

Initial Study/Proposed Mitigated Negative Declaration

Caples Lake and Silver Lake East Campground Improvements Project



Prepared for:



El Dorado Irrigation District

June 2019

Prepared by:



Consulting

Engineers and

Scientists

Initial Study/Proposed Mitigated Negative Declaration

Caples Lake and Silver Lake East Campground Improvements Project

Prepared for:

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Contact:

Doug Venable
Environmental Review Analyst
(530) 642-4187

Prepared by:

GEI Consultants
2868 Prospect Park Drive, Suite 400
Sacramento, CA 95670

Contact:

Ryan Jolley
Senior Project Manager
(916) 912-4942

June 2019

Project No. 1901628



El Dorado Irrigation District

NOTICE OF INTENT and NOTICE OF PUBLIC HEARING TO ADOPT A MITIGATED NEGATIVE DECLARATION

(Pursuant to CEQA Section 21092 and CEQA Guidelines Section 15072)

CAPLES LAKE AND SILVER LAKE EAST CAMPGROUND IMPROVEMENTS PROJECT

The El Dorado Irrigation District (EID) proposes to adopt a Mitigated Negative Declaration (MND) pursuant to the California Environmental Quality Act (Section 15000 et seq., Title 14, California Code of Regulations) for the Caples Lake and Silver Lake East Campground Improvements Project (project or proposed project). The project involves improvements to camping units, infrastructure, restrooms, and other facilities to meet the most current U.S. Forest Service (USFS) design and accessibility standards of the Architectural Barriers Act, at the Caples Lake and Silver Lake East campgrounds. The improvements are being conducted in accordance with requirements of USFS Conditions 50.1 and 50.2 of EID's Federal Energy Regulatory Commission license to operate Project No. 184. The project includes: 1) resurfacing and expanding campground roadways and parking spurs; 2) replacing, expanding, and relocating camping units; 3) replacing the potable water systems; 4) replacing restrooms and other facilities; and 5) abandoning and/or removing existing camping units, pipelines, and other facilities. Project construction is anticipated to take approximately 10 months in fall 2019 and spring/summer 2020. The project site locations are not identified on the lists specified in Government Code section 65962.5 for hazardous waste sites. The project does not increase the capacity or change the existing use of the campgrounds.

EID is the lead agency for the project, under the California Environmental Quality Act (CEQA), and has directed the preparation of an Initial Study (IS) on the proposed project in accordance with CEQA requirements, the State CEQA Guidelines, and EID's guidelines. This IS describes the proposed project and assesses the proposed project's potentially significant adverse impacts on the physical environment. It concludes that the proposed project's potentially significant or significant adverse effects on the environment could be mitigated to less-than-significant levels; therefore, a proposed Mitigated Negative Declaration (MND) has been prepared.

Agencies and members of the public are invited to comment on the proposed IS/MND. **The comment period is from June 28, 2019 to July 29, 2019.** The proposed IS/MND can be reviewed at EID's Customer Service Building, 2890 Mosquito Road, Placerville, CA 95667 or on the EID web site at www.eid.org/ceqa. Comments can be sent to Doug Venable, EID Environmental Review Analyst, at the address above or by email at dvenable@eid.org by 5:00 p.m. on July 29, 2019. **A public hearing to consider the IS/MND will be held on August 12, 2019 at 9:00 a.m.** during a regularly scheduled meeting of the EID Board of Directors. The hearing will be in the EID Customer Service Building Board Room at the above address.

In accordance with the Americans with Disabilities Act (ADA) and California law, it is the policy of the El Dorado Irrigation District to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format; or if you require any other accommodation for this meeting, please contact the EID ADA coordinator at 530.642.4045 or email at adacoordinator@eid.org at least 72 hours prior to the meeting. Advance notification within this guideline will enable the District to make reasonable accommodations to ensure accessibility.

PROPOSED MITIGATED NEGATIVE DECLARATION

Project: Caples Lake and Silver Lake East Campground Improvements Project

Lead Agency: El Dorado Irrigation District

PROJECT LOCATION

The Caples Lake and Silver Lake East campgrounds are located in Alpine and Amador counties, California, respectively. A segment of the new water supply pipeline and offsite well serving the Silver Lake East Campground is located in El Dorado County, California. The project site locations are adjacent to State Route 88, near Caples and Silver lakes.

PROJECT DESCRIPTION

The project involves improvements to camping units, infrastructure, and restrooms, to meet the most current U.S. Forest Service (USFS) design and accessibility standards of the Architectural Barriers Act at the Caples Lake and Silver Lake East campgrounds. The improvements are being conducted in accordance with requirements of USFS Conditions 50.1 and 50.2 of El Dorado Irrigation District's (EID's) Federal Energy Regulatory Commission license for operation of Project No. 184. The project includes: 1) resurfacing and expanding campground roadways and parking spurs; 2) replacing, expanding, and relocating camping units; 3) replacing potable water systems; 4) replacing restrooms and other facilities; and 5) abandoning and/or removing existing camping units, pipelines, and other facilities. Project construction is anticipated to take approximately 10 months in fall 2019 and spring/summer 2020.

FINDINGS

An Initial Study (IS) was prepared to assess the proposed project's potential effects on the environment and the significance of those effects. Based on the IS, it has been determined that the proposed project would not result in significant adverse effects on the physical environment after implementation of mitigation measures. This conclusion is supported by the following findings:

1. The proposed project would have no impacts on land use and planning, mineral resources, population and housing, public services, and wildfire.
2. The proposed project would have less-than-significant impacts on aesthetics, agriculture and forestry resources, air quality, greenhouse gas emissions, noise, recreation, transportation, and utilities and service systems.
3. The proposed project would have potentially significant impacts on biological, Tribal and cultural resources, geology and soils, hazards and hazardous materials, and hydrology and water quality, but mitigation measures are proposed to avoid or reduce these effects to less-than-significant levels.

4. The proposed project would not have the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory.
5. The proposed project would not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
6. The proposed project would not have possible environmental effects that are individually limited but cumulatively considerable and contribute to a significant cumulative impact. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.
7. The environmental effects of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly.

Following are the proposed mitigation measures that would be implemented by EID to avoid or minimize environmental impacts. Implementation of these mitigation measures would reduce the environmental impacts of the proposed project to less-than-significant levels.

Mitigation Measure BIO-1: Minimize Potential Impacts on Sierra Nevada Yellow-legged Frog

EID shall implement the following measures to minimize potential for significant adverse effects on Sierra Nevada yellow-legged frog during project activities at the Silver Lake East Campground.

- Conduct environmental awareness training before project activities begin to inform all construction personnel about measures to avoid and minimize effects on biological resources.
- Install and maintain high-visibility fencing or other visual marking to protect sensitive biological resource areas (i.e., Oyster Lake and Oyster Creek) that are located adjacent to construction areas from encroachment by personnel and equipment. Incorporate sensitive habitat information into construction bid specifications, with a requirement for contractors to avoid these areas.
- A qualified biologist experienced in amphibian surveys and identification shall conduct a pre-construction survey of upland habitat in the Silver Lake East Campground improvements area that is within 25 feet of Oyster Lake or Oyster Creek, immediately before protective fencing or other visual marking is installed.
- If Sierra Nevada yellow-legged frogs are observed during construction activities, all work in the immediate area will cease and the animal will be allowed to leave the area on its own accord. EID will contact USFWS to report the encounter and to receive further guidance.

Under no circumstance shall Sierra Nevada yellow-legged frog be harassed, captured, or relocated.

- Tightly woven fiber netting, plastic mono-filament netting, or similar material shall not be used for erosion control or other purposes within Sierra Nevada yellow-legged frog suitable habitat.

Timing: Before and during construction

Responsibility: El Dorado Irrigation District.

Mitigation Measure CR-1: Address Previously Undiscovered Historic, Archaeological Resources, and Tribal Cultural Resources.

EID shall implement the following measure to reduce or avoid impacts on undiscovered historic properties, archaeological resources, and tribal cultural resources. If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist to do the following tasks: 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation.

If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot-radius of the find shall cease. EID shall retain a professional archaeologist meeting the *Secretary of the Interior's Professional Standards for Archaeologists* to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and USFS, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Timing: During construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure CR-2: Address Previously Identified Archaeological Resources Near the Silver Lake East Campground.

EID shall implement the following measure to avoid impacts on a previously identified archaeological resource immediately outside the project footprint, a prehistoric bedrock mortar complex within the Silver Lake East Campground. This resource is identified as P-03-001402, CA-AMA-882, and FS #05-03-51-442, through different recording systems, and is comprised of two outcrops containing three shallow mortars each. EID should protect these outcrops during project activities by creating a 15-foot buffer area around each outcrop, clearly demarcated with protective fencing to serve as a visual indication of the excluded perimeter.

Timing: During construction.
Responsibility: El Dorado Irrigation District.

Mitigation Measure CR-3: Avoid Potential Effects on Undiscovered Burials.

EID shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot-radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act, Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires Federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. The Native American Graves Protection and Repatriation Act also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. EID shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During construction.
Responsibility: El Dorado Irrigation District.

Mitigation Measure GEO-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices (BMPs).

EID shall prepare and implement the appropriate Stormwater Pollution Prevention Plan (SWPPP), or Stormwater Management Plan (SWMP), to prevent and control pollution and to minimize and control runoff and erosion, in compliance with State and local laws. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events and the BMPs that will be employed to control pollutant discharge. Construction techniques that will be identified and implemented to reduce the potential for runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. In addition, the SWPPP or SWMP shall include an erosion control plan and BMPs that specify the erosion and sedimentation control measures to be implemented, which may include silt fences, staked straw

bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers re-seeding with native species, and mulching to revegetate disturbed areas. If suitable vegetation cannot reasonably be expected to become established, non-erodible material will be used for such stabilization. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment.

The SWPPP or SWMP shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to such spills.

The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions through amendments approved by the Central Valley Regional Water Quality Control Board (RWQCB), if necessary.

Timing: Before and during construction.
Responsibility: EID and Construction Contractor(s).

This page intentionally left blank.

INITIAL STUDY

Project Information

1. Project title:	Caples Lake and Silver Lake East Campground Improvements Project
2. Lead agency name and address:	El Dorado Irrigation District 2890 Mosquito Road Placerville, CA 95667
3. Contact person and phone number:	Doug Venable, Environmental Review Analyst 530-642-4187 dvenable@eid.org
4. Project location:	Alpine, Amador, and El Dorado counties
5. Project sponsor's name and address:	See #2, above.
6. General plan designation:	OS- Open Space, OF- Open Forest, GF - General Forest, Natural Resources/Forest Resource – 160 acres
7. Zoning:	See #6, above.
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed project involves improvements to camping units, infrastructure, restrooms, and other facilities associated with the Caples Lake and Silver Lake East campgrounds. See Chapter 2, "Project Description."
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The Caples Lake and Silver Lake East campgrounds are located in Alpine County and Amador County, California, respectively. A segment of the new water supply pipeline and offsite well serving the Silver Lake East Campground are located in El Dorado County, California. The project site locations are adjacent to State Route 88 nearby Caples Lake and Silver Lake. Surrounding land uses are forest and open spaces. See "Environmental Setting" discussion under each issue area in Chapter 3, Environmental Checklist.
10. Other public agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement.)	California Department of Transportation (Caltrans)—Encroachment permit and California Department of Water Resources, Small Drinking Water Systems
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Yes. Consultation is described in more detail in Sections 3.5 Cultural Resources and 3.17, Tribal Cultural Resources.

This page intentionally left blank.

Table of Contents

Abbreviations and Acronyms	v
Chapter 1. Introduction	1-1
1.1 Purpose of the Initial Study.....	1-1
1.2 Summary of Findings.....	1-2
1.3 Document Organization.....	1-3
Chapter 2. Project Description	2-1
2.1 Project Location.....	2-1
2.2 Project Background.....	2-1
2.3 Project Objectives.....	2-5
2.4 Description of Proposed Campground Improvements.....	2-5
2.5 Abandonment and Removal of Existing Camping Units, Pipelines, and Other Facilities	2-15
2.6 Construction.....	2-16
2.7 Operations and Maintenance.....	2-17
2.8 Regulatory Requirements, Permits, and Approvals.....	2-17
Chapter 3. Environmental Checklist	3-1
3.1 Aesthetics.....	3-4
3.2 Agriculture and Forestry Resources.....	3-8
3.3 Air Quality.....	3-11
3.4 Biological Resources.....	3-16
3.5 Cultural Resources.....	3-27
3.6 Energy.....	3-35
3.7 Geology and Soils.....	3-37
3.8 Greenhouse Gas Emissions.....	3-42
3.9 Hazards and Hazardous Materials.....	3-44
3.10 Hydrology and Water Quality.....	3-48
3.11 Land Use and Planning.....	3-53
3.12 Mineral Resources.....	3-55
3.13 Noise.....	3-56
3.14 Population and Housing.....	3-60
3.15 Public Services.....	3-61
3.16 Recreation.....	3-63
3.17 Transportation.....	3-65
3.18 Tribal Cultural Resources.....	3-68
3.19 Utilities and Service Systems.....	3-71
3.20 Wildfire.....	3-2
3.21 Mandatory Findings of Significance.....	3-4
Chapter 4. References Cited	4-1
Chapter 5. Report Preparers	5-1

List of Tables

Table 3-1:	Air Quality Thresholds of Significance.....	3-12
Table 3-2:	Unmitigated Construction Emissions.....	3-14
Table 3-3:	Construction GHG Emissions.....	3-43
Table 3-4:	Construction Equipment and Typical Equipment Noise Levels.....	3-57
Table 3-5:	Representative Vibration Source Levels for Construction Equipment	3-58

List of Figures

Figure 2-1:	Project Site Locations	2-3
Figure 2-2:	Caples Lake Campground Improvements.....	2-7
Figure 2-3:	Silver Lake East Campground Improvements.....	2-9
Figure 2-4:	Silver Lake East Campground Offsite Water Pipeline and Well Site	2-13

Appendices

- Appendix A. Project Photographs**
- Appendix B. Air Quality Modeling Data**
- Appendix C. Biological Resources Report for the Caples Lake Campground Improvements**
- Appendix D. Biological Resources Report for the Silver Lake East Campground Improvements**
- Appendix E. Native American Consultation**
- Appendix F. Mitigation Monitoring and Reporting Program**

Abbreviations and Acronyms

ABA	Architectural Barriers Act
AQMD	Air Quality Management District
BMPs	best management practices
BSC	California Building Standards Commission
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CGS	California Geological Survey, California Department of Conservation
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalents
CRHR	California Register of Historical Resources
dB	decibel
DOC	California Department of Conservation
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EID	El Dorado Irrigation District
EIR	Environmental Impact Report
ENF	Eldorado National Forest
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
GBUAPCD	Great Basin Unified Air Pollution Control District
GEI	GEI Consultants, Inc.
GHG	greenhouse gas
gpm	gallons per minute

IS/MND	Initial Study/proposed Mitigated Negative Declaration
L _{eq}	equivalent continuous sound level
MT	metric tons
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxides
PM ₁₀	particulate matter less than 10 microns in diameter
PM _{2.5}	particulate matter less than 2.5 microns in diameter
ppv	peak particle velocity
PRC	California Public Resources Code
project	Caples Lake and Silver Lake East Campground Improvements Project
Project No. 184	El Dorado Hydroelectric Project, FERC Project No. 184
proposed project	Caples Lake and Silver Lake East Campground Improvements Project
ROG	reactive organic gases
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SMAQMD	Sacramento Metropolitan Air Quality Management District
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWMP	Storm Water amangement Plan
UBC	Uniform Building Code
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service

Chapter 1. Introduction

The El Dorado Irrigation District (EID) has prepared this Initial Study/proposed Mitigated Negative Declaration (IS/MND) in compliance with the California Environmental Quality Act (CEQA) to address the potentially significant environmental impacts of the proposed Caples Lake and Silver Lake East Campground Improvements Project (proposed project or project) in Alpine, Amador, and El Dorado counties, California. EID is the lead agency under CEQA.

To satisfy CEQA requirements, this document includes:

- an IS
- a proposed MND
- an intent to adopt an MND for the proposed project

After the required public review of this document is complete, EID will consider adopting the proposed MND, adopting a Mitigation Monitoring and Reporting Program, and approving the proposed project.

1.1 Purpose of the Initial Study

This document is an IS prepared in accordance with CEQA (California Public Resources Code [PRC], Section California Code of Regulations [CCR] 21000 et seq.) and the State CEQA Guidelines (Title 14, Section 15000 et seq. of the CCR). The purpose of this IS is to (1) determine whether proposed project implementation would result in potentially significant or significant impacts on the physical environment; and (2) incorporate mitigation measures into the proposed project design, as necessary, to eliminate the proposed project's potentially significant or significant project impacts or reduce them to a less-than-significant level. An MND is prepared if the IS identified potentially significant impacts, and: (1) revisions in the proposed project mitigate the potentially significant impacts to less-than-significant levels; and (2) there is no substantial evidence, in light of the whole record before the lead agency, that the proposed project, as revised, may have a potentially significant or significant impact on the physical environment.

An IS presents environmental analysis and substantial evidence in support of its conclusions regarding the significance of environmental impacts. Substantial evidence may include expert opinion based on facts, technical studies, or reasonable assumptions based on facts. An IS is neither intended nor required to include the level of detail provided in an Environmental Impact Report (EIR).

CEQA requires that all State and local government agencies consider the potentially significant and significant environmental impacts of projects they propose to carry out or over which they have discretionary authority, before implementing or approving those projects. The public agency that has the principal responsibility for carrying out or approving a proposed project is the lead agency for CEQA compliance (State CEQA Guidelines, CCR Section 15367). EID has principal responsibility for carrying out the proposed project and is therefore the CEQA lead agency for this IS/MND.

If there is substantial evidence (such as the findings of an IS) that a proposed project, either individually or cumulatively, may have a significant or potentially significant impact on the physical environment, the lead agency must prepare an EIR (State CEQA Guidelines, CCR Section 15064[a]). If the IS concludes that impacts would be less-than-significant, or that mitigation measures committed to by the project proponent (EID) would clearly reduce impacts to a less-than-significant level, a Negative Declaration or MND may be prepared.

EID has prepared this IS to evaluate the potential environmental impacts of the proposed project and has incorporated mitigation measures to reduce or eliminate any potentially significant project-related impacts. Therefore, an MND has been prepared for this project.

1.2 Summary of Findings

Chapter 3, Environmental Checklist, of this document contains the analysis and discussion of potential environmental impacts of the proposed project. Based on the issues evaluated in that chapter, it was determined that:

The proposed project would result in no impacts on the following issue areas:

- Land use and planning
- Mineral resources
- Population and housing
- Public services
- Wildfire

The proposed project would result in less-than-significant impacts on the following issue areas:

- Aesthetics
- Agriculture and forestry resources
- Air quality
- Energy
- Greenhouse gas emissions
- Noise
- Recreation
- Transportation
- Utilities and service systems

The proposed project would result in less-than-significant impacts *after* mitigation implementation on the following issue areas:

- Biological resources
- Cultural resources
- Geology and soils
- Hazards and hazardous materials
- Hydrology and water quality
- Tribal cultural resources
- Mandatory findings of significance

1.3 Document Organization

This document is divided into five key sections:

Chapter 1 Introduction describes the purpose of the IS/MND, summarizes findings, and describes the organization of this IS.

Chapter 2 Project Description describes the project location and background, project need and objectives, project characteristics, construction activities, project operations, and discretionary actions and approvals that may be required.

Chapter 3 Environmental Checklist presents an analysis of environmental issues identified in the CEQA Environmental Checklist and determines whether project implementation would result in a beneficial impact, no impact, less-than-significant impact, less-than-significant impact with mitigation incorporated, potentially significant impact, or significant impact, on the physical environment in each issue area. Should any impacts be determined to be potentially significant or significant with mitigation incorporated, an EIR would be required. For the proposed project, however, mitigation measures have been incorporated as needed to reduce all potentially significant and significant impacts to less-than-significant levels.

Chapter 4 References Cited lists the references used to prepare this IS.

Chapter 5 Report Preparers identifies individuals who helped prepare or review this document.

This page intentionally left blank.

Chapter 2. Project Description

This chapter describes the project location and background along with the project objectives, project components and characteristics, construction activities, project operations, discretionary actions, and approvals that may be required. Appendix A presents photographs of the existing site and facilities.

2.1 Project Location

The Caples Lake and Silver Lake East campgrounds are located within the boundary of the El Dorado Hydroelectric Project, Federal Energy Regulatory Commission (FERC) Project Number 184 (Project No. 184), and on Federal lands managed by the U.S. Forest Service (USFS), Eldorado National Forest (ENF), as shown in **Figure 2-1**. The Caples Lake Campground is located east of Kirkwood in Alpine County, California and is accessible from State Route (SR) 88. Caples Lake and the Caples Lake Resort are located on the opposite side of SR 88 from the campground. The Silver Lake East Campground is located southwest of Kirkwood in Amador County, California and is also accessible from SR 88. Oyster Lake is adjacent to the campground and Silver Lake is south of the campground and Oyster Lake. A new water supply pipeline would extend from the Silver Lake East Campground to the south within SR 88 or the right-of-way (ROW) and ultimately west along an existing EID maintenance road to an existing well site on EID property in El Dorado County.

2.2 Project Background

On October 18, 2006, FERC issued EID a new license to continue operation of Project No. 184. USFS Conditions 50.1 and 50.2, which require EID reconstruct the paved surfaces, toilets, and water system at the Silver Lake East and Caples Lake campgrounds, respectively. In 2016, FERC and USFS approved modifications to Condition 50.1 and 50.2, including upgrade of the campground facilities to meet the most current USFS design and accessibility standards of the Architectural Barriers Act (ABA), and a time extension to complete the required campground upgrades by October 18, 2020. EID is responsible for the construction and funding of the campground improvements.

2.2.1 Caples Lake Campground

The Caples Lake Campground currently contains 36 camping units including one host unit, each equipped with a picnic table and fire ring. The campground is operated by a concessionaire under a special-use permit with USFS. This campground is typically open June 1 through October 15, weather permitting, and has a total capacity of 210 persons (AECOM 2018). USFS Condition 50.2 requires the following specific improvements to the Caples Lake Campground (FERC 2006 and 2016):

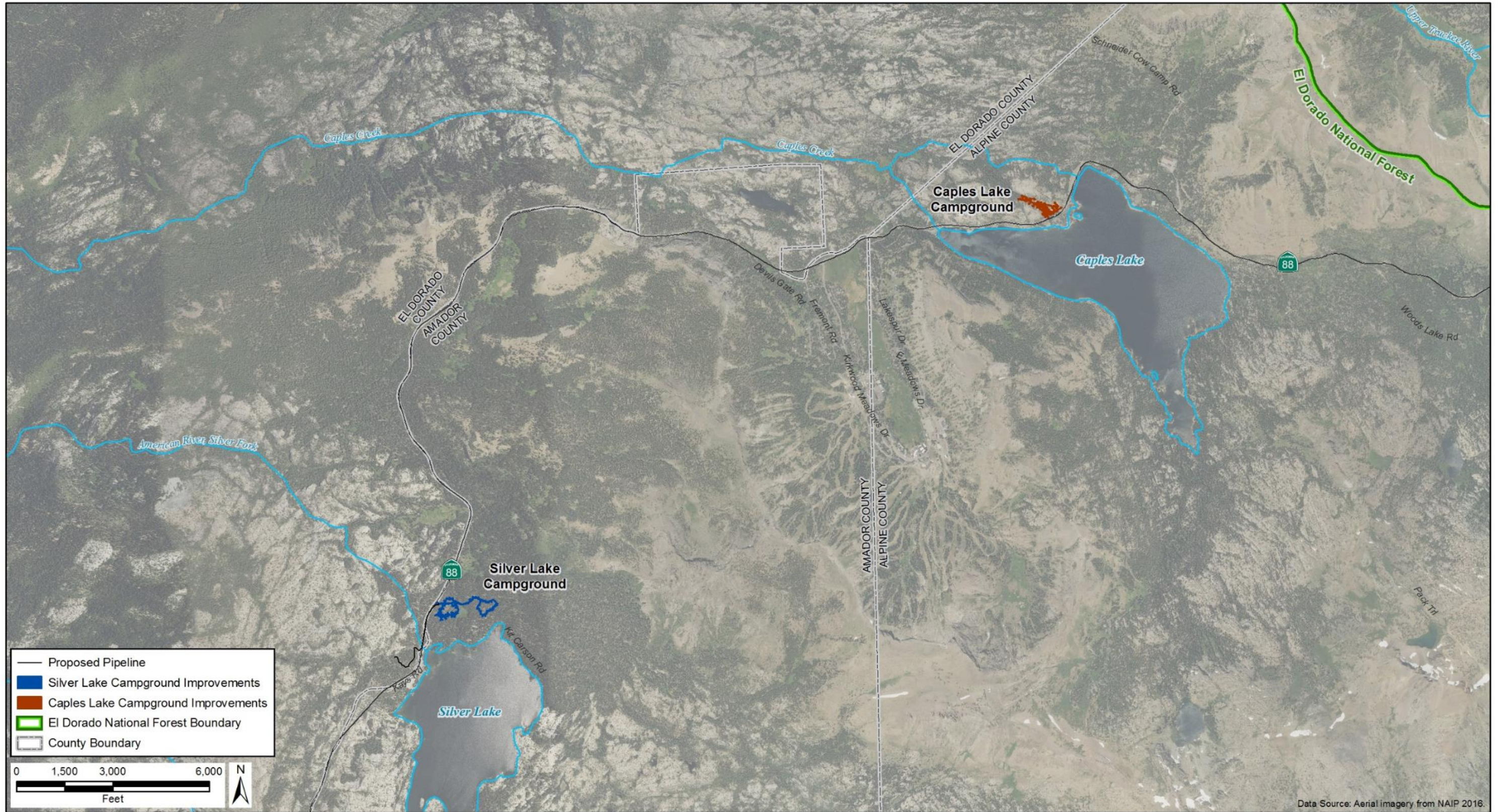
- a. Replace existing toilets with four single-unit accessible vault toilets. Relocate the new toilets to provide for easier access and less distance from the camping units. Also construct a paved parking turnout in front of each toilet for servicing and for parking access.
- b. Replace and relocate all the faucet units adjacent to the roadway. Provide a level and paved pad in front and on the sides of the faucet unit.
- c. For all pathways between camping units and spurs/roadway, remove ground protrusions, re-grade and widen the pathways, and compact the native surface where feasible and deemed appropriate by USFS. Meet most current grade and cross-slope accessibility standards for access for up to 20 camping units.
- d. Widen spurs where feasible to meet most current accessibility standards. Re-construct and pave all spurs.
- e. Prepare existing campground roads for resurfacing by patching, scarifying, or other methods, as determined by USFS. Place asphalt overlay on campground road.
- f. Remove obstacles and protrusions, and level and compact the native surface at each camping unit. Enlarge the camping units to a minimum of 900 square feet where feasible and when deemed appropriate by USFS. Grades of all the camping units shall be re-constructed to the most current accessibility standards including clear space around facilities.
- g. Replace all waterlines, including the distribution lines within the campground and the service lines from the well source to the facility.

2.2.2 Silver Lake East Campground

The Silver Lake East Campground currently contains 62 camping units, including 28 camping units for tents and 34 camping units for tents, trailers, or recreational vehicles measuring up to 40 feet long. Each camping unit is equipped with a picnic table, fire rings, grills, and some bear boxes. The campground is operated by a concessionaire under a special-use permit with USFS. This campground is typically open June 1 through October 15, weather permitting, and has a total capacity of 372 persons (AECOM 2018). USFS Condition 50.1 requires the following specific improvements to the Silver Lake East Campground (FERC 2006 and 2016):

- a. Replace all toilets with accessible toilets relocated to reduce the distance from camping units to the toilets and to avoid the steeper road grades. Construct paved parking turnouts in front of each toilet with a paved access route to the toilet.

Figure 2-1: Project Site Locations



This page left intentionally blank

- b. Replace and relocate all faucet units adjacent to the roadway with accessible ones. Construct a paved area at all the faucet units to the most current accessibility standards.
- c. Widen spurs for up to 20 camping units to meet most current accessibility standards. Re-construct and pave all spurs.
- d. Prepare existing campground roads for resurfacing by patching, scarifying, or other methods, as determined by USFS. Place asphalt overlay on campground road.
- e. Replace all waterlines, including the distribution lines within the campground and the collection lines from the source to the facility.

2.3 Project Objectives

The project objectives are to:

- Provide improvements at the Silver Lake East and Caples Lake campgrounds in compliance with FERC Project No. 184 USFS Condition 50.1 and 50.2, respectively, including meeting the most current USFS design and accessibility standards of the ABA.
- Provide a reliable water system for the Caples Lake, Silver Lake East, and Silver Lake West campgrounds.
- Construct improvements at the campgrounds in a manner that facilitates runoff along natural slopes and pathways to the extent possible.

2.4 Description of Proposed Campground Improvements

Under the proposed project, at both the Caples Lake and Silver Lake East campgrounds, the existing roadways, parking spurs, camping units, water supply system, restrooms, and other minor facilities would be improved to satisfy USFS Conditions 50.2 and 50.1 including ABA standards, as shown in **Figure 2-2** and **Figure 2-3**, respectively. Improvements would occur throughout the Caples Lake Campground. Improvements would occur to camping units on the southwest loop and roadway, water system, restrooms and other facilities throughout the Silver Lake East Campground. No improvements would occur to camping units, including pathways or parking spurs, on the northwestern and eastern loops at the Silver Lake East Campground. In addition, improvements to the water supply system include a new water sources for both the Caples Lake and Silver Lake East campgrounds. Since the Silver Lake East and West Campground water systems are connected, a new water source would also be provided for the Silver Lake West Campground. Improvements are described in the remainder of this section.

2.4.1 Campground Roadway and Parking Spur Improvements

Access to both the Caples Lake and Silver Lake East campgrounds is provided by the existing campground roadways directly from SR 88. The campground roadways provide access for two-way traffic, except campground loops which provide access for one-way traffic. Each camping unit contains a spur for parking vehicles and some camping units contain a short driveway from the campground roadway as an extension of the parking spur.

Under the proposed project, at the Caples Lake Campground, two-way portions of the campground roadways would be approximately 18-foot wide, except for approximately 130 feet of the campground roadway from the entrance on SR 88 which would be approximately 20 feet, and one-way campground loops which would be approximately 10 feet. At the Silver Lake East Campground, two-way portions of the campground roadways would be approximately 20 feet wide and one-way campground loops would be widened to approximately 10 feet. Existing campground roadways that do not meet these design criteria would be widened. At both campgrounds, parking spurs would be widened, reshaped, or relocated to meet ABA standards. Improved/new parking spurs would have a minimum 2 percent slope oriented towards the natural slope.

At both campgrounds, the existing pavement on the campground roadway and parking spurs would be replaced by grinding and overlaying new asphalt. Where there is no existing pavement and the campground roadways are widened or the parking spurs are widened, reshaped, or relocated, the subgrade would be re-compacted and topped with new aggregate base rock and overlaid with new pavement. Areas adjacent to roadways and parking spurs would be graded with a minimum 2 percent slope oriented towards the natural slope. New traffic signage, roadway markings, and speed bumps would be installed along campground roadways.

At the Caples Lake campground, existing culverts crossing beneath the campground roadway and existing parking spurs would either be: 1) cleared of debris and graded approximately 20 feet above the entrance and below the exit to create a clear flow path for runoff, or 2) replaced entirely with a new, approximately 18-inch diameter pipe culvert. New culverts would be placed on suitable bedding material and backfilled with suitable material and overlaid with new pavement.

At the Silver Lake East Campground, existing bollards at parking spurs would be permanently removed. A new culvert would be installed beneath the parking spur at Camping Unit 5. The new culvert would be placed on suitable bedding material and backfilled with suitable material and overlaid with new pavement. Rip-rap rock would be placed above the entrance to divert water into the culvert.

2.4.2 Camping Unit Improvements

At both the Caples Lake and Silver Lake East campgrounds, camping units contain designated areas for picnic tables, fire rings, and level tent pads with a pathway extending to the campground roadway or a parking spur. Under the proposed project, each camping unit has a designated boundary (excluding the pathways) covering minimum of 900 square feet where feasible. Existing camping units and pathways would either be improved, expanded, permanently abandoned, or abandoned and replaced with a camping unit at a new location.

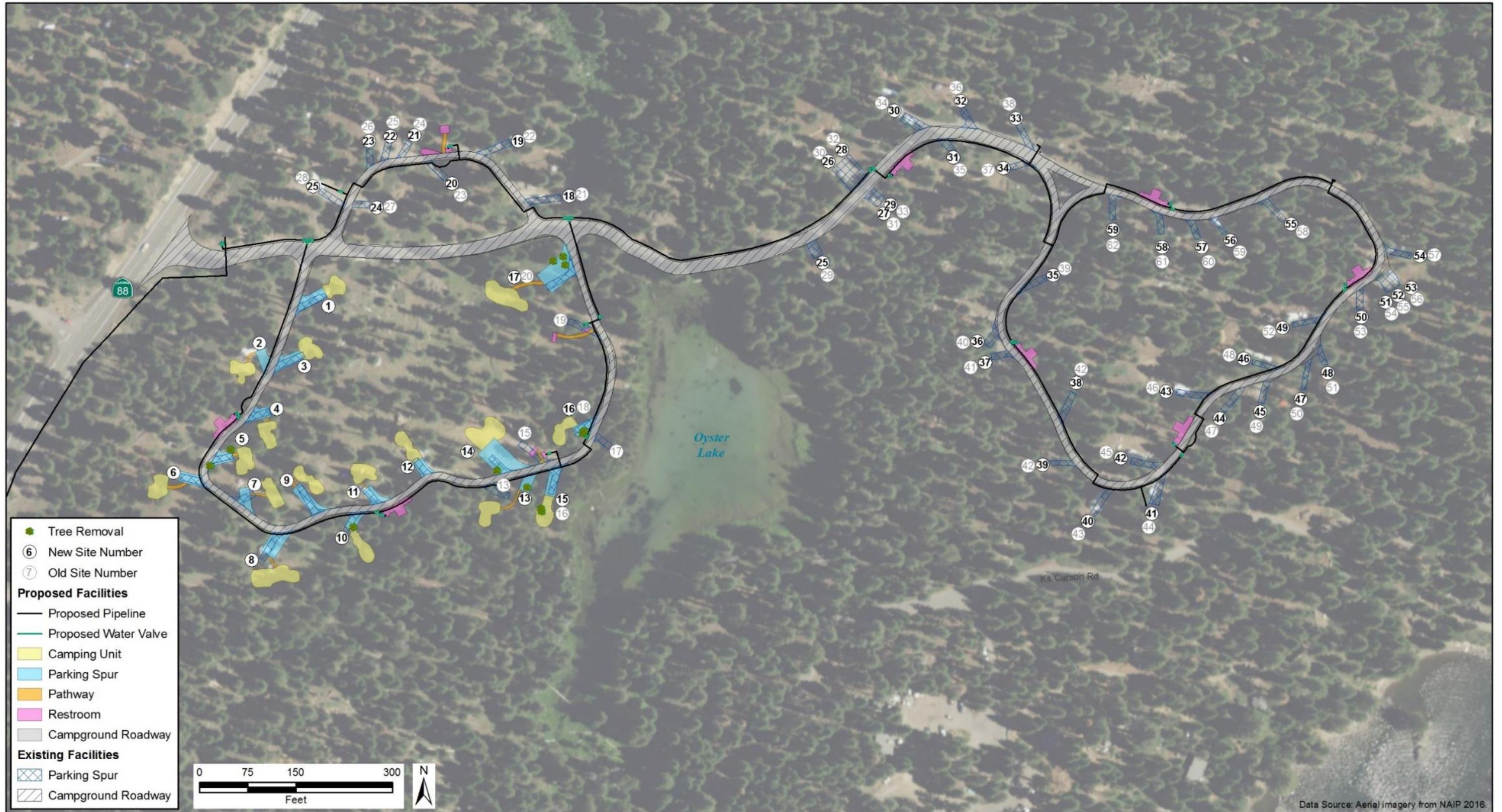
Figure 2-2: Caples Lake Campground Improvements



14May2019 RS Z:\Projects\1901628_EID_Campground_Improvements\G001_CL_CampgroundImprovements.mxd

This page left intentionally blank

Figure 2-3: Silver Lake East Campground Improvements



This page left intentionally blank

Camping units would be cleared of obstructions and graded to a minimum 2 percent slope oriented towards the natural slope, except for level tent pads and fire rings where a level finish would be graded a minimum of 4 feet from the edge of the fire ring. Fire rings would be located a minimum of 5 feet from picnic tables. Fire rings would be anchored in a concrete footing extending more than a foot below the ground surface and filled with clean drain rock. Existing pathways would be ground and re-graded and new or relocated pathways would be graded. Pathways would be a minimum of 3 feet wide where feasible and timber wood stairs would be installed along pathways where needed to facilitate safe access.

At the Caples Lake Campground, rocked crossings would be installed along pathways to new Camping Units 5, 13, 23, and 24; new pipe culverts would be installed crossing the pathways to Camping Units 25 and 26; and new ditches would be constructed adjacent to new Camping Unit 12 and adjacent to a portion of the pathway from the parking spur to new Camping Unit 18. At rocked crossings, the pathway would be constructed of rock embedded in concrete with a minimum 8 feet of rip-rap rock placed before and after the pathway crossing. Rip-rap rock would also be placed at the entrance and exit of the new culvert openings. Ditches would be excavated to be approximately 3 feet wide and 6 inches deep.

At the Silver Lake East Campground, rip-rap rock would be installed on the slope adjacent to both sides of the short pathway to Camping Unit 5.

2.4.3 Water System Improvements

Caples Lake Campground

The Caples Lake Campground was historically supplied water from a spring across Caples Lake Dam via a pipeline extending over the dam face. However, EID abandoned use of the pipeline over the dam face several years ago at the direction of the California Department of Water Resources (DWR), Division of Safety of Dams. EID has since trucked water from the spring to fill existing 2,000-gallon water tanks at the campground. EID drilled a well and installed a pump with a capacity of 3 gallons-per-minute (gpm) at the campground in 2018, which has not yet been put into operation.

Under the proposed project, EID would develop improvements to the water system and provide connection to the existing well to provide a reliable long-term water supply to the campground. The existing well would be powered solely by a new small solar panel system generating approximately 670 watts of electricity. The solar panel system would be installed at ground level on a new concrete foundation and connected to the adjacent well with electrical conduit. Two approximately 1,000-gallon and approximately 75-inch-wide plastic water storage tanks would be installed along the small loop at the back of the campground. The tanks would be anchored to a newly constructed concrete foundation and connected to the well via a new 1-inch diameter underground water pipeline extending along the campground roadway. The tanks would be filled with water from the well during the day for use within the campground during the night. A small water filtration system would be installed at the site of the water tanks if needed to treat water to water quality to levels satisfying applicable water quality standards.

A new 2-inch diameter underground water distribution pipeline would be installed parallel to the 1-inch diameter water pipeline (in the same trench) to distribute water through the campground including to new restrooms and faucets. The water pipeline would be placed in approximately 4- to 6-inch diameter conduit pipe for crossings beneath the campground roadway and parking spurs. Water system improvements also include installation of new valves, blowoffs, and water faucets with a sump excavated below ground and filled with drainage rock at several locations.

Silver Lake East and West Campgrounds

The Silver Lake East and West campgrounds currently receive water from a spring owned and operated by USFS. Water is piped from the spring over 1 mile to pipelines interconnected between the two campgrounds. Water supply from the spring is regularly subject to curtailment due to the junior status of water rights.

Under the proposed project, EID would use an existing groundwater well outside the campground and west of SR 88 on property owned by EID, as shown in **Figure 2-4**, and previously used to supply water to the Kay's Silver Lake Resort (now the Silver Lake Boat Launch). EID has previously disinfected and tested the well. The well would be upgraded with a new approximately 7.5 gpm pump within a new insulated metal enclosure. A new approximately 16-foot-tall building would be installed adjacent to the well and would contain an approximately 2,500 gallon storage tank and well equipment including chlorination equipment. A solar power system generating approximately 1,665 watts of electricity would be installed on poles or at the ground level adjacent to the new building. A backup generator connection would be installed to the outside of the building for use if water needs to be pumped at night. Development of the solar system at ground level would occur as described above for the Caples Lake Campground. Additionally, a metal chain-link fence would be installed around the solar array, pump enclosure, and new building.

A new 2-inch diameter water pipeline would be installed from the new offsite well along the existing access and maintenance road to SR 88, in the SR 88 ROW to the campground and then within the campground roadway and loops, as shown in Figures 2-3 and 2-4. The pipeline would be attached to the SR 88 bridge crossing the Silver Fork American River and otherwise installed underground within the roadway. A new 3-inch diameter polyvinyl chloride casing would be installed under SR-88 for connection to the existing Silver Lake West Campground water system. The water pipeline would be placed in a 4- to 6-inch diameter conduit pipe for crossings beneath the campground roadway and parking spurs. Water system improvements also include installation of new valves, blowoffs, meters, backflow prevention, and water faucets with a sump excavated below ground and filled with drainage rock at several locations. Within the campground, the new pipeline would connect to the existing water supply pipeline for the Silver Lake West Campground. A small new turnout to the existing spring water source would be developed, connected to the new pipeline, and capped. Although EID has no current plans to continue using water from the existing spring water source, installation of the turnout provides the option of using water from the spring in the new water supply system in the future.

Figure 2-4: Silver Lake East Campground Offsite Water Pipeline and Well Site



This page left intentionally blank

2.4.4 Restroom Improvements

Up to five new restroom facilities would be installed at the Caples Lake Campground and up to 10 new restroom facilities would be installed at the Silver Lake East Campground. New restroom facilities would replace existing facilities at the same or new locations along the campground roadways. New restroom facilities include pre-fabricated single- or double-unit restroom structures with toilets installed on new concrete pads overlaying new below grade sewage tanks. Compared to existing restroom facilities, the new facilities are intended to provide easier access from the campground roadways with new pathways, paved driveways/parking turnouts, and/or timber stairs. Each restroom facility also contains new external faucet units connected to the new waterlines and new trash/recycling receptacles, both installed on new concrete pads.

2.5 Abandonment and Removal of Existing Camping Units, Pipelines, and Other Facilities

USFS ABA standards are more stringent than those in place when the campgrounds were originally built. To satisfy ABA standards, the re-design required relocating and removal of existing camping units to accommodate the expansion of camping units and restroom facilities. As a result, improvements at the Caples Lake Campground require removal of six camping units and a new total of 30 camping units, and improvements at the Silver Lake East Campground require removal of three camping units and a new total of 59 camping units. Fire rings, picnic tables, and other above-ground features would be removed from abandoned camping units. Existing parking spurs and pathways to camping units would be removed when replaced at a new location and at abandoned camping units. Abandonment of existing parking spurs requires removing existing gravel and/or pavement and regrading and compacting soil to match existing grades. Abandonment of pathways requires regrading and compacting soil to match existing grades.

At both the Caples Lake and Silver Lake East campgrounds, existing water pipelines would be cut and capped and abandoned in place below ground and existing valves and faucet structures would be removed, including the faucet, support beam, gravel pits, and framing. Existing restroom facilities would be demolished and removed for disposal, including wood structures, toilets, vent stacks, concrete slabs, and underground sewage tanks. Demolition of existing toilet vaults would not begin until tanks are pumped clean of waste and residual debris are removed.

At the Caples Lake Campground, an existing septic tank at new Camping Unit 28 would be protected in place and the pipeline connection from Camping Unit 27 would be cut and capped approximately 2 feet below grade. A small segment of fence adjacent to new Camping Unit 28 would be removed. In addition, three existing wooden sheds would be relocated following direction from USFS. At the Silver Lake East Campground, an existing water vault would be removed adjacent to new Camping Unit 41.

2.6 Construction

2.6.1 Construction Techniques and Equipment

The campgrounds would be closed to use by the public during construction activities. Construction materials would be staged in existing areas of the Caples Lake and Silver Lake East campgrounds. Materials would be staged within the existing access roadway and existing well site for construction of the new offsite water pipeline and upgraded well service for the Silver Lake East Campground. Construction traffic would access the project site locations directly from SR 88. It is anticipated debris and materials would be off-hauled to disposal facilities in South Lake Tahoe or Arnold, California.

Water pipelines would typically be installed in small trenches approximately 3 feet deep. Select bedding material would be used for compaction around pipelines and topped with native material. Construction for the new water pipeline at Caples Lake Campground may require minor blasting with a charge cord. Existing asphalt would be ground or pulverized in advance of new paving. Over excavation would occur where needed, such as for installation of new concrete pads and vaults. Concrete, gravel, aggregate base, drain rock, and other fill materials would be installed as discussed above. Excavations for pipelines or removal of existing facilities would be backfilled with native material or similar imported material. Grading would occur as needed to establish design grades or match existing contours and natural slopes.

Up to eight construction personnel would be on-site to construct improvements for each campground, and equipment vendors and delivery personnel would occasionally visit the site. Construction equipment operating on any given day for each campground consists of: an excavator with hammer, backhoe, two dump trucks, and a tampering compactor. It is estimated up to 3,235 cubic yards of native soil excavated during construction could require off-hauling, although EID intends to re-use as much soil as possible in constructing the improvements. Approximately 165 truck trips may be required for off hauling throughout the construction period and approximately 200 truck trips may be required for delivery of materials and would be made to each campground during a 4-week period.

2.6.2 Tree Removal and Trimming and Rock Relocation

Under the proposed project, removing trees and relocating rocks would occur as needed to construct the campground improvements. Trees less than 6 inches in diameter within the designated boundaries of new camping units would be removed. Trees outside camping units and trees greater than 6 inches in diameter within camping units would be preserved to the extent possible and would be removed where they conflict with constructing improvements. Approximately 47 trees between 6- and 36-inches diameter and 33 stumps would be removed at the Caples Lake Campground, approximately 11 trees between 8- and 15-inches diameter and seven stumps would be removed at the Silver Lake East Campground, and approximately 8 trees between 8- and 40-inches in diameter would be removed at the existing offsite well location. During construction activities, it may be determined additional trees require removal to complete construction activities. Within the designated boundaries of camping units, tree limbs would be trimmed to approximately 10 feet above the post-project ground surface. Rocks would be relocated and stockpiled at new locations within the campground adjacent to the improved areas.

2.6.3 Construction Schedule

Construction activities would occur between the hours of 8 a.m. and 6 p.m., Monday through Friday, and 8 a.m. and 3 p.m. on weekends. Constructing improvements at the Caples Lake Campground is expected to require up to 5 months and is planned to commence September 2019 and continue until weather conditions (i.e., excessive rain or snow) require construction to stop. Construction at the Caples Lake Campground would resume in 2020, when weather conditions are suitable for construction activities. Constructing improvements at the Silver Lake East Campground is also expected to require up to 5 months and is planned to commence in 2020, when weather conditions are suitable for construction activities. However, it is possible that weather conditions or other unexpected delays could result in construction of both projects concurrently in 2020.

2.7 Operations and Maintenance

Following construction activities, facility operations and maintenance would primarily be similar to activities that occur now without the proposed project. EID would assume responsibility for operation and maintenance of the new groundwater well and water supply system for the Silver Lake East and West campgrounds, replacing USFS which has been responsible for operation and maintenance of the existing spring and water supply system. This would result in periodic new worker trips to the new offsite well site for inspections and maintenance. USFS historically maintained the water supply spring on the opposite side of the Caples Lake Dam. EID currently trucks water to the Caples Lake Campground as needed. Under the proposed project, these truck trips would cease, and USFS would instead maintain the well at the Caples Lake Campground.

2.8 Regulatory Requirements, Permits, and Approvals

As the CEQA lead agency, EID has the principal responsibility for approving and carrying out the proposed project and for ensuring that CEQA requirements and all other applicable regulations are met. The proposed project is a requirement of EID's FERC license for Project No. 184. USFS issued a special use permit for the license covering Project No. 184 activities on ENF lands. Other permitting agencies that may have permitting approval or review authority over portions of the proposed project are listed below:

- **California Department of Transportation (Caltrans).** Encroachment permit for construction of the new water pipeline along the SR 88 ROW including attachment to the bridge over the Silver Fork American River.
- **State Water Resources Control Board, Domestic Water Supply Permit.** Required for use of the new groundwater wells to regularly serve 25 or more people daily for at least 60 days out of the year.

This page intentionally left blank.

Chapter 3. Environmental Checklist

Project Information

1. Project title:	Caples Lake and Silver Lake East Campground Improvements Project
2. Lead agency name and address:	El Dorado Irrigation District 2890 Mosquito Road Placerville, CA 95667
3. Contact person and phone number:	Doug Venable, Environmental Review Analyst 530-642-4187 dvenable@eid.org
4. Project location:	Alpine, Amador, and El Dorado counties
5. Project sponsor's name and address:	See #2, above.
6. General plan designation:	OS- Open Space, OF- Open Forest, GF - General Forest, Natural Resources/Forest Resource – 160 acres
7. Zoning:	See #6, above.
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)	The proposed project involves improvements to camping units, infrastructure, restrooms, and other facilities associated with the Caples Lake and Silver Lake East campgrounds. See Chapter 2, Project Description.
9. Surrounding land uses and setting: Briefly describe the project's surroundings:	The Caples Lake and Silver Lake East campgrounds are located in Alpine County and Amador County, California, respectively. A segment of the new water supply pipeline and offsite well serving the Silver Lake East Campground are located in El Dorado County, California. The project site locations are adjacent to SR 88 nearby Caples Lake and Silver Lake. Surrounding land uses are forest and open spaces. See “Environmental Setting” discussion under each issue area in Chapter 3, Environmental Checklist.
10. Other public agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement.)	Caltrans—Encroachment permit and California Department of Water Resources, Small Drinking Water Systems
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?	Yes. Consultation is described in more detail in Sections 3.5, Cultural Resources, and 3.17, Tribal Cultural Resources.

Environmental Factors Potentially Affected

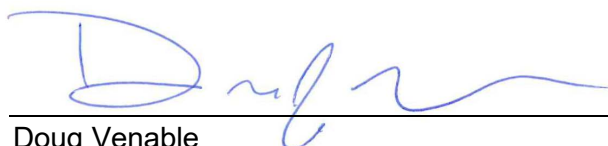
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

<input type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry Resources	<input type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input checked="" type="checkbox"/>	Geology / Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input checked="" type="checkbox"/>	Hazards and Hazardous Materials	<input checked="" type="checkbox"/>	Hydrology / Water Quality
<input type="checkbox"/>	Land Use / Planning	<input type="checkbox"/>	Mineral Resources	<input type="checkbox"/>	Noise
<input type="checkbox"/>	Population / Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input type="checkbox"/>	Transportation	<input checked="" type="checkbox"/>	Tribal Cultural Resources	<input type="checkbox"/>	Utilities / Service Systems
<input checked="" type="checkbox"/>	Mandatory Findings of Significance	<input type="checkbox"/>	Energy	<input type="checkbox"/>	Wildfire

Determination (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Doug Venable
Environmental Review Analyst
El Dorado Irrigation District

6/25/2019

Date

Evaluation of Environmental Impacts

- 1) A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. Operations and maintenance impacts of the proposed project are routine, minimal, and essentially the same as current operations and maintenance of the existing facilities. There is no potential for significant impacts to any resource category from project operations and maintenance of the existing and proposed facilities.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less-than-significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required. “Beneficial impacts” are also identified where appropriate to provide full disclosure of any benefits from implementing the proposed project.
- 4) “Less-than-significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less-Than-Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level.
- 5) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
- 7) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
- 8) The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less-than-significant.

Significance thresholds are identified for certain resources, but others are not necessary because there is clearly no impact or the question itself provides the basis for the significance threshold.

3.1 Aesthetics

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
I. AESTHETICS – Except as provided in PRC Section 21099, would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.1.1 Environmental Setting

The landscape in the project area is characterized by mountains and high meadows within the Sierra Nevada mountain range. Elements of the built environment (structures, roads, and other man-made improvements) are present; however, they are clearly secondary to the dominant natural landscape elements. The Caples Lake and Silver Lake East campgrounds and the offsite well west of SR 88 exists within heavily forested areas of the ENF. The high elevations along the western slope of the Sierras receive significant winter snowfall. Snow depths at Kirkwood, in between Caples and Silver lakes, can often exceed 20 to 30 feet (Alpine County 2017). Caltrans has designated SR 88 as a State scenic highway and USFS designated the road as a scenic byway from Dew Drop Ranger Station in Amador County to the Nevada state line, which includes the segment of SR 88 passing by the campgrounds and offsite water pipeline and well (Caltrans 2019).

Methods

The evaluation of visual impacts is based on the Federal Highway Administration (FHWA) Visual Impact Assessment for Highway Projects guidelines. Potential visual impacts of the project were determined by assessing the nature of the project’s contribution to change the existing visual setting and determining the viewer response to that change. Visibility and visual dominance of landscape elements depend on their placement within a viewshed. A viewshed is defined as all of the surface area visible from a particular

location (e.g., an overlook), or sequence of locations (e.g., a roadway or trail) (FHWA 1988). A viewshed can be broken into distance zones of foreground (within 0.25-0.50 mile), middle ground (within 3-5 miles), and background (5 miles to the limit of human sight). Visual sensitivity is affected by viewer activity, awareness, and expectations in combination with the number of viewers and the duration of the view. Viewer awareness and concern for changes in the landscape can vary depending on the primary activity in which the viewer is engaged. Potentially affected viewer groups were identified based on primary viewing activities within the project area. Generally, increased visual contrast within foreground distances would be more noticeable to viewers than increased visual contrast within background distance zones.

Viewer Groups

Viewer groups in the project area with high viewer sensitivity include motorists driving on SR 88 and recreational users. Motorists driving eastbound and westbound are considered to have high viewer sensitivity due to the greater level of viewer concern associated with scenic highways. The turnoffs from SR 88 to the Caples Lake and Silver Lake East campgrounds and the maintenance roadway for access to the offsite well are all visible when travelling along SR 88. The campgrounds begin approximately 100 feet from the SR 88 turnoffs and the offsite well site is located over 1,500 feet from SR 88. Tree density is very high and dominates the foreground along SR 88 in the project area and trees screen most of existing campground features, such as camping units, camping roadway loops, picnic tables, and restrooms. Existing campground features are partially visible between the trees in a few locations at each campground. The middle ground and background consists of mountains of the Sierra Nevada.

Recreationists in the area include those using the Caples Lake and Silver Lake East campgrounds. The views provided at the campgrounds consists of campground facilities with trees, rocks, and other scenic resources dominating the user's experience (see **Appendix A**). Caples Lake is visible in the background from parts of the Caples Lake Campground. Oyster Lake, the Kit Carson Lodge, and users of the Silver Lake Boat Launch are visible from parts of the Silver Lake East Campground. Patrons of the Caples Lake Resort would be located on the opposite side of SR 88 from the Caples Lake campground and would not have direct views of the campgrounds.

3.1.2 Discussion

a), c) Have a substantial adverse effect on a scenic vista? In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Although the project site locations are not within an area specifically designated as scenic vistas, views provided to users at the campgrounds contribute to the recreational value of the user's experience. New campground facilities would be limited, such as water tanks, solar packages, and roadway signage, and would primarily be located along the campground roadways/loops where other campground facilities are currently located. Facilities replaced/relocated by the project would be in the existing location or along the campground roadways/loops. New and replaced/relocated facilities would generally be consistent with

look and types of materials that are currently visible at the campground. Tree removal locations are shown on Figures 2-2, 2-3, and 2-4 and any additional trees removed during construction would be scattered throughout the campgrounds and limited to construction areas within and around camping units and the campground roadway. The project would not obstruct views of Caples Lake from the Caples Lake Campground and Oyster Lake from the Silver Lake East Campground. After construction of the proposed project, trees, rocks, and other scenic resources would continue to dominate the user's experience and the existing visual character at the campgrounds would be maintained.

During construction activities, construction equipment would be visible entering/exiting the roadway turnoffs from SR 88 and would primarily be operated behind trees in the background to motorist passing by on SR 88. These effects would be temporary.

Because long-term changes would not substantially affect the existing visual character of the site, and construction effects would be temporary, this impact would be **less than significant**.

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

SR 88 is designated as a State scenic highway along the turnoffs to the Caples Lake and Silver Lake campgrounds and maintenance road to the offsite well. Historic buildings are not located at the project site locations. The offsite well site is not visible from SR 88. Construction of the new 2-inch diameter pipeline within SR 88 ROW would be in the roadway and/or existing disturbed areas and the existing dirt maintenance road west of SR 88. Construction and placement of the new 2-inch diameter pipeline segment attached to the SR 88 bridge extending over the Silver Fork American River would be subject to the requirements of an encroachment permit issued by Caltrans. Removal of rock outcroppings or other natural/scenic features are not required to construct the pipeline.

The campground roadway turnoffs from SR 88 are the most visible features to passing motorist. The roadways would be repaved and widened on the margins if needed to achieve the new roadway design widths. Most of the campgrounds are not visible to motorist travelling on SR 88 due to the high density of trees. New campground facilities would be limited, such as water tanks, solar packages, and roadway signage, and would primarily be located along the campground roadways/loops where existing campground facilities are currently located. Facilities replaced/relocated by the project would be in the existing location or along the campground roadways/loops. New and replaced/relocated facilities would generally be consistent with look and types of materials that are currently visible at the campground, and views of these facilities to motorists on SR 88 would continue to be limited.

During construction activities, numerous trees and rocks would be removed and rocks would be relocated within the campground. Tree removal locations are shown on Figures 2-2, 2-3, and 2-4 and any additional trees removed during construction would be scattered throughout the campgrounds and limited to construction areas within and around camping units and the campground roadway. Trees visible from SR 88 that are removed would be a small number, scattered, and limited to areas along the campground roadway and loops closest to SR 88. All or most tree removal would not be visible to motorist travelling on SR 88 due to the high density of trees visible as the motorist passes the campgrounds.

Because long-term changes would not substantially change or damage scenic resources within view of motorist travelling on SR 88, this impact would be **less than significant**.

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

The project would not include any new light sources beyond those currently present at the project site locations. New roadway signs and small solar panel packages, at the Caples Lake Campground and offsite well site, may be reflective but due to their small size would not provide a substantial source of glare. New structures and equipment at the project site locations would be wooden or covered in non-reflective paint. This impact would be **less than significant**.

3.2 Agriculture and Forestry Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
II. AGRICULTURE AND FORESTRY RESOURCES:					
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may <i>refer to</i> the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may <i>refer to</i> information compiled by the California Department of Forestry and Fire Protection [CAL FIRE] regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:</p>					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.2.1 Environmental Setting

The project site locations are on Federal lands managed by USFS. The Caples Lake Campground is in an area designated as OS (Open Space) by Alpine County (Alpine County 2017). The Silver Lake East Campground is in an area designated as OF (Open Forest) and GF (General Forest) by Amador County (Amador County 2016). The offsite water pipeline and well site west of SR 88 are in areas designated as Natural Resources/Forest Resource – 160 acres by El Dorado County (El Dorado County 2004 and 2012). The project site locations are not designated as Farmland and there are no agricultural zoning or Williamson Act contracts (Department of Conservation 2016, 2018). The campgrounds are currently developed and contain facilities necessary for camping recreation and associated infrastructure. The alignment of the water pipelines within the campgrounds follows the existing campground roadways. The alignment of the offsite water pipeline west of SR 88 follows an existing EID maintenance road and the offsite well and associated building are located at an existing well site.

3.2.2 Discussion

- a) **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

The project site locations do not contain farmland. There would be **no impact**.

- b) **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

The project site locations do not have agricultural zoning or Williamson Act contracts. There would be **no impact**.

- c), d) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? Result in the loss of forest land or conversion of forest land to non-forest use?**

Portions of the project site locations are zoned for forest land, timberland, or Timberland Production. However, these wooded areas are contiguous to the campgrounds and are not currently used for timber production. As detailed in Section 2, “Project Description,” removal of a limited number of trees would occur as needed to construct the campground improvements. Campground improvements would not cause rezoning of forest or timberlands or result in the loss or conversion of forest land. Due to the small areas affected by the project at each campground and the continued use of the sites as campgrounds, impacts related to the loss of forest land would be **less than significant**. Impacts related to the removal of specific trees are addressed in Impact 3.4 (a) and (e) in Section 3.4, Biological Resources.

- e) **Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

There would be no other changes from the proposed project on the existing environment that would convert farmland to non-agricultural use or forest land to non-forest use. See responses above under Impacts 3.2 (a), (c), and (d). There would be **no impact**.

3.3 Air Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
III. AIR QUALITY:					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 Environmental Setting

The project site locations are in the Mountain Counties (El Dorado and Amador counties) and Great Basin Valley Air Basins (Alpine County). The El Dorado County Air Quality Management District (AQMD) attains and maintains air quality conditions in El Dorado County where the offsite water pipeline alignment and well site for the Silver Lake East Campground are located. The Great Basin Unified Air Pollution Control District (GBUAPCD) attains and maintains air quality conditions in Alpine County where the Caples Lake Campground is located. The Amador County Air District attains and maintains air quality conditions in Amador County where the Silver Lake East Campground is located.

The Federal Clean Air Act and the California Clean Air Act required the U.S. Environmental Protection Agency (EPA) and California Air Resources Board (CARB) to establish health-based air quality standards at the Federal and State levels. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) were established for the following criteria pollutants: carbon monoxide (CO), ozone, sulfur dioxide, nitrogen dioxide, particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), and lead. These standards have been established with a margin of safety to protect the public’s health. Both EPA and CARB designate areas of the State as attainment, nonattainment, maintenance, or unclassified for the various pollutant standards according to the Federal Clean Air Act and the California Clean Air Act, respectively.

An “attainment” designation for an area signifies that pollutant concentrations did not violate the NAAQS or CAAQS for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as identified in the criteria. A “maintenance” designation indicates that the area previously had nonattainment status and currently has attainment status for the applicable pollutant; the area must demonstrate continued attainment for a specified number of years before it can be re-designated as an attainment area. An “unclassified” designation signifies that data do not support either an attainment or a nonattainment status.

Under the NAAQS, Amador and El Dorado counties are designated as nonattainment for 8-hour ozone, attainment for nitrogen oxides (NO_x), and unclassified for PM_{2.5} and PM₁₀. Under the CAAQS, Alpine and El Dorado counties are designated as nonattainment for PM₁₀, while Amador and El Dorado counties are designated as nonattainment for 8-hour ozone. (CARB 2015).

3.3.2 Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

At the local level, air quality is managed through land use and development planning practices, which are implemented in El Dorado, Alpine, and Amador counties through the general planning process. The El Dorado AQMD, GBUAPCD, and Amador County Air District are responsible for establishing and enforcing local air quality rules and regulations that address the requirements of Federal and State air quality laws. They are also responsible for implementing strategies for air quality improvement and recommending mitigation measures for new growth and development. The El Dorado AQMD, GBUAPCD, and Amador Air District have identified CEQA thresholds of significance for certain criteria air pollutants to assist lead agencies in determining air quality impacts for projects located in El Dorado County (i.e., the offsite water pipeline and well site), Alpine County (Caples Lake Campground) and Amador County (Silver Lake Campground), respectively, as shown in **Table 3-1**.

Table 3-1: Air Quality Thresholds of Significance

Air District	Emission Type	O ₃ Precursor Emissions		PM ₁₀
		ROG	NO _x	
El Dorado County AQMD	Construction (short-term)	82 pounds per day	82 pounds per day	-
Amador County Air District	Construction (short-term)	100 tons per year	100 tons per year	70 tons per year
GBUAPCD	Construction (short-term)	-	150 pounds per day	150 pounds per day

Notes: O₃ = oxides, ROG = reactive organic gases, NO_x = nitrogen oxides, CO = carbon monoxide, PM₁₀ = particulate matter less than 10 microns in diameter, PM_{2.5} = particulate matter less than 2.5 microns in diameter. PM₁₀ standards are provided. All three counties do not have thresholds for PM_{2.5}.

Source: El Dorado County Air Quality Management District 2002, Great Basin Unified Air Pollution Control District 2016; Amador Air District 2001

The proposed project involves improvements of existing campground camping units, infrastructure, and other facilities, including development of an offsite water pipeline and well site for the Silver Lake East Campground. The project would not result in increased population or employment growth. The project would replace water currently trucked to the Caples Lake Campground with a local supply well powered by new solar panels installed adjacent to the well pump. The existing USFS-maintained water source that

serves Silver Lake East and West campgrounds would also be replaced by an existing nearby EID well powered by new solar panels installed adjacent to the well pump. Therefore, the project would result in a net reduction in operational emissions from the use of solar powered pumps. The project would temporarily generate emissions during construction from vehicle engine exhaust from heavy-duty construction equipment, haul trips, and construction worker trips, and particulate matter emissions from ground-disturbing activities. Construction emissions from the project would be short-term and limited at each project site location.

Two criteria are used to determine whether the proposed project would conflict with or obstruct implementation of the air quality plans. The first criterion is whether the proposed project is consistent with the projections for population and vehicle miles traveled that were used as the basis of the air quality plan. The proposed project would not increase population in the project area and would not add a substantial enough number of vehicle miles traveled to exceed the projections used by all three air districts.

The second criterion is whether the proposed project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards. The AQMD, GBUAPCD, and Amador County Air District have developed thresholds of significance for criteria pollutants to evaluate regional impacts of project-specific emissions of air pollutants and their impact on the existing air quality plans. Emissions exceeding the thresholds have not been accommodated in the air quality plans and would not be consistent with such plans and therefore would be considered potentially significant impacts.

Table 3-2 shows the proposed project's estimated daily construction emissions. Emissions from project construction were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. Modeling results are presented in Appendix B. To estimate the maximum potential emissions from construction activities an intensive scenario was considered where construction at each campground, including the offsite water pipeline and well site for the Silver Lake East Campground, occurred concurrently over a 3-month period. As shown in **Table 3-2**, calculated daily and annual emissions are below applicable CEQA thresholds of significance for all three air districts where emissions would occur. Therefore, this impact would be **less than significant**.

Table 3-2: Estimated Construction Emissions of Criteria Air Pollutants

Construction Phase	Emissions (lbs/day)					Emissions (tons/year)				
	ROG	NO _x	CO	PM ₁₀	PM _{2.5}	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
El Dorado County AQMD										
Offsite water pipeline and well	1.49	11.21	13.05	0.93	0.65	0.04	0.37	0.43	0.03	0.02
CEQA threshold	82	82	None	None	None	None	None	None	None	None
<i>Exceed threshold?</i>	<i>No</i>	<i>No</i>	-	-	-	-	-	-	-	-
Amador County Air District										
Silver Lake Campground	1.68	13.12	14.5	1.09	0.7	0.05	0.44	0.47	0.02	0.02
CEQA threshold	None	None	None	None	None	100	100	None	70	None
<i>Exceed threshold?</i>	-	-	-	-	-	<i>No</i>	<i>No</i>	-	<i>No</i>	-
GBUAPCD										
Caples Lake Campground	1.49	11.47	13.05	1.01	0.67	0.04	0.38	0.43	0.03	0.02
CEQA threshold	None	150	None	150	None	None	None	None	None	None
<i>Exceed threshold?</i>	-	<i>No</i>	-	<i>No</i>	-	-	-	-	-	-

Notes: lbs/day = pounds per day, ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = particulate matter with aerodynamic diameter less than 10 micrometers, PM_{2.5} = particulate matter with aerodynamic diameter less than 2.5 micrometers, CO = carbon monoxide. Calculations account for importing and exporting material and equipment used.

Source: Emissions modeled by GEI using CalEEMod, version 2016.3.2 computer program. Refer to Appendix B, for model data outputs.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or state ambient air quality standard?

Under the NAAQS, Amador County and El Dorado County are designated as nonattainment for 8-hour ozone, attainment for NO_x, and unclassified for PM_{2.5} and PM₁₀. Under the CAAQS, Alpine and El Dorado counties are designated as nonattainment for PM₁₀; Amador and El Dorado counties are designated as nonattainment for 8-hour ozone (CARB 2015). Amador and El Dorado counties are designated as nonattainment for 8-hour ozone at the Federal level. Alpine and El Dorado counties are designated as nonattainment for PM₁₀; Amador and El Dorado counties are designated as nonattainment for 8-hour ozone at the State level.

The air basin’s nonattainment status is attributed to the region’s development history. Past, present, and future development projects contribute to the region’s adverse air quality impacts on a cumulative basis. By its nature, air pollution is largely a cumulative impact. No single project by itself is sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project’s individual emissions contribute to existing cumulatively significant adverse air quality impacts. In developing thresholds of significance for air pollutants, all three air districts considered the emission levels for which a project’s individual emissions would be cumulatively considerable. In general, if a project exceeds its identified project-level significance thresholds, the project’s cumulative impact would be cumulatively considerable. Project implementation would not exceed any of the significant thresholds as mentioned in Air Quality Impact a) above. Therefore, the project would not result in a cumulatively considerable net increase in any of the criteria pollutants and this impact would be **less than significant**.

c) Expose sensitive receptors to substantial pollutant concentrations?

Some members of the population are especially sensitive to emissions of air pollutants and should be given special consideration during the evaluation of the project's air quality impacts. These people include children, older adults, any person with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Sensitive receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. There are no sensitive receptors near the project site locations. Therefore, the potential impact of exposing sensitive receptors to substantial pollutant concentrations would be **less than significant**.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Human response to odors is subjective, and sensitivity to odors varies greatly. Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, anxiety) to physiological (e.g., circulatory and respiratory reactions, nausea, vomiting, headaches). The proposed project would not create new objectionable odors. There would be **no impact**.

3.4 Biological Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IV. BIOLOGICAL RESOURCES – Would the project:					
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.4.1 Environmental Setting

A complete discussion of biological resources is provided in the biological resources assessments that were completed for the project (Appendix C and Appendix D). This section summarizes the environmental setting and impact evaluation provided in these assessments.

Caples Lake Campground

The Caples Lake Campground is at approximately 7,800 feet above mean sea level and is separated from the north shore of Caples Lake by SR 88. On-site topography slopes gently southeast, toward the lake. A shallow swale in the southeastern portion of the campground appears to convey low drainage volumes for short durations (i.e., during heavy rain events); this swale does not support wetland soils or vegetation. Habitat at the campground is composed entirely of upper montane forest. This habitat is characteristic of Sierra Nevada elevations above approximately 7,000 feet. Dominant tree species in upper montane forest include red fir (*Abies magnifica*), white fir (*A. concolor*), lodgepole pine (*Pinus contorta*), and western juniper (*Juniperus occidentalis*). Understory species are generally sparse in upper montane forest, including at the Caples Lake Campground. Rock outcrops cover a significant portion of the campground and adjacent habitat, further limiting the area that understory vegetation can colonize, and soil compaction from on-site land use (i.e., camping) also limits understory vegetation. The few shrubs that are present include squaw wax currant (*Ribes cereum*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and willow (*Salix* sp.). Dominant herbaceous species include pine bluegrass (*Poa secunda* ssp. *secunda*), dune bent grass (*Agrostis pallens*), and mountain coyote mint (*Monardella odoratissima*).

Silver Lake East Campground

The Silver Lake East Campground is approximately 7,300 feet above mean sea level. The campground and offsite water pipeline corridor are composed entirely of upper montane forest habitat. Dominant tree species include red fir, white fir, lodgepole pine, sugar pine (*P. lambertiana*), and Jeffery pine (*P. jeffreyi*). Western juniper and foothill pine (*P. sabiniana*) are also present. Understory species are generally sparse but include squaw wax currant, blue elderberry, snowberry (*Symphoricarpos mollis*), and whitethorn ceanothus (*Ceanothus cordulatus*). Dominant herbaceous species include squirreltail (*Elymus elymoides*), pine bluegrass, and mountain coyote mint.

The north end and northwestern shoreline of Oyster Lake extends slightly into the Silver Lake East Campground area. This small lake is relatively shallow. Vegetation at the lake margin is dominated by sedge, predominately big-leaf sedge (*Carex amplifolia*), and includes tuft hair grass (*Deschampsia cespitosa* ssp. *cespitosa*) and rush (*Juncus* spp.); sphagnum moss is also common along the edge of the lake. A large corrugated metal culvert allows Oyster Lake to flow north under the campground road and into Oyster Creek. The approximately 15-foot-wide creek corridor is dominated by white fir and white alder (*Alnus rhombifolia*) trees; graceful cinquefoil (*Potentilla gracilis*) is occasionally present along the top of the creek bank. A shallow unvegetated swale at the south end of Oyster Creek, similar to uplands at the surrounding camping units, conveys runoff from the adjacent campground road surface and adjoining camping units. The offsite water pipeline would cross the Silver Fork American River, immediately downstream of its outlet from Silver Lake.

3.4.2 Discussion

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

The California Department of Fish and Wildlife's California Natural Diversity Database (CDFW 2019) and the California Native Plant Society online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2019) were reviewed prior to field surveys in 2017 and again during preparation of this IS in 2019. These reviews were centered on the Caples Lake U.S. Geologic Survey 7.5-minute quadrangle, containing the project site locations, and included the eight surrounding quadrangles. A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could occur in the vicinity of either campground was obtained from the Information for Planning and Conservation website (USFWS 2019), and USFS lists of sensitive plants and animals for ENF were reviewed. The National Marine Fisheries Service (NMFS) online California Species List Tools (NMFS 2019) were also reviewed and indicate no resources under NMFS jurisdiction are present in the Caples Lake U.S. Geologic Survey quadrangle. Database search results, Information for Planning and Conservation resource lists, and USFS species lists are included in the biological resources assessments provided as Appendix C and Appendix D.

Special-status species were evaluated for the potential to occur at the project site locations, based on the database reviews and on-site habitat conditions. Species that occupy elevation ranges higher or lower than the project site locations occur in a different hydrologic basin, or otherwise could be determined to have no potential to occur in the project vicinity, were eliminated from consideration. Species that were determined to have at least low potential to occur at the project site locations are discussed below.

Caples Lake Campground

Special-status Plants

Jack's wild buckwheat (*Eriogonum luteolum* var. *saltuarium*) and whitebark pine (*P. albicaulis*) are the only special-status plants that were determined to have potential to occur at Caples Lake campground. Both are ENF sensitive species, and Jack's wild buckwheat has a California Rare Plant Rank of 1B (rare or endangered in California and elsewhere). Suitable soils are present for Jack's wild buckwheat, but the site is at the species' upper elevational range. The nearest known occurrences are 8 and 30 miles from Caples Lake Campground. The closer occurrence was last documented in 1975 and lacks information about associated species; vegetation associated with the more distant location includes species that do not occur at the campground. In addition, project-related ground disturbance would primarily occur in areas with compacted soils, near existing campground facilities, and along the existing campground roadway that do not support shrub cover.

Whitebark pine has low potential to occur at the campground. The nearest known occurrences of whitebark pine are from over 8,200 feet and over 9,500 feet, approximately 4 and 3 miles from the Caples Lake Campground, respectively. Whitebark pine typically occurs on soils that are less-developed than those at the campground. Although a focused survey was not conducted, whitebark pine trees were not observed

during the field survey, despite being identifiable at the time it was conducted. Approximately 47 trees are planned for removal from the campground during project activities and additional trees could be removed if needed to complete construction activities. Identification of trees to be removed has not been confirmed, but most are expected to be lodgepole pine. Therefore, whitebark pine trees are unlikely to be removed by project activities. In the unlikely event either of these special-status plant species occurs in the Caples Lake Campground improvement area, few, if any, would be removed, and such removal is unlikely to result in a substantial adverse effect to either species. Therefore, this impact would be **less than significant**.

Special-status Invertebrates

The only special-status invertebrate with potential to occur at the Caples Lake Campground is western bumble bee (*Bombus occidentalis*), an ENF sensitive species. This species could forage at the campground when suitable flowering plants are in bloom, although meadows in the region likely provide higher-quality foraging habitat. Western bumble bees also could nest in underground cavities at the campground, such as in abandoned chipmunk burrows. Because this species is highly mobile and similar or higher-quality foraging habitat is present in the vicinity, potential disturbance of foraging individuals would likely be minor. There is minimal potential for project activities to impact a nesting colony if ground disturbance occurs in areas with suitable nesting habitat. However, because project activities would primarily occur within or adjacent to campground facilities, roadways and other areas that have already been graded or otherwise altered, potential to impact a nesting colony is low. The relatively limited impact from potential disturbance of foraging individuals and nest colonies during construction activities would not result in a substantial adverse effect to the species. Therefore, this impact would be **less than significant**.

Special-status Amphibians

Sierra Nevada yellow-legged frog (*Rana sierrae*), Yosemite toad (*Anaxyrus canorus*), and Southern long-toed salamander (*Ambystoma macrodactylum sigillatum*) have been documented in the larger region. However, potential for these species to occur at the Caples Lake Campground is extremely low because no aquatic habitat is present on or adjacent to the campground. Sierra Nevada yellow-legged frog is Federally-listed as endangered and State-listed as threatened; Yosemite toad is Federally-listed as threatened and a California species of special concern; and southern long-toed salamander is a California species of special concern. The nearest areas of potentially suitable aquatic habitat are Caples Creek (approximately 850 feet north) and Caples Lake (across SR 88; approximately 250 feet south). Although these special-status amphibians use upland areas when foraging and dispersing, they would not use the Caples Lake Campground, because it is separated from Caples Lake and Caples Creek by open, dry, rocky habitat and asphalt surfaces that would be avoided by these species. In addition, project activities would primarily occur in areas that are already developed (e.g., existing structures and paved roadways) or highly disturbed (e.g., existing camping units with compacted soils and little protective cover). Therefore, these amphibians would not be encountered during project activities, and minor permanent impacts on upland habitat would not adversely affect them. This impact would be **less than significant**.

Special-status Birds

Seven special-status bird species were evaluated for potential to be affected by project activities at the Caples Lake Campground: Northern goshawk (*Accipiter gentilis*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), American peregrine falcon (*Falco peregrinus anatum*), great gray owl (*Strix nebulosi*), California spotted owl (*Strix occidentalis occidentalis*), and willow flycatcher (*Empidonax trailii*). These birds are ENF sensitive species and/or California species of special concern, except for golden eagle and peregrine falcon, which are fully protected under the California Fish and Game Code. Bald eagle, great gray owl, and willow flycatcher are also State-listed as endangered. All of these species are known or likely to occur in the general region, but habitat at Caples Lake Campground is unsuitable or only marginally suitable for them. Most importantly, the Caples Lake Campground and immediately adjacent areas do not provide suitable nesting habitat for these species. Therefore, potential for special-status birds to occur on-site is likely limited to individuals that forage or roost in coniferous forest or pass through the project vicinity in transit between nesting and/or foraging areas. Because extensive areas of similar or higher-quality and less-disturbed coniferous forest are present in the vicinity, these birds are more likely to forage and roost elsewhere. Therefore, disturbance during construction of campground improvements would not affect nesting special-status birds and is unlikely to displace foraging or roosting individuals; if any impacts on special-status birds occur, they would be minor. This impact would be **less than significant**.

Special-status Mammals

Eleven special-status mammals were evaluated for their potential to be affected by project activities at the Caples Lake Campground: pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), fringed myotis (*Myotis thysanodes*), Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), western white-tailed jackrabbit (*Lepus townsendii townsendii*), Sierra Nevada mountain beaver (*Aplodontia rufa californica*), Sierra Nevada red fox (*Vulpes vulpes necator*), California wolverine (*Gulo gulo*), Sierra marten (*Martes caurina sierra*), fisher (*Pekania pennanti*), and American badger (*Taxidea taxus*). These mammals are ENF sensitive species and/or California species of special concern, except for Sierra Nevada red fox, which is a candidate for Federal listing and State-listed as threatened. California wolverine is also proposed for Federal listing and is State-listed as threatened, Fisher is proposed for Federal listing and is a candidate for State listing as threatened.

Although these species are known from, or have potential to occur in, the larger region, most of them have low or very low potential to occur at the Caples Lake Campground, because they prefer relatively undisturbed areas of coniferous forest, are more associated with meadows and other wetland areas that are absent from the Caples Lake Campground area and immediate vicinity, typically occur at lower elevations, or are suspected of being extirpated from the local region. Because potential for these mammals to occur on at the Caples Lake Campground is low or very low, they are unlikely to be encountered during construction of campground improvements, and minor permanent impacts on upland habitat would not adversely affect them. The only species with moderate potential to occur on-site is fringed myotis, which has been recently documented within several miles. This highly mobile bat species could forage over the campground, and roosting colonies may use nearby areas of rock outcrops. Small rocky areas and existing structures at the campground are unlikely to support roosting colonies but could be used as temporary roost sites for small numbers of individuals. Foraging activities are unlikely to be disturbed by construction

activities, and potential disturbance of roosting individuals would likely be limited to the small numbers that may roost in the existing toilet block during the day. These minor potential impacts would not result in a substantial adverse effect on fringed myotis. Therefore, potential impacts on special-status mammals would be **less than significant**.

Silver Lake Campground and Offsite Water Pipeline and Well

Special-status Plants

Seven special-status plants have low potential to occur only along the margins of Oyster Lake or Oyster Creek, adjacent to the Silver Lake East Campground: upswept moonwort (*Botrychium ascendens*), Mingan moonwort (*Botrychium minganense*), mud sedge (*Carex limosa*), marsh willowherb (*E. palustre*), broad-nerved hump-moss (*Meesia uliginosa*), veined water lichen (*Peltigera gowardii*), and whitebark pine. The overall habitat characteristics are suitable to support the moonworts, hump-moss, and lichen, but microhabitat elements with which these species are typically associated differ from those of the campground and adjacent areas; therefore, these species are unlikely to occur. Mud sedge (*Carex limosa*) and marsh willowherb (*E. palustre*), however, occur in conditions more similar to the margins of Oyster Lake and have higher potential to occur there. No project-related ground disturbance is anticipated to occur in or along the margin of Oyster Lake or Oyster Creek. Ground disturbance would primarily be associated with existing campground facilities and occur in areas of compacted soils, where the moonworts, bryophytes, mud sedge, and willowherb are unlikely to occur. Therefore, if present, these species are very unlikely to be removed by project activities.

Whitebark pine also has potential to occur in the Silver Lake vicinity. However, as described above for Caples Lake Campground, soils at the Silver Lake East Campground and the offsite water pipeline alignment and well site are more developed than those where whitebark pine typically occurs, and this species was not observed during the field survey. The nearest occurrence of whitebark pine is from 8,200 feet, approximately 4 miles to the south. Approximately 11 trees are planned for removal from the campground, approximately 8 trees are planned for removal from the offsite well site, and additional trees could be removed if needed to complete construction activities. Identification of the trees to be removed has not been confirmed, but most are likely lodgepole pine. Therefore, whitebark pine trees are unlikely to be removed by project activities. In the unlikely event whitebark pine occurs at the campground, few, if any, would be removed. Therefore, project activities are unlikely to result in loss of special-status plant populations or individuals and would not result in a substantial adverse effect to any of these species. This impact would be **less than significant**.

Special-status Invertebrates

The only special-status invertebrate with potential to occur at the Silver Lake East Campground and the offsite water pipeline alignment and well site is the western bumble bee. As described above for the Caples Lake Campground, the relatively limited impact from potential disturbance of foraging individuals and nest colonies during project activities would not result in a substantial adverse effect to western bumble bee, and this impact would be **less than significant**.

Special-status Amphibians

Yosemite toad occurs approximately 8 miles east southeast of the Silver Lake East Campground, but the campground and the offsite water pipeline alignment and well site are outside the current recognized range of the species, and no individuals have been documented during extensive surveys conducted in the Silver Lake vicinity. Therefore, potential for Yosemite toad to occur at the campground, along the offsite water pipeline alignment, or at the offsite well site is very low, and there would be **no impact** on this species.

Oyster Lake provides potentially suitable aquatic habitat for Sierra Nevada yellow-legged frog, and Oyster Creek may also provide suitable aquatic habitat when flows are present. This species is not known to have been documented in either of these aquatic features, along the northern or western shores of Silver Lake, or in the Silver Fork American River, but potential for it to occur in aquatic habitat adjacent to the campground and the offsite water pipeline alignment cannot be ruled out. Montane coniferous forest adjacent to Oyster Lake and Oyster Creek is only marginally suitable for yellow-legged frog because these uplands are very well-shaded and provide few opportunities for basking, provide little protective cover, and are highly disturbed by recreational users. Southern long-toed salamander has been documented at Oyster Lake and Silver Lake, and the Oyster Creek and Silver Fork American River could also provide suitable aquatic habitat. Non-breeding individuals could use portions of the Silver Lake East Campground area that provide suitable burrows and moist areas under litter, logs, and rocks. Potential for yellow-legged frog or long-toed salamander to be present where project activities occur is low, because improvements would focus on replacement and upgrade of existing facilities in areas that are already developed (e.g., existing structures and paved roadways) or highly disturbed (e.g., existing camping units with compacted soils and little protective cover). Suitable habitat for these species could be affected if construction activities cause erosion and sedimentation that degrades water quality and other habitat conditions in the Oyster Lake, Oyster Creek, or Silver Fork American River. Potential effects on long-toed salamander are unlikely to have a substantial adverse effect on the species, because it is relatively widespread, and large numbers of individuals are unlikely to be affected. Therefore, impact on southern long-toed salamander would be **less than significant**. However, because Sierra Nevada yellow-legged frog is Federally-listed as endangered and restricted to relatively small populations at fewer locations in the region, potential impacts on this species could have a substantial adverse effect and would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure BIO-1: Minimize Potential Impacts on Sierra Nevada Yellow-legged Frog

EID shall implement the following measures to minimize potential for significant adverse effects on Sierra Nevada yellow-legged frog during project activities at the Silver Lake East Campground.

- Conduct environmental awareness training before project activities begin to inform all construction personnel about measures to avoid and minimize effects on biological resources.
- Install and maintain high-visibility fencing or other visual marking to protect sensitive biological resource areas (i.e., Oyster Lake and Oyster Creek) that are located adjacent

to construction areas from encroachment by personnel and equipment. Incorporate sensitive habitat information into construction bid specifications, with a requirement for contractors to avoid these areas.

- A qualified biologist experienced in amphibian surveys and identification shall conduct a pre-construction survey of upland habitat in the Silver Lake East Campground improvements area that is within 25 feet of Oyster Lake or Oyster Creek, immediately before protective fencing or other visual marking is installed.
- If Sierra Nevada yellow-legged frogs are observed during construction activities, all work in the immediate area will cease and the animal will be allowed to leave the area on its own accord. EID will contact USFWS to report the encounter and to receive further guidance. Under no circumstance shall Sierra Nevada yellow-legged frog be harassed, captured, or relocated.
- Tightly woven fiber netting, plastic mono-filament netting, or similar material shall not be used for erosion control or other purposes within Sierra Nevada yellow-legged frog suitable habitat.

Timing: Before and during construction.

Responsibility: El Dorado Irrigation District.

Mitigation Measure GEO-1: Prepare and Implement a Storm Water Pollution Prevention Plan and BMPs.

Please refer to Mitigation Measure GEO-1 in **Section 1.7 Geology and Soils**, for the full text of this mitigation measure.

Implementing Mitigation Measures BIO-1 and GEO-1 would ensure that potential impacts on Sierra Nevada yellow-legged frog are minimized to the extent that individuals are unlikely to be adversely affected. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

Special-status Birds

Potential for special-status birds to be affected by project activities associated with project activities at the Silver Lake East Campground and the offsite water pipeline alignment and well site is similar to that discussed above for the Caples Lake Campground. The only species with potential to nest in the vicinity of the campground of offsite water pipeline alignment and well is willow flycatcher. This species has very low potential to nest in the sparse riparian vegetation along Oyster Lake, Oyster Creek, and the Silver Fork American River. Potential for nesting is further limited by the existing high levels of human disturbance in these areas during the nesting season. Therefore, disturbance from project activities is unlikely to affect nesting special-status birds or to displace foraging or roosting individuals. If any impacts on special-status birds occur, they would be minor. This impact would be **less than significant**.

Special-status Mammals

Potential for special-status mammals to be affected by project activities at the Silver Lake East Campground and the offsite water pipeline alignment and well site is similar to that discussed above for the Caples Lake Campground. Because potential for most of the special-status mammals to occur in the area is low or very low, they are unlikely to be encountered during project activities, and minor permanent impacts on upland habitat would not adversely affect them. The only species with moderate potential to occur on-site are pallid bat, fringed myotis, and Sierra marten, all of which have recently been documented within several miles of the Silver Lake East Campground. The bats could forage over the area, but foraging activities are unlikely to be disturbed by construction activities. Nearby areas of rock outcrops and the SR 88 bridge may support colonial bat roost sites; existing structures at the campground are unlikely to provide habitat for roosting colonies but could be used as temporary roost sites for small numbers of individuals. If bats roost in the SR 88 bridge, they could be disturbed during attachment of the offsite water pipeline to the bridge. However, this disturbance would be temporary and is not anticipated to cause substantial disturbance or result in abandonment by a large number of roosting individuals. Potential disturbance or temporary displacement of small numbers of pallid bat or fringed myotis would not result in a substantial adverse effect to either species. Sierra martens could use forest habitat at the campground and the offsite water pipeline alignment and well site, but they are more likely to use less-disturbed habitat in the vicinity, particularly when the campground is open. Females are also unlikely to den on the site. If martens are using on-site habitat when construction activities begin, they are expected to avoid areas of disturbance and concentrate activities in similar or higher-quality forest habitat to the east and north or elsewhere in the vicinity. Project activities only have potential to disturb a small number of Sierra martens and extensive adjacent habitat is available; such disturbance would not result in a substantial adverse effect. Therefore, potential impacts on special-status mammals would be **less than significant**.

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

The Caples Lake Campground does not support riparian habitat or other sensitive natural communities. Narrow patches of riparian vegetation occur along Oyster Lake and Oyster Creek adjacent to the Silver Lake East Campground and along the Silver Fork American River beneath the SR 88 bridge and offsite water pipeline alignment; no other sensitive natural communities occur in these areas. Project activities at the Silver Lake East Campground would not remove riparian vegetation associated with Oyster Lake or Oyster Creek, and riparian vegetation removal along Silver Fork American River would be avoided by attaching the offsite water pipeline to the SR 88 bridge. Therefore, the proposed project would have **no impact** on riparian habitat or other sensitive natural communities.

The project site is within the mapped boundaries of designated critical habitat for Sierra Nevada yellow-legged frog. However, both campgrounds and the Silver Lake East Campground offsite water pipeline alignment are excluded from the designated critical habitat area because they are in areas of existing development. In addition, the overall campground would not be expanded into new areas and construction would not occur in previously undisturbed habitat. Therefore, implementing the proposed project would not result in destruction or adverse modification of critical habitat and this impact would be **less than significant**.

c) Have a substantial adverse effect on state or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The Caples Lake Campground and adjacent areas do not support State or Federally-protected wetlands. Therefore, implementing project activities associated with Caples Lake Campground improvements would have **no impact** on State or Federally-protected wetlands.

Aquatic features (Oyster Lake, Oyster Creek, and the Silver Fork American River) adjacent to the Silver Lake East Campground and the offsite water pipeline alignment are potentially jurisdictional waters of the United States and waters of the State subject to regulation under Sections 404 and 401 of the Clean Water Act. Project activities at the Silver Lake East Campground would not result in direct removal, fill, or hydrological interruption of Oyster Lake or Oyster Creek; direct removal, fill, or hydrological interruption of the Silver Fork American River would be avoided by attaching the offsite water pipeline to the SR 88 bridge. However, accidental fill could occur if project activities cause erosion and sedimentation of adjacent aquatic habitat. Depending on the extent, this could result in a **potentially significant impact** to waters of the United States and waters of the State. Mitigation Measure GEO-1 would be implemented to reduce the impact to a less-than-significant level.

Mitigation Measure GEO-1: Prepare and Implement a Storm Water Pollution Prevention Plan and BMPs.

Please refer to Mitigation Measure GEO-1 in **Section 1.7, Geology and Soils**, for the full text of this mitigation measure.

Implementing Mitigation Measure GEO-1 would ensure that indirect impacts to waters of the United States and waters of the State would be avoided. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

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

Caples Lake and Silver Lake East campgrounds are part of a much larger extent of coniferous forest and do not serve as a corridor or other primary route for wildlife movement. They also are not known or anticipated to serve as a nursery site for any wildlife species. Some species may use Oyster Creek to travel between Oyster Lake and the small meadow complex north of the Silver Lake East Campground, and fish and wildlife use the Silver Fork American River. Because animals travelling along Oyster Creek must pass through the campground area, this route is subject to relatively high levels of seasonal disturbance under current conditions, and this portion of the Silver Fork American River is heavily disturbed by traffic along SR 88 and other adjacent roadways. Potential impacts from additional disturbance adjacent to these waterways during project implementation are anticipated to be minor. Therefore, implementing campground improvements would not substantially interfere 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. This impact would be **less than significant**.

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

No local agency policies or ordinances apply to the project site locations. The project site locations also are not within special designated management areas for species or other biological resources addressed in the Eldorado National Forest Land and Resources Management Plan and is not subject to vegetation management actions prescribed by the Sierra Nevada Forest Plan Amendment. Therefore, implementing the campground improvements would not conflict with any provisions, guidelines, goals, or objectives related to biological resources outlined in such plans and programs. Project activities at the campgrounds would be primarily restricted to the existing campground areas and roadways and adjacent areas, the offsite water pipeline alignment and well site are in previously disturbed areas, and vegetation removal is anticipated to be minimal and limited to modification or slight expansion of existing facilities. Therefore, potential effects on habitat for USFS Management Indicator Species would be minor. This impact would be **less than significant**.

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

There is no Habitat Conservation Plan, Natural Community Conservation Plan, or other conservation plan applicable to the project site locations. Therefore, there would be **no impact** related to conflict with such a plan.

3.5 Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
V. CULTURAL RESOURCES – Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 Environmental Setting

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance. CEQA defines a “historical resource” as any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR).

Prehistoric Setting

Archaeological deposits found in the Central Sierra have been relatively ephemeral, due to poor preservation of organic materials in the harsh montane environment. Archaeological components are generally identified based on the style and material of lithic tools, including flaked stone and ground stone.

Tahoe Reach (~8130 ± 130 years B.P.): The Tahoe Reach cultural component is the earliest known, based on a single site on the Truckee River (Pla-23), where Parman-style projectile points were found, a style similar to the Silver Lake type of Great Basin stemmed points (Justice 2002:100; Moratto 1984).

Spoooner (7100 years B.P.- Historic Period): The earliest Spooner phase pre-dates Martis Complex assemblages, but three subsequent phases are contemporaneous. The two assemblage types are very similar and may simply represent regional variations of the same traditions. Spooner assemblages include millingstones, bifacial manos, and unshaped pestles. Prior to 1900 B.P., Elko, Rose Spring, and Martis type projectile points are common, made from obsidian, chert, or basalt. After 1900 B.P., Eastgate, Cottonwood, and Desert Side-notched points are more typical. These later assemblages often also include cobble manos and drills (Moratto 1984).

Martis Complex (4,000-1,450 years B.P.): The Martis Complex assemblage type was identified in the Martis Valley, north of Lake Tahoe, but is found as far south as Hope Valley, in Alpine County (Justice 2002:223). The defining difference between Martis assemblages and Spooner assemblages is that flaked

stone tools are made from basalt rather than obsidian. Early Martis point styles include contracting stem Elko-Martis series points and large bifaces. Martis points feature distinctive, large, rounded corner notches, but otherwise are variable in form (Justice 2002:215). After 3500 B.P., Steamboat point types are added to the assemblage. By 1500 B.P., corner-notched and eared points are seen, as well as large side-notched points. Light-colored basalt is common through all phases of the Martis complex. Other common artifacts include atlatl weights or “boatstones,” mano and millstones, bowl mortars with cylindrical pestles, and basalt flake scrapers.

King’s Beach/Washo (1,450-100 years B.P.): The King’s Beach archaeological complex was first identified on the north shore of Lake Tahoe and includes an abundance of flaked chert and obsidian tools, small projectile points consistent with bow and arrow technology, bedrock mortars, and scrapers. Eastgate and Rose Spring projectile point types are common, with Desert Side-notched and Cottonwood series points added after 750 B.P. This archaeological complex has been associated with the ancestral Washoe (Moratto 1984).

Ethnographic Setting

The region south of Lake Tahoe is the ancestral home of the Washoe, although it was also used seasonally by the Nisenan and Northern Miwok from the western Sierra foothills, and by the Northern Paiute, from the Great Basin, to the east of the mountains. The Washoe language is from the Hokan stock, and is regionally unique (Jacobsen 1986). Great Basin languages are from the Numic family. Nisenan languages are related to Maiduan languages and come from the Penutian stock (Wilson and Towne 1978). Miwok languages are in the Uto-Aztecan family (Levy 1978). The long history of interaction between these cultural groups is confirmed by ethnohistoric reports (Downs 1966) and evinced by Washoe words with origins of Miwokan, Maiduan, and Numic origin (Jacobsen 1986).

Washoe villages were typically established in valleys of moderate altitude, around 4,500 to 5,500 feet above sea level, with a core territory of approximately 4,000 square miles. However, the Washoe made extensive use of lands of both higher and lower elevation than the village sites during seasonal rounds, expanding their territory to more than 10,000 square miles (Jacobsen 1986).

The expansive territory and porous borders granted the Washoe abundant dietary options, including wild game, fish, seeds, greens, and geophytes (e.g., roots, bulbs, and tubers). Both acorns and pine nuts were important dietary staples. In the environment of Caples Lake, pine nuts would have been a preferred food. Pine cones were gathered in autumn, dried, and either stored in that form in caches covered by pine boughs or roasted to release the nuts (D’Azevedo 1986). Pine nuts were parched and their shells cracked with a mano (handstone), cleaned and winnowed, and then eaten whole or ground into flour in a shallow mortar, like those seen in bedrock milling features near project site locations.

Historic Setting

Alpine County was created in 1864 from parts of nearby counties. Silver mining was the main activity in the county in the mid-19th century and it attracted thousands of miners to the region. Following the collapse of silver by the early 20th century, lumber, ranching, dairy farming, and tourism drove the local economy. Caples Lake was constructed between 1917 and 1923 with the creation of Caples Lake Main Dam. The

resort was established in the 1940s to serve the growing tourist population. Skiing, recreation, and ranching continue to be the main activities in the county (Alpine County Chamber of Commerce 2018; JRP Historical Consulting 2003).

Portions of the Old Alpine State Highway and SR 88 are located in the project area. The segment of SR 88 that travels through the Caples Lake area (historically a valley) now runs past Silver Lake and over Carson Pass, and is also known as Carson Pass Highway. The portion of the road that circles Silver Lake is known as Old Emigrant Road. By the late 19th century, shorter and more accessible routes largely bypassed the pass as they were developed (Anthropological Studies Center 2000). In 1911, the State assumed control of the road segments and pieced together a route that became known as Alpine State Highway. Over time, the highway was broken up, and some of it was abandoned while various other segments became part of State Routes 4, 88, and 89. (Blow 1920: 23; Anthropological Studies Center 2000.)

Methods

The cultural resources investigations carried out for the proposed project included a Sacred Lands Files database search with the Native American Heritage Commission (NAHC) (See Section 3.18, Tribal Cultural Resources and Appendix E for additional information on NAHC search), background research conducted at the North Central Information Center (NCIC) and Central California Information Center (CCIC) of the California Historical Resources Information System, review of historic maps and ethnographic documents, archival research at local repositories, and an archaeological survey of the project area.

To find information about the Silver Lake East Campground in Amador County, record searches were done at the NCIC. For background information about the Caples Lake Campground in Alpine County, a search was conducted at the CCIC. In addition to these efforts, two searches were conducted with the USFS. First, GEI Consultants, Inc. (GEI) conducted a records search at the El Dorado County Office of the ENF, in Placerville, California. Later, Miranda Galvalis, EID archaeologist at the USFS Office in Pioneer, California, assisted with a search of the offsite water pipeline alignment and well site for the Silver Lake Campground.

GEI cultural staff conducted an archaeological pedestrian survey for the project areas at the Caples Lake and Silver Lake campgrounds on October 19, 2017. The survey was conducted to intensive standards (transects spaced no more than 50 feet apart) and included additional attention in the immediate area of known project activities (e.g., near bathrooms, faucets, roads, and turnouts). A Trimble 7 Series GPS unit capable of sub-meter accuracy was carried to record the location of any identified resources. Hard copy maps were used to ensure adequate survey coverage.

Findings

The Sacred Lands Database searches for the project site locations had negative results. The California Historical Resources Information System records searches, USFS records searches, and background research found one previously identified historical resource within the Silver Lake East Campground project area, the abandoned alignment of the Alpine State Highway (P-03-000454). This resource has been previously evaluated and determined ineligible for listing in the NHRP (Anthropological Studies Center

2000). It also does not appear to meet the criteria for listing in the CRHR and thus is not considered a historical resource for the purposes of this study. Another previously identified resource was found immediately outside the project footprint, a prehistoric bedrock mortar complex comprised of two outcrops containing three shallow mortars each (P-03-001402). This resource has not previously been evaluated for eligibility for listing in the CRHR and was assumed eligible for the purposes of this assessment. Both of these resources were located during the pedestrian survey, but no additional resources were found. No archaeological or historical resources were found within the Caples Lake project footprint during background research or during the pedestrian survey. Furthermore, none of these investigations found evidence of human remains within either project area.

3.5.2 Discussion

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Under CEQA, public agencies must consider the effects of their actions on “historical resources.” The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places, as well as some California Historical Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts) or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise (California PRC Section 5024.1, 14 CCR Section 4850). The eligibility criteria for listing in the CRHR are similar to those for National Register of Historic Places listing but focus on importance of the resources to California history and heritage.

A cultural resource may be eligible for listing on the CRHR if it:

1. is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage
2. is associated with the lives of persons important in our past
3. embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of an important creative individual or possesses high artistic values
4. or has yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting one or more of the above criteria, resources eligible for listing in the CRHR must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association (OHP 1999).

No historical resources were identified during the records search or pedestrian survey. Further, while the geoarchaeological desktop study indicates that the project area has high sensitivity for buried resources, historical land use suggests that any deposits that may have been present would have been previously disturbed. Though very unlikely, the possibility remains that a resource meeting CRHR significance criteria for a historical resource may be discovered during project-related ground-disturbing activities.

Therefore, this impact would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

EID shall implement the following measure to reduce or avoid impacts on undiscovered historic properties, archaeological resources, and tribal cultural resources. If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist to do the following tasks: 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation.

If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot radius of the find shall cease. EID shall retain a professional archaeologist meeting the *Secretary of the Interior's Professional Standards for Archaeologists* to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and USFS, if necessary, and shall be completed before project activities continue in the vicinity of the find.

Timing: During construction.
Responsibility: El Dorado Irrigation District.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historic resources to a less-than-significant level because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in accordance with Section 106 (CFR 800.13- Post-review discoveries). Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

The State CEQA Guidelines require consideration of unique archaeological resources (CCR Section 15064.5). As used in California PRC Section 21083.2, the term “unique archaeological resource” refers to an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- has a special and particular quality such as being the oldest of its type or the best available example of its type
- or is directly associated with a scientifically recognized important prehistoric or historic event or person

No archaeological resources were identified within the project area during the records search or pedestrian survey. However, a previously identified archaeological resource, a prehistoric bedrock mortar complex identified as P-03-001402, CA-AMA-882, and FS #05-03-51-442, is located immediately outside the project footprint. While the geoarchaeological desktop study indicates that the project area has high sensitivity for buried resources, historical land use suggests that any deposits that may have been present would have been previously disturbed. Because a previously identified archaeological resource is present immediately outside the project footprint at Silver Lake East Campground, and the possibility remains that an archaeological resource may be discovered during project-related ground-disturbing activities, this impact would be potentially significant. The following mitigation measures have been identified to address this impact:

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

Please refer to Mitigation Measure CR-1 in cultural resources impact a) above for the full text of this mitigation measure.

Mitigation Measure CR-2: Address Previously Identified Archaeological Resources Near the Silver Lake East Campground.

EID shall implement the following measure to avoid impacts on a previously identified archaeological resource immediately outside the project footprint, a prehistoric bedrock mortar complex within the Silver Lake East Campground. This resource is identified as P-03-001402, CA-AMA-882, and FS #05-03-51-442, through different recording systems, and is comprised of two outcrops containing three shallow mortars each. EID should protect these outcrops during Project activities by creating a 15-foot buffer area around each outcrop, clearly demarcated with protective fencing to serve as a visual indication of the excluded perimeter.

Timing: During construction.
Responsibility: El Dorado Irrigation District.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown historic resources because the find would be assessed by an archaeologist and the treatment or investigation would be conducted in accordance with Section 106 (CFR 800.13- Post-review discoveries). Implementing Mitigation Measure CR-2 would ensure avoidance of the previously identified

archaeological resource near the Silver Lake East Campground. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

No human remains have been discovered in the project area and it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be discovered during ground-disturbance activities with the proposed project. There is no indication from the records searches or pedestrian survey that human remains are present within the project site locations. However, in the event that human remains, including those interred outside of formal cemeteries and including associated items and materials, are discovered during subsurface activities, the human remains and associated items and materials could be inadvertently damaged. Therefore, a **potentially significant impact** would occur. The following mitigation measure has been identified to address this impact:

Mitigation Measure CR-3: Avoid Potential Effects on Undiscovered Burials.

EID shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and within a 100-foot radius, shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remain would come into effect. Specifically, the Native American Graves Protection and Repatriation Act, Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires Federal agencies and institutions that receive Federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. the Native American Graves Protection and Repatriation Act also has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. EID shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.

Timing: During construction.
Responsibility: El Dorado Irrigation District.

Implementing Mitigation Measure CR-3 would reduce the potentially significant impact related to discovery of human remains to a less-than-significant level because the find would be assessed by an archaeologist and treated or investigated in accordance with State and Federal laws. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated.**

3.6 Energy

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VI. ENERGY.					
Would the project:					
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.6.1 Environmental Setting

EID currently trucks water from a spring to fill a water tank at the Caples Lake Campground. The Silver Lake East and West campgrounds receive water from a USFS-maintained spring located approximately 1 mile from the campgrounds. The Caples Lake Campground does not include any camping units with electric connections. The Silver Lake East Campground currently contains 34 camping units designated for use by tents, trailers, or recreational vehicles, which may represent a small energy use depending on how often each site may be used by a trailer or recreational vehicle, rather than a tent. The existing offsite well site for the Silver Lake East Campground has not been operational for several years.

3.6.2 Discussion

- a) **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

The project would replace water currently trucked to the Caples Lake Campground with a local supply well powered by new solar panels installed adjacent to the well pump. The existing USFS-maintained well that serves Silver Lake East and West campgrounds would also be replaced by an existing, nearby EID well powered by new solar panels installed adjacent to the well pump. Additionally, the project would result in a net reduction in camping units at each campground and there would be no new facilities requiring new electric connections. Energy use during project construction was modeled indirectly with the construction emissions calculations used for air quality analyses, and the project construction use of energy resources would be temporary at each project site location and would not include unnecessary, inefficient, or wasteful energy use. The project would have a **beneficial** impact on operational energy use and a **less-than-significant impact** for project construction.

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency?

Since the project currently relies on trucked water (and use of fossil fuels) for the Caples Lake Campground and this fossil fuel usage would be replaced by solar-powered pumps, the project would be in support of and in compliance with the goals of the Alpine County Energy Action Plan, Amador County Energy Action Plan, El Dorado County Resolution 29-2008, and the State's Climate Commitment to reducing the reliance on non-renewable energy sources by half by 2030 (Alpine County 2016, Amador County 2015, El Dorado County 2008, California Energy Commission 2015). The proposed project would reduce overall energy use at the project site locations due to equipment. There would be **no impact**.

3.7 Geology and Soils

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VII. GEOLOGY AND SOILS – Would the project:					
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (<i>Refer to California Geological Survey Special Publication 42.</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 Environmental Setting

The project site locations are on cryumbrept sandy loam 5 to 50 percent slopes (moraine) and rock outcrop (NRCS 2019). Nearby faults include two unnamed Quaternary faults and two pre-Quaternary faults of

undifferentiated age. The faults are part of the Tahoe-Sierra frontal fault zone and are located approximately 6 miles east-northeast of the project site locations. The active, discontinuous, and unnamed Dog Valley Fault Zone is located more than 50 miles north of the site (CGS 2010). There are no Alquist-Priolo Earthquake Fault Zones near the project site locations (CGS 2019a).

3.7.2 Discussion

- a) **Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

The project site locations are not within an Alquist-Priolo Earthquake Fault Zone or in the immediate vicinity of an active fault. Surface fault rupture is most likely to occur on active faults (i.e., faults showing evidence of displacement within the last 11,700 years). Damage from surface fault rupture is generally limited to a linear zone a few yards wide. There would be **no impact**.

- ii) **Strong seismic ground shaking?**

Strong earthquakes generally create ground shaking, with reduced effects as distance increases from the earthquake's epicenter. The area affected by ground shaking in any given earthquake will vary depending on the earthquake's intensity, duration, distance from the project site locations, and the underlying material. Although there are no active faults within 50 miles of the project site locations, ground shaking could occur. However, project designs would comply with California Uniform Building Code (UBC), which is based on the Federal UBC but is more detailed and stringent. Chapter 16 of the California UBC regulates structural design, Chapter 18 regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles, and Appendix J addresses grading considerations. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (California Building Standards Commission [BSC] 2016). All project facilities would be designed in accordance with UBC requirements. Additionally, the nearby Caples Lake and Silver Lake dams are included in an ongoing dam safety program of DWR's Division of Dam Safety to ensure the facility meets all current dam safety standards. Caples Lake and Silver Lake dams are additionally part of the Project 184 Dam Safety Program under FERC's authority. The proposed project would not expose people or structures to potential substantial adverse effects from strong seismic ground shaking. This impact would be **less than significant**.

iii) **Seismic-related ground failure, including liquefaction?**

Seismic shaking can cause ground failure, including liquefaction. Although there are no active faults within 50 miles of the project site locations, ground failure could occur. However, project designs would comply with the California UBC, which is based on the Federal UBC but is more detailed and stringent. Chapter 16 of the California UBC regulates structural design; Chapter 18 regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles; and Appendix J addresses grading considerations. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (BSC 2016). All project facilities would be designed in accordance with UBC requirements. Additionally, the project site locations are not within a known liquefaction zone (CGS 2019b). This impact would be **less than significant**.

iv) **Landslides?**

The project site locations consist of an existing campground and there are no steep slopes that would pose a landslide risk. Grading would occur on minor slopes to ensure current ABA standards are met within the campgrounds. Project designs would comply with California UBC, which is based on the Federal UBC but is more detailed and stringent. Chapter 16 of the California UBC regulates structural design, Chapter 18 regulates the excavation and construction of foundations, retaining walls, and embedded posts and poles, and Appendix J addresses grading considerations. UBC Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils (BSC 2016). All project facilities would be designed in accordance with the requirements of the UBC. Additionally, the project site locations are not within a known landslide zone (CGS 2019b). This impact would be **less-than-significant**.

b) **Result in substantial soil erosion or the loss of topsoil?**

The project site locations consist of an existing campground and there are no steep slopes that would pose a landslide risk on the project site locations. However, grading within the project site locations would be necessary to ensure current ABA standards are met within the campgrounds. Grading and other construction activities could result in the temporary and short-term disturbance of soil and could expose disturbed areas if a storm event were to occur during project implementation. Rainfall of sufficient intensity could dislodge soil particles from the soil surface. Once particles are dislodged and the storm is large enough to generate runoff, substantial localized erosion could occur. In addition, soil disturbance could result in substantial loss of topsoil because of wind erosion. Therefore, this impact would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated BMPs.

EID shall prepare and implement the appropriate Stormwater Pollution Prevention Plan (SWPPP), or Stormwater Management Plan (SWMP), to prevent and control pollution and to minimize and control runoff and erosion in compliance with State and local laws. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events and the BMPs that will be employed to

control pollutant discharge. Construction techniques that will be identified and implemented to reduce the potential for runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. In addition, the SWPPP or SWMP shall include an erosion control plan and BMPs that specify the erosion and sedimentation control measures to be implemented, which may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers re-seeding with native species and mulching to revegetate disturbed areas. If suitable vegetation cannot reasonably be expected to become established, non-erodible material will be used for such stabilization. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment.

The SWPPP or SWMP shall also include a spill prevention, control, and countermeasure plan, and applicable hazardous materials business plans, and shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to spills.

The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions through amendments approved by the Central Valley Regional Water Quality Control Board (RWQCB), if necessary.

Timing: Before and during construction.
Responsibility: EID and Construction Contractor(s).

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from construction-related erosion to a less-than-significant level because a SWPPP or SWMP would be prepared and implemented consistent with permit requirements that would prevent and control pollution and minimize and control runoff and erosion. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

No Impact. See response to Question “a)” above.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

The project site locations contain well-drained moraine deposits and rock outcroppings and are not on expansive soils (NRCS 2019). There would be **no impact**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

There are no septic tanks planned for the proposed project site. The existing campgrounds include vault toilets. The would be replaced with upgraded facilities that meet current ABA standards. Toilets would be installed on new concrete pads overlaying new below grade approved plastic or concrete sewage tanks, similar to existing facilities. The underground tanks are pumped on a regular basis and waste is disposed of at an offsite, approved wastewater treatment facility. Additionally, at the Caples Lake Campground, an existing septic tank at the location of new Camping Unit 28 would be removed from use, protected in place and the pipeline connection would but cut and capped approximately 24 inches below grade. Connection to a sewage system is not available at the project site locations. However, since vault toilets would be pumped regularly as part of campground maintenance, no septic systems or alternative wastewater disposal systems that would require appropriate soils to adequately function are needed at the campgrounds. There would be **no impact**.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The project site locations are on Mesozoic granitic and Tertiary volcanic rocks (CGS 2010). Because the bedrock underlying the site is igneous and/or volcanic in origin, paleontological resources, which are found almost exclusively in sedimentary rocks, are not likely to be encountered. There would be **no impact**.

3.8 Greenhouse Gas Emissions

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
VIII. GREENHOUSE GAS EMISSIONS – Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.8.1 Environmental Setting

Neither El Dorado County, Amador County, or Alpine County has adopted a local plan for reducing greenhouse gas (GHG) emissions.

3.8.2 Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The El Dorado County AQMD, GBUAPCD, and the Amador County Air District have not established CEQA thresholds of significance for GHG emissions. However, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has adopted a CEQA threshold of 1,100 metric tons (MT) of carbon dioxide equivalents (CO₂e) per year for construction GHG emissions (SMAQMD 2015). In the absence of a local threshold, the SMAQMD threshold was used to evaluate the significance of GHG emissions.

As discussed in Section 3.3, Air Quality, the project would result in a net reduction in operational emissions (including GHGs) from the use of solar powered pumps. Project construction would temporarily generate GHG emissions. Construction emissions would be generated by vehicle engine exhaust from heavy-duty construction equipment, haul trips, and construction worker trips.

Table 3-3 shows the proposed project’s estimated GHG emissions. Construction GHG emissions were modeled using CalEEMod. Modeling results are presented in Appendix B. To estimate the maximum potential emissions from construction activities an intensive scenario was considered where construction at each campground, including the offsite water pipeline and well site for the Silver Lake East Campground, occurred concurrently over a 3-month period. As shown in **Table 3-3**, calculated emissions are below SMAQMD’s threshold of significance, and the project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the physical environment. Therefore, this impact would be **less than significant**.

Table 3-3: Construction GHG Emissions

Air District	Project Location	CO ₂ e (MT)
El Dorado AQMD	Offsite water pipeline and well	68
Amador County Air District	Silver Lake East Campground	81
GBUAPCD	Caples Lake Campground	71
SMAQMD CEQA threshold	–	1,100
<i>Exceeds threshold?</i>	–	<i>no</i>

Notes: MT = metric tons; CO₂e = carbon dioxide equivalents; SMAQMD's threshold measures annual GHG emissions; and all project GHG emissions would occur in a single year.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would not conflict with plans, policies, or regulations prepared or established to reduce GHG emissions. The proposed project's incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs would be less than cumulatively considerable. The impact would be **less than significant**.

3.9 Hazards and Hazardous Materials

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.9.1 Environmental Setting

The database search included all data sources included in the Cortese List (enumerated in PRC Section 65962.5). These sources include the GeoTracker database, a groundwater information management system that is maintained by the State Water Resources Control Board (SWRCB); the Hazardous Waste and Substances Site List (i.e., the EnviroStor database), maintained by the California

Department of Toxic Substances Control (DTSC); and EPA's Superfund Site database (DTSC 2018a and 2018b, SWRCB 2018a and 2018b, CalEPA 2018, EPA 2019). There were no hazardous materials sites identified within 0.25 mile of the project site locations. However, FERC has identified two locations approximately 0.5 mile away from the campgrounds that may be used to store hazardous substances: Silver Lake Gate House (batteries and gas-powered generator) and Caples Lake Tender House (propane tank). The project site locations are not in an area identified as more likely to contain asbestos by the California Department of Conservation (DOC 2000). This issue is not discussed further in this IS.

There are no schools within 0.25 mile of the project site locations. The nearest schools to the project site locations are Diamond Valley Elementary School in Markleeville, California and Tahoe Preparatory Academy in South Lake Tahoe, California; both sites are approximately 25 miles from the project site locations.

3.9.2 Discussion

a), b) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The project consists of temporary construction activities and upgrades to an existing facility and would not result in new or changed long-term activities that would include the use, transport, or disposal of hazardous materials. Project construction would involve the storage, transport, and use of small amounts of hazardous substances necessary to operate and maintain construction vehicles and equipment such as oils, lubricants, and fuel. However, the project would not involve routine or long-term transport or disposal of such materials. None of the proposed project activities would involve the use of acutely hazardous materials.

The transport and use of hazardous materials is strictly regulated by local, State, and Federal agencies to minimize adverse hazards from accidental release. EPA, the California Highway Patrol, Caltrans, and DTSC implement and enforce State and Federal laws regarding hazardous materials transportation. Contractors would be required to use, store, and dispose of any hazardous materials in accordance with all applicable regulations. Additionally, the project would comply with the provisions of the FERC Project No. 184 Hazardous Substances Plan (FERC 2008). However, accidental spills could still occur and therefore the project would have a **potentially significant impact**. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Prepare and Implement a Storm Water Pollution Prevention Plan and BMPs.

Please refer *to* Mitigation Measure GEO-1 in Section 1.7, Geology and Soils, for the full text of this mitigation measure.

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from accidental spill of or exposure to hazardous materials during routine use, transport, or disposal to a less-than-

significant level because a SWPPP would be prepared and implemented. The SWPPP would include a spill prevention, control, and countermeasure plan, and would identify the types of materials used for equipment operation (including fuel and hydraulic fluids), along with measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP would also identify emergency procedures for responding to spills. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated.**

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

There are no schools within 0.25 mile of the project site locations. There would be **no impact.**

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The project site locations are not identified on lists compiled pursuant to Government Code Section 65962.5. There would be **no impact.**

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The project site locations are not within an airport land use plan area or within 2 miles of a public or public use airport (Alpine County 2015, Amador County 2016, El Dorado County Transportation Commission 2018). There would be **no impact.**

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The project would include replacement and minor alteration of existing campground roadway, water supply, and sanitation facilities and would not substantially change campground operations. There would be no increase in the number of users at the campgrounds that could impair emergency response or evacuation. Campsite improvements to meet ABA standards would allow more efficient and safer egress for all users, and the number of camping units would be slightly reduced, resulting in fewer people in need of evacuation during an emergency. Additionally, the short-term, temporary nature of construction and the intermittent nature of material offhauling and drop-off via large trucks at the site would not pose a risk to emergency response or evacuation during an emergency. The project would not adversely affect an adopted emergency response plan. This impact would be **less than significant.**

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The Caples Lake Campground is not located within a fire hazard severity zone or State responsibility area; this portion of the site is entirely within a Federal responsibility area. The Silver Lake East Campground and offsite water pipeline alignment and well site are located in a moderate fire hazard severity zone in a State responsibility area and are adjacent to a Federal responsibility area (Alpine County 2015; Amador County 2016; El Dorado County 2015; CAL FIRE 2007a, 2007b, 2007c). The proposed project would not substantially change operations and maintenance at the project site locations, and construction activities would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. This impact would be **less than significant**.

3.10 Hydrology and Water Quality

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
X. HYDROLOGY AND WATER QUALITY –					
Would the project:					
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.10.1 Environmental Setting

Surface Water

The Caples Lake Campground is near Caples Lake Reservoir on Caples Creek and local drainage from the campground travels overland into Caples Creek. The Silver Lake East Campground and the offsite water pipeline and well site are near Oyster Lake and Silver Lake Reservoir on the Silver Fork American River and local drainage travels overland into Oyster Lake and the Silver Fork American River.

Water Quality

The project site locations are in the Sacramento Hydrologic Basin Planning Area, the American Hydrologic Unit, and the Silver Fork Hydrologic Unit Subarea, as designated by the Central Valley RWQCB (CVRWQCB 2018). In accordance with Clean Water Act Section 303, water quality standards for this basin are contained in the Water Quality Control Plan for the Sacramento River Basin and the San Joaquin River Basin. Stormwater runoff from the project site locations is received by Caples Creek, Oyster Lake, Oyster Creek, and the Silver Fork American River, as described above. There are no water bodies on or near the project site locations that appear on the 303(d) list as an impaired water (SWRCB 2017).

Naturally-occurring arsenic has been documented in the existing well at the Caples Lake Campground that is proposed to supply drinking water under the proposed project (McC Campbell Analytical 2017, 2018a, 2018b). Preliminary testing of the well has shown that arsenic level low enough to be effectively treated by conventional water treatment methods and a small water filtration system would be installed at the site of the water tanks, if needed, to treat water to satisfy applicable water quality standards. The applicable drinking water standards for EID's potable water system are provided in the California Domestic Water Quality and Monitoring Regulations, Title 22 of the California Administrative Code. These regulations incorporate EPA requirements in conformance with the Safe Drinking Water Act (PL 93-523). The standards specify water quality sampling frequencies and location as well as maximum concentrations of chemical constituents and are continually revised and amended. Additionally, EID would apply for a Domestic Water Supply Permit from SWRCB to operate the campground water supply wells.

Groundwater

The project site locations are not within a Bulletin 118 designated groundwater basin or located within a groundwater basin designated as "High Priority" or "Critically Overdrafted" (DWR 2003, 2019). The Caples Lake Campground is within the boundaries of the Alpine County Groundwater Management Plan area (Alpine County 2007).

Flood Management

The project site locations are not located within a 100-year flood zone. The Alpine County portion of the project area is mapped as Zone D (areas of undetermined but possible flood risk) on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (map panel 0606320075A: FEMA 1987). The Amador County portion of the project site is mapped as Zone X (areas of minimal flood hazard) (map panel 06005C0050F 2010: FEMA 2010). The El Dorado County portion of the project site is

mapped as Zone D (areas of undetermined but possible flood risk) (map panel 06017C0925E: FEMA 2008).

The project site locations are not within a mapped dam inundation zone (Alpine County 2017, Amador County 2016, El Dorado County 2004). The project is not located in a coastal area and is outside of a tsunami hazard zone. Water bodies in the project area large enough to be subject to large, damaging seiche as a result of an earthquake consists of lakes and reservoirs including Caples Lake and Silver Lake reservoirs. The land adjacent to these reservoirs is held in recreational use and open space, with few occupied structures other than the Caples Lake Resort and Kit Carson Resort.

3.10.2 Discussion

a) Violate any water quality standards or waste discharge requirements? Otherwise substantially degrade surface or ground water quality?

Constructing the project could affect water quality in Caples Creek, Oyster Lake, Oyster Creek, or the Silver Fork American River in the immediate vicinity of areas disturbed during construction by contributing sediment or other contaminants directly or indirectly into the receiving water bodies. Materials used during demolition of existing facilities, grading, paving, and construction of new facilities could also produce sediment-laden runoff or contamination. This impact would be **potentially significant**. The following mitigation measure has been identified to address this impact:

Mitigation Measure GEO-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Associated BMPs.

Please refer to Mitigation Measure GEO-1 in Section 1.7, Geology and Soils, for the full text of this mitigation measure.

Implementing Mitigation Measure GEO-1 would reduce the potentially significant impact from accidental spill of or exposure to hazardous materials during routine use, transport, or disposal to a less-than-significant level because a SWPPP would be prepared and implemented. The SWPPP would include a spill prevention, control, and countermeasure plan, and would identify the types of materials used for equipment operation (including fuel and hydraulic fluids), along with measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP would also identify emergency procedures for responding to spills. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Although the project would include use of groundwater supplies to supply potable water to the campgrounds for drinking, washing, and other uses by campground users, the pumping capacity of the wells are small (3 gpm for Caples Lake Campground and 7.5 gpm for Silver Lake East and West Campgrounds) and use of groundwater onsite would be moderated by the small size of onsite storage

tanks (2,000 gallons for Caples Lake Campground and 2,500 gallons for Silver Lake East Campground). In addition, the Caples Lake Campground well would only pump during daylight hours when the solar panel is activated and would use water from storage tanks at night. Water system improvements also include installing new valves, blowoffs, meter, backflow prevention, and water faucets, and include a sump excavated below ground and filled with drainage rock, at numerous locations throughout both campgrounds.

Project construction is not expected to come into contact with groundwater based on the limited depths of excavation, grading, or blasting. The campgrounds are currently supplied by groundwater (either trucked from a spring across Caples Lake Dam or from a nearby spring) and the proposed project would not change this use or quantity, only the location of the supply. Therefore, there would be no impact to regional groundwater levels or rate of groundwater recharge. This impact would be **less than significant**.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i, ii, iii, iv) Result in substantial erosion or siltation on- or off-site? Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite? Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? Impede or redirect flood flows?

The proposed project would not substantially alter the drainage pattern of the site or impede or redirect flood flows. Grading conducted for the improvements would follow natural drainage patterns. Additionally, on-site drainage would be improved and potential for siltation would be reduced due to cleaning or replacing existing culverts along the campground roadways and within the camping units. Rip-rap rock would be placed at the entrance and exit of the new culvert openings to reduce water velocity and erosion risk. Additionally, rocked low-water crossing would be installed to reduce erosion potential from storm drainage at the project site locations and on-site drainage ditches would be excavated to be approximately 3 feet wide and 6 inches deep.

Stormwater would be diverted during construction in accordance with Mitigation Measure GEO-1 to avoid erosion or siltation, but these temporary changes would not result in substantial erosion, siltation, or flooding on- or off-site. The project would eliminate impervious surfaces by removing parking spurs and other existing facilities, increasing impervious surfaces from minor widening of the campground roadways, expanding/replacing parking spurs, and developing access to new restrooms and other new facilities (such as water tanks). Overall, a slight net increase in impervious surfaces would result, but impervious surfaces would be limited to the area of the existing campground roadway and adjacent areas and no new areas would be made impervious. Therefore, the project is anticipated to result in only minor differences in stormwater runoff and would not exceed existing natural drainage systems or result in flooding on- or offsite. The project would not substantially change operation of the campgrounds and

associated facilities in any way that would produce substantial additional sources of polluted runoff. Therefore, this impact would be **less than significant**.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project site locations are not within a mapped 100-year flood hazard area. If a seiche were to occur near the project site locations, it likely would not damage the campground or associated facilities due to their location at a substantial distance from the shores of Caples and Silver lakes, and the risk of damage to these facilities would not change from existing conditions at the site; the project would not expose people or structures to additional danger from such an event. There is no tsunami risk at the project site locations. There would be **no impact**.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Please refer to the discussion above under (a), (b), and (c). The project would not result in other effects that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. This impact would be **less than significant**.

3.11 Land Use and Planning

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XI. LAND USE AND PLANNING – Would the project:					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.11.1 Environmental Setting

The project site locations are on Federal lands managed by USFS and also in an area designated as OS (Open Space) by Alpine County (Caples Lake Campground), OF (Open Forest) and GF (General Forest) by Amador County (Silver Lake East Campground), and Natural Resources/Forest Resource (160 acres) by El Dorado County (offsite water pipeline alignment and well site) (Alpine County 2017, Amador County 2016, and El Dorado County 2004 and 2012, respectively). The Caples Lake and Silver Lake East campgrounds are currently developed as campgrounds with associated facilities and infrastructure. The offsite water pipeline alignment is within existing roadways, SR 88, and an EID maintenance road. The offsite well is located at an existing well site at the end of the EID maintenance road on property owned by EID.

3.11.2 Discussion

a) Physically divide an established community?

The project site locations are very close to Caples and Silver lakes in an area developed for recreation. The proposed project consists of replacement and minor alteration of existing campgrounds, infrastructure, and other facilities and would not physically divide an established community. There would be **no impact**.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project consists of replacement and minor alteration of existing campgrounds and associated infrastructure. During the 2006 FERC relicensing, various parties engaged in a public and collaborative process to execute a multiple party Settlement Agreement containing measures to protect, mitigate, and enhance resources affected by Project No. 184. Section 20 of the Settlement Agreement identifies specific

recreation conditions and improvements that were adopted into the FERC license. There would be no change in land use associated with implementing the project, and the project would not conflict with land use plans or policies adopted for the purpose of avoiding or mitigating an environmental effect. There would be **no impact**.

3.12 Mineral Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XII. MINERAL RESOURCES – Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.12.1 Environmental Setting

There are no known mineral resources at the project site locations (Amador County 2016, CGS 2001, Clark 1977, McKee et al. 1981, El Dorado County 2003).

3.12.2 Discussion

- a) **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

There are no known mineral resources at the project site locations. There would be **no impact**.

- b) **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?**

There are no locally designated mineral resources at the project site locations. There would be **no impact**.

3.13 Noise

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIII. NOISE – Would the project:					
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or Federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.13.1 Environmental Setting

The project site locations are within existing campgrounds and adjacent to developed outdoor recreation facilities. The campgrounds would be closed during construction activities. It is anticipated some recreational use of the surrounding areas would occur during construction in fall and spring. Construction could occur during summer, the heaviest recreation season, if weather conditions make construction during fall and spring infeasible. The closest sensitive noise receptors are Caples Lake Resort approximately 450 feet from the Caples Lake Campground and Kit Carson Lodge approximately 650 feet from the Silver Lake East Campground. There are no sensitive receptors near the offsite water pipeline and well site that would take place in El Dorado County.

The Alpine County and Amador County General Plans establish a protection standard of 50 decibels (dB) and 60 dB equivalent continuous sound level (L_{eq}), respectively, between 7 a.m. and 10 p.m. (Alpine County 2017 and Amador County 2016, respectively).

3.13.2 Discussion

- a) **Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable standards of other agencies?**

Following construction activities, facility operations and maintenance would be similar to activities that occur now without the proposed project. The well pump at the Caples Lake Campground may emit perceptible noise when operating during the day (water from the tanks is used at night). However, noise would not be significant due to the small size of the well (3 gpm).

Construction noise impacts typically occur when construction activities take place during noise-sensitive times of the day (e.g., early morning, evening, or nighttime hours), when construction activities occur immediately adjacent to noise sensitive land uses, or when construction durations last over extended periods of time.

The project would generate construction noise from equipment operating at the project site locations, from blasting, and from the transport of construction workers, construction materials, and equipment to and from the project site locations. The list of construction equipment that may be used for project construction activities is shown in **Table 3-4** with typical noise levels generated at 50 feet from the equipment (reference levels). Since the closest sensitive noise receptors are approximately 450 feet from the Caples Lake Campground and approximately 650 feet from the Silver Lake East Campground, construction noise levels at the sensitive noise receptors would be considerably lower, and due to shielding from the high density of trees and traffic on SR 88, may not be perceptible.

Table 3-4: Construction Equipment and Typical Equipment Noise Levels

Type of Equipment	Typical Noise Levels (dB)
	L_{max} at 50 Feet
Backhoe	80
Concrete Mixer Truck	79
Dump Truck	76
Excavator with hammer	81
Compactor	80
Grader/Paving Equipment	85
Jackhammer	89
Paver	77
Pick-up Truck	75
Rock Drill	81

Notes: dB = decibels; L_{max} = maximum instantaneous sound level;

L_{eq} = 1-hour equivalent sound level (the sound energy averaged over a continuous 1-hour period)

Source: Construction equipment list based on Federal Highway Administration 2006, adapted by GEI in 2019

The Alpine County and Amador County General Plans sets a noise standard of 50-60 dB L_{eq} between 7 a.m. and 10 p.m. Chapter 18.68 (General Requirements and Exemptions) of the Alpine County Code exempts construction noise between the hours of 8 a.m. and 6 p.m. Monday through Friday; and between 9 a.m. and 3 p.m. on Saturday and Sunday. The Amador County Municipal Code does not include ordinances specifically related to noise; however, the Noise Element of the Amador County General Plan provides policies and implementation measures to control noise including the requirement that all construction equipment shall be properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., mufflers, silencers, wraps); all impact tools would be shrouded or shielded; and all intake and exhaust ports on power equipment would be muffled or shielded. Since all project-related construction activities would only occur within the hours specified in the Alpine County code and construction vehicles and equipment would be properly maintained and fitted with noise suppression devices per Amador County General Plan requirements, the proposed project would not violate the Alpine or Amador county construction noise standards, and this impact would be **less than significant**.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Ground vibration would only be caused by construction activities and varies based on the equipment and activities. **Table 3-5** presents ground vibration levels associated with various construction equipment used during project construction. The project may cause random and/or transient groundborne vibration from construction equipment use (such as a jackhammer to break up concrete pads and pavement). Vibrations may be detectable at the noise sensitive receptors nearby both campgrounds for brief periods. However, based on the vibration levels discussed above and presented in **Table 3-5**, and a distance of 450 and 650 feet to the nearest sensitive noise receptors, predicted vibration levels would not be anticipated to exceed the threshold of 0.3 inch per second peak particle velocity (ppv) for continuous vibration sources at the nearest receptor structure.

Table 3-5: Representative Vibration Source Levels for Construction Equipment

Type of Equipment	Peak Particle Velocity at 25 feet (in/sec)	Estimated Peak Particle Velocity at Nearest Residential Structure
Large Bulldozer	0.089	0.004
Caisson Drilling	0.089	0.004
Loaded Trucks	0.076	0.003
Jackhammer	0.035	0.001
Small Bulldozer	0.003	0.000

Notes: Estimated peak particle velocity (ppv) at the nearest structure calculated using $PPV_{Equipment} = PPV_{Ref} (25/D)^n$ (inches/second), where D is the distance from the equipment to the receiver (in this case, 450 feet), and n is 1.1, a value related to the attenuation rate through ground. (Caltrans 2013 Equation 12)

Source: Federal Transit Administration 1995

Construction for the new water pipeline at the Caples Lake Campground may require minor blasting with a charge cord. Vibration from blasting varies depending on the weight of the charge, geological characteristics, and distance to the source. Typical blasting vibration has been measured between 0.26 and 0.5 inch per second ppv at approximately 260 feet, and 0.09 and 0.13 inch per second ppv at 400 feet,

based on a 4-pound detonation charge (U.S. Army 1989). Caltrans recommends thresholds of 0.5 inch per second ppv for transient sources such as blasting, or 0.3 inch per second ppv for continuous sources such as piledrivers to avoid structural damage to older residential structures (Caltrans 2013). Based on the vibration levels discussed above for blasting and a distance of 450 feet to the nearest sensitive noise receptor at the Caples Lake Campground, predicted vibration levels from blasting would not be anticipated to exceed the threshold of 0.3 inch per second ppv for continuous vibration sources at the nearest receptor structure. Therefore, this impact would be **less than significant**.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

The project is not located within 2 miles of a public airport or private airstrip. There would be **no impact**.

3.14 Population and Housing

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIV. POPULATION AND HOUSING – Would the project:					
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.14.1 Environmental Setting

The project site locations are in unincorporated areas of Alpine, Amador, and El Dorado counties. The population was estimated in 2018 to be 1,154 in Alpine County; 38,094 in Amador County; and 188,399 in El Dorado County (DOF 2018).

3.14.2 Discussion

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would not develop a new long-term or permanent water supply that would support or facilitate construction of new homes or businesses or extend roadways or other infrastructure that could increase population near the proposed project. The project does not involve construction of any permanent housing, only the continued, seasonal use of existing campgrounds. The use of existing trucked water and USFS spring water supplies would be replaced by more reliable EID wells and on-site short-term storage in water tanks, but total water usage would not increase and would not facilitate population growth in the area. Therefore, the proposed project would have no potential to directly or indirectly induce population growth. There would be **no impact**.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project would not displace any houses or people. There would be **no impact**.

3.15 Public Services

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XV. PUBLIC SERVICES – Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.15.1 Environmental Setting

The project site locations are within the boundaries of the ENF and where three counties (Alpine, Amador, and El Dorado) converge. Due to the multiple jurisdictions converging in the project vicinity, multiple entities may respond to the project site locations during an emergency (police, fire, ambulance), due to proximity and/or mutual aid agreements. Responding agencies could include: Alpine County Sheriff, Amador County Sheriff, El Dorado County Sheriff, California Highway Patrol, Amador Fire Protection District, El Dorado County Fire Protection District, Markleeville and Woodfords Fire Departments, Kirkwood Volunteer Fire Department (part of the Kirkwood Meadows Public Utility District), Lake Valley Fire Department, California Department of Forestry and Fire Prevention, and USFS (via the Camino Interagency Dispatch). The nearest fire station is located approximately 5 miles away at 33540 Loop Road, Kirkwood, California. The nearest sheriff station is approximately 25 miles away in Markleeville, California.

3.15.2 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for public services, including fire protection, police protection, schools, or other public facilities.**

The proposed project involves improving and replacing existing camping units, infrastructure, and other facilities and would not result in new or more intense uses or population at the project site locations and would not increase the need for public services from existing conditions. Overall, the improvements would result in a net reduction of camping units, resulting in fewer potential campground users on-site at any time.

New facilities such as restrooms would replace existing facilities at the campgrounds. A new building would be installed adjacent to the offsite well to house the water tanks and a backup generator for the well pump solar system and would not be regularly occupied or require public services. Since the project would not develop buildings requiring public services or increase the number of users at the campgrounds, the project would not impede or increase response times for fire protection, police protection, or other public services. Since the project involves only seasonal recreational facility improvements and no new residential construction, no new schools would be needed. This impact would be **less than significant**.

3.16 Recreation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVI. RECREATION – Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.16.1 Environmental Setting

The area surrounding the project site locations is heavily used for recreation including: boating, fishing, hiking, wildlife viewing, scenic drives, camping, picnicking, and cross-country skiing and snowmobiling during winter. The Caples Lake and Silver Lake East campgrounds are only open for use from June 1 through October 15, weather permitting.

At the Caples Lake Campground, a total of 3,683 people paid for 1,354 camping units during the 2017 peak season. The average number of people camping at the Caples Lake campground over the previous 6 years was 5,065. In general, past surveys show that occupancy is highest between the last week in June and the second week of August, often reaching capacity during this period on weekends. Occupancy of individual camping units has stayed consistent over the past 6 years, at around 2.8 people per site (AECOM 2017).

At the Silver Lake East Campground, a total of 12,882 people paid for 3,336 camping units during the 2017 season. The average number of people camping at this campground over the previous 6 years was 13,904. In general, past surveys show that occupancy is highest between the last week of June and the first week of August and often reaches capacity during this period on weekends. Occupancy of individual camping units has stayed consistent over the 6-year sample period, at around 3.6 people per site (AECOM 2017).

3.16.2 Discussion

a), b) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

The proposed project would not generate new demand for recreational facilities, and there would be no increase in use of the existing campgrounds and associated facilities that could cause physical deterioration and require repairs beyond normal maintenance activities. The project also would not generate a need for new or expanded recreational facilities due to project implementation since the existing campgrounds uses would continue on-site. To meet ABA standard site size and requirements, the number of camping units available for public use would be slightly reduced from 36 to 30 at the Caples Lake Campground and from 62 to 59 at the Silver Lake East Campground. This change represents a permanent 9 percent decrease in the number of camping units. The FERC license and USFS conditions do not require construction of new recreation facilities to compensate for the reduction in camping units. Additionally, both campgrounds would be closed during construction, planned for fall 2019 and spring 2020. Closure of the campgrounds in summer could occur if weather conditions make construction in fall and spring infeasible. However, due to the extensive availability of camping at other sites within the region, this reduction of camping units and temporary closure during construction would be **less than significant**.

3.17 Transportation

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVII. TRANSPORTATION – Would the project:					
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.17.1 Environmental Setting

The project site locations are in rural portions of Alpine, Amador, and El Dorado counties. Access to the project site locations is provided via SR 88. The Alpine County and Amador County General Plans identify a standard of Level of Service C for SR 88 (Alpine County 2017, Amador County 2016). There are no transit or on-street bicycle/pedestrian facilities near the project site locations. Additionally, the campground roadways are dead-end loop roads and there is no access to other facilities via the loop roads.

The Institute of Transportation Engineers has recommended a screening criterion for assessing the effects of construction projects that create temporary traffic increases (ITE 1989). To account for the large percentage of heavy trucks associated with typical construction projects, the Institute of Transportation Engineers recommends a threshold level of 50 or more new peak-direction truck trips during the peak-hour. Therefore, a project would cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system, and result in a significant effect related to traffic, if they would result in 50 or more new truck trips (100 passenger car equivalent [PCE] trips) during the a.m. or p.m. peak hours. This is considered an “industry standard” and is the most current guidance for significance thresholds.

3.17.2 Discussion

a), b) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Construction-related activity from the proposed project may potentially disrupt the existing transportation network in the surrounding project area. The campground roadways would be closed during construction. Otherwise, no lane, street, sidewalk, or bikeway closures are planned, but heavy construction vehicles, materials, and workers would travel to and from the site on a two-lane mountain highway during the season of heaviest recreational use. As a result of these activities, existing roadway operation conditions along SR 88 may be degraded. Approximately 165 truck trips could be required for off-hauling soil and construction debris from the project site locations during the construction period. An additional approximately 200 truck trips over 4 weeks (weekdays only) may be required to deliver construction materials to the project site locations.

The construction period is anticipated to extend 5 months for each project beginning in September 2019 at Caples Lake Campground and continuing as long as weather allows and resuming in 2020 at Silver Lake East Campground. The intensive scenario considers construction of both projects concurrently over a 3-month period in 2020. Altogether, 365 truck trips could occur, for an average of approximately 2.5 truck trips per day and up to 12.5 truck trips per day during the 4-week period when deliveries are made to the project locations. Up to eight construction workers would be present at any given time. Construction-related activity would therefore require substantially less than the threshold of 50 heavy truck trips (or 100 passenger car equivalent trips) during the peak a.m. or p.m. hour.

There are no transit or bicycle facilities that would be affected by the proposed project. The maximum number of vehicle trips by camping users would potentially be reduced after project construction due to the overall reduction in camping units. EID would assume responsibility for operating and maintaining the new groundwater well and water supply system for the Silver Lake East and West campgrounds, replacing USFS which has been responsible for operating and maintaining the existing spring and water supply system. This would result in periodic new worker trips to the new offsite well site by EID for inspections and maintenance. EID historically maintained the water supply spring on the opposite side of the Caples Lake Dam. EID currently trucks water to the Caples Lake Campground as needed. Under the proposed project, these truck trips would cease and EID would instead maintain the well at the Caples Lake Campground resulting in a slight reduction in worker truck trips for well maintenance. Overall, truck trips for operations and maintenance would not significantly change from existing conditions. This impact would be **less than significant**.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would improve the geometry of campground roads and parking spurs to improve accessibility and meet ABA standards. The project would not introduce incompatible uses on roadways at the project site locations. There would be **no impact**.

d) Result in inadequate emergency access?

The project would not require road closures or other changes which could result in inadequate emergency access. The increased number of construction-related trucks to and from the project site locations during construction activities would be small and not effect emergency access. There would be **no impact**.

3.18 Tribal Cultural Resources

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XVIII. TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.18.1 Environmental Setting

The region south of Lake Tahoe is the ancestral home of the Washoe, although it was also used seasonally by the Nisenan and Northern Miwok from the western Sierra foothills, and by the Northern Paiute, from the Great Basin, to the east of the mountains. The Washoe language is from the Hokan stock, and is regionally unique (Jacobsen 1986). Great Basin languages are from the Numic family. Nisenan languages are related to Maiduan languages and come from the Penutian stock (Wilson and Towne 1978). Miwok languages are in the Uto-Aztecan family (Levy 1978). The long history of interaction between these cultural groups is confirmed by ethnohistoric reports (Downs 1966) and evinced by Washoe words with origins of Miwokan, Maiduan, and Numic origin (Jacobsen 1986).

Washoe villages were typically established in valleys of moderate altitude, around 4,500 to 5,500 feet above sea level, with a core territory of approximately 4,000 square miles. However, the Washoe made extensive use of lands of both higher and lower elevation than the village sites during seasonal rounds, expanding their territory to more than 10,000 square miles (Jacobsen 1986).

The expansive territory and porous borders granted the Washoe abundant dietary options, including wild game, fish, seeds, greens, and geophytes (e.g., roots, bulbs, and tubers). Both acorns and pine nuts were important dietary staples. In the environment of Caples Lake, pine nuts would have been a preferred food. Pine cones were gathered in autumn, dried, and either stored in that form in caches covered by pine boughs or roasted to release the nuts (D’Azevedo 1986). Pine nuts were parched and their shells cracked with a mano (handstone), cleaned and winnowed, and then eaten whole or ground into flour in a shallow mortar, like those seen in bedrock milling features near the project.

Methods and Findings

GEI sent a request to the NAHC requesting a list of Native American contacts for the proposed project area, requesting a search of the NAHC’s Sacred Lands File. The NAHC responded on February 2, 2018, regarding the Caples Lake Campground, and on February 12, 2018, regarding the Silver Lake East Campground, and indicated that there are no known Sacred Sites listed in their Sacred Lands File Database for the proposed project areas. They provided a list of Native American contacts for each project location. On March 22, 2019, EID sent letters to United Auburn Indian Community of the Auburn Rancheria, Wopumnes Nisenan-Mewuk Nation of El Dorado County, Torres Martinez Desert Cahuilla Indians, and Wilton Rancheria in accordance with requirements of Assembly Bill 52 (PRC Section 21080.3.1). EID received Assembly Bill 52 consultation request on April 16, 2019, from the Wilton Rancheria. EID responded to the consultation request and provided additional project information to the Wilton Rancheria on May 14, 2019. No additional correspondence has been received to date. Refer to **Appendix E** for consultation information.

No Tribal Cultural Resources are known to be present within the project area based on the negative results of the Sacred Lands File database search; the lack of previously identified Tribal Cultural Resources in the project area; and the absence of Native American archaeological sites, human remains, or other Native American cultural resources revealed during the background investigation or pedestrian survey. However, it is possible that further consultation with culturally affiliated Tribes could identify previously unidentified Tribal Cultural Resources.

3.18.2 Discussion

- a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?**

- b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with**

cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.

Tribal Cultural Resources are either (1) sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that is either in or eligible for inclusion in the CRHR or a local historic register; or (2) a resource that the lead agency, at its discretion and supported by substantial evidence, chooses to treat as a Tribal Cultural Resource. In addition, a cultural landscape may also qualify as a Tribal Cultural Resource if it meets the criteria to be eligible for inclusion in the CRHR and is geographically defined in terms of the size and scope of the landscape. Other historical resources (as described in California PRC 21084.1), a unique archaeological resource (as defined in California PRC 21083.2[g]), or non-unique archaeological resources (as described in California PRC 21083.2[h]), may also be a Tribal Cultural Resource if it conforms to the criteria to be eligible for inclusion in the CRHR.

No Tribal Cultural Resources are known to be present within the project area. Though very unlikely, the possibility remains that a Tribal Cultural Resource may be revealed during project-related ground-disturbing activities or through further consultation with culturally affiliated Tribes. If this were to occur, then it would be a **potentially significant impact**. Implementation of Mitigation Measure CR-1 would address this impact:

Mitigation Measure CR-1: Address Previously Undiscovered Historic Properties, Archaeological Resources, and Tribal Cultural Resources.

Please refer to Mitigation Measure CR-1 in cultural resources impact a) above for the full text of this mitigation measure.

Implementing Mitigation Measure CR-1 would reduce the potential impact related to discovery of unknown Tribal Cultural Resources to a less-than-significant level because the find would be assessed by Culturally affiliated Tribes and the identification and implementation of avoidance or minimization measures would be conducted in consultation with the Tribes. Therefore, the proposed project would have a **less-than-significant impact with mitigation incorporated**.

3.19 Utilities and Service Systems

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:					
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Comply with Federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.19.1 Environmental Setting

The project site locations and vicinity are served by Pacific Gas & Electric Company for electrical power, and EID (or their Contractor) is responsible for pumping wastewater from vault toilet sewage tanks and providing trash removal service (CEC 2016). Potable water needs at the Caples Lake Campground are currently served by EID trucking in water from a spring across Caples Lake Dam and at the Silver Lake East Campground from an existing spring maintained by USFS. The nearest solid waste transfer stations are in Ione, California and South Lake Tahoe, California. The most likely location for offhauled soil disposal would be in South Lake Tahoe, approximately 40 miles from the project site locations. The facility likely to be used for construction debris generated by the project is the Kiefer Landfill, located approximately 80 miles southwest of the project site locations (CalRecycle 2018).

3.19.2 Discussion

- a) **Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?**

Under the proposed project, the existing water supply system would be replaced by bringing two existing grounding wells into operation, installing new water tanks and solar power systems at each well, and installing new water distribution pipelines from the wells to restrooms and faucets at the campgrounds. Potable water demand would not increase from the project and would likely be slightly reduced due to an overall reduction in camping units. The project would not generate any new wastewater demand requiring expanded facilities. The project would not require new electrical power (other than the solar systems installed for the well pumps) or natural gas. The proposed project would not require new stormwater facilities, only cleaning or replacing existing culverts and constructing one new culvert beneath the parking spur at Camping Unit 5 at the Silver Lake East Campground. Surface runoff from the project site locations drains overland to local drainages and to nearby Caples Creek, Oyster Creek, and the Silver Fork American River, as described in Section 3.10, Hydrology and Water Quality, with no off-site stormwater infrastructure. There would be **no impact**.

- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?**

The proposed project would provide long-term reliable and local water supplies for the Caples Lake and Silver Lake East and West campgrounds by making existing groundwater wells operational. Existing water supplies from springs with water rights would be replaced by the groundwater wells. Potable water demand would not increase from the project and would likely be slightly reduced due to an overall reduction in camping units. Although EID has no current plans to continue using water from the existing spring water source for the Silver Lake East and West campgrounds, installing a turnout on the new water pipeline would provide the option of using water from the spring in the new water supply system in the future. No new or expanded entitlements are needed to serve the project. There would be **no impact**.

- c) **Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

The proposed project would not generate new wastewater since it involves replacing existing facilities. Connection to a sewage system is not available at the project site locations. The underground toilet vaults are pumped on a regular basis and waste is disposed of at an offsite, approved wastewater treatment facility. There would be **no impact**.

d), e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with Federal, state, and local management and reduction statutes and regulations related to solid waste?

The proposed project would generate demolition debris during the construction phase, which would be disposed of in compliance with Federal, State, and local regulations related to solid waste. The most likely site for disposal of construction debris is the Kiefer Landfill, located approximately 80 miles southwest of the project site locations. Kiefer Landfill is currently permitted through 2064, with a maximum capacity of 10,815 tons per day (CalRecycle 2018). Kiefer Landfill has adequate capacity to meet the project's disposal needs. This impact would be **less than significant**.

3.20 Wildfire

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XX. WILDFIRE.					
If located in or near State responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
f) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.20.1 Environmental Setting

The Caples Lake Campground is not located within a fire hazard severity zone or State responsibility area; this portion of the project site is entirely within a Federal responsibility area. The Silver Lake East Campground and offsite water pipeline alignment and well site are located in a moderate fire hazard severity zone in a State responsibility area and are adjacent to a Federal responsibility area. (Alpine Fire Safe Council 2018, Amador County 2016, El Dorado County 2015, CAL FIRE 2007a, 2007b, 2007c.)

3.20.2 Discussion

a), b), c), d) **Substantially impair an adopted emergency response plan or emergency evacuation plan? Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?**

The project site locations are not in a very high fire hazard severity zone. The project would include replacement and minor alteration of existing camping units, infrastructure, and other facilities. New solar panels would be installed adjacent to the wells and connected with electrical conduit. There would be no increase in the number of users at the site due to campground facility replacement that could impair emergency response or evacuation; there would likely be a reduction due to the elimination of camping units. Additionally, the short-term, temporary nature of construction and the intermittent nature of material offhauling and drop-off via large trucks at the project site locations would not pose a risk to emergency response or evacuation during an emergency. The project would not require any infrastructure that would exacerbate fire risk or the risk of flooding, slope instability, or drainage changes. There would be **no impact**.

3.21 Mandatory Findings of Significance

Environmental Issue	Potentially Significant Impact	Less-than-Significant Impact with Mitigation Incorporated	Less-than-Significant Impact	No Impact	Beneficial Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE – Would the project:					
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Authority: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.

Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

3.21.1 Environmental Setting

3.21.2 Discussion

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

The analysis conducted in this IS concludes that implementing the proposed project would not have a significant impact on the environment. As evaluated in Section 3.4, Biological Resources, impacts on biological resources would be less than significant or less than significant with mitigation incorporated. The proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Section 3.5, Cultural Resources, the proposed project would not eliminate important examples of the major periods of California history or prehistory. This impact would be **less-than-significant with mitigation incorporated**.

- b) **Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

As discussed in this IS, the proposed project would result in less than significant impacts with mitigation incorporated, less-than-significant impacts, or no impacts on aesthetics, air quality, biological resources, cultural resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and service systems.

The temporary nature of the proposed project’s construction impacts (approximately 10 months cumulatively), and the minor, negligible changes to long-term operations and maintenance at the project site locations would result in no impacts or less-than-significant environmental impacts on the physical environment. None of the proposed project’s impacts make cumulatively considerable, incremental contributions to significant cumulative impacts with incorporation of mitigation presented in this IS. This impact would be **less-than-significant with mitigation incorporated**.

- c) **Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?**

The proposed project would result in less-than-significant impacts and would not cause substantial adverse effects on human beings, either directly or indirectly. The impact would be **less than significant**.

This page left intentionally blank

Chapter 4. References Cited

1. Introduction

No references cited.

2. Project Description

FERC. Federal Energy Regulatory Commission. 2016. *Recreation-related License Conditions Status Update and Request for Modifications and/or Time Extensions*. September 2016.

_____. 2006. *El Dorado Irrigation District, Project No. 184-065, Order Issuing New License*. Available: <https://www.eid.org/home/showdocument?id=1089>. Accessed: March 20, 2019.

AECOM. 2018. *Report on Recreation Resources, El Dorado Hydroelectric Project No. 184, El Dorado Irrigation District*. Available: <https://www.eid.org/home/showdocument?id=11067>. Accessed: March 20, 2019.

3. Environmental Checklist

3.1 Aesthetics

Alpine County. 2017. *Alpine County General Plan*. Available: <https://www.alpinecountyca.gov/DocumentCenter/View/51>. Accessed: May 14, 2019.

Caltrans. 2019. *California Scenic Highway Mapping System*. Available: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/, Accessed: May 14, 2019.

FHWA. Federal Highway Administration. 1988. *Guidelines for the Visual Impact Assessment of Highway Projects, Determine Viewsheds*. Available: https://www.environment.fhwa.dot.gov/guidebook/documents/VIA_Guidelines_for_Highway_Projects.asp. Accessed: May 14, 2019.

3.2 Agriculture and Forestry Resources

Alpine County. 2017. *Alpine County Final General Plan*. March. Available: <http://alpinecountyca.gov/documentcenter/view/51>. Accessed: May 9, 2019.

Amador County. 2016. *Amador County Final General Plan*. Available: <https://www.amadorgov.org/home/showdocument?id=25568>. Accessed: May 9, 2019.

California Department of Conservation. 2016. *Statewide Williamson Act Lands 2016*. Available: ftp://ftp.consrv.ca.gov/pub/dlrp/wa/2016%20Statewide%20Map/WA_2016_8.5X11.pdf. Accessed: May 9, 2019.

_____. 2019. *California Important Farmland Finder*. Available:
<https://maps.conservation.ca.gov/dlrp/ciff/>. Accessed: May 9, 2019.

El Dorado County. 2004. *Adopted General Plan, Land Use Diagram*. Available:
<https://www.edcgov.us/government/planning/adoptedgeneralplan/figures/documents/LU-1.pdf>.
Accessed: May 9, 2019.

_____. 2012. Draft Zoning Maps. Available:
https://www.edcgov.us/Government/planning/documents/PRD2_8.pdf. Accessed: May 9, 2019.

3.3 Air Quality

CARB California Air Resources Board. 2015. *Area Designations Maps / State and National*. Available at: <https://www.arb.ca.gov/desig/adm/adm.htm>. Accessed: May 22, 2019. (individual maps saved as CARB 2015 a-f).

El Dorado County Air Quality Management District. 2002. *Determining Significance of Air Quality Impact Under the California Environmental Quality Act (CEQA)*. Available:
https://www.edcgov.us/Government/AirQualityManagement/Pages/guide_to_air_quality_assessment.aspx. Accessed: May 21, 2019.

Amador Air District. 2001. *Rules and Regulations*. Available at:
<https://www.amadorgov.org/home/showdocument?id=29057>. Accessed: May 22, 2019.

GBUAPCD. Great Basin Unified Air Pollution Control District. 2016. *Rules and Regulation*. Available:
<https://www.gbuapcd.org/PermittingAndRules/RulesAndRegulations/>. Accessed: May 22, 2019.

3.4 Biological Resources

Please refer to Appendix C and Appendix D.

3.5 Cultural Resources

Alpine County Chamber of Commerce 2018. "Alpine County History." Available at
<https://alpinecounty.com/area-info/alpine-county-history/>. Accessed January 2018.

Anthropological Studies Center 2000. Department of Parks and Recreation (DPR) 523 form. "CHL 661: Old Emigrant Road (Update)." Prepared August 2000.

Blow, Ben 1920. *California Highways: A Descriptive Record of Road Development by the State and by Such Counties as Have Paved Highways*. H.S. Crocker Co., Inc., San Francisco, CA.

D'Azevedo, Warren L. 1986. Washoe. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D'Azevedo, pp. 466-498. Smithsonian Institution, Washington D.C.

Downs, James F. 1996. *The Two Worlds of the Washo: An Indian Tribe of California and Nevada*. Holt, Rinehart and Winston: San Francisco, CA.

- Jacobsen, Jr., William H. 1986. Washoe Language. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D’Azevedo, pp. 107-119. Smithsonian Institution, Washington D.C.
- JRP Historical Consulting Services 2003. DPR 523 form, “Caples Lake Resort.” Prepared June 2003.
- Justice, Noel D. 2002. *Stone Age Spear and Arrow Points of California and the Great Basin*. Indiana University Press, Bloomington, IN.
- Levy, Richard E. 1978. Eastern Miwok. In *Handbook of North American Indians Volume 8: California*, edited by R. F. Heizer, pp. 398-413. Smithsonian Institution, Washington, D.C.
- Moratto, Michael J. 1984. *California Archaeology*. Academic Press, Inc., Orlando, FL.
- California Office of Historic Preservation. 1999. *Technical Assistance Series 10: California State Law and Historic Preservation Statutes, Regulations and Administrative Policies Regarding Historic Preservation and Protection of Cultural and Historical Resources*. State of California, Sacramento, CA.
- Wilson, N. L., and A. H. Towne. 1978. Nisenan. Pages 387–397 in R. F. Heizer (ed.), *California. Handbook of North American Indians*, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

3.6 Energy

- Alpine County. 2016. *Alpine County Energy Action Plan*. December. Available: <https://www.alpinecountyca.gov/DocumentCenter/View/1732>. Accessed: May 9, 2019.
- Amador County. 2015. *Amador County Energy Action Plan*. May. Available: <https://www.amadorgov.org/home/showdocument?id=23721>. Accessed: May 9, 2019.
- CEC. California Energy Commission. 2015. *Fact Sheet: California’s 2030 Climate Commitment – Renewable Resources for Half of the State’s Electricity by 2030*. Available: https://www.energy.ca.gov/commission/fact_sheets/climate_commitments_fact_sheets.html. Accessed: May 10, 2019.
- El Dorado County. 2008. *Resolution No. 20-2008: Environmental Vision for El Dorado County*. March. Available: https://www.edcgov.us/Government/AirQualityManagement/documents/Resolution_No_29-2008.pdf. Accessed: May 10, 2019.

3.7 Geology and Soils

- BSC. 2016. California Building Standards Commission.. *2016 California Building Code, Part 2, Volume 2*. Available: https://codes.iccsafe.org/content/chapter/1874/?site_type=public. Accessed May 10, 2019.

CGS. 2010. California Geological Survey, California Department of Conservation. *Fault Activity Map of California*. Available: <https://maps.conservation.ca.gov/cgs/fam/>. Accessed: May 9, 2019.

_____. 2019a. *Earthquake Zones of Required Investigation*. Available: <https://maps.conservation.ca.gov/cgs/EQZApp/app/>. Accessed: May 9, 2019.

_____. 2019b. Earthquake Fault Zones, Landslides, and Liquefaction Zones. Available: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps>. Accessed: May 9, 2019.

NRCS. 2019. U.S. Department of Agriculture Natural Resources Conservation Service. *Web Soil Survey*. Available: <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>. Accessed: May 10, 2019.

3.8 Greenhouse Gas Emissions

SMAQMD. Sacramento Metropolitan Air Quality Management District. 2015. *SMAQMD Thresholds of Significance Table*. Available: <http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf>. Accessed: May 22, 2019.

3.9 Hazards and Hazardous Materials

Alpine County. 2015. *Alpine County Regional Transportation Plan. December*. Available: <https://www.alpinecountyca.gov/DocumentCenter/View/1089>. Accessed: May 13, 2019.

Alpine Fire Safe Council. 2018. *Alpine County Community Wildfire Protection Plan* Available: <https://drive.google.com/drive/folders/12KJhwZWmHaZ-ma5K2qsYT5NLqg8JWwCn>. Accessed: May 8, 2019.

Amador County. 2016. *Amador County Final General Plan. Figure LU-6 Amador County Airport Locations*. Available: <https://www.amadorgov.org/home/showdocument?id=25568>. Accessed: May 9, 2019.

California Department of Forestry and Fire Protection. (CAL FIRE) 2007a. *Alpine County Fire Hazard Severity Zones in SRA*. Available: http://frap.fire.ca.gov/webdata/maps/alpine/fhszs_map.2.pdf. Accessed: May 8, 2019.

_____. 2007b. *Amador County Fire Hazard Severity Zones in SRA*. Available: http://www.fire.ca.gov/fire_prevention/fhsz_maps_amador. Accessed: May 8, 2019.

_____. 2007c. *El Dorado County Fire Hazard Severity Zones in SRA*. Available: http://frap.fire.ca.gov/webdata/maps/el_dorado/fhszs_map.9.pdf. Accessed: May 8, 2019.

California Department of Toxic Substances Control. (DTSC) 2019a. *Envirostor Hazardous Waste and Substances Site List (Cortese)*. Available: https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_typ

[e=CSITES,OPEN,FUDS,CLOSE&status=ACT,BKLG,COM,COLUR&reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+\(CORTESE\)](#). Accessed: May 13, 2019.

_____. 2019b. *Cortese List: Section 65962.5(a)*. Available:

<https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/>. Accessed: May 13, 2019.

CalEPA. California Environmental Protection Agency. 2018. *Sites Identified with Waste Constituents Above Hazardous Waste Levels Outside the Waste Management Unit*. Available:

<https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf>. Accessed: May 13, 2019.

California State Water Resources Control Board. 2019a. *GeoTracker Database*. Available:

https://geotracker.waterboards.ca.gov/map/?global_id=T0601700073. Accessed: May 13, 2019.

_____. 2019b. *CDO-CAO List*. Available: [https://calepa.ca.gov/wp-](https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx)

[content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx](https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx). Accessed: May 13, 2019.

DOC. California Department of Conservation. 2000. [A General Location Guide for Ultramafic Rocks in California - Areas More Likely to Contain Naturally Occurring Asbestos, 2000, Map scale 1:1,100,000, Open-File Report 2000-19](#). Available:

ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf. Accessed: May 13, 2019.

El Dorado County. 2015. *El Dorado County General Plan, Public Health, Safety, and Noise Element*. Available:

https://www.edcgov.us/Government/planning/adoptedgeneralplan/Documents/6_health-safety.pdf. Accessed: May 8, 2019.

El Dorado County Transportation Commission. 2018. *El Dorado County Airport Land Use Commission*.

Available: <https://www.edctc.org/aviation/>. Accessed: May 13, 2019.

EPA. 2019. Superfund Enterprise Management System (SEMS) Database. Available:

<https://www.epa.gov/enviro/sems-search>. Accessed: May 13, 2019.

FERC. 2008. Project 184 Hazardous Substance Plan. Version 3.0, April.

3.10 Hydrology and Water Quality

Alpine County. 2007. Alpine County Groundwater Management Plan. February. Available:

http://www.water.ca.gov/groundwater/docs/GWMP/NL-1_AlpineCounty_GWMP_2007.pdf. Accessed: May 16, 2019.

Alpine County. 2017. *Alpine County Final General Plan*. March. Available:

<http://alpinecountyca.gov/documentcenter/view/51>. Accessed: May 9, 2019.

- Amador County. 2016. *Amador County Final General Plan*. Available: <https://www.amadorgov.org/home/showdocument?id=25568>. Accessed: May 9, 2019.
- CVRWQCB. California Regional Water Quality Control Board, Central Valley Region. 2018. *Water Quality Control Plan (Basin Plan) for the Central Valley Region*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf. Accessed: May 15, 2019.
- DWR. California Department of Water Resources. 2003. *California's Groundwater Bulletin 118*. Available at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/Statewide-Reports/Bulletin_118_Update_2003.pdf. Accessed May 16, 2019.
- _____. 2019. Groundwater Basin Prioritization. Available: <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed: May 16, 2019.
- El Dorado County. 2004. *Adopted General Plan, Appendix A, Dam Failure Inundation Zone Maps*. Available: <https://www.edcgov.us/government/planning/adoptedgeneralplan/app%20a/documents/A-3.pdf>. Accessed: May 16, 2019.
- FEMA. Federal Emergency Management Agency. 1987. *National Flood Hazard Layer Flood Insurance Rate Maps, Alpine County, CA*. Available: <https://msc.fema.gov/portal/availabilitySearch?addcommunity=060632&communityName=ALPINE%20COUNTY%20UNINCORPORATED%20AREAS#searchresultsanchor>. Accessed: May 1, 2019.
- _____. 2008. *National Flood Hazard Layer Flood Insurance Rate Maps, El Dorado County, CA*. Available: <https://msc.fema.gov/portal/images/btn-printmapfirmette.gif>. Accessed: May 15, 2019.
- _____. 2010. *National Flood Hazard Layer Flood Insurance Rate Maps, Amador County, CA*. Available: https://msc.fema.gov/portal/downloadProduct?filepath=/06/P/Firm/06005C0050F.tif&productTypeID=FINAL_PRODUCT&productSubTypeID=FIRM_PANEL&productID=06005C0050F. Accessed: May 15, 2019.
- McCampbell Analytical, Inc. 2017. Analytical Report Project 21739, EID Caples Lake. December.
- _____. 2018a. Analytical Report Project 21739, EID Caples Lake. August.
- _____. 2018b. Analytical Report Project 21739, EID Caples Lake. October.
- State Water Resources Control Board (SWRCB). 2017. *Final 2014 and 2016 Integrated Report (CWA Section 303(d) List/ 305(b) Report)*. Available:

https://www.waterboards.ca.gov/water_issues/programs/tmdl/2014_16state_ir_reports/category5_report.shtml. Accessed: May 15, 2019.

3.11 Land Use and Planning

Alpine County. 2017. *Alpine County Final General Plan*. March. Available: <http://alpinecountyca.gov/documentcenter/view/51>. Accessed: May 9, 2019.

Amador County. 2016. *Amador County Final General Plan*. Available: <https://www.amadorgov.org/home/showdocument?id=25568>. Accessed: May 9, 2019.

El Dorado County. 2004. *Adopted General Plan, Land Use Diagram*. Available: <https://www.edcgov.us/government/planning/adoptedgeneralplan/figures/documents/LU-1.pdf>. Accessed: May 9, 2019.

_____. 2012. *Draft Zoning Maps*. Available: https://www.edcgov.us/Government/planning/documents/PRD2_8.pdf. Accessed: May 9, 2019.

3.12 Mineral Resources

Amador County. 2016. *Amador County Final General Plan. Figure C-3: Mineral Resource Zones*. Available: <https://www.amadorgov.org/departments/planning/current-general-plan-document-1110>. Accessed: May 8, 2019.

CGS. California Department of Conservation, California Geological Survey. 2001. *CGS Open-File Report 2000-03: Mineral Land Classification of El Dorado County, California*. Available: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/OFR_2000-03/OFR_2000-03_Text.pdf. Accessed: May 8, 2019

Clark, W. B. 1977. *Mines and Mineral Resources of Alpine County, California, County Report 8*, California Division of Mines and Geology. Available: <https://archive.org/details/minesandmineral08clark/page/30>. Accessed May 8, 2019.

McKee, E. H., M. A. Chaffee, F. E. Federspiel, E. L. McHugh, E. E. Cather, D. F. Scott, and C. M. Rumsey. 1981. *Mineral Resource Potential of the Mokelumne Wilderness and Contiguous Roadless Areas, Central Sierra Nevada, California*. Summary report to accompany U.S. Geological Survey Map MF-1201-D. Available: <https://pubs.er.usgs.gov/publication/mf1201D>. Accessed May 8, 2019.

El Dorado County. 2003. *El Dorado County General Plan. Figure CO-1: Important Mineral Resource Areas*. Available: <https://www.edcgov.us/government/planning/adoptedgeneralplan/figures/documents/CO-1.pdf>. Accessed: May 8, 2019.

3.13 Noise

Alpine County. 2017. *Alpine County Final General Plan, Safety Element*. March. Available: <http://alpinecountyca.gov/documentcenter/view/51>. Accessed: May 9, 2019.

Amador County. 2016. *Amador County Final General Plan. Noise Element*. Available: <https://www.amadorgov.org/home/showdocument?id=25568>. Accessed: May 9, 2019.

Caltrans. California Department of Transportation. 2013 (September). *Transportation and Construction Vibration Guidance Manual*. Available: http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf. Accessed: November 26, 2018.

FHWA. Federal Highway Administration. 2006. *Construction Noise Handbook, 9.0 Construction Equipment Noise Levels and Ranges*. Available: https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/handbook09.cfm. Accessed: November 21, 2018.

U.S. Army. U.S. Department of the Army, U.S. Army Corps of Engineers. 1989. *Engineering and Design, Blasting Vibration Damage and Noise Prediction and Control*. 3.14 Population and Housing

3.14 Population and Housing

DOF. California Department of Finance. 2018. *New Demographic Report Shows California Population Nearing 40 Million Mark with Growth Of 309,000 in 2017*. Available: http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-1/documents/E-1_2018PressRelease.pdf. Accessed: May 8, 2019.

3.15 Public Services

No references cited.

3.16 Recreation

AECOM. 2017. Report on Recreational Resources - El Dorado Hydroelectric Project, FERC Project No. 184. El Dorado Irrigation District. June 2018.

3.17 Transportation

Alpine County. 2017. *Alpine County Final General Plan Circulation Element*. March. Available: <http://alpinecountyca.gov/documentcenter/view/51>. Accessed: May 9, 2019.

Amador County. 2016. *Amador County Final General Plan Circulation and Mobility Element*. Available: <https://www.amadorgov.org/home/showdocument?id=25568>. Accessed: May 9, 2019.

ITE. Institute of Transportation Engineers. 1989. *Traffic Access and Impact Studies for Site Development*. Transportation Planners Council. Washington, D.C.

3.18 Tribal Cultural Resources

- D’Azevedo, Warren L. 1986. Washoe. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D’Azevedo, pp. 466-498. Smithsonian Institution, Washington D.C.
- Downs, James F. 1996. *The Two Worlds of the Washo: An Indian Tribe of California and Nevada*. Holt, Rinehart and Winston: San Francisco, CA.
- Jacobsen, Jr., William H. 1986. Washoe Language. In *Handbook of North American Indians, Volume 11: Great Basin*, edited by Warren L. D’Azevedo, pp. 107-119. Smithsonian Institution, Washington D.C.
- Levy, Richard E. 1978. Eastern Miwok. In *Handbook of North American Indians Volume 8: California*, edited by R. F. Heizer, pp. 398-413. Smithsonian Institution, Washington, D.C.
- Wilson, N. L., and A. H. Towne. 1978. Nisenan. Pages 387–397 in R. F. Heizer (ed.), *California. Handbook of North American Indians*, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

3.19 Utilities and Service Systems

- CEC. California Energy Commission. 2016. California Electric Utility Service Areas. Available: https://www.pge.com/tariffs/tm2/pdf/ELEC_MAPS_Service_Area_Map.pdf. Accessed. May 13, 2019.
- CalRecycle. California Department of Resources Recycling and Recovery. 2018. *Solid Waste Information System Facility Detail, Sacramento County Landfill (Kiefer) (34-AA-0001)*. Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/34-AA-0001>. Accessed: May 13, 2019.

3.20 Wildfire

- Alpine Fire Safe Council. 2018. *Alpine County Community Wildfire Protection Plan* Available: <https://drive.google.com/drive/folders/12KJhwZWmHaZ-ma5K2qsYT5NLqg8JWwCn>. Accessed: May 8, 2019.
- Amador County. 2016. Amador County Final General Plan, Safety Element. October. Available: <https://www.amadorgov.org/home/showdocument?id=25580>. Accessed: May 8, 2019.
- El Dorado County. 2015. *El Dorado County General Plan, Public Health, Safety, and Noise Element*. Available: https://www.edcgov.us/Government/planning/adoptedgeneralplan/Documents/6_health-safety.pdf. Accessed: May 8, 2019.

California Department of Forestry and Fire Protection. (CAL FIRE) 2007a. *Alpine County Fire Hazard Severity Zones in SRA*. Available: http://frap.fire.ca.gov/webdata/maps/alpine/fhszs_map.2.pdf . Accessed: May 8, 2019.

_____. 2007b. *Amador County Fire Hazard Severity Zones in SRA*. Available: http://www.fire.ca.gov/fire_prevention/fhsz_maps_amador. Accessed: May 8, 2019.

_____. 2007c. *El Dorado County Fire Hazard Severity Zones in SRA*. Available: http://frap.fire.ca.gov/webdata/maps/el_dorado/fhszs_map.9.pdf. Accessed: May 8, 2019.

3.21 Mandatory Findings of Significance

No references cited.

Chapter 5. Report Preparers

El Dorado Irrigation District

Doug VenableProject Manager, Document Review
Brian Deason.....Project Manager, Document Review
Kailee DeLongchampProject Engineer, Document Review

GEI Consultants, Inc.

Phil DunnDocument Review
Ryan Jolley.....Project Director/Manager (CEQA Compliance), Introduction,
Project Description, Aesthetics, Document Review
Erica Bishop.....Agriculture and Forestry Resources, Geology and Soils, Hazards
and Hazardous Materials, Hydrology and Water Quality, Land Use
and Planning, Mineral Resources, Noise, Population and Housing,
Public Services, Recreation, Transportation, Utilities and Service
Systems, Mandatory Findings of Significance
Irene Ramirez.....Air Quality, Greenhouse Gas Emissions
Anne King, Sarah Norris.....Biological Resources
Barry Scott, Karen GardnerCultural Resources and Tribal Cultural Resources
Ryan Snyder.....Geographic Information Systems
Gigi Gable.....Editor

This page intentionally left blank.

Appendix A. Project Site Photographs

This page intentionally left blank.

Caples Lake Campground



View of Caples Lake from campground.



View of Scenic State Route 88.



View of existing campground access loop road.



View of existing campsite parking pad and campsite in background.



View of existing campsite.



View of existing campsite.



View of existing campsite with rock outcropping in background.



Typical view of surrounding landscape from campsite.



View of existing vault toilet facility and waste disposal access.



View of existing potable water access.



View of existing culvert crossing the campground roadway.



View of existing water supply line.

Silver Lake Campground



View of existing campground access loop road.



View of existing campsite parking pad.



View of existing campsites.



View of existing vault toilet facility.



View of existing potable water access.



View of existing water supply line.



View of vegetation surrounding campground.



View of Oyster Lake adjacent to campground.

Silver Lake Campground Offsite Pipeline and Well



View of existing well enclosure structure.



View of State Route 88 bridge where water supply pipeline will be attached, out of sight of Scenic Highway views.



View along Silver Lake Campground water supply pipeline alignment.



View along Silver Lake Campground water supply pipeline alignment.



View of Silver Lake Campground water supply pipeline alignment along State Route 88 right-of-way.



View of Silver Lake Campground water supply alignment at entrance to campground loop road.

This page intentionally left blank.

Appendix B. Air Quality Modeling Data

This page intentionally left blank.

Silver Lake Camground - Amador County, Summer

Silver Lake Camground
Amador County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	59.00	User Defined Unit	2.30	63,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	63
Climate Zone	2			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Silver Lake Camground - Amador County, Summer

Project Characteristics -

Land Use - sq.ft. based on area to be paved

Construction Phase - assuming 3 months of construction at Caples Lake Camground

Off-road Equipment - assumed equipment

Trips and VMT - assuming total trip length from caples lake to Arnold

Demolition -

Grading - Assuming all acreage is graded

Area Coating -

Fleet Mix -

Off-road Equipment -

Silver Lake Camground - Amador County, Summer

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstructionPhase	NumDays	6.00	66.00
tblConstructionPhase	NumDays	6.00	66.00
tblLandUse	LandUseSquareFeet	0.00	63,000.00
tblLandUse	LotAcreage	0.00	2.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	UsageHours	7.00	9.00

2.0 Emissions Summary

Silver Lake Camground - Amador County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3493	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.3493	6.0000e-005	6.0500e-003	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005	0.0000	0.0138

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3493	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.3493	6.0000e-005	6.0500e-003	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005	0.0000	0.0138

Silver Lake Camground - Amador County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Import Material	Grading	4/15/2020	7/15/2020	5	66	
2	Export Material	Grading	4/15/2020	7/15/2020	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Import Material	Crushing/Proc. Equipment	1	9.00	85	0.78
Import Material	Dumpers/Tenders	2	9.00	16	0.38
Import Material	Excavators	1	9.00	158	0.38
Import Material	Tractors/Loaders/Backhoes	1	9.00	97	0.37

Trips and VMT

Silver Lake Camground - Amador County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Import Material	0	16.00	0.00	90.00	10.80	7.30	36.00	LD_Mix	HDT_Mix	HHDT
Export Material	0	16.00	0.00	92.00	10.80	7.30	81.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Import Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0400	0.0000	0.0400	4.4600e-003	0.0000	4.4600e-003			0.0000			0.0000
Off-Road	1.2988	10.4027	11.7016	0.0189		0.5920	0.5920		0.5695	0.5695		1,785.7099	1,785.7099	0.3614		1,794.7441
Total	1.2988	10.4027	11.7016	0.0189	0.0400	0.5920	0.6321	4.4600e-003	0.5695	0.5740		1,785.7099	1,785.7099	0.3614		1,794.7441

Silver Lake Camground - Amador County, Summer

3.2 Import Material - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0207	0.8157	0.2349	2.0000e-003	0.0421	3.9200e-003	0.0460	0.0115	3.7500e-003	0.0152		209.5979	209.5979	2.9200e-003		209.6708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1602	0.0904	1.0319	1.2700e-003	0.1314	1.0200e-003	0.1325	0.0349	9.4000e-004	0.0358		125.2558	125.2558	8.4600e-003		125.4672
Total	0.1810	0.9060	1.2668	3.2700e-003	0.1735	4.9400e-003	0.1784	0.0463	4.6900e-003	0.0510		334.8537	334.8537	0.0114		335.1380

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0400	0.0000	0.0400	4.4600e-003	0.0000	4.4600e-003			0.0000			0.0000
Off-Road	1.2988	10.4027	11.7016	0.0189		0.5920	0.5920		0.5695	0.5695	0.0000	1,785.7099	1,785.7099	0.3614		1,794.7441
Total	1.2988	10.4027	11.7016	0.0189	0.0400	0.5920	0.6321	4.4600e-003	0.5695	0.5740	0.0000	1,785.7099	1,785.7099	0.3614		1,794.7441

Silver Lake Camground - Amador County, Summer

3.2 Import Material - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0207	0.8157	0.2349	2.0000e-003	0.0421	3.9200e-003	0.0460	0.0115	3.7500e-003	0.0152		209.5979	209.5979	2.9200e-003		209.6708
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1602	0.0904	1.0319	1.2700e-003	0.1314	1.0200e-003	0.1325	0.0349	9.4000e-004	0.0358		125.2558	125.2558	8.4600e-003		125.4672
Total	0.1810	0.9060	1.2668	3.2700e-003	0.1735	4.9400e-003	0.1784	0.0463	4.6900e-003	0.0510		334.8537	334.8537	0.0114		335.1380

3.3 Export Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0401	0.0000	0.0401	4.4700e-003	0.0000	4.4700e-003			0.0000			0.0000
Total					0.0401	0.0000	0.0401	4.4700e-003	0.0000	4.4700e-003			0.0000			0.0000

Silver Lake Camground - Amador County, Summer

3.3 Export Material - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0444	1.7219	0.4994	4.4900e-003	0.0967	8.8800e-003	0.1056	0.0263	8.4900e-003	0.0348		469.3735	469.3735	5.0400e-003		469.4994
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1602	0.0904	1.0319	1.2700e-003	0.1314	1.0200e-003	0.1325	0.0349	9.4000e-004	0.0358		125.2558	125.2558	8.4600e-003		125.4672
Total	0.2047	1.8122	1.5314	5.7600e-003	0.2281	9.9000e-003	0.2380	0.0612	9.4300e-003	0.0706		594.6293	594.6293	0.0135		594.9667

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0401	0.0000	0.0401	4.4700e-003	0.0000	4.4700e-003			0.0000			0.0000
Total					0.0401	0.0000	0.0401	4.4700e-003	0.0000	4.4700e-003			0.0000			0.0000

Silver Lake Camground - Amador County, Summer

3.3 Export Material - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0444	1.7219	0.4994	4.4900e-003	0.0967	8.8800e-003	0.1056	0.0263	8.4900e-003	0.0348		469.3735	469.3735	5.0400e-003		469.4994
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1602	0.0904	1.0319	1.2700e-003	0.1314	1.0200e-003	0.1325	0.0349	9.4000e-004	0.0358		125.2558	125.2558	8.4600e-003		125.4672
Total	0.2047	1.8122	1.5314	5.7600e-003	0.2281	9.9000e-003	0.2380	0.0612	9.4300e-003	0.0706		594.6293	594.6293	0.0135		594.9667

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Silver Lake Camground - Amador County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.531117	0.039520	0.192745	0.119470	0.025348	0.007287	0.006261	0.066039	0.002948	0.001682	0.005439	0.000985	0.001158

5.0 Energy Detail

Historical Energy Use: N

Silver Lake Camground - Amador County, Summer

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Silver Lake Camground - Amador County, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3493	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138
Unmitigated	1.3493	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138

Silver Lake Camground - Amador County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3482					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.6000e-004	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138
Total	1.3493	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3482					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.6000e-004	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138
Total	1.3493	6.0000e-005	6.0500e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0129	0.0129	3.0000e-005		0.0138

7.0 Water Detail

Silver Lake Camground - Amador County, Summer

7.1 Mitigation Measures Water**8.0 Waste Detail**

8.1 Mitigation Measures Waste**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Silver Lake Camground - Amador County, Annual

Silver Lake Camground
Amador County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	59.00	User Defined Unit	2.30	63,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	63
Climate Zone	2			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Silver Lake Camground - Amador County, Annual

Project Characteristics -

Land Use - sq.ft. based on area to be paved

Construction Phase - assuming 3 months of construction at Caples Lake Camground

Off-road Equipment - assumed equipment

Trips and VMT - assuming total trip length from caples lake to Arnold

Demolition -

Grading - Assuming all acreage is graded

Area Coating -

Fleet Mix -

Off-road Equipment -

Silver Lake Camground - Amador County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstructionPhase	NumDays	6.00	66.00
tblConstructionPhase	NumDays	6.00	66.00
tblLandUse	LandUseSquareFeet	0.00	63,000.00
tblLandUse	LotAcreage	0.00	2.30
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	UsageHours	7.00	9.00

2.0 Emissions Summary

Silver Lake Camground - Amador County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-15-2020	7-14-2020	0.4812	0.4812
2	7-15-2020	9-30-2020	0.0053	0.0053
		Highest	0.4812	0.4812

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2462	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2462	0.0000	5.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003

Silver Lake Camground - Amador County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2462	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2462	0.0000	5.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Import Material	Grading	4/15/2020	7/15/2020	5	66	
2	Export Material	Grading	4/15/2020	7/15/2020	5	66	

Silver Lake Camground - Amador County, Annual

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Import Material	Crushing/Proc. Equipment	1	9.00	85	0.78
Import Material	Dumpers/Tenders	2	9.00	16	0.38
Import Material	Excavators	1	9.00	158	0.38
Import Material	Tractors/Loaders/Backhoes	1	9.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Import Material	0	16.00	0.00	90.00	10.80	7.30	36.00	LD_Mix	HDT_Mix	HHDT
Export Material	0	16.00	0.00	92.00	10.80	7.30	81.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Silver Lake Camground - Amador County, Annual

3.2 Import Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3200e-003	0.0000	1.3200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.3433	0.3862	6.2000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	53.4590	53.4590	0.0108	0.0000	53.7294
Total	0.0429	0.3433	0.3862	6.2000e-004	1.3200e-003	0.0195	0.0209	1.5000e-004	0.0188	0.0189	0.0000	53.4590	53.4590	0.0108	0.0000	53.7294

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-004	0.0281	7.7100e-003	7.0000e-005	1.3400e-003	1.3000e-004	1.4700e-003	3.7000e-004	1.2000e-004	4.9000e-004	0.0000	6.2593	6.2593	9.0000e-005	0.0000	6.2615
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6400e-003	3.3100e-003	0.0301	4.0000e-005	4.1700e-003	3.0000e-005	4.2100e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.4182	3.4182	2.3000e-004	0.0000	3.4239
Total	5.3200e-003	0.0314	0.0378	1.1000e-004	5.5100e-003	1.6000e-004	5.6800e-003	1.4800e-003	1.5000e-004	1.6300e-003	0.0000	9.6774	9.6774	3.2000e-004	0.0000	9.6854

Silver Lake Camground - Amador County, Annual

3.2 Import Material - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3200e-003	0.0000	1.3200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.3433	0.3862	6.2000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	53.4589	53.4589	0.0108	0.0000	53.7294
Total	0.0429	0.3433	0.3862	6.2000e-004	1.3200e-003	0.0195	0.0209	1.5000e-004	0.0188	0.0189	0.0000	53.4589	53.4589	0.0108	0.0000	53.7294

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.8000e-004	0.0281	7.7100e-003	7.0000e-005	1.3400e-003	1.3000e-004	1.4700e-003	3.7000e-004	1.2000e-004	4.9000e-004	0.0000	6.2593	6.2593	9.0000e-005	0.0000	6.2615
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6400e-003	3.3100e-003	0.0301	4.0000e-005	4.1700e-003	3.0000e-005	4.2100e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.4182	3.4182	2.3000e-004	0.0000	3.4239
Total	5.3200e-003	0.0314	0.0378	1.1000e-004	5.5100e-003	1.6000e-004	5.6800e-003	1.4800e-003	1.5000e-004	1.6300e-003	0.0000	9.6774	9.6774	3.2000e-004	0.0000	9.6854

Silver Lake Camground - Amador County, Annual

3.3 Export Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3200e-003	0.0000	1.3200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					1.3200e-003	0.0000	1.3200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4600e-003	0.0597	0.0162	1.5000e-004	3.0800e-003	2.9000e-004	3.3800e-003	8.4000e-004	2.8000e-004	1.1200e-003	0.0000	14.0358	14.0358	1.5000e-004	0.0000	14.0396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6400e-003	3.3100e-003	0.0301	4.0000e-005	4.1700e-003	3.0000e-005	4.2100e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.4182	3.4182	2.3000e-004	0.0000	3.4239
Total	6.1000e-003	0.0630	0.0463	1.9000e-004	7.2500e-003	3.2000e-004	7.5900e-003	1.9500e-003	3.1000e-004	2.2600e-003	0.0000	17.4540	17.4540	3.8000e-004	0.0000	17.4635

Silver Lake Camground - Amador County, Annual

3.3 Export Material - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3200e-003	0.0000	1.3200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					1.3200e-003	0.0000	1.3200e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4600e-003	0.0597	0.0162	1.5000e-004	3.0800e-003	2.9000e-004	3.3800e-003	8.4000e-004	2.8000e-004	1.1200e-003	0.0000	14.0358	14.0358	1.5000e-004	0.0000	14.0396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6400e-003	3.3100e-003	0.0301	4.0000e-005	4.1700e-003	3.0000e-005	4.2100e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.4182	3.4182	2.3000e-004	0.0000	3.4239
Total	6.1000e-003	0.0630	0.0463	1.9000e-004	7.2500e-003	3.2000e-004	7.5900e-003	1.9500e-003	3.1000e-004	2.2600e-003	0.0000	17.4540	17.4540	3.8000e-004	0.0000	17.4635

4.0 Operational Detail - Mobile

Silver Lake Camground - Amador County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.531117	0.039520	0.192745	0.119470	0.025348	0.007287	0.006261	0.066039	0.002948	0.001682	0.005439	0.000985	0.001158

Silver Lake Camground - Amador County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Silver Lake Camground - Amador County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2462	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003
Unmitigated	0.2462	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2461					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003
Total	0.2462	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003

Silver Lake Camground - Amador County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2461					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003
Total	0.2462	0.0000	5.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.0500e-003	1.0500e-003	0.0000	0.0000	1.1200e-003

7.0 Water Detail

7.1 Mitigation Measures Water

Silver Lake Camground - Amador County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Silver Lake Camground - Amador County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Silver Lake Camground - Amador County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

Silver Lake Camground - Amador County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Caples Lake Campground - Alpine County, Summer

Caples Lake Campground
Alpine County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	30.00	User Defined Unit	2.07	63,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Caples Lake Campground - Alpine County, Summer

Project Characteristics -

Land Use - sq.ft. based on area paved

Construction Phase - assuming 3 months of construction at Caples Lake Camground

Off-road Equipment -

Off-road Equipment - assumed equipment

Trips and VMT - assuming total trip length from caples lake to Arnold

Demolition -

Grading - Assuming all acreage is graded

Area Coating -

Fleet Mix -

Caples Lake Campground - Alpine County, Summer

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstructionPhase	NumDays	6.00	66.00
tblConstructionPhase	NumDays	6.00	66.00
tblLandUse	LandUseSquareFeet	0.00	63,700.00
tblLandUse	LotAcreage	0.00	2.07
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	UsageHours	7.00	9.00

2.0 Emissions Summary

Caples Lake Campground - Alpine County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3640	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.3640	3.0000e-005	3.0700e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005	0.0000	7.0000e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3640	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.3640	3.0000e-005	3.0700e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005	0.0000	7.0000e-003

Caples Lake Campground - Alpine County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Import Material	Grading	4/15/2020	7/15/2020	5	66	
2	Export Material	Grading	4/15/2020	7/15/2020	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Import Material	Crushing/Proc. Equipment	1	9.00	85	0.78
Import Material	Dumpers/Tenders	2	9.00	16	0.38
Import Material	Excavators	1	9.00	158	0.38
Import Material	Tractors/Loaders/Backhoes	1	9.00	97	0.37

Trips and VMT

Caples Lake Campground - Alpine County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Import Material	0	16.00	0.00	90.00	10.80	7.30	36.00	LD_Mix	HDT_Mix	HHDT
Export Material	0	16.00	0.00	36.50	10.80	7.30	81.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Import Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0364	0.0000	0.0364	4.0600e-003	0.0000	4.0600e-003			0.0000			0.0000
Off-Road	1.2988	10.4027	11.7016	0.0189		0.5920	0.5920		0.5695	0.5695		1,785.7099	1,785.7099	0.3614		1,794.7441
Total	1.2988	10.4027	11.7016	0.0189	0.0364	0.5920	0.6284	4.0600e-003	0.5695	0.5736		1,785.7099	1,785.7099	0.3614		1,794.7441

Caples Lake Campground - Alpine County, Summer

3.2 Import Material - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0162	0.5353	0.0874	1.8500e-003	0.0431	1.9400e-003	0.0450	0.0118	1.8600e-003	0.0137		193.6459	193.6459	5.4400e-003		193.7818
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0607	0.5921	1.1700e-003	0.1314	9.3000e-004	0.1324	0.0349	8.5000e-004	0.0357		116.3978	116.3978	5.1200e-003		116.5257
Total	0.0993	0.5960	0.6795	3.0200e-003	0.1745	2.8700e-003	0.1774	0.0467	2.7100e-003	0.0494		310.0437	310.0437	0.0106		310.3075

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0364	0.0000	0.0364	4.0600e-003	0.0000	4.0600e-003			0.0000			0.0000
Off-Road	1.2988	10.4027	11.7016	0.0189		0.5920	0.5920		0.5695	0.5695	0.0000	1,785.7099	1,785.7099	0.3614		1,794.7441
Total	1.2988	10.4027	11.7016	0.0189	0.0364	0.5920	0.6284	4.0600e-003	0.5695	0.5736	0.0000	1,785.7099	1,785.7099	0.3614		1,794.7441

Caples Lake Campground - Alpine County, Summer

3.2 Import Material - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0162	0.5353	0.0874	1.8500e-003	0.0431	1.9400e-003	0.0450	0.0118	1.8600e-003	0.0137		193.6459	193.6459	5.4400e-003		193.7818
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0607	0.5921	1.1700e-003	0.1314	9.3000e-004	0.1324	0.0349	8.5000e-004	0.0357		116.3978	116.3978	5.1200e-003		116.5257
Total	0.0993	0.5960	0.6795	3.0200e-003	0.1745	2.8700e-003	0.1774	0.0467	2.7100e-003	0.0494		310.0437	310.0437	0.0106		310.3075

3.3 Export Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0345	0.0000	0.0345	3.7800e-003	0.0000	3.7800e-003			0.0000			0.0000
Total					0.0345	0.0000	0.0345	3.7800e-003	0.0000	3.7800e-003			0.0000			0.0000

Caples Lake Campground - Alpine County, Summer

3.3 Export Material - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0133	0.4100	0.0735	1.5800e-003	0.0394	1.7500e-003	0.0412	0.0108	1.6800e-003	0.0125		165.9067	165.9067	2.5800e-003		165.9712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0607	0.5921	1.1700e-003	0.1314	9.3000e-004	0.1324	0.0349	8.5000e-004	0.0357		116.3978	116.3978	5.1200e-003		116.5257
Total	0.0964	0.4706	0.6655	2.7500e-003	0.1708	2.6800e-003	0.1735	0.0457	2.5300e-003	0.0482		282.3045	282.3045	7.7000e-003		282.4969

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0345	0.0000	0.0345	3.7800e-003	0.0000	3.7800e-003			0.0000			0.0000
Total					0.0345	0.0000	0.0345	3.7800e-003	0.0000	3.7800e-003			0.0000			0.0000

Caples Lake Campground - Alpine County, Summer

3.3 Export Material - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0133	0.4100	0.0735	1.5800e-003	0.0394	1.7500e-003	0.0412	0.0108	1.6800e-003	0.0125		165.9067	165.9067	2.5800e-003		165.9712
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0831	0.0607	0.5921	1.1700e-003	0.1314	9.3000e-004	0.1324	0.0349	8.5000e-004	0.0357		116.3978	116.3978	5.1200e-003		116.5257
Total	0.0964	0.4706	0.6655	2.7500e-003	0.1708	2.6800e-003	0.1735	0.0457	2.5300e-003	0.0482		282.3045	282.3045	7.7000e-003		282.4969

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Caples Lake Campground - Alpine County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.531117	0.039520	0.192745	0.119470	0.025348	0.007287	0.006261	0.066039	0.002948	0.001682	0.005439	0.000985	0.001158

5.0 Energy Detail

Historical Energy Use: N

Caples Lake Campground - Alpine County, Summer

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Caples Lake Campground - Alpine County, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.3640	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Unmitigated	1.3640	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003

Caples Lake Campground - Alpine County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Total	1.3640	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3632					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Total	1.3640	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003

7.0 Water Detail

Caples Lake Campground - Alpine County, Summer

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Caples Lake Campground - Alpine County, Annual

Caples Lake Campground
Alpine County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	30.00	User Defined Unit	2.07	63,700.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	74
Climate Zone	14			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Caples Lake Campground - Alpine County, Annual

Project Characteristics -

Land Use - sq.ft. based on area paved

Construction Phase - assuming 3 months of construction at Caples Lake Camground

Off-road Equipment -

Off-road Equipment - assumed equipment

Trips and VMT - assuming total trip length from caples lake to Arnold

Demolition -

Grading - Assuming all acreage is graded

Area Coating -

Fleet Mix -

Caples Lake Campground - Alpine County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstructionPhase	NumDays	6.00	66.00
tblConstructionPhase	NumDays	6.00	66.00
tblLandUse	LandUseSquareFeet	0.00	63,700.00
tblLandUse	LotAcreage	0.00	2.07
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	UsageHours	7.00	9.00

2.0 Emissions Summary

Caples Lake Campground - Alpine County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-15-2020	7-14-2020	0.4213	0.4213
2	7-15-2020	9-30-2020	0.0046	0.0046
		Highest	0.4213	0.4213

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2489	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2489	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

Caples Lake Campground - Alpine County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2489	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2489	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Import Material	Grading	4/15/2020	7/15/2020	5	66	
2	Export Material	Grading	4/15/2020	7/15/2020	5	66	

Caples Lake Campground - Alpine County, Annual

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Import Material	Crushing/Proc. Equipment	1	9.00	85	0.78
Import Material	Dumpers/Tenders	2	9.00	16	0.38
Import Material	Excavators	1	9.00	158	0.38
Import Material	Tractors/Loaders/Backhoes	1	9.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Import Material	0	16.00	0.00	90.00	10.80	7.30	36.00	LD_Mix	HDT_Mix	HHDT
Export Material	0	16.00	0.00	36.50	10.80	7.30	81.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Caples Lake Campground - Alpine County, Annual

3.2 Import Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-003	0.0000	1.2000e-003	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.3433	0.3862	6.2000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	53.4590	53.4590	0.0108	0.0000	53.7294
Total	0.0429	0.3433	0.3862	6.2000e-004	1.2000e-003	0.0195	0.0207	1.3000e-004	0.0188	0.0189	0.0000	53.4590	53.4590	0.0108	0.0000	53.7294

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4000e-004	0.0179	3.0100e-003	6.0000e-005	1.3700e-003	6.0000e-005	1.4300e-003	3.8000e-004	6.0000e-005	4.4000e-004	0.0000	5.7557	5.7557	1.7000e-004	0.0000	5.7600
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9200e-003	2.4000e-003	0.0215	4.0000e-005	4.1500e-003	3.0000e-005	4.1800e-003	1.1000e-003	3.0000e-005	1.1300e-003	0.0000	3.4620	3.4620	1.6000e-004	0.0000	3.4659
Total	3.4600e-003	0.0203	0.0245	1.0000e-004	5.5200e-003	9.0000e-005	5.6100e-003	1.4800e-003	9.0000e-005	1.5700e-003	0.0000	9.2176	9.2176	3.3000e-004	0.0000	9.2259

Caples Lake Campground - Alpine County, Annual

3.2 Import Material - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2000e-003	0.0000	1.2000e-003	1.3000e-004	0.0000	1.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.3433	0.3862	6.2000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	53.4589	53.4589	0.0108	0.0000	53.7294
Total	0.0429	0.3433	0.3862	6.2000e-004	1.2000e-003	0.0195	0.0207	1.3000e-004	0.0188	0.0189	0.0000	53.4589	53.4589	0.0108	0.0000	53.7294

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.4000e-004	0.0179	3.0100e-003	6.0000e-005	1.3700e-003	6.0000e-005	1.4300e-003	3.8000e-004	6.0000e-005	4.4000e-004	0.0000	5.7557	5.7557	1.7000e-004	0.0000	5.7600
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9200e-003	2.4000e-003	0.0215	4.0000e-005	4.1500e-003	3.0000e-005	4.1800e-003	1.1000e-003	3.0000e-005	1.1300e-003	0.0000	3.4620	3.4620	1.6000e-004	0.0000	3.4659
Total	3.4600e-003	0.0203	0.0245	1.0000e-004	5.5200e-003	9.0000e-005	5.6100e-003	1.4800e-003	9.0000e-005	1.5700e-003	0.0000	9.2176	9.2176	3.3000e-004	0.0000	9.2259

Caples Lake Campground - Alpine County, Annual

3.3 Export Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1400e-003	0.0000	1.1400e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					1.1400e-003	0.0000	1.1400e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.4000e-004	0.0138	2.4700e-003	5.0000e-005	1.2500e-003	6.0000e-005	1.3100e-003	3.4000e-004	6.0000e-005	4.0000e-004	0.0000	4.9497	4.9497	8.0000e-005	0.0000	4.9517
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9200e-003	2.4000e-003	0.0215	4.0000e-005	4.1500e-003	3.0000e-005	4.1800e-003	1.1000e-003	3.0000e-005	1.1300e-003	0.0000	3.4620	3.4620	1.6000e-004	0.0000	3.4659
Total	3.3600e-003	0.0162	0.0240	9.0000e-005	5.4000e-003	9.0000e-005	5.4900e-003	1.4400e-003	9.0000e-005	1.5300e-003	0.0000	8.4117	8.4117	2.4000e-004	0.0000	8.4176

Caples Lake Campground - Alpine County, Annual

3.3 Export Material - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.1400e-003	0.0000	1.1400e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					1.1400e-003	0.0000	1.1400e-003	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.4000e-004	0.0138	2.4700e-003	5.0000e-005	1.2500e-003	6.0000e-005	1.3100e-003	3.4000e-004	6.0000e-005	4.0000e-004	0.0000	4.9497	4.9497	8.0000e-005	0.0000	4.9517
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9200e-003	2.4000e-003	0.0215	4.0000e-005	4.1500e-003	3.0000e-005	4.1800e-003	1.1000e-003	3.0000e-005	1.1300e-003	0.0000	3.4620	3.4620	1.6000e-004	0.0000	3.4659
Total	3.3600e-003	0.0162	0.0240	9.0000e-005	5.4000e-003	9.0000e-005	5.4900e-003	1.4400e-003	9.0000e-005	1.5300e-003	0.0000	8.4117	8.4117	2.4000e-004	0.0000	8.4176

4.0 Operational Detail - Mobile

Caples Lake Campground - Alpine County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.531117	0.039520	0.192745	0.119470	0.025348	0.007287	0.006261	0.066039	0.002948	0.001682	0.005439	0.000985	0.001158

Caples Lake Campground - Alpine County, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Caples Lake Campground - Alpine County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Caples Lake Campground - Alpine County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2489	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Unmitigated	0.2489	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	0.2489	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

Caples Lake Campground - Alpine County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2488					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	0.2489	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Caples Lake Campground - Alpine County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Caples Lake Campground - Alpine County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Caples Lake Campground - Alpine County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

Caples Lake Campground - Alpine County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

Offsite Pipeline and Well
El Dorado-Lake Tahoe County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	30.00	User Defined Unit	0.57	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	14			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity (lb/MW hr)	0

1.3 User Entered Comments & Non-Default Data

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

Project Characteristics -

Land Use - lot acreage in description

Construction Phase - assuming 3 months of construction at Caples Lake Camground

Off-road Equipment -

Off-road Equipment - assumed equipment

Trips and VMT - assuming total trip length from caples lake to Arnold

Demolition -

Grading - Assuming all acreage is graded

Area Coating -

Fleet Mix -

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstructionPhase	NumDays	6.00	66.00
tblConstructionPhase	NumDays	6.00	66.00
tblLandUse	LotAcreage	0.00	0.57
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	UsageHours	7.00	9.00

2.0 Emissions Summary

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	8.6000e-004	3.0000e-005	3.0700e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005	0.0000	7.0000e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.6000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	8.6000e-004	3.0000e-005	3.0700e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005	0.0000	7.0000e-003

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Import Material	Grading	4/15/2020	7/15/2020	5	66	
2	Export Material	Grading	4/15/2020	7/15/2020	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Import Material	Crushing/Proc. Equipment	1	9.00	85	0.78
Import Material	Dumpers/Tenders	2	9.00	16	0.38
Import Material	Excavators	1	9.00	158	0.38
Import Material	Tractors/Loaders/Backhoes	1	9.00	97	0.37

Trips and VMT

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Import Material	0	16.00	0.00	20.00	10.80	7.30	36.00	LD_Mix	HDT_Mix	HHDT
Export Material	0	16.00	0.00	33.20	10.80	7.30	81.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Import Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0101	0.0000	0.0101	1.1200e-003	0.0000	1.1200e-003			0.0000			0.0000
Off-Road	1.2988	10.4027	11.7016	0.0189		0.5920	0.5920		0.5695	0.5695		1,785.7099	1,785.7099	0.3614		1,794.7441
Total	1.2988	10.4027	11.7016	0.0189	0.0101	0.5920	0.6021	1.1200e-003	0.5695	0.5707		1,785.7099	1,785.7099	0.3614		1,794.7441

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

3.2 Import Material - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2800e-003	0.1607	0.0460	4.3000e-004	9.4000e-003	7.2000e-004	0.0101	2.5700e-003	6.9000e-004	3.2500e-003		45.0128	45.0128	4.6000e-004		45.0243
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0867	0.0432	0.5727	1.3500e-003	0.1314	1.0000e-003	0.1324	0.0349	9.2000e-004	0.0358		134.6963	134.6963	4.2400e-003		134.8024
Total	0.0910	0.2039	0.6187	1.7800e-003	0.1408	1.7200e-003	0.1426	0.0374	1.6100e-003	0.0390		179.7091	179.7091	4.7000e-003		179.8267

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0101	0.0000	0.0101	1.1200e-003	0.0000	1.1200e-003			0.0000			0.0000
Off-Road	1.2988	10.4027	11.7016	0.0189		0.5920	0.5920		0.5695	0.5695	0.0000	1,785.7099	1,785.7099	0.3614		1,794.7441
Total	1.2988	10.4027	11.7016	0.0189	0.0101	0.5920	0.6021	1.1200e-003	0.5695	0.5707	0.0000	1,785.7099	1,785.7099	0.3614		1,794.7441

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

3.2 Import Material - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.2800e-003	0.1607	0.0460	4.3000e-004	9.4000e-003	7.2000e-004	0.0101	2.5700e-003	6.9000e-004	3.2500e-003		45.0128	45.0128	4.6000e-004		45.0243
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0867	0.0432	0.5727	1.3500e-003	0.1314	1.0000e-003	0.1324	0.0349	9.2000e-004	0.0358		134.6963	134.6963	4.2400e-003		134.8024
Total	0.0910	0.2039	0.6187	1.7800e-003	0.1408	1.7200e-003	0.1426	0.0374	1.6100e-003	0.0390		179.7091	179.7091	4.7000e-003		179.8267

3.3 Export Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0106	0.0000	0.0106	1.2100e-003	0.0000	1.2100e-003			0.0000			0.0000
Total					0.0106	0.0000	0.0106	1.2100e-003	0.0000	1.2100e-003			0.0000			0.0000

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

3.3 Export Material - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0152	0.5619	0.1604	1.6000e-003	0.0353	2.7000e-003	0.0380	9.6500e-003	2.5900e-003	0.0122		167.2704	167.2704	1.4300e-003		167.3062
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0867	0.0432	0.5727	1.3500e-003	0.1314	1.0000e-003	0.1324	0.0349	9.2000e-004	0.0358		134.6963	134.6963	4.2400e-003		134.8024
Total	0.1020	0.6051	0.7331	2.9500e-003	0.1667	3.7000e-003	0.1704	0.0445	3.5100e-003	0.0480		301.9667	301.9667	5.6700e-003		302.1086

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0106	0.0000	0.0106	1.2100e-003	0.0000	1.2100e-003			0.0000			0.0000
Total					0.0106	0.0000	0.0106	1.2100e-003	0.0000	1.2100e-003			0.0000			0.0000

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

3.3 Export Material - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0152	0.5619	0.1604	1.6000e-003	0.0353	2.7000e-003	0.0380	9.6500e-003	2.5900e-003	0.0122		167.2704	167.2704	1.4300e-003		167.3062
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0867	0.0432	0.5727	1.3500e-003	0.1314	1.0000e-003	0.1324	0.0349	9.2000e-004	0.0358		134.6963	134.6963	4.2400e-003		134.8024
Total	0.1020	0.6051	0.7331	2.9500e-003	0.1667	3.7000e-003	0.1704	0.0445	3.5100e-003	0.0480		301.9667	301.9667	5.6700e-003		302.1086

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.531117	0.039520	0.192745	0.119470	0.025348	0.007287	0.006261	0.066039	0.002948	0.001682	0.005439	0.000985	0.001158

5.0 Energy Detail

Historical Energy Use: N

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.6000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Unmitigated	8.6000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Total	8.6000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.7000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003
Total	8.6000e-004	3.0000e-005	3.0700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		6.5700e-003	6.5700e-003	2.0000e-005		7.0000e-003

7.0 Water Detail

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Summer

7.1 Mitigation Measures Water**8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

Offsite Pipeline and Well
El Dorado-Lake Tahoe County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Recreational	30.00	User Defined Unit	0.57	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.7	Precipitation Freq (Days)	70
Climate Zone	14			Operational Year	2021
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

Project Characteristics -

Land Use - lot acreage in description

Construction Phase - assuming 3 months of construction at Caples Lake Camground

Off-road Equipment -

Off-road Equipment - assumed equipment

Trips and VMT - assuming total trip length from caples lake to Arnold

Demolition -

Grading - Assuming all acreage is graded

Area Coating -

Fleet Mix -

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	0
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	0
tblConstructionPhase	NumDays	6.00	66.00
tblConstructionPhase	NumDays	6.00	66.00
tblLandUse	LotAcreage	0.00	0.57
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	PhaseName		Import Material
tblOffRoadEquipment	UsageHours	7.00	9.00

2.0 Emissions Summary

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-15-2020	7-14-2020	0.4129	0.4129
2	7-15-2020	9-30-2020	0.0045	0.0045
		Highest	0.4129	0.4129

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3000e-004	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3000e-004	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3000e-004	0.0000	2.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Import Material	Grading	4/15/2020	7/15/2020	5	66	
2	Export Material	Grading	4/15/2020	7/15/2020	5	66	

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Import Material	Crushing/Proc. Equipment	1	9.00	85	0.78
Import Material	Dumpers/Tenders	2	9.00	16	0.38
Import Material	Excavators	1	9.00	158	0.38
Import Material	Tractors/Loaders/Backhoes	1	9.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Import Material	0	16.00	0.00	20.00	10.80	7.30	36.00	LD_Mix	HDT_Mix	HHDT
Export Material	0	16.00	0.00	33.20	10.80	7.30	81.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

3.2 Import Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3000e-004	0.0000	3.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.3433	0.3862	6.2000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	53.4590	53.4590	0.0108	0.0000	53.7294
Total	0.0429	0.3433	0.3862	6.2000e-004	3.3000e-004	0.0195	0.0199	4.0000e-005	0.0188	0.0188	0.0000	53.4590	53.4590	0.0108	0.0000	53.7294

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	5.5000e-003	1.5200e-003	1.0000e-005	3.0000e-004	2.0000e-005	3.2000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.3439	1.3439	1.0000e-005	0.0000	1.3443
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.6300e-003	0.0174	4.0000e-005	4.1600e-003	3.0000e-005	4.1900e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7218	3.7218	1.2000e-004	0.0000	3.7248
Total	2.7700e-003	7.1300e-003	0.0189	5.0000e-005	4.4600e-003	5.0000e-005	4.5100e-003	1.1900e-003	5.0000e-005	1.2400e-003	0.0000	5.0658	5.0658	1.3000e-004	0.0000	5.0691

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

3.2 Import Material - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.3000e-004	0.0000	3.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0429	0.3433	0.3862	6.2000e-004		0.0195	0.0195		0.0188	0.0188	0.0000	53.4589	53.4589	0.0108	0.0000	53.7294
Total	0.0429	0.3433	0.3862	6.2000e-004	3.3000e-004	0.0195	0.0199	4.0000e-005	0.0188	0.0188	0.0000	53.4589	53.4589	0.0108	0.0000	53.7294

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	5.5000e-003	1.5200e-003	1.0000e-005	3.0000e-004	2.0000e-005	3.2000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.3439	1.3439	1.0000e-005	0.0000	1.3443
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.6300e-003	0.0174	4.0000e-005	4.1600e-003	3.0000e-005	4.1900e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7218	3.7218	1.2000e-004	0.0000	3.7248
Total	2.7700e-003	7.1300e-003	0.0189	5.0000e-005	4.4600e-003	5.0000e-005	4.5100e-003	1.1900e-003	5.0000e-005	1.2400e-003	0.0000	5.0658	5.0658	1.3000e-004	0.0000	5.0691

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

3.3 Export Material - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					3.5000e-004	0.0000	3.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-004	0.0193	5.2300e-003	5.0000e-005	1.1200e-003	9.0000e-005	1.2100e-003	3.1000e-004	9.0000e-005	3.9000e-004	0.0000	5.0015	5.0015	4.0000e-005	0.0000	5.0025
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.6300e-003	0.0174	4.0000e-005	4.1600e-003	3.0000e-005	4.1900e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7218	3.7218	1.2000e-004	0.0000	3.7248
Total	3.1300e-003	0.0209	0.0227	9.0000e-005	5.2800e-003	1.2000e-004	5.4000e-003	1.4200e-003	1.2000e-004	1.5300e-003	0.0000	8.7233	8.7233	1.6000e-004	0.0000	8.7273

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

3.3 Export Material - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					3.5000e-004	0.0000	3.5000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-004	0.0193	5.2300e-003	5.0000e-005	1.1200e-003	9.0000e-005	1.2100e-003	3.1000e-004	9.0000e-005	3.9000e-004	0.0000	5.0015	5.0015	4.0000e-005	0.0000	5.0025
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6300e-003	1.6300e-003	0.0174	4.0000e-005	4.1600e-003	3.0000e-005	4.1900e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7218	3.7218	1.2000e-004	0.0000	3.7248
Total	3.1300e-003	0.0209	0.0227	9.0000e-005	5.2800e-003	1.2000e-004	5.4000e-003	1.4200e-003	1.2000e-004	1.5300e-003	0.0000	8.7233	8.7233	1.6000e-004	0.0000	8.7273

4.0 Operational Detail - Mobile

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Recreational	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Recreational	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Recreational	0.531117	0.039520	0.192745	0.119470	0.025348	0.007287	0.006261	0.066039	0.002948	0.001682	0.005439	0.000985	0.001158

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3000e-004	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Unmitigated	1.3000e-004	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	1.3000e-004	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004
Total	1.3000e-004	0.0000	2.8000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.4000e-004	5.4000e-004	0.0000	0.0000	5.7000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Recreational	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Recreational	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

Offsite Pipeline and Well - El Dorado-Lake Tahoe County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

This page intentionally left blank.

**Appendix C. Biological Resources Report for the
Caples Lake Campground Improvements**

This page intentionally left blank.

May 17, 2019

Geotechnical
Environmental
Water Resources
Ecological

Brian Deason
Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Subject: Biological Resources Assessment for Caples Lake Campground Improvements

Dear Mr. Deason:

The El Dorado Irrigation District (District) is required by Condition No. 50 of the Project 184 license to complete improvements to the U.S. Forest Service (USFS) Caples Lake Campground. The campground is in the northwest corner of Alpine County, east of Kirkwood and north of Caples Lake and State Route (SR) 88, (Attachment A, Figure 1). An assessment of proposed campground improvements and their potential to impact sensitive biological resources was conducted by GEI Consultants, Inc. (GEI). This letter report describes the methods and results of this assessment.

Project Description

Condition No. 50 of the Project 184 license requires the District to reconstruct paved surfaces, toilets, and the water system at the 36-unit Caples Lake Campground. The campground must be upgraded to meet the most current USFS design standards and accessibility requirements of the Architectural Barriers Act. An overview of the improvement plan is shown in Attachment A, Figure 2. The project at Caples Lake Campground involves the following elements:

- Replace existing toilets with four single-unit accessible vault toilets. Relocate the new toilets to provide for easier access and less distance from the camp units. Also construct a paved parking turnout in front of each toilet for servicing and for parking access.
- Replace and relocate all the faucet units adjacent to the roadway. Provide a level and paved pad in front and on the sides of the faucet unit.
- For all pathways between camp units and spurs/roadway, remove ground protrusions, re-grade and widen the pathways, and compact the native surface where feasible and deemed appropriate by USFS. Meet most-current grade and cross-slope accessibility standards for access for up to 20 camping units.
- Widen spurs where feasible to meet most current accessibility standards. Re-construct and pave all spurs.
- Prepare existing campground roads for resurfacing by patching, scarifying, or other methods, as determined by USFS. Place asphalt overlay on campground road.
- Remove obstacles and protrusions, and level and compact the native surface at each camp unit. Enlarge the camp units to a minimum of 900 square feet where feasible and when deemed appropriate by USFS. Grades of all the camp units shall be re-constructed to the most current accessibility standards including clear space around facilities.
- Replace all waterlines, including the distribution lines within the campground and the collection lines from the source to the facility.

Pre-field Investigation and Field Survey

Before conducting the field survey, and again before finalizing this letter report, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2019) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2019) were reviewed. These reviews were centered on the Caples Lake U.S. Geologic Survey (USGS) 7.5-minute quadrangle and included the eight surrounding quadrangles. Results of the most recent CNDDDB and CNPS review are provided in Attachment B.

A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could occur in the campground vicinity was obtained from the USFWS Information for Planning and Conservation (IPaC) website (USFWS 2019); the IPaC resource list is provided in Attachment B. Five fish and wildlife species that are listed as “threatened” or “endangered” under the Federal Endangered Species Act and designated critical habitat for one listed species are included on this list. The National Marine Fisheries Service online California Species List Tools (NMFS 2019) indicate no resources under their jurisdiction are present in the Caples Lake USGS quadrangle.

Aerial imagery on Google Earth®, National Wetlands Inventory data, and the Natural Resources Conservation Service *Soil Survey of El Dorado National Forest Area, Parts of Alpine, Amador, El Dorado, and Placer Counties, California* (NRCS 2019) also were reviewed before and after conducting the field survey.

A field survey of the Caples Lake campground and immediate vicinity was conducted by GEI biologists Sarah A. Norris and Hannah Dunn on October 13, 2017. Photographs of the campground area taken during the survey are provided in Attachment C. The survey included an assessment of habitat types present onsite, including potential waters of the United States, and evaluation of habitat suitability and potential for special-status species to occur at, or adjacent to, the campground and to be affected by implementing the proposed improvements.

Environmental Setting

Elevation at the 10-acre project site is approximately 7,800 feet above mean sea level. The campground is separated from the north shore of Caples Lake by SR 88, and on-site topography gently slopes to the southeast, toward the lake.

Habitat and Land Cover Types

The project site is composed entirely of upper montane forest habitat (Attachment A, Figure 3). This habitat is characteristic of the Sierra Nevada, from elevations above approximately 7,000 feet. Dominant tree species in upper montane forest include red fir (*Abies magnifica*), white fir (*A. concolor*), lodgepole pine (*Pinus contorta*), and western juniper (*Juniperus occidentalis*). Understory species are generally sparse in upper montane forest, including on the project site. Rock outcrops cover a significant portion of the project site, further limiting the area that understory vegetation can colonize, and soil compaction from on-site land use (i.e., camping) also limits understory vegetation. The few shrubs that are present onsite include squaw wax currant (*Ribes cereum*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and willow (*Salix* sp.). Dominant herbaceous species include pine bluegrass (*Poa secunda* ssp. *secunda*), dune bent grass (*Agrostis pallens*), and mountain coyote mint (*Monardella odoratissima*).

Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California

Fish and Game Code (FGC), California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-status Species

Special-status species are plants and animals that fall into any of the following categories:

- species officially listed by the Federal government or the State of California as endangered, threatened, or rare;
- candidate species for Federal or State listing as endangered or threatened;
- species proposed for Federal or State listing as endangered or threatened;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing;
- species considered sensitive by USFS
- wildlife species identified by CDFW as species of special concern and plant taxa considered by CDFW to be “rare, threatened, or endangered in California;”
- species listed as Fully Protected under the FGC; or
- species afforded protection under local or regional planning documents.

Plant taxa are assigned by CDFW to one of the following six California Rare Plant Ranks (CRPRs):

- CRPR 1A—Plants presumed to be extinct in California;
- CRPR 1B—Plants that are rare, threatened, or endangered in California and elsewhere;
- CRPR 2A—Plants that are presumed extirpated in California, but are more common elsewhere;
- CRPR 2B—Plants that are rare, threatened, or endangered in California but more common elsewhere;
- CRPR 3—Plants about which more information is needed (a review list); or
- CRPR 4—Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDDB, regardless of their legal or protection status. CDFW applies the term “California species of special concern” to wildlife species that are not listed under Federal or State endangered species acts but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and are subject to current known threats to their persistence.

Figure 4 in Attachment A shows all CNDDDB occurrences of plant and wildlife species that meet the definition of special-status species described above, occurring within 5 miles of the campground. Results of the CNDDDB search (see Attachment B) yielded occurrences of a total of 48 special-status plants and animals within the USGS 9-quad search area; only 13 of these species have been documented within 5 miles of the project site, and many of the occurrences are historical. (Note: Not all species tracked in the CNDDDB and included in the search results in Attachment B meet the definition of a special-status species described above.)

Table 1 provides information on special-status plant species that were evaluated for potential to occur on the project site. Species included in the CNDDDB or CNPS search results or on the USFS list of sensitive plants for El Dorado National Forest that occupy elevation ranges higher or lower than the project site or were otherwise determined to have no potential to occur in the project vicinity were eliminated from consideration and are not included in Table 1. Based on the review of existing documentation and observations made during field survey, habitat for most of the

special-status plant species that were evaluated is absent from the project site. Two species were determined to have low potential to occur on the project site: Jack's wild buckwheat (*Eriogonum luteolum* var. *saltuarium*) and whitebark pine (*P. albicaulis*). No recent occurrences of Jack's wild buckwheat are known from the project vicinity, and the project site is at the upper elevation limit for this species. Whitebark pine is known from several locations in the project vicinity, but this species was not observed during the field survey, despite it being identifiable at the time the survey was conducted.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Three-bracted onion <i>Allium tribracteatum</i>	March– May	FSS	1B.2	Volcanic slopes in chaparral and lower and upper montane forests	None; no suitable habitat is present on or adjacent to the project site.
Austin's astragalus <i>Astragalus austini</i>	July– September	–	1B.3	Alpine boulder and rock fields in subalpine coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Upswept moonwort <i>Botrychium ascendens</i>	July– August	FSS	2B.3	Meadows and seeps, or near streams, in lower montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Scalloped moonwort <i>Botrychium crenulatum</i>	June– September	FSS	2B.2	Bogs, fens, meadows, seeps, marshes, stream margins in lower and upper montane coniferous forest, typically in areas with hard water (calcium and magnesium carbonates)	None; no suitable habitat is present on or adjacent to the project site.
Mingan moonwort <i>Botrychium minganense</i>	July– September	FSS	2B.2	Open areas in bogs, fens, meadows, seeps, marshes, stream margins in lower and upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Western goblin <i>Botrychium montanum</i>	July– September	FSS	2B.1	Shady conifer woodland, especially under cedar along streams	None; no suitable habitat is present on or adjacent to the project site.
Bolander's bruchia <i>Bruchia bolanderi</i>	NA	FSS	4.2	Mesic soils in upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Common moonwort <i>Botrychium lunaria</i>	NA	FSS	2B.3	Moist meadows in subalpine coniferous forests	None; no suitable habitat is present on or adjacent to the project site.
Davy's sedge <i>Carex davyi</i>	May– August	–	1B.3	Dry, often sparse meadows and slopes in subalpine coniferous forest and upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Mud sedge <i>Carex limosa</i>	June– August	–	2B.2	Sphagnum bogs in lower and upper montane coniferous forest,	None; no suitable habitat is present on or adjacent to the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Western single-spiked sedge <i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i>	July– September	–	2B.2	Alpine boulder and rock field, meadows and seeps in subalpine coniferous forest on rocky substrate (often carbonate)	None; no suitable habitat is present on or adjacent to the project site.
Alpine dusty maidens <i>Chaenactis douglasii</i> var. <i>alpina</i>	July– September	–	2B.3	Upper montane coniferous forest on rocky or gravelly ridges, fell-fields, and crevices	None; project site located outside of elevation range of the species.
Male fern <i>Dryopteris filix-mas</i>	July– September	–	2B.3	Granitic cliffs in upper montane coniferous forest	None; project site is outside this species geographic range.
Oregon fireweed <i>Epilobium oreganum</i>	June– September	–	1B.2	Bogs, fens, meadows, seeps, and small streams in lower and upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Marsh willowherb <i>Epilobium palustre</i>	July– August	–	2B.3	Bogs, fens, meadows and seeps, in disturbed wet areas	None; no suitable habitat is present on or adjacent to the project site.
Jack's wild buckwheat <i>Eriogonum luteolum</i> var. <i>saltuarium</i>	July– September	FSS	1B.2	Granitic sand in Great Basin scrub and upper montane coniferous forest	Low; suitable soils are present, but the project site is at the upper limit of the elevation range for the species.
Blandow's bog moss <i>Helodium blandowii</i>	NA	FSS	2B.3	Mesic soils in meadows and seeps in subalpine coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Broad-nerved hump-moss <i>Meesia uliginosa</i>	NA	FSS	2B.2	Mesic soils in meadows, seeps, and lower and upper coniferous forests	None; no suitable habitat is present on or adjacent to the project site.
Tehachapi monardella <i>Monardella linoides</i> ssp. <i>oblonga</i>	NA	FSS	1B.3	Dry, gravelly slopes and flats in chaparral, conifer woodland to forest	None; no suitable habitat is present on or adjacent to the project site.
Veined water lichen <i>Peltigera gowardii</i>	NA	FSS	4.2	On rocks in cold water creeks with little or no sediment or disturbance	None; no suitable habitat is present on or adjacent to the project site.
Whitebark pine <i>Pinus albicaulis</i>	NA	FSS	–	Upper red-fir forest to timberline, especially subalpine forest	Low; suitable habitat is present on the project site, but no whitebark pines were observed during the field survey.
Robbins' pondweed <i>Potamogeton robbinsii</i>	July– August	–	2B.3	Deep water, typically lakes	None; no suitable habitat is present on or adjacent to the project site.
Water bulrush <i>Schoenoplectus subterminalis</i>	June– August	–	2B.3	Freshwater lakes, streams low in nutrients	None; no suitable habitat is present on or adjacent to the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Cream-flowered bladderwort <i>Utricularia ochroleuca</i>	June–July	–	2B.2	Shallow, acidic waters (generally < 30 cm) in meadows, seeps, marshes, swamp, and lake margins	None; no suitable habitat is present on or adjacent to the project site.

Notes: CNDDDB = California Natural Diversity Database; CRPR = California Rare Plant Rank; NA = not applicable

¹ Status Definitions

Federal Status

FSS = U.S. Forest Service Region 5 Sensitive Species

– = No status

California Rare Plant Ranks

1B = Considered rare or endangered in California and elsewhere

2B = Considered rare or endangered in California but more common elsewhere

4 = Limited distribution or infrequent throughout a broader area in California

– = No status

California Rare Plant Rank Extensions

.1 = Seriously endangered in California (greater than 80 percent of occurrences are threatened and/or have a high degree and immediacy of threat)

.2 = Fairly endangered in California (20 to 80 percent of occurrences are threatened and/or have a moderate degree and immediacy of threat)

.3 = Not very endangered in California

Sources: CDFW 2019; CNPS 2019; GEI data 2017; USFWS 2019

Table 2 provides information on special-status wildlife species that were evaluated for potential to occur on the project site. All fish included on the IPaC resource list and USFS list of sensitive animals for El Dorado National Forest were eliminated from consideration and are not included in Table 2, because the project site is above their elevational range, in a different hydrologic basin, or otherwise inaccessible to them. Foothill yellow-legged frog (*Rana boylei*) and western pond turtle (*Actinemys marmorata*) also were eliminated from consideration, because the project site is well above their elevational range. Based on the review of existing documentation and observations made during field surveys, habitat on the project site is unsuitable or only marginally suitable for the special-status wildlife species that were evaluated. Therefore, potential for many of the species to occur onsite is very low. Only species that are highly mobile and can occur in a variety of habitat types have low to moderate potential to occur onsite.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Invertebrates				
Western bumble bee <i>Bombus occidentalis</i>	FSS	–	Wide variety of habitats, primarily flower-rich montane meadows; nests in abandoned rodent burrows and other cavities.	Low; montane meadow habitat is present nearby.
Amphibians				
Southern long-toed salamander <i>Ambystoma macrodactylum sigillatum</i>	–	SSC	Montane meadows and lakes surrounded by coniferous forest; in non-breeding season, adults use mammal burrows and moist areas under litter, logs, and rocks.	Very low; no suitable wetland habitats are present on or adjacent to the project site; no individuals detected during ongoing Project 184 amphibian surveys at Caples Lake.
Yosemite toad <i>Anaxyrus canorus</i>	T	SSC	High elevation wet meadows in central Sierra Nevada; also occurs in seasonal ponds in subalpine coniferous forest.	Very low; no suitable habitat is present on or adjacent to the project site; no individuals detected during ongoing Project 184 amphibian surveys at Caples Lake.
Sierra Nevada yellow-legged frog <i>Rana sierrae</i>	E	T	Montane ponds, lakes, and streams, typically with shallow, exposed, and gently-sloping shorelines.	Very low; no suitable habitat is present on or adjacent to the project site; no individuals detected during ongoing focused Project 184 surveys at Caples Lake.
Birds				
Northern goshawk <i>Accipiter gentilis</i>	FSS	SSC	Coniferous and montane riparian forest; typically nests on north-facing slopes near water.	Low; no individuals detected during focused surveys conducted for Project 184, and nearest known occurrences are more than 10 miles from the project site.
Golden eagle <i>Aquila chrysaetos</i>	–	FP	Variety of habitats in foothills, mountains, high plains, and dessert; primarily nests on cliffs in steep canyons, but also in large trees in open areas.	Low; unlikely to nest in the immediate vicinity, but transient and other non-breeding individuals could occur in the area.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Bald eagle <i>Haliaeetus leucocephalus</i>	FSS	E	Coastal shorelines and wetlands, lakes, reservoirs, and rivers. Nests in large trees, typically in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers.	Moderate; non-breeding individuals were observed during focused surveys conducted for Project 184 at Caples Lake, but habitat suitability analysis concluded the species is unlikely to nest at the lake.
American peregrine falcon <i>Falco peregrinus anatum</i>	–	FP	Wide range of habitats; nests on cliffs, banks, dunes, and human-made structures near wetlands, lakes, rivers, and other water bodies.	Low; no suitable nesting habitat was identified by USFS in the Caples Lake vicinity during Project 184 relicensing; non-breeding individuals could occasionally occur in the area.
Great gray owl <i>Strix nebulosi</i>	FSS	E	High elevation coniferous forest, close to large meadows.	Low; suitable habitat in the Caples Lake vicinity is very limited, and nearest habitat is approximately 0.5 mile northeast of the project site.
California spotted owl <i>Strix occidentalis occidentalis</i>	FSS	SSC	In the Sierra Nevada, primarily coniferous and montane hardwood forests at middle elevations; also occurs in red fir forest at high elevations.	Low; no suitable habitat was identified by USFS in the Caples Lake vicinity during Project 184 relicensing; nearest documented occurrence is approximately 3 miles northeast of the project site.
Willow flycatcher <i>Empidonax traillii</i>	FSS	E	Dense willow thickets associated with wet meadows, ponds, and streams.	Very low; migrant individuals could occur in riparian and meadow habitats in the vicinity, but no suitable nesting habitat is present on the project site; no individuals were detected during Project 184 focused surveys in the Caples Lake vicinity.
Mammals				
Pallid bat <i>Antrozous pallidus</i>	FSS	SSC	Variety of habitats, including woodland, forest, grassland, and desert; roosts in tree cavities, rock crevices, mines, caves, and human structures.	Low; occurs at up to 10,000 feet elevation, but typically below 6,000 feet; documented approximately 8-10 miles west of the project site during surveys at 6,000-7,000 feet.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	FSS	SSC	Variety of habitats, but prefers mesic habitats; roosts in caves, mines, tunnels, buildings, or other human-made structures.	Low; has been observed at up to nearly 11,000 feet elevation, but typically occurs at low to middle elevations.
Fringed myotis <i>Myotis thysanodes</i>	FSS	–	Wide variety of habitats, but most often in woodland and forest; roosts in caves, mines, buildings and other crevices.	Moderate; has been documented at similar elevation within several miles of the project site; nearby rock outcrops could provide suitable roost sites, but unlikely to roost onsite.
Sierra Nevada snowshoe hare <i>Lepus americanus tahoensis</i>	–	SSC	Montane riparian areas with thickets of deciduous riparian trees and young conifers.	Very low; no suitable riparian vegetation is present on or adjacent to the project site, and no recent occurrences of the species are known from the region.
Western white-tailed jackrabbit <i>Lepus townsendii townsendii</i>	–	SSC	Coniferous forest, shrublands, and grasslands with open areas, shrub cover, and herbaceous understory.	Low; suitable habitat is present on and adjacent to the project site, but no recent occurrences of the species are known from the project vicinity.
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	–	SSC	Montane areas with dense understory of deciduous trees and shrubs, wet soil, and abundant water.	Very low; project site does not support dense understory vegetation or wet soils and water; no recent occurrences of the species are known from the project vicinity.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	C	T	Variety of montane habitats; prefers forest interspersed with meadows and other open areas and requires dense vegetation and rocky areas for cover and den sites.	Very low; potentially suitable habitat is present on and near the project site, but the nearest known extant population is in the area of Sonora Pass, more than 30 miles south of the project site.
California wolverine <i>Gulo gulo</i>	PT FSS	T	Various montane habitats; uses caves, logs, and burrows for cover and den sites; hunts in open areas.	Very low; potentially suitable habitat is present adjacent to the project site, but the species is extremely rare in California and only known to occur in Tahoe National Forest.
Sierra marten <i>Martes caurina sierrae</i>	FSS	–	Mixed coniferous forest with different-aged stands and high canopy closure, including old-growth trees and snags for denning.	Low; multiple recent occurrences within 5-7 miles of the site, but habitat on and adjacent to the project site is only marginally suitable.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Fisher <i>Pekania pennanti</i>	PT FSS	CT SSC	Large areas of mature, dense conifer forest and deciduous riparian areas with high canopy closure; uses cavities, snags, logs, and rocky areas for cover and den sites.	Very low; habitat on and adjacent to the project site is of poor quality for this species, and no known occurrences have been documented in the region for more than 30 years.
American badger <i>Taxidea taxus</i>	–	SSC	Various dry habitats, including open forest shrubland; requires friable soils and open ground for burrowing.	Low; recently documented several miles east of the project site, but habitat on and adjacent to the site is only marginally suitable.

Notes: CNDDDB = California Natural Diversity Database; Delta = Sacramento–San Joaquin Delta

¹ Status Definitions

- E = Listed as Endangered under the Federal or State Endangered Species Act
- T = Listed as Threatened under the Federal or State Endangered Species Act
- C = Candidate for listing as Threatened or Endangered under the State Endangered Species Act
- FSS = U.S. Forest Service Region 5 Sensitive Species
- FP = Fully Protected under the California Fish and Game Code
- SSC = California Species of Special Concern
- = No status

Sources: CDFG 1998; CDFW 2019; ECORP 2002, 2012; EIP 2002a, 2002b, 2002c, 2004; Garcia and Associates 2017; GEI data 2017; USFS 2010; USFWS 2015, 2019

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, ESA, Section 1602 of the FGC, Section 404 of the CWA, and the Porter-Cologne Act. Sensitive habitats may be of special concern for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to special-status species.

Critical Habitat

Critical habitat is a geographic area containing features determined to be essential to the conservation of a species listed as threatened or endangered under the ESA. The project site is entirely within Subunit 2F of final designated critical habitat for Sierra Nevada yellow-legged frog (*Rana sierrae*) (81 Federal Register [FR] 59046). Habitat features and characteristics identified as primary constituent elements (PCEs) required by the species and protected under the critical habitat designation include: aquatic habitat for breeding and rearing; aquatic nonbreeding habitat, including overwintering habitat; and upland areas. Upland areas include those adjacent to or surrounding breeding and nonbreeding aquatic habitat that provide area for feeding and movement of frogs and for the natural hydrologic regime (water quantity) of aquatic habitats and maintenance of sufficient water quality to support all life stages of the frog and their prey base.

Although the project site is within the mapped boundaries of designated critical habitat for the Sierra Nevada yellow-legged frog, USFWS rules regarding critical habitat "normally exclude by text developed areas such as buildings, roads, airports, parking lots, piers, and other such facilities" (USFWS 2017). Because the project site is a developed campground, it is excluded from the designated critical habitat area. Additionally, the project site does not support PCEs required by the

species, as described in the final critical habitat designation. Because there is no aquatic habitat present, the project site does not provide breeding or non-breeding aquatic habitat PCEs. In addition, it does not meet requirements of the upland areas PCE, because it is not within an area of proximate waterbodies (i.e., a complex of multiple lakes) or meadows and is not hydrologically connected to and therefore not important to maintaining the hydrologic regime or water quality of Caples Creek or Caples Lake.

Other Habitats Protected under Federal and State Regulations

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into aquatic features that qualify as waters of the United States; wetlands that support hydrophytic vegetation, hydric soil types, and wetland hydrology may also qualify for USACE jurisdiction under Section 404 of the CWA. Under Section 401 of the CWA, the Central Valley Regional Water Quality Control Board (RWQCB) regulates discharge of dredged or fill material into waters of the United States that drain to the Central Valley, to ensure such activities do not violate State or Federal water quality standards; the Central Valley RWQCB also regulates waters of the State, in compliance with the Porter-Cologne Act. In addition, all diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources is subject to the regulatory approval of CDFW pursuant to Section 1602 of the FGC.

An approximately 300-foot-long swale was identified in the southeastern portion of the project site during the field survey (see Figure 3). It is a shallow drainageway that conveys low volumes of water for short duration (i.e., during heavy rain events). The swale originates near camp site 15 and has a southwesterly orientation, forming a shallow topographic low area between sites 36 and 2. It is very broad and lacks an ordinary high-water mark, hydric soils, and hydrophytic plant assemblage. Therefore, this swale does not qualify as a water of the United States or wetland subject to Section 404 or 401 of the CWA, or as a water of the State subject to the Porter-Cologne Act, and it would not be subject to regulation by USACE or RWQCB. Because the swale lacks a defined bed, bank, and channel, it is also unlikely to be regulated under Section 1602 of the FGC.

Natural Communities of Special Concern

CDFW maintains a list of terrestrial natural communities that are native to California, the *List of Vegetation Alliances and Associations* (CDFG 2010). Within that list, CDFW identifies and ranks natural communities of special concern considered to be highly imperiled. Upper montane forest is classified as a red fir-white fir forest in the *California Manual of Vegetation* (Sawyer et al. 2009), which is not identified as a community of special concern by CDFW.

Potential Project Impacts

Impacts of the proposed campground improvements on biological resources could result from temporary disturbance during construction and permanent changes in the footprint of campground facilities. In general, these impacts are anticipated to be relatively minor, because the improvements would be limited to the existing campground area and would focus on replacement, upgrade, and slight expansion of existing facilities and other disturbed areas. The area where project activities would occur is subject to regular disturbance when the campground is open (June – October). The adjacent SR 88 and Caples Lake Resort are nearby sources of additional existing disturbance. Therefore, species that typically avoid areas of human activity are unlikely to occur on the project site, except possibly in late fall to early spring, when recreational and traffic disturbance is reduced.

Tree removal would only occur as needed to construct the improvements. All trees less than 6 inches in diameter and within the designated boundaries of new camp units would be removed. Trees greater than 6 inches in diameter and/or outside camp units would be preserved to the extent possible and only removed if they conflict with construction of improvements. Approximately 50 trees are anticipated to be removed, but additional trees may be determined to require removal during construction activities.

Potential for sensitive biological resources, including special-status species and regulated habitats, to be impacted by implementing campground improvements is evaluated below. This impact discussion focuses on resources with reasonable potential to be affected by implementing the campground improvements. Therefore, special-status plant and wildlife species that are unlikely to occur on the project site (because of a lack of suitable conditions, known extant range of the species, and/or lack of occurrence records) are not addressed in this discussion.

Special-status Species

Plants

Jack's wild buckwheat and whitebark pine are the only special-status plants that were determined to have potential to occur on the project site. Suitable soils are present on the project site for Jack's wild buckwheat. However, the site is at the upper elevation range of the species and the nearest known occurrences are located more than 8 miles northeast (near Luther Pass) and more than 30 miles southeast (near Dardanelle). The Luther Pass occurrence was last documented in 1975, and the record lacks information about associated species. Vegetation associated with Jack's wild buckwheat at the Dardanelle location include incense cedar (*Calocedrus decurrens*) and foothill pine (*P. sabiniana*); the vegetation assemblage at the project site doesn't include either of these species. Therefore, Jack's wild buckwheat has low potential to occur on the project site. In addition, project-related ground disturbance would primarily occur in areas with compacted soils, near existing campground facilities that do not support shrub cover. Therefore, project activities are unlikely to result in loss of Jack's wild buckwheat populations or individuals and would not result in a substantial adverse effect to the species.

The nearest known occurrences of whitebark pine are from over 8,200 feet (near Red Lake), approximately 4 miles east of the project site, and over 9,500 feet (at Thimble Peak), approximately 3 miles south of the site. Whitebark pine typically occurs on cryochapt soils, which are less-developed than the soils at the project site. Although a focused survey was not conducted, whitebark pine trees were not observed during the field survey. Therefore, whitebark pine has low potential to occur on the project site. Approximately 50 trees are anticipated to be removed during project activities. Identification of these trees has not been confirmed, but most are expected to be lodgepole pine. Therefore, whitebark pine trees are unlikely to be removed by project activities. In the unlikely event whitebark pine occurs on the project site, few, if any, would be removed, and such removal is unlikely to result in a substantial adverse effect to the species.

Invertebrates

The only special-status invertebrate with potential to occur on the project site is western bumble bee (*Bombus occidentalis*). This species could forage on the project site when suitable flowering plants are in bloom, although meadows in the region likely provide higher quality foraging habitat. Western bumble bees also could nest in underground cavities on the project site, such as in abandoned chipmunk burrows. Because this species is highly mobile and similar or higher-quality foraging habitat is present in the vicinity, potential disturbance of foraging individuals would likely be minor. There is minimal potential for campground improvements to impact a

nesting colony, if ground disturbance occurs in areas with suitable nesting habitat. However, because improvement activities would primarily occur within existing roadways, spurs, and other areas that have already been graded or otherwise altered, potential to impact a nesting colony is low. In addition, permanent impacts would be very minor and may not affect suitable nesting habitat at all. Although western bumble bees appear to have experienced substantial recent declines in range and abundance, the species has a wide geographic range and occurs across a variety of habitats. Therefore, the relatively limited impact from potential disturbance of foraging individuals and nest colonies during construction activities would not result in a substantial adverse effect to the species as a whole and is unlikely to substantially affect local or regional populations.

Amphibians

Three special-status amphibians (southern long-toed salamander [*Ambystoma macrodactylum sigillatum*], Yosemite toad [*Anaxyrus canorus*], and Sierra Nevada yellow-legged frog) have been documented in the larger region, but potential for them to occur on the project site is extremely low, because no aquatic habitat is present on or near the site. The nearest areas of potentially suitable aquatic habitat are Caples Creek, approximately 850 feet north of the site, and Caples Lake, across SR 88 and approximately 250 feet south of the site. Although these special-status amphibians can venture into nearby upland areas when foraging and dispersing, they would not use the project site, because it is separated from Caples Lake and Caples Creek by open, dry, rocky habitat and asphalt surfaces that would be avoided by them. In addition, project activities would occur in areas that are already developed (e.g., existing structures and paved roadways) or highly disturbed (e.g., existing camp sites with compacted soils and little protective cover). Therefore, these amphibians would not be encountered during construction of campground improvements, and minor permanent impacts on upland habitat would not adversely affect them.

Birds

Seven special-status bird species have very low to moderate potential to occur on the project site (see Table 2). All of these species are known or likely to occur in the general region, but habitat on the project site is unsuitable or only marginally suitable for them. Most importantly, the project site and immediately adjacent areas do not provide suitable nesting habitat for any of the species. Potential for special-status birds to occur onsite is likely limited to species that may forage or roost in coniferous forest or pass through the project vicinity in transit between nesting or foraging areas. Because extensive areas of similar or higher-quality and less-disturbed coniferous are present in the vicinity of the project site, these species are more likely to forage and roost elsewhere. Therefore, disturbance during construction of campground improvements would not affect nesting special-status birds and is unlikely to displace foraging or roosting individuals; if any impacts on special-status birds occur, they would be minor.

Mammals

Eleven special-status mammals were evaluated for potential to occur on the project site (see Table 2). Although these species are known from, or have potential to occur in, the larger region, most of them have low or very low potential to occur onsite. These species prefer relatively undisturbed areas of coniferous forest, are more associated with meadows and other wetland areas that are absent from the project site and immediate vicinity, typically occur at lower elevations, and/or are suspected of being extirpated from the local region. Because potential for these mammals to occur on the project site is low or very low, they are unlikely to be encountered during construction of campground improvements, and minor permanent impacts on upland habitat would not adversely affect them.

The only species with moderate potential to occur onsite is fringed myotis, which has been recently documented within several miles of the project site. This highly mobile species could forage over the projects site, and roosting colonies may use nearby areas of rock outcrops. Small rocky areas and existing structures on the project site are unlikely to provide habitat for roosting colonies but could be used as temporary roost sites for small numbers of individuals. Foraging activities are unlikely to be disturbed by construction activities, and potential disturbance of roosting individuals would be limited to the small numbers that may roost in the existing toilet block during the day. These minor potential impacts would not result in a substantial adverse effect to the species as a whole and is unlikely to substantially affect local or regional populations.

Sensitive Habitats

Although the project site is within the mapped boundaries of designated critical habitat for Sierra Nevada yellow-legged frog, the project site is excluded from the designated critical habitat area, because it is an existing developed area. Project activities would occur in areas that are already developed (e.g., existing structures and paved roadways) or highly disturbed (e.g., existing camp sites with compacted soils and little protective cover). The overall campground area would not be expanded and no new facilities would be constructed in previously undisturbed habitat. Additionally, the project site does not support PCEs required by the species, as described in the final critical habitat designation. Therefore, implementing the proposed project would not result in destruction or adverse modification of habitat that currently provides critical habitat PCEs for Sierra Nevada yellow-legged frog, and it would not preclude or delay capacity for critical habitat PCEs to develop onsite and eventually provide the needed ecological functions to support recovery.

The project site does not support any riparian habitat or other sensitive natural community. The on-site swale does not qualify as a water of the United States or wetland subject to Section 404 or 401 of the CWA or water of the State subject to Porter-Cologne Act; it is also unlikely to be regulated under Section 1602 of the FGC. Therefore, implementing campground improvements would have no effect on riparian habitat, sensitive natural communities, or wetlands and other habitats protected by Federal or State regulations.

Other Potential Impacts on Biological Resources

The project site is part of a much larger extent of coniferous forest and does not serve as a corridor or other primary route for wildlife movement or support an aquatic habitat corridor. It also is not known or anticipated to serve as a nursery site for any wildlife species. Therefore, implementing the campground improvements would not interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

The project site is not within any special designated management areas for species or other biological resources addressed in the El Dorado Forest Land and Resources Management Plan and is not subject to vegetation management actions prescribed by the Sierra Nevada Forest Plan Amendment. The project site is also not within an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, implementing the campground improvements would not conflict with any provisions, guidelines, goals, or objectives related to biological resources outlined in these plans or programs. Because campground improvements would be restricted to the existing campground area and vegetation removal is anticipated to be minimal and limited to modification or slight expansion of existing facilities, potential effects on habitat for USFS Management Indicator Species would be minor.

Implementing campground improvements could result in removal of active nests of common bird species, if tree or ground vegetation removal occurs during the bird nesting season. Loss of active nests of common species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels, but it could violate the Migratory Bird Treaty Act and/or FGC, depending on the timing of vegetation removal. Recommended impact avoidance and minimization measures described below would reduce potential for loss of active bird nests.

Impact Avoidance and Minimization Measures

Implementation of the following measures is recommended to avoid or minimize impacts on biological resources:

1. Limit ground disturbance to construction area, and clearly mark construction area limits to minimize potential for accidental disturbance of adjacent habitat.
2. Store all construction materials, such as portable equipment, vehicles, and supplies, in designated construction staging areas, and minimize staging in areas that are not subject to ground disturbance under existing conditions.
3. Limit vegetation removal to the minimum amount necessary to complete planned improvements.
4. If ground vegetation removal is required, replant or reseed previously vegetated areas with native species.
5. Install, monitor, and maintain erosion control measures that minimize soil or sediment from entering aquatic habitat.
6. Remove construction equipment and debris immediately after improvements are completed.
7. Dispose of all debris, rubbish, vegetation, and other material removed from the construction areas at an approved disposal site.
8. Prevent hazardous substances and construction by-products (e.g., gas, oil, other petroleum products, chemical, fresh cement, asphalt) from contaminating the soil or entering aquatic habitat.
9. Conduct environmental awareness training before improvement activities begin to inform all construction personnel about measures to avoid and minimize effects on biological resources.
10. Install and maintain high-visibility fencing or other visual markings to protect sensitive biological resource areas that are located adjacent to construction areas, but can be avoided, from encroachment of personnel and equipment. Incorporate sensitive habitat information into construction bid specifications, with a requirement for contractors to avoid these areas.
11. If vegetation removal would occur during the bird nesting season, conduct surveys for active bird nests in areas of suitable nesting vegetation designated for removal. Tree-nesting species may begin nesting as early as March 1, though ground-nesting species are unlikely to nest before May 1. All nesting activity should be completed by August 31.
12. If any active nests or behaviors indicating active nests are present are observed, establish an appropriate buffer around the nest sites to avoid nest failure resulting from vegetation removal. Activity within the buffer should be prohibited until nestlings have fledged and left the vegetation to be removed, or the nest is otherwise no longer occupied. Dimensions of the buffer zone should depend on the nesting species, characteristics of the nest location, and nest stage (i.e., nest building, incubation, nestlings).

Conclusions

Potential for implementing campground improvements to impact sensitive biological resources is generally low. Construction activities would result in temporary disturbance and minor permanent modifications within the existing campground area. Few special-status species have reasonable potential to occur on the project site, because it does not support suitable habitat for most species that occur in the region, and the campground and adjacent areas are subject to relatively high levels of human activity, particularly in summer. Improvements would not destroy or adversely modify critical habitat for Sierra Nevada yellow-legged frog, because the project site is excluded from the designated critical habitat area and does not support the required PCEs. In addition, the on-site swale is not expected to qualify for regulation under any Federal or State laws or regulations. Impact avoidance and minimization measures outlined above are designed to reduce potential for campground improvements to adversely affect biological resources. Implementing the proposed improvements would not result in any significant or potentially significant impacts to biological resources under CEQA.

If you have any questions or concerns regarding this monitoring report, please contact me by phone at 619-517-2753 or e-mail at aking@geiconsultants.com.

Sincerely,



Cindy Davis
Project Manager/Senior Regulatory Specialist



Anne King
Senior Wildlife Biologist

Attachment A: Figures 1-4

Attachment B: Special-status Species Query Results

Attachment C: Photographs of Caples Lake Campground

References

- California Department of Fish and Game. 1998. *Terrestrial Mammal Species of Special Concern in California*. Sacramento, CA.
- . 2010. *List of Vegetation Alliances and Associations*. Sacramento, CA.
- California Department of Fish and Wildlife. 2019. California Natural Diversity Database, Wildlife and Habitat Data Analysis Branch, RareFind Version 5. Commercial version. Available at: <https://www.wildlife.ca.gov/Data/CNDDDB>. Accessed March 26, 2019.
- California Native Plant Society. 2019. *Inventory of Rare and Endangered Plants*. Online edition, v8-03 0.38. Sacramento, CA. Available: <http://www.rareplants.cnps.org>. Accessed March 26, 2019.
- CDFG. *See* California Department of Fish and Game.
- CDFW. *See* California Department of Fish and Wildlife.
- CNPS. *See* California Native Plant Society.
- ECORP Consulting, Inc. 2002. Special-status Amphibian Surveys for EID Project 184. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2012. 2011 Mountain Yellow-legged Frog Monitoring Plan Survey Results for El Dorado Hydroelectric Project, FERC No. 184. Prepared for El Dorado Irrigation District, Placerville, CA.
- EIP Associates. 2002a (April). Technical Memorandum Number 1 – Summary Report for Northern Goshawk, California Spotted Owl, Peregrin Falcon, Bald Eagle and Willow Flycatcher Surveys. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2002b (May). Technical Memorandum Number 6 – Great Gray Owl Habitat Maps. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2002c (September). Technical Memorandum Number 13 – 2001/2002 willow flycatcher surveys. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2004. Technical Memorandum Number 17 – Evaluation of the Potential for Bald Eagle Nesting at Silver, Caples and Echo Lakes. Prepared for El Dorado Irrigation District, Placerville, CA.
- Garcia and Associates. 2017. 2016 Sierra Nevada Yellow-legged Frog Monitoring. El Dorado Hydroelectric Project, FERC No. 184. Prepared for El Dorado Irrigation District, Placerville, CA.
- National Marine Fisheries Service. 2019. California Species List Tools. Available: http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html. Accessed May 15, 2019.

Natural Resources Conservation Service. 2017. *Soil Survey of El Dorado National Forest Area, Parts of Alpine, Amador, El Dorado, and Placer Counties, California*. Available: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Accessed October 12, 2017.

NMFS. *See* National Marine Fisheries Service.

NRCS. *See* Natural Resources Conservation Service.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation*. Second edition. Sacramento: California Native Plant Society.

Sierra Nevada Working Group. 2010. *Sierra Nevada Red Fox Fact Sheet*. Available: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5282562.pdf. Accessed November 6, 2017.

USFS. *See* U.S. Forest Service.

U.S. Forest Service. 2010. *Environmental Impact Statement for the Big Grizzly Forest Health and Fuels Reduction Project*. Pacific Southwest Region, El Dorado National Forest, Placerville, CA.

U.S. Fish and Wildlife Service. 2015. *Species Report: Sierra Nevada Red Fox* (*Vulpes vulpes necator*).

———. 2017. *Amendment of the Programmatic Biological Opinion on Nine Forest Programs on Nine National Forests in the Sierra Nevada of California for the Endangered Sierra Nevada Yellow-legged Frog, Endangered Northern Distinct Population Segment of the Mountain Yellow-legged Frog, and Threatened Yosemite Toad*. Sacramento Fish and Wildlife Office, Sacramento, CA.

———. 2019. Information for Planning and Conservation Resource List. Sacramento Fish and Wildlife Office, Sacramento, CA.

USFWS. *See* U.S. Fish and Wildlife Service.

Attachment A

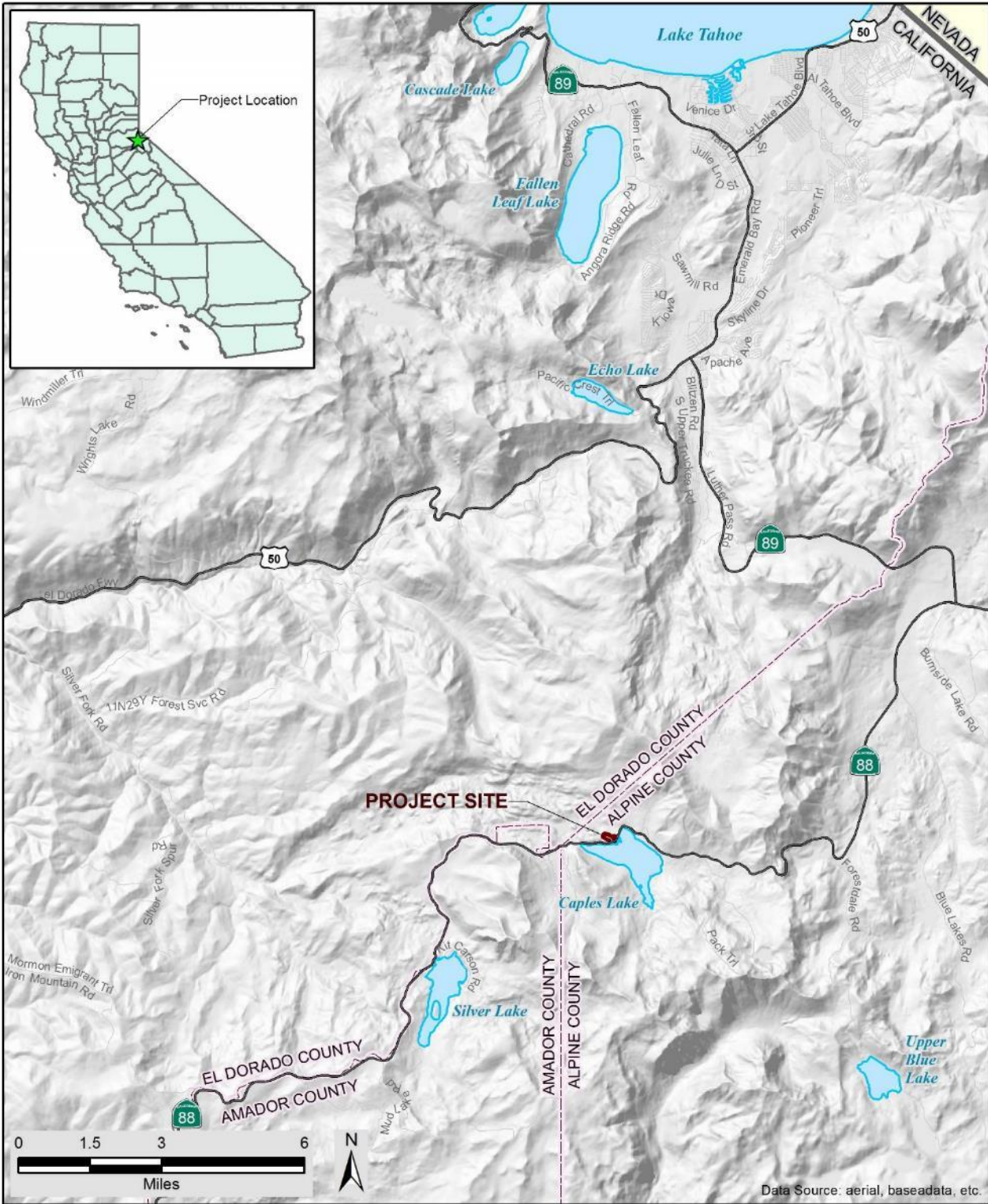
Figure 1. Project Location

Figure 2. Overview of Campground Improvement Area

Figure 3. Habitat Types on the Project Site

Figure 4. California Natural Diversity Database Occurrences within 5 Miles of the Project Site

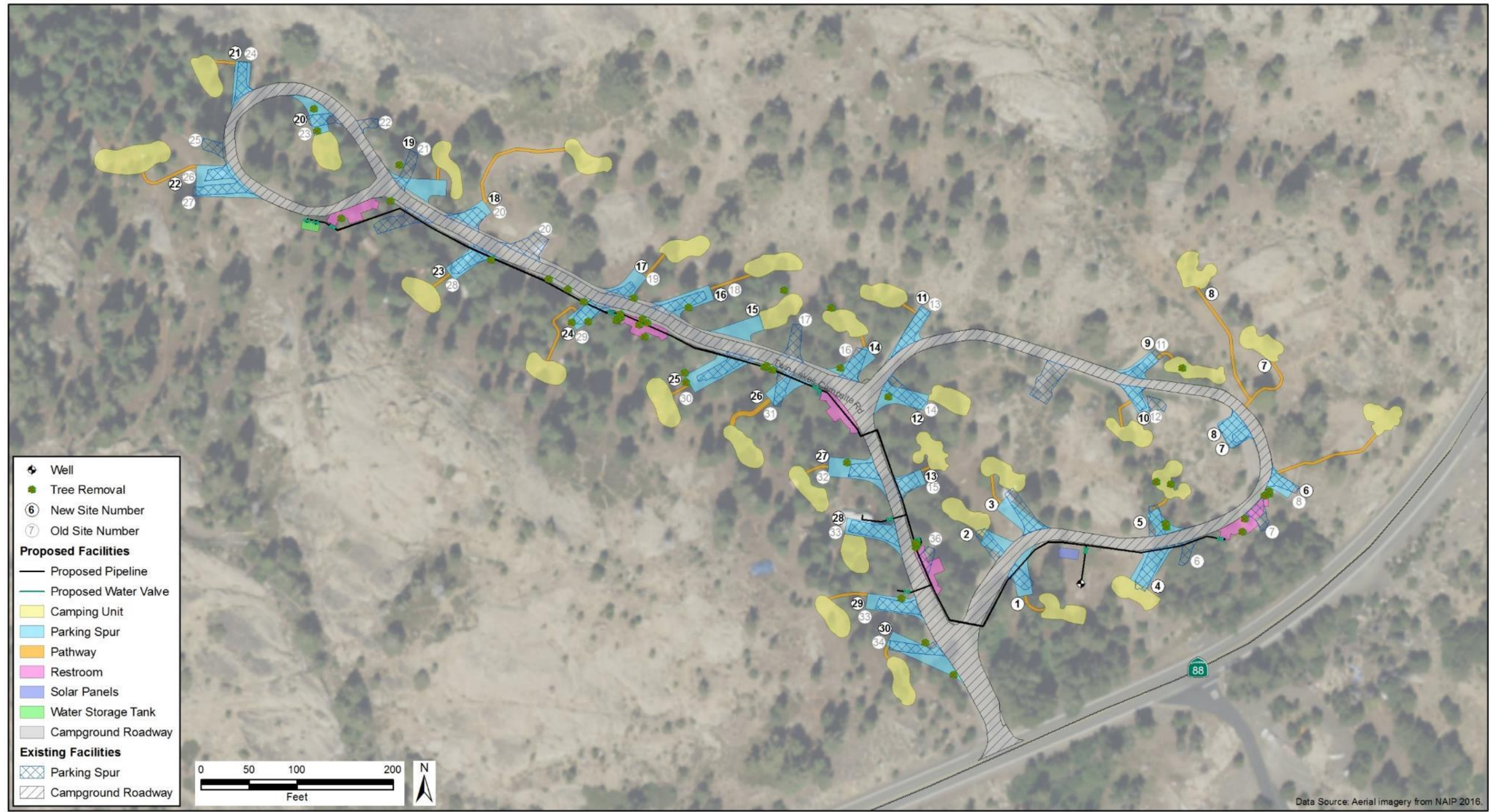
Figure 1. Project Location



Z:\Projects\1704295-7_CaplesLake\1704295_G011_CaplesLake_RegionalSetting_bioreport.mxd
20Nov2017 SET

Source: GEI Consultants, Inc. 2017

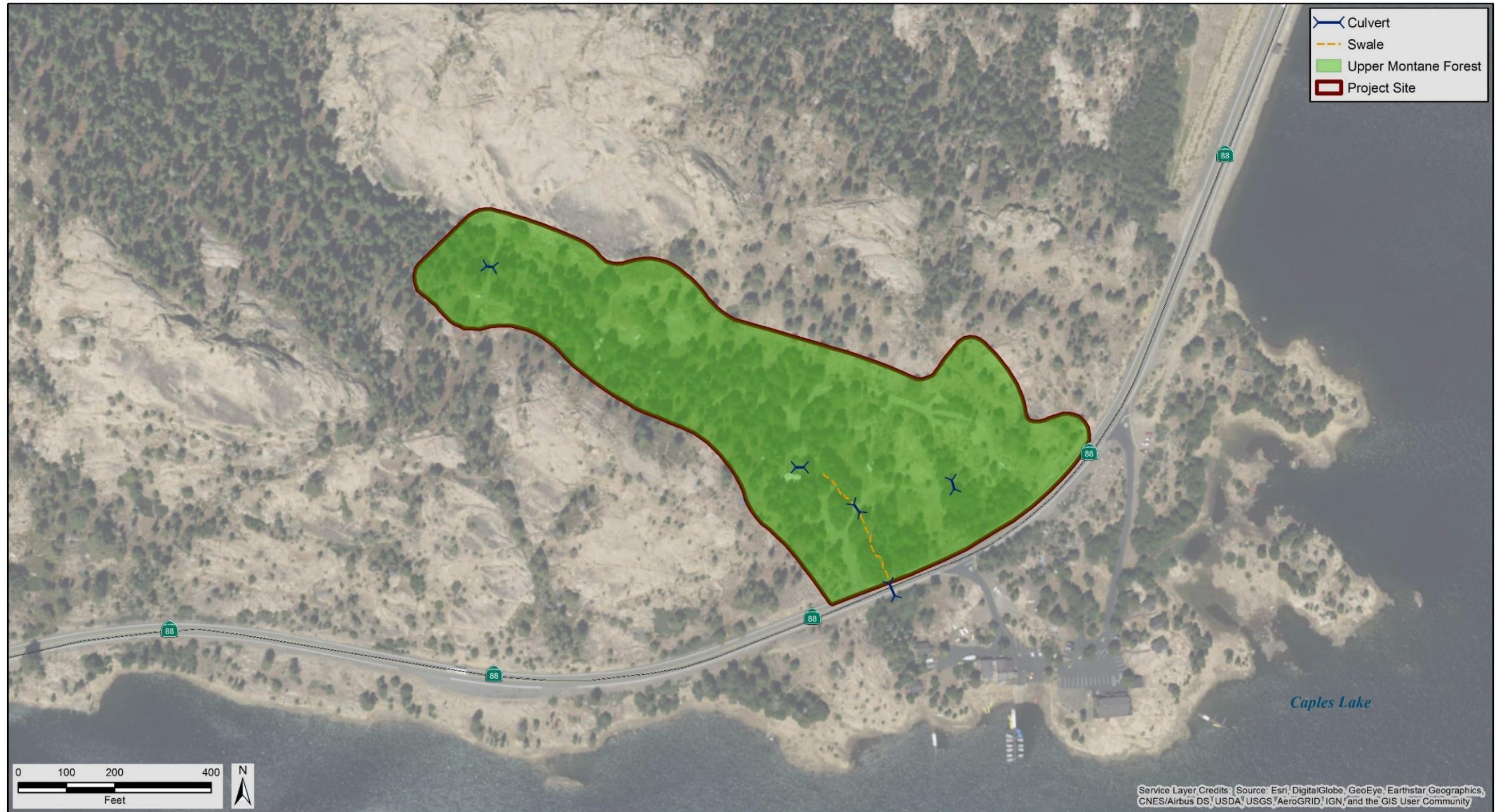
Figure 2. Overview of Campground Improvements



Source: El Dorado Irrigation District 2017

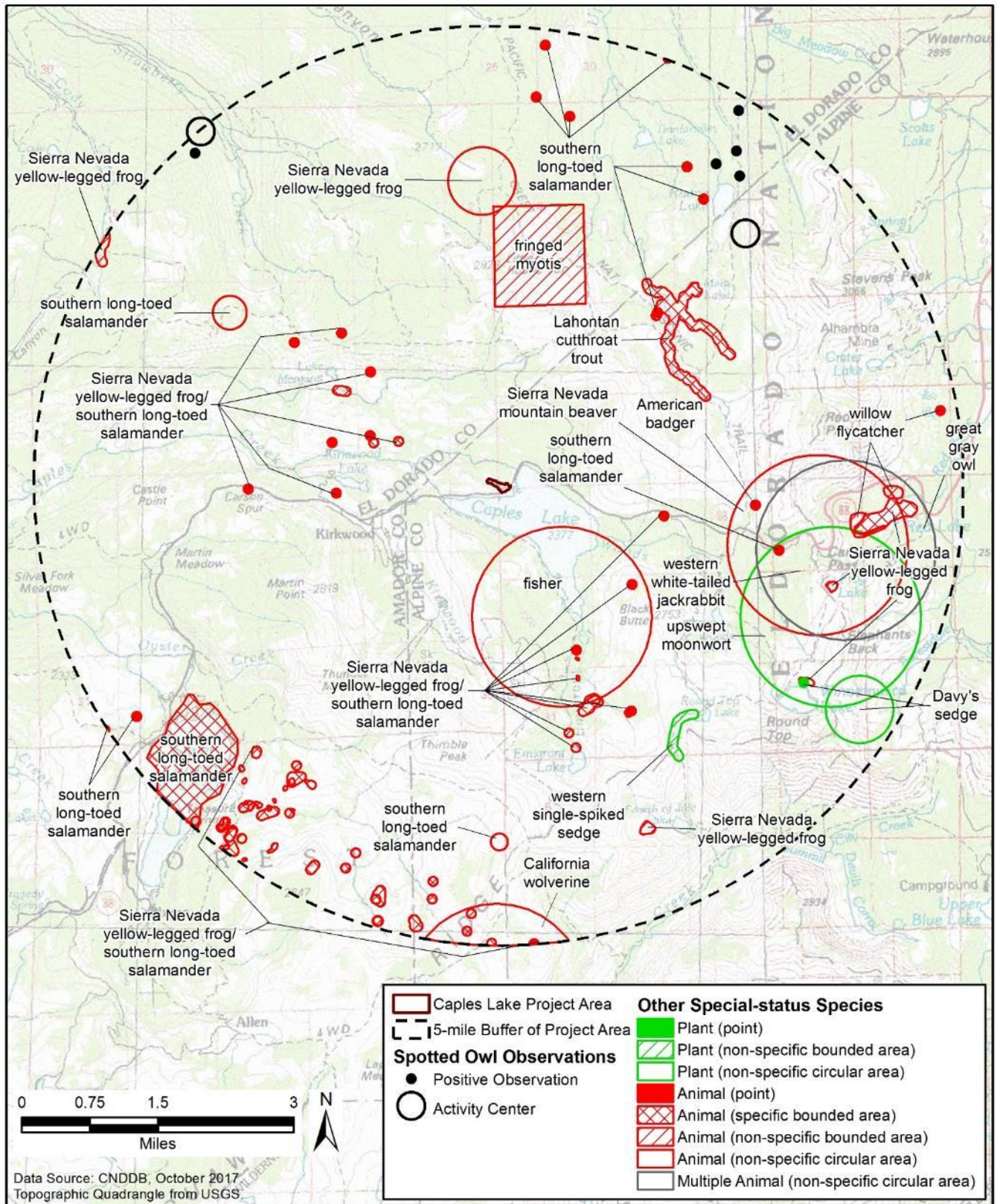
14May2019 RS Z:\Projects\1901628_EID_Campground_Improvements\G001_CL_CampgroundImprovements.mxd

Figure 3. Habitat Types on the Project Site



Source: GEI Consultants, Inc. 2017

Figure 4. California Natural Diversity Database Occurrences within 5 Miles of Project Site



Z:\Projects\1704295-7_CaplesLake\1704295_G001_SensitiveSpecies_5mi.mxd
 13Nov2017 RS

Attachment B

Special-status Species Query Results



Selected Elements by Scientific Name
 California Department of Fish and Wildlife
 California Natural Diversity Database



Query Criteria: Quad (Pyramid Peak (3812072) OR Echo Lake (3812071) OR Freel Peak (3811978) OR Tragedy Spring (3812062) OR Caples Lake (3812061) OR Carson Pass (3811968) OR Bear River Reservoir (3812052) OR Mokelumne Peak (3812051) OR Pacific Valley (3811958)) AND Taxonomic Group (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Allium tribracteatum</i> three-bracted onion	PMLIL022D0	None	None	G2	S2	1B.2
<i>Astragalus austiniae</i> Austin's astragalus	PDFAB0F120	None	None	G2G3	S2S3	1B.3
<i>Botrychium ascendens</i> upswept moonwort	PPOPH010S0	None	None	G3G4	S2	2B.3
<i>Botrychium crenulatum</i> scalloped moonwort	PPOPH010L0	None	None	G4	S3	2B.2
<i>Botrychium manganense</i> Mingan moonwort	PPOPH010R0	None	None	G4G5	S3	2B.2
<i>Botrychium montanum</i> western goblin	PPOPH010K0	None	None	G3	S2	2B.1
<i>Brasenia schreberi</i> watershield	PDCAB01010	None	None	G5	S3	2B.3
<i>Carex davyi</i> Davy's sedge	PMCYP033H0	None	None	G3	S3	1B.3
<i>Carex hystericina</i> porcupine sedge	PMCYP036D0	None	None	G5	S2	2B.1
<i>Carex limosa</i> mud sedge	PMCYP037K0	None	None	G5	S3	2B.2
<i>Carex scirpoidea ssp. pseudoscirpoidea</i> western single-spiked sedge	PMCYP03C85	None	None	G5T4	S2	2B.2
<i>Chaenactis douglasii var. alpina</i> alpine dusty maidens	PDAST20065	None	None	G5T5	S2	2B.3
<i>Cryptantha crymophila</i> subalpine cryptantha	PDBOR0A0R0	None	None	G3	S3	1B.3
<i>Draba asterophora var. asterophora</i> Tahoe draba	PDBRA110D1	None	None	G2T2?	S2?	1B.2
<i>Draba asterophora var. macrocarpa</i> Cup Lake draba	PDBRA110D2	None	None	G2T1	S1	1B.1
<i>Dryopteris filix-mas</i> male fern	PPDRY0A0B0	None	None	G5	S2	2B.3
<i>Elymus scribneri</i> Scribner's wheat grass	PMPOA2H170	None	None	G5	S3	2B.3
<i>Epilobium howellii</i> subalpine fireweed	PDONA06180	None	None	G4	S4	4.3



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Epilobium palustre</i> marsh willowherb	PDONA060R0	None	None	G5	S2	2B.3
<i>Erigeron miser</i> starved daisy	PDAST3M2K0	None	None	G3?	S3?	1B.3
<i>Eriogonum luteolum var. saltuarium</i> Jack's wild buckwheat	PDPGN083S4	None	None	G5T1	S1	1B.2
<i>Helodium blandowii</i> Blandow's bog moss	NBMUS3C010	None	None	G4	S2	2B.3
<i>Lewisia longipetala</i> long-petaled lewisia	PDPOR040K0	None	None	G2	S2	1B.3
<i>Meesia triquetra</i> three-ranked hump moss	NBMUS4L020	None	None	G5	S4	4.2
<i>Meesia uliginosa</i> broad-nerved hump moss	NBMUS4L030	None	None	G5	S3	2B.2
<i>Orthotrichum holzingeri</i> Holzinger's orthotrichum moss	NBMUS560E0	None	None	G3	S2	1B.3
<i>Peltigera gowardii</i> western waterfan lichen	NLVER00460	None	None	G3G4	S3	4.2
<i>Potamogeton epihydrus</i> Nuttall's ribbon-leaved pondweed	PMPOT03080	None	None	G5	S2S3	2B.2
<i>Potamogeton robbinsii</i> Robbins' pondweed	PMPOT030Z0	None	None	G5	S3	2B.3
<i>Schoenoplectus subterminalis</i> water bulrush	PMCYP0Q1G0	None	None	G4G5	S3	2B.3
<i>Scutellaria galericulata</i> marsh skullcap	PDLAM1U0J0	None	None	G5	S2	2B.2
<i>Utricularia ochroleuca</i> cream-flowered bladderwort	PDLNT020E0	None	None	G4G5	S1	2B.2
<i>Viola purpurea ssp. aurea</i> golden violet	PDVIO04420	None	None	G5T2	S2	2B.2

Record Count: 33

Plant List

Inventory of Rare and Endangered Plants

30 matches found. [Click on scientific name for details](#)

Search Criteria

California Rare Plant Rank is one of [1B, 2B], FESA is one of [Endangered, Threatened, Candidate, Not Listed], CESA is one of [Endangered, Threatened, Rare, Not Listed], Found in Quads 3812072, 3812071, 3811978, 3812062, 3812061, 3811968, 3812052 3812051 and 3811958;

[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
Astragalus austiniae	Austin's astragalus	Fabaceae	perennial herb	(May)Jul-Sep	1B.3	S2S3	G2G3
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	(Jun)Jul-Aug	2B.3	S2	G3G4
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
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	May-Aug	1B.3	S3	G3
Carex hystericina	porcupine sedge	Cyperaceae	perennial rhizomatous herb	May-Jun	2B.1	S2	G5
Carex limosa	mud sedge	Cyperaceae	perennial rhizomatous herb	Jun-Aug	2B.2	S3	G5
Carex scirpoidea ssp. pseudoscirpoidea	western single-spiked sedge	Cyperaceae	perennial rhizomatous herb	Jul, Sep	2B.2	S2	G5T4
Chaenactis douglasii var. alpina	alpine dusty maidens	Asteraceae	perennial herb	Jul-Sep	2B.3	S2	G5T5
Cryptantha crymophila	subalpine cryptantha	Boraginaceae	perennial herb	Jul-Aug	1B.3	S3	G3
Draba asterophora var. asterophora	Tahoe draba	Brassicaceae	perennial herb	Jul-Aug(Sep)	1B.2	S2?	G2T2?
Draba asterophora var. macrocarpa	Cup Lake draba	Brassicaceae	perennial herb	Jul-Aug(Sep)	1B.1	S1	G2T1
Dryopteris filix-mas	male fern	Dryopteridaceae	perennial rhizomatous herb	Jul-Sep	2B.3	S2	G5
Elymus scribneri	Scribner's wheat grass	Poaceae	perennial herb	Jul-Aug	2B.3	S3	G5
Epilobium oregonum	Oregon fireweed	Onagraceae	perennial herb	Jun-Sep	1B.2	S2	G2
Epilobium palustre	marsh willowherb	Onagraceae	perennial rhizomatous herb	Jul-Aug	2B.3	S2	G5

Eriogonum luteolum var. saltuarium	Jack's wild buckwheat	Polygonaceae	annual herb	Jul-Sep	1B.2	S1	G5T1
Helodium blandowii	Blandow's bog moss	Helodiaceae	moss		2B.3	S2	G4
Lewisia longipetala	long-petaled lewisia	Montiaceae	perennial herb	Jul-Aug(Sep)	1B.3	S2	G2
Meesia uliginosa	broad-nerved hump moss	Meesiaceae	moss	Jul,Oct	2B.2	S3	G5
Orthotrichum holzingeri	Holzinger's orthotrichum moss	Orthotrichaceae	moss		1B.3	S2	G3
Phacelia stebbinsii	Stebbins' phacelia	Hydrophyllaceae	annual herb	May-Jul	1B.2	S3	G3
Potamogeton epihydrus	Nuttall's ribbon-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	(Jun)Jul-Sep	2B.2	S2S3	G5
Potamogeton robbinsii	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	2B.3	S3	G5
Schoenoplectus subterminalis	water bulrush	Cyperaceae	perennial rhizomatous herb (aquatic)	Jun-Aug(Sep)	2B.3	S3	G4G5
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S2	G5
Utricularia ochroleuca	cream-flowered bladderwort	Lentibulariaceae	perennial stoloniferous herb	Jun-Jul	2B.2	S1	G4G5
Viola purpurea ssp. aurea	golden violet	Violaceae	perennial herb	Apr-Jun	2B.2	S2	G5T2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 26 March 2019].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

Questions and Comments

rareplants@cnps.org

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF	
Scientific Name (Common Name)																			
<i>Abies bracteata</i> (bristlecone fir)																		X	
<i>Abronia alpina</i> (Ramshaw Meadows abronia)									X										
<i>Abronia nana</i> var. <i>covillei</i> (Coville's dwarf abronia)									X										X
<i>Abronia villosa</i> var. <i>aurita</i> (chaparral sand-verbena)																X			X
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i> (Abrams' oxythecha)															X		X		
<i>Acanthoscyphus parishii</i> var. <i>cienegensis</i> (Cienega Seca oxythecha)																			X
<i>Agrostis hooveri</i> (Hoover's bentgrass)																		X	
<i>Allium hickmanii</i> (Hickman's onion)																		X	
<i>Allium howellii</i> var. <i>clokeyi</i> (Mt. Pinos onion)																		X	
<i>Allium jepsonii</i> (Jepson's onion)							X							X					
<i>Allium marvinii</i> (Yucaipa onion)																			X
<i>Allium tribracteatum</i> (three-bracted onion)								X						X					
<i>Allium yosemitense</i> (Yosemite onion)													X	X					
<i>Anisocarpus scabridus</i> (scabrid alpine tarplant)		X	X	X															
<i>Antennaria marginata</i> (white-margined everlasting)																			X
<i>Antirrhinum subcordatum</i> (dimorphic snapdragon)		X																	
<i>Arabis rigidissima</i> var. <i>demota</i> (Galena Creek rockcress)										X	X								
<i>Arctostaphylos cruzensis</i> (Arroyo de la Cruz manzanita)																		X	
<i>Arctostaphylos edmundsii</i> (Little Sur manzanita)																		X	
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i> (San Gabriel manzanita)															X				X
<i>Arctostaphylos hooveri</i> (Hoover's manzanita)																		X	
<i>Arctostaphylos luciana</i> (Santa Lucia manzanita)																		X	
<i>Arctostaphylos nissenana</i> (Nissenan manzanita)								X						X					
<i>Arctostaphylos obispoensis</i> (Bishop manzanita)																		X	
<i>Arctostaphylos parryana</i> ssp. <i>tumescens</i> (interior manzanita)															X				X
<i>Arctostaphylos pilosula</i> (Santa Margarita manzanita)																		X	
<i>Arctostaphylos rainbowensis</i> (Rainbow manzanita)																X			
<i>Arctostaphylos refugioensis</i> (Refugio manzanita)																		X	
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> (rock sandwort)																			X
<i>Astragalus anxius</i> (Ash Valley milk-vetch)						X													
<i>Astragalus bernardinus</i> (San Bernardino milk-vetch)																			X
<i>Astragalus bicristatus</i> (crested milk-vetch)															X				X
<i>Astragalus cimae</i> var. <i>sufflatus</i> (inflated Cima milk-vetch)									X										
<i>Astragalus deanei</i> (Dean's milk-vetch)																X			

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Astragalus douglasii var. perstrictus (Jacumba milk-vetch)																X		
Astragalus ertterae (Walker Pass milk-vetch)												X						
Astragalus johannis-howellii (Long Valley milk-vetch)									X									
Astragalus lemmonii (Lemmon's milk-vetch)						X	X		X		X							
Astragalus lentiformis (lens-pod milk-vetch)							X											
Astragalus lentiginosus var. antonius (San Antonio milk-vetch)															X			X
Astragalus lentiginosus var. kernensis (Kern Plateau milk-vetch)									X			X						
Astragalus lentiginosus var. sierrae (Big Bear Valley milk-vetch)																		X
Astragalus monoensis (Mono milk-vetch)									X									
Astragalus oocarpus (San Diego milk-vetch)																X		
Astragalus pachypus var. jaegeri (Jaeger's milk-vetch)																X		X
Astragalus pulsiferae var. coronensis (Modoc Plateau milk-vetch)						X	X				X							
Astragalus pulsiferae var. pulsiferae (Pulsifer's milk-vetch)							X											
Astragalus pulsiferae var. suksdorfii (Suksdorf's milk-vetch)					X													
Astragalus ravenii (Raven's milk-vetch)									X									
Astragalus tidestromii (Tidestrom's milk-vetch)																		X
Astragalus webberi (Webber's milk-vetch)							X				X							
Atriplex parishii (Parish's bristlescale)																X		X
Baccharis plummerae ssp. glabrata (San Simeon baccharis)																	X	
Balsamorhiza macrolepis (big-scale balsamroot)		X					X	X						X				
Bensoniella oregona (bensoniella)				X														
Bloomeria humilis (dwarf goldenstar)																	X	
Boechera bodiensis (Bodie Hills rockcress)									X									
Boechera constancei (Constance's rockcress)					X		X											
Boechera evadens (hidden rockcress)									X			X		X				
Boechera johnstonii (Johnston's rockcress)																		X
Boechera koehleri (Koehler's rockcress)				X														
Boechera parishii (Parish's rockcress)																		X
Boechera peirsonii (San Bernardino rockcress)																		X
Boechera pinzliae (Pinzl's rockcress)									X									
Boechera shevockii (Shevock's rockcress)												X						
Boechera shockleyi (Shockley's rockcress)									X									X
Boechera tiehmii (Tiehm's rockcress)									X	X								
Boechera tularensis (Tulare rockcress)									X	X		X	X					
Boletus pulcherrimus (red-pored bolete)	X		X	X							X							

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTCMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Botrychium ascendens (upswept moonwort)					X	X	X	X	X	X	X		X	X				
Botrychium crenulatum (scalloped moonwort)	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X
Botrychium lineare (slender moonwort)									X	X			X	X				
Botrychium lunaria (common moonwort)	X				X	X	X	X	X	X	X		X	X				
Botrychium minganense (mingan moonwort)	X		X		X	X	X	X	X	X	X	X	X	X				
Botrychium montanum (western goblin)	X				X	X	X	X		X	X	X	X	X				
Botrychium paradoxum (paradox moonwort)								X	X				X					
Botrychium pedunculatum (stalked moonwort)					X			X						X				
Botrychium pinnatum (northwestern moonwort)	X		X		X	X	X							X				
Botrychium pumicola (pumice moonwort)	X		X															
Botrychium tunux (moosewort)									X				X	X				
Botrychium yaaxudakeit (giant moonwort)									X				X	X				
Brodiaea insignis (Kaweah brodiaea)												X						
Brodiaea orcuttii (Orcutt's brodiaea)																X		
Brodiaea rosea (Indian Valley brodiaea)		X																
Brodiaea santarosae (Santa Rosa basalt brodiaea)																X		
Bruchia bolanderi (Bolander's bruchia)					X	X	X	X	X	X	X	X	X	X				
Buxbaumia viridis (buxbaumia moss)	X		X	X	X	X	X											
Calicium adpersum (stubble lichen)				X														
Calochortus clavatus var. avius (Pleasant Valley mariposa-lily)								X						X				
Calochortus clavatus var. clavatus (club-haired mariposa-lily)															X		X	
Calochortus clavatus var. gracilis (slender mariposa-lily)															X		X	
Calochortus dunnii (Dunn's mariposa-lily)																X		
Calochortus excavatus (Inyo County star-tulip)									X									
Calochortus fimbriatus (late-flowered mariposa-lily)															X		X	
Calochortus greenei (Greene's mariposa-lily)	X		X															
Calochortus longebarbatus var. longebarbatus (long-haired star-tulip)			X		X	X												
Calochortus obispoensis (San Luis mariposa-lily)																	X	
Calochortus palmeri var. munzii (San Jacinto mariposa-lily)																		X
Calochortus palmeri var. palmeri (Palmer's mariposa-lily)												X			X		X	X
Calochortus persistens (Siskiyou mariposa-lily)	X																	
Calochortus simulans (La Panza mariposa-lily)																	X	
Calochortus striatus (alkali mariposa-lily)												X			X			X
Calochortus weedii var. intermedius (intermediate mariposa-lily)																X		
Calochortus westonii (Shirley Meadows star-tulip)												X						

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Calycadenia micrantha (small-flowered calycadenia)		X		X													X	
Calycadenia oppositifolia (Butte County calycadenia)							X											
Calycadenia villosa (dwarf calycadenia)																	X	
Calyptridium pygmaeum (pygmy pussypaws)									X			X	X					X
Camissonia sierrae ssp. alticola (Mono Hot Springs evening-primrose)													X					
Camissoniopsis hardhamiae (Hardham's evening-primrose)																	X	
Campanula shetleri (Castle Crags harebell)			X															
Campanula wilkinsiana (Wilkin's harebell)	X		X															
Canbya candida (white pygmy-poppy)												X			X			X
Carex obispoensis (San Luis Obispo sedge)																	X	
Carex tiogana (Tioga Pass sedge)									X									
Carlquistia muirii (Muir's tarplant)												X	X				X	
Carpenteria californica (tree-anemone)													X					
Castilleja gleasonii (Mt. Gleason paintbrush)															X			
Castilleja lasiorhyncha (San Bernardino Mountains owl's-clover)																X		X
Castilleja plagiotoma (Mojave paintbrush)															X		X	X
Caulanthus amplexicaulis var. barbarae (Santa Barbara jewel-flower)																	X	
Caulanthus lemmonii (Lemmon's jewel-flower)																	X	
Caulanthus simulans (Payson's jewel-flower)																X		X
Ceanothus cyaneus (Lakeside ceanothus)																X		
Chaenactis suffrutescens (Shasta chaenactis)	X		X															
Chlorogalum pomeridianum var. minus (dwarf soaproot)																	X	
Chorizanthe blakleyi (Blakley's spineflower)																	X	
Chorizanthe breweri (Brewer's spineflower)																	X	
Chorizanthe parryi var. fernandina (San Fernando Valley spineflower)															X		X	
Chorizanthe parryi var. parryi (Parry's spineflower)															X	X		X
Chorizanthe rectispina (straight-awned spineflower)																	X	
Chorizanthe xanti var. leucotheca (white-bracted spineflower)																		X
Cinna bolanderi (Bolander's woodreed)												X	X					
Cladium californica (California saw-grass)									X						X		X	X
Clarkia australis (Small's southern clarkia)														X				
Clarkia biloba ssp. australis (Mariposa clarkia)													X	X				
Clarkia borealis ssp. borealis (northern clarkia)			X															
Clarkia gracilis ssp. albicaulis (white-stemmed clarkia)					X		X											
Clarkia jolonensis (Jolon clarkia)																	X	

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Clarkia lingulata (Merced clarkia)													X	X				
Clarkia mildrediae ssp. mildrediae (Mildred's clarkia)					X		X											
Clarkia mosquinii (Mosquin's clarkia)							X											
Claytonia lanceolata var. peirsonii (Peirson's spring beauty)															X			X
Clinopodium chandleri (San Miguel savory)																X		
Collomia larsenii (talus collomia)			X		X	X												
Collomia rawsoniana (Rawson's flaming trumpet)													X					
Cordylanthus eremicus ssp. kernensis (Kern Plateau bird's beak)									X			X						
Cordylanthus tenuis ssp. pallescens (pallid bird's-beak)			X															
Cryptantha circumscissa var. rosulata (rosette cushion cryptantha)									X			X						
Cryptantha crinita (silky cryptantha)					X													
Cryptantha incana (Tulare cryptantha)									X			X						
Cryptantha roosiorum (bristlecone cryptantha)									X									
Cudonia monticola (mountain cudonia)	X		X	X														
Cypripedium fasciculatum (clustered lady's-slipper)	X	X	X	X	X		X				X							
Cypripedium montanum (mountain lady's-slipper)	X	X	X	X	X	X	X	X			X		X	X				
Dacrophyllum falcifolium (tear drop moss)																		X
Dedeckera eurekensis (July gold)									X									
Deinandra floribunda (Tecate tarplant)																X		
Deinandra mohavensis (Mojave tarplant)												X			X	X		X
Delphinium hesperium ssp. cuyamaca (Cuyamaca larkspur)																X		X
Delphinium hutchinsoniae (Hutchinson's larkspur)																X		X
Delphinium inopinum (unexpected larkspur)												X	X					
Delphinium parryi ssp. purpureum (Mt. Pinos larkspur)																	X	
Delphinium purpusii (rose-flowered larkspur)												X						
Delphinium umbraculorum (umbrella larkspur)																	X	
Dendrocollybia racemosa (branched collybia)	X		X	X			X			X	X			X				
Dicentra nevadensis (Tulare County bleeding heart)												X	X					
Dieteria asteroides var. lagunensis (Mount Laguna aster)																X		
Dieteria canescens var. ziegleri (Ziegler's aster)																		X
Draba asterophora var. asterophora (Tahoe draba)								X	X	X				X				
Draba asterophora var. macrocarpa (Cup Lake draba)								X		X				X				
Draba carnosula (Mt. Eddy draba)	X		X	X														
Draba cruciata (Mineral King draba)									X	X		X						
Draba incrassata (Sweetwater Mountains draba)									X									

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
<i>Draba monoensis</i> (White Mountains draba)									X									
<i>Draba saxosa</i> (Southern California rock draba)																		X
<i>Draba sharsmithii</i> (Mt. Whitney draba)									X				X					
<i>Dryocallis cuneifolia</i> var. <i>cuneifolia</i> (wedgeleaf woodbeauty)																		X
<i>Dryocallis cuneifolia</i> var. <i>ewanii</i> (Ewan's cinquefoil)															X			X
<i>Dudleya abramsii</i> ssp. <i>affinis</i> (San Bernardino Mountains dudleya)																		X
<i>Dudleya cymosa</i> ssp. <i>costatifolia</i> (Pierpoint Springs dudleya)												X						
<i>Dudleya cymosa</i> ssp. <i>crebrifolia</i> (San Gabriel River dudleya)															X			
<i>Dudleya densiflora</i> (San Gabriel Mountains dudleya)															X			
<i>Dudleya multicaulis</i> (many-stemmed dudleya)															X	X		
<i>Dudleya viscida</i> (sticky dudleya)																X		
<i>Eleocharis torticulmis</i> (California twisted spikerush)							X											
<i>Epilobium nivium</i> (Snow Mountain willowherb)		X																
<i>Epilobium oreganum</i> (Oregon fireweed)	X		X	X														
<i>Eremogone cliftonii</i> (Clifton's eremogone)					X		X											
<i>Eremogone macradenia</i> var. <i>arcuifolia</i> (Forest Camp sandwort)															X			
<i>Eriastrum luteum</i> (yellow-flowered eriastrum)																	X	
<i>Eriastrum tracyi</i> (Tracy's eriastrum)		X	X		X							X	X					
<i>Ericameria gilmanii</i> (Gilman's goldenbush)									X									
<i>Ericameria parryi</i> var. <i>imula</i> (low rabbitbrush)																		X
<i>Erigeron aequifolius</i> (Hall's daisy)									X			X	X					
<i>Erigeron maniopotamicus</i> (Mad River fleabane daisy)				X														
<i>Erigeron miser</i> (starved daisy)										X	X							
<i>Erigeron multiceps</i> (Kern River daisy)									X			X						
<i>Erigeron uncialis</i> var. <i>uncialis</i> (limestone daisy)									X									
<i>Eriogonum alpinum</i> (Trinity buckwheat)	X		X															
<i>Eriogonum breedlovei</i> var. <i>breedlovei</i> (Breedlove's buckwheat)												X						
<i>Eriogonum butterworthianum</i> (Butterworth's buckwheat)																	X	
<i>Eriogonum evanidum</i> (vanishing wild buckwheat)																X		X
<i>Eriogonum hirtellum</i> (Klamath Mountain buckwheat)	X			X														
<i>Eriogonum kennedyi</i> var. <i>alpigenum</i> (southern alpine buckwheat)															X		X	X
<i>Eriogonum luteolum</i> var. <i>saltuarium</i> (Jack's wild buckwheat)								X		X				X				
<i>Eriogonum microthecum</i> var. <i>johnstonii</i> (Johnston's buckwheat)															X			X
<i>Eriogonum microthecum</i> var. <i>lacus-ursi</i> (Bear Lake buckwheat)																		X
<i>Eriogonum microthecum</i> var. <i>schoolcraftii</i> (Schoolcraft's wild buckwheat)							X											

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Eriogonum nervulosum (Snow Mountain buckwheat)		X																
Eriogonum nudum var. regirivum (Kings River buckwheat)												X	X					
Eriogonum ovalifolium ssp. monarchense (Monarch buckwheat)												X	X					
Eriogonum prociduum (prostrate buckwheat)					X	X												
Eriogonum spectabile (Barron's buckwheat)					X													
Eriogonum tripodum (tripod buckwheat)		X						X										
Eriogonum twisselmannii (Twisselmann's buckwheat)												X						
Eriogonum umbellatum var. ahartii (Ahart's buckwheat)							X											
Eriogonum umbellatum var. glaberrimum (Warner Mountains buckwheat)						X												
Eriogonum umbellatum var. torreyanum (Donner Pass buckwheat)										X	X							
Eriogonum ursinum var. erubescens (blushing wild buckwheat)	X		X															
Eriogonum wrightii var. olanchense (Olancha Peak buckwheat)									X									
Eriophyllum congdonii (Congdon's woolly sunflower)													X	X				
Eriophyllum lanatum var. hallii (Fort Tejon woolly sunflower)																	X	
Eriophyllum nubigenum (Yosemite woolly sunflower)														X				
Erythronium hendersonii (Henderson's fawn lily)	X			X														
Erythronium pluriflorum (Shuteye Peak fawn lily)													X					
Erythronium pusaterii (Kaweah Lakes fawn lily)												X						
Erythronium taylori (Pilot Ridge fawn lily)														X				
Erythronium tuolumnense (Tuolumne fawn lily)														X				
Eucephalis vialis (wayside aster)	X		X	X														
Fissidens aphelotaxifolius (brook pocket moss)	X						X						X	X				
Fissidens pauperculus (minute pocket moss)				X			X										X	
Frangula purshiana ssp. ultramafica (Caribou coffeeberry)					X		X											
Frasera umpquaensis (Umpqua green-gentian)	X		X	X														
Fritillaria brandegeei (Greenhorn fritillary)												X						
Fritillaria eastwoodiae (Butte County fritillary)			X		X		X				X							
Fritillaria falcata (talus fritillary)																		X
Fritillaria liliacea (fragrant fritillary)																		X
Fritillaria ojaiensis (Ojai fritillary)																		X
Fritillaria striata (striped adobe-lily)												X						
Fritillaria viridea (San Benito fritillary)																		X
Galium angustifolium ssp. jacinticum (San Jacinto Mountains bedstraw)																X		X
Galium californicum ssp. lucicense (Cone Peak bedstraw)																		X
Galium californicum ssp. primum (Alvin Meadow bedstraw)																		X

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF	
Galium clementis (Santa Lucia bedstraw)																		X	
Galium glabrescens ssp. modocense (Modoc bedstraw)						X													
Galium grande (San Gabriel bedstraw)															X				
Galium hardhamiae (Hardham's bedstraw)																	X		
Galium serpicum ssp. warnerense (Warner Mountains bedstraw)						X													
Gentiana fremontii (Fremont's gentian)																			X
Gentiana setigera (Mendocino gentian)				X															
Gilia leptantha ssp. leptantha (San Bernardino gilia)																			X
Gilia yorkii (Monarch gilia)												X	X						
Githopsis diffusa ssp. filicaulis (Mission Canyon bluecup)																X			
Harmonia doris-nilesiae (Niles' harmonia)			X																
Harmonia stebbinsii (Stebbins' harmonia)		X	X																
Helodium blandowii (Blandow's bog moss)	X				X	X	X	X	X	X	X	X	X	X					
Hesperidanthus jaegeri (Jaeger's hesperidanthus)									X										
Hesperocypris forbesii (Tecate cypress)																X			
Hesperocypris stephensonii (Cuyamaca cypress)																X			
Hesperolinon drymarioides (drymaria-like western flax)		X																	
Heterotheca monarchensis (Monarch golden-aster)												X	X						
Heterotheca shevockii (Shevock's golden-aster)												X							
Heuchera abramsii (Abrams' alumroot)															X	X	X	X	
Heuchera caespitosa (urn-flowered alumroot)															X		X	X	
Heuchera hirsutissima (shaggy-haired alumroot)																			X
Heuchera parishii (Parish's alumroot)																			X
Horkelia cuneata ssp. puberula (mesa horkelia)															X	X	X	X	
Horkelia cuneata ssp. sericea (Kellogg's horkelia)																	X		
Horkelia hendersonii (Henderson's horkelia)	X																		
Horkelia hispidula (White Mountains horkelia)									X										
Horkelia parryi (Parry's horkelia)								X					X	X					
Horkelia truncata (Ramona horkelia)																X			
Horkelia tularensis (Kern Plateau horkelia)												X							
Horkelia wilderae (Barton Flats horkelia)																			X
Horkelia yadonii (Santa Lucia horkelia)																		X	
Hulsea brevifolia (short-leaved hulsea)									X	X		X	X	X					
Hulsea vestita ssp. gabrielensis (San Gabriel Mountains hulsea)															X		X	X	
Hulsea vestita ssp. pygmaea (pygmy hulsea)									X			X			X				X

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
<i>Iliamna latibracteata</i> (California globe mallow)			X	X														
<i>Imperata brevifolia</i> (California satintail)															X		X	X
<i>Iris hartwegii</i> ssp. <i>columbiana</i> (Tuolumne iris)													X					
<i>Iris munzii</i> (Munz's iris)												X						
<i>Ivesia aperta</i> var. <i>aperta</i> (Sierra Valley ivesia)							X				X							
<i>Ivesia aperta</i> var. <i>canina</i> (Dog Valley ivesia)											X							
<i>Ivesia argyrocoma</i> var. <i>argyrocoma</i> (silver-haired ivesia)																		X
<i>Ivesia callida</i> (Tahquitz ivesia)																		X
<i>Ivesia longibracteata</i> (Castle Crags ivesia)			X															
<i>Ivesia paniculata</i> (Ash Creek ivesia)						X												
<i>Ivesia pickeringii</i> (Pickering's ivesia)	X		X															
<i>Ivesia sericoleuca</i> (Plumas ivesia)							X			X	X							
<i>Ivesia webberi</i> (Webber's ivesia)							X				X							
<i>Juncus leiospermus</i> var. <i>leiospermus</i> (Red Bluff dwarf rush)					X													
<i>Juncus luciensis</i> (Santa Lucia dwarf rush)					X		X				X						X	
<i>Lathyrus biflorus</i> (two-flowered pea)				X														
<i>Layia heterotricha</i> (pale-yellow layia)																	X	
<i>Layia jonesii</i> (Jones' layia)																	X	
<i>Lepechinia cardiophylla</i> (heart-leaved pitcher sage)																X		
<i>Lepechinia fragrans</i> (fragrant pitcher sage)															X			X
<i>Lepechinia rossii</i> (Ross' pitcher sage)															X		X	
<i>Leptosiphon floribundus</i> ssp. <i>hallii</i> (Santa Rosa Mountains leptosiphon)																		X
<i>Leptosiphon nuttallii</i> ssp. <i>howellii</i> (Mt. Tefoc leptosiphon)		X	X															
<i>Leptosiphon serrulatus</i> (Madera leptosiphon)												X	X					
<i>Lessingia glandulifera</i> var. <i>tomentosa</i> (Warner Springs lessingia)																X		
<i>Lewisia brachycalyx</i> (short-sepaed lewisia)															X	X		X
<i>Lewisia cantelovii</i> (Cantelow's lewisia)			X				X				X							
<i>Lewisia congdonii</i> (Congdon's lewisia)												X	X	X				
<i>Lewisia disepala</i> (Yosemite lewisia)												X	X					
<i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i> (Hutchison's lewisia)			X		X		X	X		X	X			X				
<i>Lewisia kelloggii</i> ssp. <i>kelloggii</i> (Kellogg's lewisia)				X			X	X		X	X		X	X				
<i>Lewisia longipetala</i> (long-petaled lewisia)								X		X	X							
<i>Lewisia oppositifolia</i> (opposite-leaved lewisia)				X														
<i>Lewisia serrata</i> (saw-toothed lewisia)								X			X							
<i>Lewisia stebbinsii</i> (Stebbins' lewisia)		X																

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
<i>Lilium parryi</i> (lemon lily)															X	X		X
<i>Limnanthes alba</i> var. <i>parishii</i> (Parish's meadowfoam)																X		X
<i>Limnanthes floccosa</i> ssp. <i>bellingiana</i> (Bellinger's meadowfoam)					X													
<i>Linanthus concinnus</i> (San Gabriel linanthus)															X			X
<i>Linanthus jaegeri</i> (San Jacinto linanthus)																		X
<i>Linanthus killipii</i> (Baldwin Lake linanthus)																		X
<i>Linanthus orcuttii</i> (Orcutt's linanthus)																X		
<i>Lomatium roseanum</i> (adobe lomatium)					X	X	X											
<i>Lomatium stebbinsii</i> (Stebbins' lomatium)													X					
<i>Lonicera subspicata</i> var. <i>subspicata</i> (Santa Barbara honeysuckle)																	X	
<i>Lupinus antoninus</i> (Anthony Peak lupine)		X																
<i>Lupinus citrinus</i> var. <i>citrinus</i> (orange lupine)													X					
<i>Lupinus constancei</i> (The Lassics lupine)				X														
<i>Lupinus duranii</i> (Mono Lake lupine)									X									
<i>Lupinus latifolius</i> var. <i>barbatus</i> (bearded lupine)						X												
<i>Lupinus lepidus</i> var. <i>ashlandensis</i> (Mt. Ashland lupine)	X																	
<i>Lupinus lepidus</i> var. <i>culbertsonii</i> (Hockett Meadows lupine)									X			X	X					
<i>Lupinus ludovicianus</i> (San Luis Obispo County lupine)																	X	
<i>Lupinus padre-crowleyi</i> (Father Crowley's lupine)									X									
<i>Lupinus peirsonii</i> (Peirson's lupine)															X			
<i>Malacothamnus palmeri</i> var. <i>involucratum</i> (Carmel Valley bush-mallow)																	X	
<i>Malacothamnus palmeri</i> var. <i>lucianus</i> (Arroyo Seco bush-mallow)																	X	
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> (Santa Lucia bush-mallow)																	X	
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> (Carmel Valley malacothrix)																	X	
<i>Malaxis monophyllos</i> ssp. <i>brachypoda</i> (white bog adder's-mouth)																		X
<i>Marina orcuttii</i> var. <i>orcuttii</i> (California marina)																		X
<i>Matelea parviflora</i> (spear-leaf matelea)																		X
<i>Meesia uliginosa</i> (broad-nerved hump-moss)	X		X		X	X	X	X	X	X	X	X	X	X				X
<i>Mentzelia inyoensis</i> (Inyo blazing star)									X									
<i>Mielichhoferia elongata</i> (elongate copper moss)	X	X	X	X			X				X	X	X	X				
<i>Mielichhoferia shevockii</i> (Shevock's copper moss)												X	X	X		X	X	
<i>Mimulus discolor</i> (two-colored monkeyflower)												X						
<i>Mimulus evanescens</i> (ephemeral monkeyflower)	X				X	X												
<i>Mimulus exiguus</i> (San Bernardino Mountains monkeyflower)																		X
<i>Mimulus filicaulis</i> (slender-stemmed monkeyflower)													X	X				

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTCMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Mimulus gracilipes (slender-stalked monkeyflower)												X	X					
Mimulus norrisii (Kaweah monkeyflower)												X	X					
Mimulus pulchellus (yellow-lip pansy monkeyflower)													X	X				
Mimulus purpureus (little purple monkeyflower)																		X
Mimulus shevockii (Kelso Creek monkeyflower)												X						
Minuartia decumbens (The Lassics sandwort)				X														
Minuartia rosei (peanut sandwort)			X															
Minuartia stolonifera (Scott Mountain sandwort)	X		X															
Monardella australis ssp. jokerstii (Jokerst's monardella)															X			X
Monardella beneolens (sweet-smelling monardella)									X			X						
Monardella follettii (Follett's monardella)					X		X				X							
Monardella hypoleuca ssp. lanata (flat-leaved monardella)																X		
Monardella linooides ssp. oblonga (Tehachapi monardella)								X				X					X	
Monardella macrantha ssp. hallii (Hall's monardella)															X	X		X
Monardella nana ssp. leptosiphon (San Felipe monardella)																X		X
Monardella palmeri (Palmer's monardella)																	X	
Monardella stebbinsii (Stebbins' monardella)							X											
Monardella saxicola (rock monardella)															X			X
Navarretia ojaiensis (Ojai navarretia)																	X	
Navarretia peninsularis (Baja navarretia)												X			X	X	X	X
Navarretia prolifera ssp. lutea (yellow bur navarretia)								X										
Navarretia setiloba (Piute Mountains navarretia)												X						
Nemacladus calcaratus (Chimney Creek nemacladus)												X						
Nemacladus secundiflorus var. robbinsii (Robbins' nemacladus)															X		X	
Nemacladus twisselmannii (Twisselmann's nemacladus)												X						
Neviusia cliftonii (Shasta snow-wreath)			X															
Nolina cismontana (chaparral nolina)																X	X	
Ophioglossum pusillum (northern adder's tongue)		X	X					X										
Opuntia basilaris var. brachyclada (short-joint beavertail)															X			X
Oreonana purpurascens (purple mountain-parsley)												X						
Oreonana vestita (woolly mountain-parsley)												X			X			X
Oreostemma elatum (tall alpine-aster)					X		X											
Orobanche valida ssp. valida (Rock Creek broomrape)															X		X	X
Orthotrichum kellmanii (Kellman's bristle moss)																	X	
Orthotrichum praemorsum (No common name)										X								

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Otidea smithii (Smith's otidea)				X														
Oxytropis oreophila var. oreophila (rock-loving oxytrope)															X			X
Packera bernardina (San Bernardino ragwort)																		X
Packera eurycephala var. lewisrosei (Lewis Rose's ragwort)					X		X											
Packera ganderi (Gander's ragwort)																X		
Packera hesperia (western ragwort)				X														
Parnassia cirrata var. cirrata (San Bernardino grass-of-Parnassus)															X			X
Parnassia cirrata var. intermedia (Cascade grass-of-Parnassus)	X		X															
Pedicularis dudleyi (Dudley's lousewort)																	X	
Pedicularis howellii (Howell's lousewort)	X			X														
Peltigera gowardii (veined water lichen)	X	X	X	X	X		X	X	X	X	X	X	X	X				
Penstemon californicus (California beardtongue)																X		X
Penstemon personatus (closed-throated beardtongue)					X		X				X							
Penstemon sudans (Susanville beardtongue)					X		X											
Penstemon tracyi (Tracy's beardtongue)			X															
Pentachaeta exilis ssp. aeolica (San Benito pentachaeta)																	X	
Petrophyton caespitosum ssp. acuminatum (marble rockmat)									X			X	X					
Phacelia cookei (Cooke's phacelia)	X		X															
Phacelia greenei (Scott Valley phacelia)	X		X															
Phacelia inundata (playa phacelia)	X				X	X												
Phacelia inyoensis (Inyo phacelia)									X									
Phacelia keckii (Santiago Peak phacelia)																X		
Phacelia monoensis (Mono County phacelia)									X									
Phacelia novemmillensis (Nine Mile Canyon phacelia)									X			X						
Phacelia stebbinsii (Stebbins' phacelia)								X			X							
Phaeocollybia olivacea (olive phaeocollybia)	X		X	X			X				X							
Phlox dolichantha (Big Bear Valley phlox)																		X
Pinus albicaulis (whitebark pine)	X		X		X	X		X	X	X	X	X	X	X				
Plagiobothrys collinus var. ursinus (Cooper's popcornflower)																		X
Plagiobothrys parishii (Parish's popcornflower)									X									
Plagiobothrys uncinatus (hooked popcornflower)																	X	
Platanthera yosemitensis (Yosemite bog orchid)													X					
Poa sierrae (Sierra blue grass)					X		X	X			X							
Polemonium chartaceum (Mason's sky pilot)	X		X						X									
Polyctenium williamsiae (Williams' combleaf)									X									

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Potentilla basaltica (Black Rock potentilla)						X												
Potentilla morefieldii (Morefield's cinquefoil)									X									
Potentilla rimicola (cliff cinquefoil)																		X
Prosartes parvifolia (Siskiyou bells)				X														
Pyrocoma lucida (sticky pyrocoma)					X		X				X							
Pyrocoma uniflora var. gossypina (Bear Valley pyrocoma)																		X
Quercus dumosa (Nuttall's scrub oak)																	X	
Raillardella pringlei (showy raillardella)	X		X															
Ramalina thrausta (angelhair)				X														
Ribes canthariforme (Moreno currant)																X		
Rorippa columbiae (Columbia yellow cress)	X		X		X	X												
Rorippa subumbellata (Tahoe yellow cress)										X								
Rupertia hallii (Hall's rupertia)					X													
Saltugilia latimeri (Latimer's woodland-gilia)												X						X
Sanicula maritima (adobe sanicle)																	X	
Sanicula tracyi (Tracy's sanicle)				X														
Scheuchzeria palustris (American scheuchzeria)					X													
Schoenus nigricans (black bog-rush)																		X
Scutellaria bolanderi ssp. austromontana (southern mountains skullcap)															X	X		X
Sedum albomarginatum (Feather River stonecrop)					X		X											
Sedum niveum (Davidson's stonecrop)																		X
Sedum obtusatum ssp. paradisum (Canyon Creek stonecrop)			X	X														
Senecio pattersonensis (Mount Patterson senecio)									X									
Sibaropsis hammittii (Hammitt's clay-cress)																X		
Sidalcea hickmanii ssp. anomala (Cuesta Pass checkerbloom)																	X	
Sidalcea hickmanii ssp. hickmanii (Hickman's checkerbloom)																	X	
Sidalcea hickmanii ssp. parishii (Parish's checkerbloom)															X		X	X
Sidalcea hickmanii ssp. pillsburiensis (Lake Pillsbury checkerbloom)		X																
Sidalcea malviflora ssp. dolosa ((Bear Valley checkerbloom)																		X
Sidalcea neomexicana (Salt Spring checkerbloom)															X		X	X
Sidotheca caryophylloides (chickweed oxytheca)												X			X		X	X
Sidotheca emarginata (white-margined oxytheca)																		X
Silene occidentalis ssp. longistipitata (long-stiped campion)					X													
Silene salmonacea (Klamath Mountain catchfly)			X															
Silene serpentinicola (serpentine catchfly)				X														

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF	
<i>Sisyrinchium longipes</i> (timberland blue-eyed grass)																			X
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> (most beautiful jewel-flower)																		X	
<i>Streptanthus campestris</i> (southern jewel-flower)															X	X	X	X	
<i>Streptanthus cordatus</i> var. <i>piutensis</i> (Piute Mountains jewel-flower)												X							
<i>Streptanthus fenestratus</i> (Tehipite Valley jewel-flower)												X	X						
<i>Streptanthus gracilis</i> (alpine jewel-flower)									X										
<i>Streptanthus howellii</i> (Howell's jewel-flower)				X															
<i>Streptanthus oblanceolatus</i> (Trinity River jewel-flower)			X	X															
<i>Streptanthus oliganthus</i> (Masonic Mountain jewel-flower)									X										
<i>Stylocline masonii</i> (Mason's neststraw)												X			X			X	
<i>Sulcaria badia</i> (bay horsehair lichen)		X	X	X															
<i>Symphyotrichum defoliatum</i> (San Bernardino aster)												X			X	X	X	X	X
<i>Tauschia howellii</i> (Howell's tauschia)	X			X							X		X						
<i>Tetracoccus dioicus</i> (Parry's tetracoccus)																		X	
<i>Thelypodium howellii</i> ssp. <i>howellii</i> (Howell's thelypodium)					X	X													
<i>Thelypteris puberula</i> var. <i>sonorensis</i> (Sonoran maiden fern)															X			X	X
<i>Thermopsis californica</i> var. <i>semota</i> (velvety false lupine)																X			
<i>Thermopsis macrophylla</i> (Santa Ynez false lupine)																		X	
<i>Thermopsis robusta</i> (robust false lupine)	X			X															
<i>Thysanocarpus rigidus</i> (rigid fringe-pod)															X	X			X
<i>Tracyina rostrata</i> (beaked tracyina)		X		X															
<i>Tricholomopsis fulvescens</i> (tawny tricholomopsis)	X	X		X															
<i>Trifolium bolanderi</i> (Bolander's clover)													X						
<i>Trifolium dedeckeri</i> (Dedecker's clover)									X			X							
<i>Triquetrella californica</i> (coastal triquetrella)																		X	
<i>Triteleia ixioides</i> ssp. <i>cookii</i> (Cook's triteelia)																		X	
<i>Tropidocarpum capparideum</i> (caper-fruited tropidocarpum)																		X	
<i>Viola primulifolia</i> ssp. <i>occidentalis</i> (western white bog violet)				X															



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Ambystoma macrodactylum sigillatum</i> southern long-toed salamander	AAAAA01085	None	None	G5T4	S3	SSC
<i>Anaxyrus canorus</i> Yosemite toad	AAABB01040	Threatened	None	G2G3	S2S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Aplodontia rufa californica</i> Sierra Nevada mountain beaver	AMAF01013	None	None	G5T3T4	S2S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Bombus morrisoni</i> Morrison bumble bee	IIHYM24460	None	None	G4G5	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Empidonax traillii</i> willow flycatcher	ABPAE33040	None	Endangered	G5	S1S2	
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Gulo gulo</i> California wolverine	AMAJF03010	Proposed Threatened	Threatened	G4	S1	FP
<i>Hydromantes platycephalus</i> Mount Lyell salamander	AAAAD09020	None	None	G4	S4	WL
<i>Lepus americanus tahoensis</i> Sierra Nevada snowshoe hare	AMAEB03012	None	None	G5T3T4Q	S2	SSC
<i>Lepus townsendii townsendii</i> western white-tailed jackrabbit	AMAEB03041	None	None	G5T5	S3?	SSC
<i>Martes caurina sierrae</i> Sierra marten	AMAJF01014	None	None	G5T3	S3	
<i>Myotis thysanodes</i> fringed myotis	AMACC01090	None	None	G4	S3	
<i>Myotis volans</i> long-legged myotis	AMACC01110	None	None	G5	S3	
<i>Ochotona princeps schisticeps</i> gray-headed pika	AMAEA0102L	None	None	G5T2T4	S2S4	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Oncorhynchus clarkii henshawi</i> Lahontan cutthroat trout	AFCHA02081	Threatened	None	G4T3	S2	
<i>Pekania pennanti</i> fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
<i>Picoides arcticus</i> black-backed woodpecker	ABNYF07090	None	None	G5	S2	
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
<i>Strix nebulosa</i> great gray owl	ABNSB12040	None	Endangered	G5	S1	
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	AMAJA03012	Candidate	Threatened	G5T1T2	S1	

Record Count: 26

USDA Forest Service, Pacific Southwest Region

Sensitive Animal Species by Forest

6/30/2013; Updated 9/9/2013

Scientific Name	Common Name	Angeles	Cleveland	Eldorado	Inyo	Klamath	Lassen	Los Padres	Mendocino	Modoc	Plumas	San Bernardino	Sequoia	Shasta-Trinity	Sierra	Six Rivers	Stanislaus	Tahoe	Lake Tahoe Basin
BIRDS (12)																			
<i>Accipiter gentilis</i>	Northern goshawk	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Campylorhynchus brunneicapillus sandiegensis</i>	San Diego cactus wren		X									X							
<i>Centrocercus urophasianus</i>	Greater sage-grouse				X					X									
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	X	X		X							X	X			X			
<i>Coturnicops noveboracensis</i>	Yellow rail						X							X					
<i>Empidonax traillii</i>	Willow flycatcher			X	X	X	X	X	X		X	X	X	X	X		X	X	X
<i>Grus canadensis tabida</i>	Greater sandhill crane					X	X			X	X							X	
<i>Haliaeetus leucocephalus</i>	Bald eagle	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Pelicanus occidentalis</i>	Brown pelican		X					X				X							
<i>Strix nebulosa</i>	Great gray owl			X	X	X	X			X	X		X		X		X	X	X
<i>Strix occidentalis occidentalis</i>	California spotted owl	X	X	X	X		X	X		X	X	X	X		X		X	X	X
<i>Vireo vicinior</i>	Gray vireo	X	X									X							
MAMMALS (13)																			
<i>Antrozous pallidus</i>	Pallid bat	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Brachylagus idahoensis</i>	Pygmy rabbit				X					X									
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Glaucomys sabrinus californicus</i>	San Bernardino flying squirrel											X							
<i>Gulo gulo luscus</i>	North American wolverine			X	X	X	X		X	X	X		X	X	X	X	X	X	X
<i>Martes caurina</i>	Pacific marten			X	X	X	X		X	X	X		X	X	X	X	X	X	X
<i>Pekania pennanti</i>	Fisher			X	X	X	X		X		X		X	X	X	X	X	X	X
<i>Myotis thysanodes</i>	Fringed myotis	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Ovis canadensis nelsoni</i>	San Gabriel Mountains bighorn sheep	X										X							
<i>Perognathus alticola alticola</i>	White-eared pocket mouse											X							
<i>Perognathus alticola inexpectatus</i>	Tehachapi pocket mouse	X						X											
<i>Tamias speciosus callipeplus</i>	Mount Pinos lodgepole chipmunk							X											
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox				?		X										X		
AMPHIBIANS (21)																			
<i>Anaxyrus canorus</i>	Yosemite toad			X	X										X		X		
<i>Anaxyrus exsul</i>	Black toad				X														
<i>Batrachoseps bramei</i>	Fairview slender salamander												X						
<i>Batrachoseps campi</i>	Inyo Mountain salamander				X														
<i>Batrachoseps gabrieli</i>	San Gabriel Mountains slender salamander	X										X							
<i>Batrachoseps incognitus</i>	San Simeon slender salamander							X											
<i>Batrachoseps minor</i>	Lesser slender salamander							X											
<i>Batrachoseps regius</i>	Kings River slender salamander														X				
<i>Batrachoseps relictus</i>	Relictual slender salamander												X						
<i>Batrachoseps simatus</i>	Kern Canyon slender salamander												X						
<i>Ensatina eschscholtzii croceater</i>	Yellow-blotched salamander	X						X					X						
<i>Ensatina eschscholtzii klauberi</i>	Large-blotched salamander		X									X							

Scientific Name	Common Name	Angeles	Cleveland	Eldorado	Inyo	Klamath	Lassen	Los Padres	Mendocino	Modoc	Plumas	San Bernardino	Sequoia	Shasta-Trinity	Sierra	Six Rivers	Stanislaus	Tahoe	Lake Tahoe Basin
<i>Hydromantes brunus</i>	Limestone salamander														X		X		
<i>Hydromantes shastae</i>	Shasta salamander													X					
<i>Plethodon stormi</i>	Siskiyou Mountain salamander					X													
<i>Rana aurora aurora</i>	Northern red-legged frog													X		X			
<i>Rana boylei</i>	Foothill yellow-legged frog			X		X	X	X	X		X		X	X	X	X	X	X	
<i>Rana cascadae</i>	Cascade frog					X	X							X					
<i>Rana muscosa</i>	Mountain yellow-legged frog: Southern Sierra DPS				X								X						
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog			X	X		X				X				X		X	X	X
<i>Rhyacotriton variegatus</i>	Southern torrent salamander					X								X		X			
REPTILES (12)																			
<i>Emys marmorata</i>	Western pond turtle	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Anniella pulchra</i>	California legless lizard	X	X					X				X	X						
<i>Aspidoscelis hyperythra</i>	Orange-throated whiptail		X									X							
<i>Charina umbratica</i>	Southern rubber boa											X							
<i>Crotalus ruber ruber</i>	Red diamond rattlesnake		X									X							
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	X						X				X							
<i>Diadophis punctatus similis</i>	San Diego ringneck snake		X									X							
<i>Elgaria panamintina</i>	Panamint alligator lizard				X														
<i>Lampropeltis zonata parvirubra</i>	San Bernardino Mountain kingsnake	X										X							
<i>Lampropeltis zonata pulchra</i>	San Diego Mountain kingsnake		X																
<i>Lichanura orcutti</i>	Coastal rosy boa or 3-lined boa	X	X									X							
<i>Thamnophis hammondi</i>	Two-striped garter snake	X	X					X				X							
INVERTEBRATES, TERRESTRIAL (24)																			
<i>Bombus occidentalis</i>	Western bumble bee			X		X	X			X	X			X		X		X	X
<i>Danaus plexippus</i>	Monarch butterfly							X											
<i>Euphilotes baueri (battoides) vernalis</i>	Vernal blue butterfly											X							
<i>Euphilotes enoptes cryptorufes</i>	Pratt's blue butterfly											X							
<i>Euphilotes enoptes nr. Dammersi</i>	Dammer's blue butterfly											X							
<i>Euphydryas editha bingi</i>	Bing's checkerspot butterfly									X									
<i>Euphydryas editha ehrlichii</i>	Ehrlich's checkerspot butterfly											X							
<i>Euphydryas editha karinae</i>	Karin's checkerspot butterfly								X										
<i>Euphydryas editha monoensis</i>	Mono Lake checkerspot butterfly				X														
<i>Glaucopsyche piasus nr. sagittegera</i>	Arrowhead blue butterfly											X							
<i>Hermelyceana hermes</i>	Hermes copper butterfly		X																
<i>Incisalia mossii hidakupa</i>	San Gabriel Mountains elfin											X							
<i>Monadenia troglodytes troglodytes</i>	Shasta sideband snail													X					
<i>Monadenia troglodytes wintu</i>	Wintu sideband snail													X					
<i>Plebejus saepiolus aureolus</i>	San Gabriel Mountains blue butterfly	X										X							
<i>Plebulina emigdionis</i>	San Emigdio blue butterfly	X			X							X							
<i>Polites mardon</i>	Mardon skipper															X			
<i>Rothelix warnerfontis</i>	Warner Spring shoulderband snail		X																
<i>Speyeria egleis tehachapina</i>	Tehachapi fritillary butterfly												X						
<i>Speyeria nokomis apacheana</i>	Apache silverspot butterfly				X														

Scientific Name	Common Name	Angeles	Cleveland	Eldorado	Inyo	Klamath	Lassen	Los Padres	Mendocino	Modoc	Plumas	San Bernardino	Sequoia	Shasta-Trinity	Sierra	Six Rivers	Stanislaus	Tahoe	Lake Tahoe Basin
<i>Trilobopsis roperi</i>	Shasta chaparral snail													X					
<i>Trilobopsis tehamana</i>	Tehama chaparral snail					X								X					
<i>Vespericola pressleyi</i>	Big Bar hesperian snail													X					
<i>Vespericola shasta</i>	Shasta hesperian snail						X							X					
INVERTEBRATES, AQUATIC - Mollusks (13)																			
<i>Anodonta californiensis</i>	California floater (freshwater mussel)						X			X				X		X		X	
<i>Fluminicola seminalis</i>	Nugget pebblesnail						X							X					
<i>Helisoma newberryi newberryi</i>	Great Basin rams-horn (snail)						X											X	X
<i>Juga (Calibasis) acutifilosa</i>	Topaz juga (snail)						X			X									
<i>Juga chacei</i>	Chace juga (snail)															X			
<i>Juga nigrina</i>	Black juga (snail)						X			X				X				X	
<i>Juga (Calibasis) occata</i>	Scalloped juga (snail)						X							X					
<i>Lanx patelloides</i>	Kneecap lanx (limpet)						X							X					
<i>Pisidium (Cyclocalyx) ultramontanum</i>	Montane peaclam						X							X					
<i>Pristinicola hemphilli</i>	Pristine springsnail															X			
<i>Pyrgulopsis lasseni</i>	Willow Creek pyrg (springsnail)									X									
<i>Pyrgulopsis owensensis</i>	Owen's Valley springsnail				X														
<i>Pyrgulopsis wongi</i>	Wong's springsnail				X														
FISHES (22)																			
<i>Catostomus occidentalis lacusanserinus</i>	Goose Lake sucker									X									
<i>Entosphenus similis</i>	Klamath River lamprey					X													
<i>Entosphenus tridentatus</i>	Pacific lamprey			X		X	X	X	X	X				X		X			
<i>Gila bicolor pectinifer</i>	Lahontan Lake tui chub																	X	X
<i>Gila bicolor thalassina</i>	Goose Lake tui chub									X									
<i>Gila orcutti</i>	Arroyo chub	X	X					X				X							
<i>Lampetra hubbsi</i>	Kern brook lamprey												X		X				
<i>Lampetra richardsoni</i>	Western brook lamprey					X			X							X			
<i>Lampetra tridentata</i> ssp.	Goose Lake lamprey									X									
<i>Lavinia exilicauda chi</i>	Clear Lake hitch								X										
<i>Mylopharodon conocephalus</i>	Hardhead			X			X		X	X	X		X	X	X		X	X	
<i>Oncorhynchus clarkii</i>	Coastal run cutthroat trout															X			
<i>Oncorhynchus mykiss</i>	Steelhead - Klamath Mountains Province ESU					X								X		X			
<i>Oncorhynchus mykiss aguabonita</i>	California golden trout				X								X						
<i>Oncorhynchus mykiss aquilarum</i> (pop 5)	Eagle Lake rainbow trout						X												
<i>Oncorhynchus mykiss gilberti</i>	Kern River rainbow trout												X						
<i>Oncorhynchus mykiss</i> pop 4	Warner Valley redband trout									X									
<i>Oncorhynchus mykiss</i> pop 6	Goose Lake redband trout						X			X									
<i>Oncorhynchus mykiss</i> pop 7	McCloud River redband trout													X					
<i>Oncorhynchus tshawytscha</i>	Upper Klamath-Trinity chinook ESU					X								X		X			
<i>Oncorhynchus tshawytscha</i> ssp.	SONCC Chinook salmon															X			
<i>Rhinichthys osculus</i> ssp 8	Santa Ana speckled dace	X	X									X							
R5 Total Sensitive Animals = 124	Total # Sensitive Animals per Forest	22	22	18	27	23	32	21	16	26	17	36	25	34	19	24	18	21	14
		ANG	CLE	ELD	INY	KNF	LAS	LP	MEN	MOD	PLU	SB	SEQ	S-T	SIE	6R	STAN	TAH	LTB

Last login March 19, 2019 09:09 AM MDT

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.

Project information

NAME

Caples Lake Campground Improvements Project

LOCATION

Alpine County, California





DESCRIPTION

Improvements to the USFS Caples Lake Campground

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

NOT FOR CONSULTATION

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. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

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.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Amphibians

NAME

STATUS

Sierra Nevada Yellow-legged Frog *Rana sierrae* Endangered

There is **final** critical habitat for this species. Your location overlaps the critical habitat.

<https://ecos.fws.gov/ecp/species/9529>

Yosemite Toad *Anaxyrus canorus* Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/7255>

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Lahontan Cutthroat Trout <i>Oncorhynchus clarkii henshawi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3964	Threatened

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i> https://ecos.fws.gov/ecp/species/9529#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

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>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Cassin's Finch *Carpodacus cassinii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9462>

Breeds May 15 to Jul 15

Golden Eagle *Aquila chrysaetos*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Breeds Dec 1 to Aug 31

Lewis's Woodpecker *Melanerpes lewis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

Olive-sided Flycatcher *Contopus cooperi*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Breeds May 20 to Aug 31

Rufous Hummingbird *selasphorus rufus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Breeds elsewhere

Williamson's Sapsucker *Sphyrapicus thyroideus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/8832>

Breeds May 1 to Jul 31

Willow Flycatcher *Empidonax traillii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/3482>

Breeds May 20 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

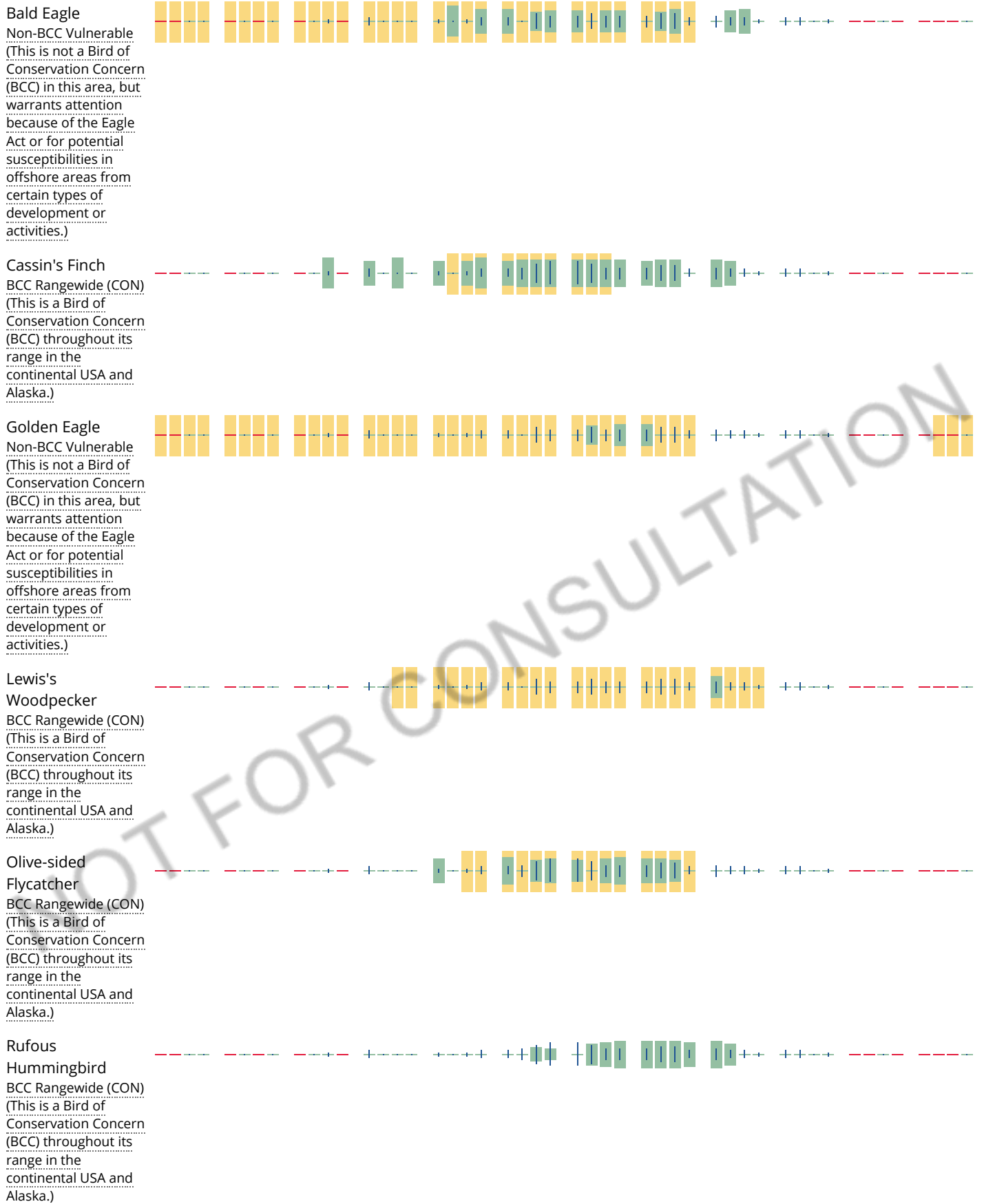
No Data (—)

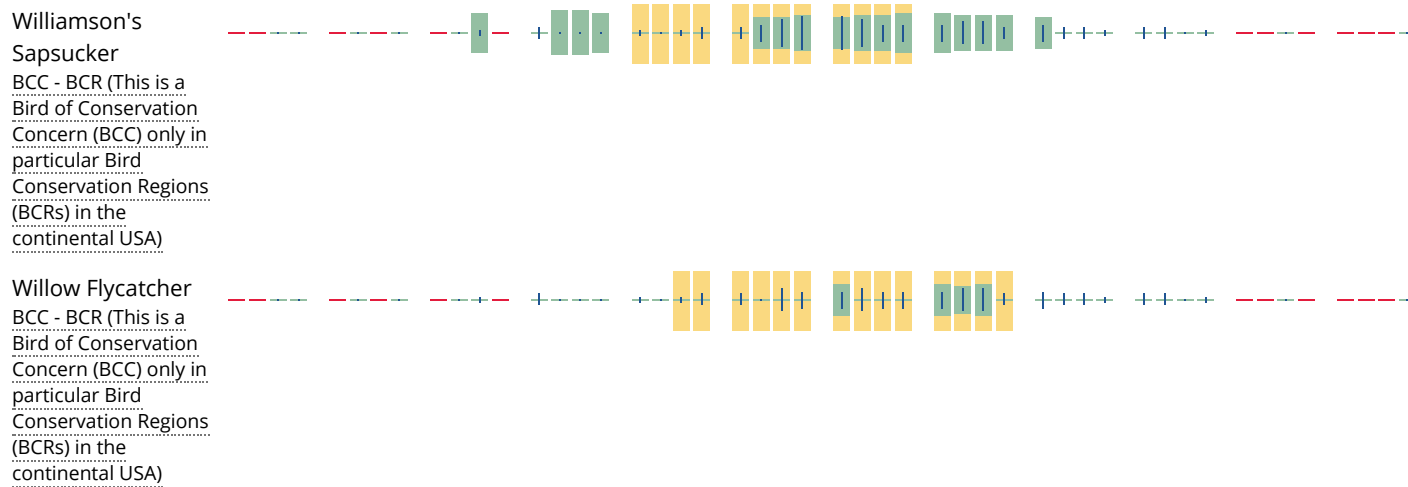
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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 [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential

impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS 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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

LAKE

[L1UBHh](#)

[L2USCh](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

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 tubercid 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.

**Appendix D. Biological Resources Report for the Silver
Lake East Campground Improvements**

This page intentionally left blank.

May 17, 2019

Geotechnical
Environmental
Water Resources
Ecological

Brian Deason
Environmental Resources Supervisor
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Subject: Biological Resources Assessment for the Silver Lake East Campground Improvements

Dear Mr. Deason:

The El Dorado Irrigation District (District) is required by Condition No. 50 of the Project 184 license to complete improvements to the U.S. Forest Service (USFS) Silver Lake Campground. The campground is near the north shore of Silver Lake, east of State Route (SR) 88, in the northeast corner of Amador County, (Attachment A, Figure 1). An assessment of proposed campground improvements and their potential to impact sensitive biological resources was conducted by GEI Consultants, Inc. (GEI). This letter report describes the methods and results of the assessment.

Project Description

Condition No. 50 of the Project 184 license requires the District to reconstruct paved surfaces, toilets, and the water system at the 62-unit Silver Lake Campground. The campground must be upgraded to meet the most current USFS design standards and accessibility requirements of the Architectural Barriers Act. An overview of the improvement plan is provided in Attachment A, Figure 2 and Figure 3. Specific improvements required by Condition No. 50 include:

- Replace all toilets with accessible toilets relocated to reduce the distance from camp units to the toilets and to avoid the steeper road grades. Construct paved parking turnouts in front of each toilet with a paved access route to the toilet.
- Replace and relocate adjacent to the roadway all faucet units with accessible ones. Construct a paved area at all the faucet units to the most current accessibility standards.
- Widen spurs for up to 20 camping units to meet most-current accessibility standards. Reconstruct and pave all spurs.
- Prepare existing campground roads for resurfacing by patching, scarifying, or other methods, as determined by USFS. Place asphalt overlay on campground road.
- Replace all waterlines, including the distribution lines within the campground and the collection lines from the source to the facility.

Pre-field Investigation and Field Survey

Before conducting the field survey, and again before finalizing this letter report, the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2019) and the California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2019) were reviewed. These reviews were centered on the Caples Lake U.S. Geologic Survey (USGS) 7.5-minute quadrangle and included the eight surrounding quadrangles. Results of the most recent CNDDDB and CNPS review are provided in Attachment B.

A list of resources under jurisdiction of the U.S. Fish and Wildlife Service (USFWS) that could occur in the campground vicinity was obtained from the USFWS Information for Planning and Conservation (IPaC) website (USFWS 2019); the IPaC resource list is provided in Attachment B. Five fish and wildlife species that are listed as “threatened” or “endangered” under the Federal Endangered Species Act and designated critical habitat for one listed species are included on this list. The National Marine Fisheries Service online California Species List Tools (NMFS 2019) indicate no resources under their jurisdiction are present in the Caples Lake USGS quadrangle.

Aerial imagery on Google Earth®, National Wetlands Inventory data, and the Natural Resources Conservation Service *Soil Survey of El Dorado National Forest Area, Parts of Alpine, Amador, El Dorado, and Placer Counties, California* (NRCS 2019) also were reviewed before and after conducting the field survey.

A field survey of the Silver Lake campground and immediate vicinity was conducted by GEI biologists Sarah A. Norris and Hannah Dunn on October 12, 2017. Photographs of the campground area taken during the field survey are provided in Attachment C. The field survey included an assessment of habitat types present, including potential waters of the United States, and evaluation of habitat suitability and potential for special-status species to occur at, or adjacent to, the campground and to be affected by the proposed improvements.

Environmental Setting

Elevation at the 20-acre campground is approximately 7,300 feet above mean sea level. The campground is immediately east of SR 88 and approximately 300 feet north of Silver Lake at its closest point.

Habitat and Land Cover Types

The project site is composed entirely of upper montane forest habitat (Attachment A, Figure 4). This habitat is characteristic of the Sierra Nevada, from elevations above approximately 7,000 feet. Dominant tree species at the campground include red fir (*Abies magnifica*), white fir (*A. concolor*), lodgepole pine (*Pinus contorta*), sugar pine (*P. lambertiana*), and Jeffery pine (*P. jeffreyi*). Western juniper (*Juniperus occidentalis*) and foothill pine (*P. sabiniana*) are also present. Understory species are generally sparse in upper montane forests, and compaction from on-site land use (i.e., camping) further limits understory vegetation. Shrubs present in the understory include squaw wax currant (*Ribes cereum*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), snowberry (*Symphoricarpos mollis*), and whitethorn ceanothus (*Ceanothus cordulatus*). Dominant herbaceous species include squirreltail (*Elymus elymoides*), pine bluegrass (*Poa secunda* ssp. *secunda*), and mountain coyote mint (*Monardella odoratissima*).

Portions of three aquatic features – Oyster Lake, Oyster Creek, and the Silver Fork of the American River – occur on the project site. These features are described below under “Sensitive Habitats.”

Sensitive Biological Resources

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code (FGC), California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

Special-status Species

Special-status species are plants and animals that fall into any of the following categories:

- species officially listed by the Federal government or the State of California as endangered, threatened, or rare;
- candidate species for Federal or State listing as endangered or threatened;
- species proposed for Federal or State listing as endangered or threatened;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing;
- species considered sensitive by USFS
- wildlife species identified by CDFW as species of special concern and plant taxa considered by CDFW to be “rare, threatened, or endangered in California;”
- species listed as Fully Protected under the FGC; or
- species afforded protection under local or regional planning documents.

Plant taxa are assigned by CDFW to one of the following six California Rare Plant Ranks (CRPRs):

- CRPR 1A—Plants presumed to be extinct in California;
- CRPR 1B—Plants that are rare, threatened, or endangered in California and elsewhere;
- CRPR 2A—Plants that are presumed extirpated in California, but are more common elsewhere;
- CRPR 2B—Plants that are rare, threatened, or endangered in California but more common elsewhere;
- CRPR 3—Plants about which more information is needed (a review list); or
- CRPR 4—Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDDB, regardless of their legal or protection status. CDFW applies the term “California species of special concern” to wildlife species that are not listed under Federal or State endangered species acts but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and are subject to current known threats to their persistence.

Figure 5 in Attachment A shows all CNDDDB occurrences of plant and wildlife species that meet the definition of special-status species described above, occurring within 5 miles of the project site. Results of the CNDDDB search (see Attachment B) yielded occurrences of a total of 48 special-status plants and animals within the USGS 9-quad search area; only 13 of these species have been documented within 5 miles of the project site, and many of the occurrences are historical. (Note: Not all species tracked in the CNDDDB and included in the search results in Attachment B meet the definition of a special-status species described above.)

Table 1 provides information on special-status plant species that were evaluated for potential to occur on the project site. Species included in the CNDDDB or CNPS search results or on the USFS list of sensitive plants for El Dorado National Forest that occupy elevation ranges higher or lower than the project site or otherwise could be determined to have no potential to occur in the project vicinity were eliminated from consideration and are not included in Table 1. Based on the review of existing documentation and observations made during field survey, habitat for most of the special-status plant species that were evaluated is absent from the project site. Four vascular plants and two bryophytes were determined to have potential to occur around the margins of Oyster Lake, or within the channel of Oyster Creek: upswept moonwort (*Botrychium ascendens*), Mingan moonwort (*Botrychium minganense*), mud sedge (*Carex limosa*), marsh willowherb (*E. palustre*), broad-nerved hump-moss (*Meesia uliginosa*), and veined water lichen (*Peltigera*

gowardii). Recent occurrences of upswept moonwort, mud sedge, marsh willowherb, and broad-nerved hump-moss are known from El Dorado County. Veined water lichen was last documented in El Dorado County in 2008. An occurrence of Mingan moonwort was documented in 2016, approximately 2.5 miles south of the project site, near Plasse. Whitebark pine (*Pinus albicaulis*) also is known from several locations in the project vicinity, but this species was not observed during the reconnaissance field survey, despite it being identifiable at the time the survey was conducted.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Three-bracted onion <i>Allium tribracteatum</i>	March– May	FSS	1B.2	Volcanic slopes in chaparral and lower and upper montane forests	None; no suitable habitat is present on or adjacent to the project site.
Austin's astragalus <i>Astragalus austiniiae</i>	July– September	–	1B.3	Alpine boulder and rock fields in subalpine coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Upswept moonwort <i>Botrychium ascendens</i>	July– August	FSS	2B.3	Meadows and seeps, or near streams, in lower montane coniferous forest; species does not tolerate inundation	Low; marginally suitable habitat is present adjacent to the project site, surrounding the margins of Oyster Lake.
Scalloped moonwort <i>Botrychium crenulatum</i>	June– September	FSS	2B.2	Bogs, fens, meadows, seeps, marshes, stream margins in lower and upper montane coniferous forest, typically in areas with hard water (calcium and magnesium carbonates)	None; no suitable habitat is present on or adjacent to the project site.
Mingan moonwort <i>Botrychium minganense</i>	July– September	FSS	2B.2	Open areas in bogs, fens, meadows, seeps, marshes, stream margins in lower and upper montane coniferous forest; species does not tolerate inundation	Low; marginally suitable habitat is present adjacent to the project site, surrounding the margins of Oyster Lake.
Western goblin <i>Botrychium montanum</i>	July– September	FSS	2B.1	Shady conifer woodland, especially under cedar along streams	None; no suitable habitat is present on or adjacent to the project site.
Bolander's bruchia <i>Bruchia bolanderi</i>	NA	FSS	4.2	Mesic soils in upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Common moonwort <i>Botrychium lunaria</i>	NA	FSS	2B.3	Moist meadows in subalpine coniferous forests	None; no suitable habitat is present on or adjacent to the project site.
Davy's sedge <i>Carex davyi</i>	May– August	–	1B.3	Dry, often sparse meadows and slopes in subalpine coniferous forest and upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Mud sedge <i>Carex limosa</i>	June– August	–	2B.2	Sphagnum bogs in lower and upper montane coniferous forest,	Moderate; suitable habitat is present adjacent to the project site, surrounding the margins of Oyster Lake.
Western single-spiked sedge <i>Carex scirpoidea</i> ssp. <i>pseudoscirpoidea</i>	July– September	–	2B.2	Alpine boulder and rock field, meadows and seeps in subalpine coniferous forest on rocky substrate (often carbonate)	None; no suitable habitat is present on or adjacent to the project site.
Alpine dusty maidens <i>Chaenactis douglasii</i> var. <i>alpina</i>	July– September	–	2B.3	Upper montane coniferous forest on rocky or gravelly ridges, fell-fields, and crevices	None; project site located outside of elevation range of the species.
Male fern <i>Dryopteris filix-mas</i>	July– September	–	2B.3	Granitic cliffs in upper montane coniferous forest	None; project site is outside this species geographic range.
Oregon fireweed <i>Epilobium oreganum</i>	June– September	–	1B.2	Bogs, fens, meadows, seeps, and small streams in lower and upper montane coniferous forest on gravelly textured soils	None; no suitable habitat is present on or adjacent to the project site.
Marsh willowherb <i>Epilobium palustre</i>	July– August	–	2B.3	Bogs, fens, meadows and seeps, in disturbed wet areas	Moderate; suitable habitat is present adjacent to the project site, surrounding the margins of Oyster Lake.
Jack's wild buckwheat <i>Eriogonum luteolum</i> var. <i>saltuarium</i>	July– September	FSS	1B.2	Granitic sand in Great Basin scrub and upper montane coniferous forest	None; no suitable habitat is present on or adjacent to the project site.
Blandow's bog moss <i>Helodium blandowii</i>	NA	FSS	2B.3	Mesic soils in meadows and seeps in subalpine coniferous forest, calcareous groundwater	None; no suitable habitat is present on or adjacent to the project site.
Broad-nerved hump-moss <i>Meesia uliginosa</i>	NA	FSS	2B.2	Mesic soils in meadows, seeps, and lower and upper coniferous forests	Low; marginally suitable habitat is present adjacent to the project site, surrounding the margins of Oyster Lake.
Tehachapi monardella <i>Monardella linoides</i> ssp. <i>oblonga</i>	NA	FSS	1B.3	Dry, gravelly slopes and flats in chaparral, conifer woodland to forest	None; no suitable habitat is present on or adjacent to the project site.
Veined water lichen <i>Peltigera gowardii</i>	NA	FSS	4.2	On granitic rocks in fast-flowing cold-water creeks with little or no sediment or disturbance	Low; marginally suitable habitat is present within Oyster Creek.

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status ¹		Habitat Associations	Potential to Occur on the Project Site
		Federal	State		
Whitebark pine <i>Pinus albicaulis</i>	NA	FSS	–	Upper red-fir forest to timberline, especially subalpine forest	Low; suitable habitat is present on the project site, but no whitebark pine was observed during the field survey.
Robbins' pondweed <i>Potamogeton robbinsii</i>	July–August	–	2B.3	Deep water, typically lakes	None; no suitable habitat is present on or adjacent to the project site.
Water bulrush <i>Schoenoplectus subterminalis</i>	June–August	–	2B.3	Freshwater lakes, streams low in nutrients	None; no suitable habitat is present on or adjacent to the project site.
Cream-flowered bladderwort <i>Utricularia ochroleuca</i>	June–July	–	2B.2	Shallow, acidic waters (generally < 30 cm) in meadows, seeps, marshes, swamp, and lake margins	None; no suitable habitat is present on or adjacent to the project site.

Notes: CNDDB = California Natural Diversity Database; CRPR = California Rare Plant Rank; NA = not applicable

¹ Status Definitions

Federal Status

FSS = U.S. Forest Service Region 5 Sensitive Species

– = No status

California Rare Plant Ranks

1B = Considered rare or endangered in California and elsewhere

2B = Considered rare or endangered in California but more common elsewhere

4 = Limited distribution or infrequent throughout a broader area in California

– = No status

California Rare Plant Rank Extensions

.1 = Seriously endangered in California (greater than 80 percent of occurrences are threatened and/or have a high degree and immediacy of threat)

.2 = Fairly endangered in California (20 to 80 percent of occurrences are threatened and/or have a moderate degree and immediacy of threat)

.3 = Not very endangered in California

Sources: CDFW 2019; CNPS 2019; GEI data 2017; USFWS 2019

Table 2 provides information on special-status wildlife species that were evaluated for potential to occur on the project site. All fish included on the IPaC resource list and USFS list of sensitive animals for El Dorado National Forest were eliminated from consideration and are not included in Table 2, because the project site is above their elevational range, in a different hydrologic basin, or otherwise inaccessible to them due to physical barriers. Foothill yellow-legged frog (*Rana boylei*) and western pond turtle (*Actinemys marmorata*) also were eliminated from consideration, because the project site is well above their elevational range. Based on the review of existing documentation and observations made during field surveys, habitat on the project site is unsuitable or only marginally suitable for the special-status wildlife species that were evaluated. Therefore, potential for many of the species to occur onsite is low or very low. Some species that are known to occur in the vicinity or that are highly mobile and use a variety of habitat types have moderate potential to occur onsite.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Invertebrates				
Western bumble bee <i>Bombus occidentalis</i>	FSS	–	Wide variety of habitats, primarily flower-rich montane meadows; nests in abandoned rodent burrows and other cavities.	Moderate; marginally suitable habitat is present on the project site, and montane meadow habitat is present approximately 600 feet north of the site.
Amphibians				
Southern long-toed salamander <i>Ambystoma macrodactylum sigillatum</i>	–	SSC	Montane meadows and lakes surrounded by coniferous forest; in non-breeding season, adults use mammal burrows and moist areas under litter, logs, and rocks.	High; known to occur at Oyster Lake and Silver Lake; Oyster Creek and upland areas on the project site provide marginally suitable habitat.
Yosemite toad <i>Anaxyrus canorus</i>	T	SSC	High elevation wet meadows in central Sierra Nevada; also occurs in seasonal ponds in subalpine coniferous forest.	Very low; the project site is outside this species' current known range; no individuals detected during Project 184 amphibian surveys at Silver Lake and upstream tributaries.
Sierra Nevada yellow-legged frog <i>Rana sierra</i>	E	T	Montane ponds, lakes, and streams, typically with shallow, exposed, and gently-sloping shorelines.	Moderate; Oyster Lake and Oyster Creek provide marginally suitable habitat; nearest detections during Project 184 focused surveys are from the Camp Silverado tributary to Silver Lake, approximately 0.75 mile southeast of project site.
Birds				
Northern goshawk <i>Accipiter gentilis</i>	FSS	SSC	Coniferous and montane riparian forest; typically nests on north-facing slopes near water.	Moderate; no individuals document during Project 184 focused surveys on the northeast side of Silver Lake, but an active nest was found during surveys on the southeast side of the lake.
Golden eagle <i>Aquila chrysaetos</i>	–	FP	Variety of habitats in foothills, mountains, high plains, and dessert; primarily nests on cliffs in steep canyons, but also in large trees in open areas.	Moderate; no nesting habitat is present in the immediate vicinity of the project site, but individuals were observed during Project 184 peregrine falcon surveys at nearby Thunder Mountain.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Bald eagle <i>Haliaeetus leucocephalus</i>	FSS	E	Coastal shorelines and wetlands, lakes, reservoirs, and rivers. Nests in large trees, typically in mountain and foothill forests and woodlands near reservoirs, lakes, and rivers.	Moderate; non-breeding individuals were observed during Project 184 focused surveys at Silver Lake, but habitat suitability analysis concluded the species is unlikely to nest there.
American peregrine falcon <i>Falco peregrinus anatum</i>	–	FP	Wide range of habitats; nests on cliffs, banks, dunes, and human-made structures near wetlands, lakes, rivers, and other water bodies.	Moderate; no nesting habitat is present in the immediate project vicinity, but individuals could occur in the area; no individuals were detected during Project 184 focused surveys at the only suitable nesting cliffs in the vicinity (west face of Thunder Mountain, approximately 1 mile east of the project site).
Great gray owl <i>Strix nebulosi</i>	FSS	E	High elevation coniferous forest, close to large meadows.	Low; nearest suitable habitat is approximately 600 feet north of the project site, but suitable habitat in the Silver Lake vicinity is very limited; repeated historic occurrences were documented near Carson Pass, approximately 7 miles east of the project site, but the nearest recent known occurrence is more than 20 miles southwest.
California spotted owl <i>Strix occidentalis occidentalis</i>	FSS	SSC	In the Sierra Nevada, primarily coniferous and montane hardwood forests at middle elevations; also red fir forest at high elevations.	Low; no suitable habitat was identified by USFS near Silver Lake during Project 184 relicensing; nearest documented occurrence is along the American River, approximately 2.5 miles west northwest of the project site.
Willow flycatcher <i>Empidonax traillii</i>	FSS	E	Dense willow thickets associated with wet meadows, ponds, and streams.	Low; no suitable nesting habitat is present on or adjacent to the project site; migrant individuals could occur at the meadow approximately 600 feet north of the site, but this area provides only marginally suitable nesting habitat; no individuals were detected during Project 184 focused surveys at the south end of Silver Lake.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
Mammals				
Pallid bat <i>Antrozous pallidus</i>	FSS	SSC	Variety of habitats, including woodland, forest, grassland, and desert; roosts in tree cavities, rock crevices, mines, caves, and human structures.	Moderate; occurs at up to 10,000 feet elevation, but typically below 6,000 feet; documented approximately 4-6 miles west northwest of the project site during surveys at 6,000-7,000 feet.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	FSS	SSC	Variety of habitats, but prefers mesic habitats; roosts in caves, mines, tunnels, buildings, or other human-made structures.	Low; has been observed at up to nearly 11,000 feet elevation, but typically occurs at low to middle elevations.
Fringed myotis <i>Myotis thysanodes</i>	FSS	–	Wide variety of habitats, but most often in woodland and forest; roosts in caves, mines, buildings and other crevices.	Moderate; has been documented at similar elevation within several miles of the project site; nearby rock outcrops could provide suitable roost sites, but unlikely to roost onsite.
Sierra Nevada snowshoe hare <i>Lepus americanus taahoensis</i>	–	SSC	Montane riparian areas with thickets of deciduous riparian trees and young conifers.	Very low; most vegetation on the project site is unsuitable; no recent occurrences of the species are known from the region.
Western white-tailed jackrabbit <i>Lepus townsendii townsendii</i>	–	SSC	Coniferous forest, shrublands, and grasslands with open areas, shrub cover, and herbaceous understory.	Low; marginally suitable habitat is present on and adjacent to the project site, but no recent occurrences of the species are known from the project vicinity.
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	–	SSC	Montane areas with dense understory of deciduous trees and shrubs, wet soil, and abundant water.	Low; marginally suitable habitat is present adjacent to the project site, but no recent occurrences of the species are known from the project vicinity.
Sierra Nevada red fox <i>Vulpes vulpes necator</i>	C	T	Variety of montane habitats; prefers forest interspersed with meadows and other open areas and requires dense vegetation and rocky areas for cover and den sites.	Very low; potentially suitable habitat is present on and adjacent to the project site, but the nearest known extant population is in the area of Sonora Pass, more than 30 miles south of the project site.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status		Habitat Associations	Potential to Occur on the Project Site
	Federal	State		
California wolverine <i>Gulo gulo</i>	PT FSS	T	Various montane habitats; uses caves, logs, and burrows for cover and den sites; hunts in open areas.	Very low; potentially suitable habitat is present on and adjacent to the project site, but the species is extremely rare in California and only known to occur in Tahoe National Forest.
Sierra marten <i>Martes caurina sierrae</i>	FSS	–	Mixed coniferous forest with different-aged stands and high canopy closure, including old-growth trees and snags for denning.	Moderate; several recent occurrences within 4 miles of the project site; habitat on and adjacent to the project site is marginally suitable, but high disturbance levels likely discourage use during the recreation season.
Fisher <i>Pekania pennanti</i>	PT FSS	CT SSC	Large areas of mature, dense conifer forest and deciduous riparian areas with high canopy closure; uses cavities, snags, logs, and rocky areas for cover and den sites.	Low; habitat on and near the project site is marginally suitable, but no known occurrences have been documented in the local region for many years.
American badger <i>Taxidea taxus</i>	–	SSC	Various dry habitats, including open forest shrubland; requires friable soils and open ground for burrowing.	Low; recently documented approximately 6 miles northeast of the project site, but habitat on and adjacent to the site is only marginally suitable.

Notes: CNDDDB = California Natural Diversity Database; Delta = Sacramento–San Joaquin Delta

¹ Status Definitions

- E = Listed as Endangered under the Federal or State Endangered Species Act
- T = Listed as Threatened under the Federal or State Endangered Species Act
- C = Candidate for listing as Threatened or Endangered under the State Endangered Species Act
- FSS = U.S. Forest Service Region 5 Sensitive Species
- FP = Fully Protected under the California Fish and Game Code
- SSC = California Species of Special Concern
- = No status

Sources: CDFG 1998; CDFW 2019; ECORP 2002, 2012; EIP 2002a, 2002b, 2002c, 2004; Garcia and Associates 2017; GEI data 2017; USFS 2010; USFWS 2015, 2019

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, ESA, Section 1602 of the FGC, Section 404 of the CWA, and the Porter-Cologne Control Act. Sensitive habitats may be of special concern for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to special-status species.

Critical Habitat

Critical habitat is a geographic area containing features determined to be essential to the conservation of a species listed as threatened or endangered under the ESA. The project site is

entirely within Subunit 2F of final designated critical habitat for Sierra Nevada yellow-legged frog (*Rana sierrae*) (81 Federal Register [FR] 59046). Habitat features and characteristics identified as primary constituent elements (PCEs) required by the species and protected under the critical habitat designation include: aquatic habitat for breeding and rearing; aquatic nonbreeding habitat, including overwintering habitat; and upland areas. Upland areas include those adjacent to or surrounding breeding and nonbreeding aquatic habitat that provide area for feeding and movement of frogs and for the natural hydrologic regime (water quantity) of aquatic habitats and maintenance of sufficient water quality to support all life stages of the frog and their prey base. Although the project site is within the mapped boundaries of designated critical habitat for the Sierra Nevada yellow-legged frog, USFWS rules regarding critical habitat "normally exclude by text developed areas such as buildings, roads, airports, parking lots, piers, and other such facilities" (USFWS 2017). Because the project site is a developed campground, and the water collection pipeline would be installed along existing roads, these areas are excluded from the designated critical habitat area.

Other Habitats Protected under Federal and State Regulations

Under Section 404 of the CWA, the U.S. Army Corps of Engineers (USACE) regulates discharge of dredged or fill material into aquatic features that qualify as waters of the United States; wetlands that support hydrophytic vegetation, hydric soil types, and wetland hydrology may also qualify for USACE jurisdiction under Section 404 of the CWA. Under Section 401 of the CWA, the Central Valley Regional Water Quality Control Board (RWQCB) regulates discharge of dredged or fill material into waters of the United States that drain to the Central Valley, to ensure such activities do not violate State or Federal water quality standards; the Central Valley RWQCB also regulates waters of the State, in compliance with the Porter-Cologne Act. In addition, all diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources is subject to the regulatory approval of CDFW pursuant to Section 1602 of the FGC.

The north end and northwestern shoreline of Oyster Lake extends slightly into the campground area (see Figure 4). This lake is relatively shallow, with a bottom composed of unconsolidated sediments and periphyton prevalent along the lake margin and in shallow waters. Vegetation at the lake margin is dominated by sedge, predominately big-leaf sedge (*Carex amplifolia*), and includes tuft hair grass (*Deschampsia cespitosa* ssp. *cespitosa*) and rush (*Juncus* spp.). Sphagnum moss is also common along the edge of the lake, with underlying sandy silty loam soils. A large corrugated metal culvert allows Oyster Lake to flow north under the campground access road and into Oyster Creek. The creek is approximately 15 feet wide, with a gravel and cobble bed. The stream corridor is dominated by white fir and white alder (*Alnus rhombifolia*) trees. Graceful cinquefoil (*Potentilla gracilis*) is occasionally present along the top of the creek bank. The water collection pipeline corridor would cross the Silver Fork of the American River. Oyster Lake, Oyster Creek, and Silver Fork are potentially jurisdictional waters of the United States and waters of the State subject to regulation under Sections 404 and 401 of the CWA, Porter-Cologne Act, and Section 1602 of the FGC.

A swale located at the south end of Oyster Creek conveys runoff from the adjacent campground road surface and adjoining campsites. It is broad and unvegetated, similar to uplands at the surrounding camp sites. Only faint evidence of drainage patterns (i.e., culverts and slight concave topography) are present. The swale lacks a wetland plant assemblage and there is no evidence of an ordinary high-water mark. Therefore, it does not qualify as a water of the United States or wetland subject to Section 404 or 401 of the CWA or as a water of the State subject to the Porter-Cologne Act, and it would not be subject to regulation by USACE or RWQCB. Because the

swale lacks a defined bed, bank, and channel, it is also unlikely to be regulated under Section 1602 of the FGC.

Natural Communities of Special Concern

CDFW maintains a list of terrestrial natural communities that are native to California, the *List of Vegetation Alliances and Associations* (CDFG 2010). Within that list, CDFW identifies and ranks natural communities of special concern considered to be highly imperiled. Upper montane forest is classified as a red fir-white fir forest in the *California Manual of Vegetation* (Sawyer et al. 2009), which is not identified as a community of special concern by CDFW.

Potential Project Impacts

Impacts of the proposed campground improvements on biological resources could result from temporary disturbance during construction and permanent changes in the footprint of campground facilities. In general, these impacts are anticipated to be minor, because the improvements would be limited to the existing campground area and would focus on replacement and upgrade of existing facilities and other disturbed areas. Little vegetation removal would be required. Disturbance during construction would occur in an area that is subject to regular disturbance when the campground is open (June-October). Therefore, species that typically avoid areas of human activity are unlikely to occur on the project site, except possibly in late fall to early spring, when recreational and traffic disturbance is reduced. In addition, species that occur on or adjacent to the campground are accustomed to regular human disturbance in the campground area.

Tree removal would only occur as needed to construct the improvements. All trees less than 6 inches in diameter and within the designated boundaries of new camp units would be removed. Trees greater than 6 inches in diameter and/or outside camp units would be preserved to the extent possible and only removed if they conflict with construction of improvements. Approximately 11 trees are anticipated to be removed from the campground; no trees are anticipated to be removed from the water collection pipeline route. Additional trees may be determined to require removal during construction activities.

Potential for sensitive biological resources, including special-status species and regulated habitats, to be impacted by implementing campground improvements is evaluated below. This impact discussion focuses on resources with reasonable potential to be affected by implementing the campground improvements. Therefore, special-status plant and wildlife species that are unlikely to occur on the project site (because of a lack of suitable conditions, known extant range of the species, and/or lack of occurrence records) are not addressed in this discussion.

Special-status Species

Plants

Upswept moonwort occurs primarily in open habitats, and most occurrences are documented on southern aspects (CNDDDB 2019). The margins of Oyster Lake, while providing suitable substrate, have mature trees located approximately 15 feet from the edge of the water surface, which reduce the amount of sunlight reaching the ground surface. Minging moonwort is more tolerant of shaded microhabitats, but microhabitat information available for Minging moonwort suggests that the species occurs predominantly on southern and western aspects and on substrate composed of dry or moist duff. The potential for upswept moonwort and Minging moonwort to occur on the project site is low, because the water surface of Oyster Lake is subject to fluctuation due to snowmelt, and there is no indication in the literature or from documented occurrences that these species tolerate inundation.

Two bryophytes, broad-nerved hump-moss and veined water lichen, also were determined to have low potential to occur on the project site. Though the overall habitat characteristics are suitable to support these species, microhabitat elements with which the species are typically associated are absent from the project site. Broad-nerved hump-moss is typically associated with willow species on mineral or organic soils in bogs or fens. Habitat surrounding Oyster Lake is suitable for this species, but the willow species with which it typically occurs are not present on the project site. Veined water lichen occurs in creeks with fast-moving, cold water, typically on large granitic boulders or bedrock. Oyster Creek has an unconsolidated channel bed with cobble- and gravel-sized granitic rocks throughout the channel bed, and the underlying geology of the project site is primarily volcanic. The absence of a granitic channel bed and large boulders within the channel reduce the likelihood of veined water lichen to occur on the project site.

Mud sedge grows in saturated organic substrate, typically sphagnum, in red fir forests. Marsh willowherb also grows on sphagnum substrate. The margins of Oyster Lake provide suitable habitat for these species, and both species have been documented at Grass Lake, approximately 10 miles north of the project site. Therefore, mud sedge and marsh willowherb have moderate potential to occur adjacent to the project site, along the margins of Oyster Lake.

Whitebark pine typically occurs on cryochapt soils, which are less developed than the soils present at the project site. The nearest occurrence of whitebark pine is from 8,200 feet near Allen, approximately 4 miles south of the project site. Though a focused survey was not conducted during the site visit, whitebark pine would have been identifiable at the time of the field survey. Therefore, this species has low potential to occur onsite.

No project-related ground disturbance is anticipated to occur in or along the margin of Oyster Lake or Oyster Creek. Ground disturbance would primarily be associated with existing campground facilities and occur in areas of compacted soils, where the moonworts, bryophytes, mud sedge, and willowherb are unlikely to occur. Approximately 10 trees are anticipated to be removed from the campground area, but none are anticipated to be removed from the water collection pipeline route. Identification of the trees to be removed has not been confirmed, but most are likely lodgepole pine. Therefore, whitebark pine trees are unlikely to be removed by project activities. In the unlikely whitebark pine occurs at the campground, few, if any, would be removed. Therefore, project activities are unlikely to result in loss of special-status plant populations or individuals and would not result in a substantial adverse effect to any of these species.

Invertebrates

The only special-status invertebrate with potential to occur on the project site is western bumble bee (*Bombus occidentalis*). This species could forage onsite if suitable flowering plants are present, but meadows in the region provide higher-quality foraging habitat. Western bumble bees could nest in underground cavities such as in abandoned chipmunk burrows, in undisturbed portions of the project site. Because this species is highly mobile and similar or higher quality foraging habitat is present elsewhere in the vicinity, potential disturbance of individuals that may forage onsite would be minor. There is minimal potential for campground improvements to impact a nesting colony or suitable nesting habitat, because construction activities would primarily occur within existing roadways, spurs, and other areas of existing development and compacted soils. Although western bumble bees appear to have experienced substantial recent declines in range and abundance, the species has a wide geographic range and occurs across a variety of habitats. Therefore, the relatively limited impact from potential disturbance of foraging individuals and nest colonies would not result in a substantial adverse effect to the species as a whole and is unlikely to substantially affect local or regional populations.

Amphibians

Southern long-toed salamander (*Ambystoma macrodactylum sigillatum*) has been documented at Oyster Lake and Silver Lake, and Oyster Creek and Silver Fork could also provide suitable aquatic habitat. Non-breeding individuals could use portions of the campground area that provide suitable burrows and moist areas under litter, logs, and rocks. Implementing campground improvements would result in temporary disturbance of montane forest habitat within the campground area and minor permanent changes in the footprint of campground facilities. However, because improvements would focus on replacement and upgrade of existing facilities in areas that are already developed (e.g., existing structures and paved roadways) or highly disturbed (e.g., existing camp sites with compacted soils and little protective cover), potential for salamanders to be present in the areas of ground disturbance is low. Aquatic habitat where salamanders may be present could be affected if construction activities degrade water quality and other habitat conditions in Oyster Lake, Oyster Creek, or South Fork. A small amount of the improvement activities would be implemented adjacent to the creek and lake. Because ground disturbance near aquatic habitat would be limited in extent and of relatively low intensity, potential for water quality impacts would be relatively small. In addition, impacts on Silver Fork would be minimized by attaching the water collection pipeline to the SR 88 bridge. If southern long-toed salamanders are present in upland or aquatic habitat that is impacted during construction, relatively few individuals would likely be affected; this potential loss would not result in a substantial adverse effect to the species as a whole and is unlikely to substantially affect local or regional populations. Recommended impact avoidance and minimization measures described below would reduce potential for individuals in upland habitats to be affected and for aquatic habitat quality to be degraded.

Yosemite toad (*Anaxyrus canorus*) occurs in the Blue Lakes region, approximately 8 miles east southeast of the project site, but the site is outside the current recognized range of the species and no individuals have been documented in the Silver Lake vicinity. Therefore, potential for Yosemite toad to occur on the project site is very low. In the unlikely circumstance that this species is present in or adjacent to the campground or water collection pipeline route when improvements are implemented, potential for adverse effects to occur is minimal. Campground improvements would occur in coniferous forest habitat that is already developed or highly disturbed; Yosemite toads are unlikely to occur in these areas. Implementing the measures recommended below would further minimize potential for adverse effects. With implementation of these measures, Yosemite toads and potentially suitable aquatic habitat are very unlikely to be affected, potential for take of this Federally listed species is extremely low, and the project would not have a substantial adverse effect on the species.

Oyster Lake provides potentially suitable aquatic habitat for Sierra Nevada yellow-legged frog, and Oyster Creek may also provide suitable aquatic habitat when flows are present. The species is not known to have been documented in either of these aquatic features, along the northern or western shores of Silver Lake, or in the Silver Fork of the American River, but potential for it to occur in these aquatic habitats cannot be ruled out. Montane coniferous forest adjacent to Oyster Lake and Oyster Creek is only marginally suitable for yellow-legged frog, because these uplands are very well-shaded and provide few opportunities for basking, provide little protective cover, and are highly disturbed by recreational users. Therefore, although there is potential for Sierra Nevada yellow-legged frog to occur in Oyster Lake and Oyster Creek, individuals are unlikely to use adjacent uplands in the campground improvements area. Potential for individuals to be present where project activities occur is further limited, because improvements would focus on replacement and upgrade of existing facilities in areas that are already developed or highly disturbed. If Sierra Nevada yellow-legged frogs are present in Oyster Lake, Oyster Creek, or Silver Fork, they could be adversely affected if construction activities degrade water quality and

other habitat conditions. With implementation of the impact avoidance and minimization measures described below, yellow-legged frogs and aquatic habitat are very unlikely to be affected, potential for take of this Federally listed species is extremely low, and the project would not have a substantial adverse effect on the species.

Birds

Seven special-status bird species have low or moderate potential to occur on the project site (see Table 2). All these species are known or likely to occur in the general region, but habitat on the project site is unsuitable or only marginally suitable for them. Most importantly, the project site and immediately adjacent areas do not provide suitable nesting habitat for any of the species. Potential for special-status birds to occur onsite is likely limited to species that may forage or roost in coniferous forest or pass through the project vicinity in transit between nesting or foraging areas. Because extensive areas of similar or higher-quality and less-disturbed coniferous are present in the project vicinity, these species are more likely to forage and roost elsewhere. Therefore, disturbance during construction of campground improvements would not affect nesting special-status birds and is unlikely to displace foraging or roosting individuals; if any impacts on special-status birds occur, they would be minor and would not have a substantial adverse effect.

Mammals

Eleven special-status mammals were evaluated for potential to occur on the project site (see Table 2). Although these species are known from, or have potential to occur in, the larger region, most of them have low or very low potential to occur onsite. These species prefer relatively undisturbed areas of coniferous forest, typically occur at lower elevations, and/or are suspected of being extirpated from the local region. Because potential for these mammals to occur on the project site is low or very low, they are unlikely to be encountered during construction of campground improvements, and minor permanent impacts on upland habitat would not adversely affect them.

The only species with moderate potential to occur onsite are two bats (pallid bat [*Antrozous pallidus*] and fringed myotis [*Myotis thysanodes*]) and Sierra marten (*Martes caurina sierrae*), all of which have recently been documented within several miles of the project site. The bats could forage over the project site, but foraging activities are unlikely to be disturbed by construction activities. Nearby areas of rock outcrops and the SR 88 bridge may support colonial bat roost sites; existing structures at the campground are unlikely to provide habitat for roosting colonies but could be used as temporary roost sites for small numbers of individuals. If bats roost in the SR88 bridge, they could be disturbed by attaching the water collection pipeline. However, this disturbance would be temporary and is not anticipated to cause substantial disturbance or result in roost abandonment by a large number of individuals. Potential disturbance or temporary displacement of small numbers of pallid bat or fringed myotis would not result in a substantial adverse effect to local or regional populations of either species.

Sierra martens may use forest habitat on the project site, but they are more likely to use less-disturbed habitat in the vicinity, particularly when the campground is open. Females are also unlikely to den on the site. If martens are using on-site habitat when construction activities begin, they are expected to avoid areas of disturbance and concentrate activities in similar or higher quality forest habitat immediately east and north of the site or elsewhere in the vicinity. Project activities only have potential to disturb a small number of individuals and extensive adjacent habitat is available. Therefore, potential disturbance of Sierra marten would not result in a substantial adverse effect on the local or regional population.

Sensitive Habitats

Although the project site is within the mapped boundaries of designated critical habitat for Sierra Nevada yellow-legged frog, the campground and water collection pipeline route are excluded from the designated critical habitat area, because they are in areas of existing development. Project activities would occur in areas that are already developed (e.g., existing structures and paved roadways) or highly disturbed (e.g., existing camp sites, dirt roadways, and maintenance corridors with compacted soils and little protective cover). The overall campground area would not be expanded, and no new facilities would be constructed in previously undisturbed habitat. Additionally, implementing erosion control conservation measures would minimize potential for soil and sediment to enter Oyster Lake, Oyster Creek, and the Silver Fork of the American River. Implementing the proposed project would not alter the quantity or quality of essential critical habitat features or appreciably diminish the value of critical habitat for the conservation of Sierra Nevada yellow-legged frog. Therefore, implementing the proposed project would not result in destruction or adverse modification of critical habitat.

Oyster Lake, Oyster Creek, and Silver Fork are potentially jurisdictional waters of the United States subject to regulation under Sections 404 and 401 of the CWA, Porter-Cologne Act, and Section 1602 of the FGC. Implementing campground improvements would not result in direct removal, fill, or hydrological interruption of Oyster Lake or Oyster Creek, and the water collection pipeline would be attached to the SR 88 bridge over Silver Fork. In addition, implementing impact avoidance and minimization measures described below would minimize potential for soil and sediment to inadvertently enter Oyster Lake, Oyster Creek, or Silver Fork. With implementation of these measures, these features would not be substantially adversely affected.

Other Potential Impacts on Biological Resources

The project site is part of a much larger extent of coniferous forest and does not serve as a corridor or other primary route for wildlife movement. It also is not known or anticipated to serve as a nursery site for any wildlife species. Some species may use Oyster Creek to travel between Oyster Lake and the small meadow complex north of Silver Lake East campground, and fish and wildlife use the Silver Fork of the American River. Because animals travelling along Oyster Creek must pass through the campground area, this route is subject to relatively high levels of seasonal disturbance under current conditions, and this portion of the Silver Fork is heavily disturbed by traffic along SR 88 and other adjacent roadways. Potential impacts from additional disturbance adjacent to these waterways during project implementation are anticipated to be minor. Therefore, implementing the campground improvements would not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

The project site is not within any special designated management areas for species or other biological resources addressed in the El Dorado Forest Land and Resources Management Plan and is not subject to vegetation management actions prescribed by the Sierra Nevada Forest Plan Amendment. The project site is also not within an area covered by an adopted Habitat Conservation Plan or Natural Community Conservation Plan. Therefore, implementing the campground improvements would not conflict with any provisions, guidelines, goals, or objectives related to biological resources outlined in such plans and programs. Because campground improvements would be restricted to the existing campground area and roadways along the water collection pipeline route, and vegetation removal is anticipated to be minimal and limited to modification or slight expansion of existing facilities, potential effects on habitat for USFS Management Indicator Species would be minor.

Implementing campground improvements could result in removal of active nests of common bird species, if tree or ground vegetation removal occurs during the bird nesting season. Loss of active nests of common species would not substantially reduce their abundance or cause any species to drop below self-sustaining levels, but it could violate the Migratory Bird Treaty Act and/or FGC. Recommended impact avoidance and minimization measures described below would reduce potential for loss of active bird nests.

Impact Avoidance and Minimization Measures

Implementation of the following measures is recommended to avoid or minimize impacts on biological resources:

1. Limit ground disturbance to construction area, and clearly mark construction area limits to minimize potential for accidental disturbance of adjacent habitat.
2. Store all construction materials, such as portable equipment, vehicles, and supplies, in designated construction staging areas, and minimize staging in areas that are not subject to ground disturbance under existing conditions.
3. Limit vegetation removal to the minimum amount necessary to complete planned improvements.
4. If ground vegetation removal is required, replant or reseed previously vegetated areas with native species.
5. Install, monitor, and maintain erosion control measures that minimize soil or sediment from entering aquatic habitat, but do not use tightly woven fiber netting, plastic monofilament netting, or similar material in which toads and frogs can be trapped.
6. Prevent hazardous substances and construction by-products (e.g., gas, oil, other petroleum products, chemical, fresh cement, asphalt) from contaminating the soil or entering aquatic habitat.
7. Conduct environmental awareness training before improvement activities begin to inform all construction personnel about measures to avoid and minimize effects on biological resources.
8. Conduct a pre-construction survey (by a qualified biologist) of upland habitat in the campground improvements area that is within 25 feet of Oyster Lake or Oyster Creek, immediately before protective fencing is installed. If any Sierra Nevada yellow-legged frogs or Yosemite toads are observed, allow them to leave the construction area on their own. If a qualified biologist determines they are in danger of being harmed by construction activities, contact USFWS and CDFW regarding potential relocation to a nearby portion of Oyster Lake or Oyster Creek.
9. Install and maintain high-visibility fencing or other visual markings to protect sensitive biological resource areas (i.e., Oyster Lake and Oyster Creek) that are located adjacent to construction areas from encroachment by personnel and equipment. Incorporate sensitive habitat information into construction bid specifications, with a requirement for contractors to avoid these areas.
10. Remove construction equipment and debris immediately after improvements are completed.
11. Dispose of all debris, rubbish, vegetation, and other material removed from the construction areas at an approved disposal site
12. If vegetation removal would occur during the bird nesting season (March-August), conduct surveys for active bird nests in areas of suitable nesting vegetation designated for removal. Tree-nesting species may begin nesting as early as March 1, though ground-

nesting species are unlikely to nest before May 1. All nesting activity should be completed by August 31.

13. If any active nests or behaviors indicating active nests are present are observed, establish appropriate buffers around active nest sites to avoid nest failure resulting from vegetation removal. Activity within the buffer should be prohibited until nestlings have fledged and left the vegetation to be removed, or the nest is otherwise no longer occupied. Dimensions of the buffer zone should depend on the nesting species, characteristics of the nest location, and nest stage (i.e., nest building, incubation, nestlings).

Conclusions

Potential for implementing campground improvements to impact sensitive biological resources is generally low. Few special-status species have reasonable potential to occur on the project site, because it does not support suitable habitat for most species that occur in the region, and the campground and adjacent areas are subject to relatively high levels of human activity, particularly in summer. Construction activities would result in temporary disturbance and minor permanent modifications within the existing campground area and along the water collection pipeline route. With implementation of recommended impact avoidance and minimization measures, the campground improvements are not anticipated to have substantial adverse effects on any special-status species. Improvements would not destroy or adversely modify critical habitat for Sierra Nevada yellow-legged frog, because the project site is excluded from the designated critical habitat area and does not support the required PCEs. In addition, the on-site swale is not expected to qualify for regulation under any Federal or State laws or regulations, and no sensitive habitats or other sensitive biological features or uses would be affected. Therefore, implementing the proposed improvements, along with recommended impact avoidance and minimization measures, would not result in any significant or potentially significant impacts to biological resources.

If you have any questions or concerns regarding this monitoring report, please contact me by phone at 619-517-2753 or e-mail at aking@geiconsultants.com.

Sincerely,



Cindy Davis
Project Manager/Senior Regulatory Specialist



Anne King
Senior Wildlife Biologist

Attachment A: Figures 1-4

Attachment B: Special-status Species Query Results

Attachment C: Photographs of Silver Lake Campground

1704295

References

- California Department of Fish and Game. 1998. *Terrestrial Mammal Species of Special Concern in California*. Sacramento, CA.
- . 2010. *List of Vegetation Alliances and Associations*. Sacramento, CA.
- California Department of Fish and Wildlife. 2017. California Natural Diversity Database, Wildlife and Habitat Data Analysis Branch, RareFind Version 5. Commercial version. Available at: <https://www.wildlife.ca.gov/Data/CNDDDB>. Accessed October 10, 2017.
- California Native Plant Society. 2017. *Inventory of Rare and Endangered Plants*. Online edition, v8-03 0.38. Sacramento, CA. Available: <http://www.rareplants.cnps.org>. Accessed September 27, 2017.
- CDFG. *See* California Department of Fish and Game.
- CDFW. *See* California Department of Fish and Wildlife.
- CNPS. *See* California Native Plant Society.
- ECORP Consulting, Inc. 2002. Special-status Amphibian Surveys for EID Project 184. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2012. 2011 Mountain Yellow-legged Frog Monitoring Plan Survey Results for El Dorado Hydroelectric Project, FERC No. 184. Prepared for El Dorado Irrigation District, Placerville, CA.
- EIP Associates. 2002a (April). Technical Memorandum Number 1 – Summary Report for Northern Goshawk, California Spotted Owl, Peregrin Falcon, Bald Eagle and Willow Flycatcher Surveys. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2002b (May). Technical Memorandum Number 6 – Great Gray Owl Habitat Maps. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2002c (September). Technical Memorandum Number 13 – 2001/2002 willow flycatcher surveys. Prepared for El Dorado Irrigation District, Placerville, CA.
- . 2004. Technical Memorandum Number 17 – Evaluation of the Potential for Bald Eagle Nesting at Silver, Caples and Echo Lakes. Prepared for El Dorado Irrigation District, Placerville, CA.
- Garcia and Associates. 2017. 2016 Sierra Nevada Yellow-legged Frog Monitoring. El Dorado Hydroelectric Project, FERC No. 184. Prepared for El Dorado Irrigation District, Placerville, CA.
- National Marine Fisheries Service. 2019. California Species List Tools. Available: http://www.westcoast.fisheries.noaa.gov/maps_data/california_species_list_tools.html. Accessed May 15, 2019.

Natural Resources Conservation Service. 2019. *Soil Survey of El Dorado National Forest Area, Parts of Alpine, Amador, El Dorado, and Placer Counties, California*. Available: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Accessed May 17, 2017.

NMFS. *See* National Marine Fisheries Service.

NRCS. *See* Natural Resources Conservation Service.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation*. Second edition. Sacramento: California Native Plant Society.

USFS. *See* U.S. Forest Service.

U.S. Forest Service. 2010. *Environmental Impact Statement for the Big Grizzly Forest Health and Fuels Reduction Project*. Pacific Southwest Region, El Dorado National Forest, Placerville, CA.

U.S. Fish and Wildlife Service. 2015. *Species Report: Sierra Nevada Red Fox* (*Vulpes vulpes necator*).

———. 2017. *Amendment of the Programmatic Biological Opinion on Nine Forest Programs on Nine National Forests in the Sierra Nevada of California for the Endangered Sierra Nevada Yellow-legged Frog, Endangered Northern Distinct Population Segment of the Mountain Yellow-legged Frog, and Threatened Yosemite Toad*. Sacramento Fish and Wildlife Office, Sacramento, CA.

———. 2019. *Information for Planning and Conservation Resource List*. Sacramento Fish and Wildlife Office, Sacramento, CA.

USFWS. *See* U.S. Fish and Wildlife Service.

Attachment A

Figure 1. Project Location

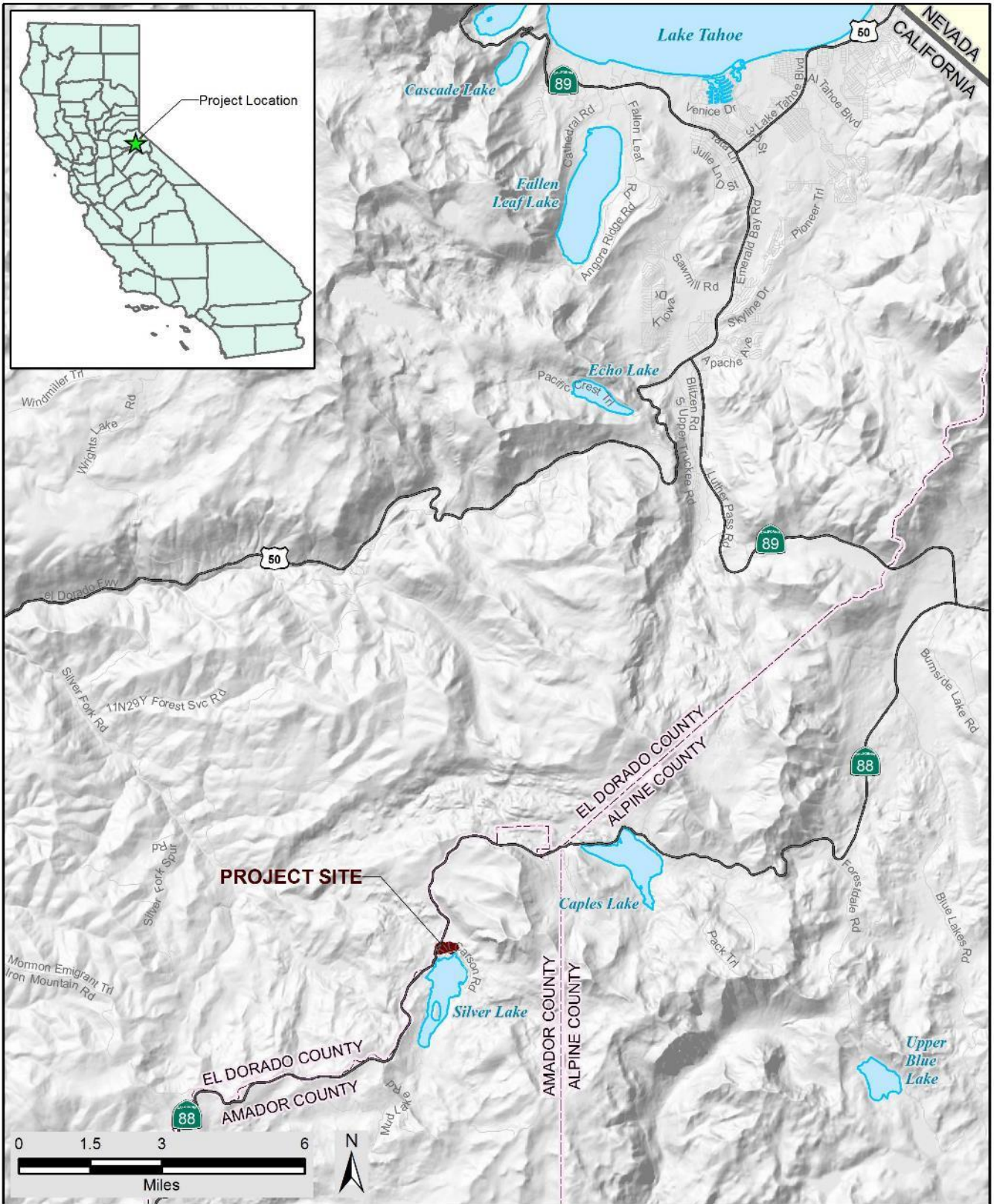
Figure 2. Overview of Campground Improvements

Figure 3. Location of Water Delivery Pipeline and Associated Well

Figure 4. Habitats in the Campground Improvement Area

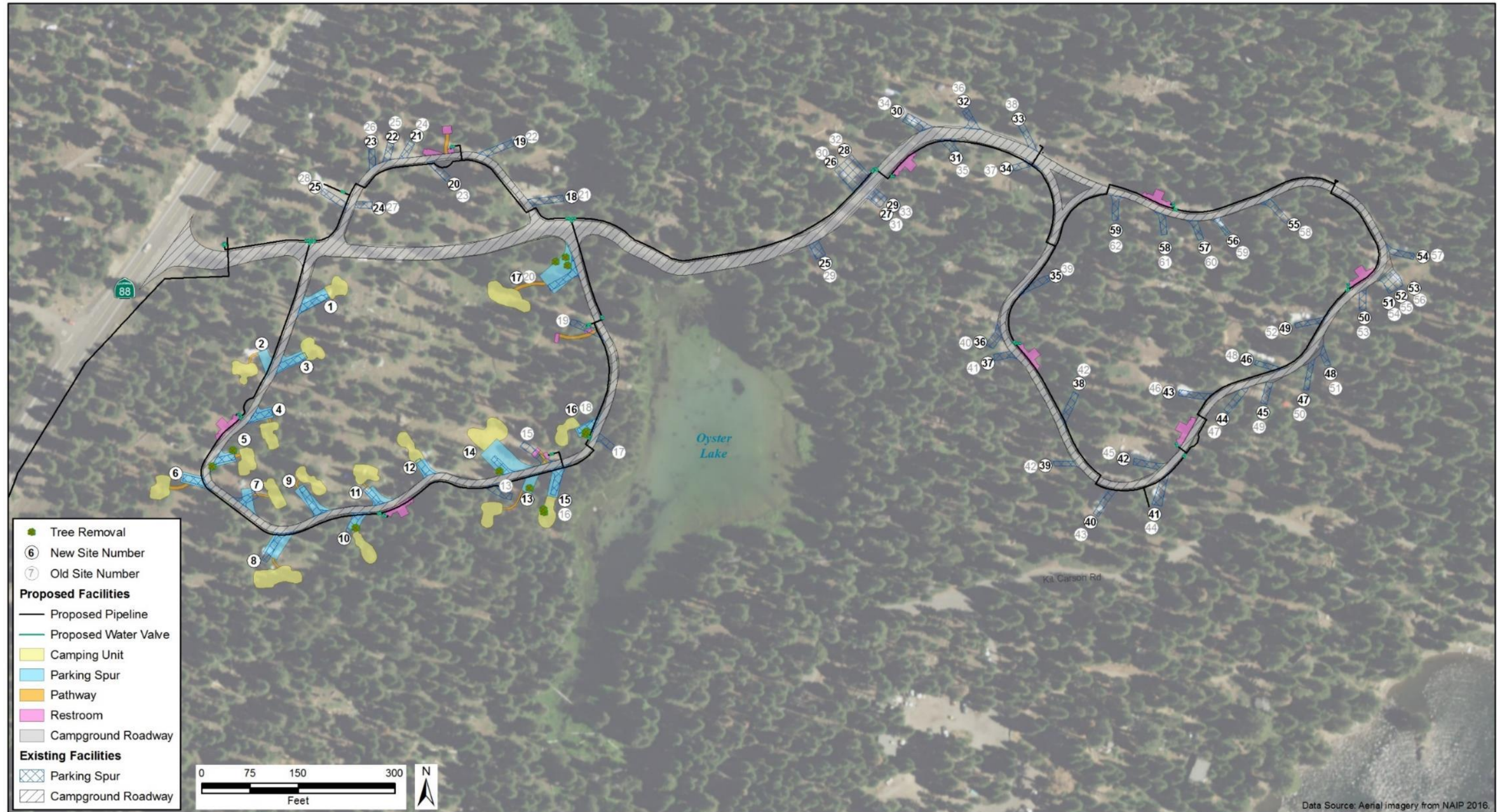
Figure 5. California Natural Diversity Database Occurrences within 5 Miles of the Project Site

Figure 1. Project Location



Z:\Projects\1704282_1704292-3_SilverLake\1704293_G012_SilverLake_RegionalSetting.mxd
12Dec2017 SET

Figure 2. Overview of Campground Improvements



Source: El Dorado Irrigation District 2019

Figure 3. Location of Water Delivery Pipeline and Associated Well



Source: El Dorado Irrigation District 2019

Figure 4. Habitats in the Campground Improvement Area

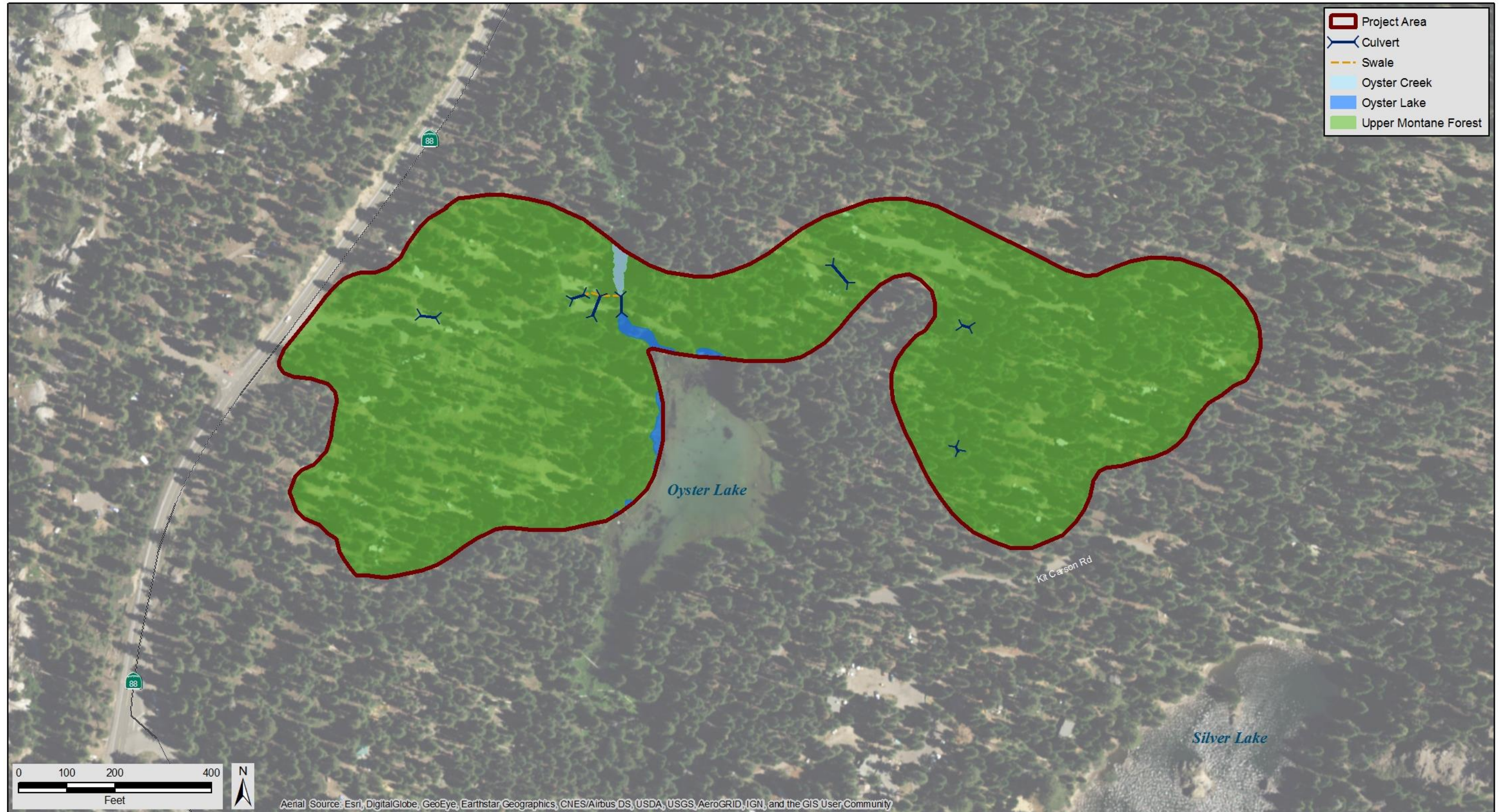
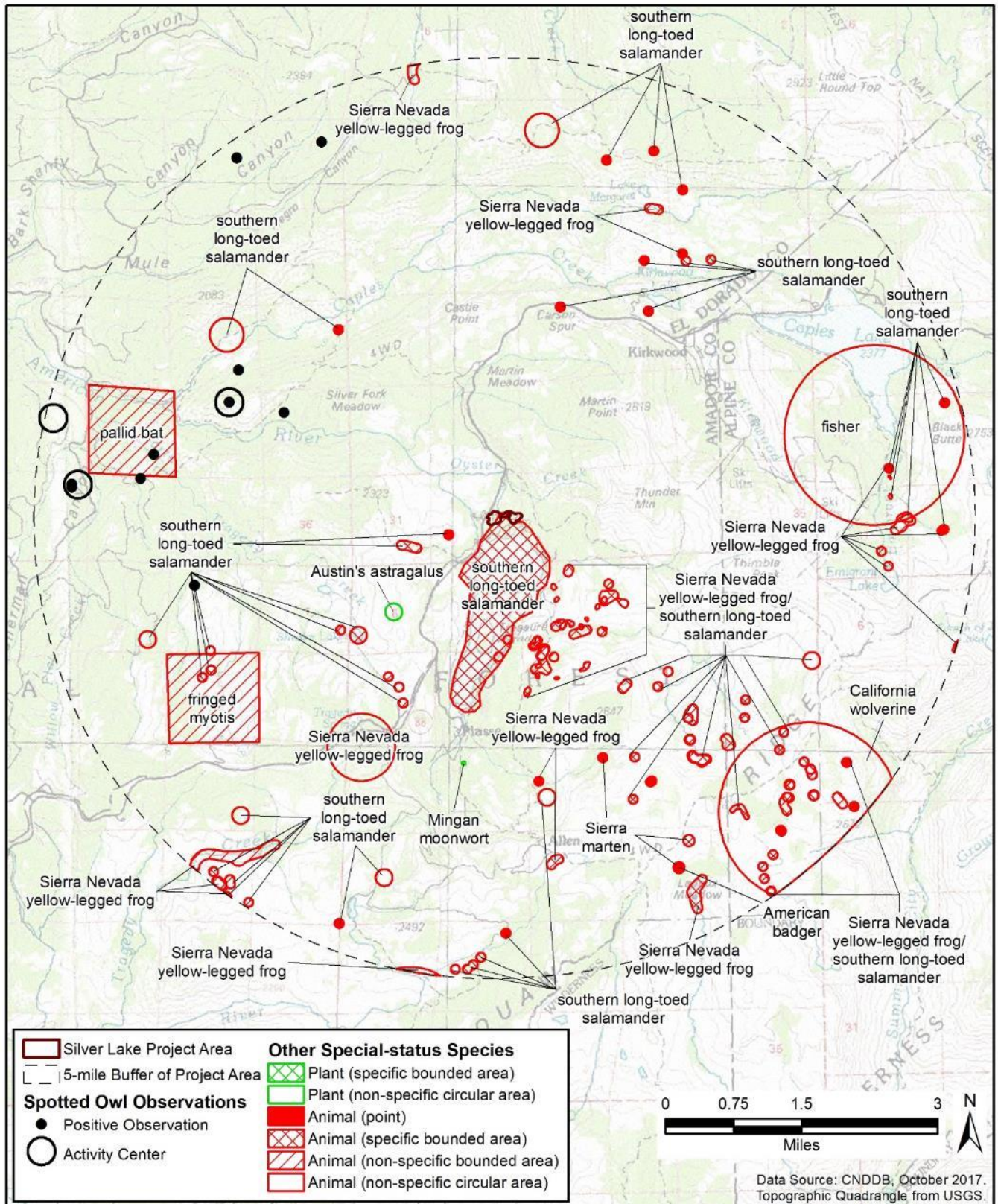


Figure 5. California Natural Diversity Database Occurrences within 5 Miles of Project Site



Z:\Projects\1704282_1704292-3_SilverLake\1704293_G001_SensitiveSpecies_5mi.mxd
13Nov2017 RS

Attachment B

Special-status Species Query Results



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Pyramid Peak (3812072) OR Echo Lake (3812071) OR Freel Peak (3811978) OR Tragedy Spring (3812062) OR Caples Lake (3812061) OR Carson Pass (3811968) OR Bear River Reservoir (3812052) OR Mokelumne Peak (3812051) OR Pacific Valley (3811958)) AND Taxonomic Group (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Allium tribracteatum</i> three-bracted onion	PMLIL022D0	None	None	G2	S2	1B.2
<i>Astragalus austiniae</i> Austin's astragalus	PDFAB0F120	None	None	G2G3	S2S3	1B.3
<i>Botrychium ascendens</i> upswept moonwort	PPOPH010S0	None	None	G3G4	S2	2B.3
<i>Botrychium crenulatum</i> scalloped moonwort	PPOPH010L0	None	None	G4	S3	2B.2
<i>Botrychium minganense</i> Mingan moonwort	PPOPH010R0	None	None	G4G5	S3	2B.2
<i>Botrychium montanum</i> western goblin	PPOPH010K0	None	None	G3	S2	2B.1
<i>Brasenia schreberi</i> watershield	PDCAB01010	None	None	G5	S3	2B.3
<i>Carex davyi</i> Davy's sedge	PMCYP033H0	None	None	G3	S3	1B.3
<i>Carex hystericina</i> porcupine sedge	PMCYP036D0	None	None	G5	S2	2B.1
<i>Carex limosa</i> mud sedge	PMCYP037K0	None	None	G5	S3	2B.2
<i>Carex scirpoidea ssp. pseudoscirpoidea</i> western single-spiked sedge	PMCYP03C85	None	None	G5T4	S2	2B.2
<i>Chaenactis douglasii var. alpina</i> alpine dusty maidens	PDAST20065	None	None	G5T5	S2	2B.3
<i>Cryptantha crymophila</i> subalpine cryptantha	PDBOR0A0R0	None	None	G3	S3	1B.3
<i>Draba asterophora var. asterophora</i> Tahoe draba	PDBRA110D1	None	None	G2T2?	S2?	1B.2
<i>Draba asterophora var. macrocarpa</i> Cup Lake draba	PDBRA110D2	None	None	G2T1	S1	1B.1
<i>Dryopteris filix-mas</i> male fern	PPDRY0A0B0	None	None	G5	S2	2B.3
<i>Elymus scribneri</i> Scribner's wheat grass	PMPOA2H170	None	None	G5	S3	2B.3
<i>Epilobium howellii</i> subalpine fireweed	PDONA06180	None	None	G4	S4	4.3



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Epilobium palustre</i> marsh willowherb	PDONA060R0	None	None	G5	S2	2B.3
<i>Erigeron miser</i> starved daisy	PDAST3M2K0	None	None	G3?	S3?	1B.3
<i>Eriogonum luteolum var. saltuarium</i> Jack's wild buckwheat	PDPGN083S4	None	None	G5T1	S1	1B.2
<i>Helodium blandowii</i> Blandow's bog moss	NBMUS3C010	None	None	G4	S2	2B.3
<i>Lewisia longipetala</i> long-petaled lewisia	PDPOR040K0	None	None	G2	S2	1B.3
<i>Meesia triquetra</i> three-ranked hump moss	NBMUS4L020	None	None	G5	S4	4.2
<i>Meesia uliginosa</i> broad-nerved hump moss	NBMUS4L030	None	None	G5	S3	2B.2
<i>Orthotrichum holzingeri</i> Holzinger's orthotrichum moss	NBMUS560E0	None	None	G3	S2	1B.3
<i>Peltigera gowardii</i> western waterfan lichen	NLVER00460	None	None	G3G4	S3	4.2
<i>Potamogeton epihydrus</i> Nuttall's ribbon-leaved pondweed	PMPOT03080	None	None	G5	S2S3	2B.2
<i>Potamogeton robbinsii</i> Robbins' pondweed	PMPOT030Z0	None	None	G5	S3	2B.3
<i>Schoenoplectus subterminalis</i> water bulrush	PMCYP0Q1G0	None	None	G4G5	S3	2B.3
<i>Scutellaria galericulata</i> marsh skullcap	PDLAM1U0J0	None	None	G5	S2	2B.2
<i>Utricularia ochroleuca</i> cream-flowered bladderwort	PDLNT020E0	None	None	G4G5	S1	2B.2
<i>Viola purpurea ssp. aurea</i> golden violet	PDVIO04420	None	None	G5T2	S2	2B.2

Record Count: 33

Plant List

Inventory of Rare and Endangered Plants

30 matches found. [Click on scientific name for details](#)

Search Criteria

California Rare Plant Rank is one of [1B, 2B], FESA is one of [Endangered, Threatened, Candidate, Not Listed], CESA is one of [Endangered, Threatened, Rare, Not Listed], Found in Quads 3812072, 3812071, 3811978, 3812062, 3812061, 3811968, 3812052 3812051 and 3811958;

[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
Astragalus austiniae	Austin's astragalus	Fabaceae	perennial herb	(May)Jul-Sep	1B.3	S2S3	G2G3
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	(Jun)Jul-Aug	2B.3	S2	G3G4
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
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Carex davyi	Davy's sedge	Cyperaceae	perennial herb	May-Aug	1B.3	S3	G3
Carex hystericina	porcupine sedge	Cyperaceae	perennial rhizomatous herb	May-Jun	2B.1	S2	G5
Carex limosa	mud sedge	Cyperaceae	perennial rhizomatous herb	Jun-Aug	2B.2	S3	G5
Carex scirpoidea ssp. pseudoscirpoidea	western single-spiked sedge	Cyperaceae	perennial rhizomatous herb	Jul, Sep	2B.2	S2	G5T4
Chaenactis douglasii var. alpina	alpine dusty maidens	Asteraceae	perennial herb	Jul-Sep	2B.3	S2	G5T5
Cryptantha crymophila	subalpine cryptantha	Boraginaceae	perennial herb	Jul-Aug	1B.3	S3	G3
Draba asterophora var. asterophora	Tahoe draba	Brassicaceae	perennial herb	Jul-Aug(Sep)	1B.2	S2?	G2T2?
Draba asterophora var. macrocarpa	Cup Lake draba	Brassicaceae	perennial herb	Jul-Aug(Sep)	1B.1	S1	G2T1
Dryopteris filix-mas	male fern	Dryopteridaceae	perennial rhizomatous herb	Jul-Sep	2B.3	S2	G5
Elymus scribneri	Scribner's wheat grass	Poaceae	perennial herb	Jul-Aug	2B.3	S3	G5
Epilobium oregonum	Oregon fireweed	Onagraceae	perennial herb	Jun-Sep	1B.2	S2	G2
Epilobium palustre	marsh willowherb	Onagraceae	perennial rhizomatous herb	Jul-Aug	2B.3	S2	G5

Eriogonum luteolum var. saltuarium	Jack's wild buckwheat	Polygonaceae	annual herb	Jul-Sep	1B.2	S1	G5T1
Helodium blandowii	Blandow's bog moss	Helodiaceae	moss		2B.3	S2	G4
Lewisia longipetala	long-petaled lewisia	Montiaceae	perennial herb	Jul-Aug(Sep)	1B.3	S2	G2
Meesia uliginosa	broad-nerved hump moss	Meesiaceae	moss	Jul,Oct	2B.2	S3	G5
Orthotrichum holzingeri	Holzinger's orthotrichum moss	Orthotrichaceae	moss		1B.3	S2	G3
Phacelia stebbinsii	Stebbins' phacelia	Hydrophyllaceae	annual herb	May-Jul	1B.2	S3	G3
Potamogeton epihydrus	Nuttall's ribbon-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	(Jun)Jul-Sep	2B.2	S2S3	G5
Potamogeton robbinsii	Robbins' pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	Jul-Aug	2B.3	S3	G5
Schoenoplectus subterminalis	water bulrush	Cyperaceae	perennial rhizomatous herb (aquatic)	Jun-Aug(Sep)	2B.3	S3	G4G5
Scutellaria galericulata	marsh skullcap	Lamiaceae	perennial rhizomatous herb	Jun-Sep	2B.2	S2	G5
Utricularia ochroleuca	cream-flowered bladderwort	Lentibulariaceae	perennial stoloniferous herb	Jun-Jul	2B.2	S1	G4G5
Viola purpurea ssp. aurea	golden violet	Violaceae	perennial herb	Apr-Jun	2B.2	S2	G5T2

Suggested Citation

California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 26 March 2019].

Search the Inventory

[Simple Search](#)

[Advanced Search](#)

[Glossary](#)

Information

[About the Inventory](#)

[About the Rare Plant Program](#)

[CNPS Home Page](#)

[About CNPS](#)

[Join CNPS](#)

Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

Questions and Comments

rareplants@cnps.org

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF	
Scientific Name (Common Name)																			
<i>Abies bracteata</i> (bristlecone fir)																		X	
<i>Abronia alpina</i> (Ramshaw Meadows abronia)									X										
<i>Abronia nana</i> var. <i>covillei</i> (Coville's dwarf abronia)									X										X
<i>Abronia villosa</i> var. <i>aurita</i> (chaparral sand-verbena)																X			X
<i>Acanthoscyphus parishii</i> var. <i>abramsii</i> (Abrams' oxytheca)															X		X		
<i>Acanthoscyphus parishii</i> var. <i>cienegensis</i> (Cienega Seca oxytheca)																			X
<i>Agrostis hooveri</i> (Hoover's bentgrass)																		X	
<i>Allium hickmanii</i> (Hickman's onion)																		X	
<i>Allium howellii</i> var. <i>clokeyi</i> (Mt. Pinos onion)																		X	
<i>Allium jepsonii</i> (Jepson's onion)							X							X					
<i>Allium marvinii</i> (Yucaipa onion)																			X
<i>Allium tribracteatum</i> (three-bracted onion)								X						X					
<i>Allium yosemitense</i> (Yosemite onion)													X	X					
<i>Anisocarpus scabridus</i> (scabrid alpine tarplant)		X	X	X															
<i>Antennaria marginata</i> (white-margined everlasting)																			X
<i>Antirrhinum subcordatum</i> (dimorphic snapdragon)		X																	
<i>Arabis rigidissima</i> var. <i>demota</i> (Galena Creek rockcress)										X	X								
<i>Arctostaphylos cruzensis</i> (Arroyo de la Cruz manzanita)																		X	
<i>Arctostaphylos edmundsii</i> (Little Sur manzanita)																		X	
<i>Arctostaphylos glandulosa</i> ssp. <i>gabrielensis</i> (San Gabriel manzanita)															X				X
<i>Arctostaphylos hooveri</i> (Hoover's manzanita)																		X	
<i>Arctostaphylos luciana</i> (Santa Lucia manzanita)																		X	
<i>Arctostaphylos nissenana</i> (Nissenan manzanita)								X						X					
<i>Arctostaphylos obispoensis</i> (Bishop manzanita)																		X	
<i>Arctostaphylos parryana</i> ssp. <i>tumescens</i> (interior manzanita)															X				X
<i>Arctostaphylos pilosula</i> (Santa Margarita manzanita)																		X	
<i>Arctostaphylos rainbowensis</i> (Rainbow manzanita)																X			
<i>Arctostaphylos refugioensis</i> (Refugio manzanita)																		X	
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i> (rock sandwort)																			X
<i>Astragalus anxius</i> (Ash Valley milk-vetch)						X													
<i>Astragalus bernardinus</i> (San Bernardino milk-vetch)																			X
<i>Astragalus bicristatus</i> (crested milk-vetch)															X				X
<i>Astragalus cimae</i> var. <i>sufflatus</i> (inflated Cima milk-vetch)									X										
<i>Astragalus deanei</i> (Dean's milk-vetch)																X			

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Astragalus douglasii var. perstrictus (Jacumba milk-vetch)																X		
Astragalus ertterae (Walker Pass milk-vetch)												X						
Astragalus johannis-howellii (Long Valley milk-vetch)									X									
Astragalus lemmonii (Lemmon's milk-vetch)						X	X		X		X							
Astragalus lentiformis (lens-pod milk-vetch)							X											
Astragalus lentiginosus var. antonius (San Antonio milk-vetch)															X			X
Astragalus lentiginosus var. kernensis (Kern Plateau milk-vetch)									X			X						
Astragalus lentiginosus var. sierrae (Big Bear Valley milk-vetch)																		X
Astragalus monoensis (Mono milk-vetch)									X									
Astragalus oocarpus (San Diego milk-vetch)																X		
Astragalus pachypus var. jaegeri (Jaeger's milk-vetch)																X		X
Astragalus pulsiferae var. coronensis (Modoc Plateau milk-vetch)						X	X				X							
Astragalus pulsiferae var. pulsiferae (Pulsifer's milk-vetch)							X											
Astragalus pulsiferae var. suksdorfii (Suksdorf's milk-vetch)					X													
Astragalus ravenii (Raven's milk-vetch)									X									
Astragalus tidestromii (Tidestrom's milk-vetch)																		X
Astragalus webberi (Webber's milk-vetch)							X				X							
Atriplex parishii (Parish's bristlescale)																X		X
Baccharis plummerae ssp. glabrata (San Simeon baccharis)																	X	
Balsamorhiza macrolepis (big-scale balsamroot)		X					X	X						X				
Bensoniella oregona (bensoniella)				X														
Bloomeria humilis (dwarf goldenstar)																	X	
Boechera bodiensis (Bodie Hills rockcress)									X									
Boechera constancei (Constance's rockcress)					X		X											
Boechera evadens (hidden rockcress)									X			X		X				
Boechera johnstonii (Johnston's rockcress)																		X
Boechera koehleri (Koehler's rockcress)				X														
Boechera parishii (Parish's rockcress)																		X
Boechera peirsonii (San Bernardino rockcress)																		X
Boechera pinzliae (Pinzl's rockcress)									X									
Boechera shevockii (Shevock's rockcress)												X						
Boechera shockleyi (Shockley's rockcress)									X									X
Boechera tiehmii (Tiehm's rockcress)									X	X								
Boechera tularensis (Tulare rockcress)									X	X		X	X					
Boletus pulcherrimus (red-pored bolete)	X		X	X							X							

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Botrychium ascendens (upswept moonwort)					X	X	X	X	X	X	X		X	X				
Botrychium crenulatum (scalloped moonwort)	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X
Botrychium lineare (slender moonwort)									X	X			X	X				
Botrychium lunaria (common moonwort)	X				X	X	X	X	X	X	X		X	X				
Botrychium minganense (mingan moonwort)	X		X		X	X	X	X	X	X	X	X	X	X				
Botrychium montanum (western goblin)	X				X	X	X	X		X	X	X	X	X				
Botrychium paradoxum (paradox moonwort)								X	X				X					
Botrychium pedunculatum (stalked moonwort)					X			X						X				
Botrychium pinnatum (northwestern moonwort)	X		X		X	X	X							X				
Botrychium pumicola (pumice moonwort)	X		X															
Botrychium tunux (moosewort)									X				X	X				
Botrychium yaaxudakeit (giant moonwort)									X				X	X				
Brodiaea insignis (Kaweah brodiaea)												X						
Brodiaea orcuttii (Orcutt's brodiaea)																X		
Brodiaea rosea (Indian Valley brodiaea)		X																
Brodiaea santarosae (Santa Rosa basalt brodiaea)																X		
Bruchia bolanderi (Bolander's bruchia)					X	X	X	X	X	X	X	X	X	X				
Buxbaumia viridis (buxbaumia moss)	X		X	X	X	X	X											
Calicium adpersum (stubble lichen)				X														
Calochortus clavatus var. avius (Pleasant Valley mariposa-lily)								X						X				
Calochortus clavatus var. clavatus (club-haired mariposa-lily)															X		X	
Calochortus clavatus var. gracilis (slender mariposa-lily)															X		X	
Calochortus dunnii (Dunn's mariposa-lily)																X		
Calochortus excavatus (Inyo County star-tulip)									X									
Calochortus fimbriatus (late-flowered mariposa-lily)															X		X	
Calochortus greenei (Greene's mariposa-lily)	X		X															
Calochortus longebarbatus var. longebarbatus (long-haired star-tulip)			X		X	X												
Calochortus obispoensis (San Luis mariposa-lily)																	X	
Calochortus palmeri var. munzii (San Jacinto mariposa-lily)																		X
Calochortus palmeri var. palmeri (Palmer's mariposa-lily)												X			X		X	X
Calochortus persistens (Siskiyou mariposa-lily)	X																	
Calochortus simulans (La Panza mariposa-lily)																	X	
Calochortus striatus (alkali mariposa-lily)												X			X			X
Calochortus weedii var. intermedius (intermediate mariposa-lily)																X		
Calochortus westonii (Shirley Meadows star-tulip)												X						

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Calycadenia micrantha (small-flowered calycadenia)		X		X													X	
Calycadenia oppositifolia (Butte County calycadenia)							X											
Calycadenia villosa (dwarf calycadenia)																	X	
Calyptridium pygmaeum (pygmy pussypaws)									X			X	X					X
Camissonia sierrae ssp. alticola (Mono Hot Springs evening-primrose)													X					
Camissoniopsis hardhamiae (Hardham's evening-primrose)																	X	
Campanula shetleri (Castle Crags harebell)			X															
Campanula wilkinsiana (Wilkin's harebell)	X		X															
Canbya candida (white pygmy-poppy)												X			X			X
Carex obispoensis (San Luis Obispo sedge)																	X	
Carex tiogana (Tioga Pass sedge)									X									
Carlquistia muirii (Muir's tarplant)												X	X				X	
Carpenteria californica (tree-anemone)													X					
Castilleja gleasonii (Mt. Gleason paintbrush)															X			
Castilleja lasiorhyncha (San Bernardino Mountains owl's-clover)																X		X
Castilleja plagiotoma (Mojave paintbrush)															X		X	X
Caulanthus amplexicaulis var. barbarae (Santa Barbara jewel-flower)																	X	
Caulanthus lemmonii (Lemmon's jewel-flower)																	X	
Caulanthus simulans (Payson's jewel-flower)																X		X
Ceanothus cyaneus (Lakeside ceanothus)																X		
Chaenactis suffrutescens (Shasta chaenactis)	X		X															
Chlorogalum pomeridianum var. minus (dwarf soaproot)																	X	
Chorizanthe blakleyi (Blakley's spineflower)																	X	
Chorizanthe breweri (Brewer's spineflower)																	X	
Chorizanthe parryi var. fernandina (San Fernando Valley spineflower)															X		X	
Chorizanthe parryi var. parryi (Parry's spineflower)															X	X		X
Chorizanthe rectispina (straight-awned spineflower)																	X	
Chorizanthe xanti var. leucotheca (white-bracted spineflower)																		X
Cinna bolanderi (Bolander's woodreed)												X	X					
Cladium californica (California saw-grass)									X						X		X	X
Clarkia australis (Small's southern clarkia)														X				
Clarkia biloba ssp. australis (Mariposa clarkia)													X	X				
Clarkia borealis ssp. borealis (northern clarkia)			X															
Clarkia gracilis ssp. albicaulis (white-stemmed clarkia)					X		X											
Clarkia jolonensis (Jolon clarkia)																	X	

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Clarkia lingulata (Merced clarkia)													X	X				
Clarkia mildrediae ssp. mildrediae (Mildred's clarkia)					X		X											
Clarkia mosquinii (Mosquin's clarkia)							X											
Claytonia lanceolata var. peirsonii (Peirson's spring beauty)															X			X
Clinopodium chandleri (San Miguel savory)																X		
Collomia larsenii (talus collomia)			X		X	X												
Collomia rawsoniana (Rawson's flaming trumpet)													X					
Cordylanthus eremicus ssp. kernensis (Kern Plateau bird's beak)									X			X						
Cordylanthus tenuis ssp. pallescens (pallid bird's-beak)			X															
Cryptantha circumscissa var. rosulata (rosette cushion cryptantha)									X			X						
Cryptantha crinita (silky cryptantha)					X													
Cryptantha incana (Tulare cryptantha)									X			X						
Cryptantha roosiorum (bristlecone cryptantha)									X									
Cudonia monticola (mountain cudonia)	X		X	X														
Cypripedium fasciculatum (clustered lady's-slipper)	X	X	X	X	X		X				X							
Cypripedium montanum (mountain lady's-slipper)	X	X	X	X	X	X	X	X			X		X	X				
Dacrophyllum falcifolium (tear drop moss)																		X
Dedeckera eurekensis (July gold)									X									
Deinandra floribunda (Tecate tarplant)																X		
Deinandra mohavensis (Mojave tarplant)												X			X	X		X
Delphinium hesperium ssp. cuyamaca (Cuyamaca larkspur)																X		X
Delphinium hutchinsoniae (Hutchinson's larkspur)																X		X
Delphinium inopinum (unexpected larkspur)												X	X					
Delphinium parryi ssp. purpureum (Mt. Pinos larkspur)																	X	
Delphinium purpusii (rose-flowered larkspur)												X						
Delphinium umbraculorum (umbrella larkspur)																	X	
Dendrocollybia racemosa (branched collybia)	X		X	X			X			X	X			X				
Dicentra nevadensis (Tulare County bleeding heart)												X	X					
Dieteria asteroides var. lagunensis (Mount Laguna aster)																X		
Dieteria canescens var. ziegleri (Ziegler's aster)																		X
Draba asterophora var. asterophora (Tahoe draba)								X	X	X				X				
Draba asterophora var. macrocarpa (Cup Lake draba)								X		X				X				
Draba carnosula (Mt. Eddy draba)	X		X	X														
Draba cruciata (Mineral King draba)									X	X		X						
Draba incrassata (Sweetwater Mountains draba)									X									

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Draba monoensis (White Mountains draba)									X									
Draba saxosa (Southern California rock draba)																		X
Draba sharsmithii (Mt. Whitney draba)									X				X					
Dryocallis cuneifolia var. cuneifolia (wedgeleaf woodbeauty)																		X
Dryocallis cuneifolia var. ewanii (Ewan's cinquefoil)															X			X
Dudleya abramsii ssp. affinis (San Bernardino Mountains dudleya)																		X
Dudleya cymosa ssp. costatifolia (Pierpoint Springs dudleya)												X						
Dudleya cymosa ssp. crebrifolia (San Gabriel River dudleya)															X			
Dudleya densiflora (San Gabriel Mountains dudleya)															X			
Dudleya multicaulis (many-stemmed dudleya)															X	X		
Dudleya viscida (sticky dudleya)																X		
Eleocharis torticulmis (California twisted spikerush)							X											
Epilobium nivium (Snow Mountain willowherb)		X																
Epilobium oreganum (Oregon fireweed)	X		X	X														
Eremogone cliftonii (Clifton's eremogone)					X		X											
Eremogone macradenia var. arcuifolia (Forest Camp sandwort)															X			
Eriastrum luteum (yellow-flowered eriastrum)																	X	
Eriastrum tracyi (Tracy's eriastrum)		X	X		X							X	X					
Ericameria gilmanii (Gilman's goldenbush)									X									
Ericameria parryi var. imula (low rabbitbrush)																		X
Erigeron aequifolius (Hall's daisy)									X			X	X					
Erigeron maniopotamicus (Mad River fleabane daisy)				X														
Erigeron miser (starved daisy)										X	X							
Erigeron multiceps (Kern River daisy)									X			X						
Erigeron uncialis var. uncialis (limestone daisy)									X									
Eriogonum alpinum (Trinity buckwheat)	X		X															
Eriogonum breedlovei var. breedlovei (Breedlove's buckwheat)												X						
Eriogonum butterworthianum (Butterworth's buckwheat)																	X	
Eriogonum evanidum (vanishing wild buckwheat)																X		X
Eriogonum hirtellum (Klamath Mountain buckwheat)	X			X														
Eriogonum kennedyi var. alpigenum (southern alpine buckwheat)															X		X	X
Eriogonum luteolum var. saltuarium (Jack's wild buckwheat)								X		X				X				
Eriogonum microthecum var. johnstonii (Johnston's buckwheat)															X			X
Eriogonum microthecum var. lacus-ursi (Bear Lake buckwheat)																		X
Eriogonum microthecum var. schoolcraftii (Schoolcraft's wild buckwheat)							X											

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Eriogonum nervulosum (Snow Mountain buckwheat)		X																
Eriogonum nudum var. regirivum (Kings River buckwheat)												X	X					
Eriogonum ovalifolium ssp. monarchense (Monarch buckwheat)												X	X					
Eriogonum prociduum (prostrate buckwheat)					X	X												
Eriogonum spectabile (Barron's buckwheat)					X													
Eriogonum tripodum (tripod buckwheat)		X						X										
Eriogonum twisselmannii (Twisselmann's buckwheat)												X						
Eriogonum umbellatum var. ahartii (Ahart's buckwheat)							X											
Eriogonum umbellatum var. glaberrimum (Warner Mountains buckwheat)						X												
Eriogonum umbellatum var. torreyanum (Donner Pass buckwheat)										X	X							
Eriogonum ursinum var. erubescens (blushing wild buckwheat)	X		X															
Eriogonum wrightii var. olanchense (Olancha Peak buckwheat)									X									
Eriophyllum congdonii (Congdon's woolly sunflower)													X	X				
Eriophyllum lanatum var. hallii (Fort Tejon woolly sunflower)																	X	
Eriophyllum nubigenum (Yosemite woolly sunflower)														X				
Erythronium hendersonii (Henderson's fawn lily)	X			X														
Erythronium pluriflorum (Shuteye Peak fawn lily)													X					
Erythronium pusaterii (Kaweah Lakes fawn lily)												X						
Erythronium taylori (Pilot Ridge fawn lily)														X				
Erythronium tuolumnense (Tuolumne fawn lily)														X				
Eucephalis vialis (wayside aster)	X		X	X														
Fissidens aphelotaxifolius (brook pocket moss)	X						X						X	X				
Fissidens pauperculus (minute pocket moss)				X			X										X	
Frangula purshiana ssp. ultramafica (Caribou coffeeberry)					X		X											
Frasera umpquaensis (Umpqua green-gentian)	X		X	X														
Fritillaria brandegeei (Greenhorn fritillary)												X						
Fritillaria eastwoodiae (Butte County fritillary)			X		X		X				X							
Fritillaria falcata (talus fritillary)																		X
Fritillaria liliacea (fragrant fritillary)																		X
Fritillaria ojaiensis (Ojai fritillary)																		X
Fritillaria striata (striped adobe-lily)												X						
Fritillaria viridea (San Benito fritillary)																		X
Galium angustifolium ssp. jacinticum (San Jacinto Mountains bedstraw)																X		X
Galium californicum ssp. lucicense (Cone Peak bedstraw)																		X
Galium californicum ssp. primum (Alvin Meadow bedstraw)																		X

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Galium clementis (Santa Lucia bedstraw)																	X	
Galium glabrescens ssp. modocense (Modoc bedstraw)						X												
Galium grande (San Gabriel bedstraw)															X			
Galium hardhamiae (Hardham's bedstraw)																	X	
Galium serpicum ssp. warnerense (Warner Mountains bedstraw)						X												
Gentiana fremontii (Fremont's gentian)																		X
Gentiana setigera (Mendocino gentian)				X														
Gilia leptantha ssp. leptantha (San Bernardino gilia)																		X
Gilia yorkii (Monarch gilia)												X	X					
Githopsis diffusa ssp. filicaulis (Mission Canyon bluecup)																X		
Harmonia doris-nilesiae (Niles' harmonia)			X															
Harmonia stebbinsii (Stebbins' harmonia)		X	X															
Helodium blandowii (Blandow's bog moss)	X				X	X	X	X	X	X	X	X	X	X				
Hesperidanthus jaegeri (Jaeger's hesperidanthus)									X									
Hesperocyparis forbesii (Tecate cypress)																X		
Hesperocyparis stephensonii (Cuyamaca cypress)																X		
Hesperolinon drymarioides (drymaria-like western flax)		X																
Heterotheca monarchensis (Monarch golden-aster)												X	X					
Heterotheca shevockii (Shevock's golden-aster)												X						
Heuchera abramsii (Abrams' alumroot)															X	X	X	X
Heuchera caespitosa (urn-flowered alumroot)															X		X	X
Heuchera hirsutissima (shaggy-haired alumroot)																		X
Heuchera parishii (Parish's alumroot)																		X
Horkelia cuneata ssp. puberula (mesa horkelia)															X	X	X	X
Horkelia cuneata ssp. sericea (Kellogg's horkelia)																	X	
Horkelia hendersonii (Henderson's horkelia)	X																	
Horkelia hispidula (White Mountains horkelia)									X									
Horkelia parryi (Parry's horkelia)								X					X	X				
Horkelia truncata (Ramona horkelia)																X		
Horkelia tularensis (Kern Plateau horkelia)												X						
Horkelia wilderae (Barton Flats horkelia)																		X
Horkelia yadonii (Santa Lucia horkelia)																	X	
Hulsea brevifolia (short-leaved hulsea)									X	X		X	X	X				
Hulsea vestita ssp. gabrielensis (San Gabriel Mountains hulsea)															X		X	X
Hulsea vestita ssp. pygmaea (pygmy hulsea)									X			X			X			X

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
<i>Iliamna latibracteata</i> (California globe mallow)			X	X														
<i>Imperata brevifolia</i> (California satintail)															X		X	X
<i>Iris hartwegii</i> ssp. <i>columbiana</i> (Tuolumne iris)													X					
<i>Iris munzii</i> (Munz's iris)												X						
<i>Ivesia aperta</i> var. <i>aperta</i> (Sierra Valley ivesia)							X				X							
<i>Ivesia aperta</i> var. <i>canina</i> (Dog Valley ivesia)											X							
<i>Ivesia argyrocoma</i> var. <i>argyrocoma</i> (silver-haired ivesia)																		X
<i>Ivesia callida</i> (Tahquitz ivesia)																		X
<i>Ivesia longibracteata</i> (Castle Crags ivesia)			X															
<i>Ivesia paniculata</i> (Ash Creek ivesia)						X												
<i>Ivesia pickeringii</i> (Pickering's ivesia)	X		X															
<i>Ivesia sericoleuca</i> (Plumas ivesia)							X			X	X							
<i>Ivesia webberi</i> (Webber's ivesia)							X				X							
<i>Juncus leiospermus</i> var. <i>leiospermus</i> (Red Bluff dwarf rush)					X													
<i>Juncus luciensis</i> (Santa Lucia dwarf rush)					X		X				X						X	
<i>Lathyrus biflorus</i> (two-flowered pea)				X														
<i>Layia heterotricha</i> (pale-yellow layia)																	X	
<i>Layia jonesii</i> (Jones' layia)																	X	
<i>Lepechinia cardiophylla</i> (heart-leaved pitcher sage)																X		
<i>Lepechinia fragrans</i> (fragrant pitcher sage)															X			X
<i>Lepechinia rossii</i> (Ross' pitcher sage)															X		X	
<i>Leptosiphon floribundus</i> ssp. <i>hallii</i> (Santa Rosa Mountains leptosiphon)																		X
<i>Leptosiphon nuttallii</i> ssp. <i>howellii</i> (Mt. Tefoc leptosiphon)		X	X															
<i>Leptosiphon serrulatus</i> (Madera leptosiphon)												X	X					
<i>Lessingia glandulifera</i> var. <i>tomentosa</i> (Warner Springs lessingia)																X		
<i>Lewisia brachycalyx</i> (short-sepaed lewisia)															X	X		X
<i>Lewisia cantelovii</i> (Cantelow's lewisia)			X				X				X							
<i>Lewisia congdonii</i> (Congdon's lewisia)												X	X	X				
<i>Lewisia disepala</i> (Yosemite lewisia)												X	X					
<i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i> (Hutchison's lewisia)			X		X		X	X		X	X			X				
<i>Lewisia kelloggii</i> ssp. <i>kelloggii</i> (Kellogg's lewisia)				X			X	X		X	X		X	X				
<i>Lewisia longipetala</i> (long-petaled lewisia)								X		X	X							
<i>Lewisia oppositifolia</i> (opposite-leaved lewisia)				X														
<i>Lewisia serrata</i> (saw-toothed lewisia)								X			X							
<i>Lewisia stebbinsii</i> (Stebbins' lewisia)		X																

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
<i>Lilium parryi</i> (lemon lily)															X	X		X
<i>Limnanthes alba</i> var. <i>parishii</i> (Parish's meadowfoam)																X		X
<i>Limnanthes floccosa</i> ssp. <i>bellingiana</i> (Bellinger's meadowfoam)					X													
<i>Linanthus concinnus</i> (San Gabriel linanthus)															X			X
<i>Linanthus jaegeri</i> (San Jacinto linanthus)																		X
<i>Linanthus killipii</i> (Baldwin Lake linanthus)																		X
<i>Linanthus orcuttii</i> (Orcutt's linanthus)																X		
<i>Lomatium roseanum</i> (adobe lomatium)					X	X	X											
<i>Lomatium stebbinsii</i> (Stebbins' lomatium)													X					
<i>Lonicera subspicata</i> var. <i>subspicata</i> (Santa Barbara honeysuckle)																	X	
<i>Lupinus antoninus</i> (Anthony Peak lupine)		X																
<i>Lupinus citrinus</i> var. <i>citrinus</i> (orange lupine)													X					
<i>Lupinus constancei</i> (The Lassics lupine)				X														
<i>Lupinus duranii</i> (Mono Lake lupine)									X									
<i>Lupinus latifolius</i> var. <i>barbatus</i> (bearded lupine)						X												
<i>Lupinus lepidus</i> var. <i>ashlandensis</i> (Mt. Ashland lupine)	X																	
<i>Lupinus lepidus</i> var. <i>culbertsonii</i> (Hockett Meadows lupine)									X			X	X					
<i>Lupinus ludovicianus</i> (San Luis Obispo County lupine)																	X	
<i>Lupinus padre-crowleyi</i> (Father Crowley's lupine)									X									
<i>Lupinus peirsonii</i> (Peirson's lupine)															X			
<i>Malacothamnus palmeri</i> var. <i>involucratum</i> (Carmel Valley bush-mallow)																	X	
<i>Malacothamnus palmeri</i> var. <i>lucianus</i> (Arroyo Seco bush-mallow)																	X	
<i>Malacothamnus palmeri</i> var. <i>palmeri</i> (Santa Lucia bush-mallow)																	X	
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> (Carmel Valley malacothrix)																	X	
<i>Malaxis monophyllos</i> ssp. <i>brachypoda</i> (white bog adder's-mouth)																		X
<i>Marina orcuttii</i> var. <i>orcuttii</i> (California marina)																		X
<i>Matelea parviflora</i> (spear-leaf matelea)																		X
<i>Meesia uliginosa</i> (broad-nerved hump-moss)	X		X		X	X	X	X	X	X	X	X	X	X				X
<i>Mentzelia inyoensis</i> (Inyo blazing star)									X									
<i>Mielichhoferia elongata</i> (elongate copper moss)	X	X	X	X			X				X	X	X	X				
<i>Mielichhoferia shevockii</i> (Shevock's copper moss)												X	X	X		X	X	
<i>Mimulus discolor</i> (two-colored monkeyflower)												X						
<i>Mimulus evanescens</i> (ephemeral monkeyflower)	X				X	X												
<i>Mimulus exiguus</i> (San Bernardino Mountains monkeyflower)																		X
<i>Mimulus filicaulis</i> (slender-stemmed monkeyflower)													X	X				

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTCMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Mimulus gracilipes (slender-stalked monkeyflower)												X	X					
Mimulus norrisii (Kaweah monkeyflower)												X	X					
Mimulus pulchellus (yellow-lip pansy monkeyflower)													X	X				
Mimulus purpureus (little purple monkeyflower)																		X
Mimulus shevockii (Kelso Creek monkeyflower)												X						
Minuartia decumbens (The Lassics sandwort)				X														
Minuartia rosei (peanut sandwort)			X															
Minuartia stolonifera (Scott Mountain sandwort)	X		X															
Monardella australis ssp. jokerstii (Jokerst's monardella)															X			X
Monardella beneolens (sweet-smelling monardella)									X			X						
Monardella follettii (Follett's monardella)					X		X				X							
Monardella hypoleuca ssp. lanata (flat-leaved monardella)																X		
Monardella linooides ssp. oblonga (Tehachapi monardella)								X				X					X	
Monardella macrantha ssp. hallii (Hall's monardella)															X	X		X
Monardella nana ssp. leptosiphon (San Felipe monardella)																X		X
Monardella palmeri (Palmer's monardella)																	X	
Monardella stebbinsii (Stebbins' monardella)							X											
Monardella saxicola (rock monardella)															X			X
Navarretia ojaiensis (Ojai navarretia)																	X	
Navarretia peninsularis (Baja navarretia)												X			X	X	X	X
Navarretia prolifera ssp. lutea (yellow bur navarretia)								X										
Navarretia setiloba (Piute Mountains navarretia)												X						
Nemacladus calcaratus (Chimney Creek nemacladus)												X						
Nemacladus secundiflorus var. robbinsii (Robbins' nemacladus)															X		X	
Nemacladus twisselmannii (Twisselmann's nemacladus)												X						
Neviusia cliftonii (Shasta snow-wreath)			X															
Nolina cismontana (chaparral nolina)																X	X	
Ophioglossum pusillum (northern adder's tongue)		X	X					X										
Opuntia basilaris var. brachyclada (short-joint beavertail)															X			X
Oreonana purpurascens (purple mountain-parsley)												X						
Oreonana vestita (woolly mountain-parsley)												X			X			X
Oreostemma elatum (tall alpine-aster)					X		X											
Orobanche valida ssp. valida (Rock Creek broomrape)															X		X	X
Orthotrichum kellmanii (Kellman's bristle moss)																	X	
Orthotrichum praemorsum (No common name)										X								

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Otidea smithii (Smith's otidea)				X														
Oxytropis oreophila var. oreophila (rock-loving oxytrope)															X			X
Packera bernardina (San Bernardino ragwort)																		X
Packera eurycephala var. lewisrosei (Lewis Rose's ragwort)					X		X											
Packera ganderi (Gander's ragwort)																X		
Packera hesperia (western ragwort)				X														
Parnassia cirrata var. cirrata (San Bernardino grass-of-Parnassus)															X			X
Parnassia cirrata var. intermedia (Cascade grass-of-Parnassus)	X		X															
Pedicularis dudleyi (Dudley's lousewort)																	X	
Pedicularis howellii (Howell's lousewort)	X			X														
Peltigera gowardii (veined water lichen)	X	X	X	X	X		X	X	X	X	X	X	X	X				
Penstemon californicus (California beardtongue)																X		X
Penstemon personatus (closed-throated beardtongue)					X		X				X							
Penstemon sudans (Susanville beardtongue)					X		X											
Penstemon tracyi (Tracy's beardtongue)			X															
Pentachaeta exilis ssp. aeolica (San Benito pentachaeta)																	X	
Petrophyton caespitosum ssp. acuminatum (marble rockmat)									X			X	X					
Phacelia cookei (Cooke's phacelia)	X		X															
Phacelia greenei (Scott Valley phacelia)	X		X															
Phacelia inundata (playa phacelia)	X				X	X												
Phacelia inyoensis (Inyo phacelia)									X									
Phacelia keckii (Santiago Peak phacelia)																X		
Phacelia monoensis (Mono County phacelia)									X									
Phacelia novenmillensis (Nine Mile Canyon phacelia)									X			X						
Phacelia stebbinsii (Stebbins' phacelia)								X			X							
Phaeocollybia olivacea (olive phaeocollybia)	X		X	X			X				X							
Phlox dolichantha (Big Bear Valley phlox)																		X
Pinus albicaulis (whitebark pine)	X		X		X	X		X	X	X	X	X	X	X				
Plagiobothrys collinus var. ursinus (Cooper's popcornflower)																		X
Plagiobothrys parishii (Parish's popcornflower)									X									
Plagiobothrys uncinatus (hooked popcornflower)																	X	
Platanthera yosemitensis (Yosemite bog orchid)													X					
Poa sierrae (Sierra blue grass)					X		X	X			X							
Polemonium chartaceum (Mason's sky pilot)	X		X						X									
Polyctenium williamsiae (Williams' combleaf)									X									

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF
Potentilla basaltica (Black Rock potentilla)						X												
Potentilla morefieldii (Morefield's cinquefoil)									X									
Potentilla rimicola (cliff cinquefoil)																		X
Prosartes parvifolia (Siskiyou bells)				X														
Pyrocoma lucida (sticky pyrocoma)					X		X				X							
Pyrocoma uniflora var. gossypina (Bear Valley pyrocoma)																		X
Quercus dumosa (Nuttall's scrub oak)																	X	
Raillardella pringlei (showy raillardella)	X		X															
Ramalina thrausta (angelhair)				X														
Ribes canthariforme (Moreno currant)																X		
Rorippa columbiae (Columbia yellow cress)	X		X		X	X												
Rorippa subumbellata (Tahoe yellow cress)										X								
Rupertia hallii (Hall's rupertia)					X													
Saltugilia latimeri (Latimer's woodland-gilia)												X						X
Sanicula maritima (adobe sanicle)																	X	
Sanicula tracyi (Tracy's sanicle)				X														
Scheuchzeria palustris (American scheuchzeria)					X													
Schoenus nigricans (black bog-rush)																		X
Scutellaria bolanderi ssp. austromontana (southern mountains skullcap)															X	X		X
Sedum albomarginatum (Feather River stonecrop)					X		X											
Sedum niveum (Davidson's stonecrop)																		X
Sedum obtusatum ssp. paradisum (Canyon Creek stonecrop)			X	X														
Senecio pattersonensis (Mount Patterson senecio)									X									
Sibaropsis hammittii (Hammitt's clay-cress)																X		
Sidalcea hickmanii ssp. anomala (Cuesta Pass checkerbloom)																	X	
Sidalcea hickmanii ssp. hickmanii (Hickman's checkerbloom)																	X	
Sidalcea hickmanii ssp. parishii (Parish's checkerbloom)															X		X	X
Sidalcea hickmanii ssp. pillsburiensis (Lake Pillsbury checkerbloom)		X																
Sidalcea malviflora ssp. dolosa ((Bear Valley checkerbloom)																		X
Sidalcea neomexicana (Salt Spring checkerbloom)															X		X	X
Sidotheca caryophylloides (chickweed oxytheca)												X			X		X	X
Sidotheca emarginata (white-margined oxytheca)																		X
Silene occidentalis ssp. longistipitata (long-stiped campion)					X													
Silene salmonacea (Klamath Mountain catchfly)			X															
Silene serpentinicola (serpentine catchfly)				X														

Pacific Southwest Region, Regional Forester's Sensitive Species List. National direction for designation and management of sensitive species can be found in Forest Service Manual (FSM) 2670.

USDA Forest Service, Pacific Southwest Region
Sensitive Plant Species by Forest

2013 FS R5 RF Sensitive Plant Species List	Klamath NF	Mendocino NF	Shasta-Trinity NF	Six Rivers NF	Lassen NF	Modoc NF	Plumas NF	Eldorado NF	Inyo NF	LTBMU	Tahoe NF	Sequoia NF	Sierra NF	Stanislaus NF	Angeles NF	Cleveland NF	Los Padres NF	San Bernardino NF	
<i>Sisyrinchium longipes</i> (timberland blue-eyed grass)																			X
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> (most beautiful jewel-flower)																		X	
<i>Streptanthus campestris</i> (southern jewel-flower)															X	X	X	X	
<i>Streptanthus cordatus</i> var. <i>piutensis</i> (Piute Mountains jewel-flower)												X							
<i>Streptanthus fenestratus</i> (Tehipite Valley jewel-flower)												X	X						
<i>Streptanthus gracilis</i> (alpine jewel-flower)									X										
<i>Streptanthus howellii</i> (Howell's jewel-flower)				X															
<i>Streptanthus oblanceolatus</i> (Trinity River jewel-flower)			X	X															
<i>Streptanthus oliganthus</i> (Masonic Mountain jewel-flower)									X										
<i>Stylocline masonii</i> (Mason's neststraw)												X			X			X	
<i>Sulcaria badia</i> (bay horsehair lichen)		X	X	X															
<i>Symphyotrichum defoliatum</i> (San Bernardino aster)												X			X	X	X	X	X
<i>Tauschia howellii</i> (Howell's tauschia)	X			X							X		X						
<i>Tetracoccus dioicus</i> (Parry's tetracoccus)																		X	
<i>Thelypodium howellii</i> ssp. <i>howellii</i> (Howell's thelypodium)					X	X													
<i>Thelypteris puberula</i> var. <i>sonorensis</i> (Sonoran maiden fern)															X			X	X
<i>Thermopsis californica</i> var. <i>semota</i> (velvety false lupine)																X			
<i>Thermopsis macrophylla</i> (Santa Ynez false lupine)																		X	
<i>Thermopsis robusta</i> (robust false lupine)	X			X															
<i>Thysanocarpus rigidus</i> (rigid fringe-pod)															X	X			X
<i>Tracyina rostrata</i> (beaked tracyina)		X		X															
<i>Tricholomopsis fulvescens</i> (tawny tricholomopsis)	X	X		X															
<i>Trifolium bolanderi</i> (Bolander's clover)													X						
<i>Trifolium dedeckeri</i> (Dedecker's clover)									X			X							
<i>Triquetrella californica</i> (coastal triquetrella)																		X	
<i>Triteleia ixioides</i> ssp. <i>cookii</i> (Cook's triteelia)																		X	
<i>Tropidocarpum capparideum</i> (caper-fruited tropidocarpum)																		X	
<i>Viola primulifolia</i> ssp. <i>occidentalis</i> (western white bog violet)				X															



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter gentilis</i> northern goshawk	ABNKC12060	None	None	G5	S3	SSC
<i>Ambystoma macrodactylum sigillatum</i> southern long-toed salamander	AAAAA01085	None	None	G5T4	S3	SSC
<i>Anaxyrus canorus</i> Yosemite toad	AAABB01040	Threatened	None	G2G3	S2S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Aplodontia rufa californica</i> Sierra Nevada mountain beaver	AMAF01013	None	None	G5T3T4	S2S3	SSC
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Bombus morrisoni</i> Morrison bumble bee	IIHYM24460	None	None	G4G5	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Empidonax traillii</i> willow flycatcher	ABPAE33040	None	Endangered	G5	S1S2	
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Gulo gulo</i> California wolverine	AMAJF03010	Proposed Threatened	Threatened	G4	S1	FP
<i>Hydromantes platycephalus</i> Mount Lyell salamander	AAAAD09020	None	None	G4	S4	WL
<i>Lepus americanus tahoensis</i> Sierra Nevada snowshoe hare	AMAEB03012	None	None	G5T3T4Q	S2	SSC
<i>Lepus townsendii townsendii</i> western white-tailed jackrabbit	AMAEB03041	None	None	G5T5	S3?	SSC
<i>Martes caurina sierrae</i> Sierra marten	AMAJF01014	None	None	G5T3	S3	
<i>Myotis thysanodes</i> fringed myotis	AMACC01090	None	None	G4	S3	
<i>Myotis volans</i> long-legged myotis	AMACC01110	None	None	G5	S3	
<i>Ochotona princeps schisticeps</i> gray-headed pika	AMAEA0102L	None	None	G5T2T4	S2S4	



Selected Elements by Scientific Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Oncorhynchus clarkii henshawi</i> Lahontan cutthroat trout	AFCHA02081	Threatened	None	G4T3	S2	
<i>Pekania pennanti</i> fisher - West Coast DPS	AMAJF01021	None	Threatened	G5T2T3Q	S2S3	SSC
<i>Picoides arcticus</i> black-backed woodpecker	ABNYF07090	None	None	G5	S2	
<i>Rana boylei</i> foothill yellow-legged frog	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
<i>Strix nebulosa</i> great gray owl	ABNSB12040	None	Endangered	G5	S1	
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Vulpes vulpes necator</i> Sierra Nevada red fox	AMAJA03012	Candidate	Threatened	G5T1T2	S1	

Record Count: 26

USDA Forest Service, Pacific Southwest Region

Sensitive Animal Species by Forest

6/30/2013; Updated 9/9/2013

Scientific Name	Common Name	Angeles	Cleveland	Eldorado	Inyo	Klamath	Lassen	Los Padres	Mendocino	Modoc	Plumas	San Bernardino	Sequoia	Shasta-Trinity	Sierra	Six Rivers	Stanislaus	Tahoe	Lake Tahoe Basin
BIRDS (12)																			
<i>Accipiter gentilis</i>	Northern goshawk	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Campylorhynchus brunneicapillus sandiegensis</i>	San Diego cactus wren		X									X							
<i>Centrocercus urophasianus</i>	Greater sage-grouse				X					X									
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo	X	X		X							X	X			X			
<i>Coturnicops noveboracensis</i>	Yellow rail						X							X					
<i>Empidonax traillii</i>	Willow flycatcher			X	X	X	X	X	X		X	X	X	X	X		X	X	X
<i>Grus canadensis tabida</i>	Greater sandhill crane					X	X			X	X							X	
<i>Haliaeetus leucocephalus</i>	Bald eagle	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Pelicanus occidentalis</i>	Brown pelican		X					X				X							
<i>Strix nebulosa</i>	Great gray owl			X	X	X	X			X	X		X		X		X	X	X
<i>Strix occidentalis occidentalis</i>	California spotted owl	X	X	X	X		X	X		X	X	X	X		X		X	X	X
<i>Vireo vicinior</i>	Gray vireo	X	X									X							
MAMMALS (13)																			
<i>Antrozous pallidus</i>	Pallid bat	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Brachylagus idahoensis</i>	Pygmy rabbit				X					X									
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Glaucomys sabrinus californicus</i>	San Bernardino flying squirrel											X							
<i>Gulo gulo luscus</i>	North American wolverine			X	X	X	X		X	X	X		X	X	X	X	X	X	X
<i>Martes caurina</i>	Pacific marten			X	X	X	X		X	X	X		X	X	X	X	X	X	X
<i>Pekania pennanti</i>	Fisher			X	X	X	X		X		X		X	X	X	X	X	X	X
<i>Myotis thysanodes</i>	Fringed myotis	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Ovis canadensis nelsoni</i>	San Gabriel Mountains bighorn sheep	X										X							
<i>Perognathus alticola alticola</i>	White-eared pocket mouse											X							
<i>Perognathus alticola inexpectatus</i>	Tehachapi pocket mouse	X						X											
<i>Tamias speciosus callipeplus</i>	Mount Pinos lodgepole chipmunk							X											
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox				?		X										X		
AMPHIBIANS (21)																			
<i>Anaxyrus canorus</i>	Yosemite toad			X	X										X		X		
<i>Anaxyrus exsul</i>	Black toad				X														
<i>Batrachoseps bramei</i>	Fairview slender salamander												X						
<i>Batrachoseps campi</i>	Inyo Mountain salamander				X														
<i>Batrachoseps gabrieli</i>	San Gabriel Mountains slender salamander	X										X							
<i>Batrachoseps incognitus</i>	San Simeon slender salamander							X											
<i>Batrachoseps minor</i>	Lesser slender salamander							X											
<i>Batrachoseps regius</i>	Kings River slender salamander														X				
<i>Batrachoseps relictus</i>	Relictual slender salamander												X						
<i>Batrachoseps simatus</i>	Kern Canyon slender salamander												X						
<i>Ensatina eschscholtzii croceater</i>	Yellow-blotched salamander	X						X					X						
<i>Ensatina eschscholtzii klauberi</i>	Large-blotched salamander		X									X							

Scientific Name	Common Name	Angeles	Cleveland	Eldorado	Inyo	Klamath	Lassen	Los Padres	Mendocino	Modoc	Plumas	San Bernardino	Sequoia	Shasta-Trinity	Sierra	Six Rivers	Stanislaus	Tahoe	Lake Tahoe Basin
<i>Hydromantes brunus</i>	Limestone salamander														X		X		
<i>Hydromantes shastae</i>	Shasta salamander													X					
<i>Plethodon stormi</i>	Siskiyou Mountain salamander					X													
<i>Rana aurora aurora</i>	Northern red-legged frog													X		X			
<i>Rana boylei</i>	Foothill yellow-legged frog			X		X	X	X	X		X		X	X	X	X	X	X	
<i>Rana cascadae</i>	Cascade frog					X	X							X					
<i>Rana muscosa</i>	Mountain yellow-legged frog: Southern Sierra DPS				X								X						
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog			X	X		X				X				X		X	X	X
<i>Rhyacotriton variegatus</i>	Southern torrent salamander					X								X		X			
REPTILES (12)																			
<i>Emys marmorata</i>	Western pond turtle	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Anniella pulchra</i>	California legless lizard	X	X					X				X	X						
<i>Aspidoscelis hyperythra</i>	Orange-throated whiptail		X									X							
<i>Charina umbratica</i>	Southern rubber boa											X							
<i>Crotalus ruber ruber</i>	Red diamond rattlesnake		X									X							
<i>Diadophis punctatus modestus</i>	San Bernardino ringneck snake	X						X				X							
<i>Diadophis punctatus similis</i>	San Diego ringneck snake		X									X							
<i>Elgaria panamintina</i>	Panamint alligator lizard				X														
<i>Lampropeltis zonata parvirubra</i>	San Bernardino Mountain kingsnake	X										X							
<i>Lampropeltis zonata pulchra</i>	San Diego Mountain kingsnake		X																
<i>Lichanura orcutti</i>	Coastal rosy boa or 3-lined boa	X	X									X							
<i>Thamnophis hammondi</i>	Two-striped garter snake	X	X					X				X							
INVERTEBRATES, TERRESTRIAL (24)																			
<i>Bombus occidentalis</i>	Western bumble bee			X		X	X			X	X			X		X		X	X
<i>Danaus plexippus</i>	Monarch butterfly							X											
<i>Euphilotes baueri (battoides) vernalis</i>	Vernal blue butterfly											X							
<i>Euphilotes enoptes cryptorufes</i>	Pratt's blue butterfly											X							
<i>Euphilotes enoptes nr. Dammersi</i>	Dammer's blue butterfly											X							
<i>Euphydryas editha bingi</i>	Bing's checkerspot butterfly									X									
<i>Euphydryas editha ehrlich</i>	Ehrlich's checkerspot butterfly											X							
<i>Euphydryas editha karinae</i>	Karin's checkerspot butterfly								X										
<i>Euphydryas editha monoensis</i>	Mono Lake checkerspot butterfly				X														
<i>Glaucopsyche piasus nr. sagittegera</i>	Arrowhead blue butterfly											X							
<i>Hermelyceana hermes</i>	Hermes copper butterfly		X																
<i>Incisalia mossii hidakupa</i>	San Gabriel Mountains elfin											X							
<i>Monadenia troglodytes troglodytes</i>	Shasta sideband snail													X					
<i>Monadenia troglodytes wintu</i>	Wintu sideband snail													X					
<i>Plebejus saepiolus aureolus</i>	San Gabriel Mountains blue butterfly	X										X							
<i>Plebulina emigdionis</i>	San Emigdio blue butterfly	X			X							X							
<i>Polites mardon</i>	Mardon skipper															X			
<i>Rothelix warnerfontis</i>	Warner Spring shoulderband snail		X																
<i>Speyeria egleis tehachapina</i>	Tehachapi fritillary butterfly												X						
<i>Speyeria nokomis apacheana</i>	Apache silverspot butterfly				X														

Scientific Name	Common Name	Angeles	Cleveland	Eldorado	Inyo	Klamath	Lassen	Los Padres	Mendocino	Modoc	Plumas	San Bernardino	Sequoia	Shasta-Trinity	Sierra	Six Rivers	Stanislaus	Tahoe	Lake Tahoe Basin
<i>Trilobopsis roperi</i>	Shasta chaparral snail													X					
<i>Trilobopsis tehamana</i>	Tehama chaparral snail					X								X					
<i>Vespericola pressleyi</i>	Big Bar hesperian snail													X					
<i>Vespericola shasta</i>	Shasta hesperian snail						X							X					
INVERTEBRATES, AQUATIC - Mollusks (13)																			
<i>Anodonta californiensis</i>	California floater (freshwater mussel)						X			X				X		X		X	
<i>Fluminicola seminalis</i>	Nugget pebblesnail						X							X					
<i>Helisoma newberryi newberryi</i>	Great Basin rams-horn (snail)						X											X	X
<i>Juga (Calibasis) acutifilosa</i>	Topaz juga (snail)						X			X									
<i>Juga chacei</i>	Chace juga (snail)															X			
<i>Juga nigrina</i>	Black juga (snail)						X			X				X				X	
<i>Juga (Calibasis) occata</i>	Scalloped juga (snail)						X							X					
<i>Lanx patelloides</i>	Kneecap lanx (limpet)						X							X					
<i>Pisidium (Cyclocalyx) ultramontanum</i>	Montane peaclam						X							X					
<i>Pristinicola hemphilli</i>	Pristine springsnail															X			
<i>Pyrgulopsis lasseni</i>	Willow Creek pyrg (springsnail)									X									
<i>Pyrgulopsis owensensis</i>	Owen's Valley springsnail				X														
<i>Pyrgulopsis wongi</i>	Wong's springsnail				X														
FISHES (22)																			
<i>Catostomus occidentalis lacusanserinus</i>	Goose Lake sucker									X									
<i>Entosphenus similis</i>	Klamath River lamprey					X													
<i>Entosphenus tridentatus</i>	Pacific lamprey			X		X	X	X	X	X				X		X			
<i>Gila bicolor pectinifer</i>	Lahontan Lake tui chub																	X	X
<i>Gila bicolor thalassina</i>	Goose Lake tui chub									X									
<i>Gila orcutti</i>	Arroyo chub	X	X					X				X							
<i>Lampetra hubbsi</i>	Kern brook lamprey												X		X				
<i>Lampetra richardsoni</i>	Western brook lamprey					X			X							X			
<i>Lampetra tridentata</i> ssp.	Goose Lake lamprey									X									
<i>Lavinia exilicauda chi</i>	Clear Lake hitch								X										
<i>Mylopharodon conocephalus</i>	Hardhead			X			X		X	X	X		X	X	X		X	X	
<i>Oncorhynchus clarkii</i>	Coastal run cutthroat trout															X			
<i>Oncorhynchus mykiss</i>	Steelhead - Klamath Mountains Province ESU					X								X		X			
<i>Oncorhynchus mykiss aguabonita</i>	California golden trout				X								X						
<i>Oncorhynchus mykiss aquilarum</i> (pop 5)	Eagle Lake rainbow trout						X												
<i>Oncorhynchus mykiss gilberti</i>	Kern River rainbow trout												X						
<i>Oncorhynchus mykiss</i> pop 4	Warner Valley redband trout									X									
<i>Oncorhynchus mykiss</i> pop 6	Goose Lake redband trout						X			X									
<i>Oncorhynchus mykiss</i> pop 7	McCloud River redband trout													X					
<i>Oncorhynchus tshawytscha</i>	Upper Klamath-Trinity chinook ESU					X								X		X			
<i>Oncorhynchus tshawytscha</i> ssp.	SONCC Chinook salmon															X			
<i>Rhinichthys osculus</i> ssp 8	Santa Ana speckled dace	X	X									X							
R5 Total Sensitive Animals = 124	Total # Sensitive Animals per Forest	22	22	18	27	23	32	21	16	26	17	36	25	34	19	24	18	21	14
		ANG	CLE	ELD	INY	KNF	LAS	LP	MEN	MOD	PLU	SB	SEQ	S-T	SIE	6R	STAN	TAH	LTB

Last login March 19, 2019 09:09 AM MDT

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.

Project information

NAME

Silver Lake Campground Improvements Project

LOCATION

Amador and El Dorado counties, California





DESCRIPTION

Improvements to USFS Silver Lake Campground facilities.

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

NOT FOR CONSULTATION

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. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

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.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Amphibians

NAME

STATUS

Sierra Nevada Yellow-legged Frog *Rana sierrae* Endangered
 There is **final** critical habitat for this species. Your location overlaps the critical habitat.
<https://ecos.fws.gov/ecp/species/9529>

Yosemite Toad *Anaxyrus canorus* Threatened
 There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/7255>

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Lahontan Cutthroat Trout <i>Oncorhynchus clarkii henshawi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3964	Threatened

Critical habitats

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

This location overlaps the critical habitat for the following species:

NAME	TYPE
Sierra Nevada Yellow-legged Frog <i>Rana sierrae</i> https://ecos.fws.gov/ecp/species/9529#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

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>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Cassin's Finch *Carpodacus cassinii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9462>

Breeds May 15 to Jul 15

Golden Eagle *Aquila chrysaetos*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Breeds Dec 1 to Aug 31

Lewis's Woodpecker *Melanerpes lewis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9408>

Breeds Apr 20 to Sep 30

Olive-sided Flycatcher *Contopus cooperi*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Breeds May 20 to Aug 31

Rufous Hummingbird *selasphorus rufus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Breeds elsewhere

Williamson's Sapsucker *Sphyrapicus thyroideus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/8832>

Breeds May 1 to Jul 31

Willow Flycatcher *Empidonax traillii*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/3482>

Breeds May 20 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.







Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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 [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential

impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS 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](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PSSC](#)

FRESHWATER POND

[PUBF](#)

LAKE

[L1UBH](#)

RIVERINE

[R3UBH](#)

[R5UBF](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

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 tubercid 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.

Appendix E. Native American Consultation

This page intentionally left blank.

**Native American Heritage Commission
Native American Contacts
2/12/2018**

Buena Vista Rancheria of Me-Wuk Indians
Rhonda Morninastar Pope. Chairperson
1418 20th Street, Suite 200 Me-Wuk / Miwok
Sacramento , CA 95811
rhonda@buenavistatribe.com

(916) 491-0011 Office

(916) 491-0012 Fax

Calaveras Band of Mi-Wuk Indians
Charles Wilson. Chairperson
546 Bald Mountain Road Mi-Wuk
West Point , CA 95255
(209) 293-2189

Calaveras Band of Mi-Wuk Indians
Debra Grimes. Cultural Res. Specialist
P.O. Box 899 Mi-Wuk
West Point , CA 95255 Miwok
calaverasmiwukpreservation@gmail.com

(209) 470-8688

Ione Band of Miwok Indians
Crvstal Martinez-Alire. Chairperson
P.O. Box 699 Miwok
Plvmouth , CA 95669
crystal@ionemiwok.net

(209) 245-5800 Office

(209) 245-3112 Fax

Ione Band of Miwok Indians
Randy Yonemura. Cultural Committee Chair
P.O. BOX 699 Miwok
Plvmouth , CA 95669
randy_yonemura@yahoo.com

(209) 245-5800 Office

(916) 601-4069 Cell

(209) 245-6377 Fax

Jackson Rancheria Band of Me-Wuk Indians
Adam Dalton. Chairman
P.O. Box 1090 Miwok
Jackson , CA 95642
adalton@jacksoncasino.com

(209) 223-8370 Office

(209) 223-5366 - Fax

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse. Chairperson
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
(530) 883-2390 Office

(530) 883-2380 Fax

Washoe Tribe of Nevada and California
Darrel Cruz. Cult Res Dept. THPO
919 Highway 395 South Washoe
Gardnerville , NV 89410
darrel.cruz@washoetribe.us

(775) 265-8600 x10714

(775) 546-3421 Cell

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed:
Silver Lake East Campground Improvement Project, Caples Lake, Amador County.

Local Government Tribal Consultation List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

CEQA Tribal Consultation List (AB 52) – Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2

General Plan (SB 18) - Per Government Code § 65352.3.

Local Action Type:

General Plan	General Plan Element	General Plan Amendment
Specific Plan	Specific Plan Amendment	Pre-planning Outreach Activity

Required Information

Project Title: _____

Local Government/Lead Agency: _____

Contact Person: _____

Street Address: _____

City: _____ **Zip:** _____

Phone: _____ **Fax:** _____

Email: _____

Specific Area Subject to Proposed Action

County: _____ **City/Community:** _____

Project Description:

Additional Request

Sacred Lands File Search - *Required Information:*

USGS Quadrangle Name(s): _____

Township: _____ **Range:** _____ **Section(s):** _____

Local Government Tribal Consultation List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

CEQA Tribal Consultation List (AB 52) – Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2

General Plan (SB 18) - Per Government Code § 65352.3.

Local Action Type:

General Plan	General Plan Element	General Plan Amendment
Specific Plan	Specific Plan Amendment	Pre-planning Outreach Activity

Required Information

Project Title: _____

Local Government/Lead Agency: _____

Contact Person: _____

Street Address: _____

City: _____ **Zip:** _____

Phone: _____ **Fax:** _____

Email: _____

Specific Area Subject to Proposed Action

County: _____ **City/Community:** _____

Project Description:

Additional Request

Sacred Lands File Search - *Required Information:*

USGS Quadrangle Name(s): _____

Township: _____ **Range:** _____ **Section(s):** _____

NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department
1650 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 FAX



February 2, 2018

Karen Gardner
GEI Consultants

Email to: kgardner@geiconsultants.com

RE: Caples Lake Campground Improvement, Alpine County

Dear Ms. Gardner,

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent of the referenced codes is to avoid and or mitigate impacts to tribal cultural resources, as defined, in the California Environmental Quality Act (CEQA).

As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of avoiding or mitigating impacts to tribal cultural resources:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.1(d))

The law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction. The NAHC believes that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC also believes that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the Area of Potential Effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
 - A listing of any and all known cultural resources that have already been recorded or are adjacent to the APE, such as known archaeological sites;
 - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
 - Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and

- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.
2. The results of any archaeological inventory survey that was conducted, including:
 - Any report that may contain site forms, site significance, and suggested mitigation measures.All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.
 3. The results of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission with the USGS topographical information provided had negative results.
 4. Any ethnographic studies conducted for any area including all or part of the potential APE; and
 5. Any geotechnical reports regarding all or part of the potential APE.

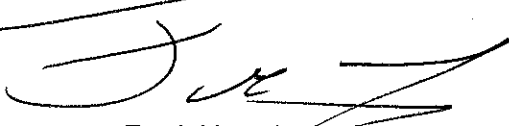
Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive. A negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we are able to assure that our consultation list remains current.

If you have any questions, please contact me at my email address: frank.lienert@nahc.ca.gov.

Sincerely,



Frank Lienert
Associate Government Program Analyst

**Native American Heritage Commission
Tribal Consultation List
February 2, 2018**

Washoe Tribe of Nevada and California
Darrel Cruz, Cult Res Dept. THPO
919 Highway 395 South Washoe
Gardnerville , NV 89410
darrel.cruz@washoetribe.us
(775) 265-8600 x10714

Calaveras Band of Mi-Wuk Indians
Debra Grimes, Cultural Res. Specialist
P.O. Box 899 Mi-Wuk
West Point , CA 95255 Miwok
calaverasmiwukpreservation@gmail.com
(209) 470-8688

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable only for consultation with Native American tribes under Public Resources Code Sections 210080.1, 21080.3.1 and 21080.3.2.
Caples Lake Campground Improvement, Alpine County

NATIVE AMERICAN HERITAGE COMMISSION

Environmental and Cultural Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710



February 12, 2018

Karen Gardner
GEI Consultants

Sent by Email:kgardner@geiconsultants.com
Number of Pages: 3

RE: Silver Lake East Campground Improvement Project, Caples Lake, Amador County

Dear Ms. Gardener:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. **Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.**

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. **By contacting all those on the list, your organization will be better able to respond to claims of failure to consult.** If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: sharaya.souza@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sharaya Souza".

Sharaya Souza
Staff Services Analyst
(916) 573-0168

Appendix F. Mitigation Monitoring and Reporting Program

This page intentionally left blank.

Mitigation Monitoring and Reporting Program

Caples Lake and Silver Lake East Campground Improvements Project

Prepared for:



El Dorado Irrigation District

June 2019

Prepared by:



Consulting
Engineers and
Scientists

This page intentionally left blank.

Mitigation Monitoring and Reporting Program

Caples Lake and Silver Lake East Campground Improvements Project

Prepared for:

El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Contact:

Doug Venable
Environmental Review Analyst
(530) 642-4187

Prepared by:

GEI Consultants, Inc.
2868 Prospect Park Drive, Suite 400
Sacramento, CA 95670

Contact:

Ryan Jolley
Senior Project Manager
(916) 912-4942

June 2019

Project No. 1901628

This page intentionally left blank.

Table of Contents

Acronyms and Other Abbreviationsii
Mitigation Monitoring and Reporting Program.....1

Table

Table 1. Mitigation Monitoring and Reporting Program for the Caples Lake and Silver Lake East
Campground Improvements Project.....2

Acronyms and Other Abbreviations

BMPs	best management practices
CEQA	California Environmental Quality Act
EID	El Dorado Irrigation District
IS/MND project	Initial Study/proposed Mitigated Negative Declaration Caples Lake and Silver Lake East Campground Improvements Project
proposed project	Caples Lake and Silver Lake East Campground Improvements Project
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan

Mitigation Monitoring and Reporting Program

In accordance with the California Environmental Quality Act (CEQA), the El Dorado Irrigation District (EID) prepared a draft initial study/proposed mitigated negative declaration (IS/MND) in June 2019 to provide the public and responsible and trustee agencies with information about the potential environmental impacts associated with implementation of the Caples Lake and Silver Lake East Campground Improvements Project (hereafter referred to as the “project” or “proposed project”).

The IS/MND concludes that implementation of the proposed project would generate significant and potentially significant adverse effects on the environment. The IS/MND identifies feasible mitigation measures that avoid, mitigate, or reduce these impacts to a less-than-significant level.

Section 21081.6(a)(1) of the California Public Resources Code and Section 15097 of the State CEQA Guidelines require a public agency to adopt a reporting and monitoring program on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental impacts on the physical environment.

This Mitigation Monitoring and Reporting Program will be used by EID to ensure that mitigation measures identified in the MND are implemented as described in the MND and that their implementation is documented.

The Mitigation Monitoring and Reporting Program is presented in tabular format. The table columns contain the following information:

Mitigation Number: Lists the mitigation measures by number, as designated in the MND.

Mitigation Measure: Provides the text of the mitigation measures, each of which has been adopted and incorporated into the project.

Timing/Schedule: Lists the time frame in which the mitigation measure is expected to take place.

Implementation Responsibility: Identifies the entity responsible for implementing the mitigation measure.

Completion of Implementation: EID is responsible for reporting on implementation of the mitigation measures. The “Completion of Implementation” column is to be used by EID to indicate when implementation of a mitigation measure has been completed. EID, at its discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors.

Table 1. Mitigation Monitoring and Reporting Program for the Caples Lake and Silver Lake East Campground Improvements Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
Biological Resources				
BIO-1	<p>Minimize Potential Impacts on Sierra Nevada Yellow-legged Frog.</p> <ul style="list-style-type: none"> ▪ EID shall implement the following measures to minimize potential for significant adverse effects on Sierra Nevada yellow-legged frog during project activities at the Silver Lake East Campground. ▪ Conduct environmental awareness training before project activities begin to inform all construction personnel about measures to avoid and minimize effects on biological resources. ▪ Install and maintain high-visibility fencing or other visual marking to protect sensitive biological resource areas (i.e., Oyster Lake and Oyster Creek) that are located adjacent to construction areas from encroachment by personnel and equipment. Incorporate sensitive habitat information into construction bid specifications, with a requirement for contractors to avoid these areas. ▪ A qualified biologist experienced in amphibian surveys and identification shall conduct a pre-construction survey of upland habitat in the Silver Lake East Campground improvements area that is within 25 feet of Oyster Lake or Oyster Creek, immediately before protective fencing or other visual marking is installed. ▪ If Sierra Nevada yellow-legged frogs are observed during construction activities, all work in the immediate area will cease and the animal will be allowed to leave the area on its own accord. EID will contact U.S. Fish and Wildlife Service to report the encounter and to receive further guidance. Under no circumstance shall Sierra Nevada yellow-legged frog be harassed, captured, or relocated. ▪ Tightly woven fiber netting, plastic mono-filament netting, or similar material shall not be used for erosion control or other purposes within Sierra Nevada yellow-legged frog suitable habitat. 	Before and during construction	EID	
Cultural Resources				
CR-1	<p>Address Previously Undiscovered Historic, Archaeological Resources, and Tribal Cultural Resources.</p> <p>EID shall implement the following measure to reduce or avoid impacts on undiscovered historic properties, archaeological resources, and tribal cultural resources. If interested Native American Tribes provide information demonstrating the significance of the project location and tangible evidence supporting the determination the site is highly sensitive for prehistoric archaeological resources, EID will retain a qualified archaeologist to do the following tasks: 1) monitor for potential prehistoric archaeological resources during initial ground disturbing activities, 2) prepare a worker</p>	During construction	EID	

Table 1. Mitigation Monitoring and Reporting Program for the Caples Lake and Silver Lake East Campground Improvements Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>awareness brochure, 3) invite tribal representatives to review the worker awareness brochure, and 4) conduct training of personnel involved in project implementation.</p> <p>If buried or previously unidentified historic properties or archaeological resources are discovered during project activities, all work within a 100-foot-radius of the find shall cease. EID shall retain a professional archaeologist meeting the Secretary of the Interior's Professional Standards for Archaeologists to assess the discovery and recommend what, if any, further treatment or investigation is necessary for the find. Interested Native American Tribes will also be contacted. Any necessary treatment/investigation shall be developed with interested Native American Tribes providing recommendations and shall be coordinated with the State Historic Preservation Officer and U.S. Forest Service, if necessary, and shall be completed before project activities continue in the vicinity of the find.</p>			
<p>CR-2</p>	<p>Address Previously Identified Archaeological Resources Near the Silver Lake East Campground.</p> <p>EID shall implement the following measure to avoid impacts on a previously identified archaeological resource immediately outside the project footprint, a prehistoric bedrock mortar complex within the Silver Lake East Campground. This resource is identified as P-03-001402, CA-AMA-882, and FS #05-03-51-442, through different recording systems, and is comprised of two outcrops containing three shallow mortars each. EID should protect these outcrops during project activities by creating a 15-foot buffer area around each outcrop, clearly demarcated with protective fencing to serve as a visual indication of the excluded perimeter.</p>	<p>During construction</p>	<p>EID</p>	
<p>CR-3</p>	<p>Avoid Potential Effects on Undiscovered Burials.</p> <p>EID shall implement the following measures to reduce or avoid impacts related to undiscovered burials. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, all potentially damaging ground-disturbance in the area of the burial and a 100-foot-radius shall halt and the El Dorado County Coroner shall be notified immediately. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or State lands (Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, then Federal laws governing the disposition of those remains would come into effect. Specifically, the Native American Graves Protection and Repatriation Act, Pub L. 101-601, 25 U.S.C. 3001 et seq., 104 Stat. 3048 requires Federal agencies and institutions that receive federal funding to return Native American cultural items to lineal descendants and culturally affiliated Indian Tribes and Native Hawaiian organizations. Cultural items include human remains, funerary objects, sacred objects, and objects of cultural patrimony. The Native American Graves Protection and Repatriation Act also</p>	<p>During construction</p>	<p>EID</p>	

Table 1. Mitigation Monitoring and Reporting Program for the Caples Lake and Silver Lake East Campground Improvements Project

Mitigation Number	Mitigation Measure	Timing/Schedule	Implementation Responsibility	Completion of Implementation
	<p>has established procedures for the inadvertent discovery of Native American cultural items on Federal or Tribal lands, which includes consultation with potential lineal descendants or Tribal officials as part of their compliance responsibilities.</p> <p>California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. EID shall ensure that the procedures for the treatment of Native American human remains contained in California Health and Safety Code Sections 7050.5 and 7052 and Public Resources Code Section 5097 are followed.</p>			
Geology and Soils				
GEO-1	<p>Prepare and Implement a Storm Water Pollution Prevention Plan and Associated Best Management Practices.</p> <p>EID shall prepare and implement the appropriate Stormwater Pollution Prevention Plan (SWPPP), or Stormwater Management Plan (SWMP), to prevent and control pollution and to minimize and control runoff and erosion, in compliance with State and local laws. The SWPPP or SWMP shall identify the activities that may cause pollutant discharge (including sediment) during storms or strong wind events and the BMPs that will be employed to control pollutant discharge. Construction techniques that will be identified and implemented to reduce the potential for runoff may include minimizing site disturbance, controlling water flow over the construction site, stabilizing bare soil, and ensuring proper site cleanup. In addition, the SWPPP or SWMP shall include an erosion control plan and BMPs that specify the erosion and sedimentation control measures to be implemented, which may include silt fences, staked straw bales/wattles, silt/sediment basins and traps, geofabric, trench plugs, terraces, water bars, soil stabilizers re-seeding with native species, and mulching to revegetate disturbed areas. If suitable vegetation cannot reasonably be expected to become established, non-erodible material will be used for such stabilization. The SWPPP shall also include dust control practices to prevent wind erosion, sediment tracking, and dust generation by construction equipment.</p> <p>The SWPPP or SWMP shall identify the types of materials used for equipment operation (including fuel and hydraulic fluids), and measures to prevent and materials available to clean up hazardous material and waste spills. The SWPPP or SWMP shall also identify emergency procedures for responding to such spills.</p> <p>The BMPs presented in either document shall be clearly identified and maintained in good working condition throughout the construction process. The construction contractor shall retain a copy of the approved SWPPP or SWMP on the construction site and modify it as necessary to suit specific site conditions through amendments approved by the Central Valley Regional Water Quality Control Board, if necessary.</p>	Before, during, and after construction	EID	

This page intentionally left blank.