FLUME 48 UTILITY AND INFRASTRUCTURE REPLACEMENT PROJECT

Notice of Preparation of a Draft Environmental Impact Report and Initial Study

Prepared By:

El Dorado Irrigation District
2890 Mosquito Road
Placerville, California 95667

December 2024

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December 2024

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Project title:	Flume 48 Utility and Infrastructure Replacement Project
Lead Agency name and address:	El Dorado Irrigation District 2890 Mosquito Road Placerville, California 95667
Contact person and phone number:	Brian Deason Environmental Resources Supervisor phone: (530) 642-4064 email to: bdeason@eid.org
Project location:	U.S. Geological Survey 7.5 Quadrangle, Pollock Pines, California, Sections 32 and 33, Township 11N, Range 13E (See Figure 2.2-1)
Project sponsor's name and address:	El Dorado Irrigation District 2890 Mosquito Road Placerville, California 95667
Land Use designation:	Rural Lands – El Dorado County General Plan
Zoning:	Residential Estate
Description of Project:	The Project would replace approximately 448 linear feet of an existing wooden flume (i.e., Flume 48), which is highly susceptible to damage from wildfire and other natural hazards, with a more durable ignition resistant concrete conveyance structure (i.e., cast-in-place or precast concrete flume). The Project would include mobilization, access improvements and site preparation, demolition and disposal of the existing wood structure, clearing and grubbing vegetation within the work area, stabilization of the existing rock wall foundation or construction of a new foundation using mechanically stabilized earth wall, and construction of the new concrete conveyance structure. The Project would also include retrofitting an existing spillway structure into the new concrete conveyance, installation of metal walkways and handrails to facilitate future maintenance and inspection along the flume, and implementation of permanent slope stabilization measures (e.g., hazard tree removal, slope/rock scaling, rock fall protection) as necessary to stabilize areas upslope of the new structure.

Surrounding Land Uses and Setting:	The Project area is east of the town of Pollock Pines in an unincorporated area of El Dorado County, north of U.S. Highway 50 and west of Fresh Pond, on private lands and lands owned by the El Dorado Irrigation District; The Project area is located partially within the El Dorado Hydroelectric Project-FERC Project 184 license boundary and the water conveyance infrastructure to be replaced (i.e., Flume 48) is part of EID's El Dorado Federal Energy Regulatory Commission Project 184, which consists of a series of dams, canals, flumes, siphons, a penstock, and a powerhouse to deliver water from the South Fork of the American River for drinking water and power generation.
Other Public Agencies whose approval may be required or requested (e.g., permits, financing approval, or participation agreement.):	The Project may be subject to further approval from the Federal Emergency Management Agency (FEMA), Federal Energy Regulatory Commission (FERC), and the California Office of Historic Preservation (SHPO)

1. INTRODUCTION

1.1 Notice of Preparation of a Draft Environmental Impact Report and Initial Study

The El Dorado Irrigation District (EID or District) has prepared this Notice of Preparation (NOP) of a Draft Environmental Impact Report (Draft EIR) and Initial Study (IS) in compliance with the California Environmental Quality Act (CEQA) to address the potentially significant environmental impacts of the proposed Flume 48 Utility and Infrastructure Replacement Project (Project). (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (Title 14, California Code of Regulations, Section 15000 et seq.).

Based on the analysis provided in the IS, the District, as Lead Agency under CEQA, has determined that the Project may result in potentially significant environmental effects and, consequently, an EIR is required. Therefore, the purpose of this NOP/IS is to provide an opportunity for the public, interested parties, and public agencies to comment on the scope and proposed content of the Draft EIR. The Draft EIR will address the potential environmental effects of the Project for the relevant environmental issues outlined by CEQA. The District will use the Draft EIR when considering approval of the Project.

1.2 Public Review Process

The NOP/IS is available for public review from December 19, 2024 through January 30, 2025. During this review period, the public is encouraged to provide written comments on the scope and proposed content of the Draft EIR. Comments may be submitted to EID at Flume48NOP@eid.org or by U.S. mail to: El Dorado Irrigation District 2890 Mosquito Road, Placerville, California 95667; Attention: Brian Deason.

2. PROJECT DESCRIPTION

2.1 Project Context and Summary

The El Dorado Irrigation District (EID or District) owns and operates the El Dorado Hydroelectric Project, which is licensed by the Federal Energy Regulatory Commission (FERC) as Project 184. One component of Project 184 is the El Dorado Canal, which consists of various conveyance structures (e.g., flumes, canals, tunnels, siphons) that help convey approximately 1/3 of the District's total drinking water supply to over 125,000 residents in El Dorado County, CA and also provides clean renewable energy through a 21-megawatt hydroelectric generation facility. Flume 48 is a component of this critical water delivery system. Flume 48 is constructed of wood and highly susceptible to damage and destruction by natural hazards including wildfires, landslides, and falling trees and rocks. Therefore, the District is proposing to implement the Flume 48 Utility and Infrastructure Replacement Project (Project).

The Project would replace approximately 448 linear feet of the existing wooden flume with a more durable ignition resistant concrete conveyance structure (i.e., cast-in-place or precast concrete flume). The Project would include mobilization, access improvements and site preparation, demolition and disposal of the existing wood structure, clearing and grubbing vegetation within the work area, stabilization of the existing rock wall foundation or construction of a new foundation using mechanically stabilized earth wall, and construction of the new concrete conveyance structure. The Project would also include retrofitting an existing spillway structure into the new concrete conveyance, installation of metal walkways and handrails to facilitate future maintenance and inspection along the flume, and implementation of permanent slope stabilization measures (e.g., hazard tree removal, slope/rock scaling, rock fall protection) as necessary to stabilize areas upslope of the new structure. The Project would incorporate nature-based solutions with the use of bioengineered natural and manmade materials to stabilize disturbed areas within the Project footprint. Representative photos of Flume 48 are provided (Photos 1 and 2).

Photo 1: Section of Flume 48

Photo 2: Flume 48 existing rock wall foundation

2.2 Project Location

The Project area is east of the town of Pollock Pines in El Dorado County. The Project area is north of US 50 and west of Fresh Pond and is located on steep terrain on a north-facing slope upslope from the South Fork American River in a heavily forested area. The Project area is located on private land and land owned by the District. The elevation of the Project area ranges from approximately 3,840–3,900 feet above mean sea level. The total Project area is approximately 5 acres and the anticipated construction footprint is approximately 2 acres. The Project location is shown in Figure 1 and the Project site is shown in Figures 2a and 2b.

Most work would be conducted within the existing Project 184 boundary. Some temporary staging and access routes may occur outside of the Project 184 boundary (see Figures 2a and 2b).

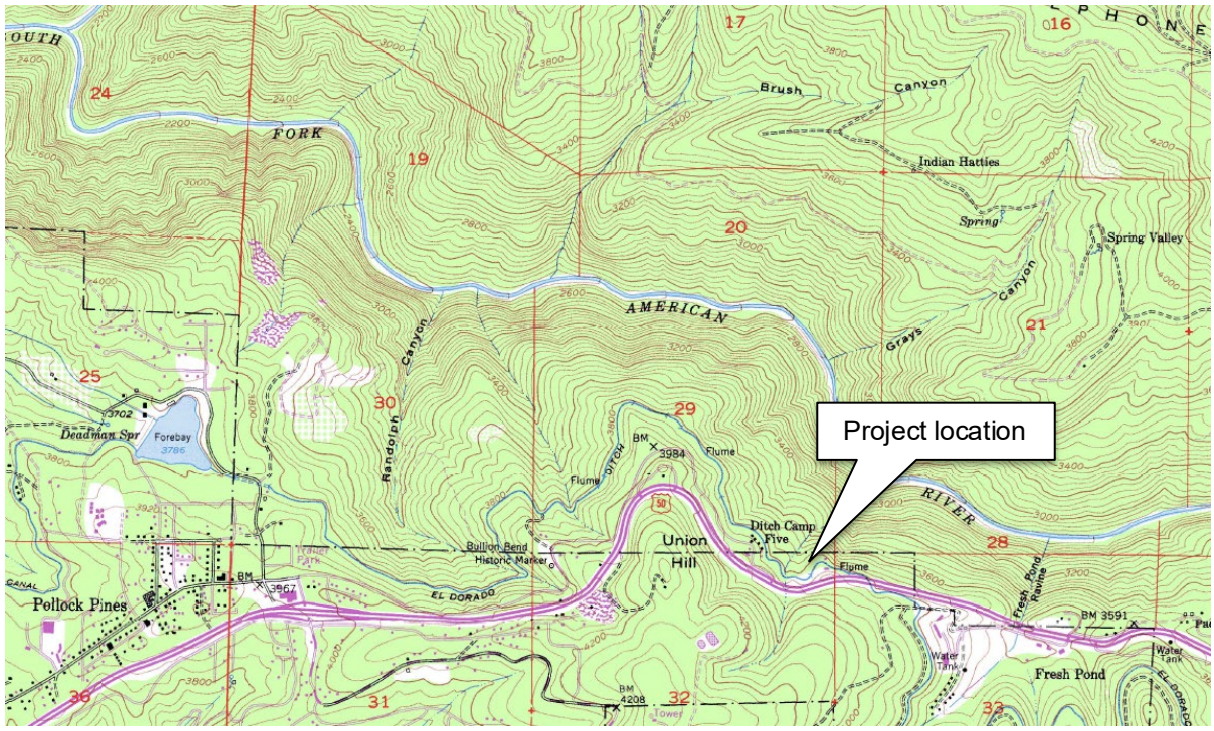

Figure 1: Project Location – Township 11 north, Range 13 east, Sections 32 and 33 of U.S. Geological Survey 7.5-minute Pollock Pines quadrangle

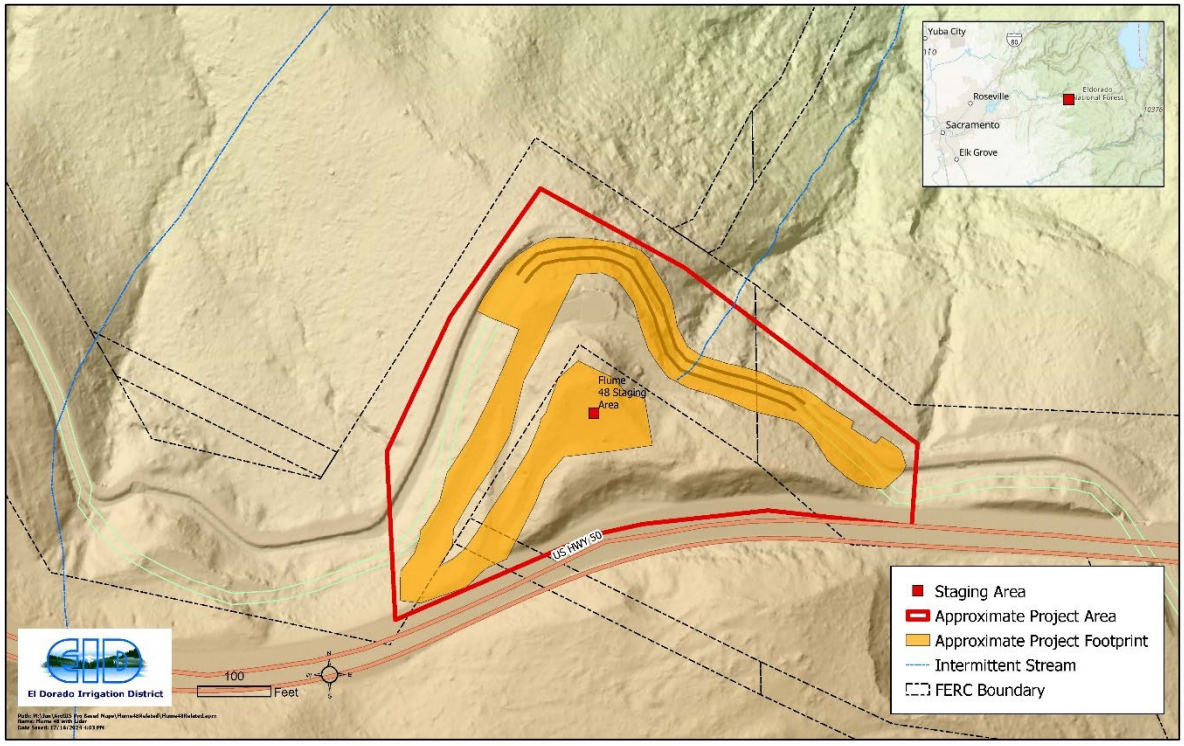

Figure 2a: Project Site - LiDAR

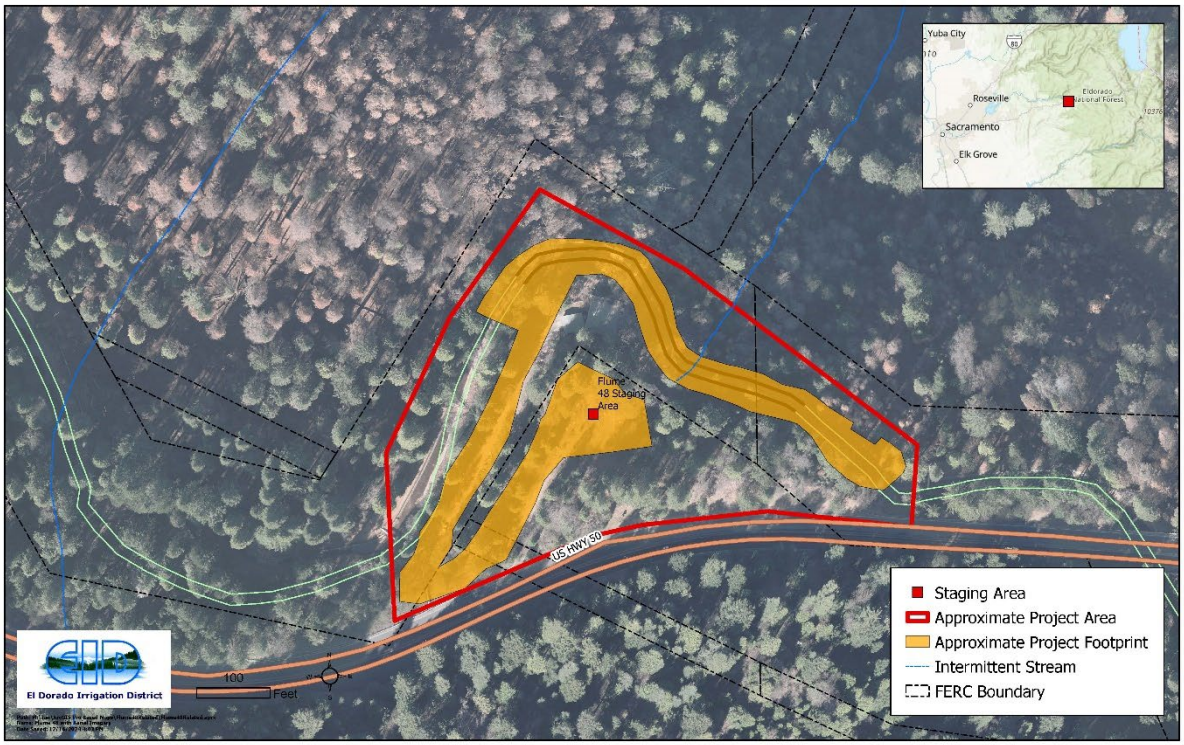

Figure 2b: Project Site – Aerial Photo

2.3 Objectives

The Project objectives include:

- Increase protection of Flume 48 and Project 184 overall from potential future catastrophic wildfire;
- Ensure a reliable water supply for drinking water and hydroelectric generation;
- Improve the safety of the El Dorado canal system;
- Ensure continued operational reliability of the El Dorado canal system.

2.4 Project Components and Details

The main components of Project construction would include mobilization and site preparation, foundation work, construction of the new concrete conveyance, retrofitting of the existing spillway structure, and slope stabilization and erosion control. Additional details for these Project components are as follows:

- Mobilization, access improvements and site preparation includes mobilization of construction equipment to the site, establishing access and staging areas, and demolition of the existing wooden flume. Vegetation and hazard trees within the limits of work area would be cleared. Hazardous rocks in the immediate vicinity of the work area would be either removed or stabilized in place.

- Foundation work includes either stabilization of the existing rock wall foundation or construction of a new foundation using mechanically stabilized earth (MSE) wall

    - In-place stabilization of the rock wall involves the placement of reinforced shotcrete facing over the exposed face of the rock wall and installation of rock anchors through the wall to secure it into competent bedrock.

    - Construction of an MSE wall involves the demolition of the existing rock wall, excavation to native competent material to accommodate a footing or leveling pad, installation of appropriate drains within the new foundation, rock anchors to stabilize sections of the embankment, and construction of the MSE wall.

- Construction of the new concrete conveyance structure includes new cast-in-place or precast flume that will be constructed atop the new foundation and tied in to the upstream and downstream canal sections with cast-in-place concrete transition structures. The new concrete conveyance will have metal walkways and handrails to facilitate future maintenance and inspection.

- Replacement of the spillway structure involves retrofitting the existing concrete spillway into the new concrete conveyance by tying in the upstream and downstream canal sections with cast-in-place concrete transition structures.

- Installation of permanent slope stabilization measures (e.g., slope/rock scaling, anchoring/pinning, rock fall protection) will be performed as necessary to stabilize areas upslope of the new structure. The Project would also incorporate nature-based solutions with the use of

bioengineered natural and manmade materials to stabilize disturbed areas within the Project footprint.

The Project would not change operation or capacity of the El Dorado Canal. No changes or temporary variances to FERC license requirements would be required to implement the Project.

2.5 Construction Equipment

The following equipment is anticipated to be used during Project activities:

- Bulldozer
- Backhoe
- Excavator
- Dump truck
- Transfer truck
- Crane
- Concrete Truck
- Concrete Pumper
- Roller
- Compactor
- Personal pick-up trucks
- Air compressor
- All-terrain vehicle
- Jack hammer
- Demolition hammer
- Rotary drill
- Generator
- Chainsaw
- Miscellaneous hand and power tools

2.6 Construction Schedule

Construction of the Project is scheduled to occur during the District's annual canal maintenance outage, which typically occurs from October through December each year. It is anticipated that the Project will be completed over the course of two annual outages, with work being suspended during the regular operational period of the canal (mid-December through September). The earliest work would begin is during the maintenance outage of 2026; however, work may not begin until a subsequent maintenance outage depending on funding, weather conditions, and/or operational considerations.

Construction would be completed by a 10-20 person construction crew and typically would occur 12-hours per day and 5 to 7-days per week, although limited construction activities could occur up to 24-hours per day if necessary.

2.7 Permitting and Agency Requirements

The District and its contractor would be required to comply with all terms and conditions of any permits, applicable plans, and agency approvals required for the Project. It is anticipated that the Project could be subject to the approvals, permits and plans identified in Table 2-1, below.

Table 2-1. Approvals/Permits/Plan Compliance

Responsible/Trustee Agency	Approvals/Permits
State Water Resources Control Board, Sacramento Region	Section 402, National Pollutant Discharge Elimination System (NPDES) Permit Compliance - Notice of Intent; Storm Water Pollution Prevention Plan (SWPPP)
California Office of Historic Preservation	National Historic Preservation Act Consultation
Project 184 Plans	Compliance with the following Project 184 Plans • Hazardous Substances Plan • Noxious Weed Prevention and Control Plan • Visual Resource Management Plan

3. INITIAL STUDY CHECKLIST

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this Project:

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

Determination

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.

December 18, 2024

Brian Deason
Environmental Resources Supervisor
El Dorado Irrigation District

Date

Evaluation of Environmental Impacts

This IS is structured to provide reviewers with a clear understanding of what environmental factors will and will not be subject to further review in the Draft EIR. Where it is determined that one or more significant impacts could result from implementation of the Project, further analysis would be provided in the Draft EIR and mitigation measures would be developed to reduce or eliminate the significant impacts when feasible. Where it is determined that there would be no impact or an impact would be less than significant for an environmental factor, the rationale to support those determinations is provided herein and no further analysis is provided in the Draft EIR. Therefore, this IS utilizes the following response headings to identify potential environmental effects:

1. **Impact to be analyzed in EIR:** This response is selected for an effect that will be subject to further analysis in the Draft EIR. In this IS, this response applies to effects that may be "Potentially Significant" or "Less Than Significant with Mitigation Incorporated" under CEQA criteria.

2. **No Additional Analysis Required:** This response is selected for effects that will not be analyzed in the Draft EIR. In this IS, this response applies when implementation of the Project would clearly result in "No Impact" or in a "Less Than Significant Impact" under CEQA criteria.

3.1 Aesthetics

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
I. Aesthetics. Except as provided in Public Resources Code Section 21099, would the project:		
a) Have a substantial adverse effect on a scenic vista?	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☒
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from 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?	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒

3.1.1 Environmental Setting

The Project area is east of the town of Pollock Pines in El Dorado County on private property and District land. The Project area is characterized by steep slopes and granite outcroppings on a northeast-facing slope, approximately 0.3-miles upslope from the South Fork American River. Most of the Project area and surrounding terrain is heavily forested, primarily with conifers, interspersed with deciduous trees and shrubs. Substantial portions of the surrounding area have standing dead trees that burned during the King Fire in 2014. The Project area is located immediately north of U.S. Highway 50, which is an officially designated State Scenic Highway. Land uses in the surrounding area include other infrastructure associated with Project 184, commercial development, undeveloped forest, and private land.

3.1.2 Discussion

a) No Impact. The Project would not have a substantial adverse effect on a scenic vista. No scenic vistas are located at or in proximity to the Project Site. Therefore, no impact would occur, and this environmental factor will not be analyzed in the EIR.

b) Less than Significant Impact. The Project would not substantially damage scenic resources within view of a state scenic highway. U.S. Highway 50 is identified by Caltrans as an Officially Designated State Scenic Highway (Caltrans 2019) and is located immediately south of the Project area. Motorists traveling on U.S. Highway 50 in the vicinity of the Project experience

momentary views of the South Fork American River canyon, granite outcroppings and peaks, and surrounding forested areas. Flume 48 and most of the Project area are not visible to motorists from U.S. Highway 50 due to terrain and densely forested areas located between U.S. Highway 50 and the Project area. Therefore, the Project would not substantially damage scenic resources within view of a state scenic highway and this environmental topic will not be analyzed in the EIR.

c) **Less than Significant Impact.** The Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings. El Dorado County General Plan identifies views of rivers, large water bodies, and views through scenic corridors as significant scenic resources (EDC 2004). U.S. Highway 50, which is located immediately south of the Project area, is a designated State Scenic Highway and would be considered a scenic corridor. Motorists traveling on U.S. Highway 50 in the vicinity of the Project experience brief views of the South Fork American River canyon, granite outcroppings and peaks, and surrounding forested areas. Flume 48 and most of the Project area are not visible to motorists due to terrain and densely forested areas located between U.S. Highway 50 and the Project area. One private residence is located within the Project area and adjacent to the Project site. This residence has full view of the South Fork American River Canyon and Flume 48. Occupants of this residence would experience varying degrees of temporary changes to views during construction. However, construction activities would only be temporary and are not anticipated to completely obstruct views. Following completion of the Project, the new concrete flume would resemble the overall appearance of the replaced wooden flume and would be is the same location as the previous structure. Additionally, the new conveyance structure and appurtenances would follow prescriptions in the Project 184 Visual Resources Management Plan (EID 2008) to help blend the infrastructure into the surrounding viewshed (e.g., use of gray materials against rock outcrop backgrounds, use of flat black non-reflective coatings on visible metal surfaces like handrails). Because the Project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, this environmental factor will not be analyzed in the Draft EIR.

d) **Less than Significant Impact.** The Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Project construction activities may occur on a 24-hour basis at various times, if necessary. However, nighttime lighting for these activities would be shielded and directed downward to reduce light spillover and would be limited to Project areas where the lighting would not present a substantial source of nighttime light to surrounding areas. No nighttime lighting would be required during the Project's operational phase. The new infrastructure associated with the Project would follow prescriptions in the Project 184 Visual Resources Management Plan (EID 2008) to help blend the infrastructure into the surrounding viewshed (e.g., use of gray materials against rock outcrop backgrounds, use of flat black non-reflective coatings on visible metal surfaces like handrails). These measures would ensure the Project would not result in a new source of substantial glare. Since the Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area, this environmental factor will not be analyzed in the EIR.

3.2 Agriculture and Forestry Resources

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
II. Agriculture and Forestry Resources.		
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to 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 refer to information compiled by the California Department of Forestry and Fire Protection 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:		
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?	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☒
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))?	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☒
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?	☐	☒

3.2.1 ENVIRONMENTAL SETTING

The Project area is located on private land and land owned by the District. The Project area is bordered by lands managed by the U.S. Forest Service to the north and U.S. Highway 50 to the south. Portions of the Project area that are not developed and lands adjacent to the Project area are forested, primarily with conifers, interspersed with deciduous trees and shrubs. Most work would be conducted within the existing Project 184 boundary. Some temporary staging and access routes may occur outside of the Project 184 boundary.

3.2.2 DISCUSSION

a) & e)

No Impact. According to the California Department of Conservation's Farmland Mapping and Monitoring Program map for El Dorado County, the Project area is not designated Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (DOC 2018). No active agricultural land uses are in or adjacent to the Project area. There are no agricultural uses at or near the Project area. Additionally, the Project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest uses. Therefore, no impact would occur and these environmental factors will not be analyzed in the Draft EIR.

b) **No Impact.** The Project area and adjacent land are not zoned for agricultural uses. No parcels in or adjacent to the Project area are under Williamson Act contracts (EDC 2018). Therefore, the Project would not conflict with existing zoning for agricultural uses or a Williamson Act contract and this environmental factor will not be analyzed in the Draft EIR.

c) & d)

No Impact. The Project area is zoned Residential Estate in the El Dorado County General Plan (EDC 2004). The Project site is located within an existing canal alignment on steep slopes in areas not typically used for commercial timber harvesting. Therefore, the Project would not conflict with existing zoning or cause rezoning of forest land or conversion of forest land to non-forest uses and these environmental factors will not be analyzed in the Draft EIR.

3.3 Air Quality

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☒	☐
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?	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☒

3.3.1 ENVIRONMENTAL SETTING

The Project area is located in the Mountain Counties Air Basin (MCAB), in the northern Sierra Nevada, close to or contiguous with the Nevada border, which covers an area of approximately 11,000 square miles. The terrain in El Dorado County transitions from rolling hills in the western portion of the county to steep mountainous terrain in the eastern half. The various changes in the terrain affect airflow patterns throughout the county that direct surface air flows, cause shallow vertical mixing, and create areas of high pollutant concentrations by hindering dispersion. Because of their proximity to the Sacramento Valley, the MCAB and El Dorado County are prone to receiving pollutant transported from more populated and heavy traffic areas (EDCAQMD 2002).

3.3.2 DISCUSSION

a) **Impacts to be analyzed in EIR.** The Project is located within the MCAB and the western portions of El Dorado County are located in a nonattainment area for ozone and particulate matter (EDCAQMD 2002). Analysis for this environmental factor will be provided in the Draft EIR.

b) **Impacts to be analyzed in EIR.** Construction activities associated with the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and reactive organic gases (ROG) off-gassing)

and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Analysis for this environmental factor will be provided in the Draft EIR.

c) **Impacts to be analyzed in EIR.** Project construction may result in emissions of diesel particulate matter (DPM) from heavy construction equipment and trucks working on-site. DPM is characterized as a Toxic Air Contaminants (TACs) by the State of California. TACs emissions may also be generated from other activities (welding, sand blasting application of architectural coatings, etc.) (CARB 2016). Analysis for this environmental factor will be provided in the Draft EIR.

d) **Less than Significant Impact.** The Project is located in a rural area with low-density residential development and undeveloped forested land. Construction and operation of the Project would not result in other emissions, such as those leading to odors that would adversely affect a substantial number of people. This environmental factor will not be analyzed in the Draft EIR.

3.4 Biological Resources

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
IV. Biological Resources. 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 Game or the U.S. Fish and Wildlife Service?	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	☐	☒
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?	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒
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?	☐	☒

3.4.1 ENVIRONMENTAL SETTING

A combination of desktop analysis and field studies were conducted to identify existing biological resources in the Project area and evaluate the potential to support sensitive biological resources and/or their habitat (e.g., special-status plant and animal species; sensitive natural communities; and jurisdictional wetlands and drainages). The methodology and results of the desktop analysis and field studies are included in Attachment A: Biological Resources Report (GEI 2022) and Attachment B: Wetland Assessment for Flume 48 (GEI 2023).

3.4.2 DISCUSSION

a) **Impacts to be analyzed in EIR.** The biological resources report (GEI 2022) prepared for the Project site determined that nine special-status plant species have the potential to occur at the Project site. However, no special-status plant species were observed during the floristic survey. Twenty-three special-status wildlife species were evaluated for potential occurrences. The report concluded that the habitat on the Project site is unsuitable or only marginally suitable for all special-status wildlife species that were evaluated except California spotted owl (Strix occidentalis occidentalis). Therefore, potential for many of the species to occur on the Project site is unlikely. Further discussion and analysis will be provided in the Draft EIR for the potential impacts that could occur as a result of the Project on special-status plants and wildlife species.

b) **No Impact.** The biological resources report concluded that no riparian habitat or other sensitive natural community is within the Project area. Therefore, the Project would not 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 (CDFW) or United States Fish and Wildlife Service (USFWS). Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

c) **No Impact.** The Project would not 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 as there are no jurisdictional or non-jurisdictional wetlands mapped or identified within the Project area (GEI 2023). No impact would occur and therefore this environmental factor will not be analyzed in the Draft EIR.

d) **Less than Significant Impact.** Project construction would temporarily impede wildlife use of the Project site. These temporary impediments would be localized and would not substantially affect wildlife movements. The Project would not result in any new impediment to wildlife movement and would not impede the use of any established or known native wildlife nursery sites. In addition, the Project would not substantially alter the path of a stream or drainage channel and would not interfere substantially with the movement of any native resident or migratory fish. Therefore, no significant impact would occur and this topic will not be analyzed in the Draft EIR.

e) **No Impact.** The Project is not located within an important biological corridor or rare plant preserve. The Project would not conflict with any local policies or ordinances protecting biological resources. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

f) **No Impact.** The Project area does not overlap with an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional, or State HCP. No impact would occur and therefore this environmental factor will not be analyzed in the Draft EIR.

3.5 Cultural Resources

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐
c) Disturb any human remains, including those interred outside of formal cemeteries?	☒	☐

3.5.1 Environmental Setting

Most of the Project area is located within the Area of Potential Effect (APE) of the Project 184 Historic Properties Management Plan (HPMP; EID 2003) and has been completely surveyed for cultural resources. No previously recorded prehistoric, archaeological, or Native American resources have previously been identified within the Project area. However, Flume 48 is located on a segment of rock wall that is a contributing element to the National Register of Historic Properties Discontinuous Rock Wall District (CA-ELD-511-H). The Project would require removal and/or stabilization of this rock wall. Additionally, abandoned segments of Highway 50 may also be present in the Project area. A cultural resource study/evaluation and finding of effect will be prepared for review by the State Historic Preservation Office (SHPO).

3.5.2 Discussion

a) & b)

Impacts to be analyzed in EIR. The potential for the Project to cause a substantial adverse change to an existing cultural or archaeological resource pursuant to Section 15064.5 will be evaluated in the Draft EIR.

c) **Impacts to be analyzed in EIR.** No indication or previous evidence from past studies of the El Dorado Canal has shown that the area has been used for human burials in the recent or distant past. While unlikely, there is some potential that earth disturbance associated with the Project could disturb or uncover previously unknown human remains. Therefore, this environmental factor will be provided in the Draft EIR.

3.6 Energy

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☐	☒
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☒

3.6.1 Environmental Setting

Flume 48 is a segment of the El Dorado Canal that is a component of the District's hydroelectric project, which is licensed by the Federal Energy Regulatory Commission (FERC) as Project 184. Project 184 consists of a series of dams, canals, flumes, siphons, a penstock, and a powerhouse to deliver water from the South Fork of the American River for power generation. The Project 184 FERC license allows the District to generate up to 21 megawatts of hydroelectric power for distribution (EID 2024).

3.6.2 Discussion

a) **Less than Significant Impact**. The Project would not substantially affect energy consumption or conservation. The Project would require a minimal amount of temporary electrical power for temporary construction lighting, power tools, and electronic equipment. Petroleum fuel consumed by the use of heavy equipment, generators, dump trucks, and other material haul trucks would be the primary energy resource expended over the course of Project construction. Workers would also likely travel to and from the Project area in gasoline-powered vehicles. Construction of the Project is scheduled to occur during the District's annual canal maintenance outage, which typically occurs from October through December each year. It is anticipated that the Project will be completed over the course of two annual outages, with work being suspended during the regular operational period of the canal (mid-December through September). The earliest work would begin is during the maintenance outage of 2026; however, work may not begin until a subsequent maintenance outage depending on funding, weather conditions, and/or operational considerations. Because work would occur during scheduled annual maintenance outages, power generation would not be affected. Once construction activities are completed, petroleum use from heavy equipment, generators, dump trucks, and other material haul trucks would cease. Continued operation of the water conveyance system would not increase energy consumption or increase inefficient energy use beyond the current energy consumption required for normal operation of the facility. Because the Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation, this environmental factor will not be analyzed in the Draft EIR.

b) **No Impact.** The Project would not include an increased need for additional energy resources or change the source of energy in use during regular operation of the water conveyance system. No impact would occur and this topic will not be analyzed in the EIR.

3.7 Geology and Soils

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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? (Refer to California Geological Survey Special Publication 42.)	☐	☒
ii) Strong seismic ground shaking?	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☒
iv) Landslides?	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒

3.7.1 Environmental Setting

El Dorado County does not contain any known Alquist-Priolo Earthquake Fault Zones, as listed by the California Geological Survey. According to the Fault Activity Map of California and Adjacent Areas, no active faults are located on the Project site (CGS 2023). The Project area is on a northeast-facing slope approximately 0.3 miles upslope from the South Fork American River. Elevations range from 3,840 to 3,900 feet above mean sea level. The majority is the Project occurs on previously disturbed land located on steep slopes.

3.7.2 DISCUSSION

a)

i) **No Impact.** As determined by the California Department of Conservation Division of Mines and Geology, there are no Alquist-Priolo fault zones within the west slope of El Dorado County (DOC 2023). Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

ii) **No Impact.** The potential for seismic ground shaking in the Project area would be considered remote since there are no fault zones within the west slope of El Dorado County (DOC 2023). Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

iii) **No Impact.** El Dorado County is considered an area with low potential for seismic activity. There are no landslide, liquefaction, or fault zones within the area (DOC 2023). Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

iv) **No Impact.** Project design and construction would be in accordance with Uniform Building Code standards, which take into account local conditions. Additionally, the Project construction and design will be prepared with recommendations from a geotechnical investigation prepared by a qualified engineering geologist. Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

b) **Impacts to be analyzed in EIR.** The Project would require grubbing existing vegetation, removing hazard trees, grading, installing mechanical stabilization and concrete at the flume, as well as road and slope stabilization. Disturbance of existing vegetation and soil could cause an increase in stormwater runoff, particularly during the winter months, which in turn could result in erosion and sedimentation. Due to the potential for an increase in soil erosion or the loss of topsoil, further analysis will be provided in the Draft EIR.

c) **Less than Significant Impact.** See Section a) i) above. This environmental factor will not be analyzed in the Draft EIR.

d) **No impact.** See Section a) iv) above. This environmental factor will not be analyzed in the Draft EIR.

e) **No impact.** The construction workers will be provided portable temporary restrooms and the Project would not require the installation of a wastewater treatment system. Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

f) **Less than Significant Impact.** Construction activities would primarily occur on previously disturbed land within the same alignment of existing conveyance facilities. Because ground disturbing activities in previously disturbed areas are not expected to result in accidental damage to or destruction of unique paleontological resources, this environmental factor will not be analyzed in the Draft EIR.

3.8 Greenhouse Gas Emissions

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐

3.8.1 ENVIRONMENTAL SETTING

Cumulative greenhouse gases (GHG) emissions are believed to contribute to an increased greenhouse effect and global climate change, which may result in sea level rise, changes in precipitation, habitat, temperature, wildfires, air pollution levels, and changes in the frequency and intensity of weather-related events. While criteria pollutants and toxic air contaminants are pollutants of regional and local concern; GHG are global pollutants. The primary land-use related GHGs are carbon dioxide (CO2), methane (CH4) and nitrous oxides (N2O). For the purposes of evaluating GHG emissions, the amount of energy that an individual pollutant will absorb over a given amount of time is expressed relative to the amount of energy trapped by an equivalent amount of CO2, or the CO2 equivalents (CO2e). The CO2e of a pollutant is known as its global warming potential. CO2 is the benchmark having a global warming potential of 1. Methane (CH4) has a global warming potential of 21 and thus would be considered equivalent to 21 times the GHG emissions contribution of an equivalent amount of CO2. Nitrous Oxide has a global warming potential of 310. Emissions are expressed in annual metric tons of CO2e units of measure (i.e., MTCO2e/yr). The three other main GHGs are Hydroflourocarbons, Perflourocarbons, and Sulfur Hexaflouride. While these compounds have significantly higher global warming potentials (ranging in the thousands), all three typically are not a concern in land-use development projects and are usually only used in specific industrial processes.

GHG Sources

The primary man-made source of CO2 is the burning of fossil fuels; the two largest sources being coal burning to produce electricity and petroleum burning in combustion engines. The primary sources of man-made CH4 are natural gas systems losses (during production, processing, storage, transmission and distribution), enteric fermentation (digestion from livestock) and landfill off-gassing. The primary source of man-made N2O is agricultural soil management (fertilizers), with fossil fuel combustion a very distant second. In El Dorado County, the primary source of GHG is fossil fuel combustion mainly in the transportation sector (estimated at 70% of countywide GHG emissions). A distant second are residential sources (approximately 20%), and commercial/industrial sources are third (approximately 7%). The remaining sources are waste/landfill (approximately 3%) and agricultural (<1%).

3.8.2 DISCUSSION

a) **Impacts to be analyzed in EIR.** The Draft EIR will assess whether the construction and operation of the Project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

b) **Impacts to be analyzed in EIR.** The Draft EIR will assess the potential for the construction and operation of the Project to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

3.9 Hazards and Hazardous Materials

	ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☒	☐
	b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☒	☐
	c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒
	d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒
	e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☒
	f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☒
	g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☒	☐

3.9.1 Environmental Setting

A search of publicly available databases maintained under Section 65962.5 of the Public Resources Code (i.e., the “Cortese List”), was conducted to determine whether any known hazardous material spills have occurred either at or within 0.25 mile of the Project site. These databases include EnviroStor, maintained by the California Department of Toxic Substances Control (DTSC 2019), and GeoTracker, maintained by the State Water Resources Control Board (SWRCB 2024). The results of these records searches indicated that no open cases are active within the Project site.

There are no schools within 0.25-miles of the Project area and there are no airports within 2 miles of the Project area.

According to the California Department of Forestry and Fire Protection (CALFIRE) fire hazard severity zone map, the Project site is in an area designated as very fire hazard severity (CALFIRE 2024). Portions of the Project that are not developed are forested, primarily with conifers, interspersed with deciduous trees and shrubs.

3.9.2 DISCUSSION

a) **Impacts to be analyzed in EIR.** During the Project construction phase hazardous materials such as fuel, oil and lubricants would likely be transported, used, and stored within the Project area. Off-site transportation of hazardous materials is regulated by the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). All construction waste materials would be disposed of in compliance with state and federal hazardous waste requirements and at appropriate facilities. The Project would also be required to implement measures to appropriately manage hazardous substances including requirements for storage, spill prevention and response and reporting procedures, and by implementing spill prevention measures included in a SWPPP and the Project 184 Hazardous Substances Plan (EID, 2008). Additional analysis will be provided in the Draft EIR due to the need for implementation of protection measures involving the management of hazardous materials.

b) **Impacts to be analyzed in EIR.** Project construction would require use of fuel, hydraulic oil, motor oil, and small amounts of solvents, coatings, glues, and adhesives all in which are hazardous materials. Due to the potential for accidental release of hazardous materials into the environment during Project construction, further analysis for this environmental factor will be provided in the Draft EIR.

c) **No Impact.** There are no schools within 0.25-miles of the Project site. Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

d) **No Impact.** The Project site is not within 0.25-miles of a hazardous materials site. Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

e) **No Impact.** There are no airports within two miles of the Project site and the Project area is not within an area covered by an airport land use plan. Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

f) **No Impact.** Access to the Project area would be from U.S. Highway 50. There is one private residence located within the Project area and adjacent to the Project site. The Project area is not in an area that is subject to an adopted emergency response or evacuation plan. Vehicles on access roads would not impede access for emergency response vehicles or evacuation access. Therefore, no impact would occur, and this environmental factor will not be analyzed in the EIR.

g) **Impacts to be analyzed in EIR.** The Project site is located in an area with steep topography that is heavily forested, primarily with conifers, interspersed with deciduous trees and shrubs. The Project site is in an area designated as very fire hazard severity (CALFIRE 2024). Unintended ignitions from Project-related construction equipment or tools could result in a

wildland fire. Additional analysis will be provided in the Draft EIR due to the high-risk potential for wildfire during construction of the Project.

3.10 Hydrology and Water Quality

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that there the project may impede sustainable groundwater management of the basin?	☐	☒
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) Result in substantial erosion or siltation on- or off-site;	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or	☒	☐
iv) Impede or redirect flood flows?	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒

3.10.1 Environmental Setting

The elevation at the Project site is approximately 3,840 – 3,900 feet above mean sea level. The climate is described as generally Mediterranean, with cool, wet winters and hot, dry summers. Precipitation occurs primarily in winter, generally between November and April, with almost no precipitation during the summer, except for occasional thunderstorms. The Project area is within the 850-square-mile South Fork American River watershed. Flume 48 is located upslope on steep terrain north of US 50 above the South Fork of the American River. The river flows from east to west, with numerous tributaries entering from both sides of the canyon. There are no other wetland or water features located in close proximity to the Project site.

The Project site is not located within a 100-year flood zone (FEMA 2008), and is not located in a dam inundation zone (EDC 2016).

3.10.2 DISCUSSION

a) **Impacts to be analyzed in the EIR.** The Project would require the use of fuel, hydraulic oil, motor oil, and small amounts of solvents, coatings, glues, and adhesives all in which are hazardous materials with potential to degrade surface or ground water quality resulting from unintentional spills during Project construction. Therefore, further analysis with regard to potential impacts to water quality will be provided in the Draft EIR.

b) **No Impact.** The Project would not involve extraction of groundwater and would not deplete groundwater supplies. The Project area is not located in a known groundwater recharge basin, and the existing facilities would not interfere substantially with groundwater recharge. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

c), i), ii), iii)

Impacts to be analyzed in the EIR. Construction of the Project has the potential to cause excessive runoff, erosion, or siltation off-site during construction activities (e.g. excavation, grading, equipment use, and hazard tree removal). Temporary construction has the potential to increase flows and cause impacts to the existing drainage patterns. Due to the potential for the Project to substantially impact existing drainage patterns further analysis will be provided in the Draft EIR.

d) **No Impact.** The Project site has been designated by FEMA within Flood Zone D, which is an area of undetermined flood hazards (FEMA 2008), however the Project site is located upslope of the South Fork of the American River on steep terrain where flooding would not be considered a hazard. The Project site is not located in an area subject to seiche or tsunami. The Project site does not pose a risk to release pollutants associated with inundation. Therefore, no impact would occur, and this environmental factor will not be analyzed in the Draft EIR.

e) **No Impact.** 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. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

3.11 Land Use and Planning

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
XI. Land Use and Planning. Would the project:		
a) Physically divide an established community?	☐	☒
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?	☐	☒

3.11.1 ENVIRONMENTAL SETTING

The Project area is located on private land and land owned by the District. The Project area is bordered by lands managed by the U.S. Forest Service to the north and U.S. Highway 50 to the south. Portions of the Project area that are not developed and lands adjacent to the Project area are forested, primarily with conifers, interspersed with deciduous trees and shrubs. Most work would be conducted within the existing Project 184 boundary. Some temporary staging and access routes may occur outside of the Project 184 boundary.

3.11.2 DISCUSSION

a) **No Impact.** The Project area contains one private residence; however, the Project area is not located within or adjacent to an established community. The Project involves replacement of existing facilities where the new facilities will be located in the same location as the existing facilities. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

b) **No Impact.** The Project would reconstruct an existing facility and increase protection of Flume 48 from potential damage due to future catastrophic wildfire. This activity would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

3.12 Mineral Resources

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☐	☒
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?	☐	☒

3.12.2 ENVIRONMENTAL SETTING

The Project area is not known to contain mineral resources and there no active mining claims or activities that are within or adjacent to the Project area (EDC 2004 and 2017). The Project involves replacement of existing facilities associated with Project 184. The Project area is on private property and land owned by the District with Project activities occurring primarily within the Project 184 boundary.

3.12.3 DISCUSSION

a) & b)

No Impact. Mineral resources are not known to exist in or near the Project site, no mining operations occur within the Project site, and the Project site does not contain a locally important mineral resource recovery site. No impact would occur and these environmental factors will not be analyzed in the Draft EIR.

3.13 Noise

ENVIRONMENTAL ISSUES		Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
XIII.	***Noise. Would the project result in:***		
	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 applicable standards of other agencies?	☒	☐
	b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐
	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?	☐	☒

3.13.1 Environmental Setting

The Project area is located on private land and land owned by the District. The Project area is bordered by lands managed by the U.S. Forest Service to the north and U.S. Highway 50 to the south. Portions of the Project area that are not developed and lands adjacent to the Project area are forested. There is one private residence located within the Project area and adjacent to the Project site.

3.13.2 Discussion

a) **Impacts to be analyzed in the EIR.** The El Dorado County General Plan identifies noise level limits for sensitive land uses (i.e., schools, hospitals, churches, and residential). The non-transportation noise source maximum level identified for these receptors is 75 decibels (dB), and the highest hourly average noise level (L_{eq}) is 55 dB (EDC 2004). The nearest noise sensitive receptor is the private residence located within the Project area. Project construction activities may result in temporary noise level increases from operation of heavy construction equipment that would vary throughout a typical workday, depending on the equipment being used, operations being performed and proximity to a noise sensitive receptor. Therefore, the potential for Project activities to generate noise in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies, will be further analyzed in the Draft EIR.

b) **Impacts to be analyzed in the EIR.** The vibration generated by heavy equipment may cause temporary groundborne vibration or noise levels that may result in a potentially significant impact on sensitive noise receptors. Therefore, the potential for Project activities to result in exposure of individuals to, or generation of, excessive groundborne noise or vibration levels will be further analyzed in the Draft EIR.

c) **No Impact.** The Project area is not in the vicinity of a private airstrip or part of an airport land use plan and the Project would not expose people within the area to excessive noise levels. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

3.14 Population and Housing

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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)?	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☒

3.14.1 Environmental Setting

The Project area is located on private land and land owned by the District. The Project area is bordered by lands managed by the U.S. Forest Service to the north and U.S. Highway 50 to the south. Portions of the Project area that are not developed and lands adjacent to the Project area are forested. There is one private residence located within the Project area and adjacent to the Project site.

3.14.2 Discussion

a) **No Impact.** The Project would not include construction of new homes or businesses that would directly induce population growth or extension of infrastructure that would indirectly induce population growth. The Project would replace an existing wooden flume with a concrete conveyance in order to mitigate the potential loss of the structure as a result of catastrophic wildfire. The Project would not change the authorized capacity of the water conveyance system or result in changes in its operation. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

b) **Less than Significant.** The Project would not permanently displace substantial numbers of people or housing. There is one private residence that is located within the Project area and the District would obtain landowner authorization for any work to occur on their property. Any inconveniences associated with the Project would be temporary and limited to periods of construction. Therefore, this impact would be less than significant and this environmental factor will not be analyzed in the Draft EIR.

3.15 Public Services

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☐	☒
Police protection?	☐	☒
Schools?	☐	☒
Parks?	☐	☒
Other public facilities?	☐	☒

3.15.1 Environmental Setting

Fire Protection

According to the CALFIRE fire hazard severity zone map, the Project site is in an area designated as very fire hazard severity (CALFIRE 2024). Portions of the Project that are not developed are forested, primarily with conifers, interspersed with deciduous trees and shrubs.

Police Protection

Local law enforcement is provided to the Project area by the El Dorado County Sheriff's Department with headquarters located in Placerville and also substations located in South Lake Tahoe, El Dorado Hills, and Georgetown. The nearest substation is in Pollock Pines, approximately 8-miles west of the Project area (EDCSO, 2021).

Schools

The Project area is located in a rural area east of Pollock Pines and west of Fresh Pond. There are no schools located in the vicinity of the Project area.

Parks

The Project area is located in a rural area east of Pollock Pines and west of Fresh Pond. There are no parks located in the vicinity of the Project site.

OTHER

The Project area is located in a rural area east of Pollock Pines and west of Fresh Pond. Other public services (libraries, churches, community centers) are not located in close proximity to the Project.

3.15.2 DISCUSSION

a) **No Impact.** The Project involves replacement of an existing wooden water conveyance structure, rather than construction of new facilities. The Project would not result in additional population in the area and thus would not require new or expanded facilities to support adequate fire or police protection, schools, parks or other public facilities. Therefore, no impact would occur and these environmental factors will not be analyzed in the Draft EIR.

3.16 Recreation

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
XVI. Recreation.		
a) Would the project 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?	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☒

3.16.1 Environmental Setting

The Project area is east of the town of Pollock Pines in El Dorado County. The Pollock Pines community region and surrounding area provide various opportunities for outdoor recreation with activities ranging from hiking, skiing, to aquatic recreation on rivers and lakes (EDC 2004). However, there is no public access to the Project area and public access to the canal facilities is not encouraged due to hazardous conditions associated with flowing water through the various conveyances (e.g., flumes, canals, siphons, tunnels) managed by the District.

3.16.2 Discussion

a) **No Impact.** The Project would not construct new homes or businesses, increase capacity of existing facilities, or extend public roads or other public infrastructure into areas where these facilities do not currently exist. As such, the Project would not induce population growth, and consequently would not increase the use of existing neighborhood parks or recreational facilities. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

b) **No Impact.** The Project does not include recreational facilities and would not result in population growth that would require the construction or expansion of recreational facilities. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

3.17 Transportation

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☒	☐
d) Result in inadequate emergency access?	☒	☐

3.17.1 Environmental Setting

The Project area is located immediately north of U.S. Highway 50. Vehicle access to the Project site would be from U.S. Highway 50 to an existing driveway and access road.

3.17.2 Discussion

a) **Impacts to be analyzed in the EIR.** Traffic generation associated with the Project would involve equipment/materials hauling and worker commute trips to and from the Project area. These trips generally would occur on U.S. Highway 50. Increased construction traffic would be temporary, would occur seasonally over a two-year period between approximately August to the end of December. Typical traffic patterns during construction of the Project could occur 12-hours per day and 5- to 7-days per week, although construction activities could occur up to 24-hours a day if required. Potential traffic increases would be limited to temporary construction-related activities. However, because ingress and egress of construction traffic associated with the Project would be directly from U.S. Highway 50, these activities could temporarily affect the performance of the local circulation system due to traffic delays and roadway obstructions, which could conflict with a program, plan, ordinance or policy addressing this system. Therefore, further analysis on this environmental factor will be provided in the Draft EIR.

b) **Less than Significant Impact.** Project construction would be temporary and would not result in a substantial increase in traffic that could degrade any roadway or intersection. No increase in traffic would occur after Project construction is completed. The Project is not anticipated to cause an increase in traffic that would be substantial in relation to the existing traffic load and capacity of the roadways. Therefore, no significant impact would occur and this environmental factor will not be analyzed in the Draft EIR.

c) **Impacts to be analyzed in the EIR.** The Project would not result in any permanent changes to public roadways and would not substantially increase hazards due to incompatible uses. However, because ingress and egress of construction traffic associated with the Project would be directly from U.S. Highway 50, these activities could temporarily cause hazards to motorists on U.S. Highway 50. Therefore, this environmental factor will be further analyzed in the Draft EIR.

d) **Impacts to be analyzed in the EIR.** Emergency access to the Project area could be temporarily affected by activities associated with the Project. Slow-moving trucks entering and exiting the Project site from U.S. Highway 50 could delay the movement of emergency vehicles between U.S. Highway 50 and the Project site. Therefore, this environmental factor will be further analyzed in the Draft EIR.

3.18 Tribal Cultural Resources

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact)
XVIII. Tribal Cultural Resources. Would the project:		
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geologically 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:		
i) Listed or eligible for listed in the California Register of Historical Resources, or in local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☒	☐
ii) 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?	☒	☐

3.18.1 Environmental Setting

The presence of tribal cultural resources (TCRs) are generally identified through consultation with California Native American Tribes. Under AB 52 a TCR must have tangible, geographically defined properties that could be impacted by implementation of a project. Tribal cultural resources are defined in CEQA as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe, which may include non-unique archaeological resources previously subject to limited review under CEQA. In accordance with AB 52, concurrent with the release of this NOP/IS, the District will send written notices of the Project to Tribes that have requested notification from the District. The District will also provide notification to other tribal groups based on a contact list provided by the Native American Heritage Commission (NAHC).

3.18.2 Discussion

a) i) & ii)

Impacts to be analyzed in EIR. No indication or previous evidence from past studies of the El Dorado Canal has shown that TCRs are known to be present in the Project area in the recent or

distant past. While unlikely, there is some potential that earth disturbance associated with the Project could disturb or uncover previously unknown TCRs. Due to the potential for the Project to disturb unknown TCRs, further analysis on this topic will be provided in the Draft EIR.

3.19 Utilities and Service Systems

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No 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?	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☒
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?	☐	☒
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?	☐	☒
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☒

3.19.1 Environmental Setting

The Project site is within the boundaries of the District's Project 184, which encompasses the El Dorado Canal and associated facilities that are operated for safe and reliable delivery of water to downstream users and for hydroelectric power generation to meet the water and energy demands in El Dorado County. No water or sewer service is provided within the Project site. Drainage resulting from stormwater in the Project area is by natural drainages or roadside ditches.

3.19.2 Discussion

a) **No Impact.** The Project would not include new development that would require relocation or construction of new or expanded municipal wastewater treatment, storm water drainage, natural gas, or telecommunications facilities. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

b) **No Impact.** The Project would not include new development that would increase water supply demand. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

c) **No Impact.** The Project does not include elements that would generate wastewater flows and therefore would not exceed a wastewater treatment provider's capacity. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

d) **No Impact.** The existing wooden flume and its substructure would be demolished and disposed at an off-site disposal area with permitted capacity to except construction debris, in accordance with applicable federal, state, and local regulations. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

e) **No Impact.** As discussed in item d), disposal of the wooden flume structure, or waste associated with paint, solvent, or other chemical containers that potentially contained hazardous materials associated with the Project would be disposed of in accordance with applicable federal, state, and local regulations. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

3.20 Wildfire

ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact
XX. Wildfire. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:		
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☒
b) 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?	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☒

3.20.1 Environmental Setting

According to the CALFIRE fire hazard severity zone map, the Project site is in an area designated as very fire hazard severity (CALFIRE 2024). Portions of the Project that are not developed are forested, primarily with conifers, interspersed with deciduous trees and shrubs.

3.20.2 Discussion

a) **No Impact.** The Project area is not in an area that is subject to an adopted emergency response or evacuation plan. Therefore, this environmental factor will not be analyzed in the Draft EIR.

b) **Impacts to be analyzed in EIR.** The Project area is located in an area designated as very fire hazard severity (CALFIRE 2024). During construction, heavy equipment and on-site fueling could pose a risk for wildfire, from potential ignition sources (e.g., internal combustion engines, gasoline-powered tools, and equipment) that could produce a spark, fire, or flame. However, once the Project work is completed, the risk to people from wildland fires would remain the same as the pre-Project risk conditions. Due to the surrounding topography and potential for wildfire causes associated with Project construction, additional analysis of this topic will be provided in the Draft EIR.

c) **No Impact.** The Project would not require installation of fuel breaks, emergency water sources, power lines, or other utilities that could exacerbate fire risk. No impact would occur and this environmental factor will not be analyzed in the Draft EIR.

d) **No Impact.** The Project will not significantly change the slope of the Project site. Project implementation would not expose people or structures to significant risks because of runoff, post-fire slope instability, or changes to drainage patterns. Therefore, no impact would occur and this environmental factor will not be analyzed in the Draft EIR.

3.21 Mandatory Findings of Significance

	ENVIRONMENTAL ISSUES	Impacts to be Analyzed in EIR	No Additional Analysis Required (Less Than Significant Impact/No Impact
XXI.	***Mandatory Findings of Significance.***		
	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, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐
	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.)	☒	☐
	c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐

Authority: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.
Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083, 21083.3, 21083.5, 21093, 21094, 21095, 21151; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296*; Leonoff v. Monterey Board of Supervisors* (1990) 222 Cal.App.3d 1337; *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 DISCUSSION

a) **Impacts to be analyzed in the EIR.** This NOP/IS provides an analysis of potential environmental impacts of the Project, including the potential to degrade the quality of the environment, impact fish, wildlife, or plant species, or harm important examples of major historical periods. As demonstrated in the discussions above, the Project has the potential to result in significant biological and cultural resource impacts, and substantially degrade the quality of the environment. The Draft EIR will evaluate the potential for the Project to result in significant biological and cultural resource impacts, and substantially degrade the quality of the environment or provide adequate mitigation measure to avoid, minimize, or compensate for potential impacts.

b) **Impacts to be analyzed in the EIR.** Cumulative impacts are defined in Section 15355 of the CEQA Guidelines as *two or more individual effects, which when considered together, would be considerable or which would compound or increase other environmental impacts.* The EIR will evaluate whether the potential impacts of the Project in combination with other current projects in the region and construction activities near the Project area could be cumulatively considerable.

c) **Impacts to be analyzed in the EIR.** As suggested in the discussions for each environmental topic above, the Project has the potential to result in significant impacts. The EIR will evaluate whether any of those impacts have the potential to result in substantial adverse effects on human beings either directly or indirectly.

4. REFERENCES

4.1 Aesthetics

Caltrans 2019. California Department of Transportation List of *Eligible and Officially Designated Scenic Highways (XLSX)*. Available online: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways.

EDC 2004. *County of El Dorado General Plan, Land Use Element*. Available online: https://www.edcgov.us/Government/Planning/pages/Adopted_General_Plan.aspx.

EID 2008. *Project 184 Visual Resources Management Plan*. Available online: https://www.eid.org/our-services/hydroelectric/project-184/project-184-document-library.

4.2 Agriculture and Forestry Resources

DOC 2018. California Department of Conservation *California Important Farmland Finder*. Available online: https://maps.conservation.ca.gov/DLRP/CIFF/.

EDC 2018. *El Dorado County Williamson Act Lands 2018. Available online*: https://edcapps.edcgov.us/maplibrary/html/ImageFiles/EDC2018_WIlmsnAct.pdf.

EDC 2004. *County of El Dorado General Plan. Land Use Element*. Available online: https://www.edcgov.us/Government/Planning/pages/Adopted_General_Plan.aspx.

4.3 Air Quality

CARB 2016. California Air Resources Board *Ambient Air Quality Standards*. Available online: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf.

EDCAQMD 2002. El Dorado Air Quality Management District *CEQA Guide – Chapter 3, Thresholds of Significance*. Available online: https://www.edcgov.us/Government/AirQualityManagement/documents/Chapter3_RF6.pdf.

4.4 Biological Resources

GEI 2022. Biological Resources Survey Report for Flume 48 Project. Prepared by GEI Consultants, Inc for EID. December 16, 2022. Included as Attachment A.

GEI 2023. Wetland Assessment for Flume 48 Project. Prepared by GEI Consultants, Inc for EID. July 11, 2023. Included as Attachment B.

4.5 Cultural Resources

EID 2003. Project 184 Historic Properties Management Plan. Prepared by Far Western for EID. July 2003.

4.6 Energy

EID 2024. El Dorado Irrigation District *Project 184*. Available online: https://www.eid.org/our-services/hydroelectric/project-184.

4.7 Geology and Soils

California Department of Conservation Mines and Geology (DOC). 2023. California Geology. Available online: https://maps.conservation.ca.gov/mineralresources/.

California Geological Survey (CGS). 2023. *Alquist-Priolo Earthquake Fault Zone Maps*. Available online: https://maps.conservation.ca.gov/cgs/EQZApp/app/.

4.8 Greenhouse Gas Emissions

None

4.9 Hazards and Hazardous Materials

CALFIRE 2024. California Department of Forestry and Fire Protection *Fire Hazard Severity Zones in State Responsibility Area September 29 2023 - Effective April 1 2024.* Available online: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.

DTSC 2019. California Department of Toxic Substances Control *EnviroStor*. Available online: https://www.envirostor.dtsc.ca.gov/public/.

EID 2008. El Dorado Irrigation District *Project 184 Hazardous Substances Plan*. Available online: https://www.eid.org/our-services/hydroelectric/project-184/project-184-document-library.

SWRCB 2024. State Water Resources Control Board *GeoTracker.* Available online: https://geotracker.waterboards.ca.gov/.

4.10 Hydrology and Water Quality

FEMA 2008. Federal Emergency Management Agency *Flood Insurance Rate Maps*. Available online: https://msc.fema.gov/portal/search?AddressQuery=camino%20ca#searchresultsanchor.

EDC 2016. El Dorado County *Flood and Inundation Areas*. Available online: https://edcapps.edcgov.us/maplibrary/html/ImageFiles/gi0072757a.pdf.

4.11 Land Use and Planning

None.

4.12 Mineral Resources

EDC 2004 *El Dorado County General Plan. Figure CO-1: Important Mineral Resource Areas.* Available online: https://www.edcgov.us/government/planning/adoptedgeneralplan/figures/documents/CO-1.pdf.

EDC 2017. *El Dorado County General Plan—Conservation and Open Space Element.* Available online: https://www.edcgov.us/Government/planning/Pages/adopted_general_plan.aspx.

4.13 Noise

EDC 2017. *El Dorado County General Plan—Noise Element*. Available online: https://www.edcgov.us/Government/planning/Pages/adopted_general_plan.aspx.

4.14 Population and Housing

None

4.15 Public Services

CALFIRE 2024. California Department of Forestry and Fire Protection *El Dorado County Fire Hazard Severity Zones in SRA September 29 2023 - Effective April 1 2024.* Available at: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.

EDCSO 2021. El Dorado County Sheriff's Department *El Dorado County Sheriff's Office Annual Report*. Available at: https://www.edcgov.us/Government/sheriff.

4.16 Recreation

EDC 2004. *County of El Dorado General Plan*. Available online: https://www.edcgov.us/Government/Planning/pages/Adopted_General_Plan.aspx.

4.17 Transportation

None.

4.18 Tribal Cultural Resources

None

4.19 Utilities and Service Systems

None

4.20 Wildfire

CALFIRE *2024.* California Department of Forestry and Fire Protection *El Dorado County Fire Hazard Severity Zones in SRA September 29 2023 - Effective April 1 2024.* Available at: https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.

4.21 Mandatory Findings

None

ATTACHMENT A

BIOLOGICAL RESOURCE ASSESSMENT

December 16, 2022

GEI Consultants

Geotechnical
Environmental
Water Resources
Ecological

Michael Baron
Environmental Review Analyst
El Dorado Irrigation District
2890 Mosquito Road
Placerville, CA 95667

Subject: Biological Resources Survey Report for the Flume 48 Project

Dear Mr. Baron:

The El Dorado Irrigation District (District) is proposing to replace the existing flume structure at Flume 48 along the El Dorado Canal. The Flume 48 project is located in central El Dorado County, north of U.S. Highway 50 and west of Fresh Pond (**Attachment A, Figure 1**). The proposed project is situated south of the South Fork American River at elevations ranging from approximately 3,840–3,900 feet (**Attachment A, Figure 2**). The project site includes the flume, staging area, access road and buffer zone of approximately 50 feet downslope of the flume (**Attachment A, Figure 3**). GEI Consultants, Inc. (GEI) biologists conducted a biological resource survey on the project site on June 21, 2022. This report describes the methods and results of these surveys and the potential for implementation of the proposed project to impact sensitive biological resources.

Pre-field Investigation and Field Survey

Before conducting the field survey, reviews of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2022a), California Native Plant Society (CNPS) online Inventory of Rare and Endangered Vascular Plants of California (CNPS 2022a), U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) website (USFWS 2022a), U.S. Forest Service (USFS) Region 5 Sensitive Plant Species (USFS 2013a) and Sensitive Animal Species Lists (USFS 2013b) were conducted. These reviews were centered on the Pollock Pines U.S. Geological Survey (USGS) 7.5-minute quadrangle and included the eight surrounding quadrangles. Species lists generated during the reviews are provided in **Attachment B**.

Aerial imagery on Google Earth®, the USGS Pollock Pines 7.5-minute quadrangles, USFWS National Wetlands Inventory (USFWS 2022b) 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) were also reviewed before and after conducting the field survey.

A floristic survey of the project site was conducted by GEI botanist Lasthenia Michele Lee and biologist Devin Barry on June 21, 2022. This floristic survey included pedestrian visual surveys within the boundaries of the project site for target special-status plant species, mapping vegetation and habitat types, an evaluation of habitat suitability for special-status plants and recording plant species that were observed.

During the June 21, 2022 survey, biologist Devin Barry also conducted constraints-level mapping of aquatic resources and an evaluation of habitat suitability on or adjacent to the project site for special-status wildlife species, and documented observations of wildlife species. Photographs representative of the project sites are provided in **Attachment C**.

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Environmental Setting

Elevation at the 3.8-acre project site is approximately 3,840 to 3,900 feet above mean sea level. The access road and staging area of the project site are located immediately north of CA-50. The staging area is a flat opening in the tree canopy. The flume located in the northern portion of the project site slopes gradually east to west, with north-facing slopes on both sides of the flume.

Habitat and Land Cover Types

The project site is composed primarily of Douglas fir (*Pseudotsuga menziesii*) forest (**Attachment A, Figure 3**). This habitat is characteristic of mixed coniferous forests that occur in El Dorado County between 2,000 and 6,000 feet (CNPS 2022b). Dominant tree species in this forest type in the project site include Douglas fir, black oak (*Quercus kelloggii*), and incense cedar (*Calocedrus decurrens*). Canyon live oak (*Quercus chrysolepis*) and Ponderosa pine (*Pinus ponderosa*) are occasional species that co-occur with big-leaf maple (*Acer macrophyllum*). Understory species density ranged from sparse due to the contiguous tree canopy that limits light penetration to denser areas in openings and along the forest edges bordering grassland and ruderal habitats. In addition, vegetation immediately adjacent to the flume appears disturbed and managed to reduce vegetation cover and supports more ruderal, non-native plant species. Understory species and species observed in small canopy openings along the access road and staging area include wax leaf raspberry (*Rubus glaucifolius*), feathery false lily of the valley (*Maianthemum racemosum*), western thimbleberry (*Rubus parviflora*), blue wildrye (*Elymus glaucus* ssp. *glaucus*), Bolander's blue grass (*Poa bolanderi*), tincture plant (*Collinsia tinctoria*), variable-leaf collomia (*Collomia heterophylla*), violet draperia (*Draperia systyla*), and chickweed (*Stellaria media*).

Two small ephemeral drainages were identified within the project site. The two drainages flow from rocky slopes north of the Eldorado Ditch below the elevated flume, and then south towards the South Fork American River (**Attachment A, Figure 3)**. At the time of the field survey, the drainages exhibited some evidence of ephemeral water flow but lacked vegetation and riparian trees species in the overstory.

One small intermittent drainage was identified north of the Eldorado Ditch below the elevated flume (**Attachment C**). Surface water originated from below the flume and trickled over concrete abutments. The area supported riparian species such as arroyo willow (*Salix lasiolepis.*) and alumroot (*Heuchera micrantha*) in proximity to the drainage.

Soil Types

Soils in the survey area are classified by the Natural Resources Conservation Service was entirely Josephine very rocky loam derived from metamorphic rock, schist or slate parent material (NRCS 2019). Josephine silt loam soils are sometimes associated with known occurrences of Pleasant valley mariposa-lily (*Calochortus clavatus* ssp. *avius*), a California Rare Plant Rank (CRPR) 1B.2 species. Soils in the project site are not serpentinite or volcanic soils that could support special-status plants endemic to these soil types.

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 plant and animal taxa (taxonomic categories or populations) that fall into any of the following categories:

- taxa officially listed by the Federal government or the State of California as endangered, threatened, or rare;
- candidate taxa for Federal or State listing as endangered or threatened;
- taxa proposed for Federal or State listing as endangered or threatened;
- taxa that meet the criteria for listing;
- taxa considered sensitive by USFS
- wildlife identified by CDFW as species of special concern and plants considered by CDFW to be "rare, threatened, or endangered in California;" (CRPR 1A through 2B)
- species listed as Fully Protected under the FGC; or
- taxa 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 CNDDB, 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 CNDDB occurrences of plant and wildlife species that meet the definition of special-status species described above and have been documented within 5 miles of the project site. Results of the CNDDB search yielded occurrences of a total of 59 special-status plants and animals within the USGS 9-quadrangle search area; only six of these species have been documented within 5 miles of the project site, and many of the occurrences are historical (**Attachment B**). (Note: Not all species tracked in the CNDDB and included in the search results in Attachment B meet the definition of a special-status species described above).

Special-status Plants

Table 1 provides information on special-status plants that were evaluated for their potential to occur on the project site based on the CNDDB query, CNPS Inventory of Rare and Endangered Vascular Plants of California, and USFS list of Sensitive Plant Species for the El Dorado National Forest. A total of 36

special-status plant species were evaluated. Nine species, including Pleasant Valley mariposa-lily (*Calochortus clavatus* var. *avius*), could potentially occur on the project site. There is potentially limited suitable habitat for these species on the project site. Several of these nine species occur in wetland habitats, and the site lacks natural wetland habitats. As described above, there are areas where moisture from water leaking from the flume creates small patches with hydrophytic plants. The June 21, 2022, survey was conducted during the blooming period of all nine of these species and no special-status plants were observed during these surveys.

Pleasant Valley mariposa-lily was determined to have the potential to occur on the project site prior to conducting the June 21, 2022, floristic survey. A reference population for this species approximately 8 miles west along the El Dorado Powerhouse Penstock was visited on June 16, 2022. Most of these 100 individual plants were blooming were readily identifiable and within view of the survey area. Only a few individual plants contained fruit at the time of the survey.

Although the June 21, 2022, floristic survey was conducted during the blooming period of the nine plant species with a potential to occur on the project site, no special-status plant species were observed during this floristic survey.

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[2]
		Federal	State		
Three-bracted onion *Allium tribracteatum*	March–May	FSS	1B.2	Volcanic slopes in chaparral and lower and upper montane forests. Elevation: 3,610-9,845 feet	No potential to occur; no volcanic slopes present on the project site.
Nissenan manzanita *Arctostaphylos nissenana*	February–March	FSS	1B.2	Open, rocky shale ridges in closed-cone coniferous forest and chaparral. Elevation: 1,475- 5,410 feet	No potential to occur; no suitable habitat is present on the project site.
Big-scale balsamroot *Balsamorhiza macrolepis*	March–June	FSS	1B.2	Chaparral, cismontane woodland, valley and foothill grassland; sometimes on serpentinite. Elevation: below 4,500 feet	Could occur; grassland and woodland limited on project site.
Upswept moonwort *Botrychium ascendens*	July–August	FSS	2B.3	Lower montane coniferous forest, meadows and seeps; grassy fields, coniferous woods near springs and creeks. Elevation: 6,900- 15,000 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range.
Scalloped moonwort *Botrychium crenulatum*	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. Elevation: 4,900 – 11,800 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range.

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[2]
		Federal	State		
Common moonwort *Botrychium lunaria*	August	FSS	–	Meadows and seeps, subalpine coniferous forest, upper montane coniferous forest. Elevation: 6,500 – 11,200 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Mingan moonwort *Botrychium minganense*	July–September	FSS	2B.2	Open areas in bogs, fens, meadows, seeps, marshes; stream margins in lower and upper montane coniferous forest; yellow pine forest. Elevation: 4,920- 10,100 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Western goblin *Botrychium montanum*	July–September	FSS	2B.1	Creek banks in old growth forest in lower and upper montane coniferous forest. Elevation: 4,920- 10,100 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Pardox moonwort *Botrychium paradoxum*	August	FSS	2B.1	Moist meadows and shady slopes in lower and upper montane coniferous forest. Elevation: above 13,000 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Stalked moonwort *Botrychium pedunculosum*	August	FSS	2B.1	Moist or dry meadows, springs, stream terraces, in lower and upper montane coniferous forest of Tuolumne County. Elevation: 3,000- 6,300 feet.	No potential to occur; no suitable habitat present on project site
Bolander's bruchia *Bruchia bolanderi*	NA	FSS	4.2	Mesic soils in upper montane coniferous forest. Elevation: 5,000 – 6,640 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Pleasant valley mariposa-lily *Calochortus clavatus* var. *avius*	May-July	FSS	1B.2	Open areas in pine-oak habitats in lower montane coniferous forest; sometimes on Josephine silt loam and volcanic soils	Could occur; marginally suitable habitat is present on the project site; suitable Josephine soils present on the project site; dense tree canopy limits open areas; nearby documented occurrences within 5 miles of the project site.
Flagella-like atractylocarpus *Campylopodiella stenocarpa*	NA	–	2B.2	Seeping metamorphic rock. Elevation: 330 – 1,640 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range

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[2]
		Federal	State		
Sierra arching sedge *Carex cyrtostachya*	May–August	–	1B.2	Mesic sites in lower montane coniferous forest, riparian forest, marshes and swamps, meadows and seeps. Elevation: 2,000- 4,460	Could occur; project site lacks natural wetland habitats; marginally suitable habitat present in north-facing upper slopes that border the flume and that are moist from flume leaks, species not observed during June 2022 survey.
Red Hills soaproot *Chlorogalum grandiflorum*	March–June	–	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest on serpentinite and gabbroic soils. Elevation: 980- 1,640 feet.	No potential to occur; serpentine and gabbroic soils are not present on project site and project site is outside the species' known elevation range
Mountain lady's slipper *Cypripedium montanum*	March–August	FSS	4.2	Moist areas, dry slopes, cismontane woodland, broadleaf forest, lower montane coniferous forest. Elevation: 1,600- 6,900 feet.	Could occur; potential suitable habitat present in undisturbed areas of the Study Area, but many areas adjacent to flume are disturbed, species not observed during June 2022 survey
Tahoe draba *Draba asterophora* var. *asterophora*	July–August	FSS	1B.2	Alpine boulder rock fields and subalpine coniferous forest. Elevation: above 8,500 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Cup Lake draba *Draba asterophora* var. *macrocarpa*	July–August	FSS	1B.1	Rocky substrates in subalpine coniferous forest. Elevation: above 8,500 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Jack's wild buckwheat *Eriogonum luteolum* var. *saltuarium*	July–September	FSS	1B.2	Granitic sand in Great Basin scrub and upper montane coniferous forest. Elevation: 5,575- 7,785	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Tripod buckwheat *Eriogonum tripodum*	May–July	FSS	4.2	Chaparral and cismontane woodland in serpentinite soils. Elevation: 655-5,250 feet	No potential to occur; serpentinite soils are not present on project site
Blandow's bog moss *Helodium blandowii*	NA	FSS	–	Montane bogs, fens, mires, and seeps. Elevation: 5,000-6,000 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Parry's horkelia *Horkelia parryi*	April–September	FSS	1B.2	Chaparral and cismontane woodland. Elevation: 260-2,952	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range

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[2]
		Federal	State		
Finger rush *Juncus digitatus*	May–June	–	1B.1	Openings in cismontane woodland, lower montane coniferous forest, and vernal pools. Elevation: 2,130-2,625 feet	No potential to occur; no natural wetlands present on project site for this obligate wetland species and project site is outside the species' known elevation range
Hutchison's lewisia *Lewisia kelloggii* ssp. *hutchisonii*	May–August	FSS	3.2	Upper montane coniferous forest in openings, often on ridgetops composed of slate or rhyolite tuff Elevation: 4,915- 6,910 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Kellogg's lewisia *Lewisia kelloggii* ssp. *kelloggii*	May–August	FSS	3.2	Upper montane coniferous forest in openings, often on ridgetops composed of slate or rhyolite tuff. Elevation: 5,100-7,000 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Long-petaled lewisia *Lewisia longipetala*	July–August	FSS	1B.3	Alpine boulder and rock fields in subalpine coniferous forest in mesic substrates Elevation: above 8,000 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range
Saw-toothed lewisia *Lewisia serrata*	May–June	FSS	1B.1	North-facing, mostly shaded, moss-covered and metamorphic rock cliffs and ledges in steep gorges along relatively permanent streams in broadleafed upland forest, lower montane coniferous forest, riparian forest. Known from El Dorado and Placer counties. Elevation: 2,525-4,710 feet	Could occur; site lacks natural seeps and wetlands; marginally suitable moist, rocky north-facing upper slopes that border the flume where moisture occurs from flume structures; no gorges on or adjacent to the project site; species not observed during June 2022 survey
Broad-nerved hump-moss *Meesia uliginosa*	NA	FSS	2B.2	Mesic soils in meadows, seeps, and lower and upper coniferous forests Elevation: 5,000-6,000 feet	No potential to occur; project site is outside the species' known elevation range
Tehachapi monardella *Monardella linoides* ssp. *oblonga*	June–August	FSS	1B.3	Dry, gravelly slopes and flats in chaparral, conifer woodland, and pinyon and juniper woodlands in Tulare and Kern County. Elevation: 5,000-8,200 feet.	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range.
Yellow bur navarretia *Navarretia prolifera* ssp. *lutea*	May–July	FSS	4.3	Chaparral and cismontane woodland, often in dry rocky flats near drainage channels. Elevation: 2,300- 6,560 feet	Could occur; open habitat is limited on project site; species not observed during June 2022 floristic survey.

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[2]
		Federal	State		
Northern adder's tongue *Ophioglossum pusillum*	July	FSS	2B.2	Marshes and swamps; marsh edges, low pastures, and grassy roadside ditches in acidic soils. Elevation: 40-3,200 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range.
Veined water lichen *Peltigera gowardii*	NA	FSS	4.2	On rocks in cold-water creeks with little or no sediment or disturbance. Elevation: 2,500- 7,000 feet.	No potential to occur; no suitable habitat present on project site.
Stebbins' phacelia *Phacelia stebbinsii*	May–July	FSS	1B.2	Shady, moss-covered metamorphic rock outcrops or meadows with rocky soil in lower montane coniferous forest, cismontane woodland, meadows and seeps. Elevation: 3,000-6,900 feet	Could occur; potential suitable habitat present on project site is limited; species not observed during June 2022 floristic survey.
Whitebark pine *Pinus albicaulis*	NA	FSS	–	Upper red fir forest to timberline, especially subalpine forest. Elevation: above 7,300 feet	No potential to occur; no suitable habitat present on project site and project site is outside the species' known elevation range.
Sierra blue grass *Poa sierrae*	April–July	FSS	1B.3	Shady north-facing, often moist, rocky slopes in lower montane coniferous forest; often in canyons. Elevation: 1,200- 4,900 feet	Could occur; understory habitat present on project site; species not observed during June 2022 floristic survey.
Brownish beaked rush *Rhynchospora capitella*	June–August	–	2B.2	Lower and upper montane coniferous forest, meadows, seeps, marsh, and swamps; mesic sites. Elevation: below 6,500 feet	Could occur; project site lacks natural wetland habitats; marginally suitable habitat present in north-facing upper slopes that border the flume and that are moist from flume leaks, species not observed during June 2022 survey

Table 1. Special-status Plants Evaluated for Potential to Occur on the Project Site

Species	Blooming Period	Status[1] Federal	Status[1] State	Habitat Associations	Potential to Occur on the Project Site[2]

[1] Status Definitions

Federal Status

FSS = U.S. Forest Service Region 5 Sensitive Species

– = No status

State/California Rare Plant Rank (CRPR)

1B = Considered rare or endangered in California and elsewhere

2B = Considered rare or endangered in California but more common elsewhere

3 = Species for which limited information is available

4 = Limited distribution or infrequent throughout a broader area in California

– = No status

California Rare Plant Rank (CRPR) 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

[2] Potential to Occur

- No potential to occur: Potentially suitable habitat is not present
- Unlikely to occur: Potentially suitable habitat present but species unlikely to be present because of very restricted distribution
- Could occur: Suitable habitat is available; however, there are few or no other indicators that the species may be present
- Likely to occur: Habitat conditions, behavior of the species, known occurrences in the vicinity, or other factors indicate a relatively high likelihood that the species would occur
- Known to occur: The species, or evidence of its presence, was observed during reconnaissance-level surveys or was reported by others

Sources: CDFW 2022a; CNPS 2022a; USFS 2013a; data compiled by GEI Consultants, Inc. 2022

Special-status Wildlife

Table 2 provides information on special-status wildlife species that were evaluated for potential to occur on the project site based on review of the CNDDB, IPaC, and the USFS list of Sensitive Animal Species for the El Dorado National Forest. A total of 23 species were evaluated.

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 all special-status wildlife species that were evaluated except California spotted owl (*Strix occidentalis occidentalis*). Therefore, potential for many of the species to occur on the project site is unlikely. Only species that are highly mobile and distributed in a variety of habitat types have potential to occur on the project site.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status[1] Federal	State	Habitat Associations	Potential to Occur on the Project Site[2]
Invertebrates				
Western bumble bee *Bombus occidentalis*	FSS	C	Wide variety of habitats, primarily flower-rich montane meadows; nests in abandoned rodent burrows and other cavities.	Unlikely to occur; no suitable meadow habitat in or adjacent to the project site; drainage areas in project site supports few flowering plants in the understory; nearest CNDDB occurrence approximately 23 miles northeast of project site.
Fishes				
Pacific lamprey *Entosphenus tridentalus*	FSS	–	Found in gravelly streams, including tributaries of the San Francisco Estuary and the Central Valley.	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Delta smelt *Hypomesus transpacificus*	T	E	Endemic to the Sacramento-San Joaquin Delta, occurring primarily below Isleton on the Sacramento River	No potential to occur; project site is outside this species' range.
Hardhead *Mylopharodon conocephalus*	FSS	–	Typically found in small to large streams in a low to mid-elevation, but can inhabit lakes and reservoirs too. Can be found in warm water streams and spawns in gravel and rocky substrates.	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Amphibians				
Southern long-toed salamander *Ambystoma macrodactylum sigillatum*	–	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	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Yosemite Toad *Anaxyrus canorus*	T FSS	C –	High elevation wet meadows in central Sierra Nevada; also occurs in seasonal ponds in subalpine coniferous forest	No potential to occur; project site is outside this species' range.
Foothill yellow-legged frog *Rana boylii*	FSS	E	Rocky streams and rivers with open, sunny banks, in forests, chaparral, and woodlands	No potential to occur; no suitable habitat is present on or adjacent to the project site.
California red-legged frog *Rana draytonii*	T	SSC	Lowlands and foothill streams, pool, and marshes in or near permanent or late season sources of deep water with dense, shrubby, riparian, or emergent vegetation	No potential to occur; no suitable habitat is present on or adjacent to the project site.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status[1] Federal	Status[1] State	Habitat Associations	Potential to Occur on the Project Site[2]
Sierra Nevada yellow-legged frog *Rana sierrae*	E FSS	T	Montane ponds, lakes, and streams, typically with shallow, exposed, and gently sloping shorelines	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Reptiles				
Western pond turtle *Emys marmorata*	FSS	SSC	Ponds, lakes, rivers, streams, etc. with abundant vegetation, rocks, and logs for basking	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Birds				
Northern goshawk *Accipiter gentilis*	FSS	SSC	Coniferous and montane riparian forest; typically nests on north-facing slopes near water	Unlikely to occur; site provides poor-quality nesting habitat, but transient and other non-breeding individuals could occur in the area. Nearest CNDDB occurrence approximately 7 miles east of the project site.
Willow flycatcher *Empidonax traillii*	FSS	–	Dense willow thickets associated with wet meadows, ponds, and streams	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Bald eagle *Haliaeetus leucocephalus*	FSS	E FP	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	Unlikely to occur; unlikely to nest in the immediate vicinity, but transient and other non-breeding individuals could occur in the area. Nearest CNDDB occurrence approximately 8 miles north of project site.
Great gray owl *Strix nebulosi*	FSS	E	High elevation coniferous forest, close to large meadows	No potential to occur; no suitable habitat is present on or adjacent to the project site (EID 2002a).
California spotted owl *Strix occidentalis occidentalis*	FSS	SSC	In the Sierra Nevada, primarily coniferous and montane hardwood forests at middle elevations; also occurs in red fir forest at high elevations	Likely to occur; suitable habitat present on and adjacent to the project site; species was observed 8 during surveys completed by GEI biologists 3 miles west at Flume 47A in 2021.
Mammals				
Pallid bat *Antrozous pallidus*	FSS	SSC	Variety of habitats, including woodland, forest, grassland, and desert; roosts in tree cavities, rock crevices, mines, caves, and human structures	Unlikely to occur; visible tree cavities were not observed at the project site. nearest documented CNDDB occurrence approximately 15 miles southwest of project site.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status[1] Federal	Status[1] State	Habitat Associations	Potential to Occur on the Project Site[2]
Sierra Nevada mountain beaver *Aplodontia rufa californica*	FSS –	SSC	Found in dense riparian-deciduous and open, brushy stages of forests, in the Sierra Nevada mostly found in maintain riparian habitats	No potential to occur; no suitable habitat is present on or adjacent to the project site.
Townsend's big-eared bat *Corynorhinus townsendii*	FSS	SSC	Variety of habitats, but prefers mesic habitats; roosts in caves, mines, tunnels, buildings, or other human-made structures	Unlikely to occur; no suitable roost sites occur on the project site; nearest CNDDB documented occurrence approximately 17 miles northwest of project site.
California wolverine *Gulo gulo*	FSS –	T FP	Various montane habitats; uses caves, logs, and burrows for cover and den sites; hunts in open areas.	No potential to occur; project site is outside this species' range.
Pacific marten *Martes caurina*	FSS	–	Mixed coniferous forest in the Olympic mountain range; high canopy closure, including old-growth trees and snags for denning.	No potential to occur; project site is outside this species' range.
Fringed myotis *Myotis thysanodes*	FSS	–	Wide variety of habitats, but most often in woodland and forest; roosts in caves, mines, buildings and other crevices	Unlikely to occur; suitable roost locations are absent onsite; has been documented approximately 3.5 miles south the project site.
Fisher *Pekania pennanti*	FSS	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	No potential to occur; project site is outside this species' range.
Sierra Nevada red fox *Vulpes vulpes necator*	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	No potential to occur; project site is outside this species' range.

Table 2. Special-status Wildlife Evaluated for Potential to Occur on the Project Site

Species	Status[1] Federal	Status[1] State	Habitat Associations	Potential to Occur on the Project Site[2]

Notes: CNDDB = California Natural Diversity Database

[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

[2] Potential to Occur

- No potential to occur: Potentially suitable habitat is not present
- Unlikely to occur: Potentially suitable habitat present but species unlikely to be present because of very restricted distribution
- Could occur: Suitable habitat is available; however, there are few or no other indicators that the species may be present
- Likely to occur: Habitat conditions, behavior of the species, known occurrences in the vicinity, or other factors indicate a relatively high likelihood that the species would occur
- Known to occur: The species, or evidence of its presence, was observed during reconnaissance-level surveys or was documented.

Sources: USFS 2013b, CDFW 2022a; data compiled by GEI Consultants, Inc. in 2022

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, CDFW, 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 not within designated or proposed critical habitat for any species.

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 State, to ensure such activities do not violate State or Federal water quality standards and 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 project site contains two ephemeral drainages and one intermittent drainage that are potentially subject to these regulations.

Sensitive Natural Communities

CDFW maintains a *List of Natural Communities* that are native to California (CDFW 2022b). CDFW identifies and ranks subsets of these natural communities as sensitive natural communities that are considered to be highly imperiled. CDFW publishes and frequently updates a list of *Sensitive Natural*

Communities (CDFW 2022b). Many riparian plant communities are included as sensitive natural communities because of habitat loss and their value to a diverse community of plant and wildlife species. No sensitive natural community occur on the project site.

If you have any questions or concerns regarding this biological assessment report, please contact me by phone at (916) 912-4940 or e-mail at ehtain@geiconsultants.com.

Sincerely,

Eric Htain
Project Manager/Senior Regulatory Specialist

Attachment A: Figures 1-5
Attachment B: Special-status Species Lists
Attachment C: Representative Photographs
Attachment D: Lists of Plant and Wildlife Species Observed during the Field Survey

References

CDFW (California Department of Fish and Wildlife). 2022a. California Natural Diversity Database, Wildlife and Habitat Data Analysis Branch, RareFind Version 5. Commercial version. Available at: https://www.wildlife.ca.gov/Data/CNDDB. Accessed June 2022.

CDFW (California Department of Fish and Wildlife). 2022b. *Natural Communities and Sensitive Natural Communities.* Sacramento, CA. Available: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#sensitive%20natural%20communities. Accessed May 2022.

CNPS (California Native Plant Society), Rare Plant Program. 2022a. *Inventory of Rare and Endangered Plants of California* (online edition, v9-01 0.0). Website https://www.rareplants.cnps.org. Accessed May 2022.

CNPS (California Native Plant Society), El Dorado Chapter. 2022b. *Ecology of El Dorado County*. Prepared by Debra Ayres. Website https://www.eldoradocnps.org/plants/ecology. Accessed July 2022.

NRCS (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 2022.

USDA (U.S. Department of Agriculture) 2019 (April). *Conservation Strategy for the California Spotted Owl in the Sierra Nevada.* Version 1.0. R5-TP-043. Available: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd624135.pdf. Accessed May 2022.

USFS (U.S. Forest Service). 2013a. Region 5 Sensitive Plant Species List. Available: https://www.fs.usda.gov/main/r5/plants-animals/plants. Accessed May 2022.

———. 2013b. Region 5 Sensitive Animal List by Forest. Available: https://www.fs.usda.gov/main/r5/plants-animals/plants. Accessed May 2022.

———. 1988. El Dorado National Forest Land and Resource Management Plan. Available: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5253925.pdf

U.S. Fish and Wildlife Service. 2022a. Information for Planning and Conservation Resource List. Sacramento Fish and Wildlife Office, Sacramento, CA. Accessed May 2022.

------. 2022b. National Wetlands Inventory Mapper [web application]. Accessed May 2022. Available at https://www.fws.gov/wetlands/data/mapper.html.

Attachment A

Figure 1. Regional Location

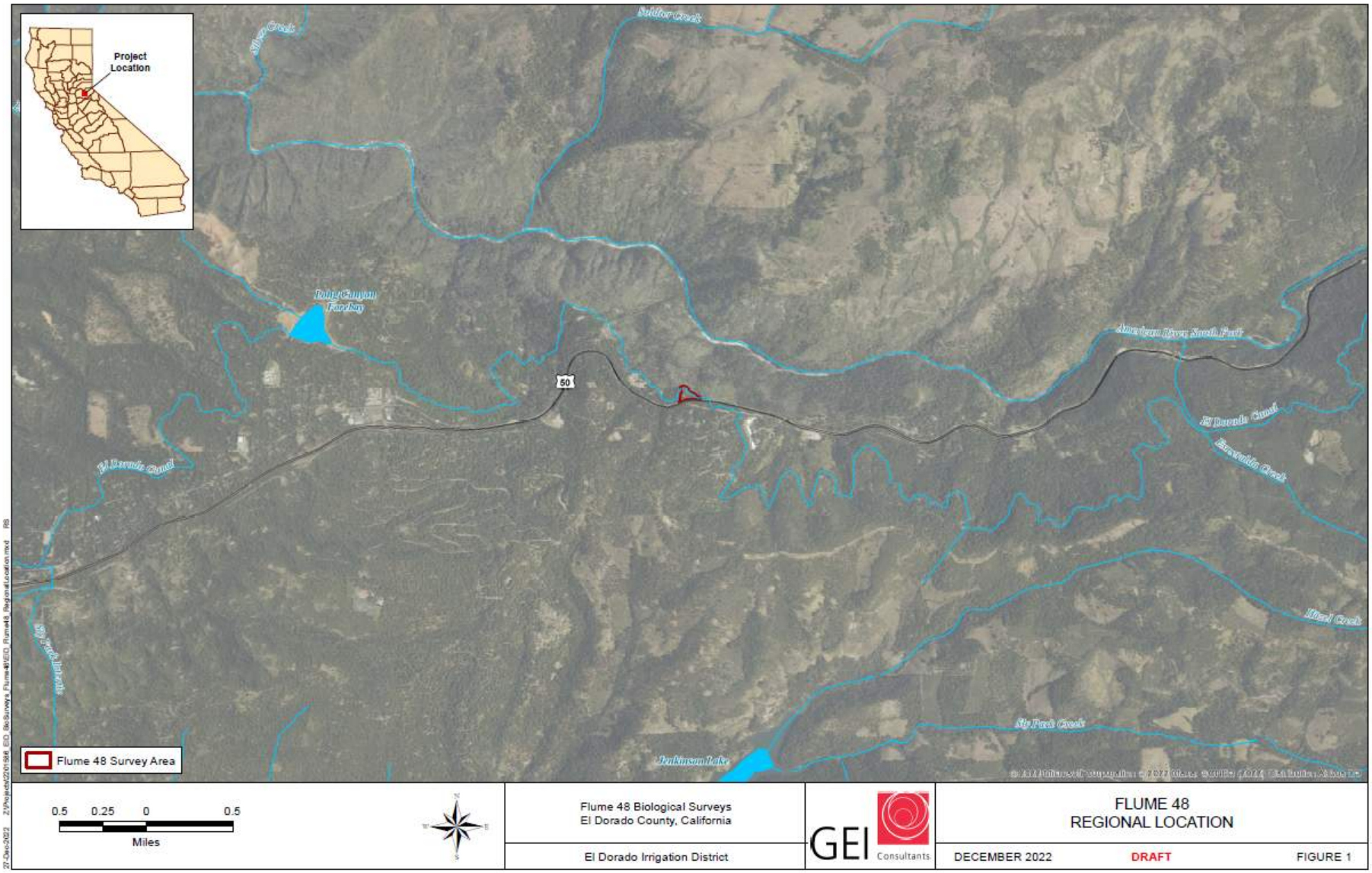
Figure 2. Topographic Map

Figure 3. Habitat Types on the Project Site

Figure 4. California Natural Diversity Database Occurrences within 5 Miles of the Project Site

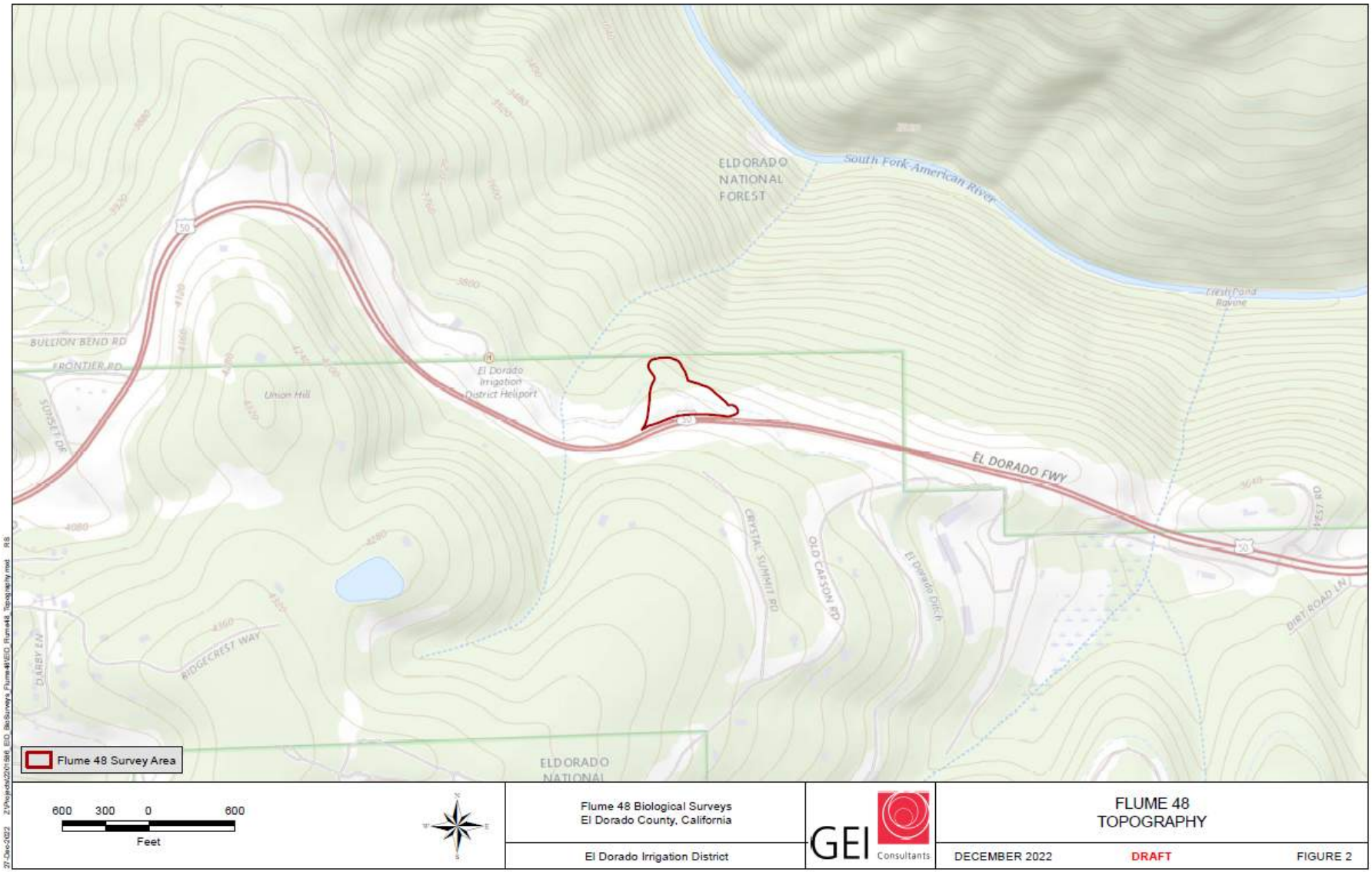
Figure 5. California Natural Diversity Database Occurrences of Spotted Owl within 5 Miles of the Project Site

Figure 1. Regional Location



Source: GEI Consultants, Inc. 2022

Figure 2. Topographic Map

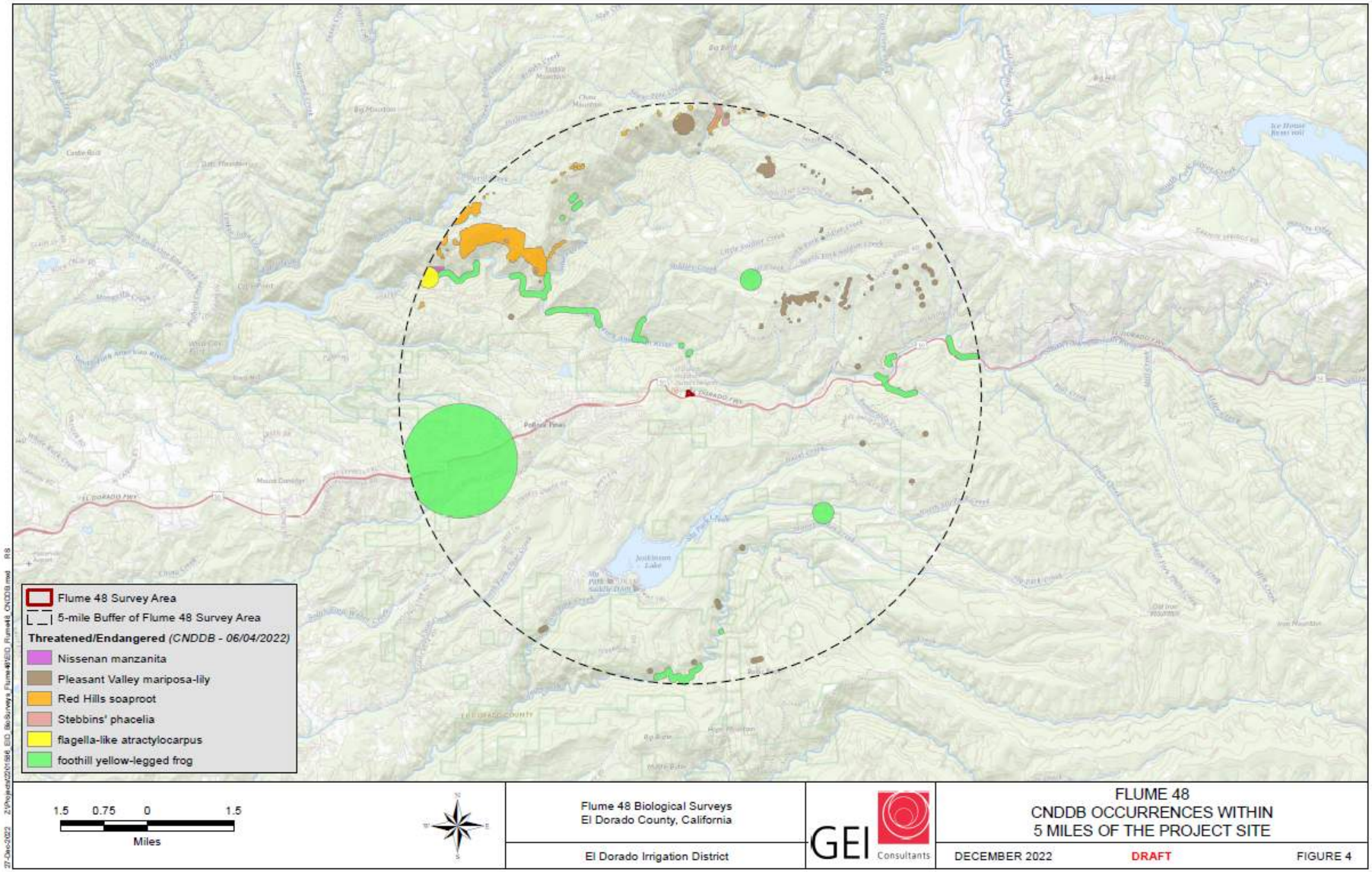


Source: GEI Consultants, Inc. 2022

Figure 3. Habitat Types on the Project Site

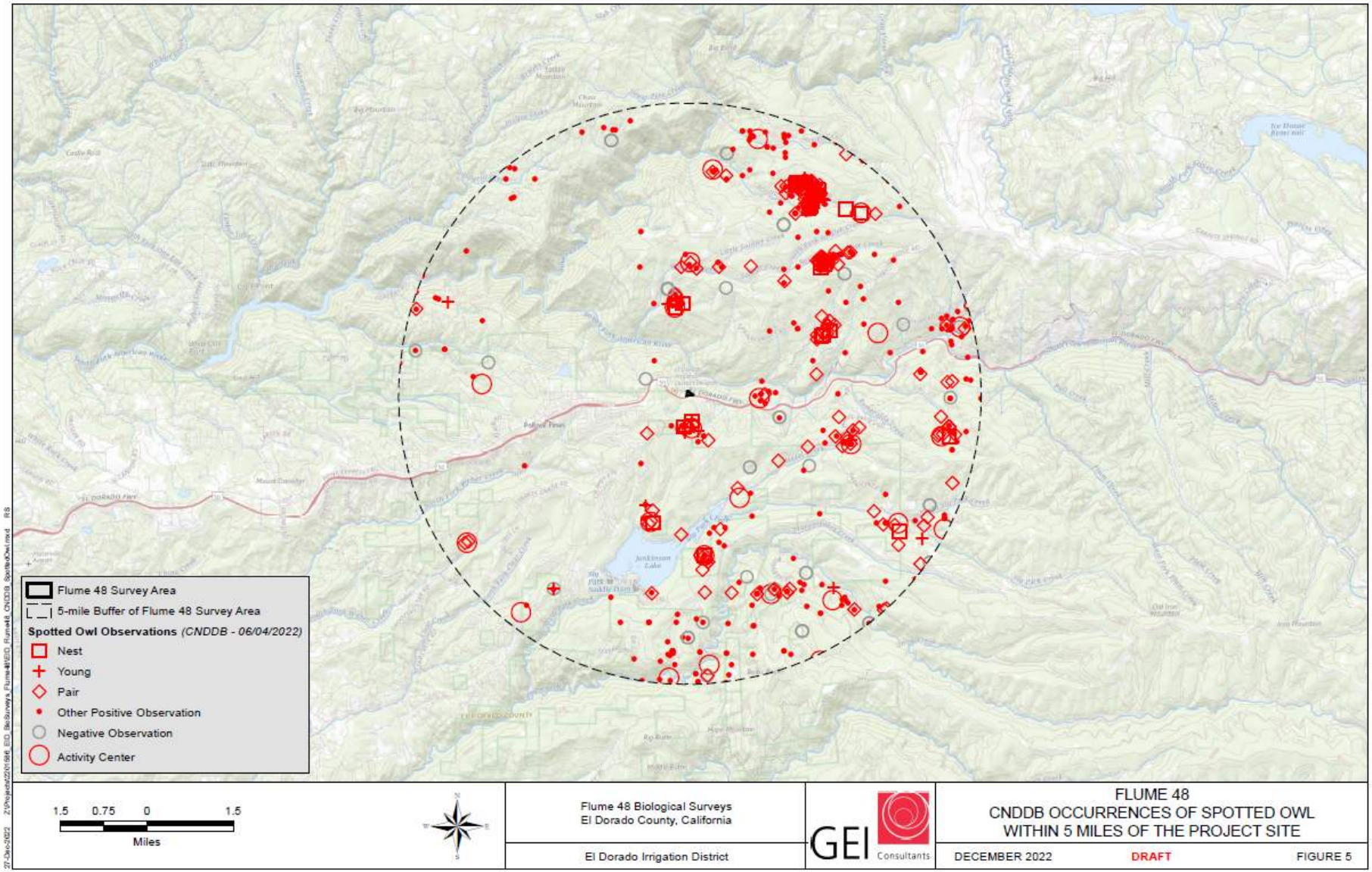
Source: GEI Consultants, Inc. 2022

Figure 4. California Natural Diversity Database Occurrences within 5 Miles of Project Site



Source: GEI Consultants, Inc. 2022

Figure 5. California Natural Diversity Database Occurrences of Spotted Owl within 5 Miles of Project Site



Source: GEI Consultants, Inc. 2022

Attachment B

Special-status Species Lists

United States Department of the Interior

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

In Reply Refer To:
Project Code: 2022-0079365
Project Name: Flume 48

August 26, 2022

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

To Whom It May Concern:

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

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

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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

Project Summary

Project Code: 2022-0079365
Project Name: Flume 48
Project Type: Irrigation
Project Description: water conveyence
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.7641822,-120.5433615410092,14z

Counties: El Dorado County, California

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. 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.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2891	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Pollock Pines (3812075) OR Slate Mtn. (3812076) OR Tunnel Hill (3812086) OR Devil Peak (3812085) OR Robbs Peak (3812084) OR Riverton (3812074) OR Old Iron Mountain (3812064) OR Sly Park (3812065) OR Camino (3812066))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Accipiter gentilis northern goshawk	ABNKC12060	None	None	G5	S3	SSC
Ambystoma macrodactylum sigillatum southern long-toed salamander	AAAAA01085	None	None	G5T4	S3	SSC
Aplodontia rufa californica Sierra Nevada mountain beaver	AMAFA01013	None	None	G5T3T4	S2S3	SSC
Arctostaphylos nissenana Nissenan manzanita	PDERI040V0	None	None	G1	S1	1B.2
Atractelmis wawona Wawona riffle beetle	IICOL58010	None	None	G3	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	
Botrychium ascendens upswept moonwort	PPOPH010S0	None	None	G3G4	S2	2B.3
Botrychium crenulatum scalloped moonwort	PPOPH010L0	None	None	G4	S3	2B.2
Botrychium minganense Mingan moonwort	PPOPH010R0	None	None	G4G5	S3	2B.2
Calochortus clavatus var. avius Pleasant Valley mariposa-lily	PMLIL0D095	None	None	G4T2	S2	1B.2
Campylopodiella stenocarpa flagella-like atractylocarpus	NBMUS84010	None	None	G5	S1?	2B.2
Carex cyrtostachya Sierra arching sedge	PMCYP03M00	None	None	G2	S2	1B.2
Central Valley Drainage Hardhead/Squawfish Stream Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
Central Valley Drainage Resident Rainbow Trout Stream Central Valley Drainage Resident Rainbow Trout Stream	CARA2421CA	None	None	GNR	SNR	
Central Valley Drainage Spring Stream Central Valley Drainage Spring Stream	CARA2413CA	None	None	GNR	SNR	
Chlorogalum grandiflorum Red Hills soaproot	PMLIL0G020	None	None	G3	S3	1B.2
Clarkia biloba ssp. brandegeeae Brandegee's clarkia	PDONA05053	None	None	G4G5T4	S4	4.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Cosumnoperla hypocrena Cosumnes stripetail	IIPLE23020	None	None	G2	S2	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Horkelia parryi Parry's horkelia	PDROS0W0C0	None	None	G2	S2	1B.2
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Lewisia serrata saw-toothed lewisia	PDPOR040E0	None	None	G2	S2	1B.1
Monadenia mormonum buttoni Button's Sierra sideband	IMGASC7071	None	None	G2T1	S1S2	
Myotis thysanodes fringed myotis	AMACC01090	None	None	G4	S3	
Myotis volans long-legged myotis	AMACC01110	None	None	G4G5	S3	
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Nebria darlingtoni South Forks ground beetle	IICOL6L100	None	None	G1	S1	
Orobittacus obscurus gold rush hanging scorpionfly	IIMEC07010	None	None	G1	S1	
Pekania pennanti Fisher	AMAJF01020	None	None	G5	S2S3	SSC
Phacelia stebbinsii Stebbins' phacelia	PDHYD0C4D0	None	None	G3	S3	1B.2
Poa sierrae Sierra blue grass	PMPOA4Z310	None	None	G3	S3	1B.3
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Rana sierrae Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
Rhynchospora capitellata brownish beaked-rush	PMCYP0N080	None	None	G5	S1	2B.2
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Sacramento-San Joaquin Foothill/Valley Ephemeral Stream	CARA2130CA	None	None	GNR	SNR	
Sacramento-San Joaquin Foothill/Valley Ephemeral Stream						
Sphagnum Bog	CTT51110CA	None	None	G3	S1.2	
Sphagnum Bog						
Stygobromus grahami	ICMAL05920	None	None	G2	S2	
Graham's Cave amphipod						
Viola tomentosa	PDVIO04280	None	None	G3	S3	4.2
felt-leaved violet						
Vulpes vulpes necator pop. 2	AMAJA03017	Endangered	Threatened	G5TNR	S1	
Sierra Nevada red fox - Sierra Nevada DPS						

Record Count: 44

CNPS Rare Plant Inventory

CALIFORNIA NATIVE PLANT SOCIETY

Search Results

38 matches found. Click on scientific name for details

Search Criteria: Quad is one of [3812075:3812076:3812086:3812085:3812084:3812074:3812064:3812065:3812066]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	FED LIST	STATE LIST	CA RARE PLANT RANK
Allium sanbornii var. *congdonii*	Congdon's onion	Alliaceae	perennial bulbiferous herb	None	None	4.3
Allium sanbornii var. *sanbornii*	Sanborn's onion	Alliaceae	perennial bulbiferous herb	None	None	4.2
Arctostaphylos nissenana	Nissenan manzanita	Ericaceae	perennial evergreen shrub	None	None	1B.2
Bolandra californica	Sierra bolandra	Saxifragaceae	perennial herb	None	None	4.3
Botrychium ascendens	upswept moonwort	Ophioglossaceae	perennial rhizomatous herb	None	None	2B.3
Botrychium crenulatum	scalloped moonwort	Ophioglossaceae	perennial rhizomatous herb	None	None	2B.2
Botrychium minganense	Mingan moonwort	Ophioglossaceae	perennial rhizomatous herb	None	None	2B.2
Calochortus clavatus var. *avius*	Pleasant Valley mariposa-lily	Liliaceae	perennial bulbiferous herb	None	None	1B.2
Campylopodiella stenocarpa	flagella-like atractylocarpus	Dicranaceae	moss	None	None	2B.2
Carex cyrtostachya	Sierra arching sedge	Cyperaceae	perennial herb	None	None	1B.2
Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	None	None	4.3
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	None	None	1B.2
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	Onagraceae	annual herb	None	None	4.2
Clarkia virgata	Sierra clarkia	Onagraceae	annual herb	None	None	4.3
Claytonia palustris	marsh claytonia	Montiaceae	perennial herb	None	None	4.3
Claytonia parviflora ssp. *grandiflora*	streambank spring beauty	Montiaceae	annual herb	None	None	4.2
Erigeron petrophilus var. *sierrensis*	northern Sierra daisy	Asteraceae	perennial rhizomatous herb	None	None	4.3
Eriogonum ovalifolium var. *eximium*	brown-margined buckwheat	Polygonaceae	perennial herb	None	None	4.3
Eriophorum gracile	slender cottongrass	Cyperaceae	perennial rhizomatous herb (emergent)	None	None	4.3
Githopsis pulchella ssp. *serpentinicola*	serpentine bluecup	Campanulaceae	annual herb	None	None	4.3
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	None	None	1B.2
Jensia yosemitana	Yosemite tarplant	Asteraceae	annual herb	None	None	3.2
Juncus digitatus	finger rush	Juncaceae	annual herb	None	None	1B.1
Lewisia kelloggii ssp. *hutchisonii*	Hutchison's lewisia	Montiaceae	perennial herb	None	None	3.2
Lewisia serrata	saw-toothed lewisia	Montiaceae	perennial herb	None	None	1B.1
Lilium humboldtii ssp.	Humboldt lily	Liliaceae	perennial bulbiferous herb	None	None	4.2

Lilium humboldtii ssp. *humboldtii*	Humboldt lily	Liliaceae	perennial bulbiferous herb	None	None	4.2
Myrica hartwegii	Sierra sweet bay	Myricaceae	perennial deciduous shrub	None	None	4.3
Navarretia prolifera ssp. *lutea*	yellow bur navarretia	Polemoniaceae	annual herb	None	None	4.3
Peltigera gowardii	western waterfan lichen	Peltigeraceae	foliose lichen (aquatic)	None	None	4.2
Phacelia stebbinsii	Stebbins' phacelia	Hydrophyllaceae	annual herb	None	None	1B.2
Piperia colemanii	Coleman's rein orchid	Orchidaceae	perennial herb	None	None	4.3
Poa sierrae	Sierra blue grass	Poaceae	perennial rhizomatous herb	None	None	1B.3
Primula pauciflora	beautiful shootingstar	Primulaceae	perennial herb	None	None	4.2
Pseudostellaria sierrae	Sierra starwort	Caryophyllaceae	perennial rhizomatous herb	None	None	4.2
Rhynchospora capitellata	brownish beaked-rush	Cyperaceae	perennial herb	None	None	2B.2
Stellaria obtusa	obtuse starwort	Caryophyllaceae	perennial rhizomatous herb	None	None	4.3
Streptanthus longisiliquus	long-fruit jewelflower	Brassicaceae	perennial herb	None	None	4.3
Viola tomentosa	felt-leaved violet	Violaceae	perennial herb	None	None	4.2

Showing 1 to 38 of 38 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website https://www.rareplants.cnps.org [accessed 16 May 2022].

USDA Forest Service, Pacific Southwest Region
El Dorado Forest Sensitive Plant Species List

2013 FS R5 RF Sensitive Plant Species List	Eldorado NF
Scientific Name (Common Name)	
Allium tribracteatum (three-bracted onion)	X
Arctostaphylos nissenana (Nissenan manzanita)	X
Balsamorhiza macrolepis (big-scale balsamroot)	X
Botrychium ascendens (upswept moonwort)	X
Botrychium crenulatum (scalloped moonwort)	X
Botrychium lunaria (common moonwort)	X
Botrychium minganense (mingan moonwort)	X
Botrychium montanum (western goblin)	X
Botrychium paradoxum (paradox moonwort)	X
Botrychium pedunculosum (stalked moonwort)	X
Bruchia bolanderi (Bolander's bruchia)	X
Calochortus clavatus var. *avius* (Pleasant Valley mariposa-lily)	X
Cypripedium montanum (mountain lady's-slipper)	X
Draba asterophora var. *asterophora* (Tahoe draba)	X
Draba asterophora var. *macrocarpa* (Cup Lake draba)	X
Eriogonum luteolum var. *saltuarium* (Jack's wild buckwheat)	X
Eriogonum tripodum (tripod buckwheat)	X
Helodium blandowii (Blandow's bog moss)	X
Horkelia parryi (Parry's horkelia)	X
Lewisia kelloggii ssp. *hutchisonii* (Hutchison's lewisia)	X
Lewisia kelloggii ssp. *kelloggii* (Kellogg's lewisia)	X
Lewisia longipetala (long-petaled lewisia)	X
Lewisia serrata (saw-toothed lewisia)	X
Meesia uliginosa (broad-nerved hump-moss)	X
Monardella linoides ssp. *oblonga* (Tehachapi monardella)	X
Navarretia prolifera ssp. *lutea* (yellow bur navarretia)	X
Ophioglossum pusillum (northern adder's tongue)	X
Peltigera gowardii (veined water lichen)	X
Phacelia stebbinsii (Stebbins' phacelia)	X
Pinus albicaulis (whitebark pine)	X
Poa sierrae (Sierra blue grass)	X

Source: U.S. Forest Service. September 9, 2013a.

USDA Forest Service, Pacific Southwest Region El Dorado Forest Sensitive Wildlife Species List	
INVERTEBRATES, TERRESTRIAL (1)	
Bombus occidentalis	Western bumble bee
BIRDS (5)	
Accipiter gentilis	Northern goshawk
Empidonax traillii	Willow flycatcher
Haliaeetus leucocephalus	Bald eagle
Strix nebulosa	Great gray owl
Strix occidentalis occidentalis	California spotted owl
AMPHIBIANS (4)	
Anaxyrus canorus	Yosemite toad
Rana boylii	Foothill yellow-legged frog
Rana sierrae	Sierra Nevada yellow-legged frog
Emys marmorata	Western pond turtle
MAMMALS (6)	
Antrozous pallidus	Pallid bat
Corynorhinus townsendii	Townsend's big-eared bat
Gulo gulo luscus	North American wolverine
Martes caurina	Pacific marten
Pekania pennanti	Fisher
Myotis thysanodes	Fringed myotis
FISHES (2)	
Entosphenus tridentatus	Pacific lamprey
Mylopharodon conocephalus	Hardhead

Source: U.S. Forest Service. September 9, 2013b.

Attachment C

Representative Photographs

View of Flume 48 project site from below, facing west.

View of access road to project site, facing northeast.

View of staging area in project site, facing east.

View of north-facing intermittent drainage in the project site below Flume 48, facing east.

View of ephemeral drainage in project site, facing northeast toward South Fork American River.

View of steep, rocky slopes of ephemeral drainage in eastern portion of project site, facing northeast.

Attachment D

Lists of Plant and Wildlife Species Observed during the Field Survey

Plant Species Observed at the Flume 48 Project Site (June 21, 2022)		
Scientific Name[1]	**Common Name**	**Native?**
APIACEAE		
Lomatium californicum	California lomatium	yes
Osmorhiza berteroi	Sweet cicely	yes
Torilis arvensis	Field hedge parsley	no
ASTERACEAE		
Adenocaulon bicolor	Trail plant	yes
Agoseris grandiflora var. *grandiflora*	Giant mountain dandelion	yes
Artemisia douglasiana	Mugwort	yes
Eriophyllum lanatum	Common woolly sunflower	yes
Madia gracilis	Grassy tarweed	yes
Sonchus oleraceus	Sow thistle	no
BETULACEAE		
Corylus cornuta ssp. *californica*	Beaked hazelnut	yes
BORAGINACEAE		
Draperia systyla	Violet draperia	yes
Hydrophyllum occidentale	California waterleaf	yes
Nemophila heterophylla	Variable leaved nemophila	yes
BRASSICACEAE		
Erysimum capitatum	Western wallflower	yes
CARYOPHYLLACEAE		
Cerastium glomeratum	Large mouse ears	no
Stellaria media	Chickweed	no
CUPRESSACEAE		
Calocedrus decurrens	Incense cedar	yes
CYPERACEAE		
Carex sp. (Group 10)[2]	Sedge	yes
Carex sp. (Group 11)[3]	Sedge	yes
DRYOPTERIDACEAE		
Polystichum munitum	Western sword fern	yes
FAGACEAE		
Quercus chrysolepis	Canyon live oak	yes
Quercus kelloggii	California black oak	yes
HYDROPHYLLACEAE		
Nemophila heterophylla	Variable leaved nemophila	yes
Phacelia heterophylla var. *virgata*	Varied leaf phacelia	yes
MONTIACEAE		
Claytonia parviflora	Narrow leaved miner's lettuce	yes
ONAGRACEAE		
Clarkia rhomboidea	Diamond clarkia	yes
PINACEAE		
Pinus ponderosa	Ponderosa pine	yes
Pseudotsuga menziesii	Douglas fir	yes
PHRYMACEAE		

Plant Species Observed at the Flume 48 Project Site (June 21, 2022)		
Scientific Name[1]	**Common Name**	**Native?**
Erythranthe guttata	Seep monkey flower	yes
PLANTAGINACEAE		
Collinsia parviflora	Few flowered blue eyed mary	yes
Collinsia tinctoria	Tincture plant	yes
POACEAE		
Elymus glaucus ssp. *glaucus*	Blue wildrye	yes
Poa bolanderi	Bolander's blue grass	yes
POLEMONIACEAE		
Gilia capitata ssp. *mediomontana*	Blue field gilia	yes
Collomia grandiflora	Large flowered collomia	yes
Collomia heterophylla	Variableleaf collomia	yes
ROSACEAE		
Drymocallis glandulosa	Sticky cinquefoil	yes
Rubus glaucifolius	Wax leaf raspberry	yes
Rubus parviflorus	Western thimbleberry	yes
RUBIACEAE		
Galium aparine	Common bedstraw	yes
RUSCACEAE		
Maianthemum racemosum	Feathery false lily of the valley	yes
SAPINDACEAE		
Acer macrophyllum	Bigleaf maple	yes
SAXIFRAGACEAE		
Heuchera micrantha	Alum root	yes
SCROPHULARIACEAE		
Verbascum thapsus	Woolly mullein	no
WOODSIACEAE		
Cystopteris fragilis	Bladder fern	yes

Notes:

[1]Scientific name is based on: Jepson Flora Project. 2022. *Jepson eFlora*, The Jepson Herbarium, University of California, Berkeley. Available at https://ucjeps.berkeley.edu/eflora/. Accessed July 2022.

[2]Several sedge (*Carex* sp.) were observed growing in moist areas on and under the flume structure near the southern half of the project site. This sedge belongs to Group 10, so it is not the special-status target species, Sierra arching sedge (*Carex cyrtostachya*), which is in Group 1 and 4.

[3]This sedge (*Carex* sp.) was observed growing on a dry upland slope in the project site. This sedge belongs to Group 11, so it is not the special-status target species, Sierra arching sedge (*Carex cyrtostachya*), which is in Group 1 and 4.

Wildlife Species Observed – June 21, 2022	
Scientific Name	**Common Name**
Invertebrates	
Adelpha californica	California sister
Birds	
Colaptes auratus	Norther flicker
Corvus brachyrhynchos	American crow
Cyanocitta stelleri	Steller's jay
Dryocopus pileatus	Pileated woodpecker
Junco hyemalis	Dark-eyed junco
Pipilo maculatus	Spotted towhee
Poecile rufescens	Chestnut-backed chickadee
Psaltriparus minimus	Bushtit
Zenaida macroura	Mourning dove

ATTACHMENT B

Wetland Assessment

Memorandum

To: Michael Baron, El Dorado Irrigation District

From: Eric Htain

cc:

Date: July 11, 2023

Re: Wetland Assessment for Flume 48

Introduction

GEI, Inc. (GEI) has been supporting the El Dorado Irrigation District (District) with biological resources surveys along the El Dorado Canal in the location of Flume 48. GEI conducted a constraints-level mapping survey at the Flume 48 project site in June 2022. During the 2022 surveys, GEI biologists observed and noted three areas downslope of Flume 48 that appeared to be potential drainages that convey water. Based on this observation, the District has requested GEI to conduct a wetland assessment of the potential drainage to determine if the feature has the potential to be subject to jurisdiction by resources agencies.

Methodology

GEI biologists Devin Barry and Summer Pardo conducted a wetland assessment in the project site on May 19, 2023. The wetland assessment consisted of walking the project site, taking photographs of any potential drainage feature, and conducting a vegetative and hydrologic assessment of the features. For the vegetative assessment, observation and characterization of vegetation within potential drainage features was conducted. Vegetative species were identified to specific epithet and compared to the 2020 National Wetland Plant List (USACE 2022) to determine if the plants were hydrophytic, which would meet the U.S. Army Corps of Engineers (USACE) definition for wetland plants. For the hydrologic assessment, potential drainage features were examined for evidence of flow, erosion and drainage patterns in the soil, and a defined drainage channel.

Results

The flume located in the northern portion of the project site slopes gradually east to west, with steep north-facing slopes on both sides of the flume. No potential drainages were identified in the project site during the May 2023 site visit. The potential drainages previously observed as surface waters during 2022 surveys was determined to originate from a leak in the elevated flume. Moisture from water leaking from the flume created a small patch downslope with riparian species such as arroyo willow (*Salix lasiolepis*) and alumroot (*Heuchera rubescens*). Additionally, there was no evidence of a flow or water conveyance from a drainage upslope of the flume. Representative photographs of the area provided below.

Conclusion

Based on the wetland assessment, GEI considers the potential drainage features identified in the Flume 48 project site to not be jurisdictional waterbodies subject to regulation by the regulatory agencies. These features that were observed may be the result of small landslides on the steep slopes, or as a result of leaks from the canal. No evidence of a swale, drainage, or seep was observed above

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the flume. Therefore, there is no contributing water or flow from above the flume that would be providing the conditions of moisture and vegetation growth to the downstream potential drainage feature. It is GEI's assessment that the moisture and vegetation observed comes from periodic spillage or leaks of water from the El Dorado Canal.

References Cited:

U.S. Army Corps of Engineers (USACE). 2020. National Wetland Plant List, version 3.5. U.S. Army Corps of Engineers Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, Hanover, NH. *Available:* http://wetland-plants.usace.army.mil/.

Attachments:

Representative Photographs

REPRESENTATIVE PHOTOGRAPHS

Photograph 1: View looking downslope flume abutment elevated above the area of the leak.

Photograph 2: View facing northeast looking at the moisture originating from a leak in the flume.