DRAFT
Initial Study and Mitigated Negative Declaration for the Nevada Irrigation District Combie and Ophir 2 & 3 Siphon Replacement Project

Lead Agency:

Nevada Irrigation District

1036 West Main Street

Grass Valley, California 95945

NID

March 2024

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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Initial Study and Mitigated Negative Declaration

Nevada Irrigation District
Combie and Ophir 2 & 3
Siphon Replacement Project

Placer County, California

Lead Agency:

Nevada Irrigation District
1036 West Main Street
Grass Valley, California 95945

Prepared By:

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March 2024

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DRAFT MITIGATED NEGATIVE DECLARATION

Lead Agency: Nevada Irrigation District (NID or District)

Project Proponent: NID

Project Location: Placer County, in the North Auburn area, primarily east of Highway 49 and north of Bell Road with siphon crossings of Orr Creek, Dry Creek and Rock Creek.

Project Description: The Combie and Ophir 2&3 Siphon Replacement Project (Project) involves the replacement of three existing underground siphon pipelines. These siphons are each over fifty years old, are nearing the end of their useful life, and require resizing to address approved future flow needs. The siphons are part of NID's Combie & Ophir 2 and 3 raw water delivery system.

Public Review Period: April 3, 2024 to May 3, 2024

ENVIRONMENTAL COMMITMENTS AND MITIGATION MEASURES

The Project would implement a variety of Best Management Practices (BMPs) and mitigation measures to avoid short- and long-term effects on the physical and human environment. These activities are considered part of the Project, would be included in contract specifications and implemented during construction to ensure Project impacts related to biological, cultural, paleontological, hazardous material, hydrology and water quality, and wildfire are protected and mitigated consistent with regulatory standards. Listed below are the BMPs and mitigation measures that would be implemented as part of the Project.

Best Management Practices

BMP-1: Conduct Environmental Awareness Training for Construction Personnel

Before any work occurs in the Project Area, including grading, a Qualified Biologist will conduct mandatory contractor/worker awareness training. The awareness training will be provided to all construction personnel to brief them on the need to avoid impacts on biological resources and the penalties for non-compliance. If new construction personnel are added to the Project, NID will ensure that the personnel receive training from the biologist before starting work.

BMP-2: Install Construction Barrier Fencing to Protect Environmentally Sensitive Areas

The Project contractor will install orange construction barrier fencing to identify site limits and environmentally sensitive areas. The fencing will be commercial-quality woven polypropylene, orange in color, and at least 4 feet high (Tensor Polygrid or equivalent). Environmentally sensitive areas in and adjacent to the construction area comprise mixed riparian forest, native oak trees greater than 4 inches diameter at breast height (DBH), wetland drainages, and any trees that support migratory bird or raptor nests. Prior to construction, a resource specialist shall identify the locations for barrier fencing and will place stakes around the ESAs to indicate these locations. The fencing will be installed by the contractor prior to construction activities and maintained by the contractor throughout the construction period. The following note will be included in the construction plans:

> "The contractor's attention is directed to the areas designated as "environmentally sensitive areas" on the Project Site. These areas are protected, and no entry by the contractor for any purpose will be allowed unless specifically authorized in writing by the NID project manager."

BMP-3: Avoid and Minimize Disturbance of Orr Creek, Dry Creek, Rock Creek and Other Aquatic Habitats and Restore all Temporarily Disturbed Areas

To the extent possible, the NID and its contractor will minimize impacts to *Orr Creek, Dry Creek, Rock Creek and other Aquatic Habitats* by implementing the following:

Contract specifications will include the following BMPs, where applicable, to reduce erosion during construction:

a. Prior to construction, the contractor shall develop and implement a spill prevention and countermeasure plan. This plan shall be developed consistent with applicable SWPPP requirements and address best management practices for: construction equipment and materials; staging areas; fuels, lubricants, and solvents; and use of sediment fences/erosion control for temporarily disturbed areas.
b. 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 must be prevented from contaminating the soil or entering surface waters; and
c. Prior to the start of construction activities, the Project limits in proximity to riparian/riverine habitats will be marked with high visibility Environmentally Sensitive Area fencing or staking to ensure construction will not further encroach into waters or any other biologically sensitive resources detected required during pre-construction surveys. The Project biologist throughout construction will periodically inspect the Environmentally Sensitive Area to ensure sensitive locations remain undisturbed.
d. During construction, water diversion measures (e.g., sheet piles, sandbags or coffer dams) will be utilized to prevent water from entering the work area.

e. After construction, all temporarily disturbed work areas will be stabilized and restored. This will include application of NID's standard erosion control seed mix and installation of erosion and sediment controls consistent with the Project's approved SWPPP.

f. After construction, all temporarily disturbed work areas will be stabilized and restored. This will include application of NID's standard erosion control seed mix and installation of erosion and sediment controls consistent with the Project's approved SWPPP.

g. All equipment maintenance materials (e.g., oils, grease, lubricants, antifreeze, and similar materials) will be stored offsite.

BMP-4: Minimize Potential for the Long-Term Loss of Riparian Habitat

To the extent possible, the NID will minimize the potential for the long-term loss of riparian vegetation by trimming vegetation rather than removing entire shrubs. Shrubs that need to be trimmed will be cut at least one foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone. To the greatest extent feasible, disturbance or removal of vegetation will be minimized. Vegetation removal will occur using hand tools (e.g., clippers, chain saw), trees may be trimmed to the extent necessary to gain access to the work sites. All cleared material/vegetation will be removed out of the riparian/stream zone. If tree removal is needed, the Project will comply with the Placer County Woodland Conservation Program (Chapter 19.50) and any applicable mitigation requirements from the issued environmental permits.

BMP-5: Avoid the Introduction or Spread of Noxious Weeds in the Project Area

To avoid the introduction or spread of noxious weeds into previously uninfected areas (especially within the riparian communities), NID will revegetate disturbed areas immediately after construction is complete using certified weed-free native and nonnative mixes.

BMP-6: Prepare and Implement a Fire Suppression and Control Plan

NID will require the contractor to develop and implement a fire control plan to reduce the risk of fires during construction. The fire prevention and control plan will include requirements for onsite extinguishers; roles and responsibilities of NID, the contractor; specification for fire suppression equipment and other critical fire prevention and suppression items.

BMP-7: Prepare and Implement a Construction Traffic Management Plan

NID will require the contractor to prepare a Construction Traffic Management Plan in accordance with Placer County requirements and professional engineering standards prior to construction. The Traffic Management Plan shall specifically address the proposed Rock Creek Siphon crossing of Highway 49 and the following: adequate provisions for protection of the traveling public; emergency service access; the need for temporary traffic controls

(signage/flaggers); and maintenance of private property driveway access. All traffic controls, including equipment and personnel requirements, shall be consistent with the current State of California Manual of Traffic Controls for Construction and Maintenance Work Areas.

CEQA Mitigation Measures

Biological Resources

BIO-1: **Conduct Special Status Plant Surveys.** The following shall be implemented to minimize potential impacts to special-status plants:

- Where feasible, Project-related activities shall be restricted to previously developed or disturbed areas to avoid disturbance of habitats that may support special-status plants.
- The Project impact limits shall be clearly demarcated prior to construction and all workers shall be made aware of the impact limits and avoided areas. No work shall occur outside of the Project impact limits. All vehicles and equipment shall be restricted to the Project impact limits or existing designated access roads and staging areas.
- If suitable habitat for special-status plants cannot be avoided, the applicant shall perform special-status plant surveys according to CDFW, CNPS, and USFWS protocols (CDFW 2018a; CNPS 2001; USFWS 2000). Surveys shall be conducted throughout all suitable habitat within the Project footprint and a 50-foot buffer, where accessible, to address potential direct and indirect impacts of the Project. Surveys shall be conducted by a qualified biologist and timed according to the identifiable period for target species (typically the blooming period). To the extent feasible, known reference populations will be visited prior to surveys to confirm target species are evident and identifiable at the time of the survey.
- If no special-status plants are found, no further measures pertaining to special-status plants are necessary.
- If special-status plants are identified onsite, the Project shall be modified to the extent feasible to prevent disturbance or loss of special-status plants. No-disturbance buffers shall be established around sensitive plant populations to be preserved in or adjacent to the Project Area. A 50-foot buffer should be maintained between project activities and sensitive plant populations, unless otherwise determined by a qualified biologist. Buffer distances may vary between species depending on listing status, rarity, and other factors. Buffer areas will be clearly demarcated in the field, and no construction or ground-disturbing activities will occur within the boundaries of the delineated area.
- If a special-status plant species is found and avoidance is not feasible, additional measures may be developed in consultation with CDFW, USFWS and/or the CEQA Lead Agency. These measures may include restoration or permanent preservation of

habitat for the special-status plant species or translocation (via seed collection and/or transplantation) from planned impact areas to unaffected suitable habitat.

- If a state or federally listed threatened or endangered plant or a plant that is a candidate for state listing is found onsite, the applicant shall consult with CDFW and/or USFWS, as applicable, to determine appropriate avoidance and minimization measures. If the plants cannot be avoided, an incidental take permit and compensatory mitigation may be required.

BIO-2: Conduct Preconstruction Surveys for Crotch's Bumble Bee and if Found Implement Avoidance Measures

The following measures are recommended to minimize potential impacts to Crotch's bumble bee:

- If the Crotch's bumble bee is no longer a Candidate or formally Listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.
- Because Crotch's bumble bee nest locations are chosen on an annual basis and the site provides nesting habitat, a CDFW-approved Crotch's bumble bee biologist shall conduct three weekly preconstruction nesting surveys with focus on detecting active nesting colonies with the third and final survey conducted within 24-hours immediately prior to ground disturbing activities that are scheduled to occur during the flight season (February through October). Surveys shall be completed at a minimum of one person-hour of searching per three acres of suitable habitat during suitable weather conditions (sustained winds less than 8 miles per hour, mostly sunny to full sun, temperatures between 65 and 90˚F) at an appropriate time of day for detection (at least an hour after sunrise and at least two hours before sunset, though ideally between 9am-1pm). If no nests are found but the species is present, a full-time qualified biological monitor shall be present during initial vegetation or ground disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). The Crotch's bumble bee biologist shall immediately notify CDFW of the detection as further coordination may be required to avoid or mitigate certain impacts. If an active Crotch's bumble bee nest is detected, an appropriate no disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established around the nest to reduce the risk of disturbance or accidental take and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified Crotch's bumble bee biologist deems the nesting colony is no longer active and CDFW agrees with the determination.

- If initial grading is phased or delayed for any reason, the 24-hour preconstruction nesting survey will be repeated prior to ground-disturbing activities that are scheduled to occur during the same flight season (February through October). Three preconstruction Crotch's bumble bee nesting surveys shall be required in subsequent years of construction whenever vegetation and ground disturbing activities are scheduled to occur during the flight season (February through October) if nesting habitat is still present or has re-established and will be affected.

BIO-3: Conduct Preconstruction Surveys for California Red-Legged Frog and Foothill Yellow-Legged Frog

The following measures are recommended to minimize potential impacts to California red-legged frog and foothill yellow-legged frog:

- A qualified biologist shall conduct a preconstruction survey for California red-legged frog and foothill yellow-legged frog within all suitable habitat in the Project work area 48 hours prior to the start of ground- or vegetation-disturbing activities. The biologist will search for all life stages during this survey. If either species are found, the qualified biologist will notify CDFW immediately and consult on appropriate actions to be taken before construction begins.
- A biological monitor shall be present when activities occur within 100 feet of suitable habitat for either California red-legged frog or foothill yellow-legged frog.

BIO-4: Conduct Preconstruction Survey for Sensitive Reptiles -Blainville's horned lizard

- A qualified biologist shall determine if the Project Area contains suitable habitat for Blainville's horned lizard. If suitable habitat is identified within the Project Area, a biologist will conduct surveys for Blainville's horned lizard 48-hours prior to construction in areas of potential habitat. The surveys shall be conducted at the appropriate time of day to detect Blainville's horned lizard. If Blainville's horned lizard is found, a plan will be prepared, in consultation with CDFW, to potentially collect and relocate individual(s) to suitable habitat outside the Project Area.

BIO-5: Conduct Pre-Construction Northwestern Pond Turtle Surveys

Conduct a pre-construction northwestern pond turtle survey within 48 hours prior to the initiation of construction activities and retain a qualified biologist to survey immediately prior to ground disturbing activities in suitable habitat. If northwestern pond turtle is found, consultation with CDFW shall be required, as well as the development of a relocation plan for northwestern pond turtle encountered during construction. If no special status reptiles are detected during surveys, no further measures are needed.

BIO-6: Conduct Pre-Construction Nesting Bird Surveys and if Found Implement Avoidance Measures

The following measures are recommended to avoid or minimize potential effect to special-status birds and other birds protected under the MBTA (and their nests):

- To the extent feasible, vegetation removal activities shall commence during the nonbreeding season (typically October 1 through January 31, as determined by a qualified biologist).
- No Project activity with potential to disturb nesting birds shall begin during the nesting season (typically February 1 through September 30, as determined by a qualified biologist) unless the following surveys are completed by a qualified wildlife biologist:

California Black Rail

- A qualified biologist shall conduct a habitat assessment for California black rail. The survey shall be conducted within the entire Project footprint and a 500-foot buffer.
- If suitable habitat is found within 500 feet of the Project work area, a qualified biologist shall conduct a preconstruction California black rail survey sometime between March 15 and May 15 of the year in which ground disturbance activities commence. A minimum of four surveys shall be conducted. The survey dates will be spaced at least 10 days apart and will cover the time period from the date of the first survey through the end of June to early July. Surveys shall be conducted using survey protocol based on the methods used in Richmond et al. (2008) or other guidance agreed upon by the applicant and CDFW. If active nests are located during the preconstruction surveys, CDFW shall be notified. The nests shall be designated a sensitive area and protected by an avoidance buffer of 500 feet, or as otherwise determined in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are independent of the nest. Monitoring of occupied nests shall be conducted by a qualified biologist during construction activities, and avoidance buffers may be adjusted if any agitated behavior by the nesting birds is observed.

Tricolored Blackbird

- Within 30 days prior to construction, a qualified wildlife biologist shall survey for nesting tricolored blackbirds within the Project work area and a 500-foot radius. If active nests are located during the preconstruction surveys, CDFW shall be notified. The nests shall be designated a sensitive area and protected by an avoidance buffer of 500 feet, or as otherwise determined in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are independent of the nest. Monitoring of occupied nests shall be

conducted by a qualified biologist during construction activities, and avoidance buffers may be adjusted if any agitated behavior by the nesting birds is observed.

Other Special-Status Birds and Migratory Bird Treaty Act-Protected Birds

- During the nesting season, 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 for raptors and 100 feet for other birds protected under the MBTA.
- 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 nestlings have fledged, to be determined by a qualified biologist. No further measures are necessary once the young are independent of the nest or the nest is otherwise no longer occupied.

BIO-7: Survey for Special Status Bats and if Found Implement Avoidance Measures

To avoid and minimize significant impacts to special-status bats or roosting colonies, the following measures shall be implemented:

- At least 30 days prior to initiation of Project activities, a bat habitat assessment shall be conducted by a qualified bat biologist to examine trees and structures for suitable bat roosting habitat. High-quality habitat features (e.g., large tree cavities, basal hollows, loose or peeling bark, abandoned structures) will be identified and the area around the features searched for bats and bat sign (i.e., guano, staining, culled insect parts).
- If suitable bat roosting habitat is identified, the feature shall be avoided and protected in place to the extent feasible. A buffer area shall be established around the roost site to minimize disturbance of roosting bats. The size of the buffer area will be determined in consultation with CDFW.
- If suitable trees or structures cannot be avoided, removal shall be timed to occur outside of the maternity roosting season (generally April 1 to August 31) and only when nighttime low temperature are above 45°F and rainfall is less than 1/2 inch in 24 hours.
- Trees with identified bat roosting habitat shall be removed using a two-phase removal process conducted over two consecutive days. On the first day, tree limbs and branches will be removed, using chainsaws only. Removal will avoid limbs with cavities, cracks, crevices, or deep bark fissures. On the second day, the remainder of the tree will be removed.

- Standing dead trees or snags with habitat features should be removed over a single day by gently lowering the tree or snag to the ground. The tree or snag shall be left undisturbed onsite for the next 48 hours.
- Removal and trimming of trees with potential roosting habitat shall be conducted in the presence of a biological monitor.

If removal/modification of a suitable tree or structure must occur during the maternity season, a qualified bat biologist shall conduct a focused emergence survey(s) within 48 hours of scheduled work. If a maternity roost is located, whether solitary or colonial, that roost will remain undisturbed until after the maternity season or a qualified biological monitor has determined the roost is no longer active.

BIO-8: Restore all Temporarily Disturbed Riparian Habitat, and Compensate for Temporal Loss

All riparian areas subject to temporary construction disturbance shall be restored by NID and its contractor in accordance with a post construction Erosion Control and Riparian Habitat Restoration Plan (ECRHRP). The ECRHRP shall be prepared by a qualified biologist, address all temporarily disturbed areas, and shall be reviewed and approved by CDFW as part of the CDFW Section 1602 permit process. The ECRHRP shall address the following:

- **Temporary erosion control**. Measures for water quality protection shall be addressed as needed (such as silt fencing and/or coir rolls).
- **Specifications for native riparian plant densities.** The ECRHRP shall address planting densities, species composition, and survivorship, based on characteristics of the existing impacted habitat.
- **Temporal Loss**. The ECRHRP shall include a compensation strategy for temporal loss. This may be accomplished by either: 1) establishing riparian vegetation on currently unvegetated creek banks affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate; or, 2) purchase of CDFW approved mitigation credits.
- **Monitoring and Reporting**. Monitoring protocol, including a schedule for delivery of annual reports shall be addressed. Monitoring of restoration habitat shall occur for a minimum of three (3) years from installation, or until the success criteria identified in the approved mitigation plan has been met.
- **Performance Standards**. Ecological performance standards for plantings, including the acceptable amount of dead woody vegetation gaps and bare ground, and survivorship shall be addressed in the ECRHRP.
- **Corrective measures**. Should performance standards not be met, the ECRHRP shall allow for the purchase of riparian mitigation credits in an amount agreed to by CDFW as an alternative to meeting the prescribed success criteria.

- **Responsible Parties**. Responsible parties for preparation of monitoring reports, and for verifying success or prescribing implementation or corrective actions shall be addressed in the ECRHRP.

BIO-9: Obtain the necessary permits and Implement the Required Conditions

- Prior to the start of construction activities, NID will obtain all necessary regulatory permits for this Project. These permits are expected to include a CWA Section 401 Water Quality Certification from the RWQCB, a CWA Section 402 NPDES Compliance Permit from the State Water Resources Control Board, a CWA Section 404 from the USACE, and a Fish and Game Code Section 1602 Streambed Alteration Agreement from the CDFW. The Project shall implement all the BMPs, and Mitigation Measures identified in the issued permits.

BIO-10: Comply with the Placer County Tree Preservation Article

- To the extent feasible, Project construction shall avoid ground or vegetation disturbance within the dripline of protected trees subject to the Placer County Tree Preservation Article. If protected trees are to be impacted by Project activities the appropriate tree permits shall be obtained prior to initiation of impacting activities.

Cultural Resources

CUL-1: Stop Work in the Event of Unanticipated Discovery of Potential Cultural Resources and/or Human Remains and Evaluate the Find

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined by CEQA or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property

under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

- If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Placer County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

Geology and Soils

PALEO-1: Discovery of Unknown Resources

If any paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the area shall be isolated using orange or yellow fencing until NID is notified and the area is cleared for future work. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resources. If NID resumes work in a location where paleontological remains have been discovered and cleared, NID will have a paleontologist onsite to confirm that no additional paleontological resources are in the area.

Hazards and Hazardous Materials

HAZ-1: Proper Handling of Hazardous Materials

Construction documents shall identify materials that are considered hazardous. The Project contractor shall be required to develop a Health and Safety Plan that addresses release prevention measures; employee training, notification, and evacuation procedures; and emergency response protocols and cleanup procedures. The contractor will comply with the California Occupational Safety and Health Administration (Cal-OSHA) standards for the storage and handling of fuels, flammable materials, and common construction-related

hazardous materials and for fire prevention. Cal-OSHA requirements can be found in California Labor Code, Division 5, Chapter 2.5.

HAZ-2: Naturally Occurring Asbestos (NOA) Dust Control

Should construction activities expose ultramafic rock, water support, in the form of a water truck or mobile storage tank, shall be used in regular intervals to keep the open earth area wet and dust free. Proper signage noting the possibility of NOA and required PPE shall be posted in the area. PPE including coveralls and respirators shall be worn by all workers in the area. These procedures shall be followed as long as ultramafic rock is exposed and can be suspended once it has been reburied with soil.

Hydrology and Water Quality

HYD-1: Avoid and Minimize Disturbance of Surface Water/Creek Project Areas and Associated Aquatic Habitat and Restore all Temporary Disturbed Areas

To the extent possible, NID and the contractor shall minimize impacts to surface waters and associated aquatic habitat by implementing the following:

- During construction NID and its contractor shall ensure the following:
  a. All heavy equipment shall be properly maintained by the contractor to prevent leaks of materials that if introduced into water could be deleterious to aquatic life. All heavy equipment shall be checked for leaks prior to operation within fifty feet of any flowing surface water.

  b. Vehicles that aren't required to be onsite shall be parked or stored within designated staging areas.

  c. Sediment fences shall be installed and maintained in appropriate locations to reduce the introduction of sediment into surface waters.

  d. Any overburden material to be temporarily stored onsite shall be stabilized to prevent sediment transport.

  e. Construction debris/waste shall be picked up daily and properly stored onsite or disposed of offsite.

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
AB	Assembly Bill
ANSI	American National Standards Institute
APN	Assessor's Parcel Number
ARD	Aquatic Resources Delineation
BCC	Bird of Conservation Concern
BIOS	Biogeographic Information and Observation System
BMPs	Best Management Practices
BRA	Biological Resources Assessment
BSA	Biological Study Area
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	Methane
CHL	California Historical Landmarks
CHP	California Highway Patrol
CIWM	California Integrated Waste Management
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Ranks
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
DHS	Department of Health Services
DPM	Diesel Particulate Matter

Term	Definition
DOC	California Department of Conservation
DPR	Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
ECRHRP	Erosion Control and Riparian Habitat Restoration Plan
EIR	Environmental Impact Report
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHG	Greenhouse Gas
HCP	Habitat Conservation Plan
HUC	Hydrologic Unit Code
IEPR	Integrated Energy Policy Report
IS/MND	Initial Study/Mitigated Negative Declaration
kWh	kilowatt-hours
L_{max}	Maximum level
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCV	Manual of California Vegetation Online
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
mya	million years ago
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NCIC	North Central Information Center
NHPA	National Historic Preservation Act
NID	Nevada Irrigation District
NIOSH	National Institute for Occupational Safety and Health
NMFS	National Marine Fisheries Service
N_2O	Nitrous Oxide
NO_x	Nitrogen Oxides
NOA	Naturally Occurring Asbestos
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
O_3	Ozone
OHP	Office of Historic Preservation

Term	Definition
OHWM	Ordinary High-Water Mark
PCAPCD	Placer County Air Pollution Control District
PCCP	Placer County Conservation Program
PCSP	Placer County Sustainability Plan
PG&E	Pacific Gas & Electric Company
PM	Particulate matter
$PM_{2.5}$	Particulate matter with a diameter of 2.5 microns or less
PM_{10}	Particulate matter with a diameter of 10 microns or less
PPE	Personal Protective Equipment
PPV	peak particle velocity
PRC	Public Resources Code
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SIP	State Implementation Plan
SMARA	Surface Mining and Reclamation Act of 1975
SO_2	Sulfur Dioxide
SR	State Route
SRA	Sensitive Receptor Area
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TCRs	Tribal Cultural Resources
UAIC	United Auburn Indian Community
USACE	United States Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

1.0 BACKGROUND

1.1 Summary

Project Title:	Combie and Ophir 2 & 3 Siphon Replacement Project (Project)
Lead Agency Name and Address:	Nevada Irrigation District 1036 West Main Street Grass Valley, CA 95945
Contact Person and Phone Number:	Adrian Schneider, Senior Engineer (530) 271-6839
Project Location:	Placer County, in the North Auburn area, primarily east of Highway 49 and north of Bell Road with siphon crossings of Orr Creek, Dry Creek and Rock Creek.
General Plan and Zoning Designations:	Orr Creek Siphon: General Plan designation of Rural Residential 2.3 – 4.6 Acres Minimum and zoning designation of Residential Single Family. Dry Creek Siphon: General Plan designation of Rural Residential 2.3 -4.6 Acres Minimum and zoning designation of Residential Agricultural, Residential Single Family, and Farm. Rock Creek Siphon: General Plan and zoning designations are Office and Professional, Industrial and Commercial.

1.2 Introduction

The Nevada Irrigation District (NID or District) is the Lead Agency for this California Environmental Quality Act (CEQA) Initial Study. This Initial Study has been prepared to identify and assess the anticipated environmental impacts of the NID Combie and Ophir 2 & 3 Siphon Replacement Project (Project) to satisfy CEQA (Public Resources Code [PRC], Section 21000 et seq.) and state CEQA Guidelines (Title 14, California Code of Regulations [CCR] 15000 et seq.).

The proposed Project generally involves replacement of three existing underground siphon pipelines that are nearing the end of their useful life. To facilitate public outreach and coordination, for CEQA purposes these replacement siphons are analyzed together as a single project in this initial study. It should be noted that two of the three replacement siphons (the Orr Creek and Dry Creek Siphons) are proposed along their existing alignments within existing NID easements and as such could qualify for a CEQA Categorical Exemption (for Class 2 Replacement or Reconstruction Projects) (State CEQA Guidelines Section 15302). However, due to development that has occurred along the existing Rock Creek Siphon alignment, the replacement siphon follows a new alignment (and would require new easement in some locations) to take advantage of existing road right-of-way and minimize potential land use conflicts. Because the Rock Creek replacement siphon includes realignment, and because all three siphon replacements are analyzed together as a single project in this initial study for public coordination efficiencies, the overall Project doesn't qualify for a CEQA Exemption.

The mitigation measures presented in this document apply to each siphon replacement unless otherwise stated in the measure.

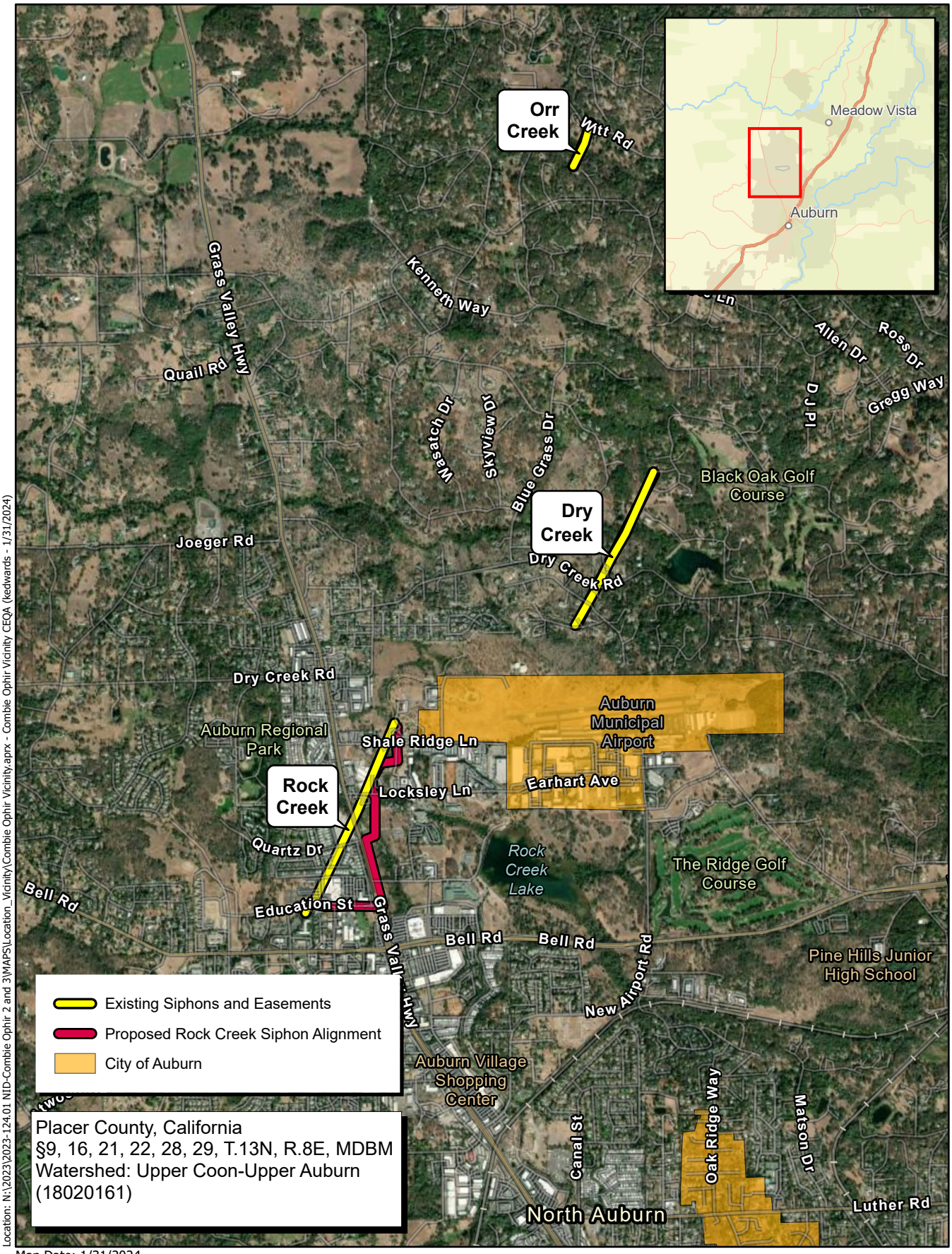
CEQA requires that all state and local government agencies consider the environmental consequences before approving discretionary projects. NID will use this CEQA Initial Study to determine which CEQA document is appropriate for the Project: either a Negative Declaration, Mitigated Negative Declaration (MND), or Environmental Impact Report (EIR). Based on results of the Initial Study, NID has determined a Mitigated Negative Declaration is the appropriate CEQA document.

In accordance with CEQA, this Initial Study/Mitigated Negative Declaration (IS/MND) will be circulated for a 30-day public review and comment period. Written comments should be addressed to:

Adrian Schneider, Senior Engineer
Nevada Irrigation District
1036 West Main Street
Grass Valley, California 95945
Email: schneider@nidwater.com

1.3 Surrounding Land Uses/Environmental Setting

As shown in Figure 1-1, Project Location and Vicinity, the Project Area is north of the City of Auburn in Placer County at approximately elevation 1,400 feet. The Project Area is mostly developed with rural residential and traditional single-family subdivisions, with scattered supporting commercial, light industrial, and recreational uses. Project Area terrain varies from relatively flat areas, to gently rolling hills and relatively steep hillsides and supports primarily annual grassland and valley foothill riparian communities. Project Area climate is characterized by hot, dry summers and cool, rainy winters. Surface waters in the Project Area that would be crossed by the proposed siphons include Orr Creek, Dry Creek and Rock Creek, all of which generally flow east to west.



Location: N:\2023\2023-124.01 NID-Combie Ophir 2 and 3\MAPS\Location_Vicinity\Combie Ophir Vicinity.aprx - Combie Ophir Vicinity CEQA (kedwards - 1/31/2024)

Map Date: 1/31/2024
Sources: Esri

Miles
0 0.5

Figure 1-1. Project Vicinity

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2023-124.01 NID-Combie Ophir 2 and 3

2.0 PROJECT DESCRIPTION

2.1 Project Background

Formed in 1921, the Nevada Irrigation District (NID or District) is an independent special water district that operates water storage and distribution facilities in Nevada, Placer, Sierra and Yuba counties and provides water service to wide areas of Nevada and Placer counties. NID's service area covers ±287,000 acres and is one of the largest in the state. It is bounded by the Yuba River on the north, the Yuba/Nevada County Line on the west, the cities of Lincoln and Auburn on the south, and by a line extending north from Rollins Reservoir Dam on the east. The District supplies water for irrigation, municipal, domestic, and industrial uses through an extensive reservoir and canal system and network of water treatment plants. NID-treated water service areas are in and around Grass Valley and Nevada City, Banner Mountain, the Glenbrook Basin, Loma Rica, Alta Sierra, Lake of the Pines, Penn Valley, Lake Wildwood, Smartsville, East Lincoln and North Auburn.

Unique in many respects, NID collects water on 70,000 acres of high mountain watershed, produces hydroelectric energy and provides outdoor public recreation. NID is headquartered on West Main Street in Grass Valley, operates a maintenance yard on Gold Hill Road near Lincoln and a Hydroelectric Department office near Colfax. NID is the Lead Agency for the proposed Project under the CEQA (PRC, § 21000 et seq.) and State CEQA Guidelines (14 CCR 15000 et seq.).

2.2 Proposed Project

The Combie and Ophir 2 & 3 Siphon Replacement Project (Project) is a proposal by the NID to replace the following three District owned and operated raw water siphons (Figure 1-1): The Orr Creek Siphon, Dry Creek Siphon, and Rock Creek Siphon. These siphons are each over fifty years old, are nearing the end of their useful life, and require resizing to address approved future flow needs. The siphons are part of NID's Combie and Ophir 2 and 3 raw water delivery system and are located in North Auburn, primarily east of Highway 49 and north of Bell Road within unincorporated Placer County, California and are described below.

2.2.1 Existing and Replacement Siphons

Following installation of replacement siphons, all existing siphons would be abandoned in place but retained for future use in the event new siphons are required to be taken offline for maintenance, or due to emergency. With exception of the proposed Rock Creek Siphon which deviates from the existing siphon right-of-way, all replacement siphons would be located within NID's existing 40-foot right-of-way easement that extends 20 feet on either side of the existing siphon centerlines. Where the proposed Rock Creek siphon alignment requires a new easement, a similar 40-foot right-of-way width is proposed. The existing and replacement siphons are further described below.

2.2.1.1 Orr Creek Siphon

As shown on Figures 2-1 and 2-2, the existing Orr Creek Siphon is approximately 945 feet long extending from north of Witt Road to just south of Northgate Circle and crosses Orr Creek. The Orr Creek Siphon is an underground 36-inch steel pipe originally designed for a 50.2 cubic feet per second (cfs) flow. The existing siphon extends through the six parcels shown in Figure 2-2 and listed in Table 2-1.

The Orr Creek Siphon would be replaced by installing a new approximately 945-foot-long underground siphon culvert along the west side of the existing culvert. The new siphon would be a 40-inch pipe designed to accommodate a flow rate of 72.5 cfs consistent with NID's raw water transmission master plan and future emergency contingency.

2.2.1.2 Dry Creek Siphon

As shown on Figures 2-3 and 2-4, the Dry Creek Siphon is approximately 3,350 feet long extending from near Black Oak Road to near Red Deer Court and crosses Dry Creek. The Dry Creek Siphon is a 36-inch steel pipe originally designed for a 46.1 cfs flow. The existing siphon extends through the 19 parcels shown in Figure 2-4 and listed in Table 2-1.

The Dry Creek Siphon would be replaced by installing an approximately 3,350-foot-long new underground siphon culvert along the western side of the existing culvert. The new siphon would be a 40-inch pipe designed to accommodate a flow rate of 70 cfs consistent with NID's raw water transmission master plan and future emergency contingency.

2.2.1.3 Rock Creek Siphon

As shown on Figures 2-5 and 2-6, the existing Rock Creek Siphon is approximately 4,000-feet long extending from north of Shale Ridge Road southwest, crossing under Rock Creek and Highway 49, before terminating just south of Education Street. The Rock Creek Siphon is a 33-inch steel pipe that has been modified to 32-inch originally designed for a 43.0 cfs flow. The new siphon extends through nine parcels as shown in Figure 2-6 and listed in Table 2-1.

The existing Rock Creek Siphon would be replaced with approximately 5,500 feet of new pipe including sections that deviate from the existing alignment. Starting at the north end, the proposed route heads due south as it veers east from the existing alignment and crosses Shale Ridge Lane. From Shale Ridge Lane, the alignment generally runs in a southerly fashion, crossing Locksley Lane and Rock Creek twice, following what appears to be future right-of-way. The proposed alignment then jogs westerly towards Highway 49, across from Quartz Drive. From there it follows the east side of Highway 49 right-of-way south to Education Street. At Education Street, the alignment heads west, crosses under Highway 49 and continues west on Education Street approximately 1,400 feet through an urbanized area before jogging south leaving the public right-of-way to connect with the existing siphon. The proposed alignment maximizes use of existing roadways, driveways, and open space to reduce Project constraints and minimize construction disruptions. For more detailed Rock Creek Siphon alignment aerial imagery, refer to Appendix A.

Location: N:\2023\2023-124.01 NID-Combie Ophir 2 and 3\MAPS\CEQA\Combie Ophir CEQA.aprx - Combie Ophir CEQA Aerial (lgalvez - 11/16/2023)

Map Date: 11/16/2023

Sources: Esri

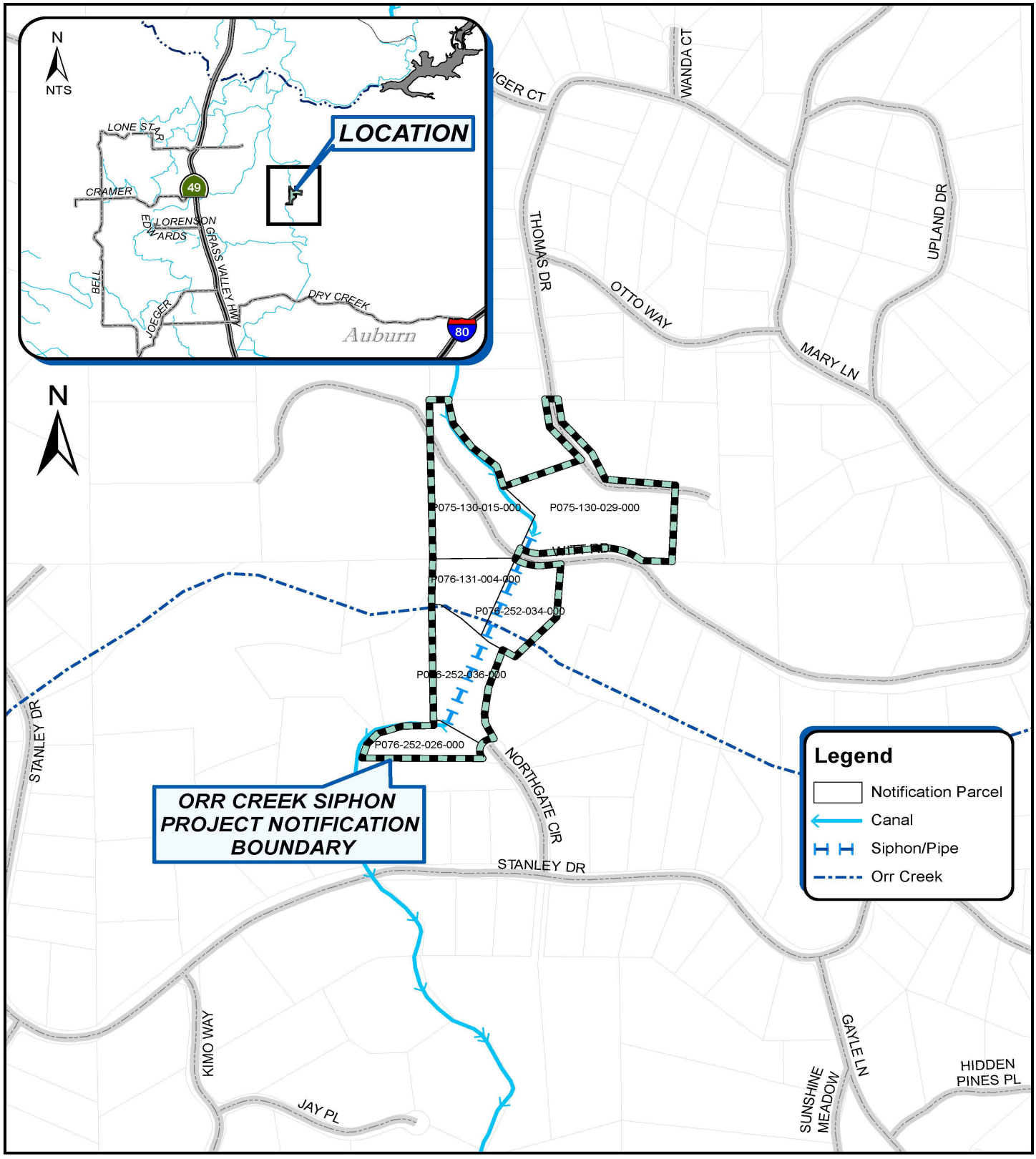
US Feet

0 310

Figure 2-1. Orr Creek Aerial Location

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2023-124.01 NID-Combie Ophir 2 and 3



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ORR CREEK SIPHON PROPERTIES FOR PROJECT #2645

Date: 8/15/2023

Drawn By: L. HAMMER

NEVADA IRRIGATION DISTRICT
NEVADA COUNTY -- PLACER COUNTY
GRASS VALLEY, CALIFORNIA

Scale: 1" = 500' @ 8.5x11

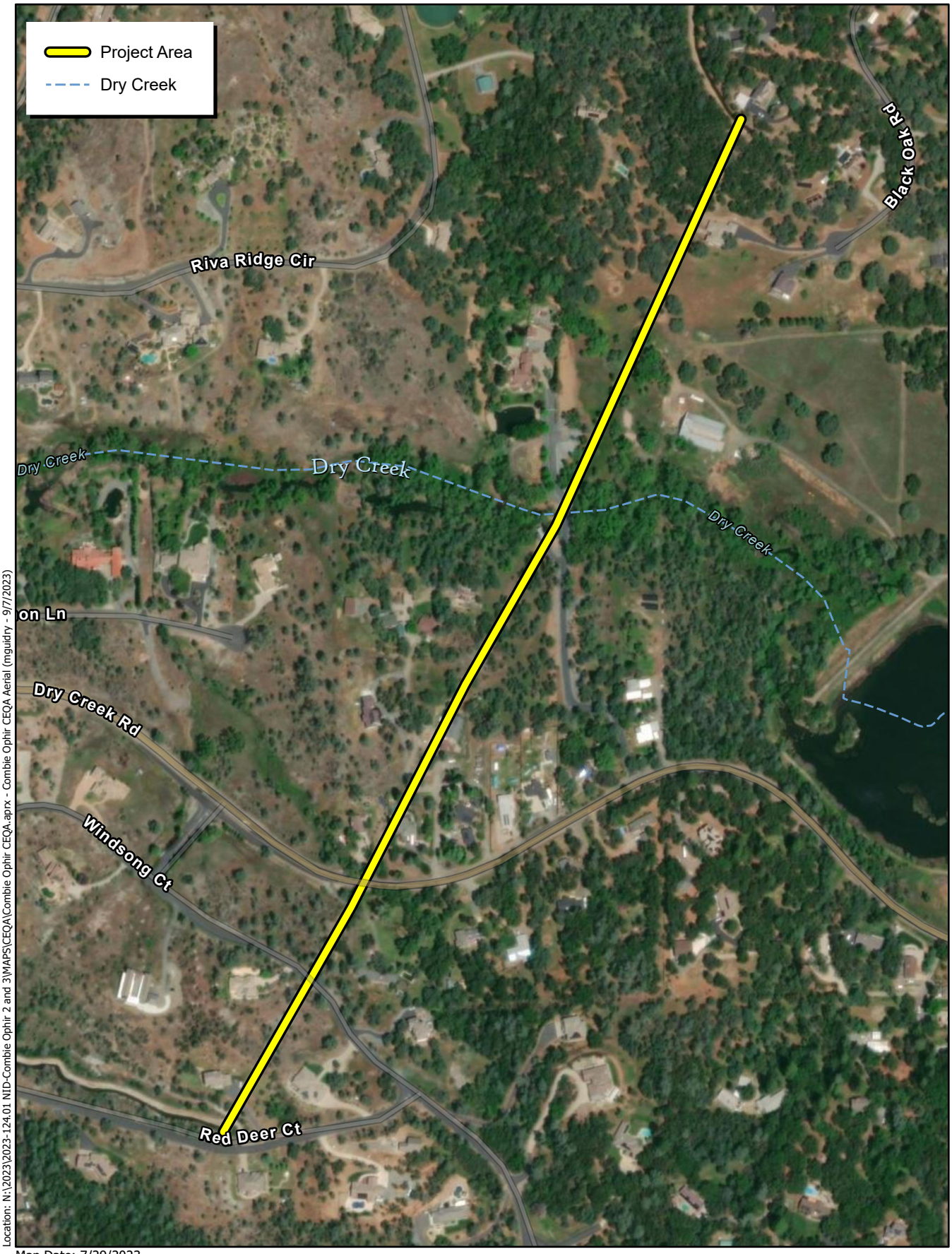
Sheet: 1 of 1

Source: Nevada Irrigation District

Figure 2-2. Orr Creek Siphon Properties

2023-124.01 NID Combie Ophir 2&3 Project

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS



Location: N:\2023\2023-124.01 NID-Combie Ophir 2 and 3\MAPS\CEQA\Combie Ophir CEQA.aprx - Combie Ophir CEQA Aerial (mguidry - 9/7/2023)

Map Date: 7/29/2023

Sources: Esri

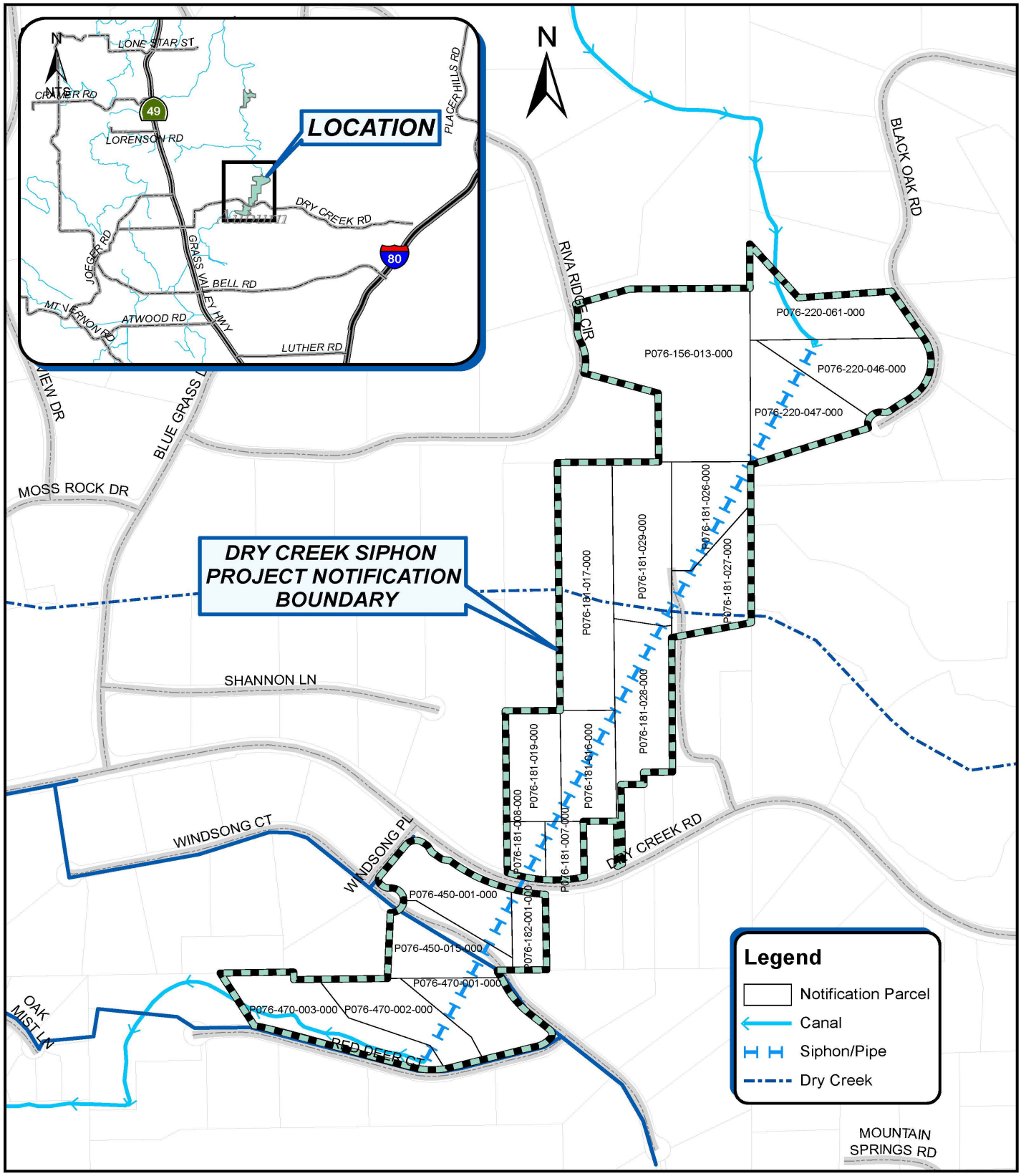
US Feet

0 400

Figure 2-3. Dry Creek Aerial Location

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2023-124.01 NID-Combie Ophir 2 and 3



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DRY CREEK SIPHON PROPERTIES FOR PROJECT #2645

NID

Date: 8/15/2023

Drawn By: L. HAMMER

NEVADA IRRIGATION DISTRICT
NEVADA COUNTY -- PLACER COUNTY
GRASS VALLEY, CALIFORNIA

Scale: 1" = 500' @ 8.5x11

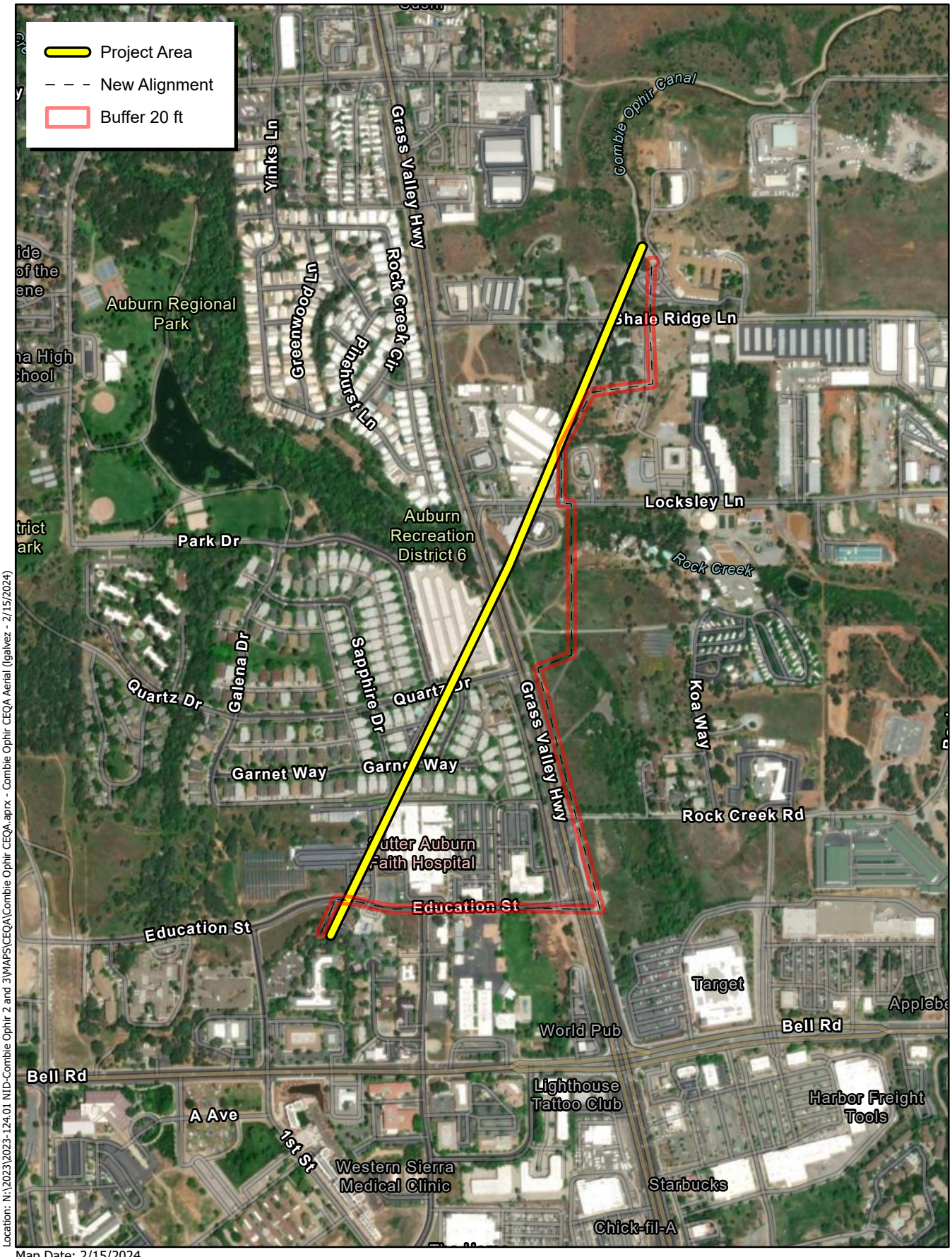
Sheet: 1 of 1

Source: Nevada Irrigation District

Figure 2-4. Dry Creek Siphon Properties

2023-124.01 NID Combie Ophir 2&3 Project

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS



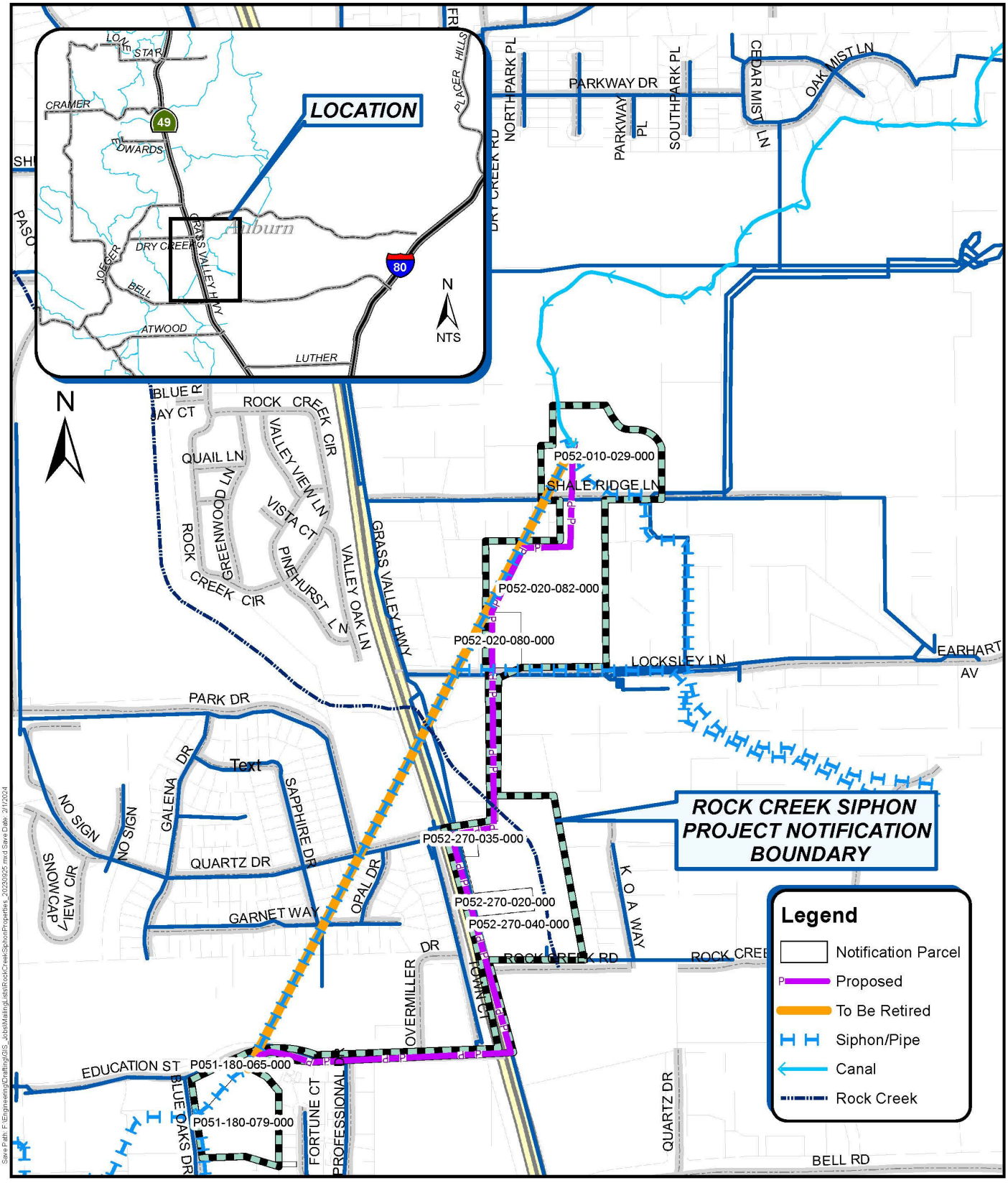
Location: N:\2023\2023-124.01 NID-Combie Ophir 2 and 3\MAPS\CEQA\Combie Ophir CEQA.aprx - Combie Ophir CEQA Aerial (lgalvez - 2/15/2024)

Map Date: 2/15/2024
Sources: Esri

US Feet
0 770

Figure 2-5. Rock Creek Aerial Location

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS



ROCK CREEK SIPHON PROPERTIES FOR PROJECT #2645

NID

Date: 2/1/2024

Drawn By: M. Bryant

NEVADA IRRIGATION DISTRICT
NEVADA COUNTY -- PLACER COUNTY
GRASS VALLEY, CALIFORNIA

Scale: NTS

Sheet: 1 of 1

Figure 2-6. Rock Creek Siphon Properties

2023-124.01 Ophir Combie 2&3 Siphon Replacement

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Table 2-1. Existing Siphon Easement Properties	
APN	**Address**
Dry Creek Siphon	
076-450-015	12960 WINDSONG CT, AUBURN, CA 95602
076-220-061	2940 BLACK OAK RD, AUBURN, CA 95602
076-220-047	3000 BLACK OAK RD, AUBURN, CA 95602
076-181-026	13167 DRY CREEK RD, AUBURN, CA 95602
076-181-027	13167 D RY CREEK RD, AUBURN, CA 95602
076-181-028	13167 DRY CREEK RD, AUBURN, CA 95602
076-181-017	13085 DRY CREEK RD, AUBURN, CA 95602
076-156-013	14335 RIVA RIDGE CIR, AUBURN, CA 95602
076-181-016	13065 DRY CREEK RD, AUBURN, CA 95602
076-181-019	7233 WISE RD, AUBURN, CA 95602
076-470-003	211 TIMBERLINE LN, AUBURN, CA 95602
076-181-008	13015 DRY CREEK RD, AUBURN, CA 95602
076-182-001	13010 DRY CREEK RD, AUBURN, CA 95602
076-220-046	2970 BLACK OAK RD , AUBURN, CA 95602
076-450-001	5275 MORNING SIDE AVE, AUBURN, CA 95602
076-470-001	12980 WINDSONG CT, AUBURN, CA 95602
076-181-007	13025 DRY CREEK RD , AUBURN, CA 95602
076-181-029	13167 DRY CREEK RD, AUBURN, CA 95602
076-470-002	3018 RED DEER CT, AUBURN, CA 95602
Orr Creek Siphon	
076-252-026	3845 NORTHGATE CIR, AUBURN, CA 95602
076-252-036	3850 NORTHGATE CIR , AUBURN, CA 95602
076-252-034	3757 WITT RD, AUBURN, CA 95602
075-130-029	5270 THOMAS DR, AUBURN, CA 95602
075-130-015	3801 WITT RD, AUBURN, CA 95602
076-131-004	3801 WITT RD, AUBURN, CA 95602
Rock Creek Siphon	
051-160-071	11710 EDUCATION STREET
052-270-040	12085 ROCK CREEK ROAD

Table 2-1. Existing Siphon Easement Properties	
APN	**Address**
052-270-020	3530 GRASS VALLEY HIGHWAY
052-270-035	No Address on File
052-020-080	12125 LOCKSLEY LANE
052-020-082	12170 SHALE RIDGE ROAD
052-010-029	12155 SHALE RIDGE ROAD
051-180-079	3250 BLUE OAKS DRIVE
051-180-065	No Address on File

Note: APN = Assessor's Parcel Number

2.2.2 Construction Approach and Methods

With the exception of the Rock Creek Siphon, the Project generally involves the installation/construction of replacement siphons adjacent to existing siphons within existing or proposed new easements using open trench construction methods. As described in Section 2.2.1.3 above, the proposed Rock Creek replacement siphon would require new easements where the proposed siphon alignment deviates from the existing easement. The proposed construction sequence and methods are described below.

- **Mobilization and Staging**. The first construction task would involve mobilization to the Project Site, establishment of work limits and staging areas, and installation of temporary construction fencing to limit the area of disturbance and protect any environmentally sensitive areas. This would include the use of temporary construction fencing and silt fencing along the perimeter of the construction work area and provision of gravel tracking pads between the work area access points and local roadways.
- **Clear and Grub**. Prior to trenching, the proposed alignment ground surface would first be cleared of vegetation and trees. All cut vegetation would be removed and properly disposed of offsite.
- **Trenching and Siphon Culvert Installation**. Following clear and grub, a trench measuring approximately six feet wide at a depth of about seven feet would be dug using a backhoe. Following trenching, the siphon piping would be placed and backfilled, and soils compacted. The pipe would then be pressure tested. Following successful pressure testing, the ground surface would be restored to pre-Project conditions.
- **Connection and Operation**. The new siphon culvert would then be connected to the existing open canal. This would be accomplished by constructing a new inlet and outlet next to the existing inlet/outlet structures and within the canal. A raw water outage would entail switching the canal flows from the old structures to the new structures connected to the newly installed pipe. Once the new siphon pipe and connections are operating, the old structures would be removed and portions abandoned.

- **Site Restoration**. Following construction of all improvements, the trench alignment surface and all other temporarily disturbed areas would be restored to pre-Project conditions. This would include application of California Department of Fish and Wildlife (CDFW) approved erosion control seed mix in all temporarily disturbed areas.

Where proposed siphon alignments would cross a flowing surface water/creek, approved stream diversion barriers would be installed upstream and downstream of the crossing along with temporary piping along the axis of the stream. Surface flows would be diverted through the temporary piping during construction within the streambed. The stream diversion devices would be removed immediately following completion of work within the streambed. Potential dewatering techniques are described in more detail in the following section.

2.2.2.1 Creek Crossings/Clear-Water Diversion

In order to install the new siphons, it would be necessary to temporarily de-water a segment of creek and divert flows through the Project Area. To accomplish this, a containment dam would be established consistent with applicable regulatory permits. The containment dam would be constructed within the channel banks within the Project limits upstream, and possibly downstream, of construction activities. The creek diversion would be installed to isolate the work area from flowing surface waters using one of four options depending on site conditions (or equivalent, as may be approved by the permitting agencies):

Approximately 60 cubic yards of clean gravel material wrapped in a geofabric;

A k-rail that is wrapped in a geofabric and backfilled with approximately 60 cubic yards of clean gravel;

Bladders that are filled with creek water and placed within the creek channel; or

Similar diversion structures placed upstream and possibly downstream; however, creek flow through the construction site would be piped rather than via an open, flowing channel. It is anticipated that the contractor would use backhoes and excavators from the upslope bank to install and remove the diversion.

Stream crossing construction would be scheduled for the dry season as required by state and federal permits, typically mid-June through mid-October.

2.2.2.2 Construction Personnel and Equipment

On average, approximately 7-10 crew members would be present onsite each day during construction; however, the specific number of crew members would vary depending on the work activities. The following construction equipment is anticipated to be required.

- Track hoe/backhoe/excavator
- Welding rig
- Water truck
- Dump Truck

- Flat Bed Truck
- Service pickups for workers/tools (3)

2.2.2.3 Construction Staging and Traffic Control

Construction staging areas would be established in areas devoid of sensitive habitats as needed at each construction site. Should additional staging be required, the proposed locations would first be surveyed by a qualified biologist to confirm absence of sensitive species and habitats. Consistent with BMP-7 (discussed further below), at each siphon construction site, temporary signage would be placed where construction vehicles would enter and leave the public right-of-way to notify the public of the approaching work zone and the potential for construction vehicles and controlled traffic conditions. Should Project construction require activity within a road right-of-way, traffic control flaggers and/or temporary signage and/or traffic cones/barriers would be used as appropriate.

2.2.2.4 Construction Best Management Practices

The Project would implement a variety of Best Management Practices (BMPs) to avoid impacts on the physical and human environment. These activities are considered part of the Project, would be included in contract specifications and would be implemented during Project construction as outlined below.

BMP-1: Conduct Environmental Awareness Training for Construction Personnel

Before any work occurs in the Project Area, including grading, a Qualified Biologist will conduct mandatory contractor/worker awareness training. The awareness training will be provided to all construction personnel to brief them on the need to avoid impacts on biological resources and the penalties for non-compliance. If new construction personnel are added to the Project, NID will ensure that the personnel receive training from the biologist before starting work.

BMP-2: Install Construction Barrier Fencing to Protect Environmentally Sensitive Areas

The Project contractor will install orange construction barrier fencing to identify site limits and environmentally sensitive areas. The fencing will be commercial-quality woven polypropylene, orange in color, and at least four feet high (Tensor Polygrid or equivalent). Environmentally sensitive areas in and adjacent to the construction area comprise mixed riparian forest, native oak trees greater than four inches diameter breast height (DBH), wetland drainages, and any trees that support migratory bird or raptor nests. Prior to construction, a resource specialist shall identify the locations for barrier fencing and will place stakes around the ESAs to indicate these locations. The fencing will be installed by the contractor prior to construction activities and maintained by the contractor throughout the construction period. The following note will be included in the construction plans:

> "The contractor's attention is directed to the areas designated as "environmentally sensitive areas" on the Project Site. These areas are protected, and no entry by the

contractor for any purpose will be allowed unless specifically authorized in writing by the NID project manager."

BMP-3: Avoid and Minimize Disturbance of Orr Creek, Dry Creek, Rock Creek and Other Aquatic Habitats and Restore all Temporarily Disturbed Areas

To the extent possible, the NID and its contractor will minimize impacts to *Orr Creek, Dry Creek, Rock Creek and other Aquatic Habitats* by implementing the following:

a. Prior to working within creeks and other aquatic habitats, all heavy equipment will be checked by the NID inspector and maintained properly by the contractor to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.
b. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances associated with project-related activities that could be hazardous to aquatic life will be prevented from contaminating the soil or entering the surface waters or wetland habitat.
c. During construction, the contractor shall not place any material in the stream channel. All such debris and waste will be picked up daily and properly disposed of offsite. All construction debris and associated materials will be removed from the work site upon Project completion.
d. Consistent with the Project's Stormwater Pollution Prevention Plan (SWPPP), sediment fences will be installed in appropriate locations to reduce the introduction of sediment into creeks and wetlands during construction. Any overburden project material would not be side cast into the creek channel but will be stabilized onsite or offsite at an approved disposal location to preclude increased risk of sediment input to creeks.
e. NID and the contractor will establish a spill prevention and countermeasure plan before project construction begins; the plan will include on-site handling criteria to avoid input of contaminants to the waterway. A staging and storage area will be provided away from the waterway for equipment, construction materials, fuels, lubricants, solvents, and other possible contaminants. This plan will be approved by the NID project manager prior to the start of construction.
f. After construction, all temporarily disturbed work areas will be stabilized and restored. This will include application of NID's standard erosion control seed mix and installation of erosion and sediment controls consistent with the Project's approved SWPPP.
g. All equipment maintenance materials (e.g., oils, grease, lubricants, antifreeze, and similar materials) will be stored offsite.

BMP-4: Minimize Potential for the Long-Term Loss of Riparian Habitat

To the extent possible, the NID will minimize the potential for the long-term loss of riparian vegetation by trimming vegetation rather than removing entire shrubs. Shrubs that need to be trimmed will be cut at least one foot above ground level to leave the root systems intact

and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary within the construction zone. Disturbance or removal of vegetation will not exceed the minimum necessary to complete operations. Except for the vegetation specifically identified for trimming and/or removal in the CDFW 1602 notification, no native oak trees with a trunk diameter greater than six inches DBH will be removed or damaged without prior consultation and approval by NID. Using hand tools (e.g., clippers, chain saw), trees may be trimmed to the extent necessary to gain access to the work sites. All cleared material/vegetation will be removed out of the riparian/stream zone.

BMP-5: Avoid the Introduction or Spread of Noxious Weeds in the Project Area

To avoid the introduction or spread of noxious weeds into previously uninfected areas (especially within the riparian communities), NID will revegetate disturbed areas immediately after construction is complete using certified weed-free native and nonnative mixes.

BMP-6: Prepare and Implement a Fire Suppression and Control Plan

NID will require the contractor to develop and implement a fire control plan to reduce the risk of fires during construction. The fire prevention and control plan will include requirements for onsite extinguishers; roles and responsibilities of NID, the contractor; specification for fire suppression equipment and other critical fire prevention and suppression items.

BMP-7: Prepare and Implement a Construction Traffic Management Plan

NID will require the contractor prepare a Construction Traffic Management Plan in accordance with Placer County requirements and professional engineering standards prior to construction. The Traffic Management Plan shall specifically address the proposed Rock Creek Siphon crossing of Highway 49 and the following: adequate provisions for protection of the traveling public; emergency service access; the need for temporary traffic controls (signage/flaggers); and maintenance of private property driveway access. All traffic controls, including equipment and personnel requirements, shall be consistent with the current State of California Manual of Traffic Controls for Construction and Maintenance Work Areas.

2.2.3 Construction Schedule

Project construction is currently planned to begin summer 2024 and extend through 2026. It is expected that siphons would be constructed in the following order with each expected to take approximately the following number of days to construct:

- Orr Creek (60 days in 2024),
- Dry Creek (90 days in 2025),
- Rock Creek (150 days, with construction starting in 2026 and likely occurring over multiple seasons).

2.2.4 Project Operation and Maintenance

Once the replacement siphons are put into operation, they would not require onsite personnel or active management, nor would they produce substantial noise or any air emissions. Siphons would be subject to periodic inspection by NID field staff, would operate without mechanical features, and no significant maintenance is expected to be required. Once the replacement siphons become operational, the existing siphons headwalls that are replaced would be removed and the existing siphons would be abandoned in place but would remain available for use in the event of an emergency or for backup conveyance should the replacement siphons be taken offline for maintenance.

2.3 Regulatory Requirements, Permits, and Approvals

The following permits and approvals are anticipated for the proposed Project:

- CEQA Document Adoption and Project Approval - NID Board
- Section 1600 Streambed Alteration Agreement - California Department of Fish and Wildlife
- Section 404 Permit Clean Water Act Permit - Army Corps of Engineers
- Section 401 Permit - Regional Water Quality Control Board
- Permanent and Temporary Construction Easements (as required)
- Storm Water Pollution Prevention Plan (SWPPP) for each replacement siphon (as required)

2.4 Consultation With California Native American Tribe(s)

NID has notified the following California Native American tribes traditionally and culturally affiliated with the geographic area of the proposed Project: Colfax Rancheria, Nevada City Rancheria, and United Auburn Indian Community (UAIC). To date, the UAIC has responded to request additional information relating to the proposed siphon alignments and is currently evaluating that information. To date, none of the tribes contacted have requested consultation pursuant to PRC Section 21080.3.1. Section 4.18 of this IS/MND provides a summary of the consultation process, including the determination of significance of impacts to Tribal Cultural Resources (TCRs).

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED AND DETERMINATION

3.1 Environmental Factors Potentially Affected

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

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

Determination

On the basis of this initial evaluation:

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

Jennifer Hansen General Manager, Nevada Irrigation District

Date 3/27/2024

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4.0 ENVIRONMENTAL CHECKLIST AND DISCUSSION

4.1 Aesthetics

The aesthetics section discusses the potential impacts of the proposed Project to aesthetic resources within the Project Area. Aesthetic resources refer to the natural and scenic viewsheds that define a region. The regulatory setting describes applicable laws and regulations administered by the local governing body that aim to preserve aesthetic resources. The environmental setting provides general information of the scenic and aesthetic resources of the proposed Project Area, and finally, the impact analysis evaluates the potential impacts of the proposed Project on those resources.

4.1.1 Environmental Setting

4.1.1.1 Regional Setting

State Scenic Highways

The California Scenic Highway Program protects and enhances the scenic beauty of California's highways and adjacent corridors. A highway can be designated as scenic based on how much natural beauty can be seen by users of the highway, the quality of the scenic landscape, and if development impacts the enjoyment of the view. In Placer County, portions of four State Highways (Highways 28, 49, 89 and 126) and one Interstate Highway (Interstate 80, I-80) are designated by California Department of Transportation (Caltrans) as Eligible State Scenic Highways; however, none are designated State Scenic Highways. Thus, the Project is not located along a designated State Scenic Highway (Caltrans 2023)

General Plan

As a jurisdiction with equal authority, NID is exempt from the following goals and policies of the Placer County General Plan (General Plan, 2013). However, NID strives to comply with applicable General Plan goals and policies when designing and constructing projects.

Following are relevant goals and policies identified by the General Plan (Placer County 2013) for visual resources, including scenic routes.

Goal 1.K: To protect the visual and scenic resources of Placer County as important quality-of-life amenities for County residents and a principal asset in the promotion of recreation and tourism.

Policy 1.K.1. The County shall require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:

- avoids locating structures along ridgelines and steep slopes;
- incorporates design and screening measures to minimize the visibility of structures and graded areas; and

- maintains the character and visual quality of the area.

Policy 1.K.5 *The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground, and roadways and parking areas should be designed to fit the natural terrain.*

Policy 1.L.3 *The County shall protect and enhance scenic corridors through such means as design review, sign control, undergrounding utilities, scenic setbacks, density limitations, planned unit developments, grading and tree removal standards, open space easements, and land conservation contracts.*

4.1.1.2 Visual Character of the Project Site

The Project Site is in southern Placer County in the North Auburn Area at approximately elevation 1,400 feet, primarily east of Highway 49 and north of Bell Road with siphon crossings of Orr Creek, Dry Creek and Rock Creek. The Project Area is mostly developed with rural residential and traditional single-family subdivisions, with scattered supporting commercial, light industrial, and recreational uses. Project Area terrain varies from relatively flat areas, to gently rolling hills and relatively steep hillsides and supports primarily annual grassland, oak woodland and Goodding's black willow riparian communities.

Public views in the Project Area are primarily available from public roads and dominated by oak woodlands, foothill riparian, and rural residential properties, some of which accommodate small scale agriculture and equestrian uses.

Due to topography, vegetation and distance from public roadways, the proposed Orr and Dry Creek replacement siphon sites are isolated and mostly not visible from public viewing locations. Because a good portion of the proposed Rock Creek siphon alignment follows public road right-of-way, a majority of the proposed Rock Creek siphon alignment (including along the east side of Highway 49 and along Education Street west of Highway 49) is visible to the public.

4.1.2 Aesthetics (I) Environmental Checklist and Discussion

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

No Impact

Based on review of the Caltrans State Scenic Highway List and the Placer County General Plan, no officially designated scenic vistas or scenic land units were identified within the Project Area (Caltrans 2019, Placer County 2013). Furthermore, because the proposed siphons would be underground, the Project would only be visible during the construction phase. Therefore, the Project would not have an impact on Scenic Vistas.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No Impact

As stated above, according to Caltrans' list of designated Scenic Highways and the General Plan, the Project Site is not located near or within a state scenic highway and would not damage designated scenic resources, including but not limited to trees, outcroppings, and historic buildings within a state scenic highway. There would be no impact and no mitigation is required.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐

Less Than Significant

As discussed below, Project construction would result in short-term impacts to existing visual character and quality. However, because the replacement siphons would be installed underground with minimal above ground facilities, there would be no long-term impacts to the character or quality of public views.

Construction activities would require the use of heavy equipment and storage of materials in staging areas. During construction, excavated areas, stockpiled soils, and other materials would temporarily contribute to degradation of the scenic quality/visual landscape. The Orr and Dry Creek replacement siphons are proposed in low-lying ravines and construction activities would only be partially and intermittently visible from adjacent public roads or where the proposed siphon alignments intersect roads. In comparison, construction associated with the Rock Creek replacement siphon would be more prominent in certain locations due to sight lines available from more heavily traveled nearby public roads. For example, Rock Creek siphon construction would be highly visible where siphon installation occurs within or adjacent existing road right-of-way, such as along the east side of State Highway 49, within the Education Street right-of-way, and where the proposed siphon alignment crosses other existing public roads (such as Highway 49, Locksley Lane and Rock Creek Road east of Highway 49). The construction duration for each siphon is expected to be as follows: Orr Creek (60 days), Dry Creek (90 days), Rock Creek (150 days, likely occurring over multiple seasons). Because visual degradation due to construction would

be temporary, and all construction-related equipment and materials would be removed upon project completion, and all disturbed areas restored, the impact to visual character or quality of public views of the site and its surroundings is less than significant.

Except as provided in Public Resources Code Section 21099, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Would the Project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Less Than Significant

The Project would primarily replace existing underground siphon facilities. Like the existing siphon facilities, above ground improvements would only occur at the replacement siphon "tie in" locations." No nightwork or temporary construction lighting is proposed as part of the Project. Thus, the Project would not create a new source of substantial light or glare which could adversely affect a day or nighttime view and related impacts are less than significant. No mitigation is required.

4.1.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.2 Agriculture and Forestry Resources

4.2.1 Environmental Setting

According to the Placer County Agricultural Commission Office, the top five highest grossing agriculture sectors in Placer County in 2021 were field crops ($34.1M), nut crops ($26.2M), livestock and poultry ($1.6M), nursery products ($7.6M) and fruit crops ($8.4M) (Placer County 2021a). The General Plan designates the Orr Creek and Dry Creek proposed Project Area as Rural Residential 2.3-4.6 acre minimum, and designates Rock Creek as Industrial, Commercial, and Office Park. Due to the urban development in the Project Area, there is no large-scale crop production in the Project vicinity. Most agriculture in the area is comprised of small-scale farming, grazing and equestrian uses.

4.2.2 Regulatory Setting

4.2.2.1 California Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC) sponsors the Farmland Mapping and Monitoring Program. Important Farmland maps classify land into one of eight categories, defined as follows (DOC 2023a):

- **Prime Farmland** – land that has the best combination of features for the production of agricultural crops.

- **Farmland of Statewide Importance** – land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops.
- **Unique Farmland** – land of lesser quality soils used for the production of the state's leading agricultural cash crops.
- **Farmland of Local Importance** – land that is of importance to the local agricultural economy.
- **Grazing Land** – land with existing vegetation that is suitable for grazing.
- **Urban and Built-up Lands** – land occupied by structures with a density of at least one dwelling unit per 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public utility structures, and other developed purposes.
- **Land Committed to Nonagricultural Use** – vacant areas; existing lands that have a permanent commitment to development but have an existing land use of agricultural or grazing lands.
- **Other Lands** – land that does not meet the criteria of the remaining categories.

According to the California Resources Agency Farmland Mapping and Monitoring Program website, the proposed siphon alignments are located on "Urban and Built-up Lands," "Grazing Land," and "Other lands."

4.2.2.2 Williamson Act Contracts

The California Land Conservation Act of 1965, commonly known as the Williamson Act, enables local governments to enter into agreements with private landowners to restrict parcels for agricultural or related open space use. In return, landowners receive property tax assessments that are based on farming and open space uses instead of full market value. The Open Space Subvention Act of 1971 has historically provided local governments an annual subvention (subsidy) of forgone property tax revenues from the state; however, these payments have been suspended since 2009 due to revenue shortfalls in recent years. Williamson Act contract lands in Placer County are primarily in the western valley portion of the County where lands are flat and support rice or row crop operations.

The proposed Project Sites are not under the Williamson Act contract.

4.2.3 Agriculture and Forestry Resources (II) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

No Impact

According to the California Resources Agency Farmland Mapping and Monitoring Program website, the Project Site includes lands designated as "Other Land," "Urban and Built-Up Land," or "Grazing Land" and does not occur on lands designated as Prime, Unique, or Farmland of Statewide Importance (DOC 2023a). The Project is limited to replacement of existing underground siphons and restoration of all temporarily disturbed surface areas. There would be no conversion impact and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No Impact

Portions of the Project Site include existing agricultural (AG) zoning. For example, six of the 19 parcels crossed by the proposed Dry Creek replacement siphon and all six parcels crossed by the proposed Orr Creek replacement siphon include AG zoning. None of the parcels crossed by the proposed Rock Creek replacement siphon include AG zoning. However, the AG zone allows for pipeline and transmission line uses and thus the proposed siphon improvements would not conflict with existing zoning for agricultural use and there would be no impact.

No Williamson Act contracts exist on the Project Site (DOC.2023b). Thus, there would be no impact to existing Williamson Act contracts and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	☒

No Impact

The proposed replacement siphon use is consistent with existing zoning along the proposed siphon alignments. Furthermore, the project does not propose or require rezoning of any forest land, timberland or timberland zoned Timberland Production. There would be no impact and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact

There is no designated forest land on the Project Site. No impact would occur, and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact

See discussion under items a) and c). The Project is limited to installation of underground siphons and includes restoration of all temporarily disturbed ground surface. Thus, the Project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur, and no mitigation is required.

4.2.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.3 Air Quality

This assessment was prepared using methods and assumptions recommended in the rules and regulations of the Placer County Air Pollution Control District (PCAPCD). Regional and local existing conditions are presented, along with pertinent pollutant emissions standards and regulations that apply to the Sacramento Valley Air Basin (SVAB), which encompasses the Project Area. The purpose of this assessment is to estimate criteria air pollutants attributable to the Project and determine the level of impact the Project would have on the environment.

4.3.1 Environmental Setting

The Project Area is located in unincorporated Placer County, near the City of Auburn, California. The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The Project Area is located in the SVAB portion of Placer County. The SVAB is comprised of all of Butte, Colusa, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties and parts of Solano and Placer County. The air basin is relatively flat, bordered by mountains to the east, west, and north and by the San Joaquin Valley to the south. Air flows into the SVAB through the Carquinez Strait, moving across the Sacramento Delta, and bringing pollutants from the heavily populated San Francisco Bay Area. The climate is characterized by hot, dry summers and cool, rainy winters. Characteristic of SVAB winter weather are periods of dense and persistent low-level fog, which are most prevalent between storm systems. From May to October, the region's intense heat and sunlight lead to high ozone pollutant concentrations. Summer inversions are strong and frequent but are less troublesome than those that occur in the fall. Autumn inversions, formed by warm air subsiding in a region of high pressure, have accompanying light winds that do not provide adequate dispersion of air pollutants.

Both the U.S. Environmental Protection Agency (USEPA) and CARB have established ambient air quality standards for common pollutants. These ambient air quality standards establish safe levels of contaminants that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called criteria pollutants because the health and other effects of each pollutant are described in criteria documents. The six criteria pollutants are ozone (O_3), carbon monoxide (CO), particulate matter (PM), oxides of nitrogen (NO_x), sulfur dioxide (SO_2), and lead. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

The USEPA and CARB designate air basins or portions of air basins and counties as being in "attainment" or "nonattainment" for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) for O_3, particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for Placer County portion of the SVAB is presented in Table 4.3-1.

Table 4.3-1. Attainment Status of Criteria Pollutants in the Placer County Portion of the SVAB

Pollutant	State Designation	Federal Designation
O_3	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Unclassified	Unclassified/Attainment
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Unclassified/Attainment

Source: California Air Resources Board (CARB) 2023
Note: CO = Carbon Monoxide; NO_2 = Nitrogen Dioxide; O_3 = Ozone; $PM_{2.5}$ = Fine Particulate Matter; PM_{10} = Coarse Particulate Matter; SO_2 = Sulfur Dioxide; SVAB = Sacramento County Valley Air Basis

4.3.2 Air Quality (III) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

No Impact.

As part of its enforcement responsibilities, the USEPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously described, the PCAPCD is the agency responsible for enforcing many federal and state air quality requirements and for establishing air quality rules and regulations. The PCAPCD attains and maintains air quality conditions in Placer County. They achieve this through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. As part of this effort, the PCAPCD has developed input to the SIP. The 2017 Sacramento Regional 2008 8-Hour Ozone Attainment and Reasonable Further Progress Plan (including 2018 updates), the PM_{10} Implementation/Maintenance Plan and Re-Designation Request (2010), and $PM_{2.5}$ Implementation/ Maintenance Plan and Re-designation Request for Sacramento $PM_{2.5}$ Nonattainment Area (2013) constitute the current SIP for the Placer County portion of the SVAB and include the

PCAPCD's plans and control measures for attaining air quality standards. These air quality attainment plans are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations, and federal controls describing how the state will attain ambient air quality standards.

The SIP plans and control measures are based on information derived from projected growth in Placer County to project future emissions and then determine strategies and regulatory controls for the reduction of emissions. Growth projections are based on the general plans developed by Placer County and the incorporated cities in the County. As such, projects that propose development consistent with the growth anticipated by the respective general plan of the jurisdiction in which the proposed development is located would be consistent with the SIP. If a project proposes a development that is less dense than that associated with the general plan, the project would likewise be consistent with the SIP. If a project, however, proposes a development that is denser than that assumed in the general plan, the project may conflict with the SIP and could therefore result in a significant impact on air quality.

Growth projections for the unincorporated portions of Placer County are based on the Placer County General Plan Housing Element 2021-2029 (Placer County 2021b). The Project does not include development of new housing or employment centers and would not induce population or employment growth. Rather, the Project seeks to replace three District owned and operated raw water siphons: The Orr Creek Siphon, Dry Creek Siphon, and Rock Creek Siphon. Once the replacement siphons are put into operation, they would not require onsite personnel or active management. Therefore, the Project would not affect local plans for population growth and the proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of PCAPCD air quality planning efforts. As demonstrated below, the Project would not exceed the PCAPCD's short-term construction significance thresholds. The Project would not conflict with or obstruct implementation of the applicable air quality plan. No impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐

Less Than Significant Impact.

Emissions associated with Project construction would be temporary and short-term but have the potential to represent a significant air quality impact. Two basic sources of short-term emissions will be generated through Project construction: operation of the heavy-duty equipment (i.e., excavator, welding rig, dump truck) and the creation of fugitive dust during excavation. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during

construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts.

Construction-generated emissions associated with the proposed Project were calculated using the California Air Pollution Control Officers Association (CAPCOA) California Emissions Estimator Model (CalEEMod), version 2022.1.1 (CAPCOA 2022). CalEEMod is a statewide land use emissions computer model designed to quantify potential criterial pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were calculated using CalEEMod model defaults for Placer County.

Predicted maximum daily construction-generated emissions for the Project are summarized in Table 4.3-2. Construction-generated emissions are short-term and of temporary duration, lasting only when construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the PCAPCD's thresholds of significance.

Table 4.3-2. Construction-Related Criteria Air Pollutant Emissions

Construction Year	Pollutant (maximum pounds per day)					
	ROG	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Construction Year One	0.94	9.96	10.4	0.03	1.12	0.56
PCAPCD Significance Threshold	*82 pounds/day*	*82 pounds/day*	–	–	*82 pounds/day*	–
Exceed PCAPCD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Source: California Emissions Estimator Model (CalEEMod) version 2022.1. Refer to Appendix B for Model Data Outputs.

Notes: CO = Carbon Monoxide; NOx = Nitric Oxide; PM2.5 = Fine Particulate Matter; PM10 = Coarse Particulate Matter; ROG = Reactive Organic Gas; SO2 = Sulfur Dioxide; PCAPCD = Placer County Air Pollution Control District.
Construction emissions taken from the season (summer or winter) with the highest output.

According to Table 4.3-2, emissions generated during Project construction would not exceed the PCAPCD's threshold of significance. Therefore, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard, and no health effects from Project criteria pollutants would occur.

The proposed Project involves the replacement of three District-owned and operated raw water siphons and does not include an operational phase. This impact is less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

Less Than Significant Impact.

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over age 65, children under age 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptor to the Project Area are single-family residences located directly adjacent to the proposed Dry Creek Siphon.

4.3.2.1 Construction-Generated Air Contaminants

Construction of the Project would result in temporary emissions of diesel particulate matter (DPM), Reactive Organic Gases (ROG), NO_x, CO, PM_{10}, and $PM_{2.5}$ from the exhaust of off-road, heavy-duty diesel equipment for Project construction; trenching; and other miscellaneous activities. As previously identified, the area of SVAB, which encompasses the Project Area is designated nonattainment for the federal standards of O_3 and is nonattainment for the state standards of O_3 and PM_{10} (CARB 2023). Thus, existing levels of these criteria pollutants in the SVAB are at unhealthy levels during certain periods. However, shown in Table 4.3-2, construction-related emissions would not result in an exceedance of the PCAPCD thresholds and therefore no regional health effects from Project criteria pollutants would occur.

The health effects associated with O_3 are generally associated with reduced lung function. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of ROG and NOx in the presence of sunlight. The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term O_3 exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O_3 may increase the risk of respiratory-related deaths. The concentration of O_3 at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of O_3 and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence

suggests that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum O_3 concentration reaches 80 parts per billion. Because the Project would not involve construction activities that would result in O_3 precursor emissions (ROG or NO_x) in excess of the PCAPCD thresholds, which are set to be protective of human health and account for cumulative emissions in Placer County, the Project is not anticipated to substantially contribute to regional O_3 concentrations and the associated health impacts.

CO tends to be a localized impact associated with congested intersections. In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions. The Project would not involve construction activities that would result in CO emissions in excess of the PCAPCD thresholds, which are set to be protective of human health and account for cumulative emissions in Placer County. Thus, the Project's CO emissions would not contribute to the health effects associated with this pollutant.

Particulate matter (PM_{10} and $PM_{2.5}$) contains microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. Particulate matter exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms such as irritation of the airways, coughing, or difficulty breathing. For construction activity, DPM is the primary toxic air contaminant (TAC) of concern. The potential cancer risk from the inhalation of DPM outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. PM_{10} exhaust is considered a surrogate for DPM as all diesel exhaust is considered to be DPM and PM_{10} exhaust contains $PM_{2.5}$ exhaust as a subset. As with O_3 and NO_x, the Project would not generate emissions of PM_{10} or $PM_{2.5}$ that would exceed the PCAPCD's thresholds. The increases of these pollutants generated by the proposed Project would not on their own generate an increase in the number of days exceeding the NAAQS or CAAQS standards. Therefore, PM_{10} and $PM_{2.5}$ emissions, when combined with the existing PM emitted regionally, would have minimal health effect on people located in the immediate vicinity of the Project Area. Accordingly, the Project's PM_{10} and $PM_{2.5}$ emissions are not expected to cause any increase in related regional health effects for these pollutants.

In summary, Project construction would not result in a potentially significant contribution to regional concentrations of air pollutants and would not result in a significant contribution to the adverse health impacts associated with those pollutants.

4.3.2.2 Operational Air Contaminants

The proposed Project involves the replacement of three District-owned and operated raw water siphons and does not include an operational phase. Related impacts are less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less Than Significant Impact.

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

During construction, the proposed Project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the Project Area. However, these emissions are short-term in nature and will rapidly dissipate and be diluted by the atmosphere downwind of the emission sources. Additionally, odors would be localized and generally confined to the construction area. Therefore, construction odors would not adversely affect a substantial number of people to odor emissions.

Land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The proposed siphons would not emit odors. Impacts would be less than significant.

4.3.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.4 Biological Resources

This section is based on the analysis and recommendations presented in the *Biological Resources Assessment for the Nevada Irrigation District Combie Ophir 2 & 3 Siphon Replacement Project* (BRA) (ECORP 2024a) (Appendix C).

4.4.1 Methods

4.4.1.1 Literature Review

ECORP biologists performed a review of existing available information for the 9.22-acre Biological Study Area (BSA) identified in Appendix C. Literature sources included current and historical aerial imagery, topographic mapping, soil survey mapping available from the Natural Resources Conservation Service (NRCS) *Web Soil Survey*, U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) mapping, USFWS Critical Habitat Mapper, National Marine Fisheries Service (NMFS) Essential Fish Habitat Mapper, VegCAMP vegetation data (CDFW 2018b), and other relevant literature as cited throughout the BRA. 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 "Auburn California" 7.5-minute quadrangle and the surrounding eight quadrangles (CDFW 2023e);
- California Native Plant Society (CNPS) Rare Plant Inventory data for the "Auburn, California" 7.5-minute quadrangle and the surrounding eight quadrangles (CNPS 2023a);
- USFWS Information for Planning and Consultation (IPaC) Resource Report List for the BSA (USFWS 2023b);
- NMFS Resources data for the "Auburn, California" 7.5-minute quadrangle (National Oceanic and Atmospheric Administration [NOAA] 2016).

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

4.4.1.2 Field Surveys

Site Reconnaissance

ECORP biologist Daniel Wong conducted the site reconnaissance visit on November 2, 2023. The biologist visually assessed the BSA while walking meandering transects through all portions of the site, using

binoculars to scan inaccessible areas. The biologist collected the following biological resource information:

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

The biologist qualitatively assessed and mapped vegetation communities based on dominant plant composition. Vegetation community classification was based on the classification systems presented in A Manual of California Vegetation Online (MCV), paying special attention 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 unit, field notebooks, and/or maps. Photographs were taken during the survey to provide visual representation of the conditions within the BSA.

Aquatic Resources Delineation

ECORP biologists Daniel Wong and Carmen David performed an Aquatic Resources Delineation (ARD) on November 2 and 21, 2023 in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (U.S. Army Corps of Engineers [USACE] 2008a). Non-wetland waters were identified in the field according to *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), where applicable. Results of the ARD are contained in the BRA (Appendix C).

4.4.2 Federal Regulations

4.4.2.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) protects plants and animals that are listed as endangered or threatened by the USFWS or the National Marine Fisheries Service (NMFS). 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, 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.

4.4.2.2 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. The USFWS may issue permits to qualified applicants as authorized by the MBTA 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.

4.4.2.3 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 rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas:

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

The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit.

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

4.4.3 State or Local Regulations

4.4.3.1 California Fish and Game Code

California Endangered Species Act

The California ESA (California Fish and Game Code Sections 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.

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 Sections 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 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; or
- 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.

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 Sections 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 Sections 2050-2116) provided further protection for rare and endangered plant species, but the NPPA remains part of the California Fish and Game Code.

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.

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. CDFW may suggest additional protective measures during their review. 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.

4.4.3.2 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 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). 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 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

4.4.3.3 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.

CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (i.e., rare, threatened, or endangered) species are considered significant. Assessment of *impact significance* to populations of non-listed species (e.g., Species of Special Concern [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 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.

Species of Special Concern

The definition of SSC by the CDFW is a species, subspecies, or distinct population of an animal native to California that are not legally protected under the 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.

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 Bird of Conservation Concern (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.

Watch List Species

The CDFW maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Depending on the policy of the lead agency, projects that result in substantial impacts to species on the Watch List may be considered significant under CEQA.

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 California Rare Plant Ranks (CRPR). The rank system was developed in collaboration with government, academic, 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 (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (less than 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.

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* (MCV; 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.

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 California Department of Transportation 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.

4.4.3.4 Placer County Woodland Conservation (Chapter 19.50)

The Placer County Woodland Conservation (Chapter 19.50; Woodland Conservation Article) requires tree permits for all development activities (except those that qualify under an exemption) within the protected zone of any protected tree on public or private land. The Tree Preservation Article does not allow for any person, firm, corporation, or county agency to harm, destroy, kill, or remove any protected tree unless authorized by a tree permit or as permitted pursuant to approval of a discretionary project.

The Woodland Conservation Article is applicable to all landmark trees, riparian zone trees, and certain commercial firewood operations, except as exempted, as well as native trees with a single main stem or trunk at least 6 inches diameter at breast height (DBH), or a multiple trunk with an aggregate of at least 10 inches DBH. All oak species (*Quercus* sp.) will be considered a tree when a single main stem is 5 inches DBH or larger. Foothill pine (*Pinus sabiniana*) is exempt from this article. In addition, certain plants commonly found as "brush," such as manzanita, are not considered to be trees in this article regardless of size.

4.4.4 Environmental Setting

The BSA is located within relatively flat terrain to gently rolling hills and relatively steep hillsides in a rural area. The BSA is situated at an elevational range of approximately 1,300 to 1,480 feet above mean sea level (MSL) in the Northern Sierra Nevada Foothills District in the Sierra Navada Region of the California floristic province (Jepson eFlora 2023). The average winter low temperature in the vicinity of the BSA is 38.6 degrees Fahrenheit (˚F) and the average summer high temperature is 89.1˚F. Average annual precipitation is approximately 37.15 inches at the Auburn, California station, which is located approximately 3 miles from the BSA (NOAA 2023).

The BSA is currently occupied by residential structures, driveways, roads, parking lots, and undeveloped lands. Undeveloped portions of the BSA primarily include annual grassland, coyote brush scrub, Goodding's black willow riparian woodland, gray pine woodland, and urban land cover types. Vegetation communities and plant species composition are described in further detail below.

Land uses surrounding the BSA include rural residential and traditional single-family subdivisions with scattered supporting commercial, light industrial, and recreation.

Representative photographs of the BSA are provided in BRA Appendix B (see Appendix C).

4.4.4.1 Soils and Geology

Soil survey mapping for the BSA was obtained from the NRCS *Web Soil Survey* (NRCS 2023b) and is presented in BRA Figure 2 (See Appendix C). Table 4.4-1 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 volcanic soil material.

Table 4.4-1. Soil Series Mapped in the Biological Study Area[1]

Map Unit Symbol	Map Unit Name	Rating	Hydric Components and Landforms[2]
114	Auburn silt loam, 2 to 15 percent slopes	residuum weathered from metamorphic rock	None
115	Auburn-Argonaut complex, 2 to 15 percent slopes	residuum weathered from metamorphic rock	Unnamed (fan remnants)
116	Auburn-Argonaut-Rock outcrop complex, 2 to 15 percent slopes	residuum weathered from metamorphic rock	Unnamed (drainageways)
118	Auburn-Sobrante silt loams, 15 to 30 percent slopes	residuum weathered from metamorphic rock	None
119	Auburn-Sobrante-Rock outcrop complex, 2 to 30 percent slopes	residuum weathered from metamorphic rock	None
120	Auburn-Sobrante-Rock outcrop complex, 30 to 50 percent slopes	residuum weathered from metamorphic rock	None
124	Boomer-Rock outcrop complex, 5 to 30 percent slopes	colluvium and/or residuum weathered from metavolcanics	None
148	Henneke-Rock outcrop complex, 5 to 50 percent slopes	residuum weathered from serpentinite	None
196	Xerorthents, cut and fill areas	mine spoil or earthy fill	None
197	Xerorthents, placer areas	mine spoil or earthy fill	Unnamed (drainageways)

[1]Source: Natural Resources Conservation Service (NRCS) 2023b
[2]Source: NRCS 2023a

Additionally, soils derived from a geological unit containing ultramafic rocks, mostly serpentinite with minor gabbro (Ultramafic rocks, chiefly Mesozoic, unit 2 [Western Sierra Nevada and Klamath Mountains]) are mapped within the BSA (Horton 2017; Jennings et al. 1977, 2010).

4.4.4.2 Vegetation Communities and Land Cover Types

The following sections describe vegetation communities and land cover types within the BSA as observed during the site reconnaissance. A full list of plants observed onsite can be found in the BRA Section 4.6.1 Plants (see Appendix C). The approximate extent of vegetation communities and land cover types is depicted in BRA Figure 3 (see Appendix C).

Annual Grassland

The annual grassland community is found in the central portion of the Rock Creek Siphon segment. The annual grassland in the BSA is dominated by nonnative annual grasses including ripgut brome (*Bromus diandrus*) and soft brome (*Bromus hordeaceus*). Yellow star-thistle (*Centaurea solstitialis*) is the dominant forb within the grassland.

The annual grasslands can be characterized as the *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance (CNPS 2023b). Semi-natural alliances are strongly dominated by nonnative plants that have become naturalized in the State, do not have state rarity rankings, and are not considered sensitive natural communities.

Coyote Brush Scrub

The coyote brush scrub community is found in the southern portion of the Rock Creek Siphon segment. Coyote brush (*Baccharis pilularis*) is dominant in the shrub layer. Trees are found at low cover with the most prevalent being interior live oak (*Quercus wislizeni*) and Fremont's cottonwood (*Populus fremontii*). The herbaceous understory is composed of herbaceous vegetation characteristic of the annual grassland found onsite.

The coyote brush scrub community in the BSA can be characterized as the *Baccharis pilularis* Shrubland Alliance as classified by the MCV. This alliance has a state rarity ranking of S5 and is not considered a sensitive natural community (CNPS 2023b). The coyote brush scrub within the BSA does not resemble any known sensitive associations (CDFW 2023d).

Goodding's Black Willow Riparian Woodland

The Goodding's black willow riparian woodland community is found in central portions of the Orr Creek Siphon and Rock Creek Siphon segments within the BSA. This community is dominated by Goodding's black willow (*Salix gooddingii*) with red willow (*Salix laevigata*) present at lower cover in the canopy. Himalayan blackberry (*Rubus armeniacus*) is the dominant shrub.

The Goodding's black willow riparian woodland community in the BSA most resembles the *Salix gooddingii - Salix laevigata* Forest & Woodland Alliance as characterized by the MCV. The alliance has a state rarity ranking of S3 and is considered a sensitive natural community (CNPS 2023b).

Gray Pine Woodland

The gray pine woodland community is scattered throughout the Orr Creek Siphon and Rock Creek Siphon segments. This community is comprised of gray pine (*Pinus sabiniana*) with interior live oak and blue oak (*Quercus douglasii*) present in the canopy at lower cover. The herbaceous understory resembles the annual grassland within the BSA.

The gray pine woodland community in the BSA most resembles the *Pinus sabiniana* Woodland Alliance as characterized by the MCV. The alliance has a state rarity ranking of S4 and is not considered a sensitive natural community (CNPS 2023b). The gray pine woodland within the BSA does not resemble any known sensitive associations (CDFW 2023d).

Urban

The urban land cover type is scattered throughout the BSA and is composed of roads, driveways, parking lots, and residential structures. These areas are either devoid of vegetation or dominated by nonnative ruderal herbaceous species similar in composition to the annual grassland found within the BSA. The urban land cover type is not considered a sensitive natural community.

4.4.4.3 Aquatic Resources

An ARD was conducted for the BSA and is contained in the BRA (ECORP 2024a). A total of 0.173 acre of aquatic resources were mapped within the BSA. The aquatic features identified onsite include seeps, canals, intermittent drainages, and creeks. These features are identified in BRA Figure 4 (Appendix C) and are further described below.

Seep

A seep is an area where groundwater reaches the surface through porous soil or cracks in rock. Seeps may form small pools on level or gently rolling terrain, but generally result in seasonal or perennial soil saturation with minimal standing water and gentle flows in hilly to mountainous terrain. There are two seeps located within the BSA. The seep located in the Orr Creek Siphon segment is immediately below an NID canal forming from a possible leak in the canal. The other seep is located in the Dry Creek Siphon segment and has been artificially channelized to drain into Dry Creek. Dominant plants species identified within the seeps include deergrass (*Muhlenbergia rigens*), tall flatsedge (*Cyperus eragrostis*), and water cress (*Nasturtium officinale*).

Canal

Canals are constructed channels used for water conveyance. Canals onsite are portions of the Combie Ophir Canal. Within the BSA, the portions of the canal are both earthen and concrete lined and unvegetated.

Intermittent Drainage

Intermittent drainages are linear features that exhibit a bed and bank, OHWM, and flow for weeks or months following significant precipitation events. The intermittent drainages located within the BSA originate from Orr Creek and are located at the low point of the Orr Creek Siphon. A sand bar is located between the two intermittent drainages. The intermittent drainage was dominated by Goodding's black willow. Himalayan blackberry is dominant in the understory, however a large portion of it was recently removed.

Creek

Perennial creeks are linear features that exhibit a bed and bank, OHWM, and flow continuously throughout the year. Portions of two perennial creeks, Dry Creek and Rock Creek, are present within the BSA. The creeks were heavily vegetated and support riparian corridors. Dominant plant species observed within the OHWM of the creeks include Himalayan blackberry, cattail (*Typha* sp.), mulefat (*Baccharis salicifolia*), red willow, and mint (*Mentha* sp.).

National Wetlands Inventory

Review of the NWI identified multiple mapped aquatic features within the BSA. These features are shown in BRA Figure 5, National Wetlands Inventory (Appendix C). The NWI mapping designation (NWI code) indicates the presence of Riverine, Freshwater Pond, and Freshwater Forested/Shrub Wetland features (USFWS 2023a). The NWI features roughly align with the delineated features noted previously. Note that the NWI inventory mapping is based on data prepared from the analysis of high-altitude imagery in conjunction with collateral data sources and limited field work. A margin of error is inherent in the use of imagery.

4.4.4.4 Wildlife

The vegetation communities in the BSA provide habitat for a variety of wildlife species. The woodland communities found within the BSA support habitat for a variety of wildlife species such as western fence lizard (*Sceloporus occidentalis*), Sierran chorus frog (*Pseudacris sierra*), western gray squirrel (*Sciurus griseus*), and nesting habitat for birds, including mourning dove (*Zenaida macroura*), acorn woodpecker (*Melanerpes formicivorus*), northern flicker (*Colaptes auratus*), oak titmouse (*Baeolophus inornatus*), and white-breasted nuthatch (*Sitta carolinensis*), among others. A list of wildlife species observed in the BSA is provided in BRA Appendix D (see Appendix C).

4.4.4.5 Special-Status Species

BRA Table 2 (Appendix C) 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.

Those species special-status species with potential to occur within the BSA are described below.

Plants

Based on the literature review, 29 special-status plant species were identified as having the potential to occur in the vicinity of the BSA. However, upon further analysis and after the site visit, eight of those species are considered to be absent from the BSA due to the lack of suitable habitat or because the BSA is outside the known geographical or elevational range for the species. No further discussion of those species is provided in this assessment. A brief description of the remaining 21 species that have potential to occur within the BSA is presented below.

Jepson's Onion

Jepson's onion (*Allium jepsonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a bulbiferous herbaceous perennial that occurs on serpentinite or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. Jepson's onion blooms from April through August and is known to occur at elevations ranging from 985 to 4,330 feet above MSL. Jepson's onion is endemic to California; the current range of this species includes Butte, El Dorado, Placer, and Tuolumne counties (CNPS 2023a).

There is one documented CNDDB occurrence of Jepson's onion within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Jepson's onion has potential to occur onsite.

Congdon's Onion

Congdon's onion (*Allium sanbornii* var. *congdonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a bulbiferous, herbaceous perennial that occurs on serpentinite or volcanic soils on chaparral and cismontane woodlands. Congdon's onion blooms from April through July and is known to occur at elevations ranging from 985 to 4,575 feet above MSL. Congdon's onion is endemic to California; the current range of this species includes El Dorado, Mariposa, Nevada, Placer, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of Congdon's onion within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Congdon's onion has potential to occur onsite.

Sanborn's Onion

Sanborn's onion (*Allium sanbornii* var. *sanbornii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a bulbiferous herbaceous perennial that usually occurs on serpentinite or gravelly soils in chaparral, cismontane woodlands, and lower montane coniferous forest. Sanborn's onion blooms from May through September and is known to occur at elevations ranging from 855 to 4,955 feet above MSL. The current range of this species in California includes Butte, Calaveras, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of Sanborn's onion within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Sanborn's onion has potential to occur onsite.

Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grassland, and sometimes on serpentinite soils. Big-scale balsamroot blooms from March through June and is known to occur at elevations ranging from 150 to 5,100 feet above MSL. Big-scale balsamroot is endemic to California; the current range of this species includes Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of big-scale balsamroot within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species, however, the only known occurrence of this species in the vicinity of the BSA that is presumed extant is historic and has not been observed for over 65 years (CDFW 2023e). Big-scale balsamroot has low potential to occur onsite.

Stebbins' Morning-Glory

Stebbins' morning-glory (*Calystegia stebbinsii*) is listed as endangered pursuant to the federal and California ESAs, and is designated as a CRPR 1B.1 species. This species is a rhizomatous herbaceous perennial that occurs on gabbroic or serpentinite soils in openings of chaparral habitats and cismontane woodlands. Stebbins' morning-glory blooms from April through July and is known to occur at elevations ranging from 605 to 3,575 feet above MSL. Stebbins' morning-glory is endemic to California; the current range of this species includes El Dorado and Nevada counties (CNPS 2023a).

There are no documented CNDDB occurrences of Stebbins' morning-glory within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Stebbins' morning-glory has potential to occur onsite.

Chaparral Sedge

Chaparral sedge (*Carex xerophila*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial herb that occurs on serpentinite or gabbroic soils of lower montane coniferous forest, cismontane woodland, or chaparral. Chaparral sedge blooms from March through June and is known to occur at elevations ranging from 1,445 to 2,525 feet above MSL. Chaparral sedge is endemic to California; the current range of this species includes Butte, El Dorado, Nevada, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of chaparral sedge within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Chaparral sedge has potential to occur onsite.

Red Hills Soaproot

Red Hills soaproot (*Chlorogalum grandiflorum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 plant. This species is a bulbiferous perennial herb that typically occurs on serpentinite, gabbroic, and other soils in chaparral, cismontane woodland, and lower montane coniferous forest communities. Red Hills soaproot blooms from May through June and is known to occur at elevations ranging from 805 to 5,545 feet above MSL. Red Hill soaproot is endemic to California; the current range of this species includes Amador, Calaveras, El Dorado, Placer, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of Red Hills soaproot within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Red Hills soaproot has potential to occur onsite.

Brandegee's Clarkia

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 plant. This species is an herbaceous annual that occurs in chaparral, cismontane woodlands, and lower montane coniferous forest. Brandegee's clarkia blooms from May through July and is known to occur at elevations ranging from 245 to 3,000 feet above MSL. Brandegee's clarkia is endemic to California; the current range of this species includes Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties (CNPS 2023a).

There are six documented CNDDB occurrences of Brandegee's clarkia within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Brandegee's clarkia has potential to occur onsite.

Golden-Anthered Clarkia

Golden-anthered clarkia (*Clarkia mildrediae* ssp. *lutescens*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs often on roadsides, roadcuts, and rocky soils in cismontane woodland and openings of lower montane coniferous forest. Golden-anthered clarkia blooms from June through August and it is known to occur at

elevations ranging from 900 to 5,740 feet above MSL. Golden-anthered clarkia is endemic to California; the current range of this species includes Butte, Nevada, Plumas, Sierra, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of golden-anthered clarkia within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Golden-anthered clarkia has potential to occur onsite.

Streambank Spring Beauty

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in rocky soils within cismontane woodland. Streambank spring beauty blooms from February through May and is known to occur at elevations ranging from 820 to 3,935 feet above MSL. Streambank spring beauty is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Madera, Placer, Tulare, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of streambank spring beauty within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Streambank spring beauty has potential to occur onsite.

Tripod Buckwheat

Tripod buckwheat (*Eriogonum tripodum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial deciduous shrub that occurs on cismontane woodland or chaparral, often on serpentinite soils. Tripod buckwheat blooms from May through July and is known to occur at elevations ranging from 655 to 5,250 feet above MSL. Tripod buckwheat is endemic to California; the current range of this species includes Amador, Colusa, El Dorado, Glenn, Lake, Mariposa, Napa, Nevada, Placer, Shasta, Tehama, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of tripod buckwheat within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Tripod buckwheat has potential to occur onsite.

Stinkbells

Stinkbells (*Fritillaria agrestis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in clay, sometimes serpentinite areas in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. Stinkbells bloom from March through June and is known to occur at elevations ranging from 35 to 5,100 feet above MSL. This species is endemic to California; its current range includes Alameda, Colusa, Contra Costa, Fresno, Kern, Kings, Mendocino, Merced, Monterey, Mariposa, Placer, Sacramento, Santa Barbara, San Benito, Santa Clara, San Luis Obispo, San Mateo, Solano, Stanislaus, Tulare, Tuolumne, Ventura, Yolo, and Yuba counties, and is considered to be extirpated from San Mateo County (CNPS 2023a).

There are no documented CNDDB occurrences of stinkbells within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species. Stinkbells has potential to occur onsite.

Butte County Fritillary

Butte County fritillary (*Fritillaria eastwoodiae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.2 species. This species is an herbaceous bulbiferous perennial that occurs in chaparral, cismontane woodland, and lower montane coniferous forest, and is occasionally found on serpentinite soils. Butte County fritillary blooms from March through June and is known to occur at elevations ranging from 165 to 4,920 feet above MSL. The current range of this species in California includes Butte, El Dorado, Nevada, Placer, Shasta, Tehama, and Yuba counties (CNPS 2023a).

There is one documented CNDDB occurrence of Butte County fritillary within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Butte County fritillary has potential to occur onsite.

Serpentine Bluecup

Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous annual that occurs in serpentinite or lone soils in cismontane woodland. Serpentine bluecup blooms from May through June and is known to occur at elevations ranging from 1,050 to 2,000 feet above MSL. Serpentine bluecup is endemic to California; the current range of this species in California includes Amador, Butte, El Dorado, Mariposa, Placer, and Tuolumne counties. (CNPS 2023a).

There are no documented CNDDB occurrences of serpentine bluecup within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Serpentine bluecup has potential to occur onsite.

Dubious Pea

Dubious pea (*Lathyrus sulphureus* var. *argillaceus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3 species. This species is an herbaceous perennial that occurs in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Dubious pea blooms from April through May and is known to occur at elevations ranging from 490 to 3,050 feet above MSL. Dubious pea is endemic to California; the current range of this species includes Amador, Calaveras, El Dorado, Nevada (distribution or identity is uncertain), Placer, Shasta, and Tehama counties (CNPS 2023a).

There is one documented CNDDB occurrence of dubious pea within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Dubious pea has potential to occur onsite.

Serpentine Leptosiphon

Serpentine leptosiphon (*Leptosiphon ambiguus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs usually in serpentinite soil within cismontane woodland, coastal scrub, valley and foothill grassland. Serpentine leptosiphon blooms from March through June and is known to occur at elevations ranging from 395 to 3,710 feet above MSL. Serpentine bird's-beak is endemic to California; its current range includes Alameda, Butte, Contra Costa, El Dorado, Fresno, Merced, Monterey, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Mateo, and Stanislaus counties (CNPS 2023a).

There are no documented CNDDB occurrences of serpentine leptosiphon within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species. Serpentine leptosiphon has potential to occur onsite.

Bristly Leptosiphon

Bristly leptosiphon (*Leptosiphon aureus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an annual herb that occurs in chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. Bristly leptosiphon blooms from April through July and is known to occur at elevations ranging from 180 to 4,920 feet above MSL. Bristly leptosiphon is endemic to California; the current range of this species includes Alameda, Butte, Colusa, Humboldt, Kern, Lake, Marin, Mendocino, Napa, Placer, San Benito, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of bristly leptosiphon within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species. Bristly leptosiphon has potential to occur onsite.

Humboldt Lily

Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest. Humboldt lily blooms from May through July and is known to occur at elevations ranging from 295 to 4,200 feet above MSL. Humboldt lily is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Los Angeles, Nevada, Placer, Plumas, San Diego, Santa Barbara, Sierra, Tehama, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of Humboldt lily within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Humboldt lily has potential to occur onsite.

Layne's Ragwort

Layne's ragwort (*Packera layneae*) is listed as threatened pursuant to the federal ESA, rare pursuant to the California ESA, and is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs on rocky serpentinite or gabbroic soil in chaparral and cismontane woodland communities. Layne's

ragwort blooms from April through August and is known to occur at elevations ranging from 655 to 3,560 feet above MSL. Layne's ragwort is endemic to California; the current range of this species includes El Dorado, Placer, Tuolumne, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of Layne's ragwort within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Layne's ragwort has potential to occur onsite.

Narrow-Petaled Rein Orchid

Narrow-petaled rein orchid (*Piperia leptopetala*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous perennial that occurs in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Narrow-petaled rein orchid blooms from May through July and is known to occur at elevations ranging from 1,245 to 7,300 feet above MSL. Narrow-petaled rein orchid is endemic to California; the current range of this species includes Colusa, Lake, Orange, Placer, Plumas, San Bernardino, San Diego, San Luis Obispo, and Sonoma counties (CNPS 2023a).

There are no documented CNDDB occurrences of narrow-petaled rein orchid within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Narrow-petaled rein orchid has potential to occur onsite.

Oval-Leaved Viburnum

Oval-leaved viburnum (*Viburnum ellipticum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.3 species. This species is a perennial deciduous shrub that occurs in chaparral, cismontane woodland, and lower montane coniferous forest communities. Oval-leaved viburnum blooms from May through June and is known to occur at elevations ranging from 705 to 4,595 feet above MSL. The current range of this species in California includes Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties (CNPS 2023a).

There are two documented CNDDB occurrences of oval-leaved viburnum within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Oval-leaved viburnum has potential to occur onsite.

Invertebrates

Based on the literature review, five special-status invertebrate species were identified as having the potential to occur in the vicinity of the BSA. However, upon further analysis and after the site visit, four species are considered to be absent from the BSA due to lack of suitable habitat and because is outside of the geographic range for the species. No further discussion of these species is provided in this assessment. A brief description of the remaining species that has potential to occur within the BSA is presented below.

Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a candidate for listing as endangered under the California ESA. The historic range of Crotch's bumble bee extends from coastal areas east to the edges of the desert in central California south to Baja California del Norte, Mexico, excluding mountainous areas (Thorpe et al. 1983, Williams et al. 2014). The species was historically common throughout the southern two-thirds of its range but is now largely absent from much of that area and is nearly extirpated from the center of its historic range, the Central Valley (Hatfield et al. 2014).

Crotch's bumble bee inhabits open grassland and scrub habitats (Williams et al. 2014). The species visits a wide variety of flowering plants, although its very short tongue makes it best suited to forage at open flowers with short corollas (Xerces Society 2018). Plant families most commonly associated with Crotch's bumble bee include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Xerces Society 2018). The species primarily nests underground (Williams et al. 2014). Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or other debris (Goulson 2010; Williams et al. 2014). The flight period for Crotch's bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July (Thorp et al. 1983). The flight period for workers and males in California is from late March through September with peak abundance in early July (Thorp et al. 1983).

There are no documented CNDDB occurrences of Crotch's bumble bee within 5 miles of the BSA (CDFW 2023e). Abandoned rodent burrows may provide suitable nesting habitat and the BSA may also support overwintering and marginal foraging habitat for this species. Crotch's bumble bee has low potential to occur onsite.

Fish

Based on the literature review, three special-status fish species or Evolutionarily Significant Units were identified as having the potential to occur in the vicinity of the BSA. However, upon further analysis and after the site visit, all of those species are considered to be absent from the BSA due to the BSA being outside the geographic range for the species. No further discussion of special-status fish is provided in this assessment.

Amphibians

Based on the literature review, three special-status amphibian species or clades were identified as having the potential to occur in the vicinity of the BSA. However, upon further analysis and after the site visit, one of the clades is considered to be absent from the BSA due to the BSA being outside the geographic range for the clade. No further discussion of this clade is provided in this assessment. A brief description of the remaining species that have potential to occur within the BSA is presented below.

California Red-Legged Frog

The California red-legged frog (*Rana draytonii*) is listed as Threatened pursuant to the ESA and is a California SSC. The current range and abundance of California red-legged frog is greatly reduced from historic levels, with most remaining populations occurring along the coast from Marin County to Ventura

County and in blue oak woodland, foothill pine/oak, and riparian deciduous forests in the foothills of the western slope of the Sierra Nevada (Barry and Fellers 2013).

Breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. Creeks and ponds with dense growths of woody riparian vegetation, especially willows (*Salix* spp.) are preferred (Hayes and Jennings 1988). Adult California red-legged frogs use dense, shrubby or emergent riparian vegetation near deep [≥ 0.6 to 0.9 m (2 to 3 feet)], still or slow-moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail (*Typha* sp.) occur adjacent to open water. California red-legged frogs breed from November through April (Jennings and Hayes 1994), and larvae generally metamorphose by mid to late summer. Upland and riparian areas provide important sheltering habitat during summer when California red-legged frogs aestivate in dense vegetation, burrows, and leaf litter.

There are no documented CNDDB occurrences of California red-legged frog within 5 miles of the BSA (CDFW 2023e). The creeks within the BSA provide potentially suitable dispersal habitat for this species but no breeding habitat is present onsite. However, the BSA is located within a relatively urban setting and the presence of manufactured impoundments in the area increase the likelihood of non-native predators such as bullfrogs and various fishes being present which further lowers habitat suitability. California red-legged frog has low potential to occur onsite.

Foothill Yellow-Legged Frog (Northeast/Northern Sierra Clade)

The foothill yellow-legged frog (*Rana boylii*) occurs in the Coast Ranges, from the Oregon border south to the Transverse Mountains in Los Angeles County, west of the Cascade crest in most of Northern California, and in the Sierra Nevada foothills south to Kern County, from sea level to 6,000 feet above MSL (Stebbins 1985). Six clades are recognized. The Northeast/Northern Sierra clade of foothill yellow-legged frog is listed as threatened pursuant to California ESA and is considered a California SSC across its range. The Northeast/Northern Sierra clade of foothill yellow-legged frog generally occurs in Sutter, Yuba, Sierra, Nevada, and Placer counties. The northern portion of the clade boundary extends into Plumas County and coincides with the northern boundary of the Upper Yuba Watershed (Hydrologic Unit Code [HUC] #18020125; U.S. Geological Survey [USGS] 2023a). The southern portion of the clade boundary extends into El Dorado County and coincides with the southern boundary of the North Fork American Watershed (HUC #18020128; USGS 2023a).

Foothill yellow-legged frogs occupy rocky streams in valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow plant communities. They are rarely found far from water and will often dive into water to take refuge under rocks or sediment when disturbed (Zeiner et al. 1988).

Moyle (1973) implicated the bullfrog (*Lithobates catesbeianus*) as a cause of the observed reduction of yellow-legged frog populations in the Central Valley and in the Sierra Nevada. The introduction of nonnative fishes, including centrarchids (e.g., bass, sunfish), known to eat eggs of ranid frogs (Werschkul and Christensen 1977), and stocking of salmonids (trout) in streams where they historically did not exist, may also contribute to the disappearance or reduction of native frog populations in Sierra streams. Additional human-related impacts to foothill yellow-legged frogs and their habitat include the

construction and maintenance of dams and reservoirs and resultant controlled stream flows, recreation, and livestock grazing (Jennings and Hayes 1994; Lind et al. 1996). A chytrid fungus (*Batrachochytrium dendrobatidis*), which can be fatal to metamorphic and adult frogs, has become increasingly common in the Sierra Nevada (Speare et al. 1998), and has been shown to delay growth of foothill yellow-legged frogs (Davidson et al. 2007).

There is one documented CNDDB occurrences of foothill-legged frog within 5 miles of the BSA (CDFW 2023e). The creeks within the BSA provide potentially suitable dispersal habitat for this species but no breeding habitat is present onsite. However, the BSA is located within a relatively urban setting and the presence of manufactured impoundments in the area increase the likelihood of non-native predators such as bullfrogs and various fishes being present which further lowers habitat suitability. Foothill yellow-legged frog has low potential to occur onsite.

Reptiles

Based on the literature review, two special-status reptile species were identified as having the potential to occur in the vicinity of the BSA. A brief description of these species is presented below.

Northwestern Pond Turtle

The northwestern pond turtle (*Actinemys marmorata*) is one of two species of California's only remaining native freshwater turtles. Both species are considered SSC by CDFW, Sensitive by the U.S. Forest Service and Bureau of Land Management (BLM), and are proposed for listing as Threatened under the Federal ESA. The range of the northwestern pond turtle in California extends from the Oregon border southward to the Stockton area in the Central Valley, and the western slope of the Sierra-Cascade (Bury et al. 2012a). This species can occur in a variety of waters including ponds, lakes, streams, reservoirs, rivers, settling ponds of wastewater treatment plants, and other permanent and ephemeral wetlands (Bury et al. 2012b). However, in streams and other lotic features they generally require slack- or slow-water aquatic microhabitats (Jennings and Hayes 1994). Northwestern pond turtles also require basking areas such as logs, rocks, banks, and brush piles for thermoregulation (Bury et al. 2012b). Nesting sites for pond turtles are typically located in annual grasslands adjacent to a watercourse with little slope and hard, dry soil (Ashton et al. 1997). Nesting habitat soils typically display high clay or silt fraction, with few nests located in sandy soils. Nests are usually within 400 meters of a watercourse, with the majority being within 50 meters of the water's edge (Holland 1994).

There is one documented CNDDB occurrence of northwestern pond turtle within 5 miles of the BSA (CDFW 2023e). Aquatic resources within the BSA represent suitable habitat for this species. Northwestern pond turtle has potential to occur onsite.

Blainville's ("Coast") Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is considered a CDFW SSC. This species is easily identifiable from many other lizards in California. Like all horned lizards, it is flattened dorsoventrally and possesses enlarged scales along the back of the head that resemble horns. This species can be distinguished from the desert horned lizard, a species with which it shares only a narrow portion of its range, by a double row of pointed fringe scales. This diurnal species can occur within a variety of habitats

including scrubland, annual grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral (Stebbins 2003). In the Central Valley, the species ranges from southern Tehama County southward. In the Sierra Nevada it occurs from Butte County south to Tulare County, and in the Coast Ranges it occurs from Sonoma County south into Baja California (California Department of Fish and Game 1988). It occurs from sea level to 8,000 feet above MSL.

There are no documented CNDDB occurrences of Blainville's horned lizard within 5 miles of the BSA (CDFW 2023e). Open areas within annual grassland, woodlands, and coyote brush scrub within the BSA represent marginally suitable habitat for this species. Blainville's horned lizard has low potential to occur onsite.

Birds

Based on the literature review, 18 special-status bird species were identified as having potential to occur in the vicinity of the BSA. Upon further analysis and after the site visit, 10 of those species are considered to be absent from the BSA due to the lack of suitable habitat. No further discussion of those species is provided in this assessment. A brief description of the remaining eight species that have potential to occur within the BSA is presented below.

California Black Rail

California black rail (*Laterallus jamaicensis coturniculus*) is listed as a threatened species and protected pursuant to the California ESA, and is fully protected pursuant to California Fish and Game Code Section 3511. Typical habitat for black rails includes coastal saltmarsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation (Eddleman et al. 2020). They are found in marshes and meadows where the water depth is less than three centimeters, and the difficulty of maintaining these shallow depths may limit distribution (Eddleman et al. 2020). California black rails are a year-round resident in the San Francisco Bay region and a discontinuous resident breeding population in the Sierra Nevada foothills (elevation range of 300 feet to 1,000 feet) within Placer, Yuba, Butte, and Nevada counties (Beedy and Pandalfino 2013). According to the CNDDB, black rails nested in El Dorado Hills, El Dorado County in 2017 (CDFW 2023e). Nesting typically occurs from March through September (Eddleman et al. 2020).

There are no documented CNDDB occurrences of California black rail within 5 miles of the BSA (CDFW 2023e). Riparian thickets and seeps within the BSA represent suitable habitat for this species; however, due to the relatively small size of these wetland areas and close proximity to human disturbances, the potential for occurrence is reduced but not eliminated. California black rail has low potential to occur onsite.

White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either the California or federal ESAs; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. This species is a common resident in the Central Valley and the entire length of the California coast, as well as all areas up to the Sierra Nevada foothills and southeastern deserts (Dunk 2020). In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March

through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 2020).

There are no documented CNDDB occurrences of white-tailed kite within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. White-tailed kite has potential to occur onsite.

Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal ESAs but is considered a USFWS BCC. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther et al. 2020). Breeding occurs from April through July.

There are no documented CNDDB occurrences of Nuttall's woodpecker within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. Nuttall's woodpecker has potential to occur onsite.

Yellow-Billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal ESAs but is considered a USFWS BCC. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late January to mid-February, which may take up to 6 to 8 weeks to complete, with eggs laid from April through May, and fledging from May through June (Koenig and Reynolds 2020). The young leave the nest about 30 days after hatching (Koenig and Reynolds 2020). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2020).

There are no documented CNDDB occurrences of yellow-billed magpie within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species; however, the BSA is at the extreme eastern limits of its breeding distribution. Yellow-billed magpie has low potential to occur onsite.

Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) is not listed and protected under either state or federal EDAs but are considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse, and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2020). They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands (Cicero et al. 2020). Nesting occurs during March through July.

There are no documented CNDDB occurrences of oak titmouse within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. Oak titmouse has potential to occur onsite.

Wrentit

The wrentit (*Chamaea fasciata*) is not listed in accordance with either the California or federal ESAs but is designated as a BCC by the USFWS. Wrentit are a sedentary resident along the west coast of North America from the Columbia River south to Baja California (Geupel and Ballard 2020). Wrentit are found in coastal sage scrub, northern coastal scrub, and coastal hard and montane chaparral, and breed in the dense understory of valley oak riparian, Douglas fir and redwood forests, early successional forests, riparian scrub, coyote bush, blackberry thickets, suburban parks, and larger gardens (Geupel and Ballard 2020). Nesting occurs from March through August.

There are no documented CNDDB occurrences of wrentit within 5 miles of the BSA (CDFW 2023e). The Gooding's black willow riparian woodland and other riparian understory species provides suitable habitat for this species. Wrentit has potential to occur onsite.

Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) was granted emergency listing for protection under the California ESA in December 2014 but the listing status was not renewed in June 2015. After an extensive status review, the California Fish and Game Commission listed tricolored blackbirds as a threatened species in 2018. In addition, it is currently considered a USFWS BCC and a CDFW SSC. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California (Beedy et al. 2020). Tricolored blackbirds nest in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. Tricolored blackbirds nesting habitat includes emergent marsh, riparian woodland/scrub, blackberry thickets, densely vegetated agricultural and idle fields (e.g., wheat, triticale, safflower, fava bean fields, thistle, mustard, cane, and fiddleneck), usually with some nearby standing water or ground saturation (Beedy et al. 2020). They feed mainly on grasshoppers during the breeding season, but may also forage upon a variety of other insects, grains, and seeds in open grasslands, wetlands, feedlots, dairies, and agricultural fields (Beedy et al. 2020). The nesting season is generally from March through August.

There are no documented CNDDB occurrences of tricolored blackbird within 5 miles of the BSA (CDFW 2023e). Riparian thickets within the BSA represent suitable habitat for this species. Tricolored blackbird has potential to occur onsite.

Bullock's Oriole

The Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal ESAs but is currently a BCC according to the USFWS. In California, Bullock's orioles are found throughout the state except the higher elevations of mountain ranges and the eastern deserts (Small 1994). They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees (Flood et al. 2020). Nesting occurs from March through July.

There are no documented CNDDB occurrences of Bullock's oriole within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. Bullock's oriole has potential to occur onsite.

Mammals

Based on the literature review, three special-status mammal species were identified as having potential to occur in the vicinity of the BSA. Upon further analysis and after the site visit, one of those species is considered to be absent from the BSA due to the BSA being outside the known geographical range for the species. No further discussion of this species is provided in this assessment. A brief description of the remaining two species that have potential to occur within the BSA is presented below.

Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The Townsend's big-eared bat is a fairly large bat with prominent bilateral noes lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. The Townsend's big-eared bat has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet above MSL. Habitats used include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. The Townsend's big-eared bat is a moth specialist with more than 90 percent of its diet composed of them. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (Western Bat Working Group [WBWG] 2023).

There are two documented CNDDB occurrences of Townsend's big-eared bat located within 5 miles of the BSA (CDFW 2023e). Trees within the BSA may provide suitable roosting habitat for this species. Townsend's big-eared bat has potential to occur onsite.

Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the federal or California ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet above MSL) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and high elevation (above 7,000 feet above MSL) coniferous forest. This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges and barns. The pallid bat is a feeding generalist that gleans a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, they often use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2023).

There are no documented CNDDB occurrences of pallid bat located within 5 miles of the BSA (CDFW 2023e). Trees within the BSA may provide suitable roosting habitat for this species. Pallid bat has potential to occur onsite.

4.4.4.6 Critical Habitat or Essential Fish Habitat

There is no designated critical habitat mapped within the BSA (USFWS 2023b).

Based on the literature review, critical habitat for anadromous fish, steelhead (Central Valley Distinct Population Segment) and Essential Fish Habitat for chinook salmon may be present in the *Auburn, California* 7.5-minute quadrangle (NOAA 2016). However, there is no habitat for special-status fish within the BSA because access to this reach of Dry Creek by the migratory special-status fish species occurring in the Sacramento River is precluded by artificial barriers.

4.4.4.7 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 2023e) and none were observed during the site reconnaissance.

4.4.4.8 Protected Trees/Oak Woodlands

An arborist survey has not been conducted for the BSA; however, riparian zone trees in addition to other native trees are present within the BSA. Impacts to these trees would be subject to the Placer County Woodland Conservation Article.

4.4.5 Biological Resources (IV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated

4.4.6 Special-Status Plants

As discussed above, the BSA supports potential habitat for special-status plants. No special-status plants were found during field surveys; however, protocol-level surveys have not been conducted. If a special-status plant is found onsite, Project impacts could include damage or loss of individual plants, loss of occupied habitat, and indirect impacts such as disturbance from human encroachment and changes in habitat quality due to alteration of hydrology, erosion, and transport of soil, debris, or pollutants into occupied habitat from adjacent Project Areas. Thus, impacts to special status plants are potentially significant. This impact would be minimized to the maximum extent feasible through implementation of BMP-1: Conduct Environmental Awareness Training for Construction Personnel; BMP-2: Install Construction Barrier Fencing to Protect Environmentally Sensitive Areas; and BMP-4: Minimize Potential for the Long-Term Loss of Riparian Habitat. These BMPs require environmental awareness training for construction workers, the use of temporary construction fencing to minimize the area of impact, and requires vegetation trimming rather than entire shrub removal where feasible (such as in areas of clearing, but no trenching). BMP implementation would help to reduce special status plan impacts but would not eliminate them. With implementation of BMPs and Mitigation Measure BIO-1: Conduct Special Status Plant Surveys, impacts to special status plants would be reduced to less than significant with mitigation incorporated.

4.4.7 Special-Status Wildlife Species

4.4.7.1 Crotch's Bumble Bee

The BSA contains suitable habitat for Crotch's bumble bee. If present, Crotch's bumble bee or it's nest(s) could be significantly impacted by Project construction activities. As discussed above, implementation of BMP-1, 2 and 4 would help to reduce special wildlife species impacts but would not eliminate them. With implementation of BMPs and Mitigation Measure BIO-2: Conduct Preconstruction Surveys for Crotch's Bumble Bee and if Found Implement Avoidance Measures, this impact would be reduced to less than significant with mitigation incorporated.

4.4.7.2 California Red-Legged Frog and Foothill Yellow-Legged Frog

The BSA contains marginally suitable habitat for California red-legged frog and foothill yellow-legged frog (Northeast/Northern Sierra clade). If present, Project construction could result in significant impacts to listed frog species. As discussed above, implementation of BMP-1, 2 and 4 would help to reduce impacts to California red-legged frog and foothill yellow-legged frog but would not eliminate them. With implementation of Mitigation Measure BIO-3: Conduct Preconstruction Surveys for California Red-Legged Frog and Foothill Yellow-Legged Frog, this impact would be reduced to less than significant with mitigation incorporated.

4.4.7.3 Northwestern Pond Turtle and Blainville's Horned Lizard

The BSA contains suitable habitat for northwestern pond turtle and Blainville's horned lizard. If present, Project construction could result in significant impacts to individual northwestern pond turtles, nests, and Blainville's horned lizard. As discussed above, implementation of BMP-1, 2 and 4 would help to reduce impacts to northwestern pond turtle and Blainville's horned lizard but would not eliminate them. With implementation of Mitigation Measure BIO-4 and Mitigation Measure BIO-5: Conduct Preconstruction Surveys for Northwestern Pond Turtle and Blainville's Horned Lizard and if Present Implement Avoidance Measures, this impact would be reduced to less than significant with mitigation incorporated.

4.4.7.4 Nesting Birds (including Raptors)

The BSA contains suitable nesting and/or wintering and foraging habitat for eight 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 a violation of the MBTA and California Fish and Game Code, and would be considered a significant impact under CEQA. As discussed above, implementation of BMP-1, 2 and 4 would help to reduce impacts to nesting birds but would not eliminate them. With implementation of Mitigation Measure BIO-6: Conduct Pre-Construction Nesting Bird Surveys and if Found Implement Avoidance Measures this potential impact would be reduced to less than significant with mitigation incorporated.

4.4.7.5 Special-Status Bats and Maternity Roosts

Trees in the Project Area represent potential roosting habitat for Townsend's big-eared bat and pallid bat. If occupied bat roosts are present, removal of the habitat feature could result in direct mortality or injury to special-status bats. Removal during the maternity roosting season could result in the loss of an established maternity roosting site and injury or mortality of pups that are not yet able to fly. Removal of a roost site during the winter season could also result in direct injury or death of special-status bats, particularly during time periods of colder weather or heavy rain, when bats are more likely to be in torpor. Impacts to special-status bats and maternity roost sites are potentially significant. As discussed above, implementation of BMP-1, 2 and 4 would help to reduce impacts to nesting birds but would not eliminate them. With implementation of Mitigation Measure BIO-7: Survey for Special Status Bats and if Found Implement Avoidance Measures this impact would be reduced to less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated

There is one sensitive natural community identified within the BSA: Goodding's black willow riparian woodland. As shown in BRA Figure 3, sheets 1 and 3 (Appendix C), culvert placement for the Orr and Rock Creek Siphons would require temporary impact to this sensitive natural community at the proposed creek crossings. The impact would involve riparian vegetation trimming and/or removal within an approximately 20-foot-wide corridor to accommodate trenching and temporary soil stockpiling. As shown BRA Figure 3, sheet 1 (Appendix C), the width of riparian habitat at the Orr Creek crossing is approximately 100 feet resulting in a temporary disturbance area of approximately 0.05 acres. As shown BRA Figure 3, sheet 3 (Appendix C), the width of riparian habitat at the two Dry Creek crossings totals approximately 325 lineal feet resulting in a temporary disturbance area of approximately 0.15 acres. Thus, the total impact to Goodding's black willow riparian is approximately 0.20 acres, which is a significant impact. As discussed above, implementation of BMP-1, 2 and 4 would help to reduce impacts to riparian habitat but would not eliminate them. Goodding's black willow riparian woodland habitat is regulated by the CDFW. Thus, the Project would require a CDFW Section 1602 Streambed Alteration Agreement. This permit would identify restoration requirements and any necessary compensatory mitigation for temporal loss. With implementation of BMPs 1, 2 and 4 and Mitigation Measure BIO-8, impacts to sensitive Goodding's black willow riparian habitat would be reduced to a less-than-significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated

As discussed in the BRA Section 4.4 Aquatic Resources (Appendix C), an ARD of the BSA was conducted and identified a total of 0.173 acre of aquatic resources. Per BRA Figure 4 (Appendix C), the aquatic features identified include seeps, canals, intermittent drainages, and creeks, including Orr, Dry and Rock Creeks. These aquatic resources are considered potential jurisdictional waters of the U.S. and/or the State, and as such, are regulated by Sections 404 and 401 of the CWA and/or the Porter-Cologne Water Quality

Control Act. The aquatic features identified would be directly and/or indirectly impacted by Project construction activities. Direct impacts to aquatic resources would include any grading, trenching, excavation, or placement of temporary or permanent fill within a regulated feature (including temporary creek divisions at the proposed creek crossing locations). Indirect impacts may include inadvertent encroachments, changes in hydrology, and runoff and erosion from the Project Area. Thus, the Project would result in a significant impact to state or federally protected wetlands.

As discussed above, implementation of BMP-1, 2 and 4 would help to reduce impacts to state and federally protected wetlands but would not eliminate them. The Project would also be subject to a SWPPP which would further protect aquatic resources. While these BMPs and SWPPP permit would minimize the area of aquatic disturbance and require water quality protection, temporary impacts to regulated aquatic resources would still occur and regulatory permitting would be required. With implementation of applicable BMPs and Mitigation Measure BIO-9: Obtain Clean Water Act Section 404 and 401 permits and Implement Required Conditions, impacts to state or federally protected wetlands would be reduced to less-than-significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐

Less Than Significant Impact

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 BSA habitats opportunistically for the duration of construction. Once construction is complete, wildlife movements are expected to resume. There are no documented nursery sites and no nursery sites were observed within the BSA during the site reconnaissance. Therefore, the Project is expected to have a less than significant impact on wildlife movement.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐

Less Than Significant Impact With Mitigation Incorporated.

Project implementation could result in the loss of tree and woodland resources protected by the County's Woodland Conservation Article. Should this occur, a significant impact would result. As discussed above,

implementation of BMP-1, 2 and 4 would help to reduce tree impacts consistent with County policy but would not eliminate them. With implementation of Mitigation Measure BIO-10: Comply with the Placer County Tree Preservation Article, impacts related to conflict with policies or ordinances protecting biological resources would be reduced to less-than-significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☐	☒

No Impact

A small portion of the BSA is located within the Placer County Conservation Program (PCCP) area. However, the Project proponent, NID, is not a PCCP Participating Agency and is not required to obtain regulatory approval via the PCCP. Therefore, the Project is not covered by any local, regional, or state conservation plans and would not conflict with such plans. There would be no impact.

4.4.8 Mitigation Measures

BIO-1: Conduct Special Status Plant Surveys

The following shall be implemented to minimize potential impacts to special-status plants:

- Where feasible, Project-related activities shall be restricted to previously developed or disturbed areas to avoid disturbance of habitats that may support special-status plants.
- The Project impact limits shall be clearly demarcated prior to construction and all workers shall be made aware of the impact limits and avoided areas. No work shall occur outside of the Project impact limits. All vehicles and equipment shall be restricted to the Project impact limits or existing designated access roads and staging areas.
- If suitable habitat for special-status plants cannot be avoided, the applicant shall perform special-status plant surveys according to CDFW, CNPS, and USFWS protocols (CDFW 2018a; CNPS 2001; USFWS 2000). Surveys shall be conducted throughout all suitable habitat within the Project footprint and a 50-foot buffer, where accessible, to address potential direct and indirect impacts of the Project. Surveys shall be conducted by a qualified biologist and timed according to the identifiable period for target species (typically the blooming period). To the extent feasible, known reference populations will be visited prior to surveys to confirm target species are evident and identifiable at the time of the survey.

- If no special-status plants are found, no further measures pertaining to special-status plants are necessary.
- If special-status plants are identified onsite, the Project shall be modified to the extent feasible to prevent disturbance or loss of special-status plants. No-disturbance buffers shall be established around sensitive plant populations to be preserved in or adjacent to the Project Area. A 50-foot buffer should be maintained between project activities and sensitive plant populations, unless otherwise determined by a qualified biologist. Buffer distances may vary between species depending on listing status, rarity, and other factors. Buffer areas will be clearly demarcated in the field, and no construction or ground-disturbing activities will occur within the boundaries of the delineated area.
- If a special-status plant species is found and avoidance is not feasible, additional measures may be developed in consultation with CDFW, USFWS and/or the CEQA Lead Agency. These measures may include restoration or permanent preservation of habitat for the special-status plant species or translocation (via seed collection and/or transplantation) from planned impact areas to unaffected suitable habitat.
- If a state or federally listed threatened or endangered plant or a plant that is a candidate for state listing is found onsite, the applicant shall consult with CDFW and/or USFWS, as applicable, to determine appropriate avoidance and minimization measures. If the plants cannot be avoided, an incidental take permit and compensatory mitigation may be required.

BIO-2: Conduct Preconstruction Surveys for Crotch's Bumble Bee and if Found Implement Avoidance Measures

The following measures are recommended to minimize potential impacts to Crotch's bumble bee:

- If the Crotch's bumble bee is no longer a Candidate or formally Listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.
- Because Crotch's bumble bee nest locations are chosen on an annual basis and the site provides nesting habitat, a CDFW-approved Crotch's bumble bee biologist shall conduct three weekly preconstruction nesting surveys with focus on detecting active nesting colonies with the third and final survey conducted within 24-hours immediately prior to ground disturbing activities that are scheduled to occur during the flight season (February through October). Surveys shall be completed at a minimum of one person-hour of searching per three acres of suitable habitat during suitable weather conditions (sustained winds less than 8 miles per hour, mostly sunny to full sun, temperatures between 65 and 90˚F) at an appropriate time of day for detection (at least an hour after sunrise and at least two hours before sunset, though ideally between 9am-1pm). If no nests are found but the species is present, a full-time qualified biological monitor shall be present during initial vegetation or

ground disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). The Crotch's bumble bee biologist shall immediately notify CDFW of the detection as further coordination may be required to avoid or mitigate certain impacts. If an active Crotch's bumble bee nest is detected, an appropriate no disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established around the nest to reduce the risk of disturbance or accidental take and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified Crotch's bumble bee biologist deems the nesting colony is no longer active and CDFW agrees with the determination.

- If initial grading is phased or delayed for any reason, the 24-hour preconstruction nesting survey will be repeated prior to ground-disturbing activities that are scheduled to occur during the same flight season (February through October). Three preconstruction Crotch's bumble bee nesting surveys shall be required in subsequent years of construction whenever vegetation and ground disturbing activities are scheduled to occur during the flight season (February through October) if nesting habitat is still present or has re-established and will be affected.

BIO-3: Conduct Preconstruction Surveys for California Red-Legged Frog and Foothill Yellow-Legged Frog

The following measures are recommended to minimize potential impacts to California red-legged frog and foothill yellow-legged frog:

- A qualified biologist shall conduct a preconstruction survey for California red-legged frog and foothill yellow-legged frog within all suitable habitat in the Project work area 48 hours prior to the start of ground- or vegetation-disturbing activities. The biologist will search for all life stages during this survey. If either species are found, the qualified biologist will notify CDFW immediately and consult on appropriate actions to be taken before construction begins.
- A biological monitor shall be present when activities occur within 100 feet of suitable habitat for either California red-legged frog or foothill yellow-legged frog.

BIO-4: Conduct Preconstruction Survey for Sensitive Reptiles -Blainville's horned lizard

- A qualified biologist shall determine if the Project Area contains suitable habitat for Blainville's horned lizard. If suitable habitat is identified within the Project Area, a biologist will conduct surveys for Blainville's horned lizard 48-hours prior to construction in areas of potential habitat. The surveys shall be conducted at the appropriate time of day to detect Blainville's horned lizard. If Blainville's horned

lizard is found, a plan will be prepared, in consultation with CDFW, to potentially collect and relocate individual(s) to suitable habitat outside the Project Area.

BIO-5: Conduct Pre-Construction Northwestern Pond Turtle Surveys

Conduct a pre-construction northwestern pond turtle survey within 48 hours prior to the initiation of construction activities and retain a qualified biologist to survey immediately prior to ground disturbing activities in suitable habitat. If northwestern pond turtle is found, consultation with CDFW shall be required, as well as the development of a relocation plan for northwestern pond turtle encountered during construction. If no special status reptiles are detected during surveys, no further measures are needed.

BIO-6: Conduct Pre-Construction Nesting Bird Surveys and if Found Implement Avoidance Measures

The following measures are recommended to avoid or minimize potential effect to special-status birds and other birds protected under the MBTA (and their nests):

- To the extent feasible, vegetation removal activities shall commence during the nonbreeding season (typically October 1 through January 31, as determined by a qualified biologist).
- No Project activity with potential to disturb nesting birds shall begin during the nesting season (typically February 1 through September 30, as determined by a qualified biologist) unless the following surveys are completed by a qualified wildlife biologist:

California Black Rail

- A qualified biologist shall conduct a habitat assessment for California black rail. The survey shall be conducted within the entire Project footprint and a 500-foot buffer.
- If suitable habitat is found within 500 feet of the Project work area, a qualified biologist shall conduct a preconstruction California black rail survey sometime between March 15 and May 15 of the year in which ground disturbance activities commence. A minimum of four surveys shall be conducted. The survey dates will be spaced at least 10 days apart and will cover the time period from the date of the first survey through the end of June to early July. Surveys shall be conducted using survey protocol based on the methods used in Richmond et al. (2008) or other guidance agreed upon by the applicant and CDFW. If active nests are located during the preconstruction surveys, CDFW shall be notified. The nests shall be designated a sensitive area and protected by an avoidance buffer of 500 feet, or as otherwise determined in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are independent of the nest. Monitoring of occupied nests shall be conducted by a qualified biologist during construction activities, and avoidance buffers may be adjusted if any agitated behavior by the nesting birds is observed.

Tricolored Blackbird

- Within 30 days prior to construction, a qualified wildlife biologist shall survey for nesting tricolored blackbirds within the Project work area and a 500-foot radius. If active nests are located during the preconstruction surveys, CDFW shall be notified. The nests shall be designated a sensitive area and protected by an avoidance buffer of 500 feet, or as otherwise determined in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are independent of the nest. Monitoring of occupied nests shall be conducted by a qualified biologist during construction activities, and avoidance buffers may be adjusted if any agitated behavior by the nesting birds is observed.

Other Special-Status Birds and Migratory Bird Treaty Act-Protected Birds

- During the nesting season, 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 for raptors and 100 feet for other birds protected under the MBTA.
- 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 nestlings have fledged, to be determined by a qualified biologist. No further measures are necessary once the young are independent of the nest or the nest is otherwise no longer occupied.

BIO-7: Survey for Special Status Bats and if Found Implement Avoidance Measures

To avoid and minimize significant impacts to special-status bats or roosting colonies, the following measures shall be implemented:

- At least 30 days prior to initiation of Project activities, a bat habitat assessment shall be conducted by a qualified bat biologist to examine trees and structures for suitable bat roosting habitat. High-quality habitat features (e.g., large tree cavities, basal hollows, loose or peeling bark, abandoned structures) will be identified and the area around the features searched for bats and bat sign (i.e., guano, staining, culled insect parts).
- If suitable bat roosting habitat is identified, the feature shall be avoided and protected in place to the extent feasible. A buffer area shall be established around the roost site to minimize disturbance of roosting bats. The size of the buffer area will be determined in consultation with CDFW.
- If suitable trees or structures cannot be avoided, removal shall be timed to occur outside of the maternity roosting season (generally April 1 to August 31) and only

when nighttime low temperature are above 45°F and rainfall is less than 1/2 inch in 24 hours.

- Trees with identified bat roosting habitat shall be removed using a two-phase removal process conducted over two consecutive days. On the first day, tree limbs and branches will be removed, using chainsaws only. Removal will avoid limbs with cavities, cracks, crevices, or deep bark fissures. On the second day, the remainder of the tree will be removed.
- Standing dead trees or snags with habitat features should be removed over a single day by gently lowering the tree or snag to the ground. The tree or snag shall be left undisturbed onsite for the next 48 hours.
- Removal and trimming of trees with potential roosting habitat shall be conducted in the presence of a biological monitor.

If removal/modification of a suitable tree or structure must occur during the maternity season, a qualified bat biologist shall conduct a focused emergence survey(s) within 48 hours of scheduled work. If a maternity roost is located, whether solitary or colonial, that roost will remain undisturbed until after the maternity season or a qualified biological monitor has determined the roost is no longer active.

BIO-8: Restore all Temporarily Disturbed Riparian Habitat, and Compensate for Temporal Loss

All riparian areas subject to temporary construction disturbance shall be restored by NID and its contractor in accordance with a post construction Erosion Control and Riparian Habitat Restoration Plan (ECRHRP). The ECRHRP shall be prepared by a qualified biologist, address all temporarily disturbed areas, and shall be reviewed and approved by CDFW as part of the CDFW Section 1602 permit process. The ECRHRP shall address the following:

- **Temporary erosion control**. Measures for water quality protection shall be addressed as needed (such as silt fencing and/or coir rolls).
- **Specifications for native riparian plant densities.** The ECRHRP shall address planting densities, species composition, and survivorship, based on characteristics of the existing impacted habitat.
- **Temporal Loss**. The ECRHRP shall include a compensation strategy for temporal loss. This may be accomplished by either: 1) establishing riparian vegetation on currently unvegetated creek banks affected by the project and enhancement of existing riparian habitat through removal of nonnative species, where appropriate; or, 2) purchase of CDFW approved mitigation credits.
- **Monitoring and Reporting**. Monitoring protocol, including a schedule for delivery of annual reports shall be addressed. Monitoring of restoration habitat shall occur for a minimum of three (3) years from installation, or until the success criteria identified in the approved mitigation plan has been met.

- **Performance Standards**. Ecological performance standards for plantings, including the acceptable amount of dead woody vegetation gaps and bare ground, and survivorship shall be addressed in the ECRHRP.
- **Corrective measures**. Should performance standards not be met, the ECRHRP shall allow for the purchase of riparian mitigation credits in an amount agreed to by CDFW as an alternative to meeting the prescribed success criteria.
- **Responsible Parties**. Responsible parties for preparation of monitoring reports, and for verifying success or prescribing implementation or corrective actions shall be addressed in the ECRHRP.

BIO-9: Obtain the necessary permits and Implement the Required Conditions

- Prior to the start of construction activities, NID will obtain all necessary regulatory permits for this Project. These permits are expected to include a CWA Section 401 Water Quality Certification from the RWQCB, a CWA Section 402 NPDES Compliance Permit from the State Water Resources Control Board, a CWA Section 404 from the USACE, and a Fish and Game Code Section 1602 Streambed Alteration Agreement from the CDFW. The Project shall implement all the BMPs, and Mitigation Measures identified in the issued permits.

BIO-10: Comply with the Placer County Tree Preservation Article

- To the extent feasible, Project construction shall avoid ground or vegetation disturbance within the dripline of protected trees subject to the Placer County Tree Preservation Article. If protected trees are to be impacted by Project activities the appropriate tree permits shall be obtained prior to initiation of impacting activities.

4.5 Cultural Resources

This section is based on the analysis and recommendations presented in the *Archaeological Resources Inventory and Built Environment Resources Evaluation Report for the NID-Combie Ophir 2 & 3 Siphon Replacement Project* (Cultural Resources Report) (ECORP 2024b, Appendix D). The Cultural Resources Report was prepared to determine if cultural resources were present in or adjacent to the Project Area and to assess the sensitivity of the Project Area for undiscovered or buried cultural resources. Cultural resources include prehistoric archaeological sites, historic archaeological sites, and historic structures, and generally consist of artifacts, food waste, structures, and facilities made by people in the past. Prehistoric archaeological sites are places that contain the material remains of activities carried out by the native population of the area (i.e., Native Americans) prior to the arrival of Europeans in Southern California. Places that contain the material remains of activities carried out by people during the period when written records were produced after the arrival of Europeans are considered historic archaeological sites. Historic structures include houses, garages, barns, commercial structures, industrial facilities, community buildings, and other structures and facilities that are more than 50 years old. Historic structures may also have associated archaeological deposits, such as abandoned wells, cellars, privies, refuse deposits, and foundations of former outbuildings.

The information provided below is a summary of results contained in the Cultural Resources Report prepared for the Project. Due to the sensitive nature of cultural resource sites and records, which are restricted from public distribution by state and federal law, the Cultural Resources Report contained in Appendix D is a redacted version that does not include sensitive information. Qualified individuals with the need-to-know site record and location information may request the complete Cultural Resources Report from NID.

4.5.1 Environmental Setting

The three segments comprising the Project Area are situated within the Northern California Valley at the western base of the Sierra Nevada Mountains within the North Auburn area of Placer County, California. Elevations within the Project Area range from 1,340 to 1,460 feet above Mean Sea Level (MSL) at the Rock Creek Siphon segment, 1,300 to 1,490 feet MSL at the Dry Creek Siphon segment, and 1,410 to 1,510 feet MSL at the Orr Creek Siphon segment.

4.5.1.1 Geology and Soils

Rosenthal and Willis (2017) describe the geology of the Sacramento Valley as a large, asymmetric, structural trough (syncline) formed by westward-tilting blocks of plutonic and metamorphic rocks on the eastern side, and highly folded and faulted blocks of metamorphic rocks (Franciscan) on the western side. This basin has been partially filled by a thick sequence (up to 12.4 miles [20 kilometers]) of sedimentary rocks and alluvial deposits that range from late Jurassic to Historical in age. Erosion of the Sierra Nevada during the Pleistocene led to the deposition of large alluvial fans at the base of the foothills along the eastern side of the Sacramento Valley. Glacial conditions are generally credited for the deposition of these fans, while subsequent interglacial periods are marked by landscape stability, soil formation, and channel incision. Subsequent depositional cycles during the Holocene progressively buried downstream sections of many older alluvial fans and led to the formation of inset stream terraces and nested alluvial fans along the foothills (Rosenthal and Willis 2017).

The general underlying geology of the Project Area consists of metavolcanic and ultramafic rocks from the Mesozoic (Wagner et al. 1981). The Orr Creek Siphon and Dry Creek Siphon segments, as well as the northernmost portion of the Rock Creek Siphon segment, are in an area of mélange terrain matrices from the late-Proterozoic to early-Jurassic periods (approximately 500 to 200 million years ago [mya]); the Rock Creek Siphon segment is in an area of Mesozoic volcanic and mafic-volcanic rocks from the Jurassic period (200 to 145 mya). According to the U.S. Department of Agriculture NRCS Web Soil Survey (NRCS 2023), 10 soil types make up the Project Area (see Table 4.4-1).

Although Orr Creek, Dry Creek, and Rock Creek bisect their respective Project Area segments, the underlying geology predates the time of human occupation. And while alluvial deposits tend to preserve archaeological material and create an increased likelihood of pre-contact archaeological sites located along perennial waterways, the alluvial soils in the western portion of the Project Area (Boomer-Rock outcrop complex) are the result of deposits that are too old to have buried evidence of human occupation. Therefore, soils and hydrology data indicate a low potential for buried pre-contact

archaeological sites within the Project Area. However, soil composition and proximity to waterways are not the only factors in determining potential for buried resources.

4.5.1.2 Vegetation and Wildlife

Prior to the arrival of European-Americans, the dominant plant communities within the Project Area would have included annual grassland, foothills riparian vegetation, manzanitas, various species of oak trees, and endemic cottonwood trees.

Prior to the arrival of European-Americans, fauna within Project Area would have included black bears, grizzly bears, mountain lions, bobcats, antelope, mule deer, coyotes, striped skunks, and raccoons, black-tailed jack rabbits, rabbits, and rodents, as well as various reptiles and amphibians, such as rattlesnakes, Pacific treefrogs, western toads, and lizards. Avifauna would have included various hawks, acorn woodpeckers, and California quail.

4.5.1.3 Regional and Local Pre-Contact History

For a discussion of regional and local pre-contact history and ethnographic history of the Project Area, refer to Cultural Resources Report Chapter 3.0 Cultural Context (Appendix D).

4.5.1.4 History of Auburn

For a discussion of the history of Auburn, Highway 49 and other local streets, local water conveyance and irrigation canals, refer to Cultural Resources Report Chapter 3.0 Cultural Context (Appendix D).

4.5.1.5 Nevada Irrigation District and Combie Ophir Canal

In 1887, the California Legislature passed the Wright Act, a bill that authorized county boards of supervisors to form irrigation districts; lawmakers later revised the Act in 1897 and 1913. The Wright Act allowed property owners in farming regions to organize districts and issue bonds to pay for irrigation systems. Irrigation systems included dams, canals, and other infrastructure that stored and delivered water. Property owners within the districts repaid bondholders through special tax assessments levied on their lands (Carter and Lauer 2021). Irrigation districts in Placer County included the Camp Far West Irrigation District, established in 1924, and the NID, which extended into Placer County in 1926.

Established in 1921, the NID initially covered 202,000 acres in Nevada County. The NID consisted of infrastructure and water rights inherited from preexisting water companies that built canals and flumes to serve miners in Nevada County. The NID had an important business partner in Pacific Gas and Electric Company (PG&E), which purchased hydroelectricity generated at NID dams. The NID also occasionally acquired PG&E canals and established new canals that drew water from PG&E sources. Revenue generated from the sale of hydropower, coupled with bonds, provided the NID with resources to build and improve new and existing dams and canals. In 1926, voters in Placer County elected to join the NID, adding 66,500 acres to the district's service area (Carter and Lauer 2021). In 1933, the NID purchased the extensive Gold Hill water system in Placer County from PG&E.

Built in c. 1880, the Combie-Ophir Canal delivered water from Lake Combie to farmers in North Auburn and Placer County. The canal segments were originally earthen but now include a combination of other materials, including concrete, rebar, rock, and tile (Bureau of Reclamation 2010). The canal's proximity to the old townsite of Ophir suggests a likely association with the early goldmining district of Ophir (Bureau of Reclamation 2010). Following the formation of the NID in 1921, the NID often modified existing canals and ditches for its infrastructure; the Combie Ophir canal appears to be one of these structures that was incorporated and modified for NID purposes (Bureau of Reclamation 2010). Proposed improvements in 1968 included adding new siphons, which drastically altered the alignment of the original canal (Auburn Journal 1968).

4.5.2 Methods

4.5.2.1 Records Search

ECORP requested a records search for the Project Area at the North Central Information Center (NCIC) of the California Historical Resources Information System at California State University, Sacramento on October 30, 2023. The purpose of the records search was to determine the extent of previous surveys within a 0.25-mile (400-meter) radius of the Proposed Project Area, and whether previously documented pre-contact or historic archaeological sites, architectural resources, or traditional cultural properties exist within this area. NCIC staff completed and returned the records search to ECORP on October 31, 2023.

In addition to the official records and maps for archaeological sites and surveys in Placer County, the following historic references were also reviewed: Built Environment Resource Directory (Office of Historic Preservation [OHP] 2020); Historic Property Data File for Placer County (OHP 2012); the National Register Information System (National Park Service [NPS] 2023); Office of Historic Preservation, California Historical Landmarks (CHL; OHP 2023); CHL (OHP 1996 and updates); California Points of Historical Interest (OHP 1992 and updates); Directory of Properties in the Historical Resources Inventory (1999); Caltrans Local Bridge Survey ([Caltrans] 2019); Caltrans State Bridge Survey (Caltrans 2018); and *Historic Spots in California* (Kyle 2002).

Maps reviewed include the:

- 1855 and 1874 BLM General Land Office Plat maps for Township 13 North, Range 8 East;
- 1891 USGS Sacramento, California topographic quadrangle map (1:125,000 scale);
- 1944 USGS Auburn, California topographic quadrangle map (1:62,500 scale); and
- 1953 USGS Auburn, California topographic quadrangle map (1:24,000 scale), including the 1973 photorevised version.
- ECORP reviewed aerial photographs taken in 1952, 1962, 1984, 1993, 1998, 2005, 2009, and every two years from 2010 to 2020 for any indications of property usage and built environment.
- ECORP conducted a search for a local historical registry and determined that no such registries exist for the City of Auburn or Placer County.

4.5.2.2 Sacred Lands File Coordination Methods

In addition to the records search, ECORP contacted the California Native American Heritage Commission (NAHC) on November 30, 2023 to request a search of the Sacred Lands File for the Project Area. This search determines whether the California Native American tribes within the Project Area have recorded Sacred Lands, because the Sacred Lands File is populated by members of the Native American community with knowledge about the locations of tribal resources. In requesting a search of the Sacred Lands File, ECORP solicited information from the Native American community regarding TCRs, but the responsibility to formally consult with the Native American community lies exclusively with the federal and local agencies under applicable state and federal laws. The lead agencies do not delegate government-to-government authority to any private entity to conduct tribal consultation. See Section 4.20 Tribal Cultural Resources below for results of AB52 Tribal Consultation conducted for the Project.

4.5.2.3 Other Interested Party Consultation Methods

ECORP emailed letters to the Placer County Historical Society and the Placer County Museum on November 30, 2023 to solicit comments or obtain historical information that the repository might have regarding events, people, or resources of historical significance within the Project Area or surrounding vicinity.

4.5.2.4 Field Methods

ECORP subjected the Project Area to an intensive pedestrian survey on November 2, 2023, and February 8, 2024 under the guidance of the *Secretary of the Interior's Standards for the Identification of Historic Properties* (NPS 1983). Due to the narrowness of the linear alignments, each discontiguous portion of the Project Area was surveyed using 15-meter transects. ECORP expended two person-days in the field for the pedestrian survey. At the time, ECORP examined the ground surface for indications of surface or subsurface cultural resources and inspected the general morphological characteristics of the ground surface for indications of subsurface deposits that may be manifested on the surface, such as circular depressions or ditches. Whenever possible, ECORP examined the locations of subsurface exposures caused by such factors as rodent activity, water or soil erosion, or vegetation disturbances for artifacts or for indications of buried deposits. ECORP archaeologists did not conduct subsurface investigations or artifact collections during the pedestrian survey.

Standard professional practice requires that all cultural resources encountered during the survey be recorded using Department of Parks and Recreation (DPR) 523-series forms approved by the California OHP. The resources are usually photographed, mapped using a handheld Global Positioning System receiver, and sketched as necessary to document their presence using appropriate DPR forms.

4.5.3 Cultural Resources (V) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☐	☒

No Impact.

The records search and 2023 field survey identified eight historic-period cultural resources within or immediately adjacent to at least one of the three Project Area segments: P-31-1171, the Combie Ophir Canal; CO-01, Witt Road; CO-02, Dry Creek Road; CO-03, Shale Ridge Road; CO-04, Locksley Lane; CO-05, Rock Creek Road; CO-06, Education Street; and CO-07, a 0.57-mile-long segment of SR-49. These resources were evaluated using National Register of Historic Places (NRHP) and CRHR eligibility criteria and determined not eligible. Therefore, no Historic Properties under Section 106 of the National Historic Preservation Act (NHPA) or Historical Resources under CEQA would be affected and the proposed Project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section §15064.5. There would be no impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated

Although Orr Creek, Dry Creek, and Rock Creek bisect their respective Project Area segments, the underlying geology predates the time of human occupation. And while alluvial deposits tend to preserve archaeological material and create an increased likelihood of pre-contact archaeological sites located along perennial waterways, the alluvial soils in the western portion of the Project Area (Boomer-Rock outcrop complex) are the result of deposits that are too old to have buried evidence of human occupation. Therefore, soils and hydrology data indicate a low potential for buried pre-contact archaeological sites within the Project Area. This likelihood is further supported by the following:

- Any pre-contact archaeological material which may have existed within the Orr Creek and Dry Creek Siphon segments of the Project Area would have been destroyed during the initial installation of the existing siphons that this Project proposes to replace.
- The areas of the proposed realignments of the Rock Creek Siphon segment are within a semi-urban setting within the North Auburn area and partially along the SR-49 corridor. Any buried pre-contact material would similarly have been uncovered during urban expansion and the construction and regular maintenance of SR-49.

While there may be a slight possibility of unrecorded historic-era resources buried within the Project Area at the Rock Creek Siphon segment due to it being in the general proximity of the Rock Creek School Site; it is unlikely because that area is within the SR-49 corridor and has been heavily and regularly surveyed since the late 1970s. Considering the entirety of the evidence examined, the likelihood of encountering any undiscovered and intact pre-contact cultural resources during Project construction is considered low. Regardless, there always remains the potential for ground-disturbing activities to expose previously unrecorded cultural resources which is considered a potentially significant impact. With implementation of Mitigation Measure CUL-1: Stop Work in the Event of Unanticipated Discovery of Potential Cultural Resources and/or Human Remains and Evaluate the Find this impact would be less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated

Based on the records search results and field surveys conducted for the Project, no human remains have been identified in the Project Area. However, Project implementation would include ground-disturbing construction activities that could result in the inadvertent disturbance and/or discovery of human remains. Thus, disturbance of human remains is a potentially significant impact. With implementation of Mitigation Measure CUL-1, this impact would be less than significant with mitigation incorporated.

4.5.4 Mitigation Measures

CUL-1: Stop Work in the Event of Unanticipated Discovery of Potential Cultural Resources and/or Human Remains and Evaluate the Find

If subsurface deposits believed to be cultural or human in origin are discovered during construction, all work must halt within a 100-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. The following notifications shall apply, depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource, work may resume immediately and no agency notifications are required.
- If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the archaeologist shall immediately notify the lead agencies. The agencies shall consult on a finding of

eligibility and implement appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined by CEQA or a historic property under Section 106 NHPA, if applicable. Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: 1) is not a Historical Resource under CEQA or a Historic Property under Section 106; or 2) that the treatment measures have been completed to their satisfaction.

- If the find includes human remains, or remains that are potentially human, they shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the Placer County Coroner (per § 7050.5 of the Health and Safety Code). The provisions of § 7050.5 of the California Health and Safety Code, § 5097.98 of the California PRC, and AB 2641 will be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the NAHC, which then will designate a Native American Most Likely Descendant (MLD) for the Project (§ 5097.98 of the PRC). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the PRC). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the PRC). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the treatment measures have been completed to their satisfaction.

4.6 Energy

This IS/MND analyzes energy consumption due to the potential direct and indirect environmental impacts associated with the Project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal) and emissions of pollutants during the construction phase. The impact analysis focuses on the two sources of energy that are relevant to the proposed Project: the electricity necessary to pump increased amounts of water and the equipment-fuel necessary for Project construction.

4.6.1 Environmental Setting

California relies on a regional power system comprised of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Natural gas provides California with a majority of its electricity followed by renewables, large hydroelectric and nuclear (California Energy Commission [CEC] 2021). Pacific Gas & Electric Company (PG&E) provides power to Placer County, using a diverse portfolio of energy sources, including natural gas, hydropower, geo-thermal, nuclear, wind, and solar energies.

PG&E service area spans over 70,000 square miles in the Northern California areas and provides about 16 million people with electric and natural gas service (PG&E 2023).

4.6.1.1 Energy Consumption

Electricity use is measured in kilowatt-hours (kWh). Natural gas is measured in therms. Vehicle fuel use is typically measured in gallons (e.g., of gasoline or diesel fuel), although energy use for electric vehicles is measured in kWh.

The electricity consumption associated with all non-residential land uses in Placer County from 2018 to 2022 is shown in Table 4.6-1. As indicated, the demand for electricity has decreased since 2018.

Table 4.6-1. Non-Residential Electricity Consumption in Placer County 2018 – 2022

Year	Electricity Consumption (kilowatt hours)
2022	1,458,116,082
2021	1,437,974,192
2020	1,393,799,847
2019	1,467,021,155
2018	1,498,225,466

Source: California Energy Commission (CEC) 2023a

Total automotive fuel consumption in Placer County from 2018 to 2022 is shown in Table 4.6-2. As shown, automotive fuel consumption has decreased since 2018.

Table 4.6-2. Automotive Fuel Consumption in Placer County 2018 – 2022

Year	Fuel Consumption (gallons)
2022	174,975,372
2021	173,933,310
2020	155,022,575
2019	179,130,091
2018	178,819,833

Source: California Air Resources Board (CARB) 2021

4.6.2 Regulatory Framework

4.6.2.1 Federal

Federal Clean Air Act

The Clean Air Act is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes the United States Environmental Protection Agency (USEPA) to establish NAAQS to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

4.6.2.2 State

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial Integrated Energy Policy Report (IEPR) that assesses major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (Public Resources Code Section 25301a). Each biennial IEPR takes into account various factors such as energy supply, demand, infrastructure, environmental considerations, and economic impacts. The report aims to address key energy challenges and provide recommendations to achieve a reliable, affordable, and sustainable energy system for California (CEC 2023b).

Some of the key areas typically covered in the report include:

1. Renewable Energy: The IEPR focuses on promoting renewable energy sources such as solar, wind, geothermal, and biomass. It assesses the state's progress in meeting its renewable energy goals, identifies barriers, and proposes strategies to increase renewable energy generation and integration into the grid.
2. Energy Efficiency: The report highlights the importance of energy efficiency measures to reduce energy consumption and greenhouse gas (GHG) emissions. It explores policies and initiatives to promote energy-efficient technologies and practices in buildings, transportation, and industries.
3. Grid Modernization: The IEPR addresses the modernization and optimization of the electrical grid infrastructure to accommodate a higher penetration of renewable energy, improve grid reliability, and support emerging technologies such as energy storage and electric vehicles.
4. Transportation: The report typically includes a section on transportation, focusing on reducing dependence on fossil fuels and promoting the adoption of electric vehicles (EVs) and alternative fuels. It may discuss infrastructure development, incentives, and policies to accelerate the transition to cleaner transportation options.

5. Climate Change Mitigation: Given California's commitment to combating climate change, the IEPR often emphasizes strategies to reduce GHG emissions and achieve the state's climate goals. This may include discussions on carbon pricing, cap-and-trade programs, and the integration of climate considerations into energy planning.

6. Energy Resilience: The report may address strategies to enhance the resilience of the energy system, considering factors such as extreme weather events, natural disasters, and cybersecurity risks. It could discuss measures to ensure a reliable and uninterrupted supply of energy during emergencies.

7. Economic Impacts and Equity: The IEPR often explores the economic implications of energy policies and initiatives, including job creation, investment opportunities, and the equitable distribution of benefits across different communities and socioeconomic groups.

The CEC prepares these assessments and associated policy recommendations every two years, with updates on alternate years, as part of the IEPR.

The 2023 IEPR focuses on next steps for transforming transportation energy use in California. The 2023 IEPR addresses the role of transportation in meeting state climate, air quality, and energy goals; the transportation fuel supply; the Alternative and Renewable Fuel and Vehicle Technology Program; current and potential funding mechanisms to advance transportation policy; transportation energy demand forecasts; the status of statewide plug-in electric vehicle infrastructure; challenges and opportunities for electric vehicle infrastructure (CEC 2023c).

4.6.2.3 Local

Placer County Sustainability Plan

The Placer County Sustainability Plan (PCSP) is predominantly intended to reduce GHG emissions and enhance community resiliency to long-term changes associated with climate-related hazards. The PCSP reduction measures address emissions from building energy, land use and transportation, water consumption, and waste generation sectors. In addition to reducing emissions, implementation of the PCSP will help achieve multiple community-wide benefits, such as lowering energy costs, reducing air and water pollution, supporting local economic development, and improving public health, safety, and quality of life (Placer County 2020).

4.6.3 Energy (VI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project does not involve an operational phase. The Project would replace three raw water siphons, which are to be resized to address approved future flow needs. It is estimated that the new siphons would increase the flow rate by a total of approximately 75.7 cubic feet per second (cfs). The additional amount of energy required to accommodate this increase in flow rate was estimated using the CEC's Refining Estimates of Water Related Energy Use in California report (CEC 2006). Using CEC's recommended revised water-energy proxies for Northern California for water supply and conveyance, the proposed Project is estimated to generate approximately 103,577 kWh. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use. For the purpose of this analysis, Project increases in electricity are compared with the countywide non-residential electricity consumption in 2022, the most recent full year of data.

Table 4.6-3. Proposed Project Electricity Consumption

Energy Type	Annual Energy Consumed	Percentage Increase Countywide
Electricity Consumption		
Project Construction	103,577 kWh	0.007

Source: California Energy Commission (CEC) 2006
Notes: The Project increase construction-related fuel consumption is compared with the countywide non-residential electricity consumption in 2022, the most recent full year of data. For energy calculations, see Appendix E.
kWh = kilowatt hour

As shown in Table 4.6-3, the Project's electricity consumption is estimated to be 103,577 kWh, which would increase the annual electricity consumption in Placer County by 0.007 percent. As such, the Project would have a nominal effect on electricity demand.

A quantifiable source of energy associated with the Project includes the equipment fuel necessary for construction. Addressing energy impacts requires an agency to make a determination as to what constitutes a significant impact. There are no established thresholds of significance, statewide or locally, for what constitutes a wasteful, inefficient, and unnecessary consumption of energy for a proposed land use. For the purpose of this analysis, Project increases in construction fuel consumption are compared with the countywide fuel consumption in 2022, the most recent full year of data. The amount of total construction-related fuel used was estimated in Table 4.6-4 using ratios provided in the Climate Registry's General Reporting Protocol for the Voluntary Reporting Program, Version 2.1 (Climate Registry 2019).

Table 4.6-4. Proposed Project Fuel Consumption		
Energy Type	**Annual Energy Consumed**	**Percentage Increase Countywide**
Vehicular/Equipment Fuel Consumption		
Project Construction	17,734 gallons	0.01

Source: Climate Registry 2019
Notes: The Project increase construction-related fuel consumption is compared with the countywide construction related fuel consumption in 2022, the most recent full year of data. For fuel consumption calculations, see Appendix E.

As shown in Table 4.6-4, the Project's gasoline fuel consumption during the construction period is estimated to be 17,734 gallons of fuel, which would increase the annual gasoline fuel use in Placer County by 0.01 percent during Project construction. As such, Project construction would have a nominal effect on local and regional energy supplies, especially over the long-term. Additionally, construction equipment fleet turnover and increasingly stringent state and federal regulations on engine efficiency combined with state regulations limiting engine idling times and require recycling of construction debris, would further reduce the amount of transportation fuel demand during Project construction. For these reasons, it is expected that construction fuel consumption associated with the Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. For these reasons, this impact would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

No Impact.

The IEPR provides policy recommendations to be implemented by energy providers in California. Electricity would be provided to the Project by PG&E. PG&E's Energy Efficiency 2024-2031 Strategic Business Plan builds on existing State programs and policies that support the IEPR goals of improving electricity, natural gas, and transportation fuel energy use in California. PG&E's Energy Efficiency Plan supports the State's goals of zero-carbon electricity and economy-wide carbon neutrality and moving towards a climate-resilient economy. PG&E's Energy Efficiency portfolio can address climate change by both delivering solutions that help to decarbonize customer's homes and buildings and by supporting the use of clean and renewable energy resources powering our electric system (PG&E 2022). Thus, because PG&E is consistent with the 2023 IEPR, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation of the goals presented in the 2023 IEPR.

The PCSP serves to provide guidance to achieve GHG reductions, demonstrate the County's conformance to California laws and regulations, implement the General Plan, identify effective GHG emission reduction measures for new development subject to environmental review, and to improve resiliency to climate-

related hazards (Placer County 2020). The Proposed Project would not conflict with the PCSP or any other local plan for renewable energy or energy efficiency. No impact would occur.

4.6.4 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.7 Geology and Soils

4.7.1 Environmental Setting

The Project Site is within Placer County and is characterized by gently rolling topography which forms the western foothills of the Sierra Nevada. The Project Site is located at approximately elevation 1,400 feet above sea level.

4.7.1.1 Regional Seismicity and Fault Zones

Fault activity in the Project vicinity is minimal: the Giant Gap Fault, with evidence of late Quaternary movement (between 12,000 and 700,000 years ago), is located approximately 20 miles northeast of the Project Area (California Geological Survey [CGS] 2023). Several other late Quaternary and older faults occur within approximately 10-60 miles of the Project Area, including the Wolf Creek Fault Zone, Spenceville Fault, Deadman Fault, Bear Mountains Fault Zone, Maidu Fault, and several pre-Quaternary (greater than 1.6 million years ago) fault traces associated with these faults zones (USGS 2023b). The Cleveland Hill Fault is the nearest principal fault with historic displacement, within the last 200 years, identified and mapped pursuant to the Alquist-Priolo Earthquake Zoning Act and is located approximately 37 miles northwest of the Project Area.

Western Placer County is characterized as having a low level of earthquake hazard and is distant from known, active faults (CGS 2023).

Liquefaction, a process in which the soil behaves like a liquid, can damage buildings, roads, and pipelines through uneven settlement of the soil and loss of structural support capabilities. In order for liquefaction to occur, there must be loose granular sediment that is saturated and there must be strong ground shaking. The low ground shaking potential of the site and well-drained cohesive soils over bedrock minimize the potential for liquefaction.

The risk of landslides in Placer County is generally low, and moderate at worst, due to the prevalence of igneous and metamorphic bedrock overlain by relatively shallow cohesive soils.

4.7.1.2 Soils

According to the Soil Survey Geographic Database for Placer County, California (NRCS 2023b), the following soil units, or types, have been mapped in the Project Areas:

Orr Creek

- 119 – Auburn-Sobrante-Rock outcrop complex, 2-30 percent slopes;
- 124 – Boomer- Rock outcrop complex, 5 to 30 percent slopes

Dry Creek

- 116 – Auburn-Argonaut-Rock outcrop complex, 2 to 15 percent slopes;
- 118 – Auburn-Sobrante silt loams, 15 to 30 percent slopes;
- 119 – Auburn-Sobrante-Rock outcrop complex, 2-30 percent slopes;
- 120- Auburn- Sobrante-Rock outcrop complex, 30-50 percent slope
- 148 – Henneke-Rock outcrop complex, 5 to 50 percent slope
- 197 – Xerorthents, placer areas.

Rock Creek

- 114 – Auburn silt loam, 2 to 15 percent slopes;
- 115 – Auburn-Argonaut complex, 2 to 15 percent slopes;
- 116 – Auburn-Argonaut-Rock outcrop complex, 2 to 15 percent slopes;
- 119 – Auburn-Sobrante-Rock outcrop complex, 2-30 percent slopes;
- 148 – Henneke-Rock outcrop complex, 5 to 50 percent slope
- 196 – Xerorthents, cut and fill areas
- 197 – Xerorthents, placer areas.

Auburn-Argonaut-Rock outcrop complex (116) and Auburn- Argonaut complex (115) both have unnamed minor components that are considered hydric.

4.7.2 Regulatory Setting

4.7.2.1 Placer County General Plan

Following are the relevant goals and policies identified by the Placer County General Plan (Placer County 2021c) for soils, geology, and seismicity.

Goal 8.A.1: To minimize the loss of life, injury, and property damage due to seismic and geological hazards.

Policy 8.A.1.1: The County shall require the preparation of a soils engineering and geologic seismic analysis prior to permitting development in areas prone to geological or seismic hazards (e.g., ground shaking, landslides, liquefaction,

critically expansive soils, avalanche), prepared by a California registered civil engineer and based upon adequate test borings as needed).

Policy 8.A.4.1: The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landsliding.

Policy 8.A.5.1: The County shall require that the location, design, and construction of any new buildings, facilities, or other development in areas subject to seismic activity minimize exposure to danger from earthquake-induced liquefaction or fault rupture or creep.

Goal 8.A.2: To ensure that infrastructure and buildings are structurally resilient to landslides and that communities are prepared for future slope instabilities. (Addresses California Government Code Section 65302 (g)(4)(B)).

Policy 8.A.2.4: The County shall ensure that areas of slope instability are adequately investigated and that any development in these areas incorporates appropriate design provisions to prevent landslides.

4.7.3 Geology and Soils (VII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐

Less Than Significant Impact.

i) There are no Alquist-Priolo mapped zones or faults within the proposed Project Area. The closest active fault is approximately 37 miles northwest of the proposed Project Area, which is the Cleveland Hill Fault. The next closest is over 50 miles away at the West Tahoe Fault (CGS 2023). The Project does not include construction of structures for human occupancy and would not subject people or structures to adverse effects due to rupture of a known fault. Therefore, impacts are considered less than significant.

ii) The proposed Project Area is susceptible to low ground shaking associated with a major earthquake on nearby active faults, in which slight to moderate damage to ordinary structures and negligible damage to well designed and constructed structures is possible. NID will consider any existing geotechnical survey information for the proposed Project Area in design and construction of the facilities to withstand potential seismic ground shaking. Therefore, impacts are considered less than significant.

iii) Soils underlying the facility are generally shallow (under six feet to bedrock), well-drained, sloped, and not likely susceptible to liquefaction. Furthermore, the site is not susceptible to strong ground shaking necessary for liquefaction to occur. Therefore, impacts are considered less than significant.

iv) The proposed Project Area is located in an area of Placer County where soils are generally shallow dense igneous and metamorphic bedrock, and the potential for landslides is low. Therefore, impacts are considered less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

The proposed Project is required to prepare and implement a SWPPP to manage erosion and the loss of topsoil during construction-related activities. In addition, the Project would implement Mitigation Measure HYD-1 (see *Hydrology and Water Quality Section 4.10.4 Mitigation Measures*) which would further protect against soil erosion. As a result, soil erosion impacts would be reduced to less than significant with mitigation.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project is located on relatively shallow and well-drained soils underlain by dense bedrock. These soils, and the bedrock, are inherently stable, generally not susceptible to landslide or lateral spreading, and are not likely susceptible to subsidence or liquefaction. Therefore, impacts are considered less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project involves the installation of three new water siphons at three different locations. Given that expansive soil material is encountered throughout California, they are generally addressed through standardized foundation engineering practices. The proposed Project will be constructed in compliance with applicable Uniform Building Code regulations and other County and State requirements. Therefore, the impact is considered less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

No Impact.

The Project involves the replacement of existing siphon pipes. No wastewater will be produced as a part of the Project. Moreover, onsite wastewater treatment and disposal is not a necessary component of the Project. Therefore, no impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

Based on a records search conducted for the Project by the Sierra College Natural History Museum, there are no known significant paleontological sites or deposits within the proposed Project Area. Furthermore, because the Orr and Dry Creek Siphons are proposed along the existing siphon alignments, soils along these alignments are previously disturbed reducing the likelihood of encountering in tack paleontological resources. However, portions of the Rock Creek replacement siphon are proposed within open space areas which increases the potential for uncovering unknown resources in comparison to the Orr and Dry Creek alignments. The discovery of unknow paleontological resources during construction is a potentially significant impact. With implementation of Mitigation Measure PALEO-1, this impact would be reduced to a less-than-significant level.

4.7.4 Mitigation Measures

As discussed above, to protect against soil erosion the Project would implement Mitigation Measure HYD-1 presented in Hydrology and Water Quality Section 4.10.4 Mitigation Measures. In addition, the Project would implement the following:

PALEO-1: Discovery of Unknown Resources

If any paleontological resources (i.e., fossils) are found during Project construction, construction shall be halted immediately in the subject area and the area shall be isolated using orange or yellow fencing until NID is notified and the area is cleared for future work. A qualified paleontologist shall be retained to evaluate the find and recommend appropriate treatment of the inadvertently discovered paleontological resources. If NID resumes work in a location where paleontological remains have been discovered and cleared, NID will have a paleontologist onsite to confirm that no additional paleontological resources are in the area.

4.8 Greenhouse Gas Emissions

The analysis of GHG emissions was prepared using methods and assumptions recommended in the rules and regulations of the PCAPCD. This section presents regional and local existing conditions in addition to pertinent GHG emissions-related standards and regulations. The purpose of this assessment is to estimate Project-generated GHG emissions and to determine the level of impact the Project would have on the environment. Emissions were modeled using CalEEMod, version 2022.1.1. Project construction generated GHG emissions were calculated using CalEEMod model defaults for Placer County.

4.8.1 Environmental Setting

GHG emissions are released as byproducts of fossil fuel combustion, waste disposal, energy use, land use changes, and other human activities. This release of gases, such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and chlorofluorocarbons, creates a blanket around the earth that allows light to pass through but traps heat at the surface, preventing its escape into space. While this is a naturally occurring process known as the greenhouse effect, human activities have accelerated the generation of GHGs beyond natural levels. The overabundance of GHGs in the atmosphere has led to an unexpected warming of the earth and has the potential to severely impact the earth's climate system. Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH_4 traps more than 25 times more heat per molecule than CO_2, and N_2O absorbs 298 times more heat per molecule than CO2. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e). Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

The significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines § 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations, and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. As previously described, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence" (14 CCR 15064.7(c)). In October of 2016, the PCAPCD adopted GHG emission thresholds to assist the district in attaining the GHG reduction goals established by Assembly Bill (AB) 32 and SB 32. The updated thresholds adopted bright-line numeric threshold emission level of 1,100 metric tons of CO_2e per year for operations of a land use project and 10,000 metric tons of CO_2e per year for construction. Any project that falls below that would be found to have a less than significant impact on GHG emissions, and, thus, would not conflict with any state or regional GHG emission reduction goals. Projects that would result in emissions above the threshold would not necessarily result in substantial impacts if certain efficiency matrices are met. The efficiency matrix is calculated on a per capita or square-foot basis (PCAPCD 2016).

In January 2020, Placer County adopted the Placer County Sustainability Plan, which outlines various programs and policies set out by the County to reduce GHGs and enhance community resiliency. The County has outlined emission targets for 2020, 2030, and 2050, all supported by strategies to reduce GHGs within sectors such as energy, water and wastewater, transportation, solid waste, agriculture and forestry, and off-road equipment. The Placer County Sustainability Plan recommends that PCAPCD CEQA GHG thresholds are used for all new development in the County (Placer County 2020).

4.8.2 Greenhouse Gas Emissions (VIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Less Than Significant Impact.

4.8.2.1 Construction-Generated Greenhouse Gas Emissions

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project Area, and off-road construction equipment (e.g., backhoe, excavators). Table 4.8-1 illustrates the specific construction generated GHG emissions that would result from construction of the Project. Once construction is complete, the generation of these GHG emissions would cease.

Table 4.8-1. Construction Related Greenhouse Gas Emissions

Description	CO_2e Emissions (Metric Tons/Year)
Construction Year One	180
PCAPCD Significance Threshold	*10,000*
Exceed Significance Threshold?	**No**

Sources: California Emissions Estimator Model (CalEEMod) version 2022.1.1. Refer to Appendix B for Model Data Outputs
Note: CO_2e = Carbon Dioxide Equivalents; PCAPCD = Placer County Air Pollution Control District

As shown in Table 4.8-1, Project construction would result in the generation of a total of approximately 180 metric tons of CO_2e over the course of construction, which is below the PCAPCD significance threshold. Once construction is complete, the generation of these GHG emissions would cease.

Furthermore, GHG emissions generated by the construction sector have been declining in recent years. For instance, construction equipment engine efficiency has continued to improve year after year. The first federal standards (Tier 1) for new off-road diesel engines were adopted in 1994 for engines over 50 horsepower (hp) and were phased in from 1996 to 2000. In 1996, a Statement of Principles pertaining to off-road diesel engines was signed between the USEPA, CARB, and engine makers (including Caterpillar, Cummins, Deere, Detroit Diesel, Deutz, Isuzu, Komatsu, Kubota, Mitsubishi, Navistar, New Holland, Wis-Con, and Yanmar). On August 27, 1998, the USEPA signed the final rule reflecting the provisions of the Statement of Principles. The 1998 regulation introduced Tier 1 standards for equipment under 50 hp and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. As a result, all off-road, diesel-fueled construction equipment manufactured in 2006 or later has been manufactured to Tier 3 standards. Tier 3 engine standards reduce precursor and subset GHG

emissions such as nitrogen oxide by as much as 60 percent. On May 11, 2004, the USEPA signed the final rule introducing Tier 4 emission standards, which were phased in over the period of 2008-2015. The Tier 4 standards require that emissions of nitrogen oxide be further reduced by about 90 percent. All off-road, diesel-fueled construction equipment manufactured in 2015 or later will be manufactured to Tier 4 standards.

4.8.2.2 Operational Greenhouse Gas Emissions

The Proposed Project involves the replacement of three District-owned and operated raw water siphons and does not include an operational phase. The only Project-related GHG emissions would indirectly result from the increased consumption of electricity. As previously described, the Project's electricity consumption is estimated to be 103,577 kWh. According to the CalEEMod emissions model, this increase in electricity consumption would generate 12 metric tons of CO_2e annually, which is below the PCAPCD significance threshold. Therefore, there will be no operational GHG emissions. Once Project construction is complete, the generation of GHG emissions would cease. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

No Impact.

Placer County's PCSP has a set of programs and policies to reduce GHGs and enhance community resiliency (Placer County 2020). The Proposed Project would not conflict with any of the plans and policies set out by the PCSP or impede progress towards the emission targets. The PCSP recommends that PCAPCD CEQA GHG thresholds are used for all new development in the County, and as shown in Table 4.8-1, the Proposed Project will be under the construction thresholds set out by the PCAPCD. The significance thresholds established by the PCAPCD are prepared consistent with statewide, as well as local, GHG-reduction efforts. The Proposed Project does not include an operational phase so there will be no operational GHG emissions. Therefore, the Project would not conflict with any adopted plans, policies, or regulations adopted for the purpose of reducing GHG emissions.

4.8.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.9 Hazards and Hazardous Materials

4.9.1 Environmental Setting

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined by the California Health and Safety Code, Section 25501 as follows:

> "Hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

A hazardous material is defined in 22 CCR Section 662601.10 as follows:

> A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Transporters of hazardous waste in California are subject to several federal and state regulations. They must register with the California Department of Health Services (DHS) and ensure that vehicle and waste container operators have been trained in the proper handling of hazardous waste. Vehicles used for the transportation of hazardous waste must pass an annual inspection by the California Highway Patrol (CHP). Transporters must allow the CHP or DHS to inspect its vehicles and must make certain required inspection records available to both agencies. The transport of hazardous materials that are not wastes is regulated by the U.S. Department of Transportation through national safety standards.

Other risks resulting from hazardous materials include the use of these materials in local industry, businesses, and agricultural production. The owner or operator of any business or entity that handles a hazardous material above threshold quantities is required by state and federal laws to submit a business plan to the local Certified Unified Program Agency (CUPA). Placer County Environmental Health is the designated CUPA for all areas of the Placer County except the City of Roseville. The CUPA program is designed to consolidate, coordinate, and uniformly and consistently administer permits and conduct inspection and enforcement activities throughout Placer County. This approach strives to reduce overlapping and sometimes conflicting requirements of different governmental agencies independently managing these programs. The County will refer large cases of hazardous materials contamination or violations to the Central Valley Regional Water Quality Control Board (RWQCB) (Region 5) and the California Department of Toxic Substances Control (DTSC). It is not uncommon for other agencies, such as federal and state Occupational Safety and Health Administrations, to become involved when issues of hazardous materials arise.

Under Government Code Section 65962.5, both the DTSC and the State Water Resources Control Board (SWRCB) are required to maintain lists of sites known to have hazardous substances present in the environment. Both agencies maintain up-to-date lists on their websites. The Project Site is not listed by the DTSC as a hazardous substances site on the list of hazardous waste sites compiled pursuant to Government Code § 65962.5 (Cortese List).

4.9.1.1 Federal Regulations

The principal federal regulatory agency responsible for the safe use and handling of hazardous materials is the USEPA. Two key federal regulations pertaining to hazardous wastes are described below. Other applicable federal regulations are contained primarily in Titles 29, 40, and 49 of the Code of Federal Regulations.

4.9.1.2 State Regulations

California regulations are equal to or more stringent than federal regulations. The USEPA has granted the State of California primary oversight responsibility to administer and enforce hazardous waste management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human health and the environment. Several key laws pertaining to hazardous wastes are discussed below.

All hazardous materials are currently regulated and controlled by CalEPA in a manner that minimizes risks of spills or accidents. Any hazardous materials used in the construction, start-up, or operations of the proposed Project, such as fuel for construction equipment, will be handled according to current best practices. The potential for construction and operation related impacts from hazardous materials are discussed below.

Naturally Occurring Asbestos

Asbestiform minerals belonging to the serpentine or amphibole mineral groups are found in many areas throughout California, are commonly exposed near faults, and are abundant in the Sierra foothills. Activity in areas with asbestos-containing rock or soil may create dust emissions containing asbestos fibers, especially when bedrock is exposed to the air. All types of asbestiform minerals are considered hazardous with no safe exposure level established for non-occupational exposures. Though exposure to low levels of asbestos for short periods of time is thought to pose minimal risk, asbestos fibers can penetrate body tissues and remain in the lung or abdominal areas for a long time (Placer County Air Pollution Control District 2014).

Naturally Occurring Asbestos (NOA) is known to be present in Placer County and Figure 4.9-1. Naturally Occurring Asbestos Hazard identifies those areas most likely to contain NOA hazards. According to the PCAPCD web site, Placer County NOA deposits are most often found in ultramafic rock formations, and often NOA is found in serpentine rock. Geologic maps prepared by the California Geologic Survey (formerly the California Division of Mines and Geology) show areas of higher probability for asbestos-containing rock within the broad zone of faults that follows the low foothills and lay in a south-east to north-west band. The Placer County communities of Auburn, Colfax, Meadow Vista, and Foresthill are

among those that are within this fault band. The proposed Rock Creek siphon and Dry Creek siphon are located within an "Area Most Likely to Contain NOA" per the Naturally Occurring Asbestos Hazard map (PCAPCD 2008). The proposed Orr Creek siphon is located within an "Area Moderately Likely to Contain NOA."

4.9.2 Hazards and Hazardous Materials (IX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐

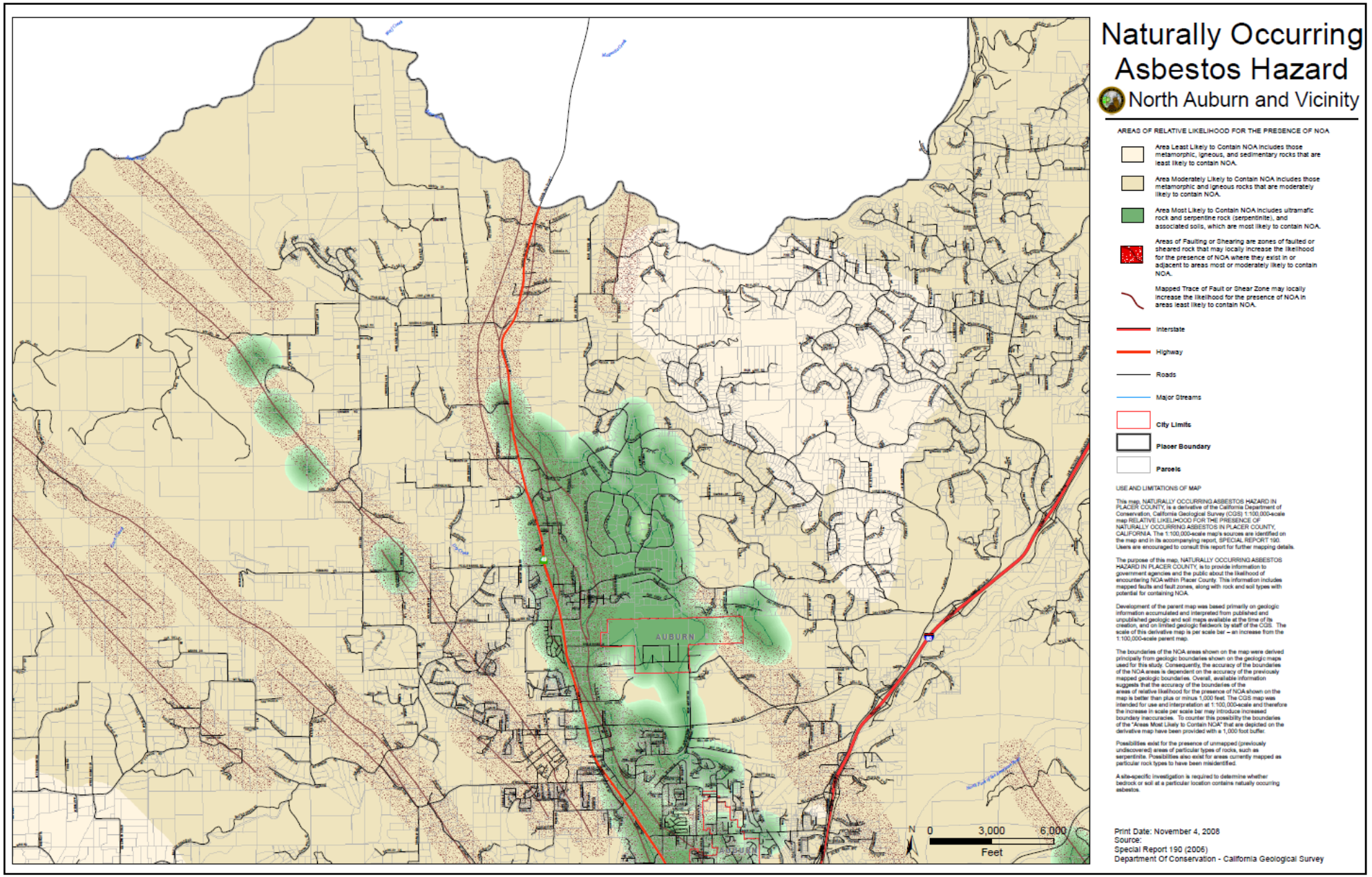
Less Than Significant With Mitigation Incorporated

Temporary construction activities associated with the proposed Project would involve the transport and use of limited quantities of miscellaneous hazardous substances including gasoline, diesel fuel, hydraulic fluid, solvents, and oils. These chemicals would be brought to the proposed Project Site, as well as transported along area roadways. Federal and state laws regulate the handling, storage, and transport of these and other hazardous materials, as well as the mechanisms to respond and clean up any spills along local and regional roadways. Implementation of Mitigation Measure HAZ-1 would ensure that chemicals handled onsite will be handled in accordance with applicable federal, state, and local regulations for hazardous substances. Any impacts to the public or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated

As shown in Figure 4.9-1, the proposed Rock Creek and Dry Creek Project Site is located within an area most likely to contain NOA. The Orr Creek proposed Project Site is located within an area moderately likely to contain NOA. "Most likely" means the Project Area has naturally occurring asbestos, serpentine, or ultramafic rock. NOA is successfully kept in the ground by keeping fill on top of ultramafic bedrock. During construction of the proposed Project, there could be a potential impact from NOA. The proposed Project would prevent potential NOA from becoming airborne thru implementation of Mitigation Measure HAZ-2, as well as adherence to Mitigation Measure HAZ-1. The operation of the siphons would not require routine use of hazardous materials.



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ENVIRONMENTAL CONSULTANTS

Figure 4.9-1. Naturally Occurring Asbestos Hazard - North Auburn and Vicinity

2023-124.01 NID-Combie Ophir 2 and 3

Therefore, the proposed Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☒	☐	☐

Less Than Significant Impact With Mitigation Incorporated

The Rock Creek siphon alignment is adjacent to the Rock Creek Elementary School and is less than 0.25 miles away. As discussed above, temporary construction activities associated with the proposed Project would involve the transport and use of hazardous materials. Additionally, the proposed Project location for Rock Creek was identified as being located within an area most likely to contain NOA. The proposed Project would be required to adhere to Mitigation Measures HAZ 1 and 2, which require that the project maintain the proper handling of hazardous materials, manage dust control, and implement a traffic control plan. Once constructed, the proposed Project operation would not require routine use of hazardous materials and would be entirely underground. Therefore, any hazardous emissions or handling of hazardous materials within one-quarter mile from a school would be less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

No Impact.

A review of the DTSC EnviroStor hazardous materials sites database did not identify any of the three proposed Project Sites as a known hazardous materials site. The nearest known site is approximately 0.3 mile east of the Rock Creek Project Site on Shale Ridge Road. Therefore, no impact would occur.

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project Area?	☐	☐	☒	☐

Less Than Significant Impact

Portions of the proposed Project are within the Auburn Municipal Airport Land Use Compatibility Plan (Placer County 2021d). The Rock Creek siphon would be in both the B1 zone and C1 zone. The Dry Creek siphon would be in both the C1 and C2 zone. The Orr Creek siphon project location is outside of any Airport Land Use Compatibility Plan.

The B1 zone encompasses portions of the runway approach/departure areas adjacent to and beyond the ends of the runway protection zone (A1 zone). Noise levels and risks are both high in this zone. The C1 zone covers the extended approach/departure corridor and includes land beneath the primary traffic pattern. This zone is impacted by moderate degrees of both noise and risk. The C2 zone encompasses areas routinely overflown by aircraft approaching and departing the airport, but less frequently or at higher altitudes than areas within the C1 zone. Noise from individual aircraft overflights may adversely impact certain land uses. Safety is only a concern when uses involve high concentrations of people and particularly risk-sensitive uses such as schools and hospitals.

The proposed Project involves installation of three replacement siphons at Dry Creek, Orr Creek and Rock Creek and abandoning the existing raw water siphons in place. All of the proposed Project work would be completely underground. While an airport land use plan has been adopted in the proposed Project Area, implementation of the Project would not result in a safety hazard for people residing or working within the proposed Project Area. Impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

Less Than Significant Impact.

Orr and Dry Creek Siphon construction activities would not significantly affect local streets or cause traffic congestion that could impact emergency response. However, the proposed Rock Creek Siphon alignment includes trenching and pipe placement both within and across Highway 49 and Education Street. These activities would require controlled traffic conditions and temporary lane closures which could affect

emergency response or evacuation. However, as discussed in Project Description Section 2.2.2.4 Construction Best Management Practices, NID would implement BMP-7: Prepare and Implement a Construction Traffic Management Plan. BMP-7 requires the traffic management plan specifically address the proposed Rock Creek Siphon crossing of Highway 49 and would ensure adequate provisions for protection of the traveling public and emergency service access. Therefore, potential impacts to emergency response and/or evacuation would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

Less Than Significant Impact.

Project Area terrain varies from relatively flat areas, to gently rolling hills, and relatively steep hillsides. The Project Site supports primarily annual grassland, oak woodland and riparian communities. According to the California Department of Forestry and Fire Protection, Placer County Fire Hazards Zone Map (California Department of Forestry and Fire Protection (CAL FIRE 2023a), the Orr Creek siphon and Dry Creek siphon are both located in a Sensitive Receptor Area (SRA) classified as Moderate. The Rock Creek siphon is not within an SRA classified zone.

The risk of fire at the Project Site is primarily a concern during the typically hot, dry summer season when heavy duty construction equipment and/or other construction related activities could generate a spark that could ignite dry vegetation and cause a wild land fire. The closest station to the proposed Project Site is Atwood Fire Station (Station 180) located at 11645 Atwood Road in Auburn. Station 180 is 3.41 miles away from Orr Creek, 1.7 miles from Dry Creek, and 0.6 mile away from Rock Creek. The next closest station is the Bowman Fire Station (Station 10), located at 13760 Lincoln Way in Auburn. Fire Station 10 is approximately 3.7 miles away from Orr Creek, 2.4 miles away from Dry Creek, and 2.5 miles away from Rock Creek.

The proposed Project does not exacerbate any existing conditions by the addition of structures, machinery, people, or recreational opportunities that would encourage the use of flammable materials or create situations that could lead to increased fire risk. The proposed Project would not require installation or maintenance of associated infrastructure as the pipeline would be entirely underground, and the operation of the proposed Project would not pose a fire risk to people or structures. Furthermore, as discussed in Project Description Section 2.2.2.4 Construction Best Management Practices and Wildfire Section 4.20.4, with implementation of BMP-6, NID would prepare and implement a Fire Suppression and Control Plan. This Plan would include requirements for onsite extinguishers; roles and responsibilities of NID and the contractor; specification for fire suppression equipment and other critical fire prevention and suppression items. Therefore, the proposed Project would not expose people or structures to wildland fire risks and impacts would be less than significant.

4.9.3 Mitigation Measures

HAZ-1: Proper Handling of Hazardous Materials

Construction documents shall identify materials that are considered hazardous. The Project contractor shall be required to develop a Health and Safety Plan that addresses release prevention measures; employee training, notification, and evacuation procedures; and emergency response protocols and cleanup procedures. The contractor will comply with the California Occupational Safety and Health Administration (Cal-OSHA) standards for the storage and handling of fuels, flammable materials, and common construction-related hazardous materials and for fire prevention. Cal-OSHA requirements can be found in California Labor Code, Division 5, Chapter 2.5.

HAZ-2: Naturally Occurring Asbestos (NOA) Dust Control

Should construction activities expose ultramafic rock, water support, in the form of a water truck or mobile storage tank, shall be used in regular intervals to keep the open earth area wet and dust free. Proper signage noting the possibility of NOA and required Personal Protective Equipment (PPE) shall be posted in the area. PPE including coveralls and respirators shall be worn by all workers in the area. These procedures shall be followed as long as ultramafic rock is exposed and can be suspended once it has been reburied with soil.

4.10 Hydrology and Water Quality

4.10.1 Environmental Setting

4.10.1.1 Project Area Hydrology

The proposed Project is located in the Auburn/Bowman area which covers approximately 41 square miles and is contained in portions of six different drainage basins: Bear River, Orr Creek, (including Rock Creek), Auburn Ravine (including North Ravine), Morman Ravine, Dutch Ravine and the American River (north fork). The Orr Creek watershed drains from east to west. The Dry Creek watershed is located south of the Orr Creek Watershed and similarly drains east to west. Rock Creek, a major tributary to Dry Creek, drains approximately 4.3 square miles in the southern portion of the watershed.

4.10.2 Regulatory Setting

4.10.2.1 Clean Water Act

The Clean Water Act (CWA) (33 U.S. Code § 1251-1376), as amended by the Water Quality Act of 1987, is the major Federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Sections of the Act relevant to this Project are as follows:

- Sections 303 and 304 provide for water quality standards, criteria, and guidelines.

- Section 401 (Water Quality Certification) requires an applicant for any Federal permit that proposes an activity, which may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the Act.
- Section 402 establishes the NPDES, a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the SWRCB and is discussed in detail below.
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the United States Army Corps of Engineers (USACE) and the USEPA.

4.10.2.2 Federal Anti-Degradation Policy

The Federal Anti-Degradation Policy is part of the CWA (Section 303(d)) and is designed to protect water quality and water resources. The policy directs states to adopt a statewide policy that includes the following primary provisions: (1) existing in-stream uses and the water quality necessary to protect those uses shall be maintained and protected; (2) where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and (3) where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

4.10.2.3 Porter Cologne Water Quality Control Act

The State of California established the SWRCB, which oversees the nine RWQCBs, through the Porter-Cologne Water Quality Control Act (Porter-Cologne). Through the enforcement of the Porter Cologne Act, the SWRCB determines the beneficial uses of the waters (surface and groundwater) of the State, establishes narrative and/or numerical water quality standards, and initiates policies relating to water quality. The SWRCB and, more specifically, the RWQCB, is authorized to prescribe Waste Discharge Requirements (WDRs) for the discharge of waste, which may impact the waters of the State. Furthermore, the development of water quality control plans, or Basin Plans, are required by Porter-Cologne to protect water quality.

4.10.2.4 NPDES Program – Construction Activity

The NPDES program regulates municipal and industrial storm water discharges under the requirements of the CWA. California is authorized to implement a statewide storm water discharge permitting program, with the SWRCB as the permitting agency. This permit regulates discharges from construction sites and Linear Underground Projects that disturb 1 acre or more of total land area. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance must comply with the provisions of this NPDES Construction General permit. The permitting process requires the development and implementation of an effective Storm Water Pollution Prevention

Plan (SWPPP). The project applicant must submit a Notice of Intent to the SWRCB to be covered by a NPDES permit and prepare the SWPPP prior to the beginning of construction. The SWPPP must include best management practices (BMPs) to reduce pollutants to the maximum extent practicable. Implementation of the SWPPP starts with the commencement of construction and continues until the Project Area is stabilized. Upon completion of the project, the applicant must submit a Notice of Termination to the SWRCB to indicate that construction is completed.

4.10.3 Hydrology and Water Quality (X) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

Project construction would involve installation of replacement siphons adjacent to existing siphons within existing easements using open trench construction methods. The exception to that is the Rock Creek replacement siphon would require new easements, as there are existing structures over the existing siphon alignment.

Where the proposed siphon alignments would cross a flowing surface water or creek, it would be necessary to temporarily de-water a segment of all three creeks that divert flows through the proposed Project Area. A containment dam would be established consistent with applicable regulatory permits and would be constructed within the channel banks upstream and downstream of the crossing and would include temporary piping along the axis of the stream. Surface flows would be diverted through the temporary piping during culvert construction within the streambed. The stream diversion devices would be removed immediately following competition of work within the streambed. Stream crossing construction would be scheduled for the dry season as required by state and federal permits, typically mid-June through mid-October.

Project construction would result in soil disturbance that would temporarily increase the potential for erosion and sedimentation. Additionally, use of heavy construction equipment entails the use of hazardous materials such as gasoline and engine oil, and if spilled could contaminate runoff and surface waters. Discharge of sediment or hazardous materials to surface waters during construction would result in a potentially significant impact to water quality and potentially a violation of water quality standards.

However, as stated in the Project Description section 2.3, *Regulatory Requirements*, NID would be required to obtain and implement a SWPPP during construction. SWPPP implementation in combination with Mitigation Measures HYD-1 and HAZ-1 would limit impacts to the surface waters through placement of silt fencing, coir logs, coir rolls, straw bale dikes, or other equivalent siltation barriers so that silt and/or other deleterious materials are not allowed to enter surface waters. These measures would ensure potential water quality and ground water impacts are mitigated to less-than-significant levels.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒

No Impact.

The proposed Project is limited to replacement of existing raw water distribution system siphons at three different locations. The existing siphons will only be used in the event that the new siphons must be taken offline for maintenance or during an emergency. The proposed Project will have no impact on groundwater supplies, recharge or groundwater management.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:				
i) result in substantial erosion or siltation onsite or offsite;	☐	☒	☐	☐
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	☐	☐	☒	☐
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
iv) impede or redirect flood flows?	☐	☐	☒	☐

Less Than Significant With Mitigation Incorporated/Less Than Significant Impact

Project implementation would not substantially alter existing drainage patterns because all improvements are proposed underground with the exception of minor above ground improvements at "tie in" locations. Construction earth work could temporarily alter micro drainage patterns, however consistent with BMP-3 and Mitigation Measure HYD-1 (discussed under response a) above), precautions would be taken during temporary stream diversions and all temporary disturbed areas will be restored following construction. In addition, the Project does not introduce any significant amount of impervious surface that could lead to

increased runoff and proposed temporary stream diversions would implement water quality measures consistent with regulatory requirements and permits. Thus, the Project would not increase the rate or amount of surface runoff, contribute to the exceedance of any existing or planned drainage system, or impede or redirect flood flows. Related impacts would be less than significant with mitigation incorporated.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	☐	☐	☐	☒

No Impact.

The proposed Project is not located in an area at risk for tsunami or seiche zones. Because the siphons transmit only raw water, should the project become inundated, there would be no risk of release of pollutants. There would be no impact and no mitigation required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☒	☐	☐

Less Than Significant Impact With Mitigation Incorporated.

The proposed Project could provide additional sources of polluted runoff during construction in the event of an unanticipated spill. Implementation of Mitigation Measures HAZ-1 and HYD-1 would minimize the potential for polluted or hazardous material runoff due to the proposed Project. Therefore, the Project's impact would be less than significant with mitigation incorporated.

4.10.4 Mitigation Measures

As discussed above, to protect water quality, the Project would implement Mitigation Measure HAZ-1 which is presented in Hazardous and Hazardous Materials Section 4.9.3 Mitigation Measures. In addition, the Project would implement the following:

HYD-1: Avoid and Minimize Disturbance of Surface Water/Creek Project Areas and Associated Aquatic Habitat and Restore all Temporary Disturbed Areas.

To the extent possible, NID and the contractor shall minimize impacts to surface waters and associated aquatic habitat by implementing the following:

- During construction NID and its contractor shall ensure the following:

a. All heavy equipment shall be properly maintained by the contractor to prevent leaks of materials that if introduced into water could be deleterious to aquatic life. All heavy equipment shall be checked for leaks prior to operation within fifty feet of any flowing surface water.

b. Vehicles that aren't required to be onsite shall be parked or stored within designated staging areas.

c. Sediment fences shall be installed and maintained in appropriate locations to reduce the introduction of sediment into surface waters.

d. Any overburden material to be temporarily stored onsite shall be stabilized to prevent sediment transport.

e. Construction debris/waste shall be picked up daily and properly stored onsite or disposed of offsite.

4.11 Land Use and Planning

4.11.1 Environmental Setting

Placer County covers approximately 1,500 square miles of diverse geography between Sacramento and the Nevada border. According to the Placer County General Plan, the proposed Project Sites are located in the Auburn/Bowman Community Plan area. As shown on Figure 1-1, the proposed Project Area is north of the City of Auburn in Placer County. The Project Area is mostly developed with rural residential and traditional single-family subdivisions, with scattered supporting commercial, light industrial, and recreational uses. According to the Placer County GIS website (Placer County 2023a and 2023b), the Orr Creek project location has a General Plan designation of Rural Residential 2.3–4.6 Acres Minimum and is zoned Residential Single Family. The Dry Creek project location has a General Plan designation of Rural Residential 2.3-4.6 Acres Minimum and is zoned Residential Agricultural, Residential Single Family, and Farm. The Rock Creek project location has a General Plan and zoning designation of Office and Professional, Industrial and Commercial.

4.11.2 Land Use and Planning (XI) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project involves installation of new raw water siphons and abandonment of the existing siphons. With the exception of the Rock Creek siphon which requires some new easements, the replacement siphons would be located within NID's existing 40-foot right-of-way easement that extends 20 feet on either side of the existing siphon centerlines. The proposed replacement Rock Creek siphon

would be installed to avoid impacting existing structures and would be constructed along existing public roads, driveways, and open space. Implementation of the proposed Project would not physically divide an established community. A less than significant impact would occur and no mitigation is required.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project involves installation of new raw water siphons and abandonment of the existing siphons. With the exception of the Rock Creek siphon which requires some new easements, the replacement siphons would be located within NID's existing 40-foot right-of-way easement that extends 20 feet on either side of the existing siphon centerlines. The proposed replacement Rock Creek siphon would be installed to avoid impacting the existing structures and would be constructed along existing public roads, driveways, and open space. The proposed Project would not conflict with any land use plan, policy, or regulation. A less than significant impact would occur, and no mitigation is required.

4.11.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.12 Mineral Resources

4.12.1 Environmental Setting

Minerals are defined as any naturally occurring chemical elements or compounds formed by inorganic processes and organic substances. Minable minerals are defined as a deposit of ore or minerals having a value materially in excess of the cost of developing, mining, and processing the mineral and reclaiming the Project Area. The conservation, extraction, and processing of mineral resources is essential to meeting the needs of society.

The Surface Mining and Reclamation Act of 1975 (SMARA) states that cities and counties shall adopt ordinances "...that establish procedures for the review and approval of reclamation plans and financial assurances and the issuance of a permit to conduct surface mining operations..." (PRC Section 2774). The intent of this legislation is to ensure the prevention or mitigation of the adverse environmental impacts of mining, the reclamation of mined lands, and the production and conservation of mineral resources are consistent with recreation, watershed, wildlife, and public safety objectives (PRC Section 2712).

SMARA requires the State Geologist to classify land into Mineral Resource Zones (MRZs) according to the known or inferred mineral potential of that land. The process is based solely on geology, without regard to existing land use or land ownership. The primary goal of mineral land classification is to ensure that the

mineral potential of land is recognized by local government decision makers and considered before land use decisions, which could preclude mining, are made. Areas subject to California mineral land classification studies are divided into the following Mineral Resource Zone (MRZ) categories that reflect varying degrees of mineral potential:

- MRZ-1: Areas of no mineral resource significance
- MRZ-2: Areas of identified mineral resource significance
- MRZ-3: Areas of undetermined mineral resource significance
- MRZ-4: Areas of unknown mineral resource significance

There are numerous known mineral resources throughout Placer County including gold, copper, silver, lead, and iron, among others.

4.12.2 Mineral Resources (XII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐

Less Than Significant Impact

The proposed Project Site is classified as MRZ-1 by the Mineral Land Classification Map of Placer County (Lloyd 1995). As discussed above, MRZ-1 zones are "Areas of No Mineral Resource Significance," wherein geologic information indicates no significant mineral deposits are present. Therefore, implementation of the proposed Project would not result in the loss of availability of a known mineral resource. A less than significant impact would occur.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project alignment is not located within a current locally important mineral resource recovery site. As described in item a), the proposed Project alignment is classified as MRZ-1; in addition, it has not been delineated within the County's General Plan or other land use plans as a locally important mineral resource recovery site. As such, a less than significant impact would occur.

4.12.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.13 Noise

This section documents the results of a comparison of predicted Proposed Project noise levels to noise standards promulgated by the Placer County General Plan Noise Element and Code of Ordinances. The purpose of this section is to estimate Project-generated noise levels and determine the level of impact the Proposed Project would have on the environment. This section describes the existing environmental and regulatory conditions specific to noise and addresses the potential impact posed by the Proposed Project.

4.13.1 Environmental Setting

4.13.1.1 Noise Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. The selection of a proper noise descriptor for a specific source is dependent on the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise include the average hourly noise level (in L_{eq}) and the average daily noise levels/community noise equivalent level (in L_{dn}/CNEL). The L_{eq} is a measure of ambient noise, while the L_{dn} and CNEL are measures of community noise. Each is applicable to this analysis and defined as follows:

Equivalent Noise Level (L_{eq}) is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.

Day-Night Average (L_{dn}) is a 24-hour average L_{eq} with a 10-dBA "weighting" added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the nighttime. The logarithmic effect of these additions is that a 60 dBA 24-hour L_{eq} would result in a measurement of 66.4 dBA L_{dn}.

Community Noise Equivalent Level (CNEL) is a 24-hour average L_{eq} with a 5-dBA weighting during the hours of 7:00 pm to 10:00 pm and a 10-dBA weighting added to noise during the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.

Noise can be generated by several sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations.

Sound spreads (propagates) uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Federal Highway Administration [FHWA] 2011). Soft surfaces, such as soft dirt or grass, can absorb sound,

so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed (FHWA 2011).

The manner in which older structures in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows (Caltrans 2002). The exterior-to-interior reduction of newer structures is generally 30 dBA or more (Harris Miller Miller & Hanson Inc. 2006).

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60- to 70-dBA range, and high, above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA. Noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1.0 dBA cannot be perceived by humans.
- Outside of the laboratory, a 3.0-dBA change is considered a just-perceivable difference.
- A change in level of at least 5.0 dBA is required before any noticeable change in community response would be expected. An increase of 5.0 dBA is typically considered substantial.
- A 10.0-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Sensitive Noise Receptors

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as

parks, historic sites, cemeteries, and recreation areas are considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The nearest sensitive receptors to the Project Area are single-family residences located directly adjacent to the proposed Dry Creek Siphon.

4.13.1.2 Vibration Sources and Characteristics

Ground vibration can be measured several ways to quantify the amplitude of vibration produced, including through peak particle velocity (PPV) or root mean square velocity. These velocity measurements measure maximum particle at one point or the average of the squared amplitude of the signal, respectively.

Vibration impacts on people can be described as the level of annoyance and can vary depending on an individual's sensitivity. Generally, low-level vibrations may cause window rattling but do not pose any threats to the integrity of buildings or structures.

4.13.1.3 Existing Ambient Noise Environment

The Project Area, which is in unincorporated Placer County near Auburn, California, is impacted by the noise sources of highways and major arterial streets and roads. According to the Placer County General Plan, examples of major noise sources existing within the County include major transportation corridors such as Interstate 80; State Highways 65, 193, 49, 174, 20, 89, 28, and 167; and two major railroad lines. The County also includes several ongoing fixed noise sources, including industrial parks, lumber mills, landfills, transfer stations, aggregate and sand and gravel operations, auxiliary power plants, marinas, and the nearby airports. The nearest source of traffic noise is State Highway 49, which is crossed by the proposed Rock Creek Siphon and located one approximately one mile west of the proposed Orr and Dry Creek replacement siphons.

The American National Standards Institute (ANSI) Standard 12.9-2013/Part 3 "Quantities and Procedures for Description and Measurement of Environmental Sound – Part 3: Short-Term Measurements with an Observer Present" provides a table of approximate background sound levels in L_{dn}, daytime L_{eq}, and nighttime L_{eq}, based on land use and population density. The ANSI standard estimation divides land uses into six distinct categories. Descriptions of these land use categories, along with the typical daytime and nighttime levels, are provided in Table 4.13-1. At times, one could reasonably expect the occurrence of periods that are both louder and quieter than the levels listed in the table. ANSI notes, "*95% prediction interval [confidence interval] is on the order of +/- 10 dB*" (ANSI 2013). The majority of the Project Area would be considered ambient noise Category 4.

Table 4.13-1. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density

Category	Land Use	Description	People per Square Mile	dBA		
				Typical L_{dn}	Daytime L_{eq}	Nighttime L_{eq}
1	Noisy Commercial & Industrial Areas and Very Noisy Residential Areas	Very heavy traffic conditions, such as in busy, downtown commercial areas; at intersections for mass transportation or other vehicles, including elevated trains, heavy motor trucks, and other heavy traffic; and at street corners where many motor buses and heavy trucks accelerate.	63,840	67	66	58
2	Moderate Commercial & Industrial Areas and Noisy Residential Areas	Heavy traffic areas with conditions similar to Category 1, but with somewhat less traffic; routes of relatively heavy or fast automobile traffic, but where heavy truck traffic is not extremely dense.	20,000	62	61	54
3	Quiet Commercial, Industrial Areas and Normal Urban & Noisy Suburban Residential Areas	Light traffic conditions where no mass-transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally travel at moderate speeds; residential areas and commercial streets, and intersections, with little traffic, compose this category.	6,384	57	55	49
4	Quiet Urban & Normal Suburban Residential Areas	These areas are similar to Category 3, but for this group, the background is either distant traffic or is unidentifiable; typically, the population density is one-third the density of Category 3.	2,000	52	50	44
5	Quiet Residential Areas	These areas are isolated, far from significant sources of sound, and may be situated in shielded areas, such as a small-wooded valley.	638	47	45	39
6	Very Quiet Sparse	These areas are similar to Category 4 but are usually in	200	42	40	34

Table 4.13-1. ANSI Standard 12.9-2013/Part 3 A-weighted Sound Levels Corresponding to Land Use and Population Density

Category	Land Use	Description	People per Square Mile	dBA		
				Typical L_{dn}	Daytime L_{eq}	Nighttime L_{eq}
	Suburban or Rural Residential Areas	sparse suburban or rural areas; and, for this group, there are few if any nearby sources of sound.				

Source: American National Standards Institute (ANSI) 2013
Note: L_{dn} = Day-Night Average Sound Level; L_{eq} = Equivalent Noise Level

4.13.2 Regulatory Framework

4.13.2.1 Placer County General Plan Noise Element

The County's General Plan Noise Element establishes several policies and implementation measures to help maintain or abate ambient noise levels and protect the residents of Placer County from excessive noise exposure. Compatibility guidelines varying by land use for interior and exterior noise levels help to protect sensitive receptors and land uses. The following policies are applicable to the Proposed Project :

Policy 9.A.2: *Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of [Table 4.13-2] as measured immediately within the property line of the lands designated for noise-sensitive use.*

Policy 9.A.4: *Impulsive noise produced by blasting should not be subject to the criteria listed in [Table 4.13-2]. Single event impulsive noise levels produced by gunshots or blasting shall not exceed a peak linear overpressure of 122 dB., or a C-weighted Sound Exposure Level of 98 dBC. The cumulative noise level from impulsive sounds such as gunshots and blasting shall not exceed 60 dB LCdn or CNELC on any given day. These standards shall be applied at the property line of a receiving land use.*

Table 4.13-2. Allowable Noise Levels (Applicable to New Projects Affected by or Including Non-Transportation Noise Standards)

Zone District of Receptors	Property Line Receiving Use (L_{dn})	Interior Spaces (L_{dn})[1]
Residential Adjacent to Industrial	60	45
Other Residential	50	45
Office/Professional	70	45
Transient Lodging	65	45
Neighborhood Commercial	70	45
General Commercial	70	45
Heavy Commercial	75	45
Limited Industrial	75	45
Highway Service	75	45
Shopping Center	70	45
Industrial	–	45
Industrial Park	75	45
Industrial Reserve	–	–
Airport	–	45
Unclassified	–	–
Farm	–	–
Agriculture Exclusive	–	–
Forestry	–	–
Timberland Preserve	–	–
Recreation & Forestry	–	–
Open Space	70	–
Mineral Reserve	–	–

Source: Placer County 2013
Notes: [1]Interior spaces are defined as any locations where some degree of noise-sensitivity exists. Examples include all habitable rooms of residences, and areas where communication and speech intelligibility are essential, such as classrooms and offices.
L_{dn} = Day-Night Average Sound Level

Policy 9.A.6: The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to [Table 4.13-3].

Table 4.13-3. Maximum Allowable Noise Exposure (Transportation Noise Sources)		
Noise Sensitive Receptors	**Outdoor Activity Areas (L_{dn}/CNEL)**	**Interior Spaces (L_{dn}/CNEL)**
Residential	60	45
Transient Lodging	60	45
Hospital, Nursing Homes	60	45
Churches, Meeting Halls	60	–
Playgrounds, Neighborhood Parks	70	–

Source: Placer County 2013
Note: CNEL = Community Noise Equivalent Level; Ldn = Day-Night Average Sound Level

4.13.2.2 Placer County Municipal Code

The County's regulations with respect to noise are included in Chapter 9, *Public Peace, Safety & Welfare*, of the County Code. *Exemptions*, outlined in Section 9.36.030, detail exemptions to the noise codes and ordinances. This part of the code states that noise sources associated with construction are prohibited between the hours of 8:00 p.m. to 6:00 a.m. Monday through Friday, and between 8:00 p.m. and 8:00 a.m. on Saturdays and Sundays. All construction equipment must be fitted with factory installed muffling devices and all construction equipment shall be maintained in good working order. Additionally, Section 9.36.060, *Sound Limits for Sensitive Receptors,* states that it is prohibited to cause the exterior sound level, when measured at the property line of any affected sensitive receptor, to exceed the ambient sound level by five dBA or exceed the noise level standards presented in Table 4.13-4.

Table 4.13-4. Sound Level Standards		
Sound Level Descriptor	**Daytime (7:00 a.m. to 10:00 p.m.)**	**Nighttime (10:00 p.m. to 7:00 a.m.)**
Hourly L_{eq}, dB	55	45
Maximum level, (L_{max}) dB	70	65

Source: Placer County 2023
Notes: [1]Each of the sound level standards specified in Table 4.13-4 shall be reduced by five dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus five dBA.
dBA = A-weighted decibels; L_{eq} = Equivalent Noise Level; L_{max} = Maximum Noise Level

4.13.3 Noise (XIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐

Less Than Significant.

As previously described, noise-sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, and some passive recreation areas would each be considered noise sensitive and may warrant unique measures for protection from intruding noise. The nearest sensitive receptors to the Project Area are single-family residences located directly adjacent to the proposed Dry Creek Siphon.

4.13.3.1 Onsite Construction Noise Impacts

Construction noise associated with the Proposed Project would be temporary and would vary depending on the specific nature of the activities being performed. Noise generated would primarily be associated with the operation of off-road equipment for onsite construction activities as well as construction vehicle traffic on area roadways. Construction noise typically occurs intermittently and varies depending on the nature or phase of construction (e.g., site preparation, excavation, paving). Noise generated by construction equipment, including earth movers, pile drivers, and portable generators, can reach high levels. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute (such as dropping large pieces of equipment or the hydraulic movement of machinery lifts). During construction, exterior noise levels could negatively affect sensitive land uses in the vicinity of the construction site. This construction noise would be temporary, short term, intermittent in nature, and would cease on completion of the Project.

The nearest existing noise-sensitive land uses to the Project Area are single-family residences located directly adjacent to the proposed Dry Creek Siphon. As previously mentioned, Placer County Municipal Code Section 9.36.030 states that noise sources associated with construction are prohibited between the hours of 8:00 p.m. to 6:00 a.m. Monday through Friday, and between 8:00 p.m. and 8:00 a.m. on Saturdays and Sundays. All construction equipment shall be fitted with factory installed muffling devices and all construction equipment shall be maintained in good working order. The Project would be required to comply with this Municipal Code requirement.

To estimate the worst-case onsite construction noise levels that may occur at the nearest noise-sensitive receptors and in order to evaluate the potential health-related effects (physical damage to the ear) from construction noise, the construction equipment noise levels were calculated using the Federal Highway Administration's Roadway Noise Construction Model and compared against the construction-related noise level threshold established in the Criteria for a Recommended Standard: Occupational Noise Exposure prepared in 1998 by National Institute for Occupational Safety and Health (NIOSH). A division of the US Department of Health and Human Services, NIOSH identifies a noise level threshold based on the duration of exposure to the source. The NIOSH construction-related noise level threshold starts at 85 dBA for more than 8 hours per day; for every 3-dBA increase, the exposure time is cut in half. This reduction results in noise level thresholds of 88 dBA for more than 4 hours per day, 92 dBA for more than 1 hour per day, 96 dBA for more than 30 minutes per day, and up to 100 dBA for more than 15 minutes per day. For the purposes of this analysis, the lowest, more conservative threshold of 85 dBA L_{eq} is used as an acceptable threshold for construction noise at the nearby sensitive receptors.

It is acknowledged that the majority of construction equipment is not situated at any one location during construction activities, but rather spread throughout the Project Area and at various distances from sensitive receptors. Therefore, this analysis employs Federal Transit Administration (FTA) guidance for calculating construction noise, which recommends measuring construction noise produced by all construction equipment simultaneously from the center of the Project Area (FTA 2018), which in this case is approximately 200 feet from the closest single-family home located west of the proposed Dry Creek Siphon. The anticipated short-term construction noise levels generated for the necessary equipment for each phase of construction are presented in Table 4.13-5.

Table 4.13-5. Construction Average (dBA) Noise Levels at Nearest Residential Receptor

Equipment	Estimated Exterior Construction Noise Level at Nearest Residences (dBA)	Construction Noise Standards (dBA L_{eq})	Exceeds Standards?
Excavator	64.7	*85*	**No**
Welder	58.0	*85*	**No**
Pickup Truck	59.0	*85*	**No**
Dump Truck	60.4	*85*	**No**
Flat Bed Truck	58.2	*85*	**No**
Pickup Truck (3)	59.0	*85*	**No**
Combined Equipment	**69.3**	***85***	**No**

Table 4.13-5. Construction Average (dBA) Noise Levels at Nearest Residential Receptor			
Equipment	**Estimated Exterior Construction Noise Level at Nearest Residences (dBA)**	**Construction Noise Standards (dBA L_{eq})**	**Exceeds Standards?**

Source: Construction noise levels were calculated by ECORP Consulting, Inc. using the Federal Highway Administration (FHWA) Roadway Noise Construction Model (FHWA 2006). Refer to Appendix F for Model Data Outputs.

Notes: Construction equipment used during construction derived from the California Emissions Estimator Model. This model contains default construction equipment and usage parameters for typical roadway construction projects. Consistent with FTA recommendations for calculating construction noise, construction noise was measured from the center of the Project Area (Federal Transit Administration [FTA] 2018), which is 200 feet from the closest residence.
L_{eq} = The equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the Leq of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
dBA = A-weighted decibels; L_{eq} = Equivalent Noise Level;

As shown in Table 4.13-5, construction activities would not exceed the 85 dBA NIOSH construction noise threshold at the nearest noise-sensitive receptors. It is noted that construction noise was modeled on a worst-case basis. It is very unlikely that all pieces of construction equipment would be operating at the same time for the various phases of Project construction as well as at the point closest to residences. Therefore, impacts would be less than significant.

4.13.3.2 Offsite Construction Traffic Noise Impacts

Project construction would result in additional traffic on adjacent roadways over the period that construction occurs. According to the California Emissions Estimator Model, which was used to predict the number of construction-related automotive trips, the maximum number of Project construction trips traveling to and from the Project Area during a single construction phase would not be expected to exceed 40 daily trips in total (20 worker commute trips and 20 haul trips). According to Caltrans Technical Noise Supplement to the Traffic Noise Analysis Protocol (Caltrans 2013), a doubling of traffic on a roadway is required to result in an increase of 3 dB (outside of the laboratory, a 3-dBA change is considered a just-perceivable difference). The addition of 40 trips would not result in a doubling of traffic on the local transportation network, and therefore its contribution to existing traffic noise would not be perceptible. Additionally, it is noted that construction is temporary, and these trips would cease upon completion of the Project.

4.13.3.3 Operational Noise Impacts

The Proposed Project involves the replacement of three District-owned and operated raw water siphons and does not include an operational phase. Therefore, there are no operational noise impacts.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Result in generation of excessive ground-borne vibration or ground-borne noise levels?	☐	☐	☒	☐

Less Than Significant Impact.

4.13.3.4 Construction Vibration Impacts

Excessive groundborne vibration impacts result from continuously occurring vibration levels. Increases in groundborne vibration levels attributable to the proposed Project would be primarily associated with short-term construction-related activities. Construction in the Project Area would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance.

Construction-related ground vibration is normally associated with impact equipment such as pile drivers, jackhammers, and the operation of some heavy-duty construction equipment, such as dozers and trucks. It is not anticipated that pile drivers would be necessary during Project construction. Vibration decreases rapidly with distance, and it is acknowledged that construction activities would occur throughout the Project Area and would not be concentrated at the point closest to sensitive receptors. Groundborne vibration levels associated with construction equipment are summarized in Table 4.13-6.

Table 4.13-6. Typical Construction Equipment Vibration Levels

Equipment Type	Peak Particle Velocity at 25 Feet (inches per second)
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Hoe Ram	0.089
Jackhammer	0.035
Small Bulldozer/Tractor	0.003
Vibratory Roller	0.210

Source: California Department of Transportation (Caltrans) 2020; Federal Transportation Administration (FTA) 2018

Placer County does not regulate or have a numeric threshold associated with construction vibrations. However, a discussion of construction vibration is included for full disclosure purposes. For comparison purposes, the Caltrans (2020) recommended standard of 0.3 inches per second PPV with respect to the prevention of structural damage for older residential buildings is used as a threshold. This is also the level

at which vibrations may begin to annoy people in buildings. Consistent with FTA recommendations for calculating construction vibration, construction vibration was measured from the center of the Project Site (FTA 2018). The nearest structure of concern to the construction site, with regard to groundborne vibrations, is a residential home located west of the proposed Dry Creek Siphon, located approximately 200 feet from the center of the Project Area.

Based on the representative vibration levels presented for various construction equipment types in Table 4.13-6 and the construction vibration assessment methodology published by the FTA (2018), it is possible to estimate the potential project construction vibration levels. The FTA provides the following equation:

$$[PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}]$$

Table 4.13-7 presents the expected Project related vibration levels at a distance of 200 feet.

Table 4.13-7 Construction Vibration Levels at 200 Feet

Receiver PPV Levels (in/sec)[1]					Peak Vibration	Threshold	Exceed Threshold?
Large Bulldozer, Caisson Drilling, & Hoe Ram	Loaded Trucks	Jackhammer	Small Bulldozer/ Tractor	Vibratory Roller			
0.004	0.003	0.002	0.000	0.009	**0.009**	*0.3*	**No**

Notes: [1]Based on the Vibration Source Levels of Construction Equipment included on Table 4.13-6 (Federal Transit Administration [FTA] 2018). Distance to the nearest structure of concern is approximately 200 feet measured from Project Area center.
in/sec = inches per second; PPV = Peak Particle Velocity

As shown in Table 4.13-7, vibration as a result of onsite construction activities in the Project Area would not exceed 0.3 PPV at the nearest structure. Thus, onsite Project construction would not exceed the recommended threshold. Impacts would be less than significant.

4.13.3.5 Operational Vibration Impacts

Project operations would not include the use of any stationary equipment that would result in excessive groundborne vibration levels. Therefore, the Project would result in no groundborne vibration impacts during operations.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project Area to excessive noise levels?	☐	☐	☒	☐

Less Than Significant Impact.

The Project Area is located approximately 0.30 mile north of the Auburn Municipal Airport. According to the Placer County Airport Land Use Compatibility Plans, the proposed Dry Creek Siphon is located in Compatibility Zones C1 and C2 and the proposed Rock Creek Siphon is located in Compatibility Zones B1 and C1 (Placer County Airport Land Use Commission 2021). The Orr Creek Siphon is not located within a designated airport compatibility zone.

Compatibility Zone B1 encompasses the portions of the runway approach/departure areas adjacent to and beyond the ends of the runway protection zone. Noise levels and risks are both high in these areas. Cumulative noise levels are generally at least CNEL 55 dB. Compatibility Zone C1 covers the extended approach/departure corridor and also includes land beneath the primary traffic pattern. This zone is affected by moderate degrees of both noise and risk. Cumulative noise levels exceed CNEL 55 dB in portions of Zone C1 and noise from individual aircraft operations is disruptive to noise-sensitive land uses. Compatibility Zone C2 encompasses areas routinely overflown by aircraft approaching and departing the airport, but less frequently or at higher altitudes than the areas within Zone C1. Noise from individual aircraft overflights may adversely affect certain land uses. Safety is a concern only regarding uses involving high concentrations of people and particularly risk-sensitive uses such as schools and hospitals (Placer County Airport Land Use Commission 2021).

The Proposed Project involves the replacement of three raw water siphons and does not propose the construction of habitable structures. Therefore, there would not be residents that could be exposed to excessive noise levels from the airport. Short-term workers, such as construction workers, would temporarily be subject to noise from the airport. However, once the replacement siphons are put into operation, they would not require onsite personnel or active management, nor would they produce substantial noise emissions. Siphons would be subject to periodic inspection by NID field staff, would operate without mechanical features, and no significant maintenance is expected to be required. Therefore, people would not be working in the Project Area long-term. Impacts would be less than significant.

4.13.4 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.14 Population and Housing

4.14.1 Environmental Setting

According to the most recent U.S. census data, Placer County is the 22nd largest county in California with an estimated population of 417,722 and a growth rate of 3.2 percent in the past year. The census estimates 179,179 total housing units in the County as of July 2022.

4.14.2 Regulatory Setting

4.14.2.1 Placer County General Plan

The Placer County General Plan Housing Element (2021b) establishes the County's housing policies and is intended to ensure that decent, safe, affordable shelter is provided for all residents in unincorporated Placer County. According to the housing element, affordable housing refers to housing in which occupants pay no more than 30 percent of their incomes on the rent or mortgage payment. Affordable rental housing is typically targeted toward lower income households (those earning less than 80% of the area median income), while affordable owner-occupied housing is targeted toward low- or moderate-income households (those earning less than 120 percent of area median income). Based on federal guidelines for 2012, a Placer County family of three earning $62,150 or less would be defined as low income. Monthly housing expenses of $1,553 or less would be considered affordable for that household.

4.14.3 Population and Housing (XIV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Less Than Significant Impact.

The Orr Creek, Dry Creek, and Rock Creek Siphons are each over fifty years old, are nearing the end of their useful life, and require resizing to address approved future flow needs. As such, the proposed Project is consistent with the NID's Master Plan to upgrade existing deficient infrastructure and would not induce growth but would serve to improve the raw water delivery system as needed to accommodate planned growth. Thus, the Project would not directly or indirectly induce substantial unplanned population growth and related impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No Impact

As described above, the proposed Project would replace existing siphons that have reached the end of their useful life. The siphon replacements are proposed primarily within NID's existing 40-foot right-of-way easements with the exception that the Rock Creek siphon would require new easements where commercial structures have been constructed over NID's existing easement. Where this occurs, the proposed new alignment avoids impacting existing structures while taking advantage of existing public roads, driveways, and open space for installation of the new siphon. Therefore, as currently planned, replacement siphons would not displace existing housing or necessitate the construction of replacement housing elsewhere and there would be no impact.

4.14.4 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.15 Public Services

4.15.1 Environmental Setting

Public services typically include fire protection, police/sheriff services, schools, and parks provided by Placer County and any state/or federal agencies.

4.15.1.1 Police Services

The Placer County Sheriff's Office (Sheriff) provides law enforcement services to the unincorporated areas of Placer County, including the proposed Project Sites. The nearest Sheriff's Station is in North Auburn at 2929 Richardson Drive, approximately 3.41 miles away from Orr Creek, 1.9 miles away from Dry Creek, and 0.5 miles away from Rock Creek. The next nearest city police station is in the City of Auburn, located approximately 5.9 miles away from Orr Creek, 4.3 miles away from Dry Creek, and 3.5 miles from Rock Creek.

4.15.1.2 Fire Services

The proposed Project Sites are served by the Placer County Fire Department. Fire service is provided via a Cooperative Fire Protection Agreement with CAL FIRE. This agreement integrates state and local firefighting resources, career and volunteer, into a combination fire department. Service is provided by eight career and five volunteer fire stations and includes all fire and emergency medical services to a 475-square-mile territory from the rural crest of the Sierra to the dense urban valley floor. The Placer County

Fire department serves a population of 57,000 residents and businesses in unincorporated Placer County and protects $7 billion in private property and infrastructure; responding to over 15,000 calls for service annually (CAL FIRE 2023b). The closest station to the proposed Project Site is Atwood Fire Station (Station 180) located at 11645 Atwood Road in Auburn. Station 180 is 3.41 miles away from Orr Creek, 1.7 miles from Dry Creek, and 0.6 miles away from Rock Creek. The next closest station is the Bowman Fire Station (Station 10), located at 13760 Lincoln Way in Auburn. Fire Station 10 is approximately 3.7 miles away from Orr Creek, 2.4 miles away from Dry Creek, and 2.5 miles away from Rock Creek.

4.15.1.3 Schools

Placer Union High School District serves all three of the proposed Project Areas for high school education from its headquarters in Auburn, California and is composed of five high schools, an adult education facility, and a virtual charter school. Orr Creek is within the Placer Hills Union School District, which is composed of one elementary school and one middle school. Dry Creek is partially within the Placer Hills Union School District and the Auburn Union School District. The Auburn Union School District is composed of two elementary schools and one middle school. The Rock Creek Project Area is within the Auburn Union School District. Portions of the Rock Creek proposed Project are adjacent to the Rock Creek Elementary School.

4.15.2 Regulatory Setting

The proposed Project Area lies within Placer County and, although NID is a jurisdiction with authority equal to Placer County and is not subject to Placer County General Plan requirements, NID strives to comply with such requirements, to the extent feasible.

The Placer County General Plan, Public Facilities and Services (May 2013) includes the following goals and policies that are applicable to the proposed Project as it relates to Public Services.

Goal 4.C: To ensure the availability of an adequate and safe water supply and the maintenance of high-quality water in water bodies and aquifers used as sources of domestic supply.

Policy 4.C.2: The County shall approve new development based on the following guidelines for water supply:

a. Urban and suburban development should rely on public water systems using surface supply.

b. Rural communities should rely on public water systems. In cases where parcels are larger than those defined as suburban and no public water system exists or can be extended to the property, individual wells may be permitted.

c. Agricultural areas should rely on public water systems where available, otherwise individual water wells are acceptable.

Policy 4.C.4: The County shall require that water supplies serving new development meet state water quality standards.

Policy 4.C.6: The County shall promote efficient water use and reduced water demand by:

d. Encouraging water-conserving agricultural irrigation practices.

Policy 4.C.10: The County shall promote the development of surface water supplies for agricultural use in the western part of the County.

Policy 4.C.11: The County shall protect the watersheds of all bodies of water associated with the storage and delivery of domestic water by limiting grading, construction of impervious surfaces, application of fertilizers, and development of septic systems within these watersheds.

4.15.3 Public Services (XV) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☒	☐
Fire Protection?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other Public Facilities?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project involves installation of three replacement siphons at Dry Creek, Orr Creek and Rock Creek and abandoning the existing raw water siphons in place. The proposed Project would increase available raw water delivery consistent with the District's Master Plan. The proposed Project does not include housing development or population growth and thus would not generate the need for additional government facilities or utilities. Therefore, the proposed Project would not require the provision of new

or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives. Furthermore, no public facilities would be directly impacted during construction activities. Related public service impacts are less than significant.

4.15.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.16 Recreation

4.16.1 Environmental Setting

The proposed Project Areas are located within Placer County, in the North Auburn area, primarily east of Highway 49 and north of Bell Road with the siphon crossings at Orr Creek, Dry Creek, and Rock Creek. Placer County provides an array of recreational opportunities, ranging from public parks with recreational facilities to uninhabited forest lands. Public parks and recreational facilities within the County include ski areas and resorts, golf courses, swimming and exercise facilities, off-road motor vehicle areas, and campgrounds. Recreational, non-motor trails are found throughout the County and provide opportunities for hiking, mountain biking, and horseback riding. There are no recreational trails or other forms of public recreation within the proposed Project Sites.

4.16.2 Recreation (XVI) Materials Checklist

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Less Than Significant Impact

The proposed Project Areas do not directly impact any parks or recreation facilities. All replacement siphons would be located within NID's existing 40-foot right-of-way easement that extends 20 feet on either side of the existing siphon centerlines. The closest recreational area to the Orr Creek project location is Black Oak Golf Course, located approximately 0.2 miles east of the proposed Project Site. The closest recreation area to the Dry Creek Project Site is Rock Creek Lake, which is approximately 0.8 miles away from the proposed Project Site. The closest recreation area to the Rock Creek Project Area is Auburn Regional Park, which is approximately 0.13 miles west of the proposed Project Area. The proposed Project would not increase the use of any existing recreational areas, nor would it require the construction of new recreational facilities. Therefore, any impacts will be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

No Impact.

The proposed Project does not involve recreational facilities or require the construction or expansion of recreational facilities. Therefore, no adverse physical effect on park and recreational facilities would occur. No impact would occur.

4.16.3 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.17 Transportation

4.17.1 Environmental Setting

The proposed Project locations are within a rural residential and commercial area within west Placer County. According to the County's General Plan Transportation/Circulation Element (Placer County 2013), the county road classification system recognizes differences in roadway function and standards between urban/suburban areas and rural areas. The following paragraphs define the linkage and functions provided by each class.

Local streets provide direct access to abutting land, and access to the collector street system. The public uses these streets for local circulation. They carry little, if any, through traffic, and generally carry very low traffic volumes. These streets are not depicted on the County's General Plan Circulation Plan Diagram.

Collector roadways are intended to "collect" traffic from local streets and carry it to roadways higher in the street classification hierarchy (e.g., arterials). The public uses these roadways as secondary circulation routes, and they generally carry light to moderate traffic volumes. Access to abutting land is normally permitted but may be restricted to certain uses dependent upon future traffic volumes. The collector roadway system is depicted on the General Plan Circulation Plan Diagram. In urban/suburban areas, major collector roadways will generally carry higher traffic volumes than minor collectors and thus require more right-of-way and have more access restrictions.

Arterial roadways are fed by local and collector roadways and provide linkages to the state highway system as well as linkages to and between communities and major activity centers. The public uses these roadways as primary circulation routes for through traffic, and they carry higher volumes of traffic than local streets and collector roadways. In urban/suburban areas, major arterials will generally carry higher traffic volumes than minor arterials and thus require more right-of-way and have more access restrictions.

Rural arterial roadways may or may not carry high traffic volumes but do provide primary access routes for through travel in rural areas of the county.

Thoroughfares are special arterial roadways with greater access control designed to carry high volumes of traffic with limited travel delay. Such roadways are used as primary circulation routes to carry longer distance, through-traffic.

Expressways are high-speed, high-capacity roadways with very limited access control whose main purpose is to serve through traffic over long distances.

Until a contractor is selected for the proposed Project, it's not possible to know what roads will be used to access the Project Site. However, the expressways (freeways/highways) most likely to carry the proposed Project construction equipment and truck trips include I-80 and State Highway 49. Rural collectors in the proposed Project Area could include Stanley Drive and Dry Creek Road.

4.17.2 Transportation (XVII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐

Less Than Significant.

The proposed Project would not permanently alter existing roadways, nor would it add a substantial number of trips to the current circulation system. In addition, the proposed Project does not involve a change in land use or affect transportation policies. Construction of the proposed Project would result in a temporary increase in truck trips on the local roads to deliver materials and machinery to the site. Additionally, there would be a limited number of vehicle trips from the work crew just outside of the construction work hours (between 7:00 a.m. and 7:00 p.m.). However, the temporary construction related trip increase is not expected to substantially impact the capacity of the local road system. Furthermore, as discussed in Project Description Section 2.2.2.4 Construction Best Management Practices, NID would implement BMP-7: Prepare and Implement a Construction Traffic Management Plan. BMP-7 requires the traffic management plan specifically address the proposed Rock Creek Siphon crossing of Highway 49 and would ensure adequate provisions for protection of the traveling public and emergency service access. Therefore, the Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities and potential impacts would be less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

b)	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	☐	☐	☐	☒

No Impact

The proposed Project would not generate new long-term vehicle trips or alter the transportation system in a way that would create additional vehicle miles traveled. There would be no impact with implementation of the proposed Project.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project does not include permanent new design features on roadways and would not result in any increased hazards. While Project construction would require a temporary lane closure for the Rock Creek siphon construction, and transport of heavy machinery and use of light trucks on the roads around the proposed Project Area, it would not substantially increase hazards along roadways and related impacts are less than significant.

Would the Project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d)	Result in inadequate emergency access?	☐	☐	☒	☐

Less Than Significant Impact

Consistent with BMP-7: Prepare and Implement a Construction Traffic Management Plan, coordination with emergency service providers would occur prior to construction. This would ensure adequate emergency access is maintained throughout Project construction. Therefore, impacts related to inadequate emergency access would be less than significant.

4.17.3 Mitigation Measures

None required.

4.18 Tribal Cultural Resources

4.18.1 Environmental Setting

4.18.1.1 Ethnographic History

Prior to the arrival of European-Americans in the region, Indigenous groups speaking more than 100 different languages and occupying a variety of ecological settings inhabited California. Kroeber (1925, 1936), and others (i.e., Driver 1961; Murdock 1960), recognized the uniqueness of California's Indigenous groups and classified them as belonging to the California culture area. Kroeber (1925) further subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central.

When the first European explorers entered the regions between 1772 and 1821, an estimated 100,000 people, about one third of the state's native population, lived in the Central Valley (Moratto 1984). At least seven distinct languages of Penutian stock were spoken among these populations: Wintu, Nomlaki, Konkow, River Patwin, Nisenan, Miwok, and Yokuts. Common linguistic roots and similar cultural and technological characteristics indicate that these groups shared a long history of interaction (Rosenthal et al. 2007). The Central area (as defined by Kroeber 1925) encompasses the Project Area and includes the Nisenan or Southern Maidu.

Ethnographically, the Project Area is in the southwestern portion of the territory occupied by the Penutian-speaking Nisenan. Nisenan inhabited the drainages of the Yuba, Bear, and American rivers, as well as the lower reaches of the Feather River, extending from the east banks of the Sacramento River on the west to the mid to high elevations of the western flank of the Sierra Nevada to the east (Wilson and Towne 1978). The territory extended from the area surrounding the current City of Oroville on the north to a few miles south of the American River in the south. The Sacramento River bounded the territory on the west, and, in the east, it extended to a general area located within a few miles of Lake Tahoe.

As a language group, Nisenan (meaning "from among us" or "of our side") are members of the Maiduan Family of the Penutian stock and are generally divided into three groups based on dialect differences: the Northern Hill (mountain) Nisenan in the Yuba River drainage; the Valley Nisenan along the Sacramento River; and the Southern Hill (foothills) Nisenan along the American River (Beals 1933; Kroeber 1925; Wilson and Towne 1978). Individual and extended families owned hunting and gathering grounds, and trespassing was discouraged (Kroeber 1925; Wilson and Towne 1978). Residence was generally patrilocal, but couples had a choice in the matter (Wilson and Towne 1978).

The basic social and economic group for the Nisenan was the family or household unit. The nuclear and extended family formed a corporate unit. These basic units were combined into distinct village or hamlet groups, each largely composed of consanguine relatives (Beals 1933; Littlejohn 1928). Lineage groups were important political and economic units that combined to form tribelets, which were the largest sociopolitical unit identified for Nisenan (Wilson and Towne 1978). Each tribelet had a chief or headman who exercised political control over all its villages. Villages typically included family dwellings, acorn granaries, a sweathouse, and a dance house, all owned by the chief. The chief seemed to have had an advisory role with little direct authority (Beals 1933) but with the support of the shaman and the elders,

the word of the chief became virtually the law (Wilson and Towne 1978). Tribelets assumed the name of the head village where the chief resided (Beals 1933; Levy 1978).

The office of tribelet chief was hereditary, with the chieftainship being the property of a single patrilineage within the tribelet. Tribelet populations of Valley Nisenan were as large as 500 persons (Wilson and Towne 1982), while foothill and mountain tribelets ranged between 100 persons and 300 persons (Levy 1978; Littlejohn 1928). Each tribelet owned a bounded tract of land and exercised control over its natural resources (Littlejohn 1928). Beals (1933) estimated that Nisenan tribelet territories averaged approximately 10 miles along each boundary, or 100 square miles, with foothill territories tending to encompass more area than mountain territories. Littlejohn (1928) noted that in many instances, these boundaries were indicated by piles of stones. Regardless, Nisenan groups tended to stay within their village areas except during the summer season when groups of people would sojourn into the mountains to hunt and gather (Littlejohn 1928).

Nisenan practiced seasonal migration, a subsistence strategy involving moving from one area or elevation to another to harvest plants, fish, and hunt game across contrasting ecosystems that were in close proximity. Valley Nisenan generally did not range beyond the valley and lower foothills, while foothill and mountain groups ranged across a more extensive area that included jointly shared territory whose entry was subject to traditional understandings of priority of ownership and current relations between the groups (d'Azevedo 1963).

During most of the year, Nisenan usually lived in permanent villages located below about 2,500 feet elevation that generally had a southern exposure, were surrounded by an open area, and were located above, but close to watercourses (Littlejohn 1928). The rather large uninhabited region between the 3,000-foot contour and the summit of the Sierra Nevada was considered open ground which was only used by communities living along its edge (Littlejohn 1928). Beals (1933) noted that permanent villages in the foothills and mountains were usually located on high ground between rivers. Valley villages were also usually located on raised areas to avoid flooding. Littlejohn (1928) stated that at one time or another there were settlements located on every small stream within Nisenan territory, but permanent villages were not located in steep, dark, narrow canyons of large rivers, or at altitudes where deep snow persisted throughout the winter. In fact, permanent occupation sites above 3,500 feet elevation were only located in protected valleys (Littlejohn 1928).

The availability of resources influenced the location of Nisenan permanent villages, since they acquired a proportion of their food resources from the surrounding general area (Littlejohn 1928; Wilson and Towne 1978). Other essential and critical food resources were obtained during the summer, when small base camps were established at higher altitudes in proximity to a water source. Individuals would stage expeditions from these camps to acquire natural, faunal, and plant resources (Littlejohn 1928; Wilson and Towne 1978).

Communally organized Nisenan task groups exploited a wide variety of resources. Communal hunting drives were undertaken to obtain deer, quail, rabbits, and grasshoppers. Bears were hunted in the winter when their hides were at their best condition. Runs of salmon in the spring and fall provided a regular supply of fish, while other fish such as suckers, pike, whitefish, and trout were obtained with snares, fish

traps, or with various fish poisons such as soaproot (Beals 1933; Faye 1923; Wilson and Towne 1978). Birds were caught with nooses or large nets and were also occasionally shot with bow and arrow. Game was prepared by roasting, baking, or drying. In addition, salt was obtained from a spring near modern-day Rocklin (Wilson and Towne 1978).

Acorns were gathered in the fall and stored in granaries for use during the rest of the year. Although acorns were the staple of the Nisenan diet, they also harvested roots like wild onion and Indian potato, which were eaten raw, steamed, baked, or dried and processed into flour cakes to be stored for winter use (Wilson and Towne 1978). Buckeye, pine nuts, hazelnuts, and other edible nuts further supplemented the diet. Key resources such as acorns, salmon, and deer were ritually managed through ceremonies to facilitate successful exploitation and equitable distribution (Beals 1933; Swezey 1975; Swezey and Heizer 1977).

Trade was important, with goods traveling between the coast and valleys into the Sierra Nevada, and beyond to the east. Coastal items like shell beads, salmon, salt, and Foothill pine nuts were traded for resources from the mountains and further inland, such as bow and arrows, deer skins, and sugar pine nuts. In addition, obsidian was imported from the north (Wilson and Towne 1978).

Nisenan built residential dwellings, ceremonial structures, semi-subterranean sweat lodges, and menstruation huts (Wilson and Towne 1978). The typical hill-and-mountain dwelling was the conical bark house made by overlapping three or four layers of bark with no interior support. A thatched house was used at lower elevations, consisting of a conical framework of poles that was covered by brush, grass, or tules. Semi-subterranean earth lodge roundhouses were also built by hill and mountain groups and were used for ceremonial gatherings, assemblies, local feasts, and for housing visitors (Beals 1933; Levy 1978).

Flaked-stone and groundstone tools were common among the Nisenan and included knives, arrow and spear points, club heads, arrow straighteners, scrapers, rough cobble and shaped pestles, bedrock mortars, grinding stones (metates), pipes, charms, and short spears (Barrett 1917; Beals 1933; Voegelin 1942; Wilson and Towne 1978). Beals (1933) also noted that certain colored stone points were considered "lucky" and could be traded for four or five other projectile points. In addition, obsidian was highly valued and imported. Nisenan informants stated that obsidian only came from a place to the north, outside of Nisenan territory (Littlejohn 1928). Littlejohn (1928) also noted that soapstone was used for bowl mortars, although informants of Wilson and Towne (1978) claimed that neither they nor their ancestors made mortars.

Wood was used for a variety of tools and weapons, including both simple and sinew-backed bows, arrow shafts and points, looped stirring sticks, flat-bladed mush paddles, pipes, and hide preparation tools (Wilson and Towne 1978). Cordage was made from plant material and used to construct fishing nets and braided and twined tumplines. Soaproot brushes were commonly used during grinding activities to collect meal or flour. Specialized food processing and cooking techniques included the grinding and leaching of ground acorn and buckeye meal; burning of umbelliferae, a plant with cabbage-like leaves, to obtain salt; and roasting various foods in earth ovens (d'Azevedo 1986; Wilson and Towne 1978). Both hill and valley groups used the bedrock mortar and pestle (both rough cobble and shaped) to grind acorns, pine nuts, seeds, other plant foods, and meat. A soaproot brush was used to sweep ground meal into mortar cups

and collect flour. Fist-sized heated stones were used to cook or warm liquid-based foods, such as acorn gruel and pine nut meal. Whole acorns were stored in granaries, and pine nuts were stored in large pine bough-covered caches (Wilson and Towne 1978).

Nisenan groups managed many wild plants, primarily by controlled burning which removed underbrush and encouraged growth of edible grasses, seed-producing plants, and other useful plant resources (e.g., basketry materials) (Blackburn and Anderson 1993). The use of fire for environmental modification and as an aid in hunting is frequently mentioned in the ethnographic literature relating to the Nisenan. Littlejohn (1928) noted that the lower foothills in the valley oak zone were thickly covered with herbaceous vegetation that was annually burned by the Nisenan to remove and limit its growth while facilitating the growth of oaks for harvesting acorns. The annual fires destroyed seedlings but did not harm established oak trees. Beals (1933) also noted that the Nisenan regularly burned the land, primarily for the purpose of driving game, and consequently created much more open stands of timber than what currently exists in the area. Beals (1933) informants stated that before their traditional burning regimes were halted by European Americans, "it was often a mile or more between trees on the ridges." In addition to removing underbrush, improving travel conditions, and facilitating plant growth, burning may also have improved areas where deer forage, potentially altering migratory patterns of deer populations by lessening their need to seek fresh vegetation on a seasonal basis (Matson 1972).

Nisenan used baskets for a variety of tasks, including storage, cooking, serving, and processing foods, as traps, cradles, headwear, cages, seed beaters, and winnowing trays. Basket manufacturing techniques include both twining and coiling, and baskets are decorated with a variety of materials and designs. Other woven artifacts include tule matting and netting made of milkweed, sage fibers, or wild hemp (Wilson and Towne 1978).

Like most Indigenous cultures, Nisenan groups have a holistic epistemology; a theorem of holistic knowledge in which any subject is a composite of all other subjects, and every aspect of knowledge is interconnected. The Nisenan world contains many ineffable supernatural beings and spirits, and all natural objects are endowed with potential supernatural powers (Beals 1933).

Stories about world creation and human origins vary amongst different ethnographic accounts as well as amongst different groups. Some express the idea that the world has always existed, but in different forms; some told that everything was made by someone, and that all birds and animals were once human; others told of a flood that killed the first people because they were bad (Kroeber 1929). In creation stories there is a culture hero, usually who created earth, and Coyote the trickster, who introduced death and conflict to a once utopian existence (Beals 1933; Kroeber 1929).

Ethnographic accounts of specific religious practices were stymied by several factors, including reluctance on behalf of Nisenan groups to discuss their religion, many variations in cultural practices, and disease epidemics during contact period. However, certain central themes were identified by Gifford (1927), who divided Nisenan religious ceremonies into three chronological strata: Indigenous dances (early); northern-influenced dances of the *Kuksu* or God-impersonating cult performed in dance houses; and a *Kuksu* religious revival circa 1870 adapted to the Ghost Dance religion.

The *Kuksu* cult is the major religious system in Central California and the Nisenan practiced it in various forms. Cult membership was reserved for initiated few, who danced disguised as the spirits of deities (Heizer 1962). Other religious ceremonies included a mourning ceremony, an annual ritual for the dead performed in the fall in which dancers covered their faces with ash and wailed and cried around a central brush pyre (Gifford 1927). This ceremony was observed and documented among mountain groups, but little is known about whether valley and foothills groups performed similar rites (Wilson and Towne 1978). Other ceremonial dances included a *Kamin* dance celebrated in late March to mark the beginning of spring; the *Weda* or Flower dance of late April; a *Dappe* or Coyote Dance; and a *Nemulsa* or *Big Festival* to which people came from a distance to celebrate (Gifford 1927).

The Nisenan have two types of doctors or shamans, curing and religious, both of whom performed their rituals publicly in the village dance house (Wilson and Towne 1978). The curing shamans could be of either sex and possessed certain charms and medicines. They diagnosed feeling and sucked out the area of pain to remove the offending object (such as a dead fly, a small bone, a blood clot), which was displayed, and then buried immediately. Curing shamans were only paid if they cured the afflicted patient (Wilson and Towne 1978). The religious shaman, or *oshpe*, represented the supernatural and was a dominant figure in dance house rituals. He gained control over spirits by dreams or esoteric encounters, and it was believed he could conjure up spirits and voices of the deceased (Wilson and Towne 1978).

The Spanish arrived on the Central California coast in 1769. Early contact with the first Spanish explorers to enter California was limited to the peripheries of Nisenan territory; they occurred mainly to the south on lands of the Miwok which had been explored by José Canizares in 1776, with only ephemeral explorations into Nisenan lands. There are no records of Nisenan groups being removed to the missions. However, they received escapees from the missions, as well as pressure of displaced Miwok populations on their southern borders. The first known occupation by European-Americans was marked by American and Hudson Bay Company fur trappers in the late 1820s establishing camps in Nisenan territories. This occupation was thought to have been peaceful (Wilson and Towne 1978).

A deadly epidemic (probably malaria) swept through the Sacramento Valley in 1833 and it had a devastating effect on Nisenan populations. Entire villages were lost and surviving Nisenan retreated into the hills. An estimated 75 percent of their population was wiped out, and only a handful were left to face the gold miners and settlers who were soon to follow (Cook 1955). Captain John Sutter settled in Nisenan territory in 1839, and through force and persuasion he coerced most of the remaining Valley Nisenan to be on peaceful terms (Wilson and Towne 1978).

The mountain Nisenan groups encountered Europeans in their territory but were not adversely affected by the epidemics and early settlers. The discovery of gold, however, led to their territory being overrun within a matter of a few years. James Marshall's 1848 gold discovery was in the middle of Nisenan territory, and thousands of miners were soon living in the area. This dynamic led to widespread killing, destruction, and persecution of the Nisenan and their culture. The few survivors were relegated to working in agriculture, logging, ranching, or domestic pursuits (Wilson and Towne 1978). A native culture resurgence occurred around 1870 with influence from the Ghost Dance revival, but by 1890s the movement had all but ended in dissolution. By the time of the Great Depression, it was said that no living Nisenan could remember a time before European contact (Wilson and Towne 1978).

The turn of the 20th century was fraught with deplorable conditions for the surviving Nisenan populations, marked by low educational attainment, high unemployment, poor housing and sanitation, and prevalence of alcoholism. The 1960 U.S. Census (California State Advisory Commission of Indian Affairs 1966 as cited in Wilson and Towne 1978) reported 1,321 Native Americans resided in the counties originally held as Nisenan territory, but none had tribal affiliation. Sacramento County listed 802 Native Americans, of which only four were known descendants of the Valley Nisenan. El Dorado, Placer, Yuba, and Nevada counties had several Nisenan families in the 1970s who are descended from mountain groups and could speak the language and retained knowledge of traditional lifeways (Wilson and Towne 1978).

A few people still practiced Nisenan customs through the turn of the 21st century, but the old ways had been largely lost. Despite the hardships on their people through the past few centuries, many modern Native American populations participate in pan-Indian activities and celebrations. Nisenan descendants continue to be active in social movements and organizations that seek to improve the Native American situation in the dominant America culture.

4.18.2 Regulatory Setting

4.18.2.1 Assembly Bill 52

Effective July 1, 2015, AB 52 amended CEQA to require that: 1) a lead agency provide notice to those California Native American tribes that requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include TCRs, the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures and project alternatives.

Pursuant to AB 52, Section 21073 of the PRC defines California Native American tribes as "a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of the Statutes of 2004." This includes both federally and non-federally recognized tribes.

Section 21074(a) of the PRC defines TCRs for the purpose of CEQA as:

1) Sites, features, places, cultural landscapes (geographically defined in terms of the size and scope), sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

    a. included or determined to be eligible for inclusion in the California Register of Historical Resources; and/or

    b. included in a local register of historical resources as defined in subdivision (k) of Section 5020.1; and/or

    c. a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the

purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Because criteria a and b also meet the definition of a Historical Resource under CEQA, a TCR may also require additional consideration as an Historical Resource. TCRs may or may not exhibit archaeological, cultural, or physical indicators.

Recognizing that California tribes are experts in their tribal cultural resources and heritage, AB 52 requires that CEQA lead agencies provide tribes that requested notification an opportunity to consult at the commencement of the CEQA process to identify TCRs. Furthermore, because a significant effect on a TCR is considered a significant impact on the environment under CEQA, consultation is used to develop appropriate avoidance, impact minimization, and mitigation measures.

4.18.2.2 Summary of Tribal Consultation

AB52 consultation requirements went into effect on July 1, 2015 for all projects that have not already published a Notice of Intent to Adopt a Negative Declaration or MND or published a Notice of Preparation of an EIR (Section 11 [c]). At the time the Nevada County Irrigation District (NID) was ready to initiate CEQA review, it had received written requests to receive project notices from three California Native American Tribes, who identified themselves as being traditionally and culturally affiliated with the lands subject to NID jurisdiction: Colfax Todds Valley Consolidated Tribe (September 28, 2017), Nevada City Rancheria (October 05, 2017), and the UAIC (December 04, 2015).

NID mailed notification letters to each of the three tribes on January 3, 2024. In accordance with PRC Section 21080.3.1(d) of the Public Resources Code (PRC), responses to the offer to consult were requested by February 4, 2024. No response was received from Nevada City Rancheria or from Colfax Todds Valley Consolidated Tribe; therefore, no consultation occurred.

The UAIC responded via email on January 22, 2024, requesting the shapefiles for the Project Area, which was sent in response. The consultation timeline ended on February 4, 2024. On February 7, 2024, UAIC representative Ms. Starkey, contacted ECORP Consulting, Inc. and indicated a desire to consult with NID and requested the contact information of the lead agency. ECORP staff forwarded the request to the lead agency, as well as responded to the email address of the contact person at NID. On February 20, 2024, ECORP staff and NID reached out to Ms. Starkey to ask if UAIC was going to request to consult under AB 52. Ms. Starkey responded that UAIC had intended to request consultation but had not formally requested it at the time. There has been no further correspondence, and no consultation has occurred.

4.18.2.3 Tribal Cultural Resources

Information about potential impacts to TCRs was drawn from: 1) the results of a search of the Sacred Lands File of the NAHC; 2) existing ethnographic information about pre-contact lifeways and settlement patterns; 3) and information on archaeological site records obtained from the California Historical Recourse Information System.

Sacred Lands File Search

A search of the NAHC Sacred Lands File was requested on November 30, 2023. The NAHC responded on December 14, 2023 that the sacred lands file search was positive. The NAHC included a list of suggested tribal representatives to contact who may have more information.

Archaeological Site Records

Twenty-seven previous cultural resource investigations have been conducted in or within 0.25 mile of the Project Area, covering approximately 70 percent of the total area surrounding the Project Area segments within the records search radius. Of the 27 previously conducted studies, nine include portions of the Project Area, and the other 18 were within the 0.25-mile radius. Of the nine studies that include portions of the Project Area, one study bisects the Dry Creek Siphon segment and the other eight studies overlap the Rock Creek Siphon segment. The records search and 2023 field survey identified eight historic-period cultural resources within or immediately adjacent to at least one of the three Project Area segments: P-31-1171, the Combie Ophir Canal; CO-01, Witt Road; CO-02, Dry Creek Road; CO-03, Shale Ridge Road; CO-04, Locksley Lane; CO-05, Rock Creek Road; CO-06, Education Street; and CO-07, a 0.57-mile-long segment of SR-49. These resources were evaluated using NRHP and CRHR eligibility criteria and determined not eligible. Additional information about cultural resources can be found in Chapter 4.5 of this CEQA document.

Tribal Consultation Results

As mentioned above, no tribes formally requested to consult for the proposed Project.

In accordance with Section 21082.3(c)(1) of the Public Resources Code, "… information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with subdivision (r) of Section 6254 of, and Section 6254.10 of, the Government Code, and subdivision (d) of Section 15120 of Title 14 of the California Code of Regulations, without the prior consent of the tribe that provided the information." Therefore, specific information about tribal cultural resources is not included in this CEQA document and remains within a confidential administrative record and not available for public disclosure without written permission from the tribe.

4.18.3 Standards of Significance

4.18.3.1 Significance Criteria

AB 52 established that a substantial adverse change to a TCR has a significant effect on the environment. In assessing substantial adverse change, NID must determine whether or not the Project will adversely affect the qualities of the resource that convey its significance. The qualities are expressed through integrity. Integrity of a resource is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association [CCR Title 14, Section 4852(c)]. Impacts are significant if the resource is demolished or destroyed or if the characteristics that made the resource eligible are

materially impaired [CCR Title 14, § 15064.5(a)]. Accordingly, impacts to a TCR would likely be significant if the Project negatively affects the qualities of integrity that made it significant in the first place. In making this determination, NID need only address the aspects of integrity that are important to the TCR's significance.

4.18.4 Tribal Cultural Resources (XVIII) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or	☐	☒	☐	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.	☐	☒	☐	☐

Less Than Significant With Mitigation Incorporated.

As conveyed in the *Cultural Resources Inventory Report* conducted by ECORP Consulting, Inc., one known tribal cultural resource was identified at the Project Site or within a 0.5-mile radius during the records search and literature review performed. P-31-0033, a single chert flake, was recorded in 1983. The Project Site has not been identified as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe. However, unanticipated, and accidental discovery of California Native American TCRs are possible during Project implementation, especially during excavation, and have the potential to impact unique cultural resources. As such, mitigation measure CUL-1 has been included to reduce the potential for impacts to tribal cultural resources to a less than significant level.

4.18.5 Mitigation Measures

CUL-1: See *Section 4.5 Cultural Resources* for the full text of Mitigation Measure CUL-1.

4.19 Utilities and Service Systems

4.19.1 Environmental Setting

4.19.1.1 Water Service

Residential, industrial, and commercial water in the North Auburn area is primarily supplied by Placer County Water Agency, NID, Christian Valley Park California Special District, and incorporated cities. Outside of the establishments listed previously, water needs are met through individual groundwater wells or small water systems.

4.19.1.2 Wastewater

In cooperation with the cities of Lincoln, Auburn and Roseville, wastewater services in Placer County is provided by the Placer County Environmental Engineering and Utilities Department (Placer County 2023c). Sewer services provided by Placer County include the operation and maintenance of the following:

- 44 sewer pump stations
- five wastewater treatment facilities
- Almost 300 miles of sewer pipe
- More than 450 Septic Tank Effluent Pump systems

4.19.1.3 Solid Waste

The Placer County Environmental Utilities Division administers and manages the County-wide solid waste and recycling programs in eastern and western Placer County. County-owned facilities include the Eastern Regional Materials Recovery Facility in the Tahoe area, transfer stations in Meadow Vista and Foresthill, and four closed landfills. The Division also provides administrative support and management to the Western Placer Waste Management Authority which owns and operates the Western Regional Sanitary Landfill and Materials Recovery Facility located in unincorporated Placer County just north of the City of Roseville.

4.19.1.4 Electricity and Natural Gas

Project Area natural gas and electric service are provided by PG&E. Based in San Francisco, PG&E is one of the largest combined natural gas and electric energy companies in the United States. With approximately 24,000 employees the company provides natural gas and electric service to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California. The proposed Project Site is included within PG&E's electric and natural gas service area.

4.19.2 Utilities and Service Systems (XIX) Environmental Checklist and Discussion

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐

Less Than Significant Impact.

The proposed Project involves installation of new raw water siphons and abandonment of the existing siphons. With the exception of the Rock Creek siphon which requires some new easements, the replacement siphons would be located within NID's existing 40-foot right-of-way easement that extends 20 feet on either side of the existing siphon centerlines. The proposed replacement Rock Creek siphon would be installed to avoid impacting existing structures and would be constructed along existing public roads, driveways, and open space. All the abandoned siphons would be retained for any future use in the event the new siphons are required to be taken offline for maintenance, or due to an emergency. proposed Project construction and/or operation is not expected to require new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities and related impacts are less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒

No Impact.

The proposed Project is part of the NID's existing water transmission infrastructure. The proposed siphon replacements are consistent with NID's master plan and would not create a new demand for water supply. Therefore, there would be no impact.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Less Than Significant Impact.

As discussed under response, b) above the proposed Project is part of the NID's existing water transmission infrastructure and would not generate or create a new wastewater demand by itself. Related impacts are less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐

Less Than Significant Impact.

Construction activities associated with the proposed Project are not expected to generate substantial amounts of solid waste. The existing steel pipes at the three proposed Project locations would be abandoned in place and would not need to be recycled or disposed of. Solid waste would only be generated as a result of grubbing, and/or trenching for new siphon installation. The relatively minimal amount of solid waste generated would not exceed the capacity of local infrastructure/landfills and would not impair the attainment of solid waste reduction goals. Related impacts are less than significant.

Would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Less Than Significant Impact.

The California Integrated Waste Management (CIWM) Act requires every county to adopt an Integrated Waste Management Plan that describes county objectives, policies, and programs relative to waste disposal, management, sources reduction, and recycling. Placer County has implemented a county-wide solid waste and recycling program and policy that is consistent with the CIWM Act. The disposal of solid

waste due to construction activities will comply with all federal, state, and local statues and regulations. Impacts to solid waste statues and regulations will be less than significant.

4.19.3 Mitigation Measures

No significant impacts were identified and no mitigation measures are required.

4.20 Wildfire

4.20.1 Environmental Setting

Wildland and urban (structural) fire hazards in Placer County potentially threaten lives, property, and natural resources. Wildland fires result in the loss of commercial timber, may increase erosion on steep slopes, and degrade water quality in reservoirs.

There are 26 local fire districts providing structural and wildland fire protection in the county. Placer County contracts with CAL FIRE to provide structural and wildland fire protection to areas in the western County, along the I-80 corridor between Bowman Road and Emigrant Gap, and around Truckee.

Inadequate water supply infrastructure and water pressure, delayed response times, insufficient fire stations, inadequate signing, narrow roads, and dead-end roads all contribute to losses as a result of fires. Individual fire districts generally mandate adherence to the construction standards in the Uniform Building Code and/or the Uniform Fire Code or impose their own more stringent standards.

4.20.2 Regulatory Setting

The Placer County General Plan Section 8 Health and Safety Element (2021c) identifies goals and polices addressing Fire Hazard. Below are the applicable wildfire goals policies:

Goal 8.C.1: To minimize the risk of loss of life, injury, and damage to property and watershed resources resulting from unwanted fires.

Policy 8.C.1.1. The County shall require that new development meet State, County, and local fire district standards for fire protection, including the California Building Standards Code, the International Wildland-Urban Interface Code, and the Placer County Municipal Code as applicable.

Policy 8.C.1.2. The County shall refer applicants of development projects in the unincorporated county to the appropriate local fire agencies for review for compliance with fire safety standards. If dual responsibility exists, then both agencies shall review and comment relative to their area of responsibility. If standards are different or conflicting, the more stringent standards shall be applied. For new development located within high fire hazard areas, the County shall ensure that the local fire agency(s) fire safety requirements are incorporated into the project's design prior to implementation, in order

to minimize the risk from fire hazards. (Addresses California Government Code Section 65302 (g)(3)(C)(i, iv)).

Policy 8.C.1.5. For existing non-conforming development, the County shall work with property owners to improve or mitigate access, water supply and fire flow, signing, and vegetation clearance to meet current State and/or locally adopted fire safety standards.

Policy 8.C.1.6. The County shall continue to implement State fire safety standards through enforcement of the applicable standards contained in the Placer County Land Development Manual.

As shown on Figure 4.20-1 in SRA maintained on the CAL FIRE website, the proposed Project Site for Orr Creek and Dry Creek are in an area considered to be a moderate risk of a fire severity (CAL FIRE 2023c).

4.20.3 Wildfire (XX) Environmental Checklist and Discussion

Is the Project:	Yes	No
Located in or near state responsibility areas or lands classified as high fire hazard severity zones?	☒	☐

Yes.

The proposed Project is located near (within 0.3 mile) a State Responsibility Area (SRA) classified as High Risk.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

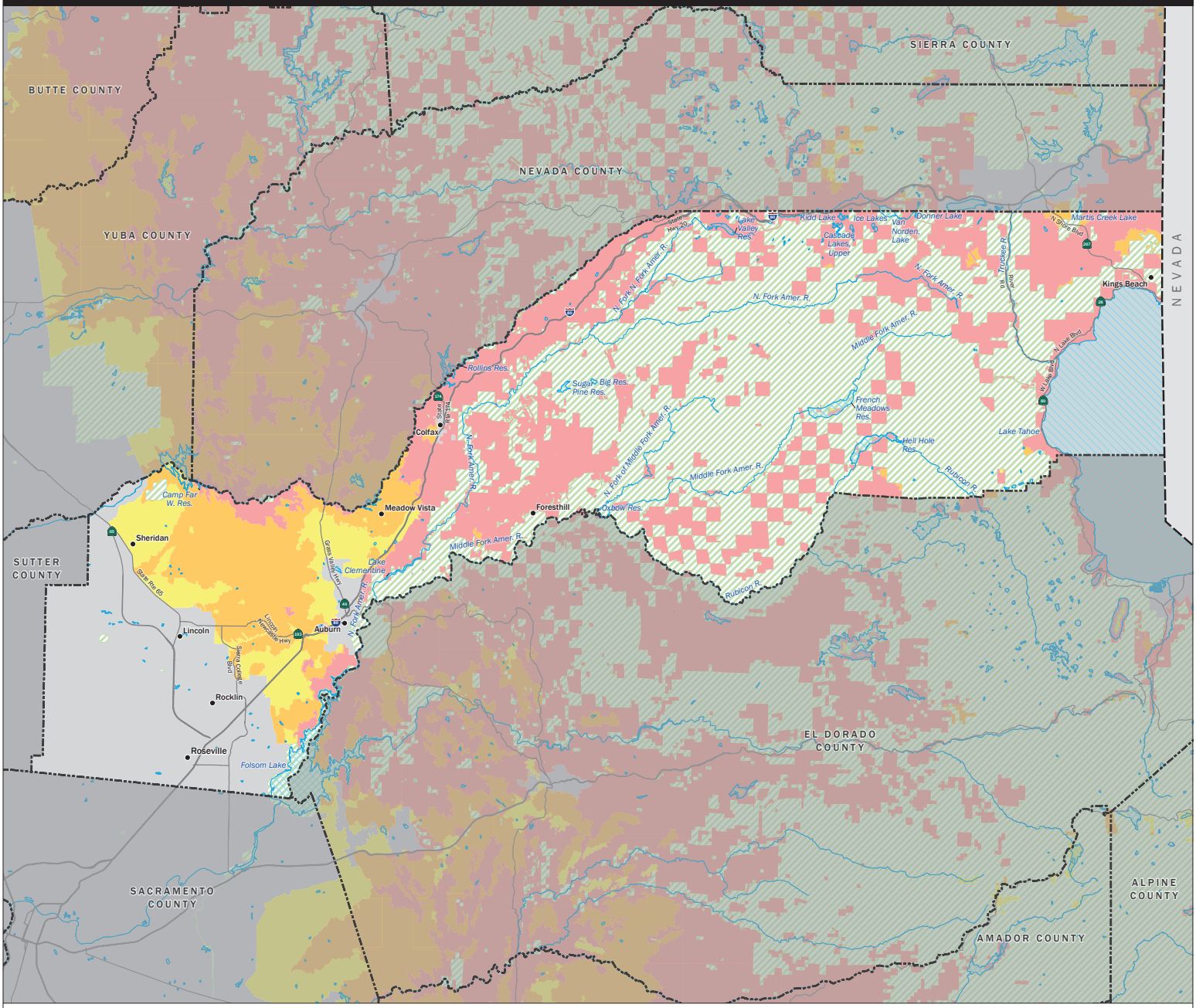
Less Than Significant Impact

The proposed Project is expected to require temporary lane closures during construction, including on Education Street and State Highway 49 during installation of the Rock Creek Siphon. This could result in potential impacts to emergency response and/or evacuation plans. However, as discussed in section 2.2.2.4 Construction Best Management Practices, any temporary lane closures would be conducted consistent with BMP-7: Prepare and Implement a Construction Traffic Management Plan. The Traffic Management Plan prepared for the Project would ensure provisions of applicable emergency response and/or evacuation plans are protected. Related impacts are less than significant.

PLACER COUNTY

State Responsibility Area Fire Hazard Severity Zones

June 15, 2023



Fire Hazard Severity Zones in State Responsibility Area (SRA)

Very High	235,071 Acres	
High	78,994 Acres	
Moderate	43,574 Acres	

Fire Protection Responsibility Areas (non-SRA)

- Federal Responsibility Area (FRA)
- Local Responsibility Area (LRA)
- Waterbody

0 5 10 15 Miles

0 5 10 15 20 25 Km

Projection: NAD 83 California Teale Albers
Scale: 1:152,000 at 36° x 48°

Public Resources Code 4201-4204 directs the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA) based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread. These zones, referred to as Fire Hazard Severity Zones (FHSZ), classify a wildland zone as Moderate, High, or Very High fire hazard based on the average hazard across the area included in the zone.

Access PDF versions of the maps at **https://osfm.fire.ca.gov/fhsz-maps**. For more information, please visit the Frequently Asked Questions document for the 2023 Fire Hazard Severity Zones at **https://osfm.fire.ca.gov/fhsz** or scan the QR code at right. If you have further questions, please call 916-633-7655 or email **FHSZcomments@fire.ca.gov**.

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ENVIRONMENTAL CONSULTANTS

Figure 4.20-1. Fire Hazard Severity Zones in SRA

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from, a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

Less Than Significant Impact

The Orr Creek siphon and Dry Creek siphon are both located in an SRA classified as Moderate, however, the Project is limited to the installation of new siphons alongside the existing siphons that will be abandoned in place. All replacement siphons for the Orr Creek Siphon and Dry Creek Siphon would be located within NID's existing 40-foot right-of-way easement that extends 20 feet on either side of the existing siphon centerlines. The Rock Creek siphon is not within an SRA classified zone. The proposed Rock Creek siphon would not follow the existing siphon alignment, but rather primarily follows existing and future road right-of-way to avoid conflict with existing structures. The proposed Project does not exacerbate any existing conditions by the addition of structures, machinery, people, or recreational opportunities that would encourage the use of flammable materials or create situations that could lead to increased fire risk. In addition, the proposed siphons would be entirely underground. Furthermore, as discussed in Project Description Section 2.2.2.4 Construction Best Management Practices, NID would implement BMP-6 which requires preparation and implementation of a Fire Suppression and Control Plan. This plan would include requirements for onsite extinguishers; roles and responsibilities of NID and the contractor; specification for fire suppression equipment and other critical fire prevention and suppression items. Therefore, the proposed Project would not exacerbate wildfire risks and impacts would be less than significant.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

No Impact

Although the proposed Project is located in an SRA classified as Moderate, the proposed Project does not exacerbate an existing condition by the addition of structures, machinery, people, or recreational opportunities that would encourage the use of flammable materials or create situations that could lead to increased fire risk. The proposed Project would increase available raw water delivery consistent with the District's Master Plan and would be entirely underground. Implementation of the proposed Project would not require installation or maintenance of any associated infrastructure that may result in temporary or ongoing impacts to the environment. The proposed Project would also not expose people or structures to significant risks. There would be no impact.

4.20.4 Mitigation Measures

No significant impacts were identified, and no mitigation measures are required.

4.21 Mandatory Findings of Significance

4.21.1 Mandatory Findings of Significance (XXI) Environmental Checklist and Discussion

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

Less Than Significant Impact With Mitigation Incorporated

As a siphon replacement project, most proposed improvements would be installed below ground. As a result, Project impacts are primarily temporary and related to vegetation clearing and required trenching for pipe placement. While the proposed Project would not result in operational impacts, construction activities would result in potential impacts to sensitive species and/or their habitat. However, as discussed in Section 4.4 Biological Resources, implementation of Mitigation Measures BIO-1 through BIO-9 would be required. These measures would ensure preconstruction surveys for sensitive plant and wildlife species are conducted (including preconstruction bird and bat nesting surveys) and consultation with regulatory agencies are completed as necessary to identify and ensure appropriate protections. Mitigation measures also require that the Project obtain appropriate state and federal permits for impacts to aquatic resources (including wetlands) and riparian habitat, appropriate restoration of all temporarily disturbed areas is

completed, and that the Project comply with the Placer County Tree Preservation Article. These measures would ensure biological resource impacts are reduced to less than significant with mitigation incorporated.

As indicated in Section 4.5 Cultural Resources, and Section 4.18, Tribal Cultural Resources, the Project is expected to avoid direct impacts to known cultural resources. Further, implementation of Mitigation Measure CUL-1 would ensure potential impacts to unknown onsite cultural resources are protected. As discussed in Mitigation Measure CUL-1, should any cultural resources or human remains be encountered, construction activities would be halted, and a professional archaeologist consulted. Similarly, implementation of Mitigation Measure PALEO-1 would ensure potential paleontological resource impacts are mitigated to less than significant ensuring the Project doesn't eliminate important examples of the major periods of California history or prehistory.

With the above mitigation measures, the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory would be less than significant with mitigation incorporated.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒

No Impact

All Project impacts were found to be less than significant (including air quality and greenhouse gas), or less than significant with mitigation incorporated. Mitigation measures are required for those special status plant and wildlife species and sensitive habitats identified in response a) above. These measures, combined with Mitigation Measures CUL-1 and PALEO-1, would ensure the Project results in no cumulative impact.

Does the Project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Less Than Significant Impact

Potential impacts to human beings include an increase in ambient noise and air emissions including PM (dust) during construction. These impacts were found to be temporary and less than significant. Implementation of the Project's Mitigation Monitoring Program will ensure compliance with all identified mitigation measures.

Based on analysis contained in this initial study, and considering most Project improvements would be underground and result in no operational impact, no significant direct or indirect impacts to human beings would occur. Therefore, Project construction and operation would not result in any substantial adverse effects on human beings and related impacts are less than significant.

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ECORP Consulting, Inc. February 2024

APPENDIX A

Rock Creek Siphon Alignment Aerial


Rock Creek - Inlet to Shale
Legend
DryCreek Existing
Shale Ridge
Google Earth
N
100 ft

Rock Creek Siphon

Replacement Alignment
Btwn Shale Ridge & Locksley Lane

Shale Ridge

Legend

y Mini-Storage

12075 Locksley Lane...

Google Earth

Locksley Lane

200 ft

N

Rock Creek Siphon

Replacement Alignment
Btwn Locksley Lane & Quartz

Legend

Locksley Lane

Schultz Tire & Auto Service

Proposed
Alignment - County
Land

Rock Creek Self Storage

Quartz Street

N

200 ft


Rock Creek Siphon
Replacement Alignment
Education Street from Hwy 49
to Outlet
Legend
Sutter Auburn Faith Hospital
Sutter Auburn Faith Hospital
Sutter Urgent Care - Auburn
Sutter Visiting Nurse and Hospice
Education St
Raad Al-Shaikh, MD, Orthopaedic Surgeon
Robert E Gilpin CPA
Allison L. McCormick, M. D
Solstice Senior Living at Auburn
Placer ARC - Adult Achievement Center
Rock Creek Elementary School
Cafe Delicia
Google Earth
500 ft
N

APPENDIX B

NID Combie & Ophir 2 & 3 Siphon Replacement Air Quality and Greenhouse Gas Detailed Report
ECORP Consulting, Inc. November 2023

NID Combie & Ophir 2 & 3 Siphon Replacement Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	NID Combie & Ophir 2 & 3 Siphon Replacement
Construction Start Date	6/3/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.30
Precipitation (days)	49.6
Location	38.9629793, -121.0815749
County	Placer-Sacramento
City	Unincorporated
Air District	Placer County APCD
Air Basin	Sacramento Valley
TAZ	456
EDFZ	4
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	0.18	Mile	0.22	0.00	0.00	—	—	Orr Creek Siphon

User Defined Linear	0.63	Mile	0.77	0.00	0.00	—	—	Dry Creek Siphon
User Defined Linear	0.76	Mile	0.92	0.00	0.00	—	—	Rock Creek Siphon

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.14	0.94	9.72	10.4	0.03	0.40	0.72	1.12	0.37	0.19	0.56	—	3,524	3,524	0.08	0.34	5.55	3,633
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.12	0.92	9.96	10.1	0.03	0.40	0.72	1.12	0.37	0.19	0.56	—	3,498	3,498	0.08	0.34	0.14	3,602
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.34	0.28	2.98	3.04	0.01	0.12	0.21	0.33	0.11	0.06	0.17	—	1,056	1,056	0.02	0.10	0.72	1,088
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.06	0.05	0.54	0.56	< 0.005	0.02	0.04	0.06	0.02	0.01	0.03	—	175	175	< 0.005	0.02	0.12	180

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.14	0.94	9.72	10.4	0.03	0.40	0.72	1.12	0.37	0.19	0.56	—	3,524	3,524	0.08	0.34	5.55	3,633
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.12	0.92	9.96	10.1	0.03	0.40	0.72	1.12	0.37	0.19	0.56	—	3,498	3,498	0.08	0.34	0.14	3,602
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.34	0.28	2.98	3.04	0.01	0.12	0.21	0.33	0.11	0.06	0.17	—	1,056	1,056	0.02	0.10	0.72	1,088
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.06	0.05	0.54	0.56	< 0.005	0.02	0.04	0.06	0.02	0.01	0.03	—	175	175	< 0.005	0.02	0.12	180

3. Construction Emissions Details

3.1. Implementation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.83	8.67	0.01	0.37	—	0.37	0.34	—	0.34	—	1,202	1,202	0.05	0.01	—	1,206
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.98	0.82	6.83	8.67	0.01	0.37	—	0.37	0.34	—	0.34	—	1,202	1,202	0.05	0.01	—	1,206
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.25	2.06	2.61	< 0.005	0.11	—	0.11	0.10	—	0.10	—	362	362	0.01	< 0.005	—	364
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.38	0.48	< 0.005	0.02	—	0.02	0.02	—	0.02	—	60.0	60.0	< 0.005	< 0.005	—	60.2
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.05	1.11	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	228	228	< 0.005	0.01	0.89	231

Vendor	0.03	0.02	0.80	0.21	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	580	580	0.01	0.09	1.51	608
Hauling	0.05	0.03	2.04	0.37	0.02	0.03	0.37	0.40	0.03	0.10	0.13	—	1,514	1,514	0.02	0.23	3.15	1,588
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.81	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	201	201	< 0.005	0.01	0.02	204
Vendor	0.03	0.02	0.86	0.21	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	580	580	0.01	0.09	0.04	607
Hauling	0.05	0.03	2.20	0.38	0.02	0.03	0.37	0.40	0.03	0.10	0.13	—	1,515	1,515	0.02	0.23	0.08	1,585
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	62.2	62.2	< 0.005	< 0.005	0.12	63.1
Vendor	0.01	< 0.005	0.25	0.06	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	175	175	< 0.005	0.03	0.20	183
Hauling	0.02	0.01	0.65	0.11	0.01	0.01	0.11	0.12	0.01	0.03	0.04	—	456	456	0.01	0.07	0.41	478
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.3	10.3	< 0.005	< 0.005	0.02	10.4
Vendor	< 0.005	< 0.005	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	28.9	28.9	< 0.005	< 0.005	0.03	30.3
Hauling	< 0.005	< 0.005	0.12	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	75.6	75.6	< 0.005	0.01	0.07	79.1

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequest	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Implementation	Linear, Grubbing & Land Clearing	6/3/2024	11/1/2024	5.00	110	Siphon Replacements

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Implementation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Implementation	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Implementation	Dumpers/Tenders	Diesel	Average	2.00	4.00	16.0	0.38
Implementation	Off-Highway Trucks	Diesel	Average	4.00	4.00	82.0	0.42

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Implementation	—	—	—	—
Implementation	Worker	20.0	14.3	LDA,LDT1,LDT2
Implementation	Vendor	20.0	8.80	HHDT,MHDT
Implementation	Hauling	20.0	20.0	HHDT
Implementation	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Implementation	—	—	1.91	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Linear	0.22	100%
User Defined Linear	0.77	100%

User Defined Linear	0.92	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.8	annual days of extreme heat
Extreme Precipitation	13.7	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	10.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	5	0	0	N/A
Extreme Precipitation	4	0	0	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	0	0	N/A
Flooding	0	0	0	N/A
Drought	0	0	0	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	5	1	1	4
Extreme Precipitation	4	1	1	4
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	1	1	1	2
Flooding	1	1	1	2
Drought	1	1	1	2
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	76.9
AQ-PM	6.12
AQ-DPM	7.53

Drinking Water	23.5
Lead Risk Housing	5.29
Pesticides	31.9
Toxic Releases	4.01
Traffic	31.9
Effect Indicators	—
CleanUp Sites	43.0
Groundwater	17.5
Haz Waste Facilities/Generators	0.00
Impaired Water Bodies	33.2
Solid Waste	43.9
Sensitive Population	—
Asthma	67.4
Cardio-vascular	29.4
Low Birth Weights	79.2
Socioeconomic Factor Indicators	—
Education	12.0
Housing	47.1
Linguistic	0.00
Poverty	28.2
Unemployment	—

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	74.2846144

Employed	64.53227255
Median HI	82.1891441
Education	—
Bachelor's or higher	71.25625561
High school enrollment	100
Preschool enrollment	25.06095214
Transportation	—
Auto Access	84.51174131
Active commuting	31.22032593
Social	—
2-parent households	92.4547671
Voting	99.37123059
Neighborhood	—
Alcohol availability	97.0101373
Park access	14.11523162
Retail density	3.284999358
Supermarket access	2.399589375
Tree canopy	98.83228538
Housing	—
Homeownership	98.24201206
Housing habitability	52.86795842
Low-inc homeowner severe housing cost burden	38.70139869
Low-inc renter severe housing cost burden	1.565507507
Uncrowded housing	80.21301168
Health Outcomes	—
Insured adults	71.87219299
Arthritis	0.0

Asthma ER Admissions	65.7
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	33.6
Cognitively Disabled	60.3
Physically Disabled	25.6
Heart Attack ER Admissions	83.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	89.4
Elderly	6.8
English Speaking	94.4

Foreign-born	4.7
Outdoor Workers	64.8
Climate Change Adaptive Capacity	—
Impervious Surface Cover	98.7
Traffic Density	30.3
Traffic Access	23.0
Other Indices	—
Hardship	23.6
Other Decision Support	—
2016 Voting	99.1

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	19.0
Healthy Places Index Score for Project Location (b)	82.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Updating phases based on available information provided by project applicant.
Construction: Off-Road Equipment	Equipment updated based on information provided by project applicant.
Construction: Trips and VMT	Updating number of trips for project needs.

APPENDIX C

Biological Resource Assessment for the Nevada Irrigation District Combie & Ophir 2 & 3 Siphon Replacement Project
ECORP Consulting, Inc. February 2024

Biological Resources Assessment
for the
Nevada Irrigation District
Combie Ophir 2 & 3 Siphon Replacement Project

Placer County, California

Prepared For:

Nevada Irrigation District

Prepared By:

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

February 2024

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LIST OF ACRONYMS AND ABBREVIATIONS

Term	Definition
°F	Degrees Fahrenheit
ARD	Aquatic Resources Delineation
BCC	Birds of Conservation Concern
BIOS	Biogeographic Information and Observation System
BRA	Biological Resources Assessment
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
DBH	diameter at breast height
DPS	Distinct Population Segment
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HUC	Hydrologic Unit Code
LSAA	Lake or Streambed Alteration Agreement
MBTA	Migratory Bird Treaty Act
MCV	*Manual of California Vegetation Online*
MSL	Mean sea level
NID	Nevada Irrigation District
NMFS	National Marine Fisheries Service
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
OHWM	Ordinary High Water Mark
PCCP	Placer County Conservation Plan
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern

Term	Definition
SWPPP	Storm Water Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WBWG	Western Bat Working Group
WL	Watch List

1.0 INTRODUCTION

ECORP Consulting, Inc. has conducted a Biological Resources Assessment (BRA) at the request of Nevada Irrigation District (NID), for the proposed NID Combie Ophir 2 & 3 Siphon Replacement Project (Project) located in unincorporated North Auburn, Placer County, California. The results of this assessment will support environmental review of the Project in accordance with the California Environmental Quality Act (CEQA) and provide the basis for identifying appropriate measures to lessen or avoid significant impacts to biological resources.

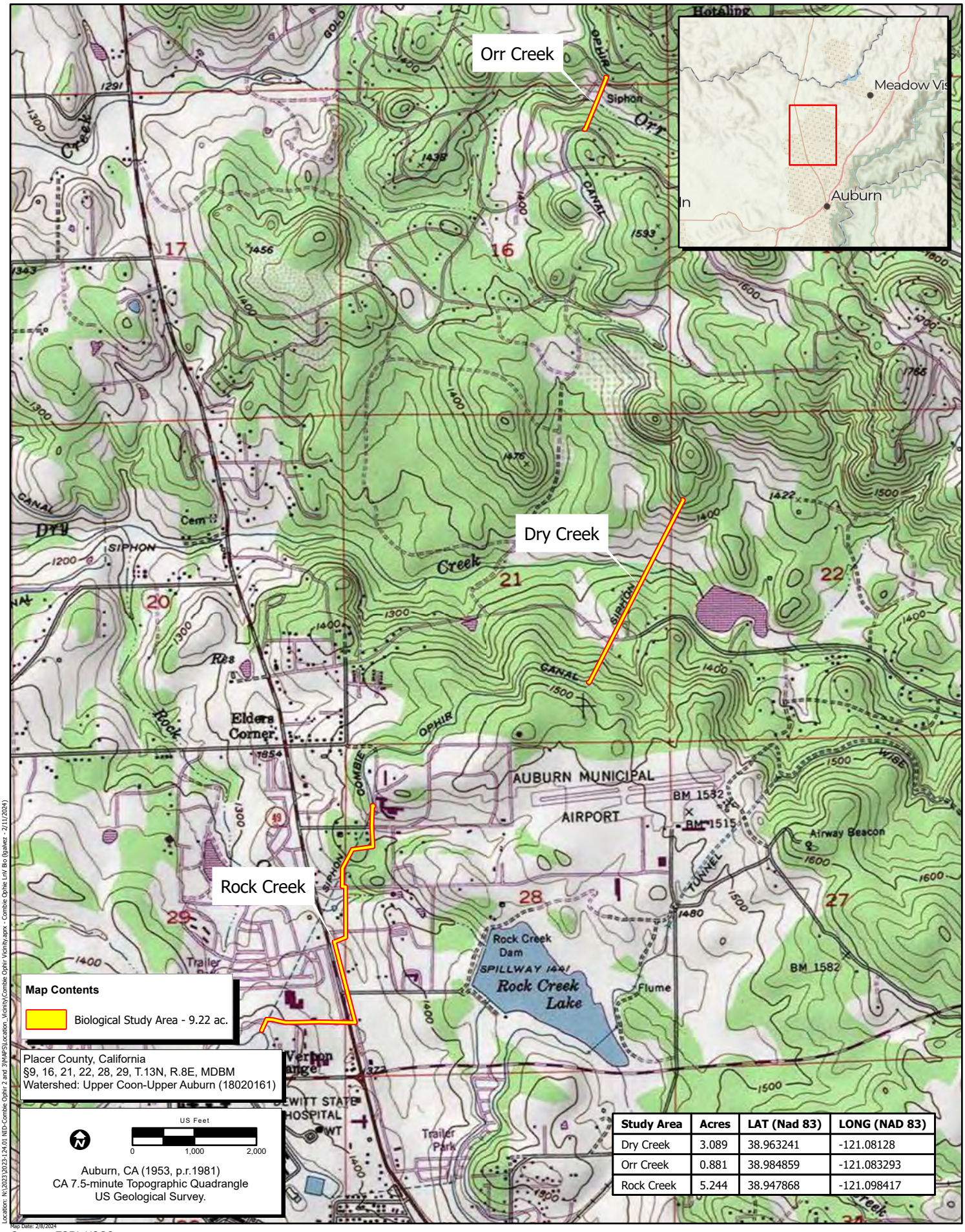
1.1 Project Location and Description

The Project is comprised of three disjunct segments that are generally located east of Highway 49 and north of Bell Road (Figure 1). The Project is a planned replacement of the following three NID owned and operated raw water siphons: The Orr Creek Siphon, Dry Creek Siphon, and Rock Creek Siphon. The Orr Creek Siphon is 945 feet long extending from north of Witt Road to just south of Northgate Circle and crosses Orr Creek. The Dry Creek Siphon is approximately 3,350 feet long extending from near Black Oak Road to near Red Deer Court and crosses Dry Creek. The existing Rock Creek Siphon is approximately 4,000 feet long extending from north of Shale Ridge Road southwest to a crossing of Rock Creek and Highway 49 before continuing through an urbanized area to its terminus just south of Education Drive.

These siphons are each over fifty years old, are nearing the end of their useful life, and may require resizing to address approved future flow needs. With the exception of the Rock Creek Siphon, the Project generally involves the installation/construction of replacement siphons adjacent to existing siphons within existing easements using open trench construction methods. The proposed Rock Creek replacement siphon would require new easements where the proposed siphon alignment deviates from the existing easement.

Where proposed siphon alignments would cross a flowing surface water/creek, approved stream diversion barriers would be installed upstream and downstream of the crossing along with temporary piping along the axis of the stream. Surface flows would be diverted through the temporary piping during culvert construction within the streambed. Following construction of all improvements, the trench alignment surface and all other temporarily disturbed areas would be restored to pre-Project conditions.

A portion of the Rock Creek Siphon is located within the Placer County Conservation Plan (PCCP) area. The PCCP is a regional effort that provides development and infrastructure projects with streamlined federal and state permitting processes while creating a preserve system to protect habitat, open space, and agricultural lands (Placer County 2020). The Project proponent, NID, is eligible to apply for coverage under the PCCP as a "Participating Special Entity," however NID is not a Participating Agency in the PCCP and is not required to obtain Project regulatory approval via the PCCP. NID has chosen not to participate in the PCCP as a Participating Special Entity for this Project. No further discussion of the PCCP is provided in this assessment.



Study Area	Acres	LAT (Nad 83)	LONG (NAD 83)
Dry Creek	3.089	38.963241	-121.08128
Orr Creek	0.881	38.984859	-121.083293
Rock Creek	5.244	38.947868	-121.098417

Sources: ESRI, USGS

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Location and Vicinity

2023-124.01 NID-Combie Ophir 2 and 3

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. The approximately 9.22-acre BSA corresponds to a portion of Sections 9, 16, 21, 22, 28, and 29, Township 13 North, Range 8 East (Mount Diablo Base and Meridian) of the "Auburn, California" 7.5-minute quadrangle (Figure 1; U.S. Geological Survey [USGS] 1953 [photo revised 1981]). The BSA is located within the Upper Coon-Upper Auburn Watershed (Hydrologic Unit Code [HUC] #18020161, USGS 2023).

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 included on the CDFW Watch List;
- 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 [CRPR] 1 and 2), plants listed by CNPS as species about which more information is needed to determine their status (CRPR 3), and plants of limited distribution (CRPR 4);
- are plants listed as rare under the California Native Plant Protection Act (California Fish and Game Code, 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 (NMFS). 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, 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. The USFWS may issue permits to qualified applicants as authorized by the MBTA 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 rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas:

> "…that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a

prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3 7b).

The U.S. Environmental Protection Agency also has authority over wetlands and may override a USACE permit.

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

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 Sections 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 Sections 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 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; or
- 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 Sections 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 Sections 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. CDFW may suggest additional protective measures during their review. 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 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 1 or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). 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 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of Waste Discharge Requirements for these activities.

2.2.3 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.

2.2.3.1 CEQA Significance Criteria

Sections 15063-15065 of the CEQA Guidelines address how an impact is identified as significant. Generally, impacts to listed (i.e., 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 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.

2.2.3.2 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 the 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.

2.2.3.3 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.

2.2.3.4 Watch List Species

The CDFW maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Depending on the policy of the lead agency, projects that result in substantial impacts to species on the Watch List (WL) may be considered significant under CEQA.

2.2.3.5 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, academic, 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 (greater than 80 percent of occurrences threatened/high degree and immediacy of threat)
- Threat Rank 0.2 – Moderately threatened in California (20 to 80 percent occurrences threatened/moderate degree and immediacy of threat)
- Threat Rank 0.3 – Not very threatened in California (less than 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.

2.2.3.6 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* (MCV; 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.

2.2.3.7 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 California Department of Transportation 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.

2.2.4 Placer County Woodland Conservation (Chapter 19.50)

The Placer County Woodland Conservation (Chapter 19.50; Woodland Conservation Article) requires tree permits for all development activities (except those that qualify under an exemption) within the protected zone of any protected tree on public or private land. The Tree Preservation Article does not allow for any person, firm, corporation, or county agency to harm, destroy, kill, or remove any protected tree unless authorized by a tree permit or as permitted pursuant to approval of a discretionary project.

The Woodland Conservation Article is applicable to all landmark trees, riparian zone trees, and certain commercial firewood operations, except as exempted, as well as native trees with a single main stem or trunk at least 6 inches diameter at breast height (DBH), or a multiple trunk with an aggregate of at least 10 inches DBH. All oak species (*Quercus* sp.) will be considered a tree when a single main stem is 5 inches DBH or larger. Foothill pine (*Pinus sabiniana*) is exempt from this article. In addition, certain plants commonly found as "brush," such as manzanita, are not considered to be trees in this article regardless of size.

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, topographic mapping, soil survey mapping available from the Natural Resources Conservation Service (NRCS) *Web Soil Survey*, USFWS National Wetlands Inventory (NWI) mapping, USFWS Critical Habitat Mapper, NMFS Essential Fish Habitat Mapper, VegCAMP vegetation data (CDFW 2018b), and other relevant literature as cited throughout this document. ECORP reviewed the following resources to identify special-status plant and wildlife species that have been documented in or near the BSA:

- CDFW's CNDDB data for the "Auburn California" 7.5-minute quadrangle and the surrounding eight quadrangles (CDFW 2023e);
- CNPS Rare Plant Inventory data for the "Auburn, California" 7.5-minute quadrangle and the surrounding eight quadrangles (CNPS 2023a);
- USFWS Information for Planning and Consultation (IPaC) Resource Report List for the BSA (USFWS 2023b);
- NMFS Resources data for the "Auburn, California" 7.5-minute quadrangle (National Oceanic and Atmospheric Administration [NOAA] 2016).

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 4.6 based on available information concerning species habitat requirements and distribution, occurrence data, and the findings of the site reconnaissance.

3.2 Field Surveys

3.2.1 Site Reconnaissance

ECORP biologist Daniel Wong conducted the site reconnaissance visit on November 2, 2023. The biologist visually assessed the BSA while walking meandering transects through all portions of the site, using binoculars to scan inaccessible areas. The biologist collected the following biological resource information:

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

The biologist qualitatively assessed and mapped vegetation communities based on dominant plant composition. Vegetation community classification was based on the classification systems presented in the MCV, paying special attention 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.

3.2.2 Aquatic Resources Delineation

ECORP biologists Daniel Wong and Carmen David performed an Aquatic Resources Delineation (ARD) on November 2 and 21, 2023 in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). Non-wetland waters were identified in the field according to *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b), where applicable.

4.0 RESULTS

4.1 Site Characteristics and Land Use

The BSA is located within relatively flat terrain to gently rolling hills and relatively steep hillsides in a rural area. The BSA is situated at an elevational range of approximately 1,300 to 1,480 feet above mean sea level (MSL) in the Northern Sierra Nevada Foothills District in the Sierra Navada Region of the California floristic province (Jepson eFlora 2023). The average winter low temperature in the vicinity of the BSA is 38.6 degrees Fahrenheit (˚F) and the average summer high temperature is 89.1˚F. Average annual precipitation is approximately 37.15 inches at the Auburn, California station, which is located approximately 3 miles from the BSA (NOAA 2023).

The BSA is currently occupied by residential structures, driveways, roads, parking lots, and undeveloped lands. Undeveloped portions of the BSA primarily include annual grassland, coyote brush scrub, Goodding's black willow riparian woodland, gray pine woodland, and urban land cover types. Vegetation communities and plant species composition are described in further detail in Section 4.3.

Land uses surrounding the BSA include rural residential and traditional single-family subdivisions with scattered supporting commercial, light industrial, and recreation.

Representative photographs of the BSA are provided in Appendix B.

4.2 Soils and Geology

ECORP staff obtained soil survey mapping for the BSA from the NRCS *Web Soil Survey* (Figure 2; NRCS 2023b). Table 2 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 volcanic soil material.

Table 1. Soil Series Mapped in the Biological Study Area[1]

Map Unit Symbol	Map Unit Name	Rating	Hydric Components and Landforms[2]
114	Auburn silt loam, 2 to 15 percent slopes	residuum weathered from metamorphic rock	None
115	Auburn-Argonaut complex, 2 to 15 percent slopes	residuum weathered from metamorphic rock	Unnamed (fan remnants)
116	Auburn-Argonaut-Rock outcrop complex, 2 to 15 percent slopes	residuum weathered from metamorphic rock	Unnamed (drainageways)
118	Auburn-Sobrante silt loams, 15 to 30 percent slopes	residuum weathered from metamorphic rock	None
119	Auburn-Sobrante-Rock outcrop complex, 2 to 30 percent slopes	residuum weathered from metamorphic rock	None
120	Auburn-Sobrante-Rock outcrop complex, 30 to 50 percent slopes	residuum weathered from metamorphic rock	None
124	Boomer-Rock outcrop complex, 5 to 30 percent slopes	colluvium and/or residuum weathered from metavolcanics	None
148	Henneke-Rock outcrop complex, 5 to 50 percent slopes	residuum weathered from serpentinite	None
196	Xerorthents, cut and fill areas	mine spoil or earthy fill	None
197	Xerorthents, placer areas	mine spoil or earthy fill	Unnamed (drainageways)

[1]Source: Natural Resources Conservation Service (NRCS) 2023b
[2]Source: NRCS 2023a

Additionally, soils derived from a geological unit containing ultramafic rocks, mostly serpentinite with minor gabbro (Ultramafic rocks, chiefly Mesozoic, unit 2 [Western Sierra Nevada and Klamath Mountains]) are mapped within the BSA (Horton 2017; Jennings et al. 1977, 2010).

4.3 Vegetation Communities and Land Cover Types

The following sections describe vegetation communities and land cover types within the BSA as observed during the site reconnaissance. A full list of plants observed onsite can be found in Appendix C. The approximate extent of vegetation communities and land cover types are depicted on Figure 3.

Map Features

Orr Creek Biological Study Area

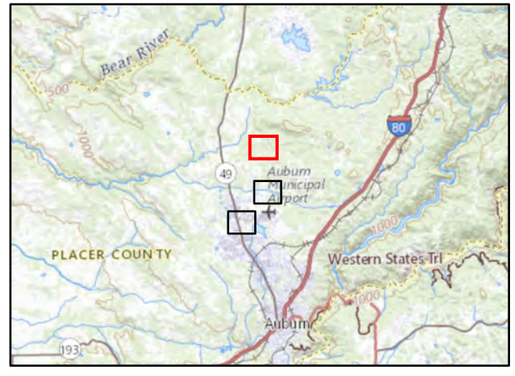
Series Designation - Series Description

119 - Auburn-Sobrante-Rock outcrop complex, 2 to 30 percent slopes

124 - Boomer - Rock outcrop complex, 5 to 30 percent slopes

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Placer County, CA

Sources: Maxar (2022)



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Map Date: 2/11/2024

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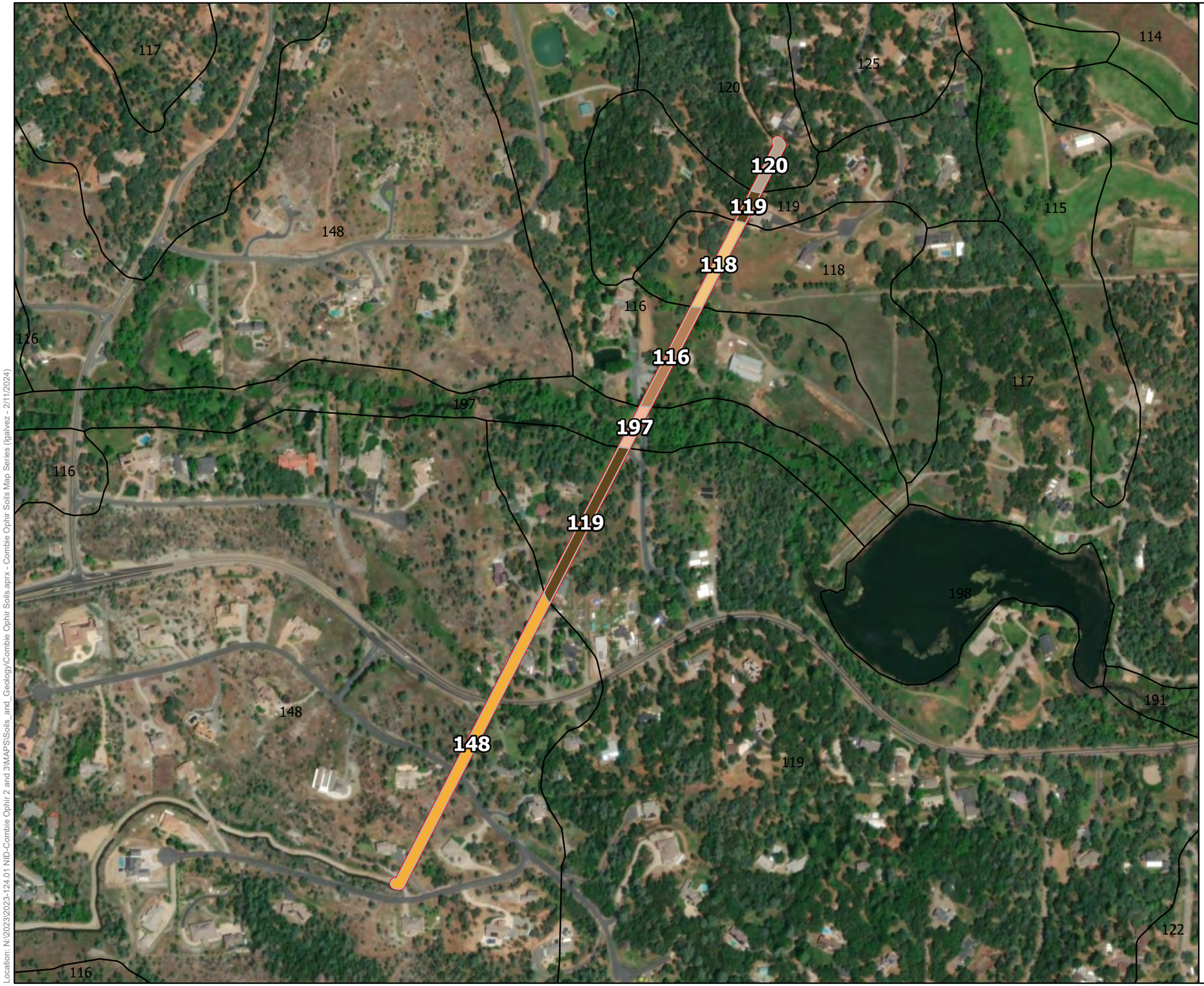
Scale in Feet
0 400

Figure 2. Natural Resources Conservation Service Soil Types
Sheet 1 of 3
2023-124.01 NID-Combie Ophir 2 and 3



Map Features

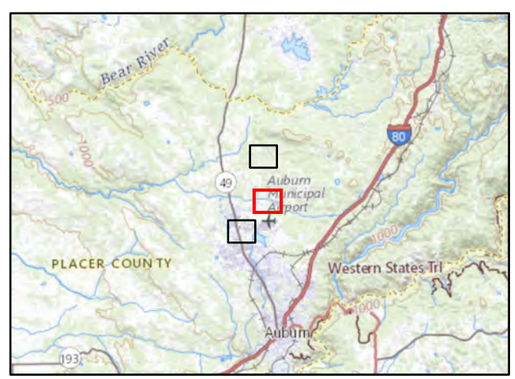
- Dry Creek Biological Study Area

Series Designation - Series Description

- 116 - Auburn-Argonaut-Rock outcrop complex, 2 to 15 percent slopes
- 118 - Auburn-Sobrante silt loams, 15 to 30 percent slopes
- 119 - Auburn-Sobrante-Rock outcrop complex, 2 to 30 percent slopes
- 120 - Auburn-Sobrante-Rock outcrop complex, 30 to 50 percent slopes
- 148 - Henneke-Rock outcrop complex, 5 to 50 percent slopes
- 197 - Xerorthents, placer areas

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Placer County, CA

Sources: Maxar (2022)



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Map Date: 2/11/2024

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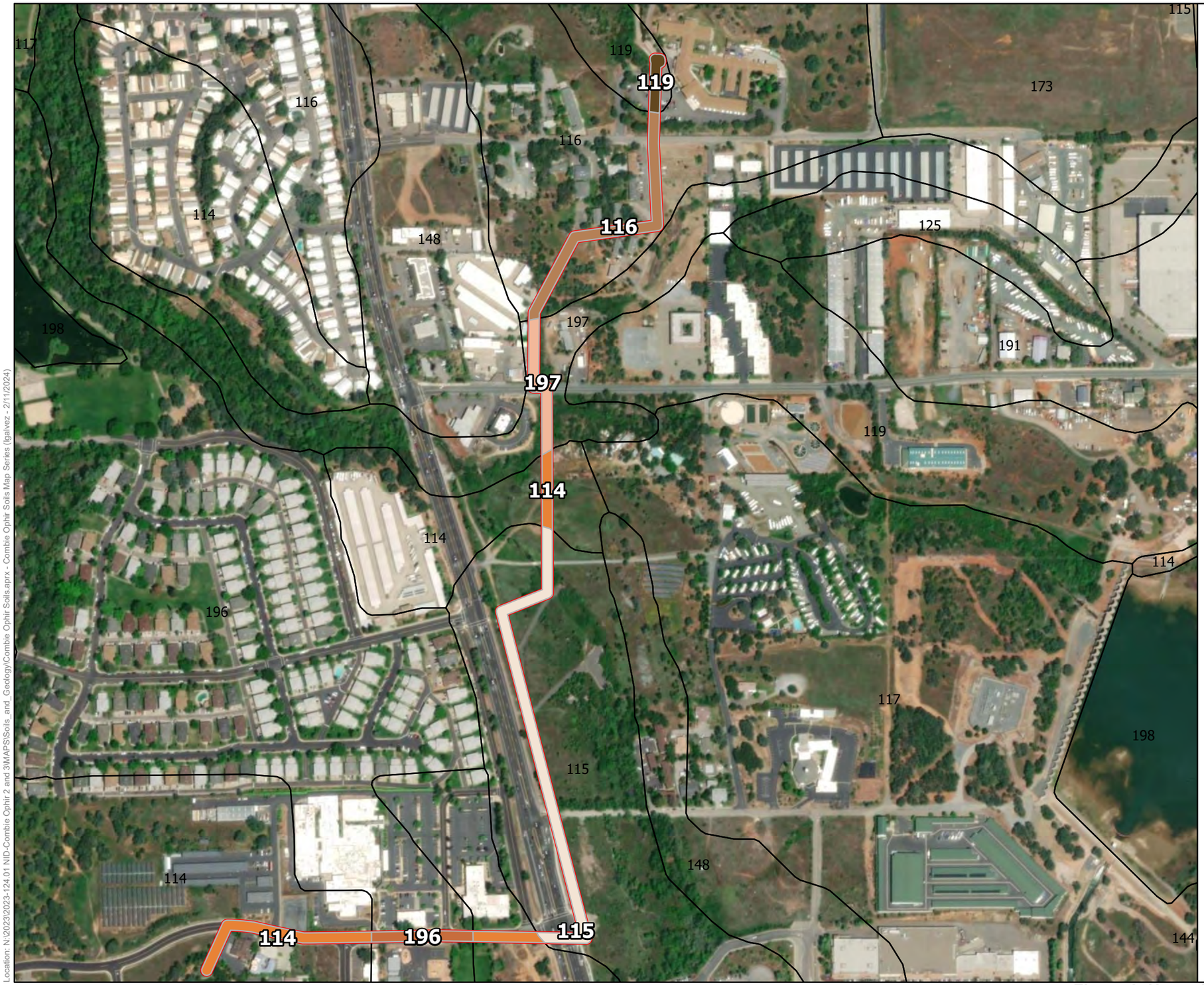
Scale in Feet
0 400

Figure 2. Natural Resources Conservation Service Soil Types
Sheet 2 of 3
2023-124.01 NID-Combie Ophir 2 and 3



Map Features

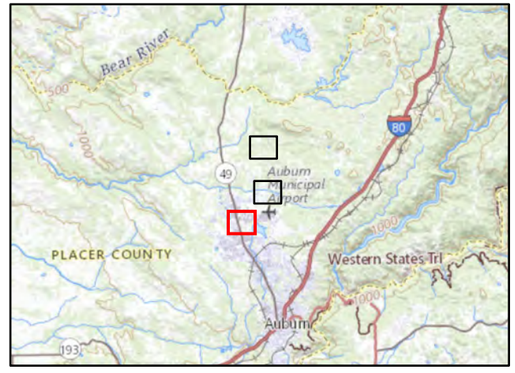
Rock Creek Biological Study Area

Series Designation - Series Description

- 114 - Auburn silt loam, 2 to 15 percent slopes
- 115 - Auburn-Argonaut complex, 2 to 15 percent slopes
- 116 - Auburn-Argonaut-Rock outcrop complex, 2 to 15 percent slopes
- 119 - Auburn-Sobrante-Rock outcrop complex, 2 to 30 percent slopes
- 196 - Xerorthents, cut and fill areas
- 197 - Xerorthents, placer areas

Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Placer County, CA

Sources: Maxar (2022)



Location: N:\2023\2023-124.01 NID-Combie Ophir 2 and 3\MAPS\Soils_and_Geology\Combie Ophir Soils aprx - Combie Ophir Soils Map Series (lgalvez - 2/11/2024)

Map Date: 2/11/2024

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Scale in Feet
0 400

Figure 2. Natural Resources Conservation Service Soil Types
Sheet 3 of 3
2023-124.01 NID-Combie Ophir 2 and 3

4.3.1 Annual Grassland

The annual grassland community is found in the central portion of the Rock Creek Siphon segment. The annual grassland in the BSA is dominated by nonnative annual grasses including ripgut brome (*Bromus diandrus*) and soft brome (*Bromus hordeaceus*). Yellow star-thistle (*Centaurea solstitialis*) is the dominant forb within the grassland.

The annual grasslands can be characterized as the *Avena* spp. – *Bromus* spp. Herbaceous Semi-Natural Alliance (CNPS 2023b). Semi-natural alliances are strongly dominated by nonnative plants that have become naturalized in the State, do not have state rarity rankings, and are not considered sensitive natural communities.

4.3.2 Coyote Brush Scrub

The coyote brush scrub community is found in the southern portion of the Rock Creek Siphon segment. Coyote brush (*Baccharis pilularis*) is dominant in the shrub layer. Trees are found at low cover with the most prevalent being interior live oak (*Quercus wislizeni*) and Fremont's cottonwood (*Populus fremontii*). The herbaceous understory is composed of herbaceous vegetation characteristic of the annual grassland found onsite.

The coyote brush scrub community in the BSA can be characterized as the *Baccharis pilularis* Shrubland Alliance as classified by the MCV. This alliance has a state rarity ranking of S5 and is not considered a sensitive natural community (CNPS 2023b). The coyote brush scrub within the BSA does not resemble any known sensitive associations (CDFW 2023d).

4.3.3 Goodding's Black Willow Riparian Woodland

The Goodding's black willow riparian woodland community is found in central portions of the Orr Creek Siphon and Rock Creek Siphon segments within the BSA. This community is dominated by Goodding's black willow (*Salix gooddingii*) with red willow (*Salix laevigata*) present at lower cover in the canopy. Himalayan blackberry (*Rubus armeniacus*) is the dominant shrub.

The Goodding's black willow riparian woodland community in the BSA most resembles the *Salix gooddingii - Salix laevigata* Forest & Woodland Alliance as characterized by the MCV. The alliance has a state rarity ranking of S3 and is considered a sensitive natural community (CNPS 2023b).

4.3.4 Gray Pine Woodland

The gray pine woodland community is scattered throughout the Orr Creek Siphon and Rock Creek Siphon segments. This community is comprised of gray pine (*Pinus sabiniana*) with interior live oak and blue oak (*Quercus douglasii*) present in the canopy at lower cover. The herbaceous understory resembles the annual grassland within the BSA.

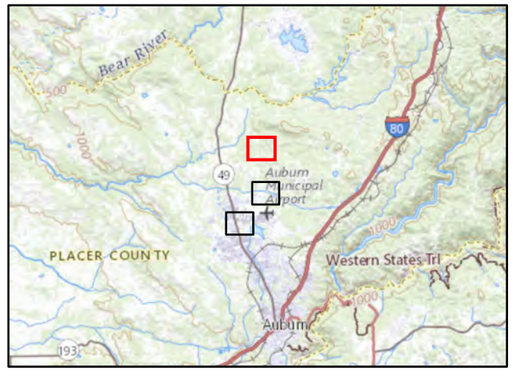
Map Features

- Orr Creek Biological Study Area

Vegetation Communities

- Goodding's Black Willow Riparian Woodland
- Gray Pine Woodland
- Urban

Sources: Maxar (2022)



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Map Date: 2/11/2024

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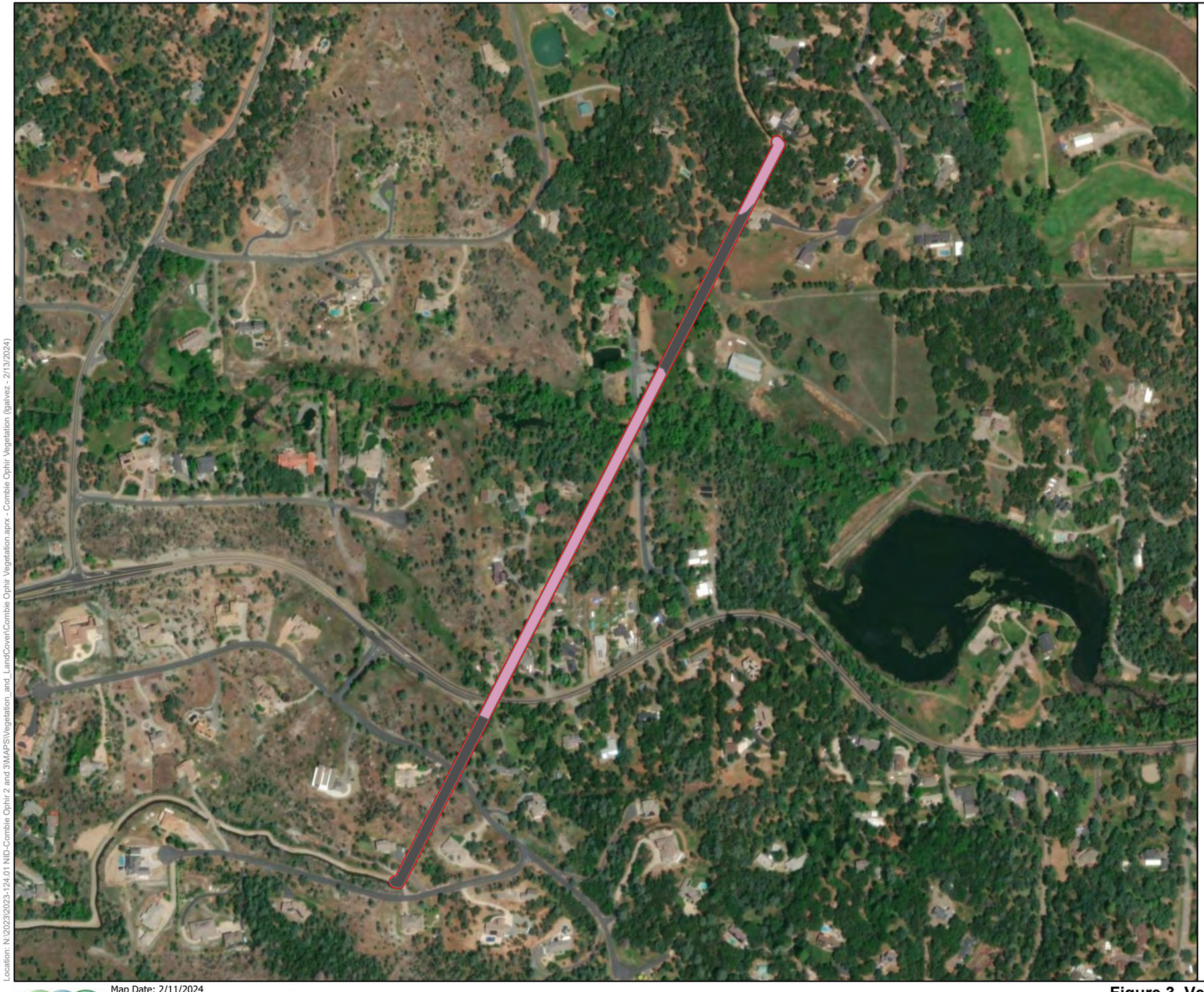
Scale in Feet
0 400

Figure 3. Vegetation Communities and Land Cover Types
Sheet 1 of 3
2023-124.01 NID-Combie Ophir 2 and 3



Map Features

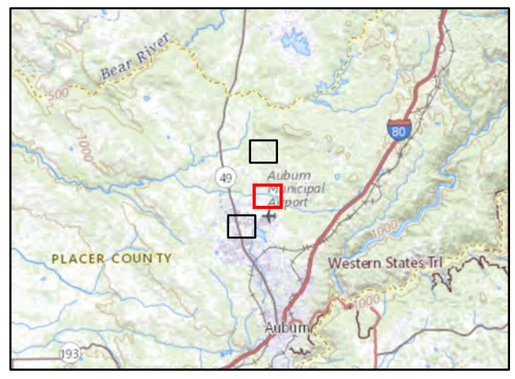
Dry Creek Biological Study Area

Vegetation Communities

Gray Pine Woodland

Urban

Sources: Maxar (2022)



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Map Date: 2/11/2024

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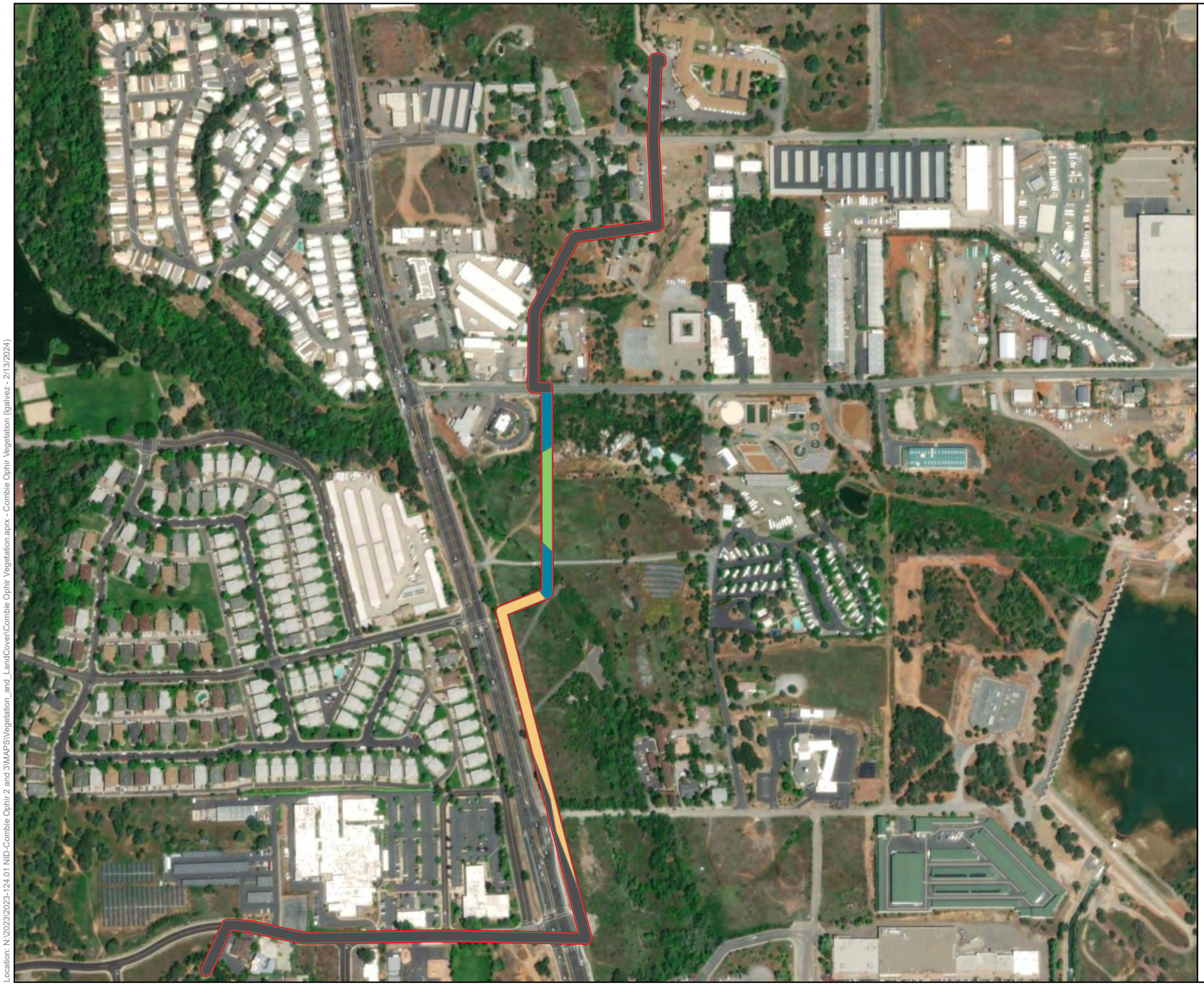
Scale in Feet
0 400

Figure 3. Vegetation Communities and Land Cover Types
Sheet 2 of 3
2023-124.01 NID-Combie Ophir 2 and 3



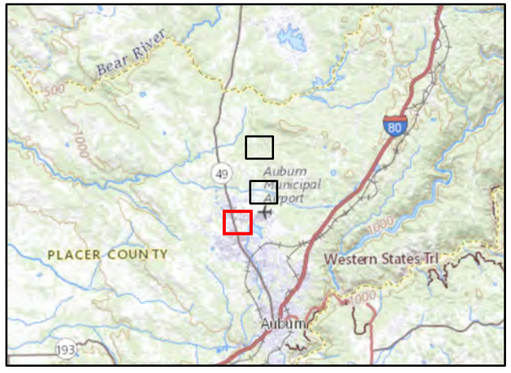
Map Features

- Rock Creek Biological Study Area

Vegetation Communities

- Annual Grassland
- Coyote Brush Scrub
- Goodding's Black Willow Riparian Woodland
- Urban

Sources: Maxar (2022)



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Map Date: 2/11/2024

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Scale in Feet
0 400

Figure 3. Vegetation Communities and Land Cover Types
Sheet 3 of 3
2023-124.01 NID-Combie Ophir 2 and 3

The gray pine woodland community in the BSA most resembles the *Pinus sabiniana* Woodland Alliance as characterized by the MCV. The alliance has a state rarity ranking of S4 and is not considered a sensitive natural community (CNPS 2023b). The gray pine woodland within the BSA does not resemble any known sensitive associations (CDFW 2023d).

4.3.5 Urban

The urban land cover type is scattered throughout the BSA and is composed of roads, driveways, parking lots, and residential structures. These areas are either devoid of vegetation or dominated by nonnative ruderal herbaceous species similar in composition to the annual grassland found within the BSA. The urban land cover type is not considered a sensitive natural community.

4.4 Aquatic Resources

An ARD was conducted for the BSA (ECORP 2024). A total of 0.173 acre of aquatic resources were mapped within the BSA. The aquatic features identified onsite include seeps, canals, intermittent drainages, and creeks (Figure 4). These features are further described in the following sections.

4.4.1 Seep

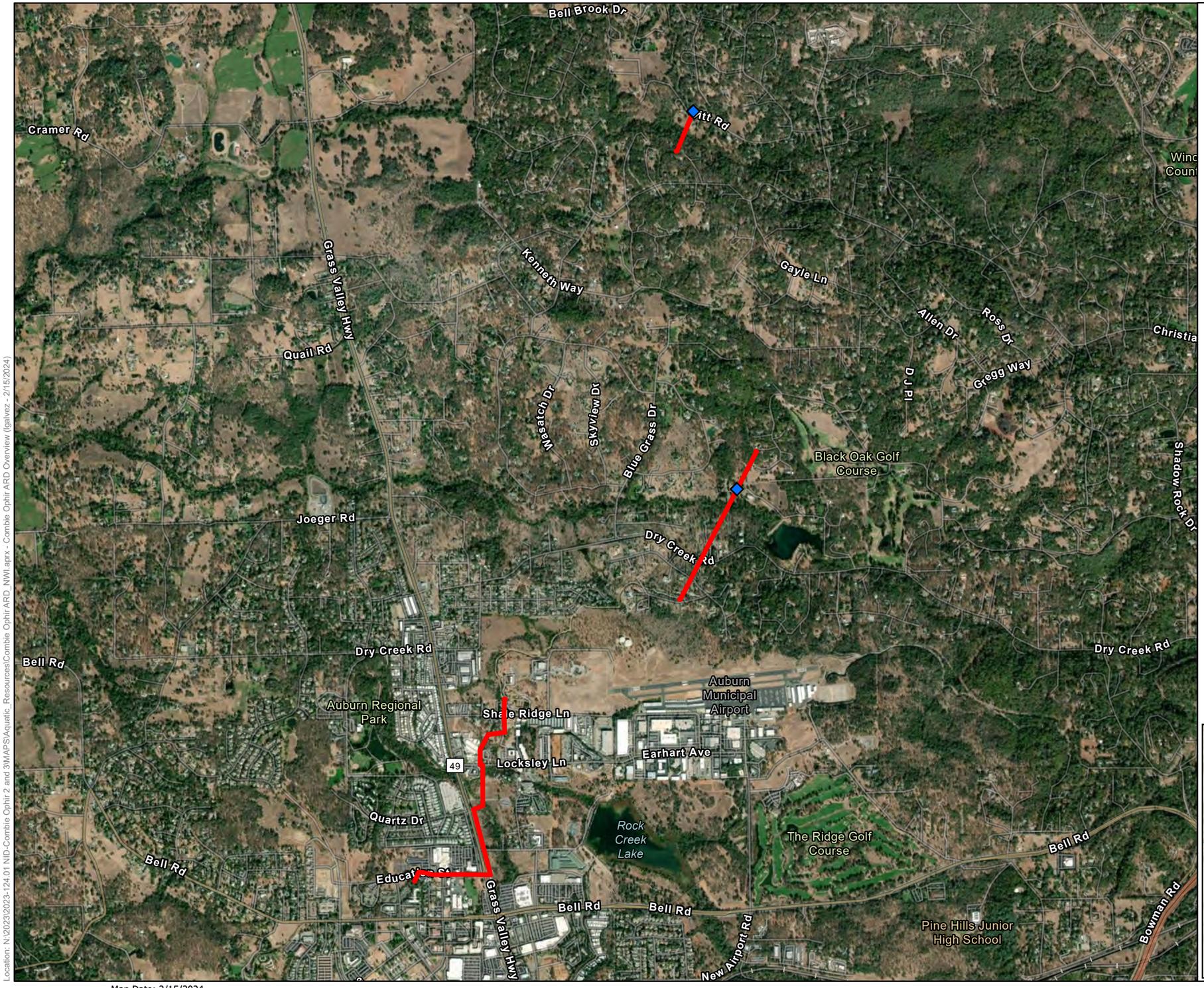
A seep is an area where groundwater reaches the surface through porous soil or cracks in rock. Seeps may form small pools on level or gently rolling terrain, but generally result in seasonal or perennial soil saturation with minimal standing water and gentle flows in hilly to mountainous terrain. There are two seeps located within the BSA. The seep located in the Orr Creek Siphon segment is immediately below an NID canal forming from a possible leak in the canal. The other seep is located in the Dry Creek Siphon segment and has been artificially channelized to drain into Dry Creek. Dominant plants species identified within the seeps include deergrass (*Muhlenbergia rigens*), tall flatsedge (*Cyperus eragrostis*), and water cress (*Nasturtium officinale*).

4.4.2 Canal

Canals are constructed channels used for water conveyance. Canals onsite are portions of the Combie Ophir Canal. Within the BSA, the portions of the canal are both earthen and concrete lined and unvegetated.

4.4.3 Intermittent Drainage

Intermittent drainages are linear features that exhibit a bed and bank, OHWM, and flow for weeks or months following significant precipitation events. The intermittent drainages located within the BSA originate from Orr Creek and are located at the low point of the Orr Creek Siphon. A sand bar is located between the two intermittent drainages. The intermittent drainage was dominated by Goodding's black willow. Himalayan blackberry is dominant in the understory, however a large portion of it was recently removed.



Map Contents

- Biological Study Area

Sample Points

- Upland
- Waters

Aquatic Resources (0.173 acre)

- Canal (0.054 acre)
- Intermittent Drainage (0.008 acre)
- Seep (0.009 acre)
- Creek (0.101 acre)

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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

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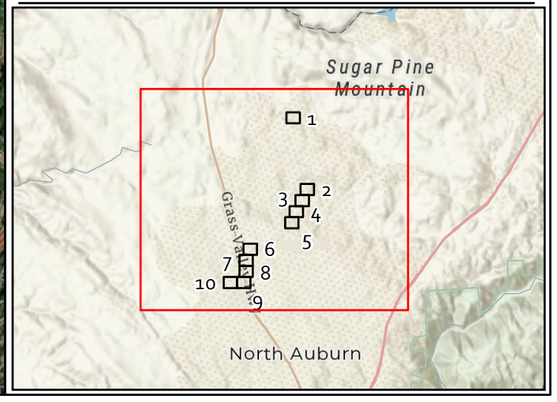

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Map Date: 2/15/2024

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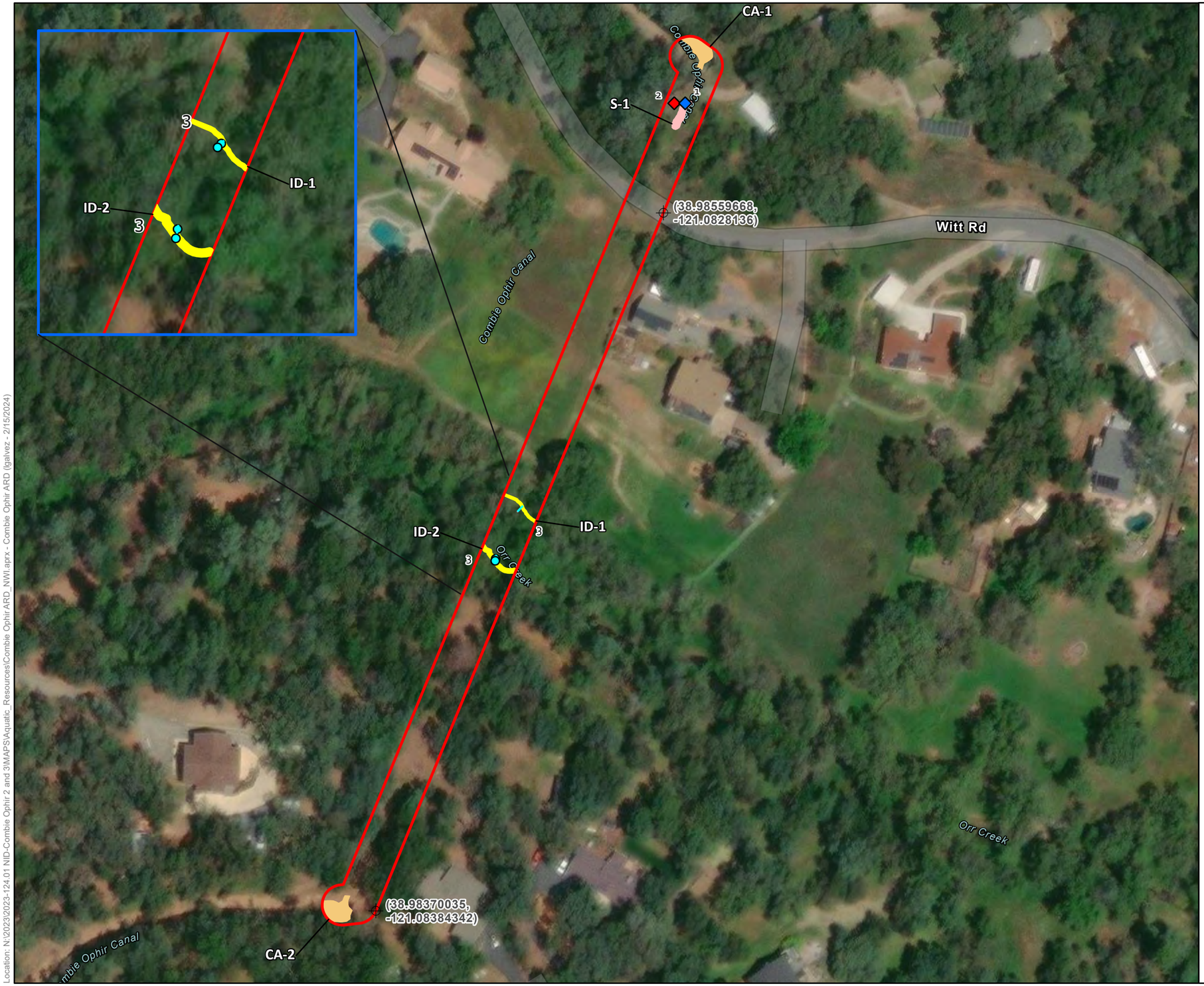
Scale in Feet
0 2,000

Figure 4. Aquatic Resources Delineation

2023-124.01 NID-Combie Ophir 2 and 3



Map Contents

- Orr Creek Biological Study Area
- Reference Coordinates

Sample Points

- Upland
- Waters
- OHWM Transects

Other Waters

- Canal
- Intermittent Drainage
- Seep

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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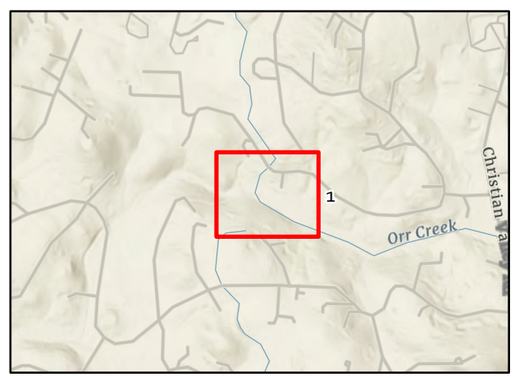

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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 1 of 10
2023-124.01 NID-Combie Ophir 2 and 3

Map Contents

- Dry Creek Biological Study Area
- Reference Coordinates

Other Waters

- Canal

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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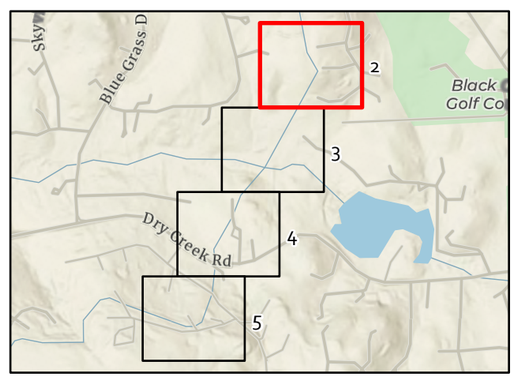

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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 2 of 10
2023-124.01 NID-Combie Ophir 2 and 3

Map Contents

- Dry Creek Biological Study Area
- Reference Coordinates

Sample Points

- Upland
- Waters
- OHWM Transects

Other Waters

- Seep
- Creek

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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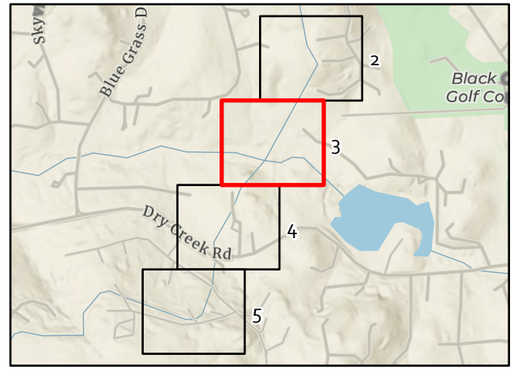

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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 3 of 10
2023-124.01 NID-Combie Ophir 2 and 3

Map Contents

- Dry Creek Biological Study Area
- Reference Coordinates

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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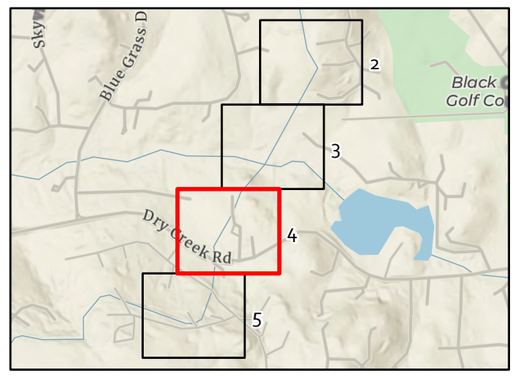

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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 4 of 10
2023-124.01 NID-Combie Ophir 2 and 3

Map Contents

- Dry Creek Biological Study Area
- Reference Coordinates

Other Waters

- Canal

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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

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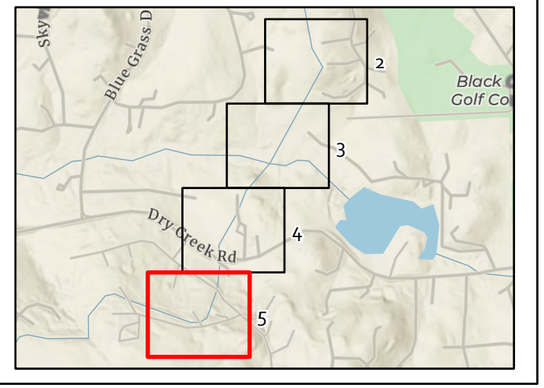

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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 5 of 10
2023-124.01 NID-Combie Ophir 2 and 3

Map Contents

- Rock Creek Biological Study Area
- Reference Coordinates

Other Waters

- Canal

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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

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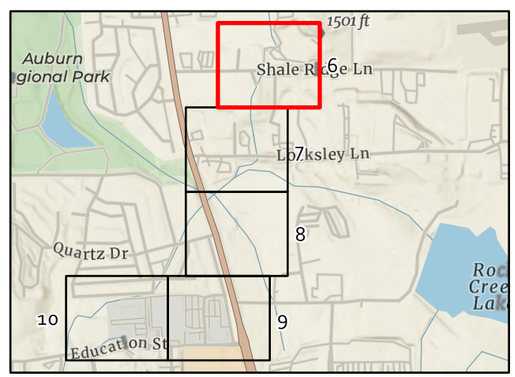

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Map Date: 2/15/2024

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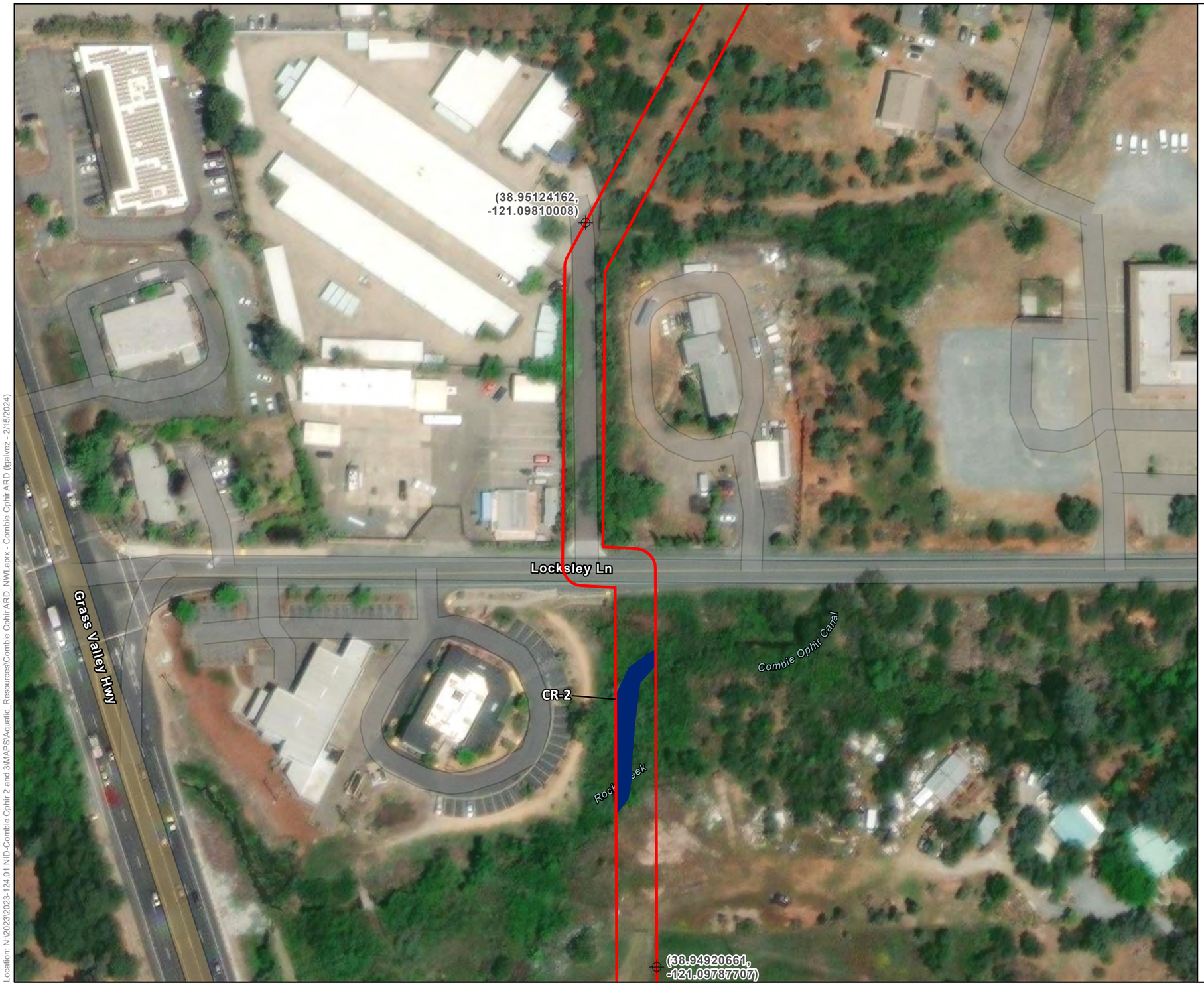
Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 6 of 10
2023-124.01 NID-Combie Ophir 2 and 3



Map Contents

- Rock Creek Study Area
- Reference Coordinates

Other Waters

- Creek

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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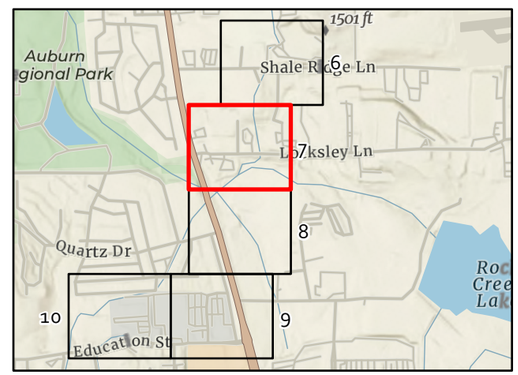

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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 7 of 10
2023-124.01 NID-Combie Ophir 2 and 3

Map Contents

- Rock Creek Biological Study Area
- Reference Coordinates
- OHWM Transects

Other Waters

- Creek

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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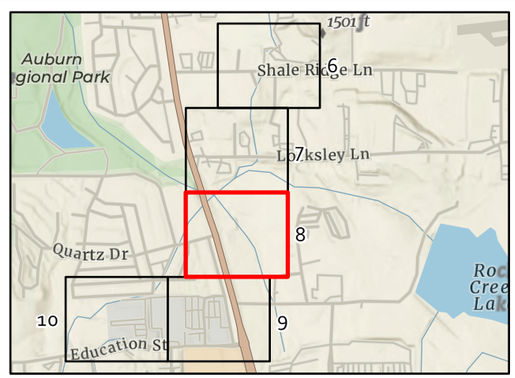

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Map Date: 2/15/2024

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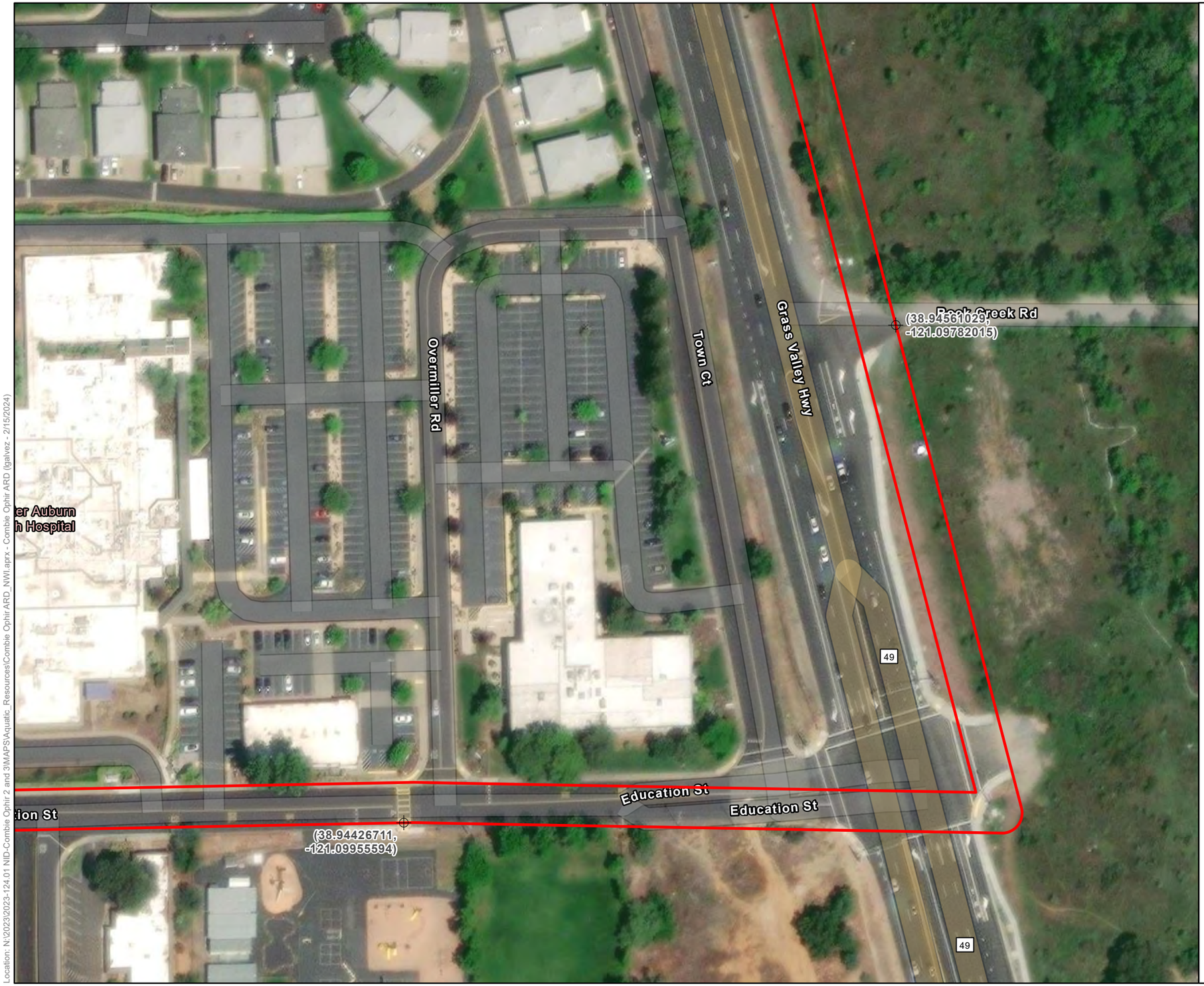
Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 8 of 10
2023-124.01 NID-Combie Ophir 2 and 3



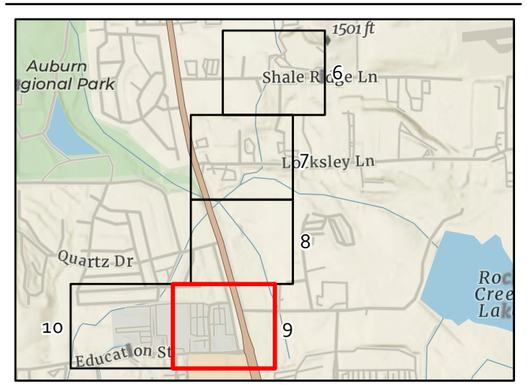
Map Contents

- Rock Creek Biological Study Area
- Reference Coordinates

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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

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



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Map Date: 2/15/2024

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Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 9 of 10
2023-124.01 NID-Combie Ophir 2 and 3

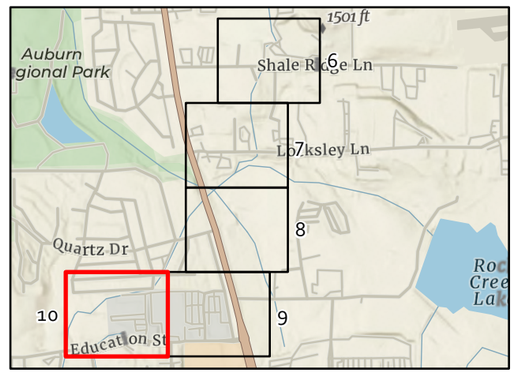
Map Contents

- Rock Creek Biological Study Area
- Reference Coordinates

Photo Source: Maxar (2022)
Boundary Source: Nevada Irrigation District
Delineator(s): Carmen David and Daniel Wong
Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet

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

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



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Map Date: 2/15/2024

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 100

Figure 4. Aquatic Resources Delineation
Sheet 10 of 10
2023-124.01 NID-Combie Ophir 2 and 3

4.4.4 Creek

Perennial creeks are linear features that exhibit a bed and bank, OHWM, and flow continuously throughout the year. Portions of two perennial creeks, Dry Creek and Rock Creek, are present within the BSA. The creeks were heavily vegetated and support riparian corridors. Dominant plant species observed within the OHWM of the creeks include Himalayan blackberry, cattail (*Typha* sp.), mulefat (*Baccharis salicifolia*), red willow, and mint (*Mentha* sp.).

4.4.5 National Wetlands Inventory

Review of the NWI showed multiple mapped aquatic features within the BSA (Figure 5). The NWI mapping designation (NWI code) indicates the presence of Riverine, Freshwater Pond, and Freshwater Forested/Shrub Wetland features (USFWS 2023a). The NWI features roughly align with the delineated features noted previously. Note that the NWI inventory mapping is based on data prepared from the analysis of high-altitude imagery in conjunction with collateral data sources and limited field work. A margin of error is inherent in the use of imagery.

4.5 Wildlife

The vegetation communities in the BSA provide habitat for a variety of wildlife species. The woodland communities found within the BSA support habitat for a variety of wildlife species such as western fence lizard (*Sceloporus occidentalis*), Sierran chorus frog (*Pseudacris sierra*), western gray squirrel (*Sciurus griseus*), and nesting habitat for birds, including mourning dove (*Zenaida macroura*), acorn woodpecker (*Melanerpes formicivorus*), northern flicker (*Colaptes auratus*), oak titmouse (*Baeolophus inornatus*), and white-breasted nuthatch (*Sitta carolinensis*), among others. A list of wildlife species observed in the BSA is provided in Appendix D.

Map Features

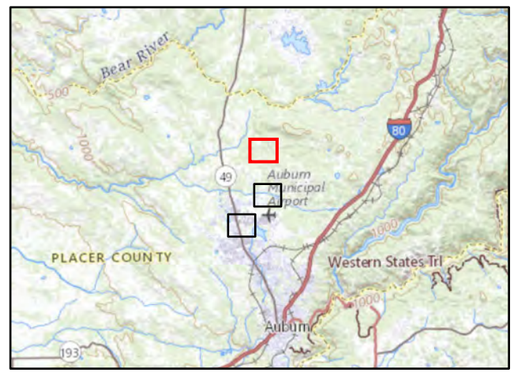
Project Area

- Orr Creek Biological Study Area

NWI Type

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Sources: Maxar (2022), ESRI, National Wetlands Inventory



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Map Date: 1/9/2024

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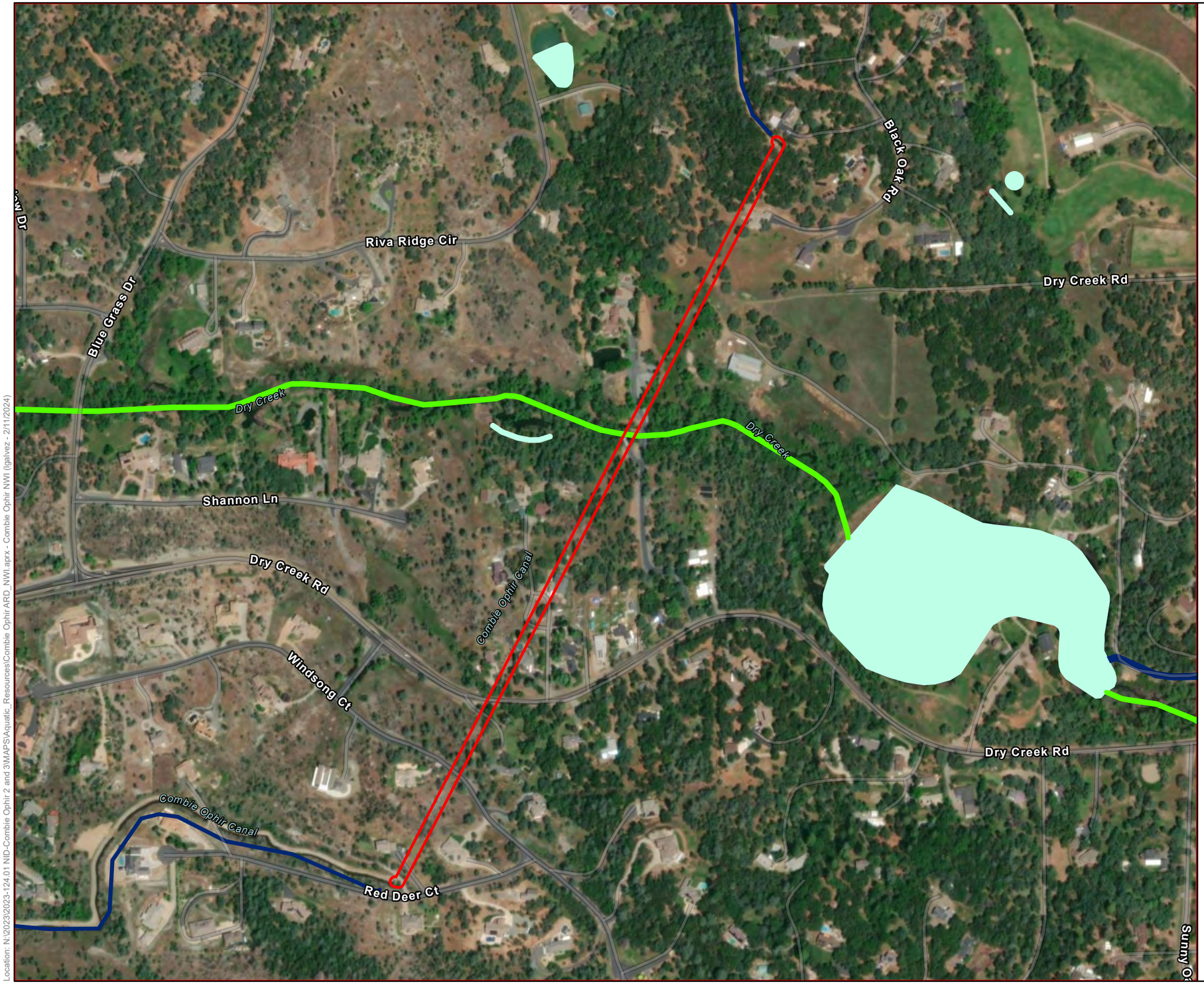
Scale in Feet
0 400

Figure 5. National Wetlands Inventory
Sheet 1 of 3
2023-124.01 NID-Combie Ophir 2 and 3



Map Features

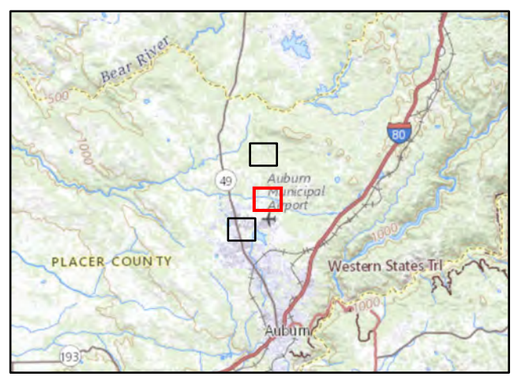
Project Area

- Dry Creek Biological Study Area

NWI Type

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

Sources: Maxar (2022), ESRI, National Wetlands Inventory



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Map Date: 1/9/2024

ECORP Consulting, Inc.
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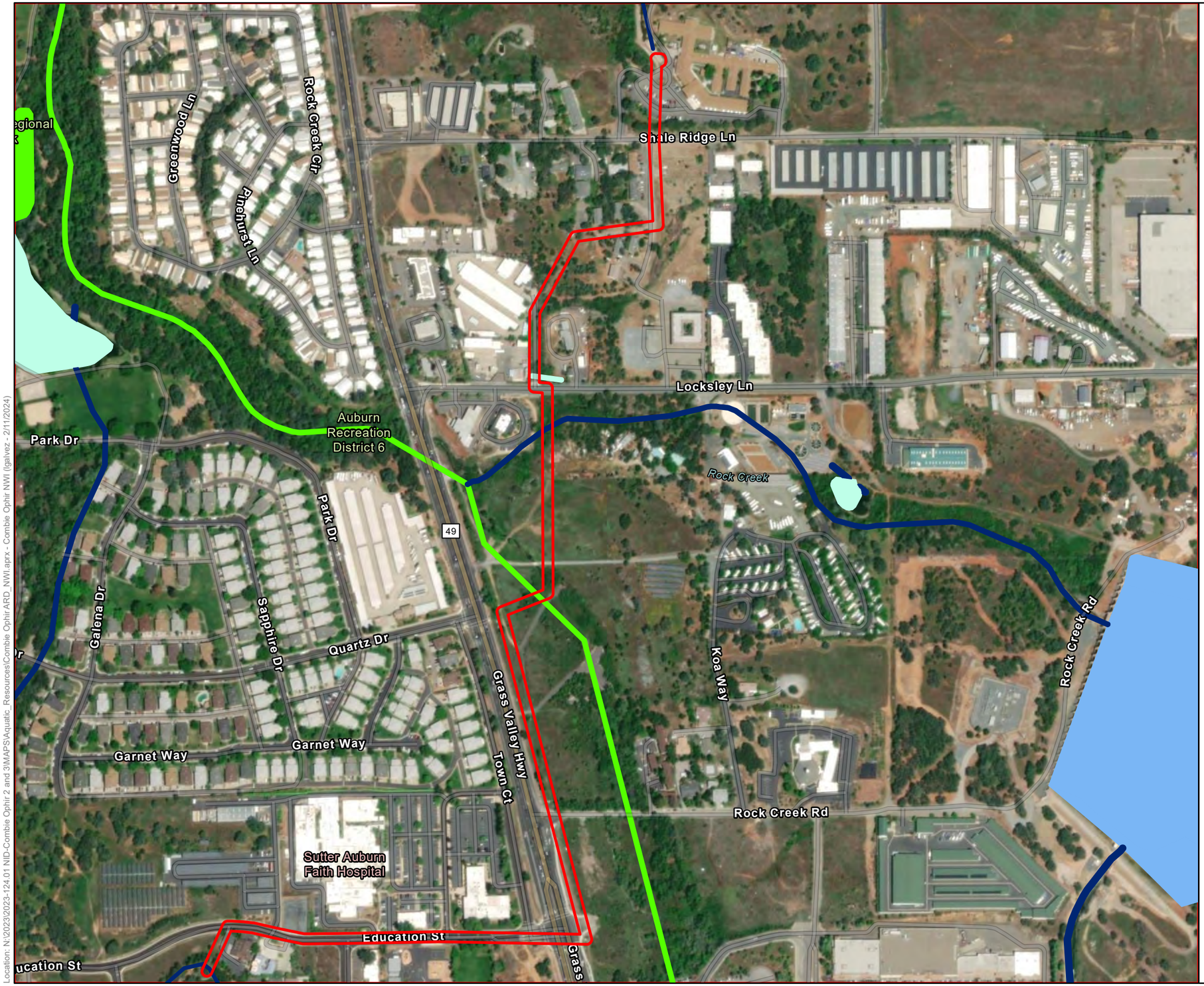
Scale in Feet
0 400

Figure 5. National Wetlands Inventory
Sheet 2 of 3
2023-124.01 NID-Combie Ophir 2 and 3



Map Features

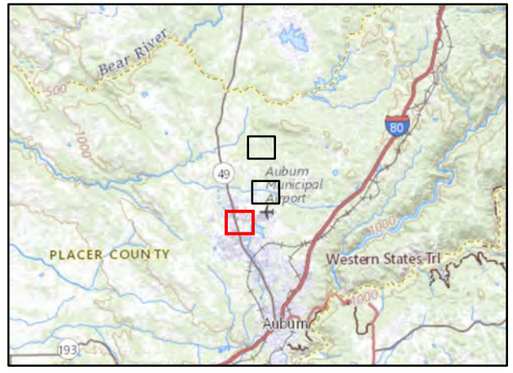
Project Area

- Rock Creek Biological Study Area

NWI Type

- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Sources: Maxar (2022), ESRI, National Wetlands Inventory



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Map Date: 1/9/2024

ECORP Consulting, Inc.
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Scale in Feet
0 400

Figure 5. National Wetlands Inventory
Sheet 3 of 3
2023-124.01 NID-Combie Ophir 2 and 3

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.

Following the table is a brief description and discussion of each special-status species that was determined to have potential to occur onsite.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
Plants					
Jepson's onion (*Allium jepsonii*)	–	–	1B.2	Serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. Elevation: 985'–4,330' Bloom Period: April–August	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
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	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ 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	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Mexican mosquito fern *(Azolla microphylla)*	–	–	4.2	Marshes and swamps, ponds or slow–moving bodies of water. Elevation: 100'–330' Bloom Period: August	Absent. No suitable habitat within the BSA and it is outside the known elevational range for this species.
Big-scale balsamroot (*Balsamorhiza macrolepis*)	–	–	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils. Elevation: 150'–5,100' Bloom Period: March–June	Low potential to occur. The only known occurrence in the vicinity that is presumed extant is historic and has not been observed for over 65 years (CDFW 2023e), however the annual grassland and gray pine woodland within the BSA may provide suitable habitat for this species.
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	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Chaparral sedge (*Carex xerophila*)	–	–	1B.2	Serpentine or gabbroic soils within chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 1,445'–2,525' Bloom Period: March–June	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Pine Hill ceanothus (*Ceanothus roderickii*)	–	–	1B.1	Rocky serpentine or gabbroic soil in chaparral and cismontane woodland. Elevation: 805'–3,575' Bloom Period: April–June	Absent. The BSA is outside the known geographic range for this species (CDFW 2023e).

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ 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 gray pine woodland within the BSA provides suitable habitat for this species.
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	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Golden-anthered clarkia (*Clarkia mildrediae* ssp. *lutescens*)	–	–	4.2	Often roadcuts and often rocky soils of cismontane woodland and lower montane coniferous forest openings. Elevation: 900'–5,740' Bloom Period: June–August	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Streambank spring beauty *(Claytonia parviflora* ssp. *grandiflora*)	–	–	4.2	Occurs in rocky cismontane woodland. Elevation: 820'–3,935' Bloom Period: February–May	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Bisbee Peak rush-rose (*Crocanthemum suffrutescens*)	–	–	3.2	Often gabbroic or Ione soil or in burned or disturbed areas within chaparral. Elevation: 245'–2,200' Bloom Period: April–August	Absent. No suitable habitat 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	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Stinkbells (*Fritillaria agrestis*)	–	–	4.2	Clay and sometimes serpentine soils in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. Elevation: 35'–5,100' Bloom Period: March–June	Potential to occur. The annual grassland and gray pine woodland within the BSA provide suitable habitat for this species.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
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 gray pine woodland within the BSA provides suitable habitat for this species.
El Dorado bedstraw (*Galium californicum* ssp. *sierrae*)	FE	CR	1B.2	Gabbroic soil in chaparral, cismontane woodland and lower montane coniferous forest communities. Elevation: 330'–1,920' Bloom Period: May–June	Absent. The BSA is outside the known geographic range for this species (CDFW 2023e).
Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*)	–	–	4.3	Serpentine or Ione cismontane woodland. Elevation: 1,050'–2,000' Bloom Period: May–June	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Boggs Lake hedge-hyssop *(Gratiola heterosepala)*	–	CE	1B.2	Clay substrates of marshes and swamps (lake margins) and vernal pools. Elevation: 35'–7,790' Bloom Period: April–August	Absent. No suitable habitat within the BSA.
Dubious pea (*Lathyrus sulphureus* var. *argillaceus*)	–	–	3	Cismontane woodland, lower montane coniferous forest and upper montane coniferous forest. Elevation: 490'–3,050' Bloom Period: April–May	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Serpentine leptosiphon (*Leptosiphon ambiguus*)	–	–	4.2	Usually serpentine soils of cismontane woodland, coastal scrub, and valley and foothill grassland. Elevation: 395'–3,710' Bloom Period: March–June	Potential to occur. The annual grassland and gray pine woodland within the BSA provides suitable habitat for this species.
Bristly leptosiphon (*Leptosiphon aureus*)	–	–	4.2	Chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland. Elevation: 180'–4,920' Bloom Period: April–July	Potential to occur. The annual grassland and gray pine woodland within the BSA provide suitable habitat for this species.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
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 gray pine woodland within the BSA provides suitable habitat for this species.
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	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Narrow-petaled rein orchid (*Piperia leptopetala*)	–	–	4.3	Cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Elevation: 1,245'–7,300' Bloom Period: May–July	Potential to occur. The gray pine woodland within the BSA provides suitable habitat for this species.
Sierra blue grass *(Poa sierrae)*	–	–	1B.3	Lower montane coniferous forest openings. Elevation: 1,200'–4,920' Bloom Period: April–July	Absent. No suitable habitat within the BSA.
Giant checkerbloom *(Sidalcea gigantea)*	–	–	4.3	Meadows and seeps within lower montane coniferous forest and upper montane coniferous forest. Elevation: 2,200'–6,400' Bloom Period: July–October	Absent. The BSA is significantly outside the known elevational range for this species.
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 gray pine woodland within the BSA provides suitable habitat 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 the known geographic range for this species (CDFW 2023e).

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
Invertebrates					
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	–	–	Vernal pools/wetlands. Survey Period: November–April when surface water is present.	Absent. No suitable habitat within the BSA.
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. The BSA is outside the known geographic range for this species (USFWS 2024).
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. The BSA is outside the known geographic range for this species (CDFW 2023f).
Crotch's bumble bee *(Bombus crotchii)*	–	CC	–	Primarily nests underground in open grassland and scrub habitats from the California coast east to the Sierra Cascade and south to Mexico. Survey Period: March-September	Potential to occur. Burrows may provide suitable nesting habitat and the BSA may also provide overwintering and marginal foraging habitat.
Monarch butterfly (overwintering population) (*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.	Absent. The BSA does not support overwintering habitat.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
Fish					
Chinook salmon (Central Valley spring-run ESU) (*Oncorhynchus tshawytscha*)	FT	CT	–	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems. Survey Period: N/A	Absent. The BSA is outside the range for this ESU.
Chinook salmon (Central Valley fall/late fall-run ESU) (*Oncorhynchus tshawytscha*)	–	–	SSC	Undammed rivers, streams, creeks in the Sacramento and San Joaquin River systems. Survey Period: N/A	Absent. The BSA is outside the range for this ESU.
Steelhead (CA Central Valley DPS) (*Oncorhynchus mykiss irideus*)	FT	–	–	Fast-flowing, well-oxygenated rivers and streams below dams in the Sacramento and San Joaquin River systems. Survey Period: N/A	Absent. The BSA is outside the range for this DPS.
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 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 – September	Low potential to occur. Creeks within the BSA provide potentially suitable dispersal habitat for this species, but no breeding habitat occurs onsite.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ 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.	Low potential to occur. Creeks within the BSA provide potentially suitable dispersal habitat for this species, but no breeding habitat occurs onsite.
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. Aquatic resources within the BSA provide suitable habitat for this species.
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 the 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 1,000 and 3,000 feet from Cameron Park (El Dorado County) north and west to Grass Valley and Nevada City. Survey Period: April-October	Low potential to occur. Open areas within grassland, woodland, and coyote brush scrub within the BSA provide marginally suitable habitat for this species.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
Birds					
Western grebe *(Aechmophorus occidentalis)*	–	–	BCC	Winters on salt or brackish bays, estuaries, sheltered sea coasts, freshwater lakes, and rivers. Nests on freshwater lakes and marshes with open water bordered by emergent vegetation. Nesting: June-August	Absent. No suitable nesting habitat within the BSA.
California black rail (*Laterallus jamaicensis coturniculus*)	–	CT	CFP	Salt marsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation. In California, primarily found in coastal and Bay-Delta communities, but also in Sierran foothills (Butte, Yuba, Nevada, Placer, El Dorado counties). Nesting: March-September	Low potential to occur. Riparian thickets and seeps within the BSA provide marginally suitable habitat for this species.
California gull (nesting colony) *(Larus californicus)*	–	–	BCC, CDFW WL	Nesting occurs in the Great Basin, Great Plains, Mono Lake, and south San Francisco Bay. Breeding colonies located on islands on natural lakes, rivers, or reservoirs. Winters along Pacific Coast from southern British Columbia south to Baja California and Mexico. In California, winters along coast and inland (Central Valley, Salton Sea). Nesting: April-August	Absent. No suitable nesting habitat within the BSA.
Osprey *(Pandion haliaetus)*	–	–	CDFW WL	Nesting habitat requires close proximity to accessible fish, open nest site free of mammalian predators, and extended ice-free season. Nest in large trees, snags, cliffs, transmission/communication towers, artificial nest platforms, channel markers/buoys. Nesting: April-September	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	CESA/ NPPA	Other		
White-tailed kite (*Elanus leucurus*)	–	–	CFP	Nesting occurs within trees in low elevation grassland, agricultural, wetland, oak woodland, riparian, savannah, and urban habitats. Nesting: March-August	Potential to occur. Trees within the BSA provide suitable nesting habitat for this species.
Golden eagle (*Aquila chrysaetos*)	–	–	CFP, CDFW WL	Nesting habitat includes mountainous canyon land, rimrock terrain of open desert and grasslands, riparian, oak woodland/ savannah, and chaparral. Nesting occurs on cliff ledges, river banks, trees, and human-made structures (e.g., windmills, platforms, and transmission towers). Breeding occurs throughout California, except the immediate coast, Central Valley floor, Salton Sea region, and the Colorado River region, where they can be found during Winter. Nesting: February-August Wintering in Central Valley: October-February	Absent. No suitable nesting habitat within the BSA.
Bald eagle (*Haliaeetus leucocephalus*)	De-listed	CE	CFP	Typically nests in forested areas near large bodies of water in the northern half of California; nest in trees and rarely on cliffs; wintering habitat includes forest and woodland communities near water bodies (e.g., rivers, lakes), wetlands, flooded agricultural fields, open grasslands. Nesting: February-September Wintering: October-March	Absent. No suitable nesting habitat within the BSA.
Nuttall's woodpecker *(Dryobates nuttallii)*	–	–	BCC	Resident from northern California south to Baja California. Nests in tree cavities in oak woodlands and riparian woodlands. Nesting: April-July	Potential to occur. Trees within the BSA provide suitable nesting habitat for this species.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
American peregrine falcon *(Falco peregrinus anatum)*	De-listed	De-listed	CFP	In California, breeds in coastal region, northern California, and Sierra Nevada. Nesting habitat includes cliff ledges and human-made ledges on towers and buildings. Wintering habitat includes areas where there are large concentrations of shorebirds, waterfowl, pigeons, or doves. California Residents nest in February-June	Absent. No suitable nesting habitat within the BSA.
Yellow-billed magpie (*Pica nuttalli*)	–	–	BCC	Endemic to California; found in the Central Valley and coast range south of San Francisco Bay and north of Los Angeles County; nesting habitat includes oak savannah with large in large expanses of open ground; also found in urban parklike settings. Nesting: April-June	Low potential to occur. The trees in the BSA represent suitable nesting habitat. However, the BSA is at the extreme eastern limits of its breeding distribution.
Oak titmouse (*Baeolophus inornatus*)	–	–	BCC	Nests in tree cavities within dry oak or oak-pine woodland and riparian; where oaks are absent, they nest in juniper woodland, open forests (gray, Jeffrey, Coulter, pinyon pines and Joshua tree). Nesting: March-July	Potential to occur. Trees within the BSA provide suitable nesting habitat for this species.
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	CESA/ NPPA	Other		
Purple martin (*Progne subis*)	–	–	SSC	In California, breeds along coast range, Cascade-northern Sierra Nevada region and isolated population in Sacramento. Nesting habitat includes montane forests, Pacific lowlands with dead snags; the isolated Sacramento population nests in weep holes under elevated highways/bridges. Winters in South America. Nesting: May-August	Absent. No suitable nesting habitat within the BSA.
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	Potential to occur. Riparian woodland understory species within the BSA provides suitable habitat for this species.
California thrasher (*Toxostoma redivivum*)	–	–	BCC	Resident and endemic to coastal and Sierra Nevada-Cascade foothill areas of California. Nests are usually well hidden in dense shrubs, including scrub oak, California lilac, and chamise. Nesting: February-July	Absent. No suitable nesting habitat within the BSA.
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	–	CE	BCC	Resident coastally from Point Conception south into Baja California; coastal salt marsh. Year-round resident; nests 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	CESA/ NPPA	Other		
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	Potential to occur. Riparian thickets within the BSA provides suitable nesting habitat for this species.
Bullock's oriole (*Icterus bullockii*)	–	–	BCC	Breeding habitat includes riparian and oak woodlands. Nesting: March-July	Potential to occur. Trees within the BSA provide suitable nesting habitat for this species.
Mammals					

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
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 provide suitable roosting habitat for this species.
Pallid bat *(Antrozous pallidus)*	–	–	SSC	Crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of redwoods, cavities of oaks, exfoliating pine and oak bark, deciduous trees in riparian areas, and fruit trees in orchards). Also roosts in various human structures such as bridges, barns, porches, bat boxes, and human occupied as well as vacant buildings (WBWG 2023). Survey Period: April-September	Potential to occur. Trees within the BSA provide suitable roosting habitat for this species.

Table 2. Special-Status Species Evaluation

Common Name (*Scientific Name*)	Status			Habitat Description/ Species Ecology	Potential To Occur Onsite
	ESA	CESA/ NPPA	Other		
Fisher- Southern Sierra Nevada DPS *(Pekania pennanti)*	FE	CT	SSC	Coniferous and mixed forests of southern Sierra Nevada mountain range. State threatened status defines northern limit as Merced River. Federal endangered status defines northern limit as Tuolumne River. Survey Period: Any season	Absent. The BSA is outside the known geographic range for this species (CDFW 2023e).

Status Codes:

ESA	Federal Endangered Species Act
CESA	California 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	CESA- or NPPA listed, Endangered
CT	CESA- or NPPA-listed, Threatened
CR	CESA- or NPPA-listed, Rare
CC	Candidate for CESA listing as Endangered or Threatened
CFP	California Fish and Game Code Fully Protected Species (§ 3511-birds, § 4700-mammals, §5050-reptiles/amphibians)
SSC	CDFW Species of Special Concern
CDFW WL	CDFW Watch List
1A	CRPR/Presumed extinct
1B	CRPR/Rare or Endangered in California and elsewhere
2A	CRPR/Plants presumed extirpated in California but common elsewhere
2B	CRPR/Plants rare, threatened, or endangered in California but more common elsewhere
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)
Delisted	Formally Delisted

Note: BSA = Biological Study Area; CDFW = California Department of Fish and Wildlife; DPS = Distinct Population Segment; ESU = Evolutionarily Significant Unit; km = Kilometer; N/A = Not Applicable; USFWS = U.S. Fish and Wildlife Service; WBWG = Western Bat Working Group

4.6.1 Plants

Based on the literature review, 29 special-status plant species were identified as having the potential to occur in the vicinity of the BSA (Table 2). However, upon further analysis and after the site visit, eight of those species are considered to be absent from the BSA due to the lack of suitable habitat or because the BSA is outside the known geographical or elevational range for the species. No further discussion of those species is provided in this assessment. A brief description of the remaining 21 species that have potential to occur within the BSA is presented below.

4.6.1.1 Jepson's Onion

Jepson's onion (*Allium jepsonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a bulbiferous herbaceous perennial that occurs on serpentinite or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. Jepson's onion blooms from April through August and is known to occur at elevations ranging from 985 to 4,330 feet above MSL. Jepson's onion is endemic to California; the current range of this species includes Butte, El Dorado, Placer, and Tuolumne counties (CNPS 2023a).

There is one documented CNDDB occurrence of Jepson's onion within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Jepson's onion has potential to occur onsite.

4.6.1.2 Congdon's Onion

Congdon's onion (*Allium sanbornii* var. *congdonii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is a bulbiferous, herbaceous perennial that occurs on serpentinite or volcanic soils on chaparral and cismontane woodlands. Congdon's onion blooms from April through July and is known to occur at elevations ranging from 985 to 4,575 feet above MSL. Congdon's onion is endemic to California; the current range of this species includes El Dorado, Mariposa, Nevada, Placer, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of Congdon's onion within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Congdon's onion has potential to occur onsite.

4.6.1.3 Sanborn's Onion

Sanborn's onion (*Allium sanbornii* var. *sanbornii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a bulbiferous herbaceous perennial that usually occurs on serpentinite or gravelly soils in chaparral, cismontane woodlands, and lower montane coniferous forest. Sanborn's onion blooms from May through September and is known to occur at elevations ranging from 855 to 4,955 feet above MSL. The current range of this species in California includes Butte, Calaveras, El Dorado, Nevada, Placer, Plumas, Shasta, Tehama, Tuolumne, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of Sanborn's onion within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Sanborn's onion has potential to occur onsite.

4.6.1.4 Big-Scale Balsamroot

Big-scale balsamroot (*Balsamorhiza macrolepis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grassland, and sometimes on serpentinite soils. Big-

scale balsamroot blooms from March through June and is known to occur at elevations ranging from 150 to 5,100 feet above MSL. Big-scale balsamroot is endemic to California; the current range of this species includes Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of big-scale balsamroot within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species, however, the only known occurrence of this species in the vicinity of the BSA that is presumed extant is historic and has not been observed for over 65 years (CDFW 2023e). Big-scale balsamroot has low potential to occur onsite.

4.6.1.5 Stebbins' Morning-Glory

Stebbins' morning-glory (*Calystegia stebbinsii*) is listed as endangered pursuant to the federal and California ESAs, and is designated as a CRPR 1B.1 species. This species is a rhizomatous herbaceous perennial that occurs on gabbroic or serpentinite soils in openings of chaparral habitats and cismontane woodlands. Stebbins' morning-glory blooms from April through July and is known to occur at elevations ranging from 605 to 3,575 feet above MSL. Stebbins' morning-glory is endemic to California; the current range of this species includes El Dorado and Nevada counties (CNPS 2023a).

There are no documented CNDDB occurrences of Stebbins' morning-glory within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Stebbins' morning-glory has potential to occur onsite.

4.6.1.6 Chaparral Sedge

Chaparral sedge (*Carex xerophila*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 species. This species is a perennial herb that occurs on serpentinite or gabbroic soils of lower montane coniferous forest, cismontane woodland, or chaparral. Chaparral sedge blooms from March through June and is known to occur at elevations ranging from 1,445 to 2,525 feet above MSL. Chaparral sedge is endemic to California; the current range of this species includes Butte, El Dorado, Nevada, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of chaparral sedge within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Chaparral sedge has potential to occur onsite.

4.6.1.7 Red Hills Soaproot

Red Hills soaproot (*Chlorogalum grandiflorum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 1B.2 plant. This species is a bulbiferous perennial herb that typically occurs on serpentinite, gabbroic, and other soils in chaparral, cismontane woodland, and lower montane coniferous forest communities. Red Hills soaproot blooms from May through June and is known to occur at elevations ranging from 805 to 5,545 feet above MSL. Red Hill soaproot is endemic to California; the

current range of this species includes Amador, Calaveras, El Dorado, Placer, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of Red Hills soaproot within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Red Hills soaproot has potential to occur onsite.

4.6.1.8 Brandegee's Clarkia

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 plant. This species is an herbaceous annual that occurs in chaparral, cismontane woodlands, and lower montane coniferous forest. Brandegee's clarkia blooms from May through July and is known to occur at elevations ranging from 245 to 3,000 feet above MSL. Brandegee's clarkia is endemic to California; the current range of this species includes Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, and Yuba counties (CNPS 2023a).

There are six documented CNDDB occurrences of Brandegee's clarkia within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Brandegee's clarkia has potential to occur onsite.

4.6.1.9 Golden-Anthered Clarkia

Golden-anthered clarkia (*Clarkia mildrediae* ssp. *lutescens*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs often on roadsides, roadcuts, and rocky soils in cismontane woodland and openings of lower montane coniferous forest. Golden-anthered clarkia blooms from June through August and it is known to occur at elevations ranging from 900 to 5,740 feet above MSL. Golden-anthered clarkia is endemic to California; the current range of this species includes Butte, Nevada, Plumas, Sierra, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of golden-anthered clarkia within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Golden-anthered clarkia has potential to occur onsite.

4.6.1.10 Streambank Spring Beauty

Streambank spring beauty (*Claytonia parviflora* ssp. *grandiflora*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs in rocky soils within cismontane woodland. Streambank spring beauty blooms from February through May and is known to occur at elevations ranging from 820 to 3,935 feet above MSL. Streambank spring beauty is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Fresno, Kern, Madera, Placer, Tulare, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of streambank spring beauty within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Streambank spring beauty has potential to occur onsite.

4.6.1.11 Tripod Buckwheat

Tripod buckwheat (*Eriogonum tripodum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial deciduous shrub that occurs on cismontane woodland or chaparral, often on serpentinite soils. Tripod buckwheat blooms from May through July and is known to occur at elevations ranging from 655 to 5,250 feet above MSL. Tripod buckwheat is endemic to California; the current range of this species includes Amador, Colusa, El Dorado, Glenn, Lake, Mariposa, Napa, Nevada, Placer, Shasta, Tehama, and Tuolumne counties (CNPS 2023a).

There are no documented CNDDB occurrences of tripod buckwheat within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Tripod buckwheat has potential to occur onsite.

4.6.1.12 Stinkbells

Stinkbells (*Fritillaria agrestis*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in clay, sometimes serpentinite areas in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland. Stinkbells bloom from March through June and is known to occur at elevations ranging from 35 to 5,100 feet above MSL. This species is endemic to California; its current range includes Alameda, Colusa, Contra Costa, Fresno, Kern, Kings, Mendocino, Merced, Monterey, Mariposa, Placer, Sacramento, Santa Barbara, San Benito, Santa Clara, San Luis Obispo, San Mateo, Solano, Stanislaus, Tulare, Tuolumne, Ventura, Yolo, and Yuba counties, and is considered to be extirpated from San Mateo County (CNPS 2023a).

There are no documented CNDDB occurrences of stinkbells within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species. Stinkbells has potential to occur onsite.

4.6.1.13 Butte County Fritillary

Butte County fritillary (*Fritillaria eastwoodiae*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3.2 species. This species is an herbaceous bulbiferous perennial that occurs in chaparral, cismontane woodland, and lower montane coniferous forest, and is occasionally found on serpentinite soils. Butte County fritillary blooms from March through June and is known to occur at elevations ranging from 165 to 4,920 feet above MSL. The current range of this species in California includes Butte, El Dorado, Nevada, Placer, Shasta, Tehama, and Yuba counties (CNPS 2023a).

There is one documented CNDDB occurrence of Butte County fritillary within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Butte County fritillary has potential to occur onsite.

4.6.1.14 Serpentine Bluecup

Serpentine bluecup (*Githopsis pulchella* ssp. *serpentinicola*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous annual that occurs in serpentinite or Ione soils in cismontane woodland. Serpentine bluecup blooms from May through June and is known to occur at elevations ranging from 1,050 to 2,000 feet above MSL. Serpentine bluecup is endemic to California; the current range of this species in California includes Amador, Butte, El Dorado, Mariposa, Placer, and Tuolumne counties. (CNPS 2023a).

There are no documented CNDDB occurrences of serpentine bluecup within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Serpentine bluecup has potential to occur onsite.

4.6.1.15 Dubious Pea

Dubious pea (*Lathyrus sulphureus* var. *argillaceus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 3 species. This species is an herbaceous perennial that occurs in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Dubious pea blooms from April through May and is known to occur at elevations ranging from 490 to 3,050 feet above MSL. Dubious pea is endemic to California; the current range of this species includes Amador, Calaveras, El Dorado, Nevada (distribution or identity is uncertain), Placer, Shasta, and Tehama counties (CNPS 2023a).

There is one documented CNDDB occurrence of dubious pea within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Dubious pea has potential to occur onsite.

4.6.1.16 Serpentine Leptosiphon

Serpentine leptosiphon (*Leptosiphon ambiguus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an herbaceous annual that occurs usually in serpentinite soil within cismontane woodland, coastal scrub, valley and foothill grassland. Serpentine leptosiphon blooms from March through June and is known to occur at elevations ranging from 395 to 3,710 feet above MSL. Serpentine bird's-beak is endemic to California; its current range includes Alameda, Butte, Contra Costa, El Dorado, Fresno, Merced, Monterey, San Benito, Santa Clara, Santa Cruz, San Joaquin, San Mateo, and Stanislaus counties (CNPS 2023a).

There are no documented CNDDB occurrences of serpentine leptosiphon within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species. Serpentine leptosiphon has potential to occur onsite.

4.6.1.17 Bristly Leptosiphon

Bristly leptosiphon (*Leptosiphon aureus*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is an annual herb that occurs in chaparral, cismontane

woodland, coastal prairie, and valley and foothill grassland. Bristly leptosiphon blooms from April through July and is known to occur at elevations ranging from 180 to 4,920 feet above MSL. Bristly leptosiphon is endemic to California; the current range of this species includes Alameda, Butte, Colusa, Humboldt, Kern, Lake, Marin, Mendocino, Napa, Placer, San Benito, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of bristly leptosiphon within 5 miles of the BSA (CDFW 2023e). The annual grassland and gray pine woodland within the BSA represent suitable habitat for this species. Bristly leptosiphon has potential to occur onsite.

4.6.1.18 Humboldt Lily

Humboldt lily (*Lilium humboldtii* ssp. *humboldtii*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.2 species. This species is a perennial bulbiferous herb that occurs in openings within chaparral, cismontane woodland, and lower montane coniferous forest. Humboldt lily blooms from May through July and is known to occur at elevations ranging from 295 to 4,200 feet above MSL. Humboldt lily is endemic to California; the current range of this species includes Amador, Butte, Calaveras, El Dorado, Los Angeles, Nevada, Placer, Plumas, San Diego, Santa Barbara, Sierra, Tehama, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of Humboldt lily within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Humboldt lily has potential to occur onsite.

4.6.1.19 Layne's Ragwort

Layne's ragwort (*Packera layneae*) is listed as threatened pursuant to the federal ESA, rare pursuant to the California ESA, and is designated as a CRPR 1B.2 species. This species is an herbaceous perennial that occurs on rocky serpentinite or gabbroic soil in chaparral and cismontane woodland communities. Layne's ragwort blooms from April through August and is known to occur at elevations ranging from 655 to 3,560 feet above MSL. Layne's ragwort is endemic to California; the current range of this species includes El Dorado, Placer, Tuolumne, and Yuba counties (CNPS 2023a).

There are no documented CNDDB occurrences of Layne's ragwort within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Layne's ragwort has potential to occur onsite.

4.6.1.20 Narrow-Petaled Rein Orchid

Narrow-petaled rein orchid (*Piperia leptopetala*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 4.3 species. This species is an herbaceous perennial that occurs in cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Narrow-petaled rein orchid blooms from May through July and is known to occur at elevations ranging from 1,245 to 7,300 feet above MSL. Narrow-petaled rein orchid is endemic to California; the current range of this

species includes Colusa, Lake, Orange, Placer, Plumas, San Bernardino, San Diego, San Luis Obispo, and Sonoma counties (CNPS 2023a).

There are no documented CNDDB occurrences of narrow-petaled rein orchid within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Narrow-petaled rein orchid has potential to occur onsite.

4.6.1.21 Oval-Leaved Viburnum

Oval-leaved viburnum (*Viburnum ellipticum*) is not listed pursuant to either the federal or California ESAs, but is designated as a CRPR 2B.3 species. This species is a perennial deciduous shrub that occurs in chaparral, cismontane woodland, and lower montane coniferous forest communities. Oval-leaved viburnum blooms from May through June and is known to occur at elevations ranging from 705 to 4,595 feet above MSL. The current range of this species in California includes Alameda, Contra Costa, El Dorado, Fresno, Glenn, Humboldt, Lake, Mendocino, Napa, Placer, Shasta, Solano, Sonoma, and Tehama counties (CNPS 2023a).

There are two documented CNDDB occurrences of oval-leaved viburnum within 5 miles of the BSA (CDFW 2023e). The gray pine woodland within the BSA represents suitable habitat for this species. Oval-leaved viburnum has potential to occur onsite.

4.6.2 Invertebrates

Based on the literature review, five special-status invertebrate species were identified as having the potential to occur in the vicinity of the BSA (Table 2). However, upon further analysis and after the site visit, four species are considered to be absent from the BSA due to lack of suitable habitat and because is outside of the geographic range for the species. No further discussion of these species is provided in this assessment. A brief description of the remaining species that has potential to occur within the BSA is presented below.

4.6.2.1 Crotch's Bumble Bee

Crotch's bumble bee (*Bombus crotchii*) is a candidate for listing as endangered under the California ESA. The historic range of Crotch's bumble bee extends from coastal areas east to the edges of the desert in central California south to Baja California del Norte, Mexico, excluding mountainous areas (Thorpe et al. 1983, Williams et al. 2014). The species was historically common throughout the southern two-thirds of its range but is now largely absent from much of that area and is nearly extirpated from the center of its historic range, the Central Valley (Hatfield et al. 2014).

Crotch's bumble bee inhabits open grassland and scrub habitats (Williams et al. 2014). The species visits a wide variety of flowering plants, although its very short tongue makes it best suited to forage at open flowers with short corollas (Xerces Society 2018). Plant families most commonly associated with Crotch's bumble bee include Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae (Xerces Society 2018). The species primarily nests underground (Williams et al. 2014). Little is known about overwintering sites for the species, but bumble bees generally overwinter in soft, disturbed soils or under leaf litter or

other debris (Goulson 2010; Williams et al. 2014). The flight period for Crotch's bumble bee queens in California is from late February to late October, peaking in early April with a second pulse in July (Thorp et al. 1983). The flight period for workers and males in California is from late March through September with peak abundance in early July (Thorp et al. 1983).

There are no documented CNDDB occurrences of Crotch's bumble bee within 5 miles of the BSA (CDFW 2023e). Abandoned rodent burrows may provide suitable nesting habitat and the BSA may also support overwintering and marginal foraging habitat for this species. Crotch's bumble bee has low potential to occur onsite.

4.6.3 Fish

Based on the literature review, three special-status fish species or Evolutionarily Significant Units were identified as having the potential to occur in the vicinity of the BSA (Table 2). However, upon further analysis and after the site visit, all of those species are considered to be absent from the BSA due to the BSA being outside the geographic range for the species. No further discussion of special-status fish is provided in this assessment.

4.6.4 Amphibians

Based on the literature review, three special-status amphibian species or clades were identified as having the potential to occur in the vicinity of the BSA (Table 2). However, upon further analysis and after the site visit, one of the clades is considered to be absent from the BSA due to the BSA being outside the geographic range for the clade. No further discussion of this clade is provided in this assessment. A brief description of the remaining species that have potential to occur within the BSA is presented below.

4.6.4.1 California Red-Legged Frog

The California red-legged frog (*Rana draytonii*) is listed as Threatened pursuant to the ESA and is a California SSC. The current range and abundance of California red-legged frog is greatly reduced from historic levels, with most remaining populations occurring along the coast from Marin County to Ventura County and in blue oak woodland, foothill pine/oak, and riparian deciduous forests in the foothills of the western slope of the Sierra Nevada (Barry and Fellers 2013).

Breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. Creeks and ponds with dense growths of woody riparian vegetation, especially willows (*Salix* spp.) are preferred (Hayes and Jennings 1988). Adult California red-legged frogs use dense, shrubby or emergent riparian vegetation near deep [≥ 0.6 to 0.9 m (2 to 3 feet)], still or slow-moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail (*Typha* sp.) occur adjacent to open water. California red-legged frogs breed from November through April (Jennings and Hayes 1994), and larvae generally metamorphose by mid to late summer. Upland and riparian areas provide important sheltering habitat during summer when California red-legged frogs aestivate in dense vegetation, burrows, and leaf litter.

There are no documented CNDDB occurrences of California red-legged frog within 5 miles of the BSA (CDFW 2023e). The creeks within the BSA provide potentially suitable dispersal habitat for this species but no breeding habitat is present onsite. However, the BSA is located within a relatively urban setting and the presence of manufactured impoundments in the area increase the likelihood of non-native predators such as bullfrogs and various fishes being present which further lowers habitat suitability. California red-legged frog has low potential to occur onsite.

4.6.4.2 Foothill Yellow-Legged Frog (Northeast/Northern Sierra Clade)

The foothill yellow-legged frog (*Rana boylii*) occurs in the Coast Ranges, from the Oregon border south to the Transverse Mountains in Los Angeles County, west of the Cascade crest in most of Northern California, and in the Sierra Nevada foothills south to Kern County, from sea level to 6,000 feet above MSL (Stebbins 1985). Six clades are recognized. The Northeast/Northern Sierra clade of foothill yellow-legged frog is listed as threatened pursuant to California ESA and is considered a California SSC across its range. The Northeast/Northern Sierra clade of foothill yellow-legged frog generally occurs in Sutter, Yuba, Sierra, Nevada, and Placer counties. The northern portion of the clade boundary extends into Plumas County and coincides with the northern boundary of the Upper Yuba Watershed (HUC #18020125; USGS 2023). The southern portion of the clade boundary extends into El Dorado County and coincides with the southern boundary of the North Fork American Watershed (HUC #18020128; USGS 2023). See Figure 6 in CDFW 2019 for a map of clades and proposed listing status.

Foothill yellow-legged frogs occupy rocky streams in valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow plant communities. They are rarely found far from water and will often dive into water to take refuge under rocks or sediment when disturbed (Zeiner et al. 1988).

Moyle (1973) implicated the bullfrog (*Lithobates catesbeianus*) as a cause of the observed reduction of yellow-legged frog populations in the Central Valley and in the Sierra Nevada. The introduction of nonnative fishes, including centrarchids (e.g., bass, sunfish), known to eat eggs of ranid frogs (Werschkul and Christensen 1977), and stocking of salmonids (trout) in streams where they historically did not exist, may also contribute to the disappearance or reduction of native frog populations in Sierra streams. Additional human-related impacts to foothill yellow-legged frogs and their habitat include the construction and maintenance of dams and reservoirs and resultant controlled stream flows, recreation, and livestock grazing (Jennings and Hayes 1994; Lind et al. 1996). A chytrid fungus (*Batrachochytrium dendrobatidis*), which can be fatal to metamorphic and adult frogs, has become increasingly common in the Sierra Nevada (Speare et al. 1998), and has been shown to delay growth of foothill yellow-legged frogs (Davidson et al. 2007).

There is one documented CNDDB occurrences of foothill-legged frog within 5 miles of the BSA (CDFW 2023e). The creeks within the BSA provide potentially suitable dispersal habitat for this species but no breeding habitat is present onsite. However, the BSA is located within a relatively urban setting and the presence of manufactured impoundments in the area increase the likelihood of non-native predators such as bullfrogs and various fishes being present which further lowers habitat suitability. Foothill yellow-legged frog has low potential to occur onsite.

4.6.5 Reptiles

Based on the literature review, two special-status reptile species were identified as having the potential to occur in the vicinity of the BSA (Table 2). A brief description of these species is presented below.

4.6.5.1 Northwestern Pond Turtle

The northwestern pond turtle (*Actinemys marmorata*) is one of two species of California's only remaining native freshwater turtles. Both species are considered SSC by CDFW, Sensitive by the U.S. Forest Service and Bureau of Land Management, and are proposed for listing as Threatened under the Federal ESA. The range of the northwestern pond turtle in California extends from the Oregon border southward to the Stockton area in the Central Valley, and the western slope of the Sierra-Cascade (Bury et al. 2012a). This species can occur in a variety of waters including ponds, lakes, streams, reservoirs, rivers, settling ponds of wastewater treatment plants, and other permanent and ephemeral wetlands (Bury et al. 2012b). However, in streams and other lotic features they generally require slack- or slow-water aquatic microhabitats (Jennings and Hayes 1994). Northwestern pond turtles also require basking areas such as logs, rocks, banks, and brush piles for thermoregulation (Bury et al. 2012b). Nesting sites for pond turtles are typically located in annual grasslands adjacent to a watercourse with little slope and hard, dry soil (Ashton et al. 1997). Nesting habitat soils typically display high clay or silt fraction, with few nests located in sandy soils. Nests are usually within 400 meters of a watercourse, with the majority being within 50 meters of the water's edge (Holland 1994).

There is one documented CNDDB occurrence of northwestern pond turtle within 5 miles of the BSA (CDFW 2023e). Aquatic resources within the BSA represent suitable habitat for this species. Northwestern pond turtle has potential to occur onsite.

4.6.5.2 Blainville's ("Coast") Horned Lizard

Blainville's horned lizard (*Phrynosoma blainvillii*) is considered a CDFW SSC. This species is easily identifiable from many other lizards in California. Like all horned lizards, it is flattened dorsoventrally and possesses enlarged scales along the back of the head that resemble horns. This species can be distinguished from the desert horned lizard, a species with which it shares only a narrow portion of its range, by a double row of pointed fringe scales. This diurnal species can occur within a variety of habitats including scrubland, annual grassland, valley-foothill woodlands and coniferous forests, though it is most common along lowland desert sandy washes and chaparral (Stebbins 2003). In the Central Valley, the species ranges from southern Tehama County southward. In the Sierra Nevada it occurs from Butte County south to Tulare County, and in the Coast Ranges it occurs from Sonoma County south into Baja California (California Department of Fish and Game 1988). It occurs from sea level to 8,000 feet above MSL.

There are no documented CNDDB occurrences of Blainville's horned lizard within 5 miles of the BSA (CDFW 2023e). Open areas within annual grassland, woodlands, and coyote brush scrub within the BSA represent marginally suitable habitat for this species. Blainville's horned lizard has low potential to occur onsite.

4.6.6 Birds

Based on the literature review, 18 special-status bird species were identified as having potential to occur in the vicinity of the BSA (Table 2). Upon further analysis and after the site visit, 10 of those species are considered to be absent from the BSA due to the lack of suitable habitat. No further discussion of those species is provided in this assessment. A brief description of the remaining eight species that have potential to occur within the BSA is presented below.

4.6.6.1 California Black Rail

California black rail (*Laterallus jamaicensis coturniculus*) is listed as a threatened species and protected pursuant to the California ESA, and is fully protected pursuant to California Fish and Game Code Section 3511. Typical habitat for black rails includes coastal saltmarsh, shallow freshwater marsh, wet meadows, and flooded grassy vegetation (Eddleman et al. 2020). They are found in marshes and meadows where the water depth is less than three centimeters, and the difficulty of maintaining these shallow depths may limit distribution (Eddleman et al. 2020). California black rails are a year-round resident in the San Francisco Bay region and a discontinuous resident breeding population in the Sierra Nevada foothills (elevation range of 300 feet to 1,000 feet) within Placer, Yuba, Butte, and Nevada counties (Beedy and Pandalfino 2013). According to the CNDDB, black rails nested in El Dorado Hills, El Dorado County in 2017 (CDFW 2023e). Nesting typically occurs from March through September (Eddleman et al. 2020).

There are no documented CNDDB occurrences of California black rail within 5 miles of the BSA (CDFW 2023e). Riparian thickets and seeps within the BSA represent suitable habitat for this species; however, due to the relatively small size of these wetland areas and close proximity to human disturbances, the potential for occurrence is reduced but not eliminated. California black rail has low potential to occur onsite.

4.6.6.2 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not listed pursuant to either the California or federal ESAs; however, the species is fully protected pursuant to Section 3511 of the California Fish and Game Code. This species is a common resident in the Central Valley and the entire length of the California coast, as well as all areas up to the Sierra Nevada foothills and southeastern deserts (Dunk 2020). In northern California, white-tailed kite nesting occurs from March through early August, with nesting activity peaking from March through June. Nesting occurs in trees within riparian, oak woodland, savannah, and agricultural communities that are near foraging areas such as low elevation grasslands, agricultural, meadows, farmlands, savannahs, and emergent wetlands (Dunk 2020).

There are no documented CNDDB occurrences of white-tailed kite within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. White-tailed kite has potential to occur onsite.

4.6.6.3 Nuttall's Woodpecker

The Nuttall's woodpecker (*Dryobates nuttallii*) is not listed and protected under either state or federal ESAs but is considered a USFWS BCC. They are resident from Siskiyou County south to Baja California. Nuttall's woodpeckers nest in tree cavities primarily within oak woodlands, but also can be found in riparian woodlands (Lowther et al. 2020). Breeding occurs from April through July.

There are no documented CNDDB occurrences of Nuttall's woodpecker within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. Nuttall's woodpecker has potential to occur onsite.

4.6.6.4 Yellow-Billed Magpie

The yellow-billed magpie (*Pica nuttalli*) is not listed pursuant to either the California or federal ESAs but is considered a USFWS BCC. This endemic species is a yearlong resident of the Central Valley and Coast Ranges from San Francisco Bay to Santa Barbara County. Yellow-billed magpies build large, bulky nests in trees in a variety of open woodland habitats, typically near grassland, pastures or cropland. Nest building begins in late January to mid-February, which may take up to 6 to 8 weeks to complete, with eggs laid from April through May, and fledging from May through June (Koenig and Reynolds 2020). The young leave the nest about 30 days after hatching (Koenig and Reynolds 2020). Yellow-billed magpies are highly susceptible to West Nile Virus, which may have been the cause of death to thousands of magpies during 2004-2006 (Koenig and Reynolds 2020).

There are no documented CNDDB occurrences of yellow-billed magpie within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species; however, the BSA is at the extreme eastern limits of its breeding distribution. Yellow-billed magpie has low potential to occur onsite.

4.6.6.5 Oak Titmouse

Oak titmouse (*Baeolophus inornatus*) is not listed and protected under either state or federal EDAs but are considered a USFWS BCC. Oak titmouse breeding range includes southwestern Oregon south through California's Coast, Transverse, and Peninsular ranges, western foothills of the Sierra Nevada, into Baja California; they are absent from the humid northwestern coastal region and the San Joaquin Valley (Cicero et al. 2020). They are found in dry oak or oak-pine woodlands but may also use scrub oaks or other brush near woodlands (Cicero et al. 2020). Nesting occurs during March through July.

There are no documented CNDDB occurrences of oak titmouse within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. Oak titmouse has potential to occur onsite.

4.6.6.6 Wrentit

The wrentit (*Chamaea fasciata*) is not listed in accordance with either the California or federal ESAs but is designated as a BCC by the USFWS. Wrentit are a sedentary resident along the west coast of North America from the Columbia River south to Baja California (Geupel and Ballard 2020). Wrentit are found in

coastal sage scrub, northern coastal scrub, and coastal hard and montane chaparral, and breed in the dense understory of valley oak riparian, Douglas fir and redwood forests, early successional forests, riparian scrub, coyote bush, blackberry thickets, suburban parks, and larger gardens (Geupel and Ballard 2020). Nesting occurs from March through August.

There are no documented CNDDB occurrences of wrentit within 5 miles of the BSA (CDFW 2023e). The Gooding's black willow riparian woodland and other riparian understory species provides suitable habitat for this species. Wrentit has potential to occur onsite.

4.6.6.7 Tricolored Blackbird

The tricolored blackbird (*Agelaius tricolor*) was granted emergency listing for protection under the California ESA in December 2014 but the listing status was not renewed in June 2015. After an extensive status review, the California Fish and Game Commission listed tricolored blackbirds as a threatened species in 2018. In addition, it is currently considered a USFWS BCC and a CDFW SSC. This colonial nesting species is distributed widely throughout the Central Valley, Coast Range, and into Oregon, Washington, Nevada, and Baja California (Beedy et al. 2020). Tricolored blackbirds nest in colonies that can range from several pairs to several thousand pairs, depending on prey availability, the presence of predators, or level of human disturbance. Tricolored blackbirds nesting habitat includes emergent marsh, riparian woodland/scrub, blackberry thickets, densely vegetated agricultural and idle fields (e.g., wheat, triticale, safflower, fava bean fields, thistle, mustard, cane, and fiddleneck), usually with some nearby standing water or ground saturation (Beedy et al. 2020). They feed mainly on grasshoppers during the breeding season, but may also forage upon a variety of other insects, grains, and seeds in open grasslands, wetlands, feedlots, dairies, and agricultural fields (Beedy et al. 2020). The nesting season is generally from March through August.

There are no documented CNDDB occurrences of tricolored blackbird within 5 miles of the BSA (CDFW 2023e). Riparian thickets within the BSA represent suitable habitat for this species. Tricolored blackbird has potential to occur onsite.

4.6.6.8 Bullock's Oriole

The Bullock's oriole (*Icterus bullockii*) is not listed pursuant to either the California or federal ESAs but is currently a BCC according to the USFWS. In California, Bullock's orioles are found throughout the state except the higher elevations of mountain ranges and the eastern deserts (Small 1994). They are found in riparian and oak woodlands where nests are built in deciduous trees, but may also use orchards, conifers, and eucalyptus trees (Flood et al. 2020). Nesting occurs from March through July.

There are no documented CNDDB occurrences of Bullock's oriole within 5 miles of the BSA (CDFW 2023e). Trees within the BSA represent suitable nesting habitat for this species. Bullock's oriole has potential to occur onsite.

4.6.7 Mammals

Based on the literature review, three special-status mammal species were identified as having potential to occur in the vicinity of the BSA (Table 2). Upon further analysis and after the site visit, one of those species is considered to be absent from the BSA due to the BSA being outside the known geographical range for the species. No further discussion of this species is provided in this assessment. A brief description of the remaining two species that have potential to occur within the BSA is presented below.

4.6.7.1 Townsend's Big-Eared Bat

The Townsend's big-eared bat (*Corynorhinus townsendii*) is not listed pursuant to either the California or federal ESAs; however, this species is considered an SSC by CDFW. The Townsend's big-eared bat is a fairly large bat with prominent bilateral noes lumps and large rabbit-like ears. This species occurs throughout the west and ranges from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains. The Townsend's big-eared bat has been reported from a wide variety of habitat types and elevations from sea level to 10,827 feet above MSL. Habitats used include coniferous forests, mixed mesophytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Its distribution is strongly associated with the availability of caves and cave-like roosting habitat including abandoned mines, buildings, bridges, rock crevices, and hollow trees. This species is readily detectable when roosting due to their habit of roosting pendant-like on open surfaces. The Townsend's big-eared bat is a moth specialist with more than 90 percent of its diet composed of them. Foraging habitat is generally edge habitats along streams adjacent to and within a variety of wooded habitats. This species often travels long distances when foraging and large home ranges have been documented in California (WBWG 2023).

There are two documented CNDDB occurrences of Townsend's big-eared bat located within 5 miles of the BSA (CDFW 2023e). Trees within the BSA may provide suitable roosting habitat for this species. Townsend's big-eared bat has potential to occur onsite.

4.6.7.2 Pallid Bat

The pallid bat (*Antrozous pallidus*) is not listed pursuant to either the federal or California ESAs; however, this species is considered an SSC by CDFW. The pallid bat is a large, light-colored bat with long, prominent ears and pink, brown, or grey wing and tail membranes. This species ranges throughout North America from the interior of British Columbia, south to Mexico, and east to Texas. The pallid bat inhabits low elevation (below 6,000 feet above MSL) rocky arid deserts and canyonlands, shrub-steppe grasslands, karst formations, and high elevation (above 7,000 feet above MSL) coniferous forest. This species roosts alone or in groups in the crevices of rocky outcrops and cliffs, caves, mines, trees, and in various human structures such as bridges and barns. The pallid bat is a feeding generalist that gleans a variety of arthropod prey from surfaces as well as capturing insects on the wing. Foraging occurs over grasslands, oak savannahs, ponderosa pine forests, talus slopes, gravel roads, lava flows, fruit orchards, and vineyards. Although this species utilizes echolocation to locate prey, they often use only passive acoustic cues. This species is not thought to migrate long distances between summer and winter sites (WBWG 2023).

There are no documented CNDDB occurrences of pallid bat located within 5 miles of the BSA (CDFW 2023e). Trees within the BSA may provide suitable roosting habitat for this species. Pallid bat has potential to occur onsite.

4.7 Critical Habitat or Essential Fish Habitat

There is no designated critical habitat mapped within the BSA (USFWS 2023b).

Based on the literature review, critical habitat for anadromous fish, steelhead (Central Valley Distinct Population Segment) and Essential Fish Habitat for chinook salmon may be present in the *Auburn, California* 7.5-minute quadrangle (NOAA 2016). However, there is no habitat for special-status fish within the BSA because access to this reach of Dry Creek by the migratory special-status fish species occurring in the Sacramento River (Table 2) is precluded by artificial barriers.

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 2023e) 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, riparian zone trees in addition to other native trees are present within the BSA. Impacts to these trees would be subject to the Woodland Conservation Article.

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. No special-status plants were found during field surveys; however, protocol-level surveys have not been conducted. If a special-status plant is found onsite, Project impacts could include damage or loss of individual plants, loss of occupied habitat, and indirect impacts such as disturbance from human encroachment and changes in habitat quality due to alteration of hydrology, erosion, and transport of soil, debris, or pollutants into occupied habitat from adjacent Project areas.

The following measures are recommended to minimize potential impacts to special-status plants:

- Where feasible, Project-related activities shall be restricted to previously developed or disturbed areas to avoid disturbance of habitats that may support special-status plants.
- The Project impact limits shall be clearly demarcated prior to construction and all workers shall be made aware of the impact limits and avoided areas. No work shall occur outside of the Project impact limits. All vehicles and equipment shall be restricted to the Project impact limits or existing designated access roads and staging areas.
- If suitable habitat for special-status plants cannot be avoided, the applicant shall perform special-status plant surveys according to CDFW, CNPS, and USFWS protocols (CDFW 2018a; CNPS 2001; USFWS 2000). Surveys shall be conducted throughout all suitable habitat within the Project footprint and a 50-foot buffer, where accessible, to address potential direct and indirect impacts of the Project. Surveys shall be conducted by a qualified biologist and timed according to the identifiable period for target species (typically the blooming period). To the extent feasible, known reference populations will be visited prior to surveys to confirm target species are evident and identifiable at the time of the survey.
- If no special-status plants are found, no further measures pertaining to special-status plants are necessary.
- If special-status plants are identified onsite, the Project shall be modified to the extent feasible to prevent disturbance or loss of special-status plants. No-disturbance buffers shall be established around sensitive plant populations to be preserved in or adjacent to the Project Area. A 50-foot buffer should be maintained between project activities and sensitive plant populations, unless otherwise determined by a qualified biologist. Buffer distances may vary between species

depending on listing status, rarity, and other factors. Buffer areas will be clearly demarcated in the field, and no construction or ground-disturbing activities will occur within the boundaries of the delineated area.

- If a special-status plant species is found and avoidance is not feasible, additional measures may be developed in consultation with CDFW, USFWS and/or the CEQA Lead Agency. These measures may include restoration or permanent preservation of habitat for the special-status plant species or translocation (via seed collection and/or transplantation) from planned impact areas to unaffected suitable habitat.
- If a state or federally listed threatened or endangered plant or a plant that is a candidate for state listing is found onsite, the applicant shall consult with CDFW and/or USFWS, as applicable, to determine appropriate avoidance and minimization measures. If the plants cannot be avoided, an incidental take permit and compensatory mitigation may be required.

5.1.2 Special-Status Wildlife Species

5.1.2.1 Crotch's Bumble Bee

The BSA contains suitable habitat for Crotch's bumble bee. Project implementation could result in impacts to Crotch's bumble bee if present.

The following measures are recommended to minimize potential impacts to Crotch's bumble bee:

- If the Crotch's bumble bee is no longer a Candidate or formally Listed species under the California ESA at the time ground-disturbing activities occur, then no additional protection measures are proposed for the species.
- Because Crotch's bumble bee nest locations are chosen on an annual basis and the site provides nesting habitat, a CDFW-approved Crotch's bumble bee biologist shall conduct three weekly preconstruction nesting surveys with focus on detecting active nesting colonies with the third and final survey conducted within 24-hours immediately prior to ground disturbing activities that are scheduled to occur during the flight season (February through October). Surveys shall be completed at a minimum of one person-hour of searching per three acres of suitable habitat during suitable weather conditions (sustained winds less than 8 miles per hour, mostly sunny to full sun, temperatures between 65 and 90˚F) at an appropriate time of day for detection (at least an hour after sunrise and at least two hours before sunset, though ideally between 9am-1pm). If no nests are found but the species is present, a full-time qualified biological monitor shall be present during initial vegetation or ground disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). The Crotch's bumble bee biologist shall immediately notify CDFW of the detection as further coordination may be required to avoid or mitigate certain impacts. If an active Crotch's bumble bee nest is detected, an appropriate no disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established around the nest to reduce the risk of

disturbance or accidental take and the designated biologist shall coordinate with CDFW to determine if an Incidental Take Permit under Section 2081 of the California ESA will be required. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified Crotch's bumble bee biologist deems the nesting colony is no longer active and CDFW agrees with the determination.

- If initial grading is phased or delayed for any reason, the 24-hour preconstruction nesting survey will be repeated prior to ground-disturbing activities that are scheduled to occur during the same flight season (February through October). Three preconstruction Crotch's bumble bee nesting surveys shall be required in subsequent years of construction whenever vegetation and ground disturbing activities are scheduled to occur during the flight season (February through October) if nesting habitat is still present or has re-established and will be affected.

5.1.2.2 California Red-Legged Frog and Foothill Yellow-Legged Frog

The BSA contains marginally suitable habitat for California red-legged frog and foothill yellow-legged frog (Northeast/Northern Sierra clade). Project implementation could result in impacts to listed frog species if present.

The following measures are recommended to minimize potential impacts to California red-legged frog and foothill yellow-legged frog:

- A qualified biologist shall conduct a preconstruction survey for California red-legged frog and foothill yellow-legged frog within all suitable habitat in the Project work area 48 hours prior to the start of ground- or vegetation-disturbing activities. The biologist will search for all life stages during this survey. If either species are found, the qualified biologist will notify CDFW immediately and consult on appropriate actions to be taken before construction begins.
- A biological monitor shall be present when activities occur within 100 feet of suitable habitat for either California red-legged frog or foothill yellow-legged frog.

5.1.2.3 Northwestern Pond Turtle and Blainville's Horned Lizard

The BSA contains suitable habitat for northwestern pond turtle and Blainville's horned lizard. Project implementation could result in impacts to individual northwestern pond turtle, nests, and Blainville's horned lizard, if present.

The following measures are recommended to minimize potential impacts to northwestern pond turtle and Blainville's horned lizard:

- A qualified biologist shall conduct a focused survey for northwestern pond turtle nests within all suitable habitat in the Project work area 10 days prior to the start of ground- or vegetation-disturbing activities. Any discovered nests will remain undisturbed until eggs have hatched.
- A qualified biologist shall conduct a preconstruction survey for northwestern pond turtle and Blainville's horned lizard within all suitable habitat in the Project work area 48 hours prior to the start of ground- or vegetation-disturbing activities. Any individuals discovered in the Project work

area immediately prior to or during Project activities shall be allowed to move out of the work area of their own volition. If this is not feasible, they shall be captured by a qualified biologist and relocated out of harm's way to the nearest suitable habitat at least 100 feet from the Project work area where they were found.

5.1.2.4 Nesting Birds (including Raptors)

The BSA contains suitable nesting and/or wintering and foraging habitat for eight 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.

The following measures are recommended to avoid or minimize potential effect to special-status birds and other birds protected under the MBTA (and their nests):

- To the extent feasible, vegetation removal activities shall commence during the nonbreeding season (typically October 1 through January 31, as determined by a qualified biologist).
- No Project activity with potential to disturb nesting birds shall begin during the nesting season (typically February 1 through September 30, as determined by a qualified biologist) unless the following surveys are completed by a qualified wildlife biologist:

California Black Rail

- A qualified biologist shall conduct a habitat assessment for California black rail. The survey shall be conducted within the entire Project footprint and a 500-foot buffer.
- If suitable habitat is found within 500 feet of the Project work area, a qualified biologist shall conduct a preconstruction California black rail survey sometime between March 15 and May 15 of the year in which ground disturbance activities commence. A minimum of four surveys shall be conducted. The survey dates will be spaced at least 10 days apart and will cover the time period from the date of the first survey through the end of June to early July. Surveys shall be conducted using survey protocol based on the methods used in Richmond et al. (2008) or other guidance agreed upon by the applicant and CDFW. If active nests are located during the preconstruction surveys, CDFW shall be notified. The nests shall be designated a sensitive area and protected by an avoidance buffer of 500 feet, or as otherwise determined in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are independent of the nest. Monitoring of occupied nests shall be conducted by a qualified biologist during construction activities, and avoidance buffers may be adjusted if any agitated behavior by the nesting birds is observed.

Tricolored Blackbird

- Within 30 days prior to construction, a qualified wildlife biologist shall survey for nesting tricolored blackbirds within the Project work area and a 500-foot radius. If active nests are located during the preconstruction surveys, CDFW shall be notified. The nests shall be designated a sensitive area and protected by an avoidance buffer of 500 feet, or as otherwise determined in coordination with CDFW. The avoidance buffer shall be maintained until a qualified biologist has determined that the young have fledged and are independent of the nest. Monitoring of occupied nests shall be conducted by a qualified biologist during construction activities, and avoidance buffers may be adjusted if any agitated behavior by the nesting birds is observed.

Other Special-Status Birds and Migratory Bird Treaty Act-Protected Birds

- During the nesting season, 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 for raptors and 100 feet for other birds protected under the MBTA.
- 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 nestlings have fledged, to be determined by a qualified biologist. No further measures are necessary once the young are independent of the nest or the nest is otherwise no longer occupied.

5.1.2.5 Special-Status Bats and Maternity Roosts

The trees in the Project Area represent potential roosting habitat for Townsend's big-eared bat and pallid bat. If occupied bat roosts are present, removal of the habitat feature could result in direct mortality or injury to special-status bats. Removal during the maternity roosting season could result in the loss of an established maternity roosting site and injury or mortality of pups that are not yet able to fly. Removal of a roost site during the winter season could also result in direct injury or death of special-status bats, particularly during time periods of colder weather or heavy rain, when bats are more likely to be in torpor. Impacts to special-status bats and maternity roost sites are considered significant under CEQA.

To avoid and minimize significant impacts to special-status bats or roosting colonies, the following mitigation measures are recommended:

- At least 30 days prior to initiation of Project activities, a bat habitat assessment shall be conducted by a qualified bat biologist to examine trees and structures for suitable bat roosting habitat. High-quality habitat features (e.g., large tree cavities, basal hollows, loose or peeling bark, abandoned structures) will be identified and the area around the features searched for bats and bat sign (i.e., guano, staining, culled insect parts).

- If suitable bat roosting habitat is identified, the feature shall be avoided and protected in place to the extent feasible. A buffer area shall be established around the roost site to minimize disturbance of roosting bats. The size of the buffer area will be determined in consultation with CDFW.
- If suitable trees or structures cannot be avoided, removal shall be timed to occur outside of the maternity roosting season (generally April 1 to August 31) and only when nighttime low temperature are above 45°F and rainfall is less than 1/2 inch in 24 hours.
- Trees with identified bat roosting habitat shall be removed using a two-phase removal process conducted over two consecutive days. On the first day, tree limbs and branches will be removed, using chainsaws only. Removal will avoid limbs with cavities, cracks, crevices, or deep bark fissures. On the second day, the remainder of the tree will be removed.
- Standing dead trees or snags with habitat features should be removed over a single day by gently lowering the tree or snag to the ground. The tree or snag shall be left undisturbed onsite for the next 48 hours.
- Removal and trimming of trees with potential roosting habitat shall be conducted in the presence of a biological monitor.
- If removal/modification of a suitable tree or structure must occur during the maternity season, a qualified bat biologist shall conduct a focused emergence survey(s) within 48 hours of scheduled work. If a maternity roost is located, whether solitary or colonial, that roost will remain undisturbed until after the maternity season or a qualified biological monitor has determined the roost is no longer active.

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?

There is one sensitive natural community identified within the BSA: Goodding's black willow riparian woodland. Project implementation could result in temporary or permanent removal of this sensitive natural community. Impacts to sensitive natural communities will be avoided or minimized to the maximum extent feasible through implementation of the recommended measures for impacts to tree and woodland resources (Section 5.5) in addition to any required measures stipulated by the CWA Section 404 permit and the CDFW Section 1602 LSAA. Thus, potential impacts to sensitive natural communities can be mitigated by obtaining CWA Section 404 and CDFW Section 1602 permits and implementing applicable conditions.

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 aquatic resources in the Project Area are considered potential jurisdictional waters of the U.S. and/or the State, and as such, are regulated by Sections 404 and 401 of the CWA and/or the Porter-Cologne Water Quality Control Act. The creeks and intermittent drainages in the Project Area are also subject to regulation under Section 1602 of the California Fish and Game Code. These features could be directly or indirectly impacted by Project activities. Direct impacts to aquatic resources would include any grading, trenching, excavation, or placement of temporary or permanent fill within a regulated feature. Indirect impacts may include inadvertent encroachments, changes in hydrology, and runoff and erosion from the Project Area. The following mitigation measures are recommended to address potential impacts to aquatic resources:

- The Project shall avoid aquatic resources to the extent feasible. Aquatic resources located within 50 feet of the Project footprint will be designated as Environmentally Sensitive Areas. The Environmentally Sensitive Areas shall be clearly demarcated with orange construction fencing or other visible barrier, and no Project-related activities shall be permitted within the delineated area.
- To minimize potential indirect effects, the applicant shall prepare and implement an Erosion and Sediment Control Plan to avoid and minimize erosion and runoff to wetlands and other waters that are to remain within or adjacent to the Project Area.
- If the Project will disturb at least 1 acre of land, the project applicant shall obtain coverage under the General Construction Storm Water Permit from the RWQCB by preparing a SWPPP and implementing best management practices (BMPs) to reduce water quality effects during construction.
- Authorization under the Section 404 of the federal CWA must be obtained from the USACE prior to discharging any dredged or fill materials into any Waters of the U.S. Mitigation measures will be developed as part of the Section 404 Permit process to ensure no net loss of wetland function and values. Mitigation for permanent impacts to Waters of the U.S. is typically required at a minimum 1:1 ratio; however, final mitigation requirements will be developed in consultation with the USACE.
- If temporary impacts to Waters of the U.S. or State will occur, the applicant shall prepare a site restoration plan describing the methods that will be used to restore impacted aquatic features to pre-project conditions. The restoration plan will include, at a minimum, the proposed methods for

stabilizing and revegetating the site, any maintenance requirements (e.g., watering, invasive species control), the expected timeframe for restoration.

- If discharges will occur to Waters of the U.S., Section 401 Water Quality Certification must be obtained from the RWQCB before a 404 Permit can be issued. An application for a 401 Water Quality Certification will be prepared and submitted to the RWQCB in accordance with the State Water Resources Control Board's *State Wetland Definition and Procedures for the Discharge of Dredged or Fill Material to Waters of the State* (Procedures; April 2021).
- In the unlikely event that none of the aquatic features delineated onsite meet the definition of Waters of the U.S., these features, with the exception of the canals, would then be considered Waters of the State. If discharges to Waters of the State will occur, the applicant shall obtain waste discharge requirements or a waiver of waste discharge requirements from the RWQCB as required pursuant to the Porter-Cologne Water Quality Control Act.
- If alteration of the bed, channel, or bank of a creek or intermittent drainage is proposed, or if the Project will impact associated aquatic or riparian vegetation, the applicant shall notify CDFW of the proposed Project activities and obtain a Streambed Alteration Agreement prior to Project implementation.

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?

Project implementation could result in the loss of tree and woodland resources protected under the Woodland Conservation Article. The following measures are recommended to avoid and/or minimize potential impacts to tree and woodland resources:

- The Project shall avoid ground or vegetation disturbance within the dripline of protected trees subject to the Placer County Tree Preservation Article. Mapping of protected tree driplines in the BSA and demarcation of avoidance zones during construction may be required. If protected trees are to be impacted by Project activities the appropriate tree permits will be obtained prior to initiation of impacting activities.

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?

A small portion of the BSA is located within the PCCP area. However, the Project proponent, NID, is not a PCCP Participating Agency and is not required to obtain regulatory approval via the PCCP. Therefore, the BSA is not covered by any local, regional, or state conservation plans and would not conflict with such 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 (Auburn (3812181) OR Colfax (3912018) OR Coloma (3812078) OR Greenwood (3812088) OR Lake Combie (3912111) OR Wolf (3912112) OR Pilot Hill (3812171) OR Rocklin (3812172) OR Gold Hill (3812182))

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
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	
ABNKC01010	***Pandion haliaetus*** osprey	None	None	G5	S4	WL
ABNKC06010	***Elanus leucurus*** white-tailed kite	None	None	G5	S3S4	FP
ABNKC10010	***Haliaeetus leucocephalus*** bald eagle	Delisted	Endangered	G5	S3	FP
ABNKD06071	***Falco peregrinus anatum*** American peregrine falcon	Delisted	Delisted	G4T4	S3S4	
ABNME03041	***Laterallus jamaicensis coturniculus*** California black rail	None	Threatened	G3T1	S2	FP
ABPAU01010	***Progne subis*** purple martin	None	None	G5	S3	SSC
ABPAU08010	***Riparia riparia*** bank swallow	None	Threatened	G5	S3	
ABPBXB0020	***Agelaius tricolor*** tricolored blackbird	None	Threatened	G1G2	S2	SSC
AFCHA0209K	***Oncorhynchus mykiss irideus pop. 11*** steelhead - Central Valley DPS	Threatened	None	G5T2Q	S2	
AMACC08010	***Corynorhinus townsendii*** Townsend's big-eared bat	None	None	G4	S2	SSC
AMACC10010	***Antrozous pallidus*** pallid bat	None	None	G4	S3	SSC
AMAFJ01010	***Erethizon dorsatum*** North American porcupine	None	None	G5	S3	
AMAJF01020	***Pekania pennanti*** Fisher	None	None	G5	S2S3	SSC
ARAAD02030	***Emys marmorata*** western pond turtle	Proposed Threatened	None	G3G4	S3	SSC
ARACF12100	***Phrynosoma blainvillii*** coast horned lizard	None	None	G4	S4	SSC
CTT44132CA	***Northern Volcanic Mud Flow Vernal Pool*** Northern Volcanic Mud Flow Vernal Pool	None	None	G1	S1.1	
ICBRA03030	***Branchinecta lynchi*** vernal pool fairy shrimp	Threatened	None	G3	S3	

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
ICBRA06010	***Linderiella occidentalis*** California linderiella	None	None	G2G3	S2S3	
IICOL48011	***Desmocerus californicus dimorphus*** valley elderberry longhorn beetle	Threatened	None	G3T3	S3	
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	
IIHYM24460	***Bombus morrisoni*** Morrison bumble bee	None	None	G3	S1S2	
IIHYM35210	***Andrena subapasta*** An andrenid bee	None	None	G1G2	S1S2	
IIPLE23020	***Cosumnoperla hypocrena*** Cosumnes stripetail	None	None	G2	S2	
ILARA14020	***Banksula californica*** Alabaster Cave harvestman	None	None	GH	SH	
ILARA14040	***Banksula galilei*** Galile's cave harvestman	None	None	G1	S1	
IMBIV27020	***Margaritifera falcata*** western pearlshell	None	None	G5	S1S2	
IMGASB0010	***Ammonitella yatesii*** tight coin (=Yates' snail)	None	None	G1	S1	
PDAST11061	***Balsamorhiza macrolepis*** big-scale balsamroot	None	None	G2	S2	1B.2
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
PDCIS020F0	***Crocanthemum suffrutescens*** Bisbee Peak rush-rose	None	None	G2?Q	S2?	3.2
PDCON040H0	***Calystegia stebbinsii*** Stebbins' morning-glory	Endangered	Endangered	G1	S1	1B.1
PDCPR07080	***Viburnum ellipticum*** oval-leaved viburnum	None	None	G4G5	S3?	2B.3
PDFAB25101	***Lathyrus sulphureus var. argillaceus*** dubious pea	None	None	G5T1T2Q	S1S2	3
PDONA05053	***Clarkia biloba ssp. brandegeeae*** Brandegee's clarkia	None	None	G4G5T4	S4	4.2
PDRHA04190	***Ceanothus roderickii*** Pine Hill ceanothus	Endangered	Rare	G1	S1	1B.1

Element Code	Species	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
PDRUB0N0E7	***Galium californicum ssp. sierrae*** El Dorado bedstraw	Endangered	Rare	G5T1	S1	1B.2
PDSCR0R060	***Gratiola heterosepala*** Boggs Lake hedge-hyssop	None	Endangered	G2	S2	1B.2
PMCYP03M60	***Carex xerophila*** chaparral sedge	None	None	G2	S2	1B.2
PMLIL022V0	***Allium jepsonii*** Jepson's onion	None	None	G2	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: 47

CALIFORNIA NATIVE PLANT SOCIETY

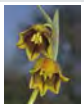
CNPS Rare Plant Inventory

Search Results

29 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3912018:3812078:3812088:3812181:3912111:3912112:3812171:3812172:3812182**]

▲ 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 jepsonii	Jepson's onion	Alliaceae	perennial bulbiferous herb	Apr-Aug	None	None	G2	S2	1B.2	Yes	1994-01-01	 © 2019 Steven Perry
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
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual/perennial herb	Aug	None	None	G5	S4	4.2		1994-01-01	No Photo Available
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	1974-01-01	 ©1998 Dean Wm. Taylor
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	Yes	1980-01-01	No Photo Available
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	Yes	2016-06-06	 © 2023 Steven Perry
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	G1	S1	1B.1	Yes	1974-01-01	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 mildrediae ssp. *lutescens*	golden-anthered clarkia	Onagraceae	annual herb	Jun-Aug	None	None	G3T3	S3	4.2	Yes	2001-01-01	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
Crocanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	None	None	G2?Q	S2?	3.2	Yes	1974-01-01	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 agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	Yes	1980-01-01	 © 2016 Aaron Schusteff
Fritillaria eastwoodiae	Butte County fritillary	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3Q	S3	3.2		1974-01-01	 ©2009 Sierra Pacific Industries
Galium californicum ssp. *sierrae*	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	G5T1	S1	1B.2	Yes	1974-01-01	 © 2019 John Doyen
Githopsis pulchella ssp. *serpentinicola*	serpentine bluecup	Campanulaceae	annual herb	May-Jun	None	None	G4T3	S3	4.3	Yes	2001-01-01	 © 2019 Barry Breckling
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2		1974-01-01	 ©2004 Carol W. Witham
Lathyrus sulphureus var. *argillaceus*	dubious pea	Fabaceae	perennial herb	Apr-May	None	None	G5T1T2Q	S1S2	3	Yes	1994-01-01	No Photo Available

Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Yes	1994-01-01	 © 2010 Aaron Schusteff
Leptosiphon aureus	bristly leptosiphon	Polemoniaceae	annual herb	Apr-Jul	None	None	G4?	S4?	4.2	Yes	1994-01-01	 © 2007 Len Blumin
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
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	Yes	1974-01-01	No Photo Available
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
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
Viburnum ellipticum	oval-leaved viburnum	Viburnaceae	perennial deciduous shrub	May-Jun	None	None	G4G5	S3?	2B.3		1974-01-01	 © 2006 Tom Engstrom
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 29 of 29 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 29 November 2023].

Quad Name **Auburn**
Quad Number **38121-H1**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) -
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat -
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

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

IPaC resource list

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

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

Location

Placer County, California

Local office

Sacramento Fish And Wildlife Office

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

Federal Building

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

Endangered species

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

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

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

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

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

Listed species[1] 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:

Reptiles

NAME	STATUS
Northwestern Pond Turtle Actinemys marmorata Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1111	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

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

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

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

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

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
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

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
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31

Probability of Presence Summary

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

Probability of Presence (■)

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

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

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

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

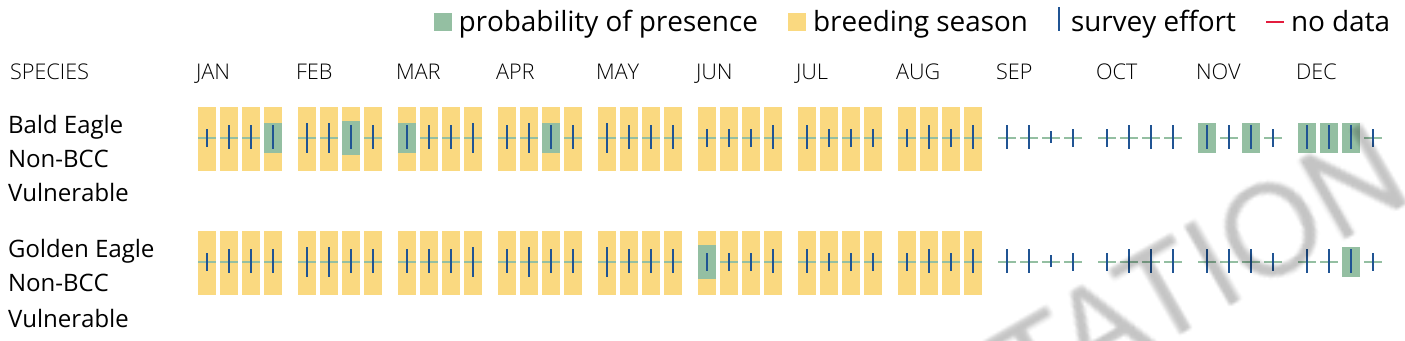
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

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

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

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



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[3] 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:

- Eagle Management 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
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

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
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Aug 31
Belding's Savannah Sparrow *Passerculus sandwichensis beldingi* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8	Breeds Apr 1 to Aug 15
Bullock's Oriole *Icterus bullockii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 21 to Jul 25
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
California Thrasher *Toxostoma redivivum* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Nuttall's Woodpecker *Picoides nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

Western Grebe aechmophorus occidentalis — Breeds Jun 1 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/6743

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

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.

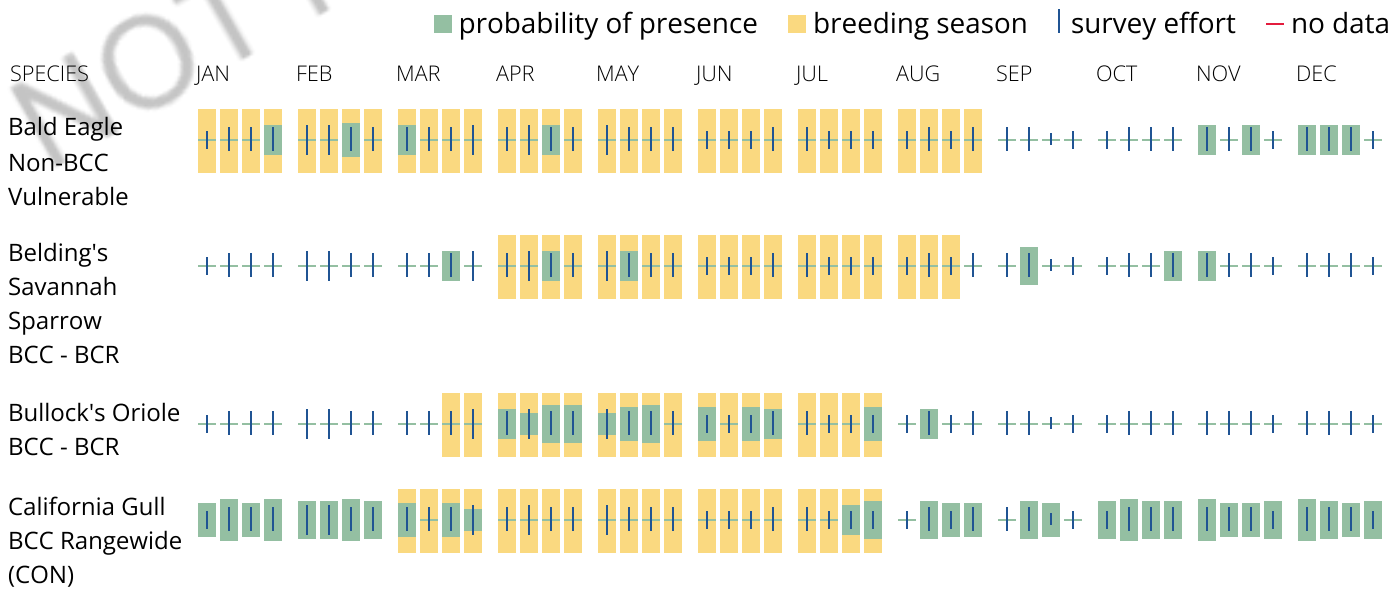
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (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

- PFOA
- PSSA

FRESHWATER POND

- PUBFh
- PUBFx

RIVERINE

- R2UBHx
- 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.

APPENDIX B

Representative Photographs

Overview of the Orr Creek Siphon Segment, facing northeast. Photo taken November 2, 2023.

Seep located within the Orr Creek Siphon Segment, facing northeast. Photo taken November 2, 2023.

Intermittent drainage located within the Orr Creek Siphon Segment, facing northwest. Photo taken November 21, 2023.

Overview of the Dry Creek Siphon Segment, facing northeast. Photo taken November 2, 2023.

Portion of Dry Creek located within the Dry Creek Siphon Segment, facing west. Photo taken November 2, 2023.

Seep located within the Dry Creek Siphon Segment, facing south. Photo taken November 21, 2023.

Overview of the Rock Creek Siphon Segment, facing southwest. Photo taken November 2, 2023.

Portion of Rock Creek located within the Rock Creek Siphon Segment, facing west. Photo taken November 2, 2023.

APPENDIX C

Plant Species Observed

SCIENTIFIC NAME	COMMON NAME
ADOXACEAE	MUSKROOT FAMILY
Sambucus nigra ssp. *caerulea*	Blue elderberry
APIACEAE	CARROT FAMILY
*Torilis arvensis**	Field hedge parsley
ASTERACEAE	SUNFLOWER FAMILY
Baccharis pilularis	Coyote bush
Baccharis salicifolia	Mulefat
*Centaurea solstitialis**	Yellow star-thistle
*Cirsium vulgare**	Bull thistle
BETULACEAE	BIRCH FAMILY
Alnus sp.	Alder
BRASSICACEAE	MUSTARD FAMILY
Nasturtium officinale	Water cress
Raphanus sp.*	Wild radish
CYPERACEAE	SEDGE FAMILY
Cyperus eragrostis	Tall flatsedge
EQUISETACEAE	HORSETAIL FAMILY
Equisetum arvense	Field horsetail
EUPHORBIACEAE	SPURGE FAMILY
Croton setiger	Turkey mullein
FABACEAE	LEGUME FAMILY
*Vicia villosa**	Hairy vetch
FAGACEAE	OAK FAMILY
Quercus douglasii	Blue oak
Quercus kelloggii	California black oak
Quercus lobata	Valley oak
Quercus wislizeni	Interior live oak
GERANIACEAE	GERANIUM FAMILY
*Erodium botrys**	Broadleaf filaree
*Geranium molle**	Dovefoot geranium
JUNCACEAE	RUSH FAMILY
Juncus balticus ssp. *ater*	Baltic rush
LAMIACEAE	MINT FAMILY
Mentha sp.*	Mint
*Mentha spicata**	Spearmint
Stachys sp.	Hedge-nettle

*Nonnative species

SCIENTIFIC NAME	COMMON NAME
ONAGRACEAE	EVENING PRIMROSE FAMILY
Epilobium ciliatum	Hairy willow-herb
PINACEAE	PINE FAMILY
Pinus sabiniana	Gray pine
POACEAE	GRASS FAMILY
*Aira caryophyllea**	Silvery hairgrass
Avena sp.*	Wild oat
*Bromus diandrus**	Ripgut brome
*Bromus hordeaceus**	Soft brome
*Cynodon dactlyon**	Bermuda grass
*Cynosurus echinatus**	Hedgehog dog-tail grass
*Elymus caput-medusae**	Medusahead grass
*Festuca perennis**	Italian ryegrass
Muhlenbergia rigens	Deergrass
*Paspalum dilatatum**	Dallis grass
POLYGONACEAE	BUCKWHEAT FAMILY
Eriogonum nudum	Naked buckwheat
*Rumex crispus**	Curly dock
ROSACEAE	ROSE FAMILY
Heteromeles arbutifolia	Toyon
*Pyrus calleryana**	Callery pear
*Rubus armeniacus**	Himalayan blackberry
RUBIACEAE	MADDER FAMILY
Cephalanthus occidentalis	Common buttonbush
SALICACEAE	WILLOW FAMILY
Populus fremontii	Fremont's cottonwood
Salix gooddingii	Goodding's black willow
Salix laevigata	Red willow
TYPHACEAE	CATTAIL FAMILY
Typha sp.	Cattail
VERBENACEAE	VERVAIN FAMILY
*Verbena bonariensis**	Purpletop vervain
VITACEAE	GRAPE FAMILY
Vitis californica	California wild grape

*Nonnative species

APPENDIX D

Wildlife Species Observed

Common Name	Scientific Name
Amphibians	
Pacific Chorus Frog	*Pseudacris regilla*
Birds	
Anna's Hummingbird	*Calypte anna*
Acorn Woodpecker	*Melanerpes formicivorus*
Northern Flicker	*Colaptes auratus*
California Scrub-Jay	*Aphelocoma californica*
Oak Titmouse	*Baeolophus inornatus*

APPENDIX D

Archaeological Resources Inventory and Built Environment Resources Evaluation Report for the
NID Combie & Ophir 2 & 3 Siphon Replacement Project
ECORP Consulting, Inc. February 2024

This Appendix is not provided due to Confidentiality

Archaeological Resources Inventory and Built Environment Resources Evaluation Report for the NID-Combie Ophir 2 & 3 Siphon Replacement Project

Placer County, California

Prepared For:

Nevada Irrigation District
1036 West Main Street
Grass Valley, California 95945

Prepared By:

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

February 2024

APPENDIX E

NID Combie & Ophir 2 &3 Siphon Replacement Total Construction Related and Operational Gasoline Usage
ECORP Consulting, Inc. 2024

Proposed Project
Total Construction-Related and Operational
Gasoline Usage

Table 1. Construction in First Calendar Year			
Action	**Carbon Dioxide Equivalents (CO_2e) in Metric Tons[1]**	**Conversion of Metric Tons to Kilograms[2]**	**Construction Equipment Emission Factor[2]**
Project Construction	180	180,000	10.15
Total Gallons Consumed During First Calendar Year of Construction:			**17,734**

Sources:

[1]California Emission Estimator Model v. 2022.1 prepared by ECORP Consulting 2023.

[2]Climate Registry. 2016. *General Reporting Protocol for the Voluntary Reporting Program version 2.1.* January 2016.

Table ES-1. Recommended revised water-energy proxies

	Indoor Uses		Outdoor Uses	
	Northern California kWh/MG	Southern California kWh/MG	Northern California kWh/MG	Southern California kWh/MG
Water Supply and Conveyance	2,117	9,727	2,117	9,727
Water Treatment	111	111	111	111
Water Distribution	1,272	1,272	1,272	1,272
Wastewater Treatment	1,911	1,911	0	0
Regional Total	5,411	13,022	3,500	11,111

Creek Name	Current flow (cfs)	New flow (cfs)	Difference (cfs)
Orr Creek	50.2	72.5	22.3
Dry Creek	46.1	70	23.9
Rock Creek	43	72.5	29.5
Total			75.7

cfs	MGD	kWh
75.7	48.92642	103577.2396

APPENDIX F

Roadway Construction Noise Model for the NID Combie & Ophir 2 & 3 Siphon Replacement Project
ECORP Consulting, Inc. February 2024

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/14/2024
Case Description: Project Implementation

Description	**Affected Land Use**
Project Implementation	Residential

Description	**Impact Device**	**Usage(%)**	**Equipment Spec Lmax (dBA)**	**Actual Lmax (dBA)**	**Receptor Distance (feet)**	**Estimated Shielding (dBA)**
Excavator	No	40		80.7	200	0
Welder / Torch	No	40		74	200	0
Pickup Truck	No	40		75	200	0
Dump Truck	No	40		76.5	200	0
Flat Bed Truck	No	40		74.3	200	0
Pickup Truck	No	40		75	200	0
Pickup Truck	No	40		75	200	0
Pickup Truck	No	40		75	200	0

Results

Calculated (dBA)

Equipment		***Lmax**	**Leq**
Excavator		68.7	64.7
Welder / Torch		62	58
Pickup Truck		63	59
Dump Truck		64.4	60.4
Flat Bed Truck		62.2	58.2
Pickup Truck		63	59
Pickup Truck		63	59
Pickup Truck		63	59
	Total	68.7	**69.3**

*Calculated Lmax is the Loudest value.

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