Print Form

Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: El Dorado
360 Fair Lane
Placerville, CA 95667

From: (Public Agency): Georgetown Divide Public Utilities District
6425 Main Street
Georgetown, CA 95634
(Address)

Project Title: GDPUD Upper Canal Reliability Project

Project Applicant: Georgetown Divide Public Utilities District (GD PUD)

Project Location - Specific:

Latitude: 38.7788787 Longitude: -120.5257

Project Location - City: Georgetown Project Location - County: El Dorado

Description of Nature, Purpose and Beneficiaries of Project:

Please see attached Project Description.

Name of Public Agency Approving Project: GD PUD

Name of Person or Agency Carrying Out Project: Adam Brown (abrown@gd-pud.org)

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: 15301(b), 15302(c)
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:

Please see attached PD for additional details.
15301(b) Existing publicly owned utilities.
15302(c) Replacement or Reconstruction of existing utility systems and/or facilities involving negligible expansion

Lead Agency Contact Person: Adam Brown Area Code/Telephone/Extension: 530-333-4356

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ▪ Yes No

Signature: _____ Date: 2/5/2024 Title: Operations Manager

Signed by Lead Agency Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

Georgetown Divide Public Utility District
Upper Canal Reliability Project

Project Description

1.0 PROJECT BACKGROUND

The Upper Canal Reliability Project (UCRP) is proposed and would be constructed by Georgetown Divide Public Utility District (GDPUD). GDPUD is an urban water supplier formed under the authority of the California Public Utility District Act in 1946 with the responsibility to construct, finance, maintain, and operate a water system in El Dorado County. It is headquartered in the foothills of El Dorado County between the north and south forks of the American River. GDPUD owns and operates a surface reservoir, canals, water treatment facilities and water distribution systems to provide water service to its customers.

GDPUD was awarded a WaterSMART (Sustain and Manage America's Resources for Tomorrow) grant to install concrete lining within its water canals. Specifically, GDPUD was awarded a Small-Scale Water Efficiency Projects (SSWEP) grant. WaterSMART is administered by the Bureau of Reclamation (BOR), which offers investments to increase water supply to modernize existing infrastructure and avoid potential water conflicts. The BOR uses the grant to provide a framework of federal leadership and assists to stretch and secure water supplies for future generations.

Currently, approximately 70 percent of GDPUD's 75 miles of conveyance is unlined canal, which allows water to seep into the ground. The leaked water correlates to an estimated loss of approximately 3,600 acre-feet per year. GDPUD's annual average water loss is nearly 40 percent of the raw water system yield over the last 20 years. The UCRP, which will maintain the canal's existing capacity and functionality, was awarded grant funding to improve water efficiency by eliminating canal scouring, seepage losses, and vegetation growth in the canal. Efficient water use within the GDPUD service area will benefit BOR operations by providing a more reliable and efficient canal conveyance system.

1.1 Proposed Project

The UCRP will reduce water loss by installing concrete lining within the existing water irrigation canal. Three canal segments were identified as high priority by the UCRP. Each location was identified in the GDPUD's *Capital Improvement Plan 2019/2020 to 2023/2024* as areas with significant water loss in need of lining to improve GDPUD's water supply and reliability.

1.1.1 Project Location and Access

The Project Site is located approximately 6.5 miles northeast of Georgetown, California and includes three segments of lining along the Georgetown Ditch irrigation canal (Figure 1-1). As shown in Figure 1-2, Segment 1 includes a 1,100-linear-foot section of existing irrigation canal extending west of Mt. Cedar Road. An existing maintenance access road located along the south side of the existing canal at Mount Cedar Road would be used for construction access. As a result of last year's winter storms, the access road is blocked by several fallen trees that will need to be removed prior to construction. As shown in Figure 1-3, Segment 2 is located adjacent to Balderston Road and includes two 200-foot sections of canal. An existing maintenance access road located along the south side of the canal and accessible from Balderston Road would be used for Segment 2 construction access.

1.1.2 Construction Approach/Methods

Construction Equipment and Materials

Construction equipment would include pickup trucks, a small excavator/backhoe, trailer mounted concrete pump, and hand tools. In addition, ready-mix concrete trucks would be used for concrete deliveries. Construction materials would include concrete, welded wire fence (which would serve as a concrete form/reinforcement within the canal) and gravel at quantities required to fill any holes or depressions in the canal prior to lining. Except for concrete, as discussed further below, pickup trucks would be used to transport all construction materials, equipment, and personnel to the construction site. All construction materials would be staged within the existing canal easement along the adjacent maintenance access road.

Construction Sequence

Project construction would progress as outlined below.

- The existing canal maintenance access road was severely impacted by fallen trees due to winter storms, in particular the access road that serves Segment 1. Some areas have also experienced substantial growth of Himalayan blackberry and herbaceous vegetation that impedes access. Construction crews would first trim overgrown vegetation by hand and prune/remove fallen trees as needed to clear the maintenance road and gain access to the canal. All cut vegetation would be transported by backhoe and/or construction crew members, loaded in pickup trucks, and transported offsite for disposal.
- Following vegetation clearing, crews would mobilize to the Project Site, establish the current phase work limits, and install temporary construction fencing to protect any environmentally sensitive areas.
- The installation of the lining would be conducted during the dry season, defined as the period between May 1 and November 15. GDPUD would provide source control and cut the water supply from Stumpy Meadows Reservoir to dewater the canal in the project area.

- A biologist would be present onsite to monitor the Project Area during dewatering. Non-sensitive biological resources found in the Project Area will be moved by the biologist out of harm's way. Any sensitive biological resources found by the biologist requiring take authorization or permission for relocation will be allowed to leave the Project Area by their own volition (i.e., no handling).
- The dewatered canal would then be cleared of sediment and vegetation using hand tools and a small backhoe operated from the adjacent maintenance road. Where needed to conform with design specifications, minor canal reshaping would be performed using hand tools and the backhoe positioned on the maintenance access road. The backhoe bucket would be used to smooth the canal bottom and sides and to remove excess sediment, which would be placed and compacted along and within limits of the existing access road. No construction equipment, other than hand tools operated by crew members, would enter the canal during the reshaping process.
- Following reshaping, welded wire fence would be installed in the canal for structural support (similar to rebar). The welded wire fence would be transported by pickup truck, unrolled on the maintenance access road adjacent the canal, and then placed in the canal using the backhoe with assistance by crew members.
- Concrete would then be delivered by commercial ready-mix trucks which would park within public right of way adjacent to the trailer mounted concrete pump. For Segment 1, the trailer mounted pump would be parked within public right-of-way on the west shoulder of Mount Cedar Road, south of the canal at the maintenance road intersection with Mount Cedar Road. Segment 2 would involve at least two additional parking locations along the shoulder of Balderston Road, one or more for each 200-foot segment. Concrete would be applied to the canal via hose pumped from delivery trucks stationed at one of the cross streets noted above.
- Upon completion, all temporarily disturbed areas would be treated with anti-scouring measures such as hydroseeding, straw waddles and/or mulching.
- The subcontractor shall be responsible for removing all wash water debris from washout location(s) at the end of the Project, at the subcontractor's expense. No wash water or leftover concrete shall be spoiled on site or near water ways.

1.1.3 Construction Schedule

As shown in Table 1-1, construction of the UCRP is scheduled to begin March 18, 2024 and is expected to take approximately 11 days to complete. Per Table 1-1, Segment 1 – Mount Cedar Road construction is anticipated to be complete on March 24, 2024. Construction of Segment 2 – Balderston Road would begin immediately following completion of Segment 1, with overall Project construction expected to be completed by March 28, 2024.

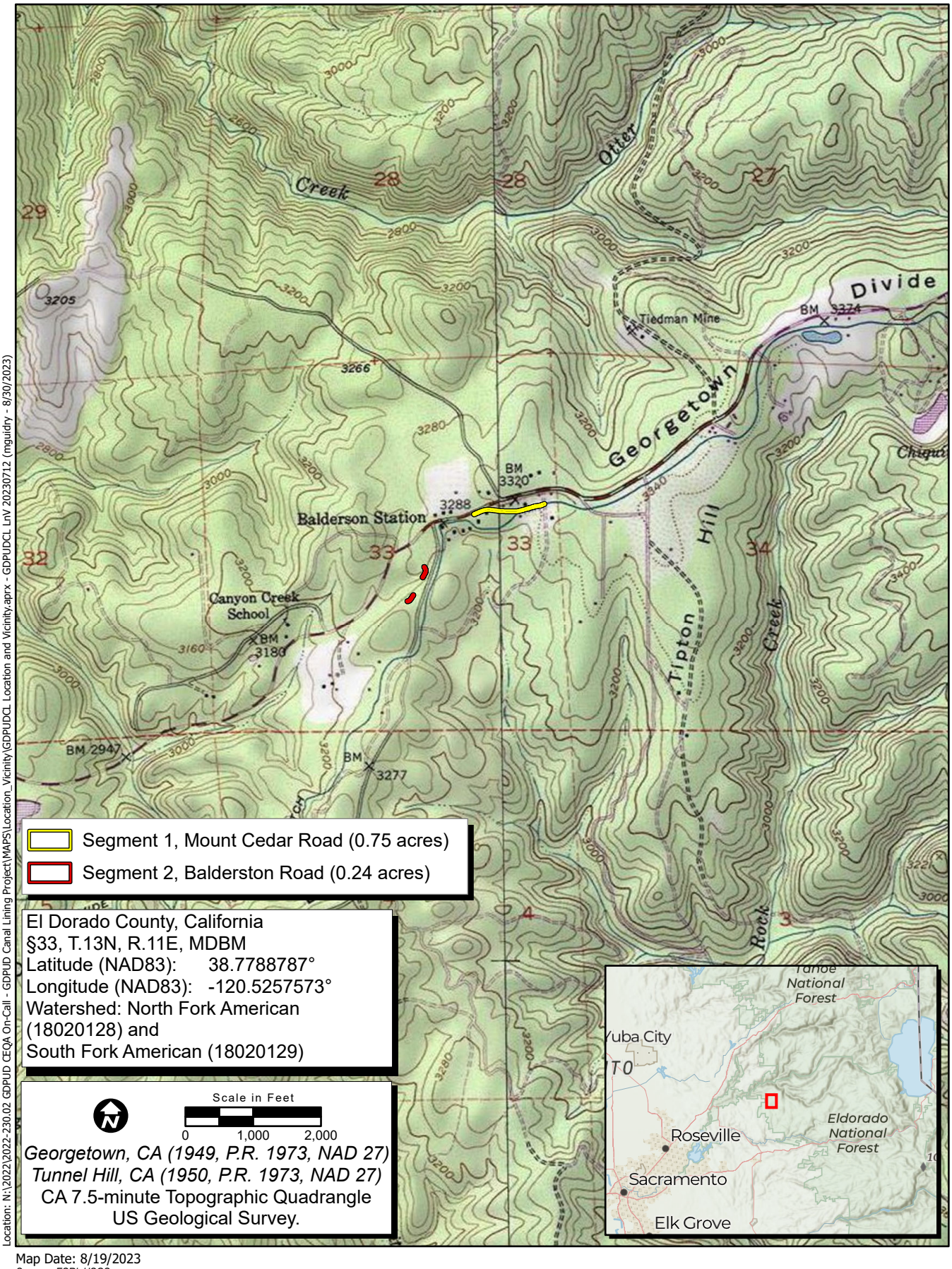
1.1.4 Operation and Maintenance

GDPUD daily operations generally include monitoring of flows and reservoir height levels checked and adjusted as needed, subject to demand or weather conditions. During frequent inspections any debris

would be removed from the canal. Medium intensive operations and management activities would include vegetation removal from canal banks, identifying and repairing leaks, adjusting services, and any small infrastructure repair like flumes, banks or retaining wall. Large intensive operations and management activities would include slope stability, bank re-construction, lining or piping, and road repair.

Table 1-1: Construction Schedule

Milestone/Task/Activity	Planned Start Date	Planned Completion Date
Mobilization	March 18, 2024	March 18, 2024
Segment 1 Mount Cedar Road	March 18, 2024	March 24, 2024
Segment 2 Balderston Road	March 24, 2024	March 28, 2024
Final report	April 3, 2024	May 31, 2024



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Map Date: 8/19/2023
Sources: ESRI, USGS

Figure 1. Project Location and Vicinity

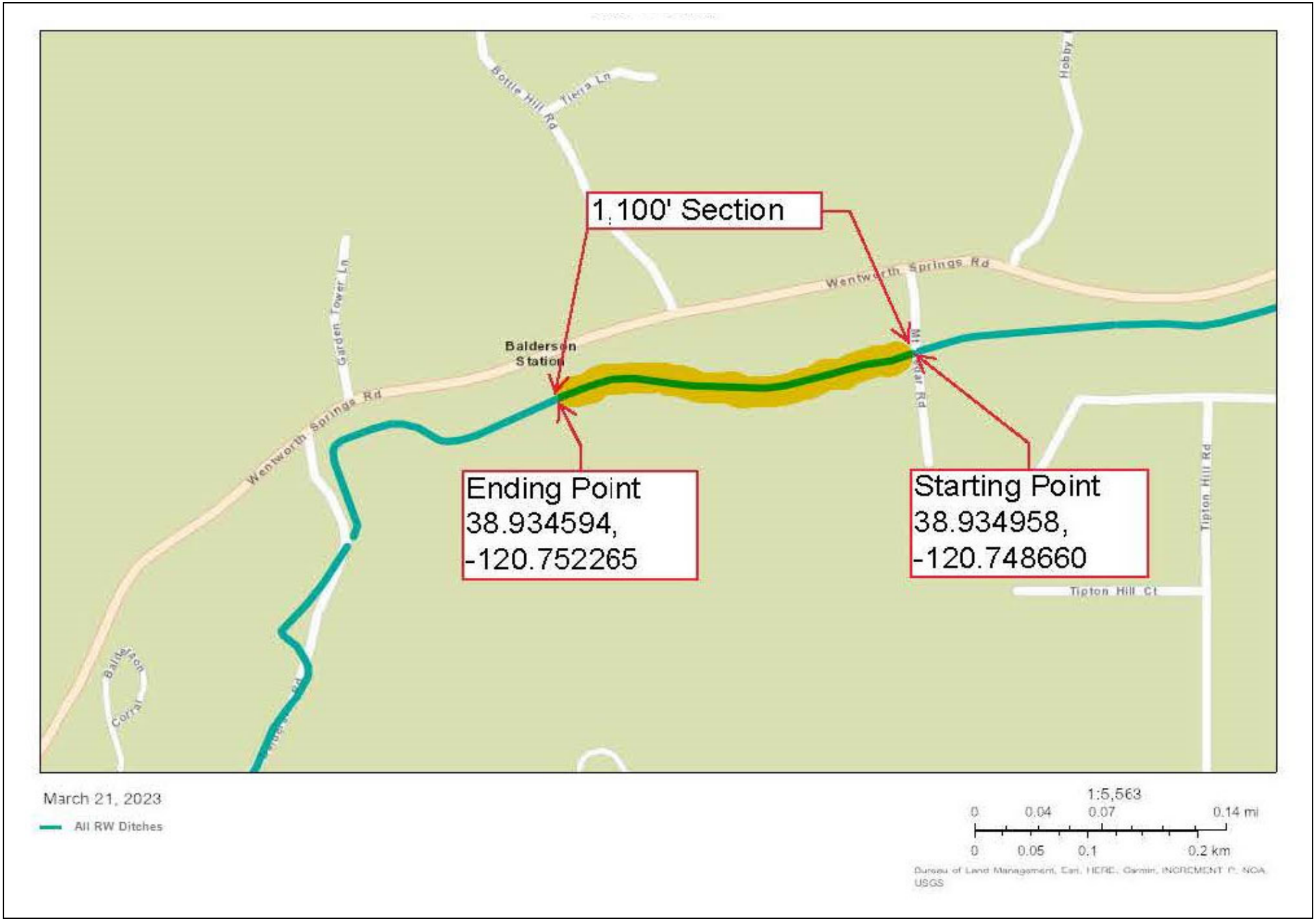


Figure 1-2. Segment 1 - Mount Cedar Road

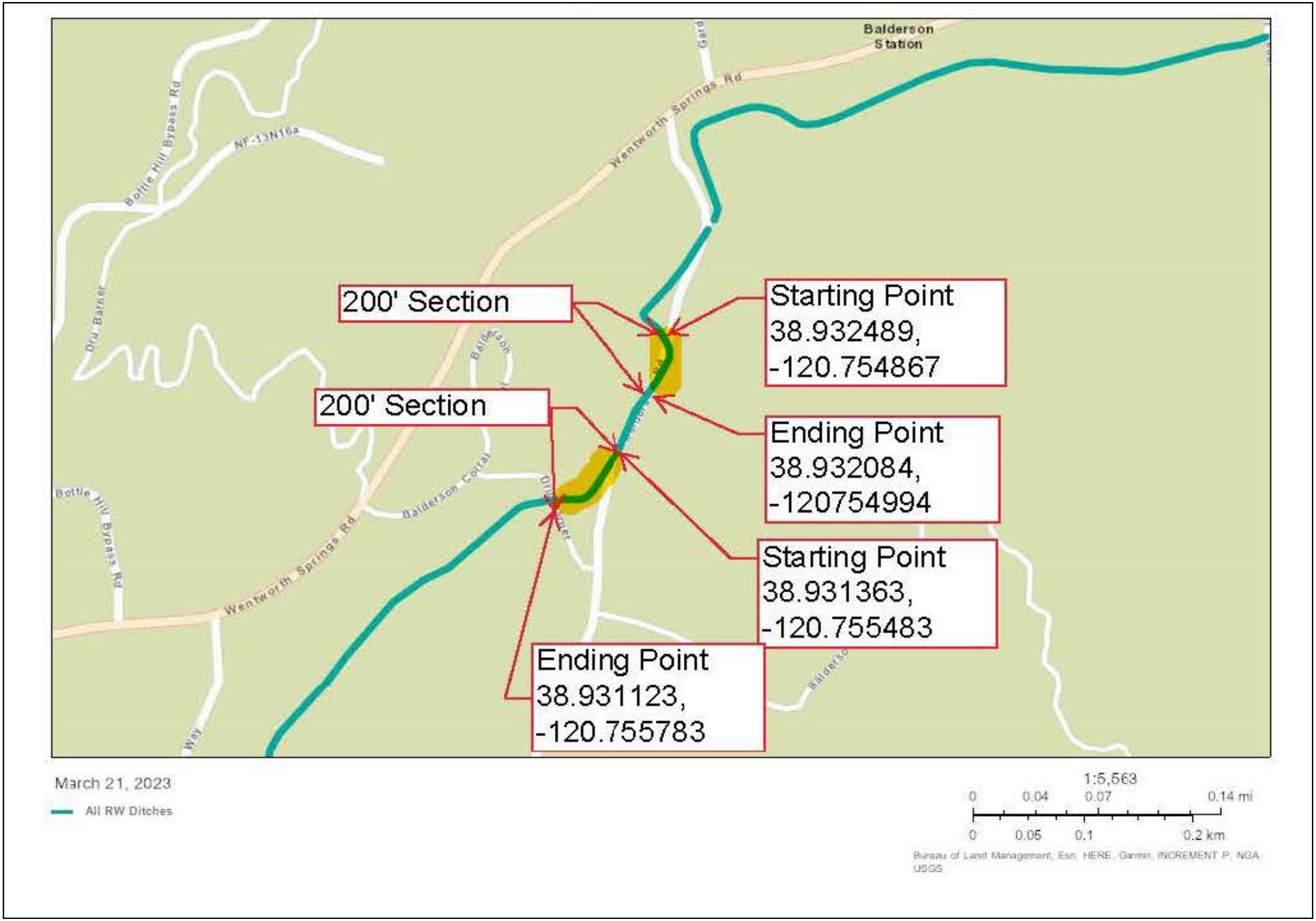


Figure 1-3. Segment 2 - Balderston Road

1.1.5 Construction Best Management Practices

Surveying for the Project will include Geographical Positioning System locating and staking of the reaches slated for construction. Detailed design plans will not be necessary as construction will be guided by typical cross-sections developed by GDPUD for each segment. GDPUD maps will be used to show limits of work, staging areas and any parcels requiring temporary construction easements, although temporary easements are not expected to be necessary at this time. Figure 1.4 includes a plan set showing the location, typical channel section and typical tie in for the proposed improvements.

The UCRP would be constructed by GDPUD crews with assistance from a concrete pumping subcontractor. The construction crew would implement construction Best Management Practices (BMPs) to avoid and minimize impacts to sensitive resources. As discussed below, construction BMPs would include implementation of a Storm Water Pollution Prevention Plan (SWPPP) consistent with National Pollutant Discharge Elimination System (NPDES) permit requirements. SWPPP measures would minimize the potential for construction-related surface water pollution and ensure water quality is not compromised by erosion and/or sedimentation during construction. While Project construction is not expected to require surface water diversion because the canal would be taken out of service and dewatered prior to construction, should conditions require, any water diversion would be installed in accordance with the provisions outlined in California Department of Transportation's *Construction Site Best Management Practices for Clear Water Diversion* (Fact Sheet NS-5).

In addition, the following BMPs would be implemented as part of the Project by GDPUD and its construction crews.

BMP 1: **Temporary Fencing.** Construction crews shall install construction barrier fencing (including sediment fencing and straw wattles) to prevent contaminants and debris from entering canals or adjacent waterways. The Project biologist will identify the locations for the barrier fencing and mark those locations with stakes or flagging before construction begins.

BMP 2: **SWPPP.** A SWPPP shall be implemented as part of the NPDES Permit and a General Construction Activity Storm Water Permit to minimize the potential for sediments or contaminants to enter waterways.

BMP 3: **Erosion Control.** The Project design shall incorporate permanent erosion control elements to ensure stormwater runoff does not cause soil erosion.

BMP 4: **Toxic Materials Control and Spill Response Plan.** The following measures shall be implemented during construction to avoid or minimize the risk of spills or discharges of toxic materials into waterways:

- Prepare a hazardous material Spill Prevention, Control, and Countermeasure Plan (SPCCP) before construction and implement during construction. Clean up all spills immediately according to the SPCCP.
- Prevent raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be

hazardous to aquatic life from contaminating the soil or entering waterways (other than the canals where lining is proposed).

- Prevent discharge of turbid water or sediment-laden runoff to waterways by using grass sediment filters, diverting the water to a settling tank, and/or implementing other erosion and water quality control BMPs to ensure compliance with water quality requirements prior to discharging water back to waterways.
- Provide areas located outside the ordinary high-water mark for staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants.
- Remove vehicles from the normal high-water area before any refueling and lubricating to prevent contaminants from being discharged to waterways during storm runoff. Any contaminated water generated by Project construction would be pumped to a holding tank for proper disposal.
- Crews shall notify the GDPUD construction manager if evidence of soil or groundwater contamination is encountered during construction activities. Construction in that area shall be halted until the fire department has evaluated the find and remediation is completed, if necessary.
- Construction crews shall comply with the California Occupational Safety and Health Administration standards for the storage and handling of fuels, flammable materials, and common construction-related hazardous materials and for fire prevention (California Labor Code, Division 5, Chapter 2.5).

BMP 7: **Traffic Management Plan.** The Project shall develop and implement a Traffic Management Plan prior to initiation of construction activities. This plan will identify general methods by which construction activities will be managed to minimize substantial delays to traffic. The traffic management plan shall include the following elements:

- *Communication*: Develop and implement a public information campaign that describes the duration of any partial lane closures with recommendations for alternative routes.
- *Wayfinding*: Provide temporary construction signage at strategic locations to advise the traveling public of construction activities.
- *Emergency Vehicle Response*: The Project Construction Manager shall coordinate construction activities that affect right-of-way with local emergency service providers to ensure potential effects of temporary lane closures on emergency response are properly communicated and addressed.

BMP 8: **Noise Control Measures.** The following measures shall be implemented during construction-related activities:

- All construction equipment shall have sound-control devices no less effective than those provided on the original equipment.
- No equipment shall have an unmuffled exhaust.

- Stationary construction equipment shall be located as far as possible from sensitive uses; sensitive uses shall be identified on construction drawings; and excessive equipment idling (greater than 5 minutes) shall be prohibited when the equipment is not in use.

BMP 9: **Pre-Construction Survey.** A qualified biologist will complete a preconstruction survey of the Project Area for California red-legged frog, foothill yellow-legged frog, and northwestern pond turtle immediately prior to dewatering activities. The biologist will remain onsite to monitor the Project Area during dewatering. Non-sensitive biological resources found in the Project Area will be moved by the biologist out of harm's way. Any sensitive biological resources found by the biologist requiring take authorization or permission for relocation will be allowed to leave the Project Area by their own volition (i.e., no handling).

BMP 10: **Nesting Birds.**

- To the extent feasible, vegetation trimming for site access shall be conducted outside of the bird nesting season (typically February 1–August 31, and as early as January 1 for raptors).
- If Project activities will occur during the nesting season (typically February 1 to August 31), a preconstruction nesting bird survey shall be conducted within 14 days prior to the commencement of Project-related activities to identify active nests that could be impacted by construction.
- The preconstruction nesting bird survey shall include accessible areas within 500 feet of the Project boundaries, including any temporary disturbance areas. For raptors, the preconstruction nesting bird survey shall include accessible areas within 0.25 mile of the Project boundary.
- If active nests are found, a no-disturbance buffer shall be established around the nest. A qualified biologist, in consultation with the CDFW, shall establish a buffer distance. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. The buffers will be removed once the young are independent of the nest.

BMP-11: **Oak Resources.**

- The applicant shall obtain appropriate permit authorization from El Dorado County prior to trimming or cutting of any live native oak trees in the Project Area.

BMP-12: **Cultural Resources.**

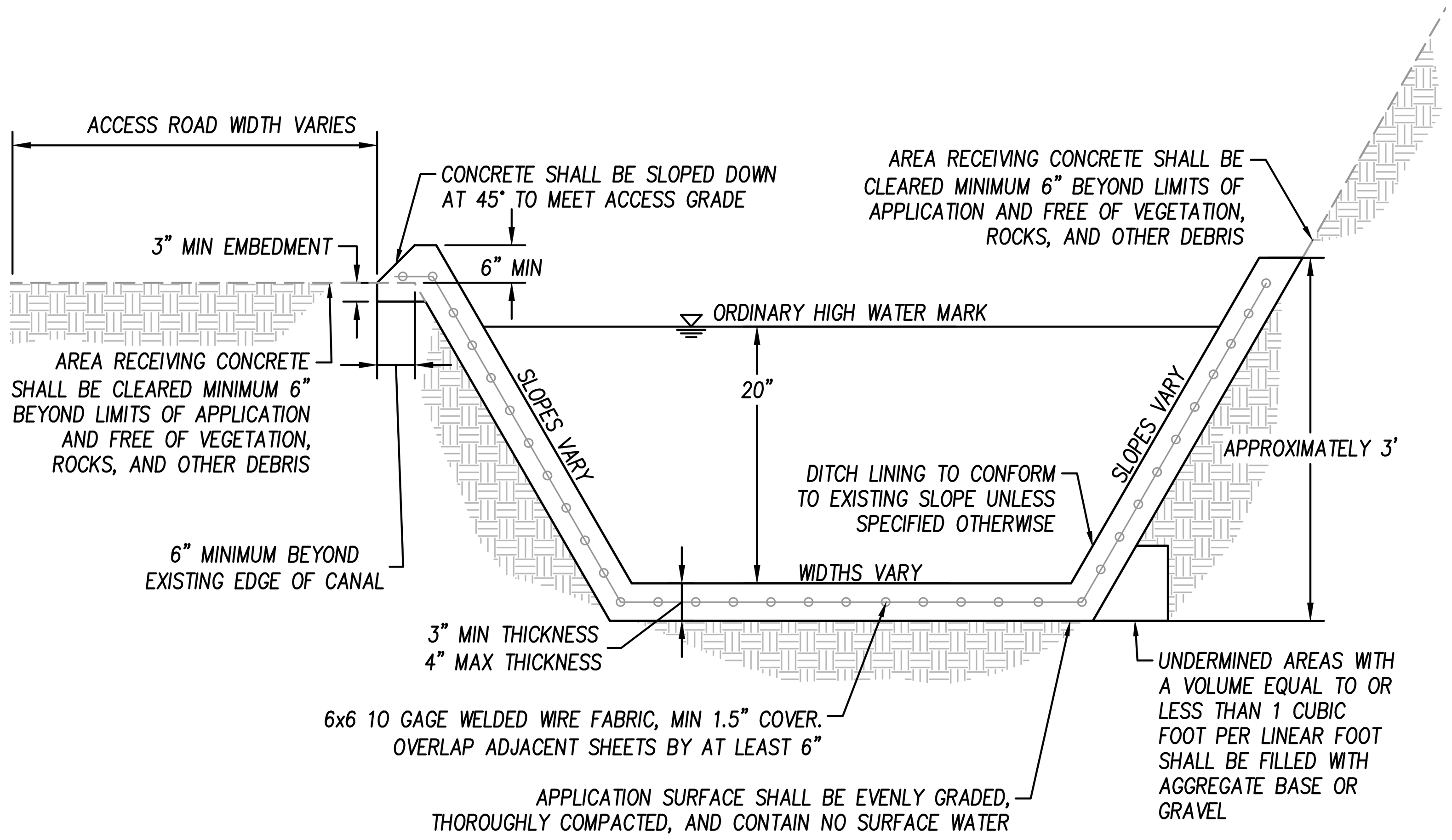
- If any amount of bone, shell, artifacts or human remains are uncovered during construction, all work shall be stopped within the immediate vicinity and the operation manager shall be notified of any findings. This may require that the district consult with a qualified archaeologist for an on-site evaluation. If the bone appears to be human, the El

Dorado County coroner and the Native American Heritage Commission must be contacted.

1.1.6 Required Permits and Approvals

The Proposed Project is located exclusively within the maintained canal easement/right-of-way owned and operated by GDPUD; therefore no new easements are required for Project implementation.

Based on results of a Biological Resources Assessment prepared for the Project (ECORP 2023) no federally or State-listed terrestrial or aquatic species would be impacted. However, a Section 1602 Streambed Alteration Agreement may be required from the California Department of Fish and Wildlife due to vegetation removal required to accommodate construction access.



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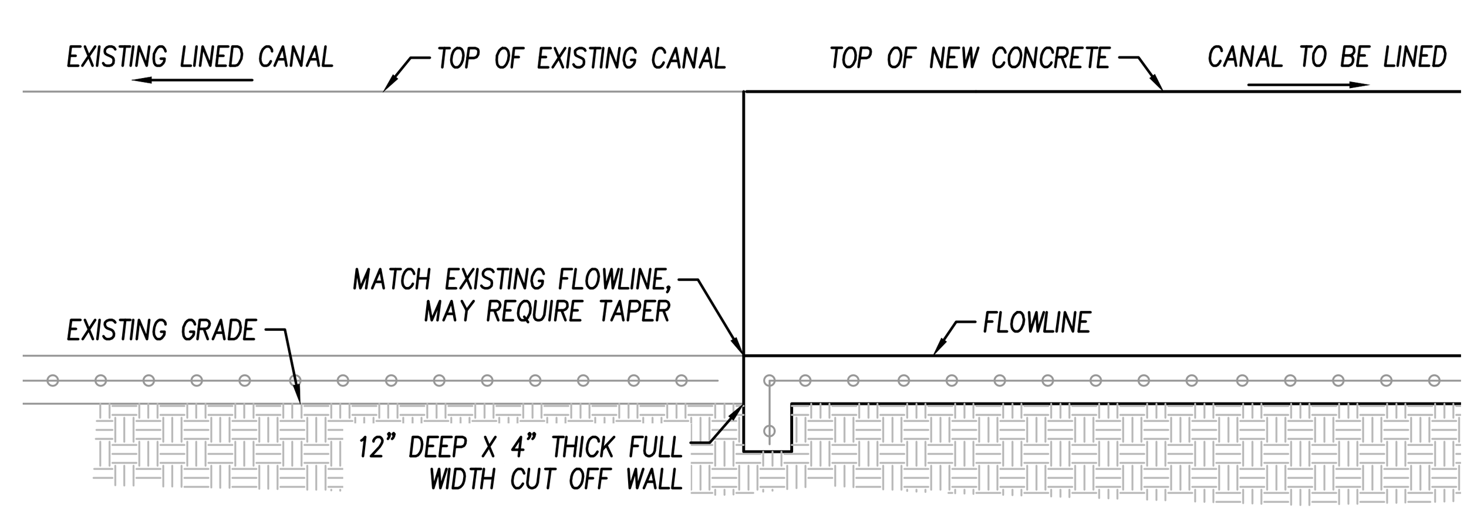

B - TYPICAL TIE IN OR END OF SECTION DETAIL
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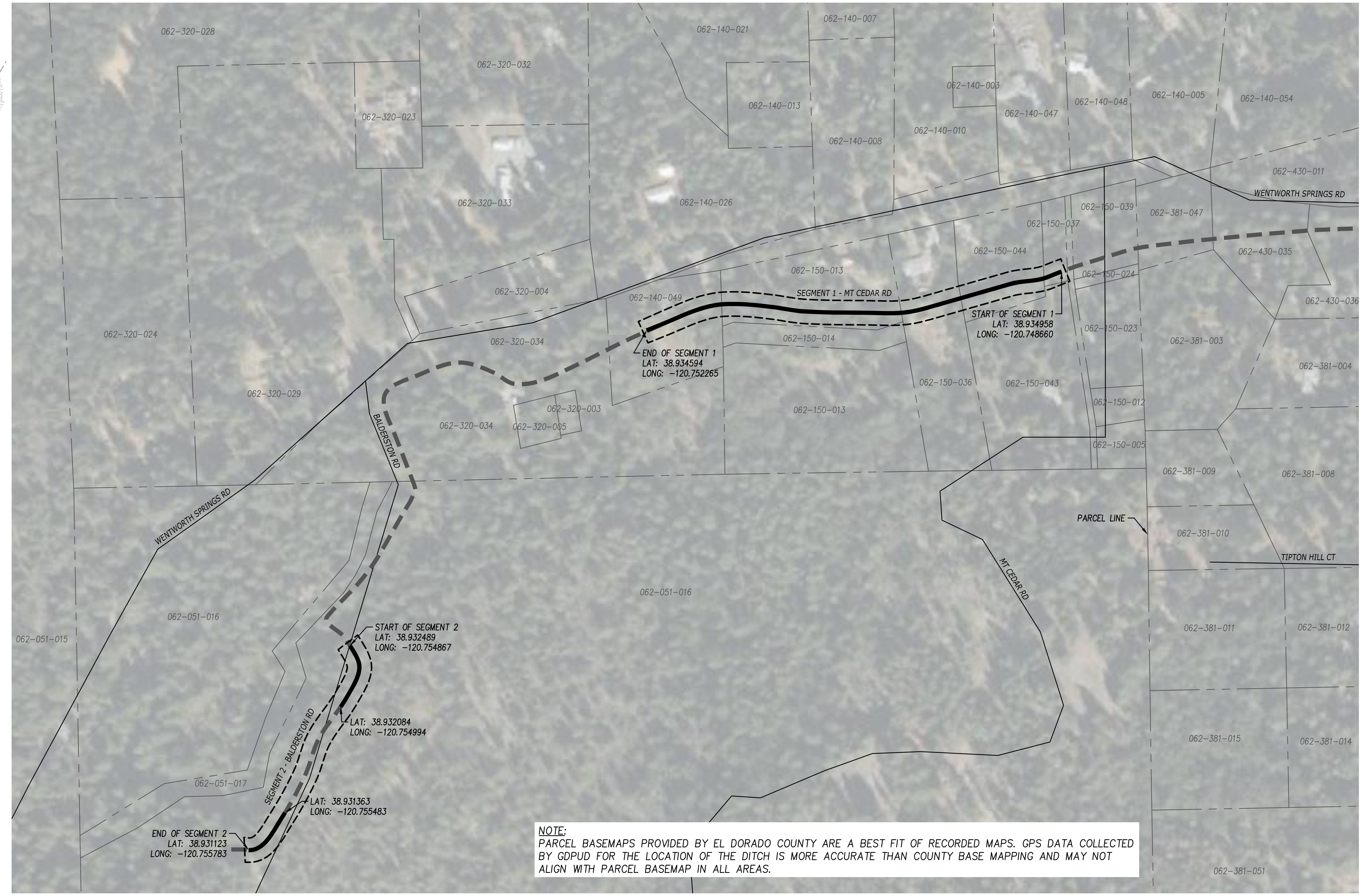

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━━━ (heavy solid)	CANAL TO BE LINED
———	ROADS
— - - —	PARCELS

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SCALE IN FEET

NO.	REVISIONS	BY	DATE
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BENCH MARK ELEV: N/A DATUM: N/A
DESCRIPTION:

DESIGN BY:	A. HOLLADAY
DRAWN BY:	J. GINNEVER
CHECKED BY:	D. HARDEN
SCALE:	1"=150'
DATE:	01/05/2024
PROJ NO.:	22110-03

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

REGISTERED PROFESSIONAL ENGINEER DAVID P. HARDEN No. C84216 CIVIL STATE OF CALIFORNIA

BEN|EN
TRUSTED ENGINEERING ADVISORS

Bennett Engineering Services
1082 Sunrise Avenue, Suite 100
Roseville, California 95661
T 916.783.4100
F 916.783.4110

GDPUD
UPPER CANAL RELIABILITY PROJECT
SITE OVERVIEW
GEORGETOWN DIVIDE PUBLIC UTILITIES DISTRICT
CALIFORNIA

G-2
2 OF 2

Figure 1-4. Site Overview and Plans

APPENDICES

Appendix A – GDPUD Canal Lining Biological Resource Assessment

Biological Resources Assessment
for the
Georgetown Divide Public Utilities District
Upper Canal Reliability Project

El Dorado County, California

Prepared For:

Georgetown Divide Public Utilities District

Prepared By:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS
2525 Warren Drive
Rocklin, California 95677

January 2024

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
˚F	Degrees Fahrenheit
BCC	Birds of Conservation Concern
BIOS	Biogeographic Information and Observation System
BO	Biological Opinion
BRA	Biological Resources Assessment
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act

Term	Definition
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct Population Segment
DSH	Diameter at Standard Height
EFH	Essential Fish Habitat
ESA	Federal Endangered Species Act
GDPUD	Georgetown Divide Public Utilities District
GPS	Global Positioning System
HCP	Habitat Conservation Plan
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCV	*A Manual of California Vegetation*
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
Plan	County of El Dorado Adopted General Plan
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 INTRODUCTION

At the request of Georgetown Divide Public Utility District (GDPUD), ECORP Consulting, Inc. has conducted Biological Resources Assessment (BRA) for the proposed GDPUD Upper Canal Reliability Project (Project) located near Georgetown, El Dorado County, California. The results of this assessment will support environmental review of the Project in accordance with the California Environmental Quality Act (CEQA) and federal Endangered Species Act and will provide the basis for identifying appropriate measures to lessen or avoid significant impacts to biological resources.

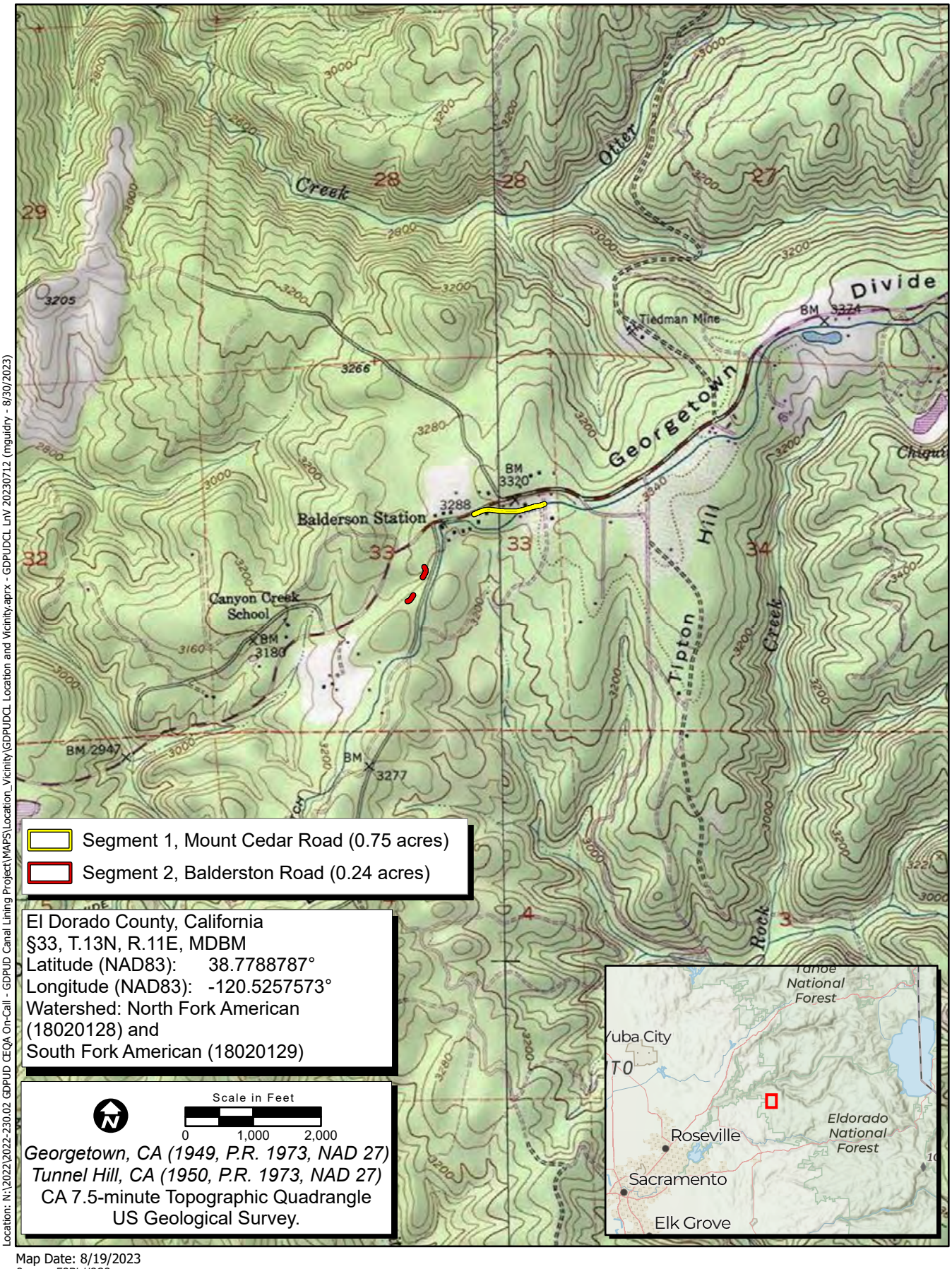
1.1 Project Location and Description

The approximately 0.99-acre Project is generally located southeast of Wentworth Springs Road, west of Mt. Cedar Road, and through Balderston Road. The Project consists of two segments of the Georgetown Ditch Water Conveyance System (Canal): Segment 1 extending west from Mount Cedar Road and Segment 2 along and crossing Balderston Road (Figure 1). Three discontinuous sections of canal totaling approximately 1,500 linear feet are included in the Project.

The Project entails the installation of concrete lining along these three Canal sections, which were identified as a high priority due to significant water loss, in order to improve GDPUD's water supply and reliability. The existing canal maintenance access road would first have overgrown vegetation trimmed by hand and fallen trees pruned/removed as needed to clear the maintenance road and gain access to the canal. No live trees are to be removed. All cut vegetation would be transported by backhoe and/or construction crew members, loaded in pickup trucks, and transported offsite for disposal. Following vegetation clearing, crews would mobilize to the Project Site, establish the current phase work limits, and install temporary construction fencing to protect any environmentally sensitive areas.

Piping installation would occur during the dry season. GDPUD would provide source control and cut the water supply from Stumpy Meadows Reservoir to dewater the canal in the Project Area. A biologist would be onsite to monitor the Project Area during the initial dewatering. The dewatered Canal section would be cleared of debris and minorly reshaped using hand tools and a small backhoe operated from the adjacent maintenance road. Following reshaping, welded wire fence would be installed in the Canal for structural support. A concrete pump and hose would then be used to deliver concrete from delivery trucks stationed at the nearest access road. Concrete would be delivered by commercial ready-mix trucks which would park within public rights-of-way adjacent to the trailer mounted concrete pump. For Segment 1, the trailer mounted pump would be parked within public right-of-way on the west shoulder of Mount Cedar Road, south of the Canal at the maintenance road intersection with Mount Cedar Road. Segment 2 would involve at least two additional parking locations along the shoulder of Balderston Road.

Upon completion, all temporarily disturbed portions of the access road would be treated with anti-scouring measures such as hydroseeding, straw waddles, and/or mulching, if needed. All wash water debris would be removed from washout location(s) at the end of the Project and no wash water or leftover concrete would be spoiled onsite or near waterways.



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Map Date: 8/19/2023
Sources: ESRI, USGS

Figure 1. Project Location and Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

1.2 Biological Study Area

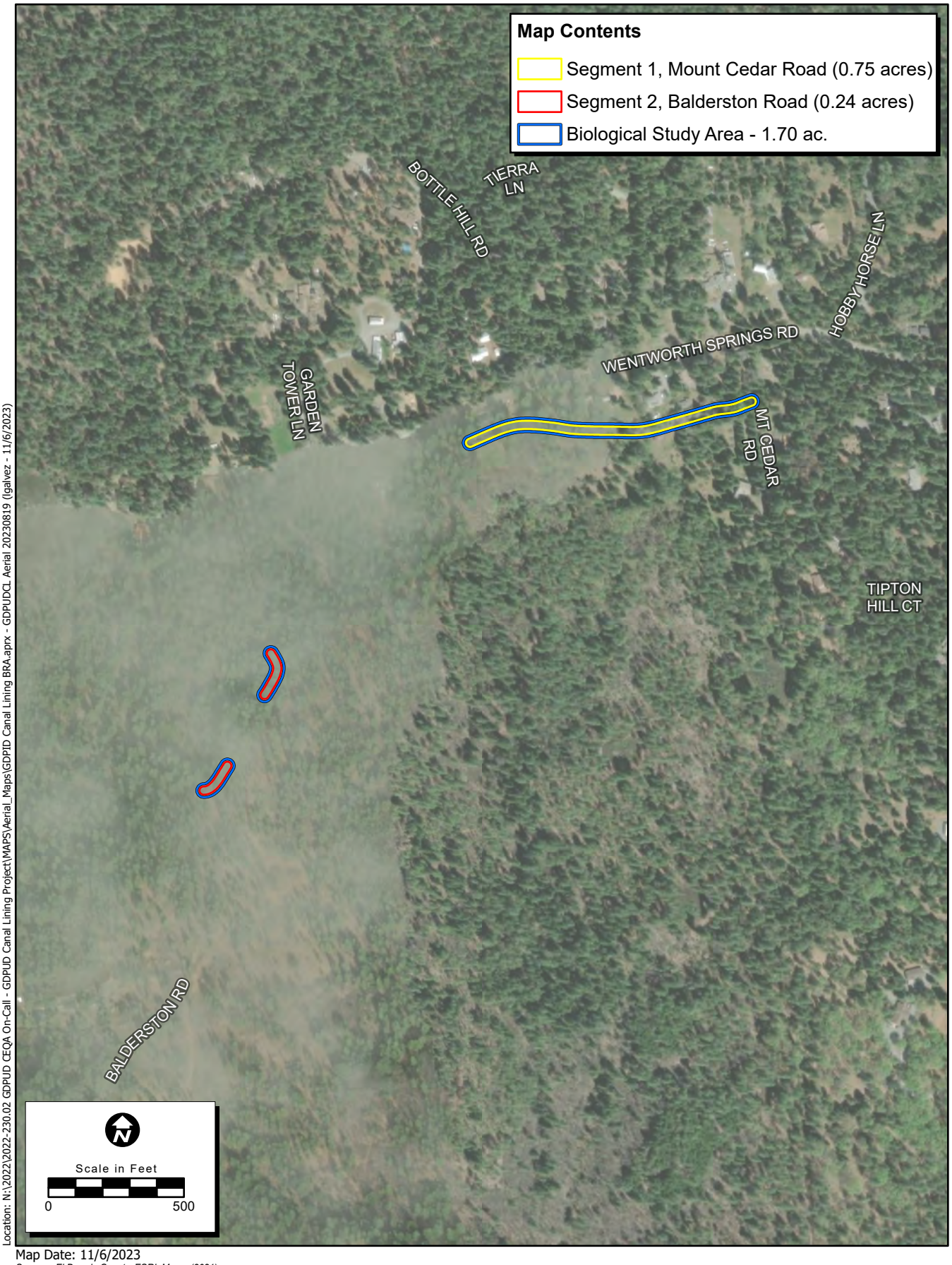
The Biological Study Area (BSA) includes all areas where Project-related activities may result in impacts to sensitive biological resources (Figure 2). The BSA includes the Project area and the surrounding "prescriptive" easement that will be used to access the Canal. The easement extends 25 feet in both directions from the centerline of the canal. The approximately 1.70-acre BSA corresponds to a portion of Section 33, Township 13 North, and Range 11 east (Mount Diablo Base and Meridian) of the "Georgetown, California" and "Tunnel Hill, California" 7.5-minute quadrangles (U.S. Geological Survey [USGS] 1949 [photo revised 1973] and 1950 [photo revised 1973], respectively; Figure 1). The approximate center of the BSA is located at 38.7788787° latitude and -120.5257573° longitude within the North Fork American and South Fork American watersheds (Hydrological Unit Codes #18020128 and #18020129, respectively; Natural Resources Conservation Service [NRCS] et al. 2019).

1.3 Purpose of this Biological Resources Assessment

The purpose of this BRA is to assess the potential for occurrence of special-status plant and animal species or their habitats, and other sensitive or protected resources such as migratory birds, sensitive natural communities, riparian habitat, oak woodlands, and potential waters of the U.S. or State, including wetlands, within the BSA. This assessment does not include determinate field surveys conducted according to agency-promulgated protocols. The conclusions and recommendations presented in this report are based upon a review of available literature and the results of site reconnaissance field surveys.

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

- are listed, proposed for listing, or candidates for future listing as threatened or endangered under the federal Endangered Species Act (ESA);
- are listed or candidates for future listing as threatened or endangered under the California ESA;
- meet the definitions of endangered or rare under Section 15380 of the CEQA Guidelines;
- are identified as a Species of Special Concern (SSC) by the California Department of Fish and Wildlife (CDFW);
- are birds identified as Birds of Conservation Concern (BCC) by the U.S. Fish and Wildlife Service (USFWS);
- are plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California" or "rare, threatened, or endangered in California but more common elsewhere" (California Rare Plant Ranks [CRPRs] 1 and 2), plants listed by CNPS as species about which more information is needed to determine their status (California Rare Plant Rank [CRPR] 3), and plants of limited distribution (CRPR 4);



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Map Date: 11/6/2023

Sources: El Dorado County, ESRI, Maxar (2021)

Figure 2. Biological Study Area

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2022-230.02 GDPUD Upper Canal Reliability Project

- are plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.); or
- are fully protected in California in accordance with the California Fish and Game Code, Sections 3511 (birds), 4700 (mammals), 5050 (amphibians and reptiles), and 5515 (fishes).

2.0 REGULATORY SETTING

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The federal ESA protects plants and animals that are listed as endangered or threatened by the USFWS or the National Marine Fisheries Service. Section 9 of the ESA prohibits the taking of listed wildlife, where take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 Code of Federal Regulations [CFR] 17.3). For plants, the ESA prohibits removing or possessing any listed plant on federal land, maliciously damaging or destroying any listed plant in any area, or removing, cutting, digging up, damaging, or destroying any such species in knowing violation of state law (16 U.S. Code 1538). Under Section 7 of ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect a listed (or proposed) species (including plants) or its designated Critical Habitat. Through consultation and the issuance of a Biological Opinion (BO), the USFWS may issue an incidental take statement allowing take of a listed species that is incidental to an otherwise authorized activity provided the activity will not jeopardize the continued existence of the species. Section 10 of the ESA provides for issuance of incidental take permits where no other federal actions are necessary provided a Habitat Conservation Plan (HCP) is developed.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The protections of the MBTA extend to disturbances that result in abandonment of a nest with eggs or young. As authorized by the MBTA, the USFWS may issue permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits can be found in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits.

2.1.3 Federal Clean Water Act

The purpose of the federal Clean Water Act (CWA) is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into Waters of the U.S. without a permit from the U.S. Army Corps of Engineers (USACE). The definition of Waters of the U.S. includes the following:

- Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- The territorial seas;
- Interstate waters;
- Impoundments of waters otherwise defined as Waters of the U.S under this definition;
- Tributaries of a) Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, b) the territorial seas, and c) interstate waters;
- Wetlands adjacent to a) Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide, b) the territorial seas, and c) interstate waters;
- Wetlands adjacent (defined as having a continuous surface connection) to relatively permanent, standing or continuously flowing bodies of water identified as impoundments of waters and with a continuous surface connection to those waters; and
- Intrastate lakes and ponds that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the water previously identified.

Wetlands are defined as those areas:

> "that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b).

Waters excluded from the definition of Waters of the U.S. include prior converted cropland (defined by the U.S. Department of Agriculture), waste treatment systems, ditches (including roadside ditches) excavated wholly in and draining only dry land, artificially irrigated areas that would revert to dry land if the irrigation ceased, artificial lakes or ponds, artificial reflecting pools or swimming pools, waterfilled depressions (e.g., created in dry land incidental to construction activity, pits excavated in dry land for purposes of obtaining fill, sand, or gravel), swales and erosional features (e.g., gullies, small washes) that are characterized by low volume, infrequent, or short-duration flow. Substantial impacts to Waters of the U.S. may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB).

2.2 State or Local Regulations

2.2.1 California Fish and Game Code

2.2.1.1 California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050-2116) generally parallels the main provisions of the federal ESA, but unlike its federal counterpart, the California ESA applies the take prohibitions to species proposed for listing (called *candidates* by the state). Section 2080 of the California Fish and Game Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. *Take* is defined in Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Section 2081 allows CDFW to authorize incidental take permits if species-specific minimization and avoidance measures are incorporated to fully mitigate the impacts of the project.

2.2.1.2 Fully Protected Species

The state of California first began to designate species as *fully protected* prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the state and/or federal ESAs. Previously, the regulations that implement the Fully Protected Species Statute (California Fish and Game Code § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provided that fully protected species may not be taken or possessed at any time. However, on July 10, 2023, Senate Bill 147 (SB147) was signed into law, authorizing CDFW to issue take permits under the California ESA for fully protected species for qualifying projects through 2033. Qualifying projects include:

- A maintenance, repair, or improvement project to the State Water Project, including existing infrastructure, undertaken by the Department of Water Resources.
- A maintenance, repair, or improvement project to critical regional or local water agency infrastructure.
- A transportation project, including any associated habitat connectivity and wildlife crossing project, undertaken by a state, regional, or local agency, that does not increase highway or street capacity for automobile or truck travel.
- A wind project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the state to a point of junction with any California based balancing authority.

- A solar photovoltaic project and any appurtenant infrastructure improvement, and any associated electric transmission project carrying electric power from a facility that is located in the state to a point of junction with any California-based balancing authority.

CDFW may also issue licenses or permits for take of these species for necessary scientific research or live capture and relocation, and may allow incidental take for lawful activities carried out under an approved Natural Community Conservation Plan within which such species are covered.

2.2.1.3 Native Plant Protection Act

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

2.2.1.4 California Fish and Game Code Special Protections for Birds

Sections 3503, 3513, and 3800 of the California Fish and Game Code specifically protect birds. Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 prohibits the take, possession, or destruction of any birds in the orders Strigiformes (owls) or Falconiformes (hawks and eagles), as well as their nests and eggs. Section 3513 prohibits the take or possession of any migratory nongame bird as designated in the MBTA. Section 3800 states that, with limited exceptions, it is unlawful to take any nongame bird, defined as all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds. These provisions, along with the federal MBTA, serve to protect all nongame birds and their nests and eggs, except as otherwise provided in the code.

2.2.1.5 Lake or Streambed Alteration Agreements

Section 1602 of the California Fish and Game Code requires that a Notification of Lake or Streambed Alteration be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The notification must incorporate proposed measures to protect affected fish and wildlife resources. During their review, CDFW may suggest additional protective measures. A Lake or Streambed Alteration Agreement (LSAA) is the final proposal mutually agreed upon by CDFW and the applicant. Projects that require an LSAA often also require a permit from the USACE under Section 404 of the CWA. The conditions of the Section 404 permit and the LSAA frequently overlap in these instances.

2.2.2 California Oak Woodlands Conservation Act

The California Oak Woodlands Conservation Act was passed in 2001 to address loss of oak woodland habitats throughout the state. As a result of the Act, the Oak Woodland Conservation Program was established to provide funding for conservation and protection of California oak woodlands. Public

Resources Code Section 21083.4 went into effect as of January 1, 2005, and requires lead agencies to analyze potential effects to oak woodlands during the CEQA process. If it is determined that a project may have a significant effect on oak woodlands, the lead agency must implement one of several mitigation alternatives, including conservation of oak woodlands through conservation easements, planting or restoration of oak woodlands, contribution of funds to the Oak Woodlands Conservation Fund, or other appropriate mitigation measures.

2.2.3 Porter-Cologne Water Quality Act

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

2.2.4 California Environmental Quality Act

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

2.2.4.1 CEQA Significance Criteria

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

Section 15064.7 of the CEQA Guidelines encourages local agencies to develop and publish the thresholds that the agency uses in determining the significance of environmental effects caused by projects under its review. However, agencies may also rely upon the guidance provided by the expanded Initial Study

checklist contained in Appendix G of the CEQA Guidelines. Pursuant to Appendix G, impacts to biological resources would normally be considered significant if the project would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS;
- have a substantial adverse effect on federally protected Waters of the U.S. including wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

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

2.2.4.2 Species of Special Concern

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

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered, and meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.

- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with threatened habitats. Projects that result in substantial impacts to SSC may be considered significant under CEQA.

2.2.4.3 USFWS Bird of Conservation Concern

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under ESA." To meet this requirement, the USFWS published a list of BCC (USFWS 2021) for the U.S. The list identifies the migratory and nonmigratory bird species (beyond those already designated as federally threatened or endangered) that represent USFWS' highest conservation priorities. Depending on the policy of the lead agency, projects that result in substantial impacts to BCC may be considered significant under CEQA.

2.2.4.4 California Rare Plant Ranks

The CNPS maintains the *Rare Plant Inventory* (CNPS 2023a), which provides a list of plant species native to California that are threatened with extinction, have limited distributions, or low populations. Plant species meeting one of these criteria are assigned to one of six CRPRs. The rank system was developed in collaboration with government, academia, non-governmental organizations, and private sector botanists, and is jointly managed by CDFW and the CNPS. The CRPRs are currently recognized in the California Natural Diversity Database (CNDDB). The following are definitions of the CNPS CRPRs:

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

Additionally, the CNPS has defined Threat Ranks that are added to the CRPR as an extension. Threat Ranks designate the level of threat on a scale of 0.1 through 0.3, with 0.1 being the most threatened and 0.3 being the least threatened. Threat Ranks are generally present for all plants ranked 1B, 2B, or 4, and for the majority of plants ranked 3. Plant species ranked 1A and 2A (presumed extirpated in California), and some species ranked 3, which lack threat information, do not typically have a Threat Rank extension. The following are definitions of the CNPS Threat Ranks:

- Threat Rank 0.1 – Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

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

Factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Rank; and differences in Threat Ranks do not constitute additional or different protection (CNPS 2023a). Depending on the policy of the lead agency, substantial impacts to plants ranked 1A, 1B, 2A, or 2B are typically considered significant under CEQA Guidelines Section 15380. Significance under CEQA is typically evaluated on a case-by-case basis for plants ranked 3 or 4.

2.2.4.5 Sensitive Natural Communities

Sensitive natural communities are vegetation communities that are imperiled or vulnerable to environmental effects of projects. CDFW maintains the California Natural Community List (CDFW 2023d), which provides a list of vegetation alliances, associations, and special stands as defined in *A Manual of California Vegetation Online* (CNPS 2023b), along with their respective state and global rarity ranks, if applicable. Natural communities with a state rarity rank of S1, S2, or S3 are considered sensitive natural communities. Depending on the policy of the lead agency, impacts to sensitive natural communities may be considered significant under CEQA.

2.2.4.6 Wildlife Movement Corridors and Nursery Sites

Impacts to wildlife movement corridors or nursery sites may be considered significant under CEQA. As part of the California Essential Habitat Connectivity Project, CDFW and Caltrans maintain data on Essential Habitat Connectivity areas. This data is available in the CNDDB. The goal of this project is to map large intact habitat or natural landscapes and potential linkages that could provide corridors for wildlife. In urban settings, riparian vegetated stream corridors can also serve as wildlife movement corridors. Nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries, bat maternity roosts, and mule deer critical fawning areas. These data are available through CDFW's Biogeographic Information and Observation System (BIOS) database or as occurrence records in the CNDDB and are supplemented with the results of the field reconnaissance.

2.2.5 El Dorado County General Plan

The County of El Dorado Adopted General Plan (Plan) is the governing document for planning and development related decisions within El Dorado County limits (County of El Dorado 2019).

The Conservation and Open Space Element of the Plan generally outlines goals, objectives, policies, mitigation requirements, and programs related to the protection of special-status species, aquatic resources, riparian areas, wildlife, and vegetation of significant biological, ecological, and recreational value, including Pine Hill rare plant species, forest, oak woodland, and tree resources.

2.2.6 El Dorado County Oak Resources Conservation Ordinance

Chapter 130.39 of the El Dorado County Code of Ordinances establishes standards for implementing the El Dorado County Oak Resources Management Plan in compliance with General Plan Policy 7.4.4.4 and Implementation Measure CO-P (mitigation requirements for impacts to oak resources). An Oak Tree and/or Oak Woodland Removal Permit is required for all discretionary projects with impacts to Oak Resources. Oak Resources include individual native oaks, Heritage Trees, and oak woodlands, and are defined as follows (Municode 2022):

- *Individual native oak tree:* any live tree of the genus *Quercus* and species *douglasii* (blue oak), *lobata* (valley oak), *kelloggii* (California black oak), *wislizenii* (interior live oak), *chrysolepis* (canyon live oak) *garryana* (Oregon oak), or hybrids, thereof, and Oracle oak (*Quercus x morehus*) with a single-trunk measuring greater than 6 inches Diameter at Standard Height (DSH), or a multiple trunk with an aggregate DSH measuring greater than 10 inches, and is not a Heritage Tree.
- *Heritage tree:* any live native oak tree of the species listed above with a single trunk measuring 36 inches DSH or greater, or a multiple trunk with an aggregate DSH of 36 inches or greater.
- *Oak woodland(s):* an oak stand with greater than ten percent canopy cover or that may have historically supported greater than ten percent canopy cover.
- Mitigation is required for impacts to Oak Resources, and may occur through in-lieu fee payment, Deed Restriction or Conservation Easement (for oak woodland only), on-site or off-site replacement planting, or a combination of those options. Additional details, including mitigation ratios, replacement tree quantities, and mitigation maintenance, monitoring and reporting, are further described in the Chapter.

3.0 METHODS

3.1 Literature Review

ECORP biologists performed a review of existing available information for the BSA. Literature sources included current and historical aerial imagery, previous biological studies conducted for the area (if any), topographic mapping, soil survey mapping available from the NRCS *Web Soil Survey*, and USFWS National Wetlands Inventory (NWI) mapping. ECORP reviewed the following resources to identify special-status plant and wildlife species that have been documented in or near the BSA:

- CDFW's California Natural Diversity Database (CNDDB) data for the "Georgetown, California" and "Tunnel Hill, California" 7.5-minute quadrangles and the surrounding 10 quadrangles (CDFW 2024);
- CNPS Rare Plant Inventory data for the "Georgetown, California" and "Tunnel Hill, California" 7.5-minute quadrangle and the surrounding 10 quadrangles (CNPS 2023a); and
- USFWS Information for Planning and Consultation (IPaC) Resource Report List for the BSA (USFWS 2023b).

The results of the database queries are provided in Appendix A. Each special-status species identified in the literature review is evaluated for its potential to occur in the BSA in Section 4 based on available information concerning species habitat requirements and distribution, occurrence data, and the findings of the site reconnaissance.

3.2 Site Reconnaissance

ECORP biologist Carmen David conducted a site reconnaissance visit on July 27, 2023. The biologist visually assessed the BSA while walking meandering transects through all portions of the site. Areas that were not accessible by foot were scanned using binoculars. The following biological resource information was collected:

- Characteristics and approximate boundaries of vegetation communities and other land cover types;
- Plant and animal species or their sign directly observed;
- Characteristics and approximate extents of potential aquatic resources observed; and
- Incidental observations of special habitat features such as burrows, active raptor nests, and potential bat roost sites.

Vegetation communities were qualitatively assessed and mapped based on dominant plant composition. Vegetation community classification was based on the classification systems presented in *A Manual of California Vegetation Online* (CNPS 2023b). Special attention was given to identifying those portions of the BSA with the potential to support special-status species or sensitive habitats. Data were recorded on a Global Positioning System (GPS) unit, field notebooks, and/or maps. Photographs were taken during the survey to provide visual representation of the conditions within the BSA.

4.0 RESULTS

4.1 Site Characteristics and Land Use

The BSA is located on gently sloping terrain in a rural area. The BSA is situated at an elevational range of approximately 3,260 to 3,300 feet above mean sea level in the Northern High Sierra Nevada region of the California floristic province (Jepson eFlora 2023). The average winter low temperature is 44.3 degrees Fahrenheit (˚F), and the average summer high temperature is 74.0˚F; the average annual precipitation is approximately 50.62 inches at the Georgetown, California station, which is approximately 2.5 miles from the BSA (National Oceanic and Atmospheric Administration [NOAA] 2023a).

The BSA is currently occupied by the Canal, associated infrastructure, and roads. Vegetation communities and plant species composition are described in further detail below.

Land uses surrounding the BSA include residential structures and roads. Figure 2 provides an overview of the Project setting.

Representative photographs of the BSA are provided in Appendix B.

4.2 Soils and Geology

Soil survey mapping for the BSA was obtained from the NRCS *Web Soil Survey* (NRCS 2023c; Figure 3). Table 1 provides an overview of the soil series mapped within the BSA and key features of the soil series, such as hydric rating or presence of serpentine or gabbroic soil material.

Table 1. Soil Series Mapped in the Biological Study Area

Map Unit	Key Features
101pc – Aiken loam, 9 to 15 percent slopes, low precip	Derived from volcanic parent material
AfB – Aiken loam, 2 to 9 percent slopes, C Lower Montane	Derived from volcanic parent material
JtD – Josephine silt loam, 15 to 30 percent slopes	None

The Aiken series consists of very deep, well-drained soils formed in material weathered from basic volcanic rocks. The Josephine series consists of deep, well-drained soils that formed in colluvium and residuum weathered from altered sedimentary and extrusive igneous rocks (NRCS 2023c).

No soils mapped within the BSA are considered hydric, as their soil units do not contain hydric components (NRCS 2023a). No soils derived from serpentine or gabbroic parent materials are mapped within the BSA or its immediate vicinity (Horton 2017; Jennings et al. 1977; NRCS 2023b). Soils derived from volcanic parent material are mapped within the BSA (Jennings et al. 2010).

4.3 Vegetation Communities and Land Cover Types

Vegetation communities and land cover types within the BSA are described in the following sections, as observed during the site reconnaissance. Vegetation community classification was based on the classification systems presented in *A Manual of California Vegetation Online* (CNPS 2023b). A full list of plants observed onsite can be found in Appendix C.

4.3.1 Ponderosa Pine - Incense Cedar Forest

The ponderosa pine (*Pinus ponderosa*) - incense cedar (*Calocedrus decurrens*) forest comprises the majority of the BSA. Ponderosa pine and incense cedar are co-dominant in the canopy. Additional subcanopy species include California black oak (*Quercus kelloggii*) and Pacific madrone (*Arbutus menziesii*). The understory is dominated by Himalayan blackberry (*Rubus armeniacus*) with sweet pea (*Lathyrus latifolius*), hedgehog dog-tail grass (*Cynosurus echinatus*), and cut-leaved blackberry (*Rubus laciniatus*).

This vegetation community most resembles the *Pinus ponderosa - Calocedrus decurrens - Pseudotsuga menziesii* Forest and Woodland Alliance as listed in CDFW's California Natural Community List (CDFW 2023d). This alliance has a state rarity ranking of S4 and is not considered a sensitive natural community (CNPS 2023b). The ponderosa pine – incense cedar forest within the BSA does not resemble any known sensitive associations.

Map Features

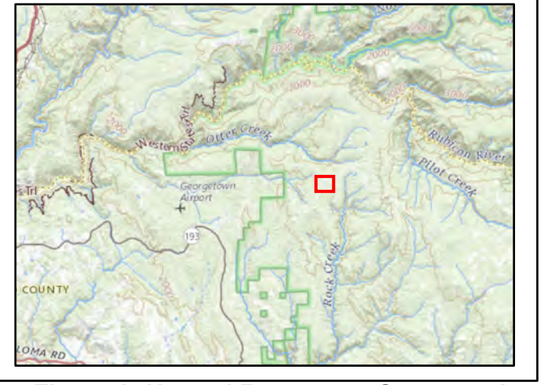
- Segment 1, Mount Cedar Road (0.75 acres)
- Segment 2, Balderston Road (0.24 acres)
- Biological Study Area - 1.70 ac.

Series Number - Series Name

- 101pc - Aiken loam, 9 to 15 percent slopes, low precip
- AfB - Aiken loam, 2 to 9 percent slopes, C Lower Montane
- JtD - Josephine silt loam, 15 to 30 percent slopes

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for EL DORADO COUNTY, CA

Sources: GDPUD Company, Esri World Imagery



Location: N:\2022\2022-230.02 GDPUD CEQA On-Call - GDPUD Canal Lining Project\MAPS\Soils_and_Geology\GDPUD Canal Lining Soils.aprx - GDPUD Canal Lining Soils (tgalvez - 11/6/2023)

Map Date: 11/6/2023

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 400

Figure 3. Natural Resources Conservation Service Soil Types
2022-230.02 GDPUD Upper Canal Reliability Project

4.3.2 Disturbed/Developed

The disturbed or developed land cover type includes roads and driveways. Portions of Balderston Road are included in Segment 2. Vegetation is limited to road margins and is composed of species found in the adjacent forest.

4.4 Aquatic Resources

The desktop review of the NWI showed three mapped aquatic feature types in the vicinity of the BSA. These include 1) riverine drainage courses, 2) freshwater forested/scrub-shrub wetlands, and 3) a freshwater pond (USFWS 2023a). The BSA is shown to intersect all three feature types (Figure 4).

None of these NWI-mapped features were identified in or near the BSA during the ECORP field reconnaissance site visit. Further, inspection of public time-series imagery did not indicate the presence of these NWI-mapped features in the vicinity of the BSA during the period 1985-2023. Because NWI maps are largely produced by digitizing commercially available data (imagery and topographic data sets), with results infrequently confirmed in the field, false positives for aquatic resources are not uncommon.

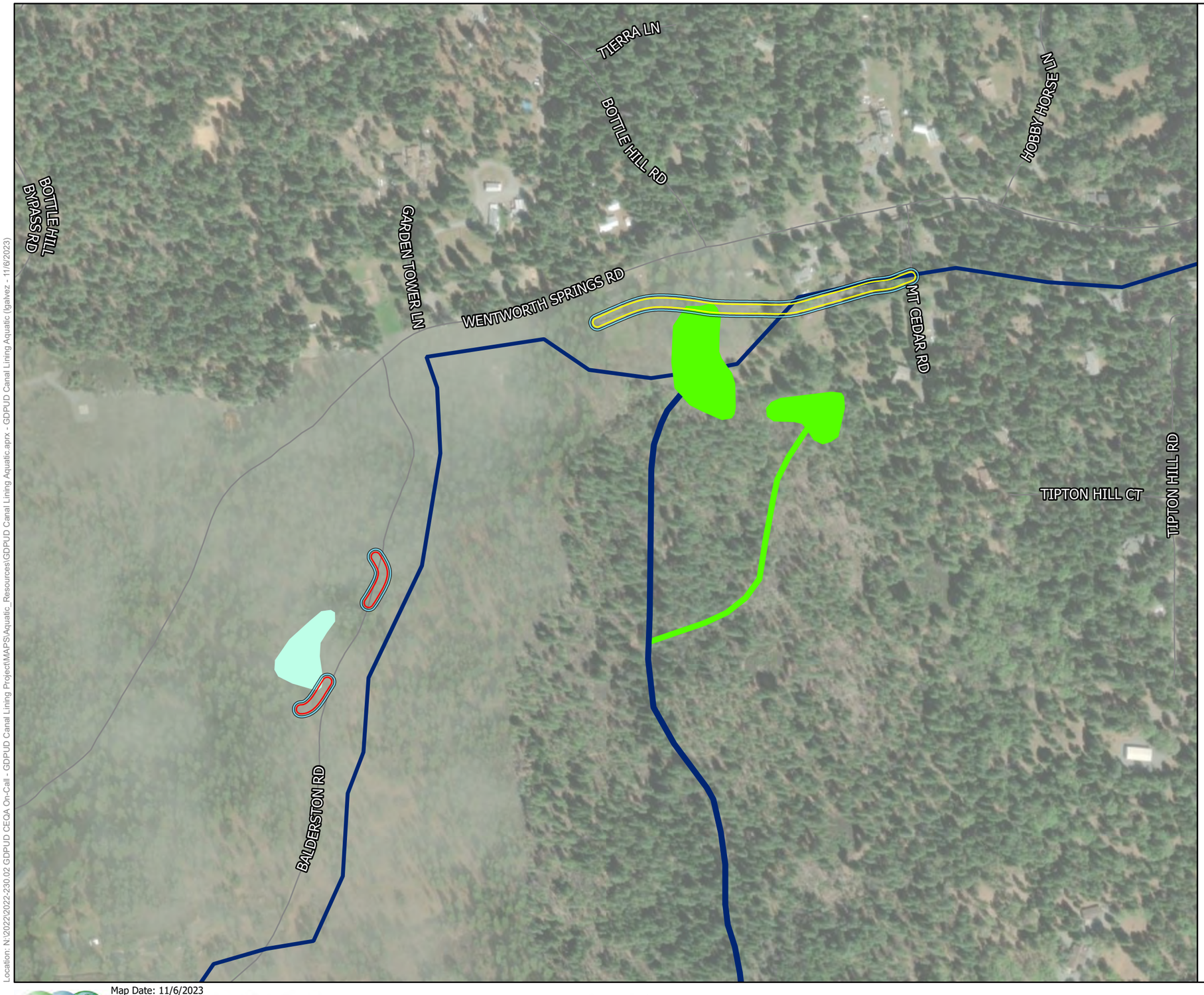
Based on the reconnaissance site visit conducted by ECORP, the only aquatic resource located within the BSA is the GDPUD Canal. The Canal is a constructed channel used to convey surface water. Based on the site reconnaissance and a review of historic topographic quadrangle maps and aerial photos, the Canal appears to have been constructed entirely in uplands, and neither relocated nor drained a natural aquatic resource of any kind. This constructed facility is operated and regularly maintained by GDPUD as a water supply conveyance facility. Based on this evaluation, the Canal does not appear to meet the criteria for a Water of the U.S. or Water of the State.

4.4.1 Canal

The Canal is a constructed channel used for water conveyance west from Stumpy Meadows Reservoir to Georgetown and beyond. The Canal is owned and operated by GDPUD who maintains the Canal and keeps the channel free of emergent vegetation and downed woody debris. Within the BSA, the Canal is earthen and unlined. Himalayan blackberry dominates the margins of the Canal.

4.5 Wildlife

The vegetation communities in the BSA provide habitat for a variety of wildlife species. Wildlife species observed onsite include California scrub-jay (*Aphelocoma californica*), Bewick's wren (*Thryomanes bewickii*), song sparrow (*Melospiza melodia*), and western gray squirrel (*Sciurus griseus*). Other species typically associated with the vegetation communities found in the BSA include bushtit (*Psaltriparus minimus*), acorn woodpecker (*Melanerpes formicivorus*), spotted towhee (*Pipilo maculatus*), northern flicker (*Colaptes auratus*), American robin (*Turdus migratorius*), lesser goldfinch (*Spinus psaltria*), mountain chickadee (*Poecile gambeli*), turkey vulture (*Cathartes aura*), Steller's jay (*Cyanocitta stelleri*) and red-tailed hawk (*Buteo jamaicensis*).



Map Contents

- Segment 1, Mount Cedar Road (0.75 acres)
- Segment 2, Balderston Road (0.24 acres)
- Biological Study Area - 1.70 ac.

NWI Type

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Sources: GDPUD Company. NWI 2022, El Dorado County

Location: N:\2022\2022-230.02 GDPUD CEQA On-Call - GDPUD Canal Lining Project\MAPS\Aquatic_Resources\GDPUD Canal Lining Aquatic.aprx - GDPUD Canal Lining Aquatic (tgalvez - 11/6/2023)

Map Date: 11/6/2023

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 400

Figure 4. National Wetlands Inventory

2022-230.02 GDPUD Upper Canal Reliability Project

4.6 Special-Status Species

Table 2 presents the full list of special-status plant and animal species identified through the literature review. For each species, the table provides the listing status, a brief description of habitat requirements and/or species ecology, a determination of the potential to occur within the BSA, and the rationale for that determination. The potential for each species to occur onsite was assessed using the following criteria:

- *Present* – Species was observed during the site visit or is known to occur within the BSA based on recent documented occurrences within the CNDDB or other literature.
- *Potential to Occur* – Suitable habitat (including soils and elevation requirements) occurs in the BSA and the species is known or expected to occur in the Project vicinity based on available data sources or professional knowledge/experience.
- *Low Potential to Occur* – Marginal or limited amounts of habitat occur or the species is not known to occur in the vicinity of the Project based on CNDDB records and other available information.
- *Absent* – No suitable habitat (including soils and elevation requirements) and the species is not known to occur within the vicinity of the Project based on CNDDB records and other documentation.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Plants					
Congdon's onion (*Allium sanbornii* var. *congdonii*)	–	–	4.3	Chaparral and cismontane woodland with serpentine or volcanic soils. Elevation: 985'–4,575' Bloom Period: April–July	Low potential to occur. While most available information indicates this species is a serpentine endemic (Safford and Miller 2020) and there are no gabbroic or serpentine soils within the BSA, there is uncertainty about whether this species may occur on volcanic substrates, and there is volcanic geology in the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Sanborn's onion (*Allium sanbornii* var. *sanbornii*)	–	–	4.2	Chaparral, cismontane woodland, and lower montane coniferous forests, usually with gravelly, serpentine soil. Elevation: 855'–4,955' Bloom Period: May–September	Low potential to occur. There are no gabbroic or serpentine soils within the BSA, however the forest community within the BSA may provide marginally suitable habitat.
True's manzanita (*Arctostaphylos mewukka* ssp. *truei*)	–	–	4.2	Chaparral and lower montane coniferous forest, sometimes on roadsides. Elevation: 1,395'–4,560' Bloom Period: February–July	Low potential to occur. While there is no chaparral, the forest community within the BSA may provide marginally suitable habitat.
Nissenan manzanita (*Arctostaphylos nissenana*)	–	–	1B.2	Rocky soils within closed–cone coniferous forest or chaparral. Elevation: 1,475'–3,610' Bloom Period: February–March	Absent. No suitable habitat within the BSA.
Sierra bolandra (*Bolandra californica*)	–	–	4.3	Mesic, rocky soils in lower montane coniferous forest and upper montane coniferous forest. Elevation: 3,200'–8,040' Bloom Period: June–July	Absent. No suitable rocky habitat within the BSA.
Pleasant valley mariposa–lily *(Calochortus clavatus* var. *avius)*	–	–	1B.2	Josephine silt loam and volcanic soils within lower montane coniferous forest. Elevation: 1,000'–5,905' Bloom Period: May–July	Potential to occur. The forest community within the BSA may provide suitable habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Stebbins' morning–glory *(Calystegia stebbinsii)*	FE	CE	1B.1	Gabbroic or serpentine soils in chaparral and cismontane woodland. Elevation: 605'–3,575' Bloom Period: April–July	Absent. There are no gabbroic or serpentine soils within the BSA.
Van Zuuk's morning–glory *(Calystegia vanzuukiae)*	–	–	1B.3	Gabbroic or serpentine soils within chaparral and cismontane woodlands. Elevation: 1,640'–3,870' Bloom Period: May–August	Absent. This species is a serpentine endemic (Safford and Miller 2020) and there are no gabbroic or serpentine soils within the BSA.
Flagella–like atractylocarpus (*Campylopodiella stenocarpa*)	–	–	2B.2	Cismontane woodland. Elevation: 330'–1,640' Bloom Period: Any Season	Absent. The BSA is significantly outside of the known elevational range for this species.
Sierra arching sedge *(Carex cyrtostachya)*	–	–	1B.2	Meadows and seeps, marshes and swamps, in mesic areas of lower montane coniferous forest, and margins of riparian forests. Elevation: 2,000'–4,460' Bloom Period: May–August	Potential to occur. The mesic areas of the forest community within the BSA may provide suitable habitat.
Fresno ceanothus (*Ceanothus fresnensis*)	–	–	4.3	Cismontane woodland openings and lower montane coniferous forests. Elevation: 2,955'–7,250' Bloom Period: May–July	Potential to occur. The forest community within the BSA may provide suitable habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Red Hills soaproot (*Chlorogalum grandiflorum*)	–	–	1B.2	Serpentine or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest, occasionally on non–ultramafic soils. Elevation: 805'–5,545' Bloom Period: May–June	Potential to occur. The forest community within the BSA may provide suitable habitat.
Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*)	–	–	4.2	Chaparral, cismontane woodlands, and lower montane coniferous forest often along roadcuts. Elevation: 245'–3,000' Bloom Period: May–July	Low potential to occur. The forest community within the BSA may provide marginally suitable habitat.
Sierra clarkia (*Clarkia virgata*)	–	–	4.3	Cismontane woodland and lower montane coniferous forest. Elevation: 1,310'–5,300' Bloom Period: May–August	Potential to occur. The forest community within the BSA may provide suitable habitat.
Bisbee Peak spring beauty (*Claytonia parviflora* ssp. *grandiflora*)	–	–	4.2	Occurs in rocky cismontane woodland. Elevation: 820'–3,935' Bloom Period: February–May	Absent. No suitable habitat within the BSA.
Ewan's larkspur (*Delphinium hansenii* ssp. *ewanianum*)	–	–	4.2	Rocky soils in cismontane woodland, and valley and foothill grassland. Elevation: 195'–1,970' Bloom Period: March–May	Absent. The BSA is significantly outside of the known elevational range for this species and does not include suitable habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Starved daisy (*Erigeron miser*)	–	–	1B.3	Rocky, granitic outcrops of upper montane coniferous forests. Elevation: 6,035'–8,595' Bloom Period: June–October	Absent. The BSA is significantly outside of the known elevational range for this species and does not include suitable habitat.
Northern Sierra daisy (*Erigeron petrophilus* var. *sierrensis*)	–	–	4.3	Cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest; sometimes on serpentine soils. Elevation: 985'–6,800' Bloom Period: June–October	Absent. This species is a serpentine endemic (Safford and Miller 2020) and there are no gabbroic or serpentine soils within the BSA.
Tripod buckwheat (*Eriogonum tripodum*)	–	–	4.2	Often serpentine soils of chaparral and cismontane woodland. Elevation: 655'–5,250' Bloom Period: May–July	Absent. This species is a serpentine endemic (Safford and Miller 2020) and there are no gabbroic or serpentine soils within the BSA.
Butte County fritillary (*Fritillaria eastwoodiae*)	–	–	3.2	Chaparral, cismontane woodland, and openings in lower montane coniferous forest and occasionally is found on serpentine soils. Elevation: 165'–4,920' Bloom Period: March–June	Potential to occur. The forest community within the BSA may provide suitable habitat.
Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*)	–	–	4.3	Serpentine or Ione cismontane woodland. Elevation: 1,050'–2,000' Bloom Period: May–June	Absent. The BSA is significantly outside of the known elevational range for this species and does not include suitable habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Parry's horkelia *(Horkelia parryi)*	–	–	1B.2	Ione and other soil formations in chaparral and cismontane woodlands. Elevation: 260'–3,510' Bloom Period: April–September	Potential to occur. The forest community within the BSA may provide suitable habitat.
Saw toothed lewisia *(Lewisia serrata)*	–	–	1B.1	Rocky slopes in mesic areas of broad–leafed upland forest, lower montane coniferous forest, and riparian forest. Elevation: 2,525'–4,710' Bloom Period: May–June	Absent. No suitable rocky habitat within the BSA.
Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*)	–	–	4.2	Occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 295'–4,200' Bloom Period: May–July	Potential to occur. The forest community within the BSA may provide suitable habitat.
Sierra sweet bay (*Myrica hartwegii*)	–	–	4.3	Riparian forest, cismontane woodland, and lower montane coniferous forest. Elevation: 490'–5,740' Bloom Period: May–June	Potential to occur. The forest community within the BSA may provide suitable habitat.
Yellow bur navarretia (*Navarretia prolifera* ssp. *lutea*)	–	–	4.3	Chaparral and cismontane woodland. Elevation: 2,800'–4,600' Bloom Period: May–July	Absent. No suitable habitat within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Layne's ragwort (*Packera layneae*)	FT	CR	1B.2	Rocky serpentine or gabbroic soil in chaparral and cismontane woodland communities. Elevation: 655'–3,560' Bloom Period: April–August	Absent. This species is a serpentine endemic (Safford and Miller 2020) and there are no gabbroic or serpentine soils within the BSA.
Western waterfan lichen (*Peltigera gowardii)*	–	–	4.2	On rocks in cold water creeks with little or no sediment or disturbance. Elevation: 3,495'–8,595' Bloom Period: Any Season	Absent. No suitable habitat within the BSA.
Stebbins' phacelia (*Phacelia stebbinsii*)	–	–	1B.2	Cismontane woodland, lower montane coniferous forest, and meadows and seeps. Elevation: 2,000'–6,595' Bloom Period: May–July	Potential to occur. The forest community within the BSA may provide suitable habitat.
Coleman's rein orchid *(Piperia colemanii)*	–	–	4.3	Sandy soils in chaparral and lower montane coniferous forest. Elevation: 3,935'–7,545' Bloom Period: June–August	Absent. The BSA is significantly outside of the known elevational range for this species.
Narrow–petaled rein orchid (*Piperia leptopetala*)	–	–	4.3	Cismontane woodland, lower and upper montane coniferous forests. Elevation: 1,245'–7,300' Bloom Period: May–July	Potential to occur. The forest community within the BSA may provide suitable habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Sierra blue grass *(Poa sierrae)*	–	–	1B.3	Lower montane coniferous forest openings. Elevation: 1,200'–4,920' Bloom Period: April–July	Potential to occur. The forest community within the BSA may provide suitable habitat.
Sierra starwort (*Pseudostellaria sierrae*)	–	–	4.2	Chaparral, cismontane woodland, and lower and upper coniferous forest. Elevation: 4,020'–7,200' Bloom Period: May–August	Absent. The BSA is significantly outside of the known elevational range for this species.
Brownish beaked–rush (*Rhynchospora capitellata*)	–	–	2B.2	Mesic areas in lower montane coniferous forest, upper montane coniferous forests, meadows, seeps, marshes, and swamps. Elevation: 150'–6,560' Bloom Period: July–August	Potential to occur. The mesic areas of the forest community within the BSA may provide suitable habitat.
Giant checkerbloom *(Sidalcea gigantea)*	–	–	4.3	Meadows and seeps within lower and upper montane coniferous forests. Elevation: 2,200'–6,400' Bloom Period: July–October	Absent. No suitable habitat within the BSA.
Obtuse starwort (*Stellaria obtusa*)	–	–	4.3	Mesic areas and streambanks of lower montane coniferous forest, riparian woodland, and upper montane coniferous forest. Elevation: 490'–7,515' Bloom Period: May–September	Potential to occur. The mesic areas of the forest community within the BSA may provide suitable habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Long–fruit jewelflower (*Streptanthus longisiliquus*)	–	–	4.3	Openings in cismontane woodland and lower montane coniferous forest. Elevation: 2,345'–4,920' Bloom Period: April–September	Potential to occur. The forest community within the BSA may provide suitable habitat.
Oval–leaved viburnum *(Viburnum ellipticum)*	–	–	2B.3	Chaparral, cismontane woodland, and lower montane coniferous forest communities. Elevation: 705'–4,595' Bloom Period: May–June	Potential to occur. The forest community within the BSA may provide suitable habitat.
Felt–leaved violet *(Viola tomentosa)*	–	–	4.2	Gravelly soils in lower montane coniferous forest, subalpine coniferous forest, and upper montane coniferous forest. Elevation: 4,710'–6,560' Bloom Period: May–October	Absent. The BSA is significantly outside of the known elevational range for this species.
El Dorado County mule ears *(Wyethia reticulata)*	–	–	1B.2	Clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest communities. Elevation: 605'–2,065' Bloom Period: April–August	Absent. The BSA is outside of the known geographic and elevational range for this species.

Table 2. Special-Status Species Evaluation					
Common Name (*Scientific Name*)	**Status**			**Habitat Description/ Species Ecology**	**Potential To Occur Onsite**
	ESA	**California ESA/ NPPA**	**Other**		
Invertebrates					
Western bumble bee (*Bombus occidentalis*)	–	CC	–	Meadows and grasslands with abundant floral resources. Primarily nests underground. Largely restricted to high elevation sites in the Sierra Nevada, although rarely detected on the California coast. Survey Period: April-November	Absent. No suitable habitat within the BSA.
Monarch butterfly (*Danaus plexippus*)	FC	–	–	Overwinters along coastal California in wind-protected groves of eucalyptus, Monterey pine and cypress with nearby nectar and water sources; disperses in spring throughout California. Adults breed and lay eggs during the spring and summer, feeding on a variety of nectar sources; eggs are laid exclusively on milkweed plants.	Low potential to occur. This species has potential to occur as a nectaring and foraging species, but the BSA does not support overwintering habitat.
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	FT	–	–	Found exclusively on its host plant, the elderberry shrub, in riparian and oak woodland/oak savannah habitats of California's Central Valley from Shasta to Madera counties.	Absent. No suitable habitat (elderberry shrubs) within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Amphibians					
California red-legged frog (*Rana draytonii*)	FT	–	SSC	Lowlands and foothills of the northern and southern Coast Ranges and Sierra Nevada. Found in deep standing or slow-flowing water with dense shrubby or emergent riparian vegetation; requires 11-20 weeks of permanent water for larval development. Adults require aestivation habitat to endure summer dry down. Survey Period: January – Sept.	Potential to Occur. There is suitable breeding habitat within the canal; however, the species prefers standing or slow-moving water with emergent vegetation. The ditches in the BSA consist of straightened, steep-walled channels used for water supply conveyance. They have a moderate to high rate of flow most of the year and are maintained to remove emergent vegetation and debris. There are two recent CNDDB occurrences nearby (i.e., within the Georgetown quad; specific locations suppressed). The occurrences are cited as occurring in a series of small pools/wet areas in a small ephemeral drainage channel. California red-legged frogs are known to use upland habitats for dispersal, and have been recorded as travelling distances of more than 2 miles. All temporary disturbance areas within the BSA could be used as dispersal habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Foothill yellow-legged frog Northeast/Northern Sierra Clade (*Rana boylii*)	–	CT	SSC	Partly shaded shallow streams and riffles in variety of habitats. Needs cobble-sized substrate for egg-laying and at least 15 weeks of permanent water to attain metamorphosis. Can be active all year in warmer locations; become inactive or hibernate in colder climates. Yuba River to Middle Fork American River and Sutter Buttes. Survey Period: May–October.	Absent. The BSA is south of the southern boundary of the Northeast/Northern Sierra Clade of foothill yellow-legged frog.
Foothill yellow-legged frog East/Southern Sierra Clade (*Rana boylii*)	FE	CE	SSC	Partly shaded shallow streams and riffles in variety of habitats. Needs cobble-sized substrate for egg-laying and at least 15 weeks of permanent water to attain metamorphosis. Can be active all year in warmer locations; become inactive or hibernate in colder climates. Sierra Nevada from the northern limits of the South Fork American River watershed to Tehachapi Mountains. Survey Period: May–October.	Low potential to occur. There is no suitable breeding habitat within the Canal. Foothill yellow-legged frog may use the Canal as dispersal habitat. The nearest reported CNDDB occurrence is 4 miles northwest of the BSA and was observed in the Rubicon River in 2017. Foothill yellow-legged frogs generally do not disperse across uplands, but use stream courses within the landscape. Dispersal through the BSA is likely limited to the Canal itself and immediately adjacent areas.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Reptiles					
Northwestern pond turtle (*Actinemys marmorata*)	FPT	–	SSC	Requires basking sites and upland habitats up to 0.5 km from water for egg laying. Uses ponds, streams, detention basins, and irrigation ditches. Survey Period: April-September	Potential to occur. The Canal provides suitable habitat for this species. There are no reported occurrences in the CNDDB for the Georgetown or Tunnel Hill quadrangles. The nearest reported recent CNDDB occurrence is over 10 miles south of the BSA and was observed basking along the South Fork American River in 2016.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Blainville's ("Coast") horned lizard (*Phrynosoma blainvillii*)	–	–	SSC	Formerly a wide-spread horned lizard found in a wide variety of habitats, often in lower elevation areas with sandy washes and scattered low bushes. Also occurs in Sierra Nevada foothills. Requires open areas for basking, but with bushes or grass clumps for cover, patches of loamy soil or sand for burrowing and an abundance of ants (Stebbins and McGinnis 2012). In the northern Sacramento area, this species appears restricted to the foothills between 1000 to 3000 feet from Cameron Park (El Dorado County) north and west to Grass Valley and Nevada City. Survey Period: April-October	Absent. No suitable habitat within the BSA.

Table 2. Special-Status Species Evaluation					
Common Name (*Scientific Name*)	**Status**			**Habitat Description/ Species Ecology**	**Potential To Occur Onsite**
	ESA	**California ESA/ NPPA**	**Other**		
Birds					
Black swift (*Cypseloides niger*)	–	–	BCC, SSC	In California, nests from Cascade-Sierra Nevada region south to Tulare and Mono counties; coastal ranges (Santa Cruz south to San Luis Obispo counties), San Gabriel, San Bernardino, and San Jacinto Mountains. Nests on ledges or shallow caves on steep rock faces, usually behind waterfalls. Winter range, unknown, but thought to be northern and western South America, and West Indies. Nesting: May-September	Absent. No suitable nesting habitat within the BSA.
Northern goshawk (*Accipiter gentilis*)	–	–	SSC	Nesting occurs in mature to old-growth forests composed primarily of large trees with high canopy closure. In California, nests are built primarily in conifer trees in the Sierra Nevada, Cascade and northwestern coastal Ranges. Nesting: March-August	Absent. No suitable nesting habitat within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
California spotted owl (*Strix occidentalis occidentalis*)	FPT	–	BCC, SSC	Found in the southern Cascade Range and northern Sierra Nevada from Pit River, Shasta County south to Tehachapi Mountains, Kern County, in the coastal ranges from Monterey County to Santa Barbara County, in Transverse and Peninsular Ranges south to northern Baja California. At lower elevations, they breed in hardwood forests and coniferous forests at higher elevations. They use forests with greater complexity and structure. Nesting: March-September	Low potential to occur. There is no suitable breeding habitat within the BSA due to disturbances associated with the rural residences, but may rarely forage in the vicinity. The closest occurrence of this species is 0.3 mile away and was observed in 2011.
Bank swallow (*Riparia riparia*)	–	CT	–	Nests colonially along coasts, rivers, streams, lakes, reservoirs, and wetlands in vertical banks, cliffs, and bluffs in alluvial, friable soils. May also nest in sand, gravel quarries and road cuts. In California, breeding range includes northern and central California. Nesting: May-July	Absent. No suitable nesting habitat within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Wrentit (*Chamaea fasciata*)	–	–	BCC	Coastal sage scrub, northern coastal scrub, chaparral, dense understory of riparian woodlands, riparian scrub, coyote brush and blackberry thickets, and dense thickets in suburban parks and gardens. Nesting: March-August	Absent. No suitable nesting habitat within the BSA.
Tricolored blackbird (*Agelaius tricolor*)	–	CT	BCC, SSC	Breeds locally west of Cascade-Sierra Nevada and southeastern deserts from Humboldt and Shasta counties south to San Bernardino, Riverside and San Diego counties. Central California, Sierra Nevada foothills and Central Valley, Siskiyou, Modoc and Lassen counties. Nests colonially in freshwater marsh, blackberry bramble, milk thistle, triticale fields, weedy (mustard, mallow) fields, giant cane, safflower, stinging nettles, tamarisk, riparian scrublands and forests, fiddleneck and fava bean fields (Beedy et al. 2020). Nesting: March-August	Absent. No suitable nesting habitat within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Black-throated gray warbler (*Setophaga nigrescens*)	–	–	BCC	Breeding habitat includes open coniferous or mixed coniferous-deciduous woodland with brushy undergrowth, pinyon-juniper and pine-oak associates, and oak scrub. Their deep cup nests are often built on horizontal branches and constructed of a variety of plant material, feathers, and mammal fur (Guzy and Lowther 2020). Nesting: May-July	Potential to occur. Suitable nesting habitat within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Mammals					
Townsend's big-eared bat *(Corynorhinus townsendii)*	–	–	SSC	Occurs throughout the west and is distributed from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains, with isolated populations occurring in the central and eastern United States. It has been reported in a wide variety of habitat types ranging from sea level to 3,300 meters. Habitat associations include coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Roosting can occur within caves, mines, buildings, rock crevices, trees. Survey Period: April-September	Potential to occur. Trees within the BSA represent potential roosting habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Pallid bat (*Antrozous pallidus*)	–	–	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human occupied as well as vacant buildings (Western Bat Working Group 2023). Survey Period: April-September	Potential to occur. Trees within the BSA represent potential roosting habitat.
Sierra Nevada Mountain Beaver (*Aplodontia rufa californica*)	–	–	SSC	Dense growth of small deciduous trees and shrubs, wet soil, and abundance of forbs in the Sierra Nevada and East slope. Needs dense understory for food and cover. Burrows into soft soil. Needs abundant supply of water (CDFW 2024). Survey Period: Any season	Absent. No suitable habitat within the BSA.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	California ESA/ NPPA	Other		
Fisher- Northern California/Southern Oregon DPS (*Pekania pennanti*)	–	–	SSC	Coastal northern California and includes reintroduced populations in the northern Sierra Nevada and southern Oregon Cascades. Survey Period: Any season	Absent. The BSA is outside of the current known range for the species.
California wolverine (*Gulo gulo*)	FPT	CT	–	Scarce resident of North Coast mountains and Sierra Nevada. Wide variety of high elevation habitats. Survey Period: Any season	Absent. The BSA is outside of the current known range for the species.

Status Codes:

ESA	Federal Endangered Species Act
FE	ESA listed, Endangered
FT	ESA listed, Threatened
FPT	Formally Proposed for ESA listing as Threatened
FC	Candidate for ESA listing as Threatened or Endangered
BCC	USFWS Bird of Conservation Concern (USFWS 2021)
CE	California ESA- or NPPA listed, Endangered
CT	California ESA- or NPPA-listed, Threatened
CR	California ESA- or NPPA-listed, Rare
CC	Candidate for California ESA listing as Endangered or Threatened
SSC	CDFW Species of Special Concern
1B	CRPR/Rare or Endangered in California and elsewhere
2B	CRPR/Plants rare, threatened, or endangered in California but more common elsewhere
3	CRPR/Plants About Which More Information is Needed – A Review List
4	CRPR/Plants of Limited Distribution – A Watch List
0.1	Threat Rank/Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Threat Rank/Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Threat Rank/Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Note: BSA = Biological Study Area; CDFW = California Department of Fish and Wildlife; CNDDB = California Natural Diversity Database; DPS = Distinct Population Segment; km = kilometer; NPPA = Native Plant Protection Act

4.7 Critical Habitat or Essential Fish Habitat

There is no designated critical habitat or Essential Fish Habitat (EFH) mapped within the BSA (NOAA 2016; USFWS 2023b). No further discussion of critical habitat or EFH is provided within this assessment.

4.8 Wildlife Movement Corridors and Nursery Sites

The Essential Connectivity Areas map identifies larger, relatively natural habitat blocks that support native biodiversity and areas essential for connectivity between them. The BSA does not fall within a natural habitat block (CDFW 2023c) or an Essential Habitat Connectivity area (CDFW 2023a). However, the BSA includes small natural areas that could support ecological value (CDFW 2023b) and movement corridors for native resident and migratory wildlife.

For the purposes of this analysis, nursery sites include but are not limited to concentrations of nest or den sites such as heron rookeries or bat maternity roosts. This data is available through CDFW's BIOS database or as occurrence records in the CNDDB and is supplemented with the results of the site reconnaissance. No nursery sites have been documented within the BSA (CDFW 2024) and none were observed during the site reconnaissance.

4.9 Protected Trees/Oak Woodlands

An arborist survey has not been conducted for the BSA; however, native California black oak trees are present within the BSA. Impacts to native oak trees would be subject to the El Dorado County Oak Resources Conservation Ordinance.

5.0 IMPACT ASSESSMENT AND RECOMMENDATIONS

This section specifically addresses questions raised by the Biological Resources section of the Environmental Checklist Form in Appendix G of the CEQA Guidelines.

5.1 CEQA Checklist Criteria IV(a) – Special-Status Species

Would the Project:

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

5.1.1 Special-Status Plants

The BSA supports potential habitat for special-status plants, as identified in Table 2. However, the Project will limit ground-disturbing activities to unvegetated portions of Canal which do not provide habitat for special-status plants identified in Table 2. Therefore, the Project will have no direct impact on special-status plants.

5.1.2 Special-Status Wildlife Species

5.1.2.1 Monarch Butterfly

The BSA contains marginally suitable nectaring and foraging habitat for monarch butterfly. However, the Project will limit ground-disturbing activities to unvegetated portions of Canal which do not provide habitat for monarch butterfly. Therefore, the Project will have no direct impact on monarch butterfly.

5.1.2.2 Amphibians

The BSA contains potential breeding habitat for California red-legged frog and potential dispersal habitat for foothill yellow-legged frog. The Project will commence after April 1 when these species are expected to be active and able to move out of the Project Area for the short duration of Project activity. The Canal will be dewatered, and a qualified biologist will perform a preconstruction survey prior to work beginning to ensure no individuals of these species are present in the dewatered area. With implementation of these avoidance measures, the Project may affect but is not likely to adversely affect special-status amphibians.

To avoid impacts to special-status amphibians, the implementation of BIO-1 is recommended:

BIO-1: A qualified biologist will complete a preconstruction survey of the Project Area for California red-legged frog, foothill yellow-legged frog, and northwestern pond turtle immediately prior to dewatering activities. The biologist will remain onsite to monitor the Project Area during dewatering. Non-sensitive biological resources found in the Project Area will be moved by the biologist out of harm's way. Any sensitive biological resources found by the biologist requiring take authorization or permission for relocation will be allowed to leave the Project Area by their own volition (i.e., no handling).

5.1.2.3 Northwestern Pond Turtle

The BSA contains suitable breeding habitat for northwestern pond turtle. The Project will commence after April 1 when turtles are expected to be active and able to move out of the Project area for the short duration of Project activity. The Canal will be dewatered, and a qualified biologist will perform a preconstruction survey prior to work beginning to ensure no individuals of these species are present in the dewatered area. Therefore, the Project may affect but is not likely to adversely affect northwestern pond turtle.

To avoid impacts to northwestern pond turtle, the implementation of BIO-1 is recommended.

5.1.2.4 Special-Status and Other Protected Nesting Birds (including Raptors)

The BSA contains suitable nesting and/or wintering and foraging habitat for two special-status birds, as well as migratory birds, non-migratory nongame birds, and raptors protected under the California Fish and Game Code and MBTA. If Project-related activities occur during the nesting season, the removal of active nests or disruption of nesting activities leading to abandonment of an active nest with eggs or young would be considered a violation of the MBTA and California Fish and Game Code, and would be considered a significant impact under CEQA.

To avoid impacts to active nests, the following mitigation measures are recommended:

BIO-2: Nesting Birds

- To the extent feasible, vegetation trimming for site access shall be conducted outside of the bird nesting season (typically February 1–August 31, and as early as January 1 for raptors).
- If Project activities will occur during the nesting season (typically February 1 to August 31), a preconstruction nesting bird survey shall be conducted within 14 days prior to the commencement of Project-related activities to identify active nests that could be impacted by construction.
- The preconstruction nesting bird survey shall include accessible areas within 500 feet of the Project boundaries, including any temporary disturbance areas. For raptors, the preconstruction nesting bird survey shall include accessible areas within 0.25 mile of the Project boundary.
- If active nests are found, a no-disturbance buffer shall be established around the nest. A qualified biologist, in consultation with the CDFW, shall establish a buffer distance. The buffer shall be maintained until the fledglings are capable of flight and become independent of the nest tree, to be determined by a qualified biologist. The buffers will be removed once the young are independent of the nest.

5.1.2.5 Special-Status Bats and Maternity Roosts

The BSA contains suitable roosting habitat for two special-status bats. However, the Project has a relatively small footprint and does not propose impacts to roosting habitat (i.e., trees). No impacts to special-status bats are therefore expected.

5.2 CEQA Checklist Criteria IV(b) – Sensitive Natural Communities

Would the Project:

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

No sensitive natural communities were identified within the BSA during the site reconnaissance. Therefore, the Project will have no impact on sensitive natural communities.

5.3 CEQA Checklist Criteria IV(c) – Aquatic Resources

Would the Project:

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

The Canal is the only aquatic resource present within the BSA. The jurisdictional status of the Canal has not been verified with the U.S. Army Corps of Engineers or state. However, the Canal is a constructed feature, excavated in uplands and subject to ongoing operation and maintenance as a water supply conveyance facility. Therefore, the Project is not likely to have an impact on federally or state protected wetlands or waters.

The Canal constitutes a bed-and-bank feature that may be subject to the jurisdiction of CDFW under Section 1602 of the California Fish and Game Code. The Project proponent will notify CDFW of the proposed Project and implement Best Management Practices as mutually agreed upon with CDFW if an LSAA is required.

5.4 CEQA Checklist Criteria IV(d) – Movement Corridors and Nursery Sites

Would the Project:

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?

Project implementation may temporarily disturb and displace wildlife from the BSA. Some wildlife such as birds or nocturnal species are likely to continue to use the habitats opportunistically for the duration of construction. Once construction is complete, wildlife movements are expected to resume. Therefore, the Project is expected to have a less than significant impact on wildlife movement.

There are no documented nursery sites and no nursery sites were observed within the BSA during the site reconnaissance.

5.5 CEQA Checklist Criteria IV(e) – Conflicts with Local Policies or Ordinances

Would the Project:

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

Trees subject to the El Dorado County Oak Resources Conservation Ordinance are present within the BSA. The Project would entail minor trimming of trees as needed to obtain site access. No removal of protected trees is expected as a result of Project implementation.

BIO-3: Oak Resources

- The applicant shall obtain appropriate permit authorization from El Dorado County prior to trimming or cutting of any live native oak trees in the Project Area.

5.6 CEQA Checklist Criteria IV(f) – Conflicts with Conservation Plans

Would the Project:

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

The BSA is not covered by any local, regional, or State conservation plan. Therefore, the Project would not conflict with any plans.

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LIST OF APPENDICES

APPENDIX A

Results of Database Queries

Selected Elements by Element Code

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Georgetown (3812087) OR Tunnel Hill (3812086) OR Colfax (3912018) OR Greenwood (3812088) OR Coloma (3812078) OR Garden Valley (3812077) OR Slate Mtn. (3812076) OR Pollock Pines (3812075) OR Devil Peak (3812085) OR Greek Store (3912015) OR Michigan Bluff (3912016) OR Foresthill (3912017))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
AAABH01022	***Rana draytonii*** California red-legged frog	Threatened	None	G2G3	S2S3	SSC
AAABH01053	***Rana boylii pop. 3*** foothill yellow-legged frog - north Sierra DPS	None	Threatened	G3T2	S2	
AAABH01055	***Rana boylii pop. 5*** foothill yellow-legged frog - south Sierra DPS	Endangered	Endangered	G3T2	S2	
ABNKC12060	***Accipiter gentilis*** northern goshawk	None	None	G5	S3	SSC
ABNUA01010	***Cypseloides niger*** black swift	None	None	G4	S3	SSC
ABPAU08010	***Riparia riparia*** bank swallow	None	Threatened	G5	S3	
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S2	SSC
AMACC01020	***Myotis yumanensis*** Yuma myotis	None	None	G5	S4	
AMACC02010	***Lasionycteris noctivagans*** silver-haired bat	None	None	G3G4	S3S4	
AMACC08010	***Corynorhinus townsendii*** Townsend's big-eared bat	None	None	G4	S2	SSC
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMAFA01013	***Aplodontia rufa californica*** Sierra Nevada mountain beaver	None	None	G5T3T4	S2S3	SSC
AMAFJ01010	***Erethizon dorsatum*** North American porcupine	None	None	G5	S3	
AMAJF01014	***Martes caurina sierrae*** Sierra marten	None	None	G4G5T3	S3	
AMAJF01020	***Pekania pennanti*** Fisher	None	None	G5	S2S3	SSC
AMAJF03010	***Gulo gulo*** wolverine	Threatened	Threatened	G4	S1	FP
ARAAD02030	***Emys marmorata*** western pond turtle	Proposed Threatened	None	G3G4	S3	SSC
ARACF12100	***Phrynosoma blainvillii*** coast horned lizard	None	None	G4	S4	SSC

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
CTT51110CA	***Sphagnum Bog*** Sphagnum Bog	None	None	G3	S1.2	
CTT84250CA	***Big Tree Forest*** Big Tree Forest	None	None	G3	S3.2	
ICMAL05920	***Stygobromus grahami*** Graham's Cave amphipod	None	None	G2	S2	
IICOL48011	***Desmocerus californicus dimorphus*** valley elderberry longhorn beetle	Threatened	None	G3T3	S3	
IICOL58010	***Atractelmis wawona*** Wawona riffle beetle	None	None	G3	S1S2	
IICOL6L100	***Nebria darlingtoni*** South Forks ground beetle	None	None	G1	S1	
IIHYM24252	***Bombus occidentalis*** western bumble bee	None	Candidate Endangered	G3	S1	
IIHYM24260	***Bombus pensylvanicus*** American bumble bee	None	None	G3G4	S2	
IIHYM24380	***Bombus caliginosus*** obscure bumble bee	None	None	G2G3	S1S2	
IIMEC07010	***Orobittacus obscurus*** gold rush hanging scorpionfly	None	None	G1	S1	
IIPLE23020	***Cosumnoperla hypocrena*** Cosumnes stripetail	None	None	G2	S2	
IITRI19080	***Rhyacophila spinata*** spiny rhyacophilan caddisfly	None	None	G1G2	S3	
IMBIV27020	***Margaritifera falcata*** western pearlshell	None	None	G5	S1S2	
PDAST8H1V0	***Packera layneae*** Layne's ragwort	Threatened	Rare	G2	S2	1B.2
PDAST9X0D0	***Wyethia reticulata*** El Dorado County mule ears	None	None	G2	S2	1B.2
PDCON040H0	***Calystegia stebbinsii*** Stebbins' morning-glory	Endangered	Endangered	G1	S1	1B.1
PDCON040Q0	***Calystegia vanzuukiae*** Van Zuuk's morning-glory	None	None	G2Q	S2	1B.3
PDCPR07080	***Viburnum ellipticum*** oval-leaved viburnum	None	None	G4G5	S3?	2B.3
PDERI040V0	***Arctostaphylos nissenana*** Nissenan manzanita	None	None	G1	S1	1B.2
PDHYD0C4D0	***Phacelia stebbinsii*** Stebbins' phacelia	None	None	G3	S3	1B.2
PDONA05053	***Clarkia biloba ssp. brandegeeae*** Brandegee's clarkia	None	None	G4G5T4	S4	4.2

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDPOR040E0	***Lewisia serrata*** saw-toothed lewisia	None	None	G2	S2	1B.1
PDROS0W0C0	***Horkelia parryi*** Parry's horkelia	None	None	G2	S2	1B.2
PDVIO04280	***Viola tomentosa*** felt-leaved violet	None	None	G3	S3	4.2
PMCYP03M00	***Carex cyrtostachya*** Sierra arching sedge	None	None	G2	S2	1B.2
PMCYP0N080	***Rhynchospora capitellata*** brownish beaked-rush	None	None	G5	S1	2B.2
PMLIL0D095	***Calochortus clavatus var. avius*** Pleasant Valley mariposa-lily	None	None	G4T2	S2	1B.2
PMLIL0G020	***Chlorogalum grandiflorum*** Red Hills soaproot	None	None	G3	S3	1B.2
PMLIL0V060	***Fritillaria eastwoodiae*** Butte County fritillary	None	None	G3Q	S3	3.2
PMPOA4Z310	***Poa sierrae*** Sierra blue grass	None	None	G3	S3	1B.3

Record Count: 48

IPaC resource list

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

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

Location

El Dorado County, California

Local office

Sacramento Fish And Wildlife Office

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

Federal Building

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

Endangered species

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

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

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

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

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

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Birds

NAME	STATUS
California Spotted Owl Strix occidentalis occidentalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7266	Proposed Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
Foothill Yellow-legged Frog Rana boylii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/5133	Proposed Endangered

Insects

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

Flowering Plants

NAME	STATUS
Layne's Butterweed Senecio layneae Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4062	Threatened

Critical habitats

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

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

There are no documented cases of eagles being present at this location. However, if you believe eagles may be using your site, please reach out to the local Fish and Wildlife Service office.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date

range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Black-throated Gray Warbler Dendroica nigrescens This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jul 20
Wrentit Chamaea fasciata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

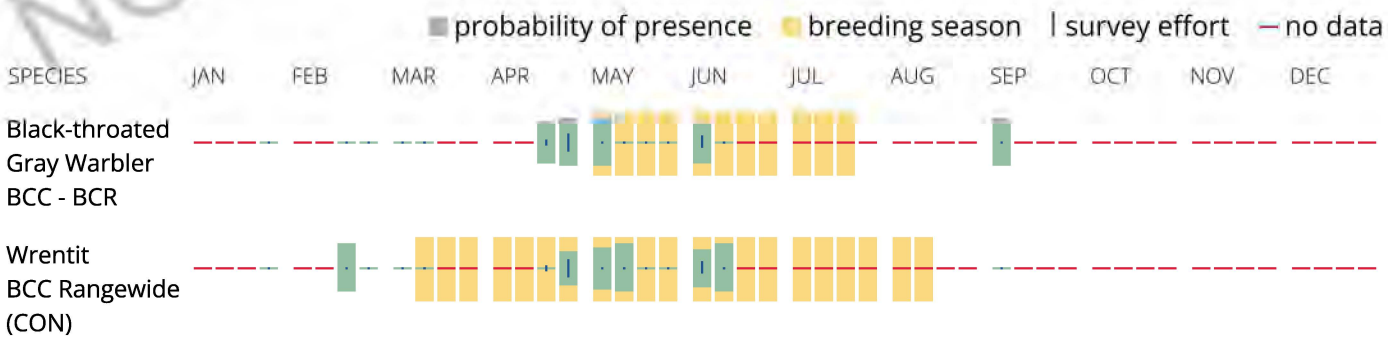
Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the

locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

Refuge and fish hatchery information is not available at this time

Wetlands in the National Wetlands Inventory (NWI)

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

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

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

PSSA

FRESHWATER POND

PABHh

RIVERINE

R5UBFx

R4SBC

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

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

Search Results

40 matches found. Click on scientific name for details

Search Criteria: Quad is one of [**3812087:3812086:3912018:3812088:3812078:3812077:3812076:3812075:3812085:3912015:3912016:3912017**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
Allium sanbornii var. *congdonii*	Congdon's onion	Alliaceae	perennial bulbiferous herb	Apr-Jul	None	None	G4T3	S3	4.3	Yes	1994-01-01	 © 2008 Steven Perry
Allium sanbornii var. *sanbornii*	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	None	None	G4T4?	S3S4	4.2		1994-01-01	 ©2018 Steven Perry
Arctostaphylos mewukka ssp. *truei*	True's manzanita	Ericaceae	perennial evergreen shrub	Feb-Jul	None	None	G4?T3	S3	4.2	Yes	1984-01-01	 © 2008 George W. Hartwell
Arctostaphylos nissenana	Nissenan manzanita	Ericaceae	perennial evergreen shrub	Feb-Mar	None	None	G1	S1	1B.2	Yes	1974-01-01	No Photo Available
Bolandra californica	Sierra bolandra	Saxifragaceae	perennial herb	Jun-Jul	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
Calochortus clavatus var. *avius*	Pleasant Valley mariposa-lily	Liliaceae	perennial bulbiferous herb	May-Jul	None	None	G4T2	S2	1B.2	Yes	1980-01-01	No Photo Available
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	Yes	1980-01-01	No Photo Available
Calystegia vanzuukiae	Van Zuuk's morning-glory	Convolvulaceae	perennial rhizomatous herb	May-Aug	None	None	G2Q	S2	1B.3	Yes	2014-07-16	No Photo Available
Campylopodiella stenocarpa	flagella-like atractylocarpus	Dicranaceae	moss		None	None	G5	S1?	CBR		2001-01-01	No Photo Available
Carex cyrtostachya	Sierra arching sedge	Cyperaceae	perennial herb	May-Aug	None	None	G2	S2	1B.2	Yes	2015-08-18	No Photo Available

Ceanothus fresnensis	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	(Apr)May-Jul	None	None	G4	S4	4.3	Yes	1980-01-01	No Photo Available
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	(Apr)May-Jun	None	None	G3	S3	1B.2	Yes	1974-01-01	No Photo Available
Clarkia biloba ssp. *brandegeeae*	Brandegee's clarkia	Onagraceae	annual herb	(Mar)May-Jul	None	None	G4G5T4	S4	4.2	Yes	2001-01-01	No Photo Available
Clarkia virgata	Sierra clarkia	Onagraceae	annual herb	May-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
Claytonia parviflora ssp. *grandiflora*	streambank spring beauty	Montiaceae	annual herb	Feb-May	None	None	G5T3	S3	4.2	Yes	2006-09-29	No Photo Available
Delphinium hansenii ssp. *ewanianum*	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	None	None	G4T3	S3	4.2	Yes	1994-01-01	No Photo Available
Erigeron miser	starved daisy	Asteraceae	perennial herb	Jun-Oct	None	None	G3?	S3?	1B.3	Yes	1974-01-01	No Photo Available
Erigeron petrophilus var. *sierrensis*	northern Sierra daisy	Asteraceae	perennial rhizomatous herb	Jun-Oct	None	None	G4T4	S4	4.3	Yes	1994-01-01	No Photo Available
Eriogonum tripodum	tripod buckwheat	Polygonaceae	perennial deciduous shrub	May-Jul	None	None	G4	S4	4.2	Yes	1974-01-01	 ©2008 Steven Perry
Fritillaria eastwoodiae	Butte County fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3Q	S3	3.2		1974-01-01	 ©2009 Sierra Pacific Industries
Githopsis pulchella ssp. *serpentinicola*	serpentine bluecup	Campanulaceae	annual herb	May-Jun	None	None	G4T3	S3	4.3	Yes	2001-01-01	 © 2019 Barry Breckling
Horkelia parryi	Parry's horkelia	Rosaceae	perennial herb	Apr-Sep	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2009 Barry Breckling
Lewisia serrata	saw-toothed lewisia	Montiaceae	perennial herb	May-Jun	None	None	G2	S2	1B.1	Yes	1980-01-01	 © 2002 Steve Tyron

Lilium humboldtii ssp. *humboldtii*	Humboldt lily	Liliaceae	perennial bulbiferous herb	May-Jul(Aug)	None	None	G4T3	S3	4.2	Yes	1994-01-01	 © 2008 Sierra Pacific Industries
Myrica hartwegii	Sierra sweet bay	Myricaceae	perennial deciduous shrub	May-Jun	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
Navarretia prolifera ssp. *lutea*	yellow bur navarretia	Polemoniaceae	annual herb	May-Jul	None	None	G4T3	S3	4.3	Yes	1974-01-01	No Photo Available
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
Peltigera gowardii	western waterfan lichen	Peltigeraceae	foliose lichen (aquatic)		None	None	G4?	S3	4.2		2014-03-01	 © 2021 Scot Loring
Phacelia stebbinsii	Stebbins' phacelia	Hydrophyllaceae	annual herb	May-Jul	None	None	G3	S3	1B.2	Yes	1974-01-01	No Photo Available
Piperia colemanii	Coleman's rein orchid	Orchidaceae	perennial herb	Jun-Aug	None	None	G4	S4	4.3	Yes	2001-01-01	 © 2005 Dean Wm. Taylor
Piperia leptopetala	narrow-petaled rein orchid	Orchidaceae	perennial herb	May-Jul	None	None	G4	S4	4.3	Yes	2001-01-01	No Photo Available
Poa sierrae	Sierra blue grass	Poaceae	perennial rhizomatous herb	Apr-Jul	None	None	G3	S3	1B.3	Yes	2010-06-10	 © 2012 Belinda Lo
Pseudostellaria sierrae	Sierra starwort	Caryophyllaceae	perennial rhizomatous herb	May-Aug	None	None	G3G4	S3	4.2	Yes	2004-01-01	No Photo Available
Rhynchospora capitellata	brownish beaked-rush	Cyperaceae	perennial herb	Jul-Aug	None	None	G5	S1	2B.2		1974-01-01	 ©2004 Dean Wm. Taylor
Sidalcea gigantea	giant checkerbloom	Malvaceae	perennial rhizomatous herb	(Jan-Jun)Jul-Oct	None	None	G3	S3	4.3	Yes	2012-07-10	 ©2018 Sierra Pacific Industries

Stellaria obtusa	obtuse starwort	Caryophyllaceae	perennial rhizomatous herb	May-Sep(Oct)	None	None	G5	S4	4.3		1988-01-01	 ©2014 Kirsten Bovee
Streptanthus longisiliquus	long-fruit jewelflower	Brassicaceae	perennial herb	Apr-Sep	None	None	G3	S3	4.3	Yes	2007-08-31	 ©2008 Sierra Pacific Industries
Viburnum ellipticum	oval-leaved viburnum	Viburnaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3?	2B.3		1974-01-01	 © 2006 Tom Engstrom
Viola tomentosa	felt-leaved violet	Violaceae	perennial herb	(Apr)May-Oct	None	None	G3	S3	4.2	Yes	1974-01-01	No Photo Available
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	1974-01-01	No Photo Available

Showing 1 to 40 of 40 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website https://www.rareplants.cnps.org [accessed 21 July 2023].

APPENDIX B

Representative Photographs

Photo 1: Eastern boundary of Segment 1. Photo direction: West. July 27, 2023

Photo 2: Western boundary of Segment 1. Photo direction: Southwest. July 27, 2023.

Photo 3: Northern portion of Segment 2. Photo direction: Northwest. July 27, 2023.

Photo 4: Southern portion of Segment 2. Photo direction: South. July 27, 2023.

APPENDIX C

Plant Species Observed

GDPUD Upper Canal Reliability Project
Plant Species Observed (July 27, 2023)

SCIENTIFIC NAME	COMMON NAME
APIACEAE	CARROT FAMILY
*Daucus carota**	Queen Anne's lace
*Torilis arvensis**	Field hedge parsley
AQUIFOLIACEAE	HOLLY FAMILY
*Ilex aquifolium**	English holly
ARALIACEAE	IVY FAMILY
*Hedera helix**	English ivy
ASTERACEAE	SUNFLOWER FAMILY
*Centaurea solstitialis**	Yellow star-thistle
*Chondrilla juncea**	Skeleton weed
*Hypochaeris radicata**	Rough cat's-ear
*Lactuca serriola**	Prickly lettuce
Solidago velutina	Threenerve goldenrod
BRASSICACEAE	MUSTARD FAMILY
Nasturtium officinale	Water cress
Rorippa curvipes	Bluntleaf yellow cress
CARYOPHYLLACEAE	PINK FAMILY
*Silene vulgaris**	Common campion
CUPRESSACEAE	CYPRESS FAMILY
Calocedrus decurrens	Incense cedar
DENNSTAEDTIACEAE	BRACKEN FERN FAMILY
Pteridium aquilinum	Bracken fern
ERICACEAE	HEATH FAMILY
Arbutus menziesii	Pacific madrone
Arctostaphylos manzanita	Common manzanita
FABACEAE	LEGUME FAMILY
*Cytisus scoparius**	Scotch broom
*Lathyrus latifolius**	Sweet pea
*Trifolium dubium**	Shamrock clover
FAGACEAE	OAK FAMILY
Quercus kelloggii	California black oak

GDPUD Upper Canal Reliability Project
Plant Species Observed (July 27, 2023)

SCIENTIFIC NAME	COMMON NAME
HYPERICACEAE	ST. JOHN'S WORT FAMILY
*Hypericum perforatum**	Klamath weed
JUGLANDACEAE	WALNUT FAMILY
Juglans hindsii	Black walnut
JUNCACEAE	RUSH FAMILY
Juncus balticus ssp. *ater*	Baltic rush
OLEACEAE	OLIVE FAMILY
Fraxinus latifolia	Oregon ash
ONAGRACEAE	EVENING PRIMROSE FAMILY
Epilobium sp.	Willowherb
PHRYMACEAE	LOPSEED FAMILY
Erythranthe cardinalis	Scarlet monkeyflower
PINACEAE	PINE FAMILY
Abies concolor	White fir
Pinus lambertiana	Sugar pine
Pinus ponderosa	Ponderosa pine
PLANTAGINACEAE	PLANTAIN FAMILY
*Plantago lanceolata**	English plantain
*Plantago major**	Broad-leaf plantain
POACEAE	GRASS FAMILY
*Bromus diandrus**	Ripgut brome
*Bromus hordeaceus**	Soft brome
*Cynosurus echinatus**	Hedgehog dog-tail grass
*Festuca myuros**	Rat-tail fescue
*Paspalum dilatatum**	Dallis grass
RANUNCULACEAE	BUTTERCUP FAMILY
Aquilegia formosa	Columbine
ROSACEAE	ROSE FAMILY
*Rubus armeniacus**	Himalayan blackberry
*Rubus laciniatus**	Cut-leaved blackberry

GDPUD Upper Canal Reliability Project
Plant Species Observed (July 27, 2023)

SCIENTIFIC NAME	COMMON NAME
RUBIACEAE	MADDER FAMILY
Galium aparine	Common bedstraw
SALICACEAE	WILLOW FAMILY
Salix exigua var. *hindsiana*	Sandbar willow
SAPINDACEAE	SOAPBERRY FAMILY
Acer macrophyllum	Big leaf maple
VITACEAE	GRAPE FAMILY
Vitis californica	California wild grape

APPENDICES

Appendix B – Cultural Resources Inventory Report for the Georgetown Divide Public Utility District Canal Lining Project - January 2024

THIS REPORT IS NOT PROVIDED IN THIS SUBMITTAL DUE TO CONFIDENTIALITY. IT IS AVAILABLE UPON REQUEST.