TIERED INITIAL STUDY

for the

South Tahoe Public Utility District

Tahoe Mountain Waterline Replacement Project

PROJECT NAME

South Tahoe Public Utility District Tahoe Mountain Waterline Replacement Project

LEAD AGENCY

The South Tahoe Public Utility District (District), located in South Lake Tahoe, California, will serve as the Lead Agency for the Tahoe Mountain Replacement Projects for this Initial Study in accordance with the California Environmental Quality Act (CEQA).

This Initial Study was prepared under contract with the District by:

Sierra Ecotone Solutions LLC
PO Box 1297
Zephyr Cove, NV 89448.

PROJECT CONTACT INFORMATION

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

If environmental factors are checked below, there would be at least one impact that is a "Potentially Significant Impact" as indicated by the checklist in Chapter 2 of this Initial Study.

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

Chapter 1. PROJECT DESCRIPTION

1.1 INTRODUCTION AND PROJECT BACKGROUND

1.1. A Purpose and Need

The South Tahoe Public Utility District (District) owns and operates the water distribution system and waste water collection and treatment system within its Service Area in the City of South Lake Tahoe and El Dorado County, California. The District regularly conducts condition assessments of existing water facilities to identify opportunities to optimize the system to better provide reliable water services safely, efficiently and cost effectively. The Tahoe Mountain Waterline Replacement Project (Project) would replace and upgrade waterlines and install new fire hydrants to improve capacity and reliability, enhance fire protection, and provide an increased level of service within the surrounding community. The Project Area is located on the western edge of the Service Area in an unincorporated area of El Dorado County in the Tahoe Mountain neighborhood, east of Fallen Leaf Lake (**Figure 1).**

The Project will replace approximately 4,100 linear feet of existing waterlines in a residential neighborhood, including a waterline that fills the Forest Mountain Tank. The existing 6-inch and 8-inch steel waterlines were installed in the early 1960's, possibly earlier, and the District has seen an increasing number of leaks in this area, indicating that the waterlines are at the end of useful life. The new waterline will be 8-inches and either C900 PVC or ductile iron. In addition, a total of eight dead-ends that cannot be connected due to land issues will have a flush-out installed so that the lines can be cleared annually. A total of 40 new water services and 7 fire hydrants will be placed within the Right-of-Way of the following streets: Iron Mountain, Forest Mountain, Granite Mountain, Brush, and Cone (**Figure 2).** The Forest Mountain Tank is located within an existing easement on US Forest Service property. The hydrants will be spaced every 500 feet to meet fire standards that require developed properties to be no more than 250 feet from a fire hydrant and undeveloped properties to be no more than 500 feet from a fire hydrant.

1.1. B Project Background

In 2015, the District completed an assessment of its water system service that serves over 16,000 residential and commercial customers to determine how the system could be optimized to provide reliable water services more safely, efficiently and cost effectively. The result was the 2016 Water System Optimization Plan (WSOP) that is used by the District to guide its operations and capital investments to meet the goal of maintaining a reliable potable water service.

The WSOP included a comprehensive condition assessment of existing water facilities that identified deficiencies within the water system. The District used the results of the assessment to develop a prioritized Capital Improvement Program (CIP) to correct deficiencies in water system condition, capacity, and Level of Service (LOS). On an annual basis, the District presents an Annual Plan Update to the CIP that identifies and prioritizes capital projects based on current needs and the adopted budget. The annual plan document is intended to be a desktop resource for basic information regarding the scope, cost, and need for proposed projects. The annual

update for FY24-33 identifies the proposed Tahoe Mountain Waterline Replacement Project as a high priority project for implementation in 2026

1.1. C Project Location

The Project is located in unincorporated El Dorado County, outside the boundary of the City of South Lake Tahoe, California (**Figure 1)**. The Project Area is in the Tahoe Mountain neighborhood, approximately three miles south of the "Y" and east of Fallen Leaf Lake (**Figure 2).** Tahoe Mountain Drive heads north from Lake Tahoe Blvd toward Fallen Leaf Lake Road. The neighborhood is the access point for Angora Ridge Road, which provides access to the popular recreation area of Angora Lakes Resort.

The Project Area is contained within the Emerald Bay United States Geological Society (USGS) 7.5 Minute Quadrangle Topographic Map and occurs within Township 12N Range 18E, Section 18 on the Mt Diablo Meridian.

1.1. D General Plan Designation, Zoning and Surrounding Land Use

The Project Area is located within the TRPA Angora Highlands Plan Area Statement (PAS). The Plan Area is located approximately three miles south of the "Y" on Tahoe Mountain Drive and includes the Angora Highlands Subdivision. Land use within the Project Area is residential at a density of one single-family dwelling per parcel. There are no special policies or planning considerations in effect for the Plan Area.

1.1. E Tiering Process

Tiering under CEQA involves the preparation of multiple CEQA documents for a sequence of actions so that the latter CEQA document incorporates and builds on the information provided in a "first-tier" document. The “tiered document” incorporates by reference the analysis of general matters contained within the initial document, and concentrates subsequent CEQA documents solely on the issue specific to the later project (State CEQA Guidelines § 15152(a)). Section 15152(b) encourages agencies to tier the environmental analyses for separate, but related, projects in order to eliminate repetitive discussions and focus the subsequent IS or negative declaration on the project-specific issues needing further decision.

This Initial Study (IS) is tiered from the IS prepared for the South Tahoe Public Utility District District-Wide Right-of-Way Water and Sewer Facilities Upgrade Project (Sierra Ecotone Solutions LLC 2021), in accordance with Section 21094 of the California Public Resources Code and Section 15152 of the State CEQA Guidelines. The District-Wide Right-of-Way Water and Sewer Facilities Upgrade Project IS (District Wide IS) evaluated the environmental impacts associated with replacement and upgrading the sewer and water distribution system in areas outside Stream Environment Zones (SEZ), as defined by the Tahoe Regional Planning Agency).

The majority of the Tahoe Mountain Project activities will occur within the Right-of-Way evaluated in the District Wide IS. However, the Project Area perimeter includes a small amount of mapped SEZ and intermittent drainages. Therefore, this tiered IS will only focus on potential impacts from the Project on the SEZ and any sensitive plant or wildlife species that could be present. Only the

Biological Resources, Cultural Resources, Geology, Soils Seismic/Land Coverage, and Hydrology/Water Quality sections are included herewith for discussion and analysis. All other sections from the District Wide IS (Aesthetics, Agricultural Resources, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous materials, Land Use Planning, Mineral Resources, Noise, Population/Housing, Public Service, Recreation, Transportation/Traffic, Utilities/Service Systems) have remained unchanged and are referenced herewith (Sierra Ecotone Solutions LLC 2021) in this tiered document.

FIGURE 1. PROJECT VICINITY

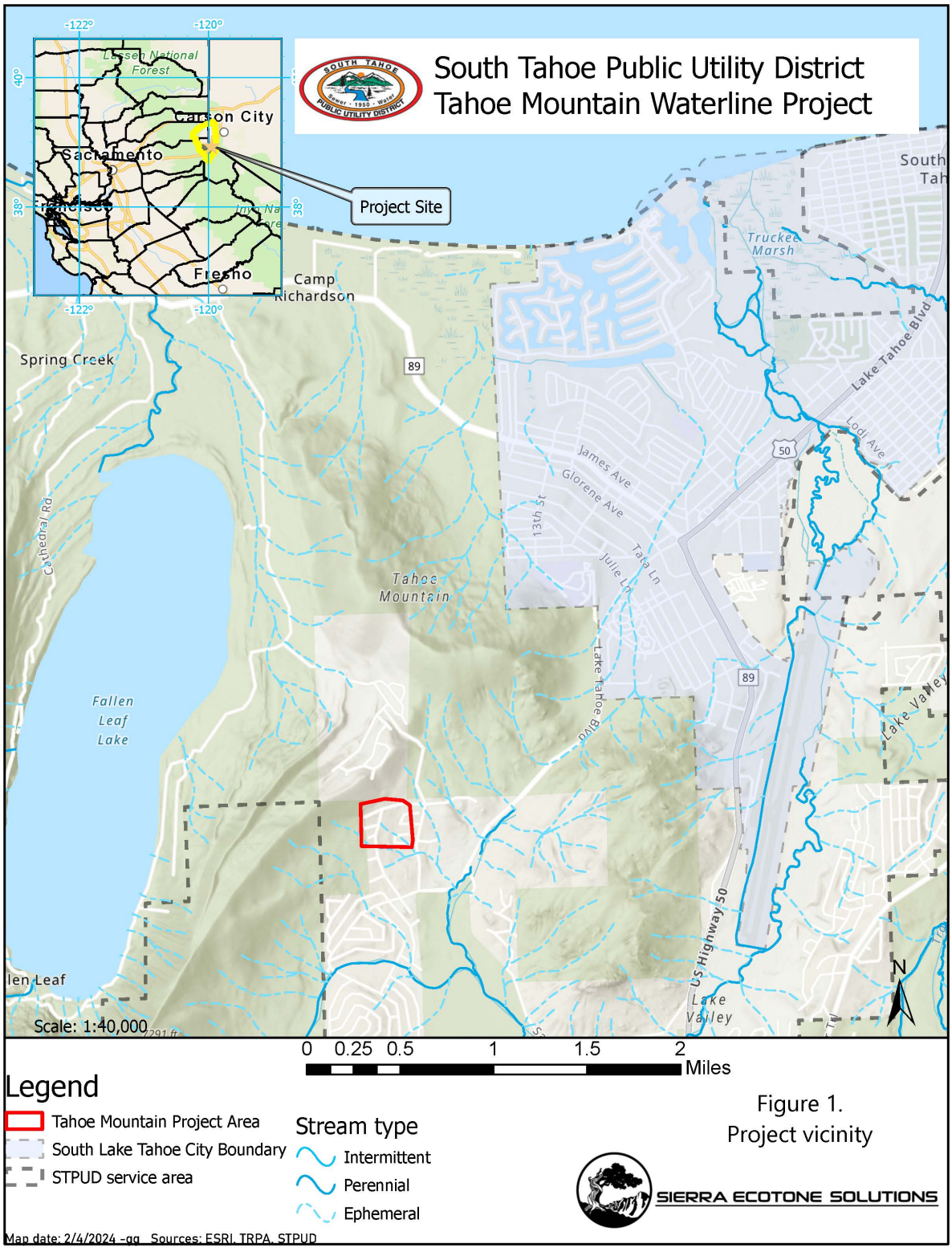
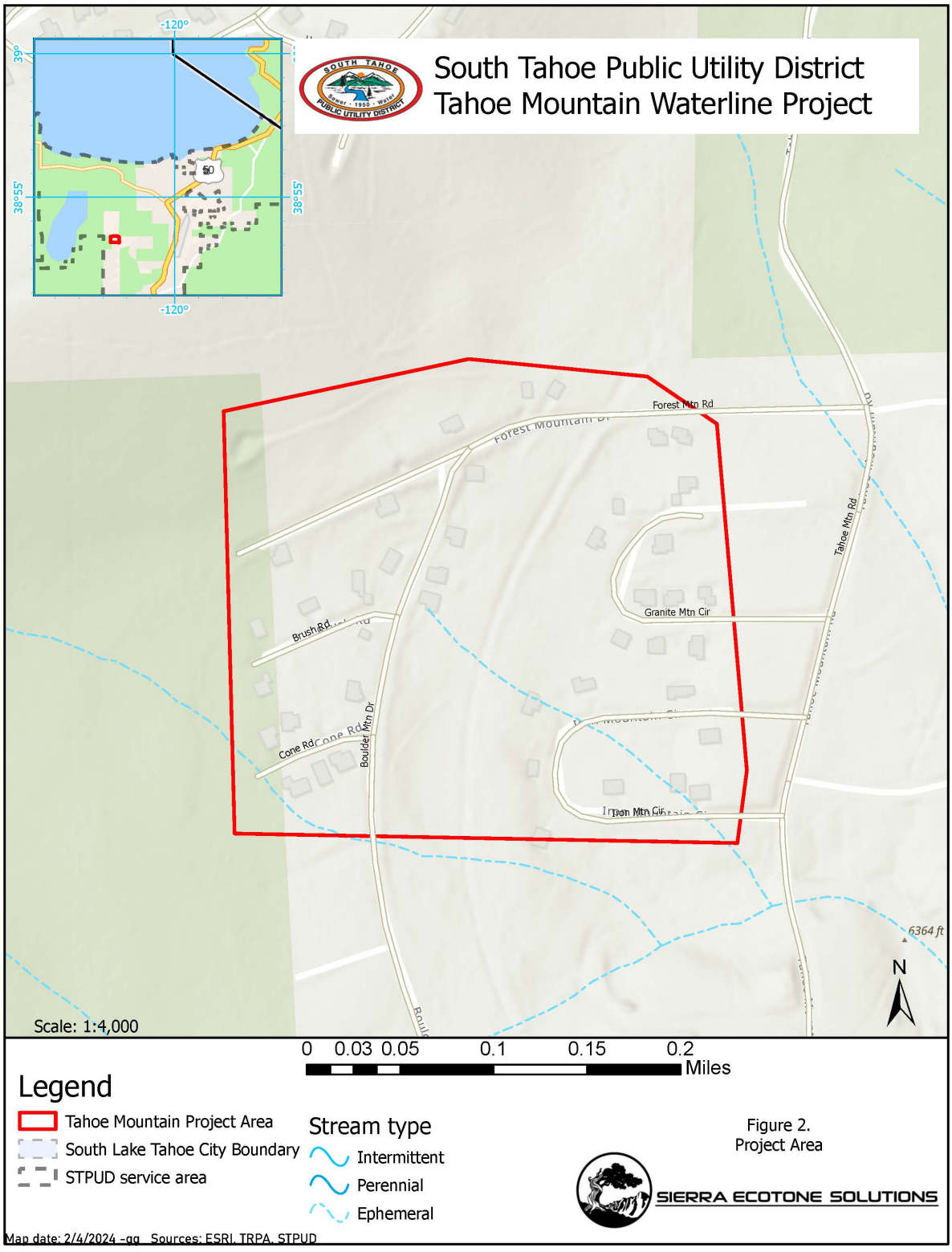


FIGURE 2. PROJECT AREA



1.2 DESCRIPTION OF PROJECT

The purpose of the Tahoe Mountain Waterline Replacement Project (Project) is to mitigate existing deficiencies within the water system to provide an increased level of service and enhanced fire protection capability. The District has conducted hydraulic capacity and condition assessments of existing waterlines, primarily based on diameter and pressure, but also age, or piping material. Existing water pipelines have been identified in the Project Area that are either small diameter (8-inch and under) or nearing the end of their useful life. The District proposes to replace these aging and small diameter water pipelines to increase water system efficiency and improve fire flows. New fire hydrants would also be installed to meet current standards. Each of these components are described in further detail below.

1.2. A Project Components

Waterline Replacement

The Project will replace approximately 4,100 linear feet of existing 6-inch and 8-inch steel waterlines with new 8-inch waterline made of either C900 PVC or ductile iron. A total of eight dead-ends that cannot be connected due to land issues will have a flush-out installed so that the lines can be cleared annually. A total of 40 new water services and 7 fire hydrants will be placed within the Right-of-Way of the following streets: Iron Mountain, Forest Mountain, Granite Mountain, Brush, and Cone (**Figure 2).** A waterline that fills the Forest Mountain Tank, located within an existing easement on US Forest Service property, will also be replaced

Waterlines that would be replaced include mains and service laterals. All water lines are expected to be installed within the road right-of-way and/or existing easements and under existing pavement or compacted road shoulder encompassing up to 10 feet out from the edge of pavement. Generally, waterlines are installed four feet below grade, with a maximum depth of excavation of five feet. Ancillary facilities (e.g., valve clusters, fire hydrants, vaults, utility crossings, etc.) may require additional excavation depth up to eight feet. The waterline replacement would begin with pipeline trenching and excavation within the road. A section of new mainline would be installed along with “in line” appurtenances and might include pressure relief valves (PRV), pressure relief stations, or meters. Generally, these projects entail installation of a vault or manhole in the street or compacted road shoulder with the mechanical equipment installed inside. A PRV might also include a roadside control panel in a box. Each completed section would be tested for leakage and disinfected. After testing, the new mainline would be tied into the existing system and the new services would be tied to the existing services at the property. The portion of the system being replaced would generally remain in service until the new system has been tied in. Then the old system would be abandoned in place. Upon completion of the install, the trenches would be backfilled and the roadway replaced. Existing guardrail and signage would be protected throughout construction along with any existing curb and gutter

New Fire Hydrant Installation

The installation of new fire hydrants within the Service Area is necessary to meet fire standards that require developed properties to be no more than 250 feet from a fire hydrant and undeveloped

properties to be no more than 500 feet from a fire hydrant. A total of 7 new fire hydrants would be installed with 500-foot spacing. Each hydrant would be connected to the new waterline via a 6-inch fire hydrant lateral and gate valve off of the hydrant tee.

All areas within and surrounding water service improvements subject to ground disturbing activities constitute the project "area of potential effect" or APE. The APE is 4,090 linear feet (0.77 miles or 1,246.6 meters) long. The APE for the work area is the roadway (averaging 20 feet wide) plus a 10-foot-wide buffer zone along each road shoulder for a total APE width of 40 feet. The total horizontal APE is 163,600 square feet/15,199 square meters or 3.76 acres. The vertical APE involves a maximum excavation depth of five feet, except at ancillary facilities where over-excavation for supports would extend the maximum depth to eight feet.

1.3. B Construction Phasing, Schedule and Equipment

Construction is planned for 2026 and is anticipated to occur within one TRPA grading season between May 1st to October 15th. The new fire hydrants would be installed in conjunction with the water pipeline replacement and all new components would be pressure tested and disinfected at the same time. When testing is complete, the new components would be tied in with the existing system.

The contractor shall comply with the TRPA standard conditions of approval. Construction that is not completed during the TRPA construction season for earth moving activities between May 1st and October 15th would require a TRPA Grading Season Exception. On-site work would be performed from 8 am to 6 pm Monday through Friday. Work outside these hours would be approved by the District a minimum of 48-hours before the abnormal working hours are scheduled to begin.

General construction equipment that would be utilized for waterline projects include excavator, mini-excavator, loader, water truck, service vehicles, small remote sheep's-foot compactor, vacuum truck, sweeper, milling machine, smooth drum compactor, and a paving machine. All but the paving equipment (the last 3 on the list) are used every day.

1.2. C.1 Earthwork and Excavations

Earthwork and excavations that result in temporary disturbance will be necessary for Project implementation. Excavation is defined as being 18 or more inches of depth below the existing surface. Water pipeline trenches are expected to be 3 to 5 feet wide and generally require excavations of 5 feet deep. Excavations will primarily occur within the El Dorado County ROW. A TRPA pre-grade inspection shall be completed prior to any excavation or saw-cutting activities.

1.2. C.2 Pipeline and Utility Trenching and Excavations

The contractor shall be responsible for contacting all utility companies, local agencies and/or utility districts as to the location of all underground facilities. Location and depth of existing utilities where shown on plans are based on best available information. No guarantee is made as to the accuracy of this information or that all utilities are shown. It shall be the contractor's responsibility to locate, protect, and maintain all existing utilities. The contractor or any subcontractor for this contractor

shall notify members of underground service alert 48 hours in advance of performing excavation work by calling underground service alert #811. Excavation is defined as being 18 or more inches of depth below the existing surface.

The contractor shall pothole all utility and storm drain crossings along the pipeline alignment in advance of installation. The contractor shall report the results of the pothole in writing to the engineer 48 hours (not to include weekends or holidays) prior to undertaking any corrective action. Should any corrective work be done prior to notification, the District assumes no liability for the costs incurred for this work.

All interties between new water mains and the existing water system, including new water service connections, and fire hydrant installations and transfers, shall only be made after all pressure testing and disinfection requirements are satisfactorily met. The contractor shall be responsible to provide all blow offs necessary for flushing and sampling of all new water mains as required by the California State Water Resources Control Board and project specifications.

The thickness of replacement pavement is 3 inches in the ROW as specified in the project plans. Trench pavement replacement exceeding this shall be completed at no additional expense to the District.

The contractor shall protect and be responsible for any disturbance or contamination to any dry wells, storm water collection or retainage systems including storm drain pipe, curb & gutter, valley gutters and horizontal drains through-out the project area. Any damage shall be repaired at no additional cost to District. The contractor shall not stock pile any material upon any drainage facilities. All sewer pipes damaged during the execution of the project shall be repaired per plan details.

1.2.C.3 Fill Materials and Placement

All excavations shall be backfilled or trench plated at the end of each day's work per the plan specifications. Within paved areas, trenches will be backfilled with project excavated material compacted at 95% relative compaction. Excavations within existing paved areas shall be hot or cold patched or steel plated as required per specifications to match the existing pavement at the end of each day’s work. All trench plates shall be non- skid type and have cold patch applied to the edge for traffic approach and departure.

The contractor shall provide, on all non-conductive piping, continuous insulated tracer wire rated for direct bury (#10 solid copper or # 12 copper clad steel wire along the pipeline and provide access to tracer wire at all valve boxes installations with a minimum of 1-foot excess tracer wire for future service connections. This shall also apply to all conductive piping unless permanently bonded at each joint. All tracer wire connections shall be made using 3M DBR-6 splice kit or approved equal.

After the new main is placed into service, the existing water mains, where shown on the project drawings, are to be abandoned in place by cutting out a section of pipe and welding a cap on the end of the pipeline, or other approved method of capping. Blind- flange capping shall be utilized

where possible. All exposed corporation stops on the existing water mains are to be left in place in the closed position. For corporation stops that have not been exposed, the capping of the end of the service line using an approved compression fitting shall be acceptable. Existing fire hydrants to be abandoned at the isolation valve, will be removed from the project area and returned to the District, by the contractor. The isolation valve is to be blind flanged or capped by other approved method.

Only new water service connections where shown on the project plans shall be installed per the Districts standard details and project drawings. After Project completion, the locations of all existing water services shall be verified and marked in the field.

1.2.C.4 Disposal of Excess Excavated Material

All excess material from the project is to be removed from the site and disposed of at a site approved by the TRPA. No excess material shall be stored on site after hours. For this Project, excess spoil may be temporarily stored at the Contractor staging area at the District Wastewater Treatment Plant. No material shall be stored in any stream environment zone or wet area. The contractor shall not stock pile any material upon any drainage facilities. Contractor shall remove all material generated by any asphalt saw cutting operation during or immediately after saw cutting by using adequately sized vacuuming equipment to accommodate the removal process.

1.2.D Site Clean Up and Restoration

All disturbed areas shall be restored to match pre-existing conditions. Unimproved areas and areas not landscaped shall be revegetated with native species in accordance with the TRPA handbook of best management practices. Existing vegetation removed during construction shall be chipped and mulched on site and stored for use during revegetation. Application of a mulch may enhance vegetative establishment. Any disturbance of private property shall be restored by the contractor at their expense. All traffic striping that is disturbed during construction shall be replaced by the contractor.

1.2.E Site Access, Staging Areas, and Parking

The District would likely provide a Contractor staging area at the Wastewater Treatment Facility located off of Al Tahoe Blvd. Additional staging may occur within compacted shoulder areas of the project area if allowed by El Dorado County. Contractors equipment and employee vehicles shall park on existing paved surfaces or existing compacted road shoulders. Contractor shall provide crushed rock in areas of temporary construction access to minimize migration of sediment.

1.3 PROJECT DESIGN FEATURES AND BEST MANAGEMENT PRACTICES

The design features and best management practices (BMPs) that are detailed in Section 1.3 below are proposed as part of the Project to avoid, reduce and minimize potential direct and indirect effects of water meter installations.

1.3. A Construction Dewatering Plan

The contractor shall be responsible for the handling and proper disposal of distribution system water encountered during system tie-ins. The water that would be encountered would come from dewatering of the pipes and not from groundwater. This water would be captured with a vacuum truck or a sump pump to the sewer syste.in accordance with the plan specifications. For this Project, the contractor shall assume that up to 1,250 gallons could be encountered at each tie-in.

1.3. B Construction Equipment Emissions Control Plan

To ensure that air quality effects will be minimized, the following best management practices will be implemented to reduce emissions from construction equipment exhaust:

- Only equipment of a size and type that will do the least amount of damage, under prevailing site conditions and considering the nature of the work will be used.
- Minimize idling time (e.g., 5-minute maximum).
- Maintain properly tuned equipment according to equipment manufacturer's guidelines.
- Limit the hours of operation of heavy equipment and noise generating activities to 8AM to 6PM.

1.3.C Fugitive Dust Control Plan

The District's contractor will take the necessary steps, procedures, or means as required to prevent its operations in connection with the execution of the Work from causing abnormal dust conditions. The District's contractor will prevent dust from construction activities from being produced in amounts that may be harmful or cause a nuisance to persons living nearby or occupying buildings in the vicinity of the Project.

To ensure compliance with El Dorado County Air Quality Management District's (EDCAQMD) Rule 223 to minimize the amount of particulate matter entrained in the ambient air as a result of man-made fugitive dust sources, the following feasible Particulate Matter (PM10) control measures for construction activities will be implemented:

- The contractor shall provide a water truck to water areas as necessary for dust control. The contractor shall apply either water or a dust palliative, or both, as required to alleviate or prevent dust nuisance.

- During construction, environmental protection devices, such as erosion control, dust control and vegetation protection devices shall be maintained at all times.
- The contractor shall provide a vacuum sweeper truck for cleaning of the site during and after construction each day as required to prevent sediment run off and to aid in dust control.

1.3.D Best Management Practices to Protect Surface and Ground Water/Sediment and Erosion Control Plan

The Contractor shall comply with the State Water Resource Control Board waste water discharge requirements for the project and the County of El Dorado encroachment permit. Portions of this Project are likely to qualify as Exempt or Qualified Exempt under TRPA regulations and therefore, would not require a pre-grade inspection. However, new construction requires a TRPA pre-grade inspection be completed prior to any saw cutting or excavation activities. To ensure that potential impacts to surface water and ground water are avoided, reduced and minimized, the following measures and BMPs will be implemented as necessary based on site conditions at individual work sites:

- During construction, environmental protection devices, such as erosion control, dust control and vegetation protection devices shall be maintained at all times.

- Soil and construction material shall not be tracked off the construction site. Grading operations shall cease in the event that this condition is in danger of being violated.

- Loose soil mounds or surface shall be protection from wind or water erosion by being appropriately covered at the end of each work day or when required by TRPA.

- The contractor shall not stock pile any material upon any drainage facilities. Excavated material shall be stored upgrade from the excavated area whenever possible. No material shall be stored in any stream environment zone or wet area.

- All excess material from the project is to be removed from the site and disposed of at a site approved by the TRPA. No excess material shall be stored on site after hours. Contractor shall remove all material generated by any asphalt saw cutting operation during or immediately after saw cutting by using adequately sized vacuuming equipment to accommodate the removal process.

- No equipment or vehicles shall be placed outside the state, city, or county right of way.

- No washing of vehicles or heavy equipment shall be permitted except when authorized by TRPA in writing.

- Contractor shall provide crushed rock in areas of temporary construction access to minimize migration of sediment.

- The contractor shall protect and be responsible for any disturbance or contamination to any dry wells, storm water collection or retainage systems including storm drain pipe, curb

& gutter, valley gutters and horizontal drains throughout the project area. Any damage shall be repaired at no additional cost to the District.

1.3.E Prevent and Control Invasive Species

To prevent the spread of invasive plant species, the following measures and BMPs will be implemented:

- Construction vehicles, including off-road vehicles, will be cleaned when they come into the Basin or come from a known invasive plant infested area. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other such debris.
- Equipment will be staged in weed-free areas to prevent vehicles from introducing or spreading invasive species.
- Earth-moving equipment, gravel, fills, or other materials are required to be weed-free. Onsite sand, gravel, rock, or organic matter will be used when possible or weed-free materials from gravel pits and fill sources that have been surveyed and approved will be used.
- Minimize the amount of ground and vegetation disturbance in the construction areas. Upon completion of construction, vegetation will be reestablished in the footprint to minimize weed establishment after the removal.

1.3.F Construction Noise Reduction

To reduce construction related noise, the following measures will be implemented:

- Noise shall be reduced by mandatory use of mufflers on all construction vehicles and equipment. Where feasible solenoid pavement breakers will be used in lieu of air powered jack hammers.
- Construction activities will be limited to the hours of 8:00 AM and 6:00 PM, pursuant to TRPA Code of Ordinances Chapter 68, Noise Limitations.

1.3.G Cultural Resources Protection

Although the Project Area has been subject to systematic surface archaeological investigations, it is possible that buried or concealed cultural resources could be present and detected during Project ground disturbance activities. In accordance with the National Historic Preservation Act of 1966, (16 U.S.C. 470), the following procedures will be implemented to ensure historic preservation. In the event previously unknown potential historical, architectural, archeological, or cultural resources (herein after cultural resources) are discovered during subsurface excavations the following procedures will be instituted:

- If archaeological features or materials are unearthed during any phase of project activities, all work in the immediate vicinity of the find shall halt until the District has contacted the State and the significance of the resource has been evaluated. Any mitigation measures that may be deemed necessary must have the approval of the State, and shall be implemented, pursuant to the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, 48 CFR 44716, by a qualified archaeologist

representing the District prior to the resumption of construction activities. Consistent with this, the Engineer will issue a “Stop Work Order” directing the District’s contractor to cease all construction operations at the location of such potential cultural resources find.

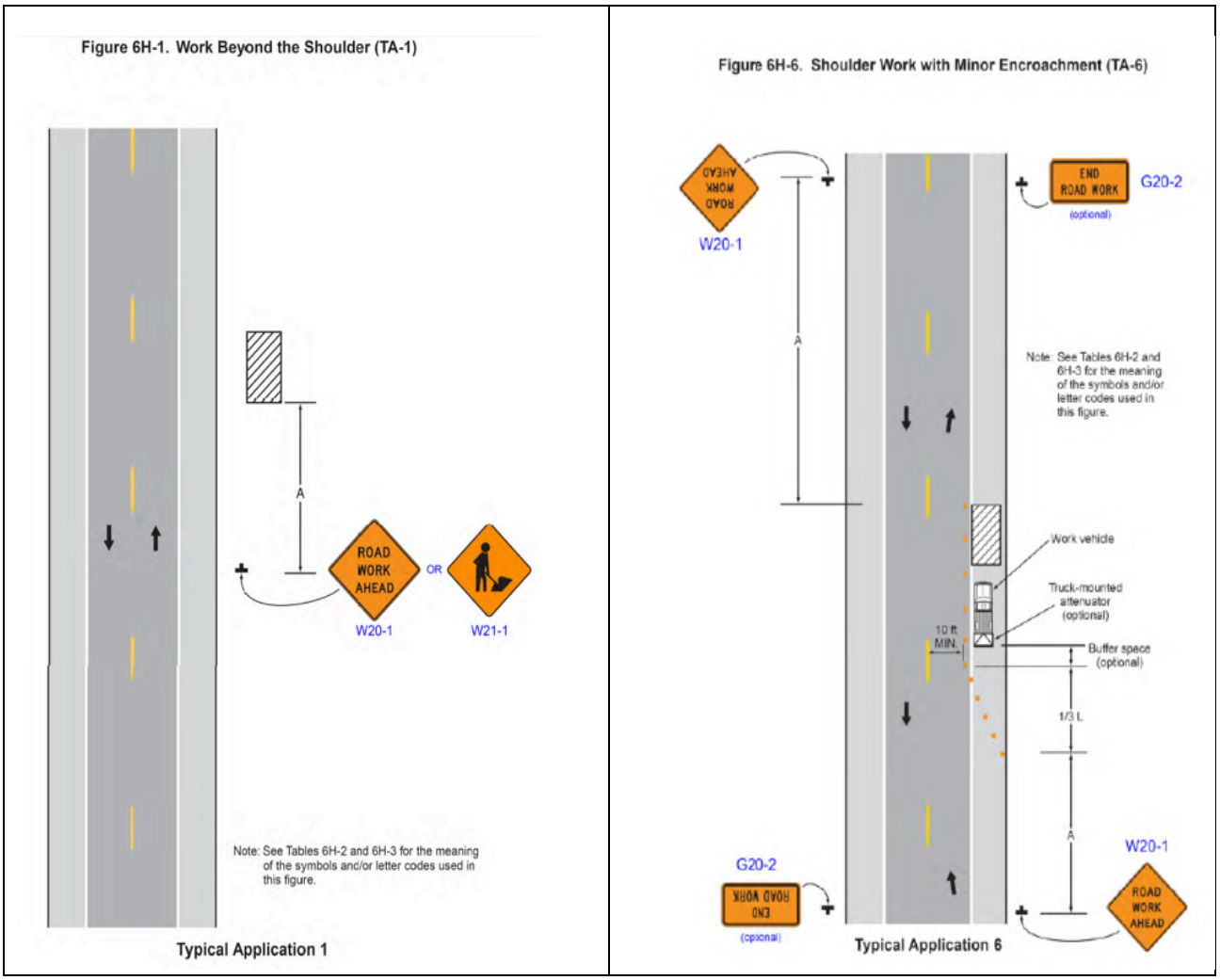
- Such “Stop Work Order” will be effective until such time as a qualified archeologist can be called to assess the value of these potential cultural resources and make recommendations to the State Office of Historic Preservation.
- If the archeologist determines that the potential find qualifies for inclusion in the National Register of Historic Places and the California Register of Historic Resources, at the direction of the State Office of Historic Preservation, the Engineer will extend the duration of the “Stop Work Order” in writing, and the District’s contractor will suspend work at the location of the find.
- In the unlikely event that human remains are encountered, all activities should be stopped immediately and the El Dorado County Coroner’s Office should be contacted. This is in compliance with California State Health and Safety Code, Section 7050.5, which states that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code, Section 5097.98.

1.3.H Traffic Control Plan

Prior to construction activity the contractor shall submit to the District for acceptance a project specific Traffic Control Plan. The Traffic Control Plan will include signage advising road users of construction activities and right of way work in accordance with the current edition of the California Manual on Uniform Traffic Control Devices (CMUTCD), which is the version of the Federal Highway Administration’s MUTCD that is amended for use in California. The contractor shall maintain the continuous flow of traffic at all times. Local traffic, in addition to emergency response vehicles, will be allowed to pass though at all times. After working hours, all traffic control devices will be removed and traffic returned to normal.

According to the CMUTCD, when construction activities Occur outside of the roadway, **Figure 3A**, Work Beyond the Shoulder (TA-1), and **Figure 3B**, Shoulder Work with Minor Encroachment (TA-6), are the most commonly used traffic control configurations that are used to allow for the free flow of traffic and ensure a safe work zone for both construction workers and the traveling public.

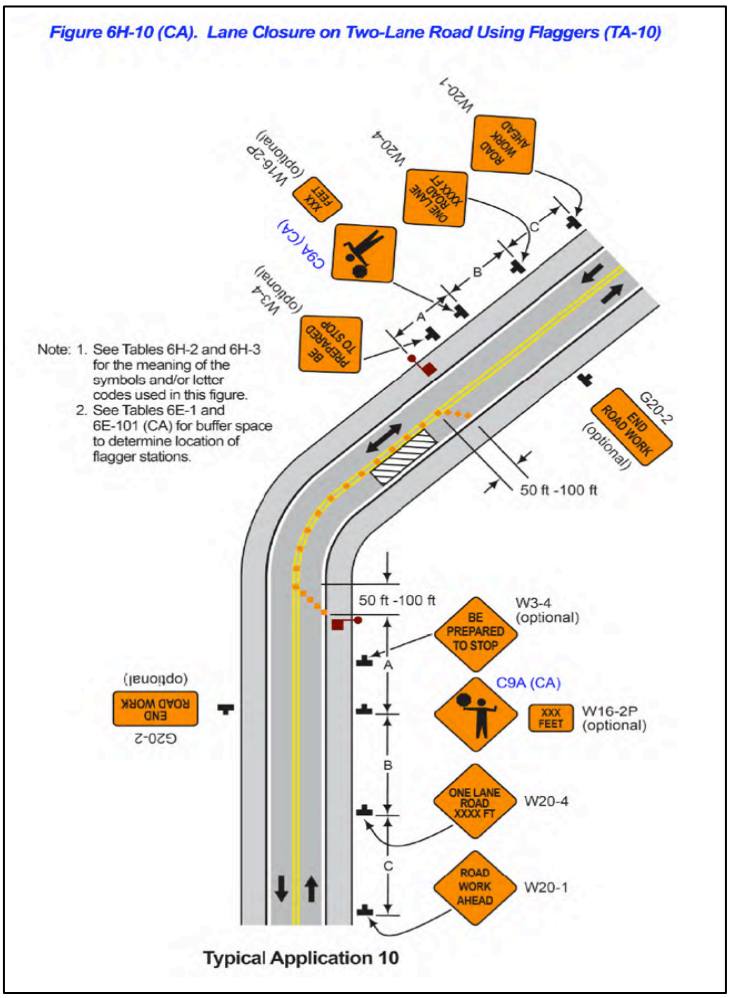
FIGURE 3A AND 3B. TRAFFIC CONTROL CONFIGURATIONS – CONSTRUCTION OUTSIDE OF ROADWAY



SOURCE: CA MUTCD

A majority of the construction for the Project will occur in or in close proximity to the roadway. The Lane Closure on Two-Lane Road Using Flaggers (TA-10) illustrated in **Figure 4** from the CA MUTCD is used for temporary lane closures. This traffic control layout allows the flaggers to maintain the continuous flow of traffic with minimal delays (less than five minutes) while maximizing both worker and public safety.

FIGURE 4. TRAFFIC CONTROL CONFIGURATION – CONSTRUCTION IN OR IN CLOSE PROXIMITY OF ROADWAY



SOURCE: CA MUTCD

1.3.I Hazard and Safety Control Plan

The District maintains a Local Hazard Mitigation Plan that satisfies federal legislation (Disaster Mitigation Act of 2000) and the California requirement for local governments to formulate and enact a pre-disaster mitigation program in order "to identify the natural hazards that impact them, to identify actions and activities to reduce any losses from those hazards, and to establish a coordinated process to take advantage of the plan, taking advantage of a wide range of resources." (44 CFR, sec. 201.1)

To ensure the protection of persons and property and to safeguard the environment the following actions, measures and BMPs will be implemented:

- Excavation on project sites from which the public is excluded will be marked or guarded in a manner appropriate to the degree of hazard.
- The District's contractor will provide suitable and adequate sanitary conveniences for the use of all persons at the site of the Work. Such conveniences will include chemical toilets or water closets and will be located at appropriate locations at the site of the Work. All sanitary conveniences will conform to the regulations of the governmental entities having jurisdiction over such matters. At the completion of the Work, all such sanitary conveniences will be removed and the site left in a sanitary condition.
- First-Aid facilities and information posters conforming, at a minimum, to the requirements of the Occupational Safety and Health Administration (OSHA) will be provided in a readily accessible location or locations.
- Construction hoists, elevators, scaffolds, stages, shoring and similar temporary facilities will be of ample size and capacity to adequately support and move the loads to which they will be subjected. Railings, enclosures, safety devices, and controls required by law or for adequate protection of life and property will be provided.
- Temporary supports will be designed with sufficient safety considerations to assure adequate load bearing capability. The District's contractor will submit design calculations by a professional registered engineer for sheeting, shoring and bracing prior to application of loads.
- The District's contractor will adequately identify and guard all hazardous areas and conditions by visual warning devices and, where necessary, physical barriers. Such devices will, at a minimum, conform to the requirements of Cal/OSHA.
- A sufficient number of fire extinguishers of the type and capacity required to protect the work and ancillary facilities will be provided in readily accessible locations.
- The District's contractor will provide labor and equipment to protect the surrounding property from fire damage resulting from construction operations.

1.3.J Migratory Bird Nest Site Protection Program

For construction activities proposed to occur during the nesting season (March 15 through August 15), and outside of paved areas, the contractor and District shall review the Project Area to identify any migratory bird nest sites that may be present. If a nest is present in the immediate vicinity, a qualified biological monitor shall be contacted to evaluate whether any migratory birds are impacted by the project. The biological monitor shall have the authority to stop construction near occupied sites if it appears to be having a negative impact on nesting migratory birds or their young. If construction must be stopped, the monitor must consult with USFWS and CDFW staff within 24 hours to determine appropriate actions to restart construction while reducing impacts to identified migratory bird nests.

1.4 PROJECT PERMITTING AND APPROVALS

For work performed within the Right-of-Way, the District is allowed access for maintenance and construction based on an annual project specific Encroachment Permit with El Dorado County. Each property owner/customer will be notified prior to work that may interrupt water service for

their respective property. Minor periods of water shut-off will occur during the installation process, which is anticipated to last less than four hours each day on a limited number of occasions during major project activities.

Tahoe Regional Planning Agency

The Tahoe Regional Planning Agency (TRPA) enters into agreements with local agencies to streamline the permitting process. These agreements allow local agencies to perform environmental review on projects for conformance with TRPA standards. The agreements are in the form of Memorandum of Understanding (MOU) that are signed by each partner. The District currently has a Memorandum of Understanding with the Tahoe Regional Planning Agency dated 23 March 2012. The District's MOU with TRPA is an MOU for Public Works Providers that allows for repair and maintenance of underground facilities without TRPA's review. This allows for increased efficiency and provides for increased protection of local and natural resources as agreed to in the MOU. The Memorandum of Understanding between Tahoe Regional Planning Agency and South Tahoe Public Utility District can be located here:

https://www.trpa.gov/wp-content/uploads/documents/archive/FINAL_Public_Works_MOU.pdf

Attachment A, identifying STPUD on page 5 of 9 can be found here:

https://www.trpa.gov/wp-content/uploads/documents/archive/FINAL-Public-Works-MOU-Attachment-A.pdf

The listing of Exempt and Qualified Exempt Activities can be found here:

https://www.trpa.gov/wp-content/uploads/documents/archive/FINAL_Public_Works_MOU_Attachment_B.pdf

While some components of the proposed Project include repair and maintenance activities that would be covered under the MOU, the installation of new facilities are subject to TRPA review. All construction projects, except for work that is exempt or qualified exempt, require a pre-grade inspection. The inspection is an on-site meeting between the TRPA Compliance Inspector and contractor to review the installation of construction BMPs, go over permit conditions, and discuss general construction practices. Information on public service projects can be found here:

https://www.trpa.gov/applications-forms/#public

The standard information and application packet for public service projects can be found here:

https://www.trpa.gov/wp-content/uploads/documents/archive/2/Public_Service_Application.pdf

The TRPA findings document for public services can be found here:

https://www.trpa.gov/wp-content/uploads/documents/archive/PUBLIC-SERVICE-FINDINGS-DOCUMENT.pdf

Encroachment Permits

The District must apply for a Right-of-Way Encroachment, Excavation and Grading Permit from El Dorado County. The Department of Transportation will issue the permit after review and will require a BMP Plan and Traffic Control Plan to be implemented at all times during construction.

Water Quality Control Board

The Municipal Storm Water Program regulates storm water discharges from municipal separate storm sewer systems (MS4s) throughout California. The Phase II Permit Program serves municipalities with less than 100,000 customers. The State Water Resources Control Board (State Water Board) and Regional Water Quality Control Boards (Lahontan for this region) implement and enforce the Municipal Storm Water Program. The State Water Resources Control Board issued a General Permit for the Discharge of Storm Water from Small MS4s (Order 2003-0005-DWQ) to provide permit coverage for smaller municipalities. The Phase II Small MS4 General Permit covers Phase II permittees statewide. On February 5, 2013 the Phase II Small MS4 General Permit was re-adopted (Order 2013-0001-DWQ) and the new requirements became effective on July 1, 2013.

1.5 ENVIRONMENTAL REVIEW

1.5. A CEQA Process

This Initial Study was prepared to support a Categorical Exemption for the Project. The Project is consistent with the exemption for Class 1 Existing Facilities per CCR Title 14, Section 15301for the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use and Class 2 Section 15302 (c) for the replacement or reconstruction of existing utility systems and/or facilities involving negligible or no expansion of capacity; and. The Project is also consistent with Class 3 New Construction or Conversion of Small Structures per CCR Title 14, Section 15303 for the construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; including d) Water main, sewage, electrical, gas, and other utility extensions, including street improvements, of reasonable length to serve such construction.

Staff will file a CEQA Notice of Exemption with the County of El Dorado and State Office of Planning and Research.

Chapter 2. Environmental Checklist

The evaluation of environmental impacts is based upon the completion of the checklist portion of the Environmental Checklist Form, and consists of the analysis of each impact issue area required under CEQA. The analysis of each checklist item identifies any significance criteria or thresholds used to evaluate each impact question, and any mitigation measure(s) identified to reduce the impact to a less-than-significant level. This section tiers from the District Wide IS as outlined in Section 1.1.E above. Only the Biological Resources, Cultural Resources, Geology, Soils Seismic/Land Coverage, and Hydrology/Water Quality sections are included herewith for discussion and analysis. All other sections from the District Wide IS (Aesthetics, Agricultural Resources, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous materials, Land Use Planning, Mineral Resources, Noise, Population/Housing, Public Service, Recreation, Transportation/Traffic, Utilities/Service Systems) have remained unchanged and are referenced herewith (Sierra Ecotone Solutions LLC 2021) in this tiered document.

This checklist identifies biological, cultural, and physical factors that might be affected by the Project. In some cases, background studies performed in connection with the Project indicate no impacts. A “No Impact” answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts.

2.4 BIOLOGICAL RESOURCES (STREAM ENVIRONMENT ZONES, WETLANDS, WILDLIFE AND VEGETATION)

2.4.A Environmental and Regulatory Settings

The Tahoe Basin contains a broad diversity of montane vegetation associations and a small number of special-status and rare plant and wildlife species, including threatened and endangered species. These species are protected through TRPA, Endangered Species Act of 1973 (ESA), California Endangered Species Act (CESA), California Department of Fish and Wildlife (CDFW), and/or the California Native Plant Society (CNPS). Land use or activity restrictions occur in areas inhabited by these species.

The proposed waterlines and facilities are located within the El Dorado County Right-of-Way where there is existing disturbance in the form of road shoulder, road base, and pavement. The Project Area includes a residential neighborhood and an easement on National Forest System land.

Database Searches

The California Natural Diversity Data Base (CNDDB; accessed 24 January, 2024) and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (accessed 24 January 2024) were searched and reviewed in order to identify sensitive species and habitats that

may be within the Project Area. In addition, a species list was generated for the Project Area by the US Fish and Wildlife Service Information for Planning and Consultation (USFWS IPaC https://ecos.fws.gov/ipac/ accessed 24 January 2024).

Species Occurrences

A one-mile buffer surrounding the Project Area was searched for recorded occurrences in the BIOS database (CNDDB 2021). A CNDDB occurrence report was generated for the Emerald Bay 7.5 Minute Quadrangle. The species lists generated in these database searches are included in Appendix B of this document.

The USFWS identified 7 species as having the potential to exist within the Project Area: North American wolverine (*Gulo gulo luscus*); Sierra Nevada red fox (*Vulpes vulpes necator*), California spotted owl (*Strix occidentalis occidentalis*); Sierra Nevada yellow-legged frog (SNYLF; *Rana sierrae*); Northwestern pond turtle (*Actinemys marmorata*); Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*), and monarch butterfly (*Danaus plexippus*). The CNDDB list identified three additional protected bird species: bald eagle (*Haliaeetus leucocephalus*); bank swallow (*Riparia riparia*); willow flycatcher (*Empidonax traillii*); and one California endangered plant: Tahoe yellowcress (*Rorippa subumbellata*) (CDFW 2024). **Figure 5** shows the known occurrences of sensitive species identified within the 1-mile buffer of the Project Area grouped by taxonomic categories. **Figure 6** shows the known occurrences and habitat of SNYLF. **Figure 7** identifies TRPA mapped stream environment zones (SEZ) adjacent and within the Project Area (TRPA 2024).

Table 2.4-1 identifies the 9 wildlife species with the potential to occur in the Project Area based on the database searches described above. **Table 2.4-2** identifies the 14 plant species with the potential to occur in the Project Area (HP = Habitat Present, SP = Species Present).

TABLE 2.4-1
WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
Fish:					
Oncorhynchus clarkii henshawi Lahontan cutthroat trout	Federally Threatened TRPA Special Interest Species	Historically occurred in all accessible cold waters of the Lahontan Basin in a wide variety of water temps and conditions. Cannot tolerate presence of other salmonids. Gravel riffles in streams required for breeding.	No	No	Project activities are limited to the Right-of-Way of paved roads.There is no suitable fish habitat.

TABLE 2.4-1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
Wildlife:					
Gulo gulo luscus North American wolverine	Federally Proposed Threatened	Wolverines do not appear to require specific habitats, but instead select cold areas that reliably maintain deep persistent snow late into the warm season. Wolverines are opportunistic feeders and therefore, require a lot of space. The availability and distribution of food is likely the primary factor in determining wolverine movements and home range size.	No	No	There are no records of detections in the Lake Tahoe Basin. High levels of existing human presence and activity are not suitable for wolverine.
Haliaeetus leucocephalus bald eagle	Federally Delisted California Endangered	Bald eagle are known to forage and nest adjacent to large bodies of water in mid to late successional types of forest with standing dead trees or snags	No	No	Project activities will occur in a residential neighborhood that lacks suitable roosting habitat.
Empidonax traillii willow flycatcher	California Endangered	In the Sierra Nevada, this species typically breeds in willow-dominated riparian vegetation among perennial streams in moist meadows or spring-fed or boggy areas.	No	No	Project activities will not occur within any riparian habitat.
Riparia riparia bank swallow	California Threatened	Species requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers,	No	No	The Project area does not contain suitable habitat for the species due to the lack of

TABLE 2.4-1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
		lakes, to dig nesting hole.			vertical banks and/or cliffs to dig nesting hole.
Danaus plexippus monarch butterfly	Federal Candidate	Monarchs lay their eggs on their obligate host plant, primarily milkweeds (*Asclepias spp.*). Their life cycle varies by geographic location. In many regions monarchs breed year-round, but many individuals in western North America fly south and west to overwintering groves along the California coast into northern Baja California.	No	No	There is no potential habitat for monarch within the project area as work will be performed in the road right-of-way and will not impact any milkweed or flowering plants.
Vulpes vulpes necator Sierra Nevada red fox	Federally Endangered	Sierra Nevada red fox sightings have consistently occurred in subalpine habitat from 8,100 to 11,608 feet. Subalpine habitat is characterized by a mosaic of high-elevation meadows, rocky areas, scrub vegetation, and relatively open and patchy conifer forest.	No	No	Project activities will occur in a residential neighborhood at low elevation that does not provide suitable habitat for this species.
Actinemys marmorata Western pond turtle	Proposed Threatened	This aquatic turtle lives in streams, ponds, lakes, and permanent and ephemeral wetlands. Pond turtles spend most of their lives in water, but they also require terrestrial habitats for nesting.	No	No	Project activities are limited to the Right-of-Way of paved roads. There is no suitable habitat.

TABLE 2.4-1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
Rana sierrae Sierra Nevada yellow-legged frog (SNYLF)	Federally Endangered California Threatened	The SNYLF is strongly associated with montane riparian habitats and wet meadow vegetation (Zeiner et al. 1988). SNYLFs prefer well illuminated, sloping banks of meadow streams, riverbanks, isolated pools, and lake borders with vegetation that is continuous to the water's edge.	No	No	Project activities are limited to the Right-of-Way of paved roads. No SNYLF suitable habitat exists within the project area.

SOURCE: SIERRA ECOTONE SOLUTIONS 2024

Table 2.4-2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
Arabis rigidissima var. *demota*	Galena Creek rockcress	1B.2	None	None	July-Aug	Open, rocky areas along forest edges of conifer and/or aspen stands; usually found on north aspects; 7,500 ft. & above.		No. Project Area is too low elevation and lacks suitable forest habitat.
Astragalus austiniae	Austin's astragalus	1B.3	None	None	(May)Jul-Sep	Alpine boulder and rock field, Subalpine coniferous forest. 8,000 feet and above.		No. Project Area is too low elevation.
Boechera tularensis	Tulare rockcress	1B.3	None	None	(May)Jun-Jul(Aug)	Subalpine coniferous forest, Upper montane coniferous forest	Rocky slopes	No. Project Area is too low elevation.
Botrychium ascendens	upswept moonwort	2B.3	None	None	(Jun)Jul-Aug	Suitable habitat for upswept moonwort includes the wet edges of streams.	On the LTBMU, this species has been found on shady streams with	No. Project Area does not include any shady

Table 2.4-2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
							dense cover of incense cedar.	streams with cedar.
Botrychium crenulatum	scalloped moonwort	2B.2	None	None	Jun-Sep	Meadows, bogs, fens, marshes, swamps, and seeps in upper and lower montane coniferous forest from 4,100 to 10,800 ft.		No. Project Area does not have any seeps, bogs or fens.
Botrychium minganense	Mingan moonwort	2B.2	None	None	Jul-Sep	Bogs, fens, meadows or riparian corridors in upper and lower montane coniferous forests; 5,100 to 10,300 ft.		No. Project Area does not include bogs or fens or riparian corridors.
Brasenia schreberi	watershield	2B.3	None	None	Jun-Sep	Marshes and swamps (freshwater)		No. Project area does not have marshes and swamps.

Table 2.4-2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
Carex davyi	Davy's sedge	1B.3	None	None	May-Aug	Subalpine coniferous forest, Upper montane coniferous forest		No. Project area only contains disturbed paved areas.
Claytonia megarhiza	Fell field claytonia	2B.3	None	None		Alpine boulder and rock field, Subalpine coniferous forest (gravelly, rocky); 8,500-11,590 ft.		No. Project Area does not have fell fields and is too low elevation
Glyceria grandis	American manna grass	2B.3	None	None	Jun-Aug	Bogs and fens, meadows and seeps, marshes and swamps (streambanks and lake margins)		No. Project Area does not have any very wet habitats.
Meesia uliginosa	broad-nerved hump moss	2B.2	None	None	Jul-Oct	Bogs and fens, but also very wet meadows from 4,000-9,200 feet.		No. Project Area does not have any bogs or fens.

Table 2.4-2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
Scutellaria galericulata	marsh skullcap	2B.2	None	None	Jun-Sep	Meadows and seeps in lower montane coniferous forest. Also marshes and swamps		No. Project Area does not have any very wet habitats.
Stuckenia filiformis ssp. alpina	Northern pondweed	2B.2	None	None	May-Jul	Marshes and swamps or shallow fresh water.		No. Project Area does not have any very wet habitats.
Rorippa subumbellata	Tahoe yellow cress	1B.1	CE	None	May-Sep	Beaches of Lake Tahoe below high water 6,220-6,229 feet (Stanton et. al 2015).	Favors the areas around the outlets of creeks at Lake Tahoe.	No. Project area does not include beaches of Lake Tahoe.

CE: CA Endangered

Source: CNPS 2024

2.4.B Checklist

CEQA Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
A) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
B) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
C) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
D) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☐	☒
E) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
F) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

2.4.C Discussion

A) Less than significant

Figure 5 identifies known occurrences of sensitive species located within 1-mile of the Project Area. None of the special status wildlife species listed in Table 2.4-1 or plant species listed in Table 2.4-2 are known to occur within the Project Area. Suitable habitat is not present for any of the plant species within the Project Area because all work will occur in the paved Right-of-Way or immediately adjacent to it in previously disturbed areas. Therefore, the Project will not have a substantial adverse effect, either directly or through habitat modifications, on any identified special status plant species.

Figure 6 identifies potentially suitable habitat for Sierra Nevada yellow-legged frog (SNYLF). mapped on the periphery of the Project Area. The mapped area is on a forested vacant lot that has significant bare ground and currently does not provide suitable habitat. In addition, the polygon is isolated and has no connection (via culvert) to the large area of SNYLF habitat by Lake Tahoe Blvd. All Project activities will occur in paved areas or areas previously disturbed immediately adjacent to paved surfaces within the Right-of-Way. The inclusion of Best Management Practices would limit the potential for sediments to drain from the Project area into any potentially suitable habitat. No stream banks, riparian vegetation or bodies of water are in the vicinity of the proposed Project. Therefore, the Project will not have a substantial adverse effect, either directly or through habitat modifications, on SNYLF.

The proposed project is not located in any essential fish habitat as defined by the Magnuson-Stevens Act. The closest essential fish habitat is located in the Pacific Ocean along the coast of California.

The USFWS species list (Appendix B) includes bird species that are protected under the Migratory Bird Treaty Act of 1918 and have potentially suitable habitat in the area surrounding the Project Area. The Project will not result in the removal of any foraging or nesting habitat for the migratory bird species listed; however, indirect impacts to migratory bird species could result because of construction noise and activities associated with the proposed Project. To ensure no impacts to migratory bird species occurs, the Migratory Bird Nest Site Protection Program (design feature 1.3.J) is included in the project description. Through implementation of the above measure, no impacts to nesting migratory bird species will result.

For the reasons above, the Project will not have a substantial adverse effect, either directly or through habitat modifications, on any special status plant or wildlife species and the effect is less than significant.

B) Less than significant

Project activities for the waterline would create temporary disturbance in the El Dorado County ROW. As shown in **Figure 7,** a small amount of SEZ is mapped just south of the Project area. However, the mapped area is on a forested vacant lot that has significant bare ground. In addition, the polygon is isolated and separated from nearby SEZ by Tahoe Mountain road, with no culvert. No impact to SEZ will occur as the pipeline will be replaced within the road ROW. Inclusion of Best Management Practices will limit the potential for sediments to drain into nearby SEZ. Therefore, no impact to SEZs will occur as a result of the proposed Project.

C) Less than significant

The National Wetlands Inventory (USFWS NWI mapper 2024) map, found in Appendix C, depicts a very small isolated wetland that could be federally protected under Section 404 of the Clean Water Act. Project activities will occur exclusively within the paved Right of Way and will not directly impact any wetlands present adjacent to the Project Area. The inclusion of Best Management Practices to control erosion will limit the potential for sediments to drain into the nearby wetlands. Therefore, the effect of the proposed Project on federally protected wetlands is less than significant.

D) No Impact

The Project will not interfere or impede the movement of any wildlife species or migratory fish species as Project components would be installed underground and in Right-of-Ways. No waterways, known migratory wildlife corridors, or wildlife nursery sites will be impeded. Therefore, there is no impact as a result of the proposed Project.

E) No Impact

The Project will not conflict with TRPA, City of South Lake Tahoe, or El Dorado County policies and ordinances aimed at protecting biological resources because all Project activities will occur within the ROW and the Project components provide essential public utility services.

F) No Impact

The Project does not conflict with the provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan, because no such plans exist for the Project Area.

Figure 5 – CNDDB 1-Mile Radius Search

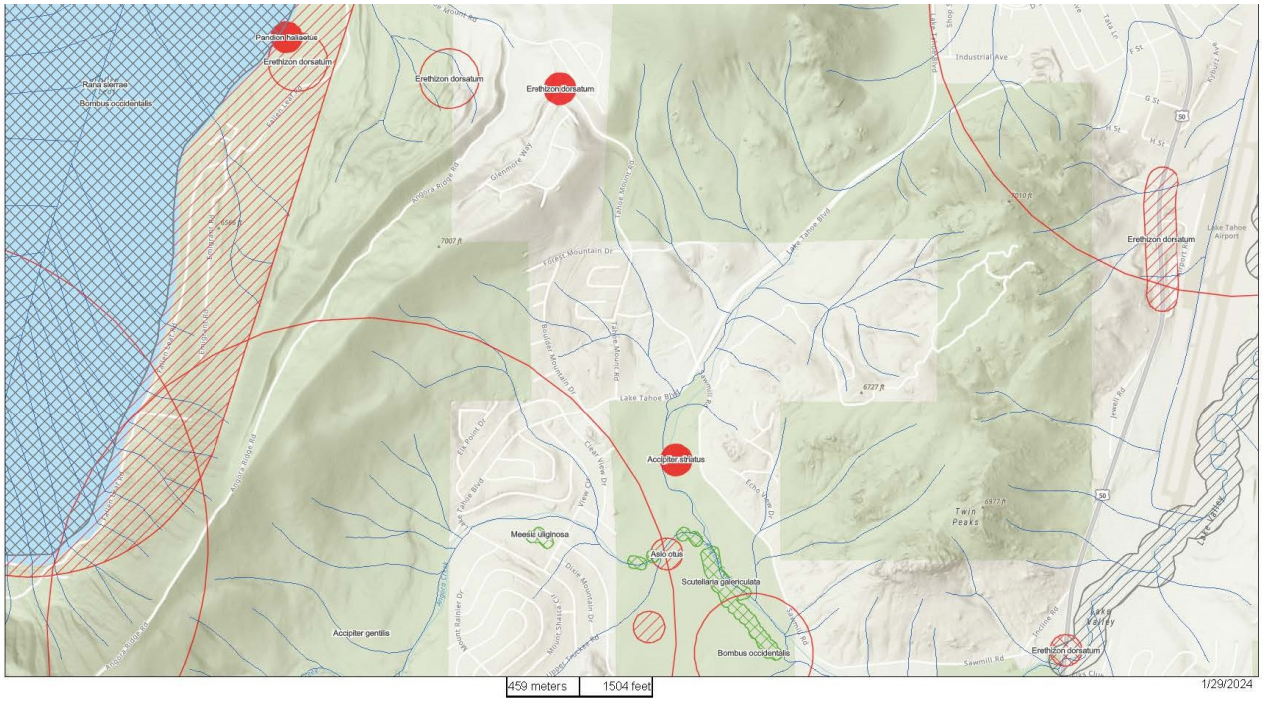


Figure 6 – SNYLF

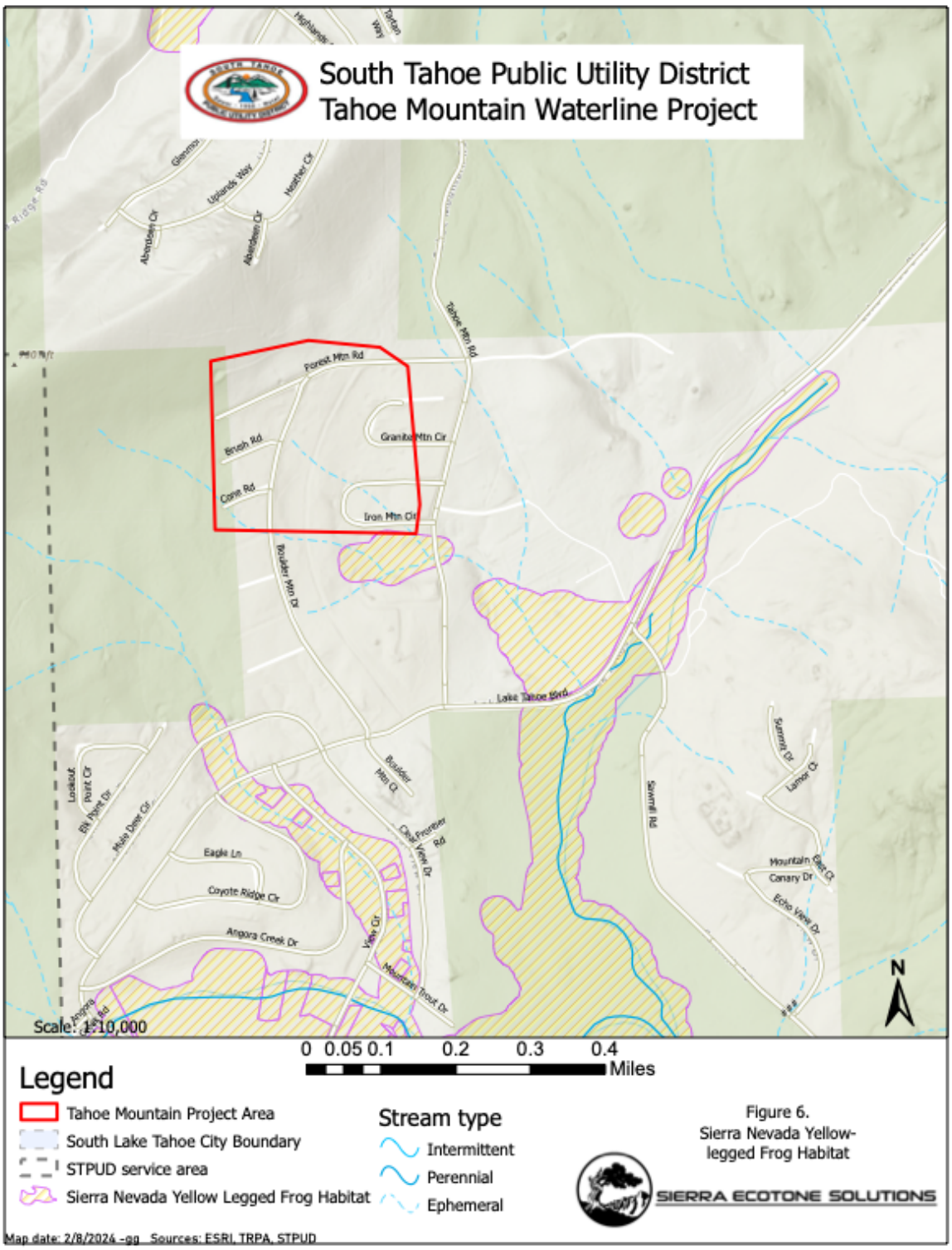
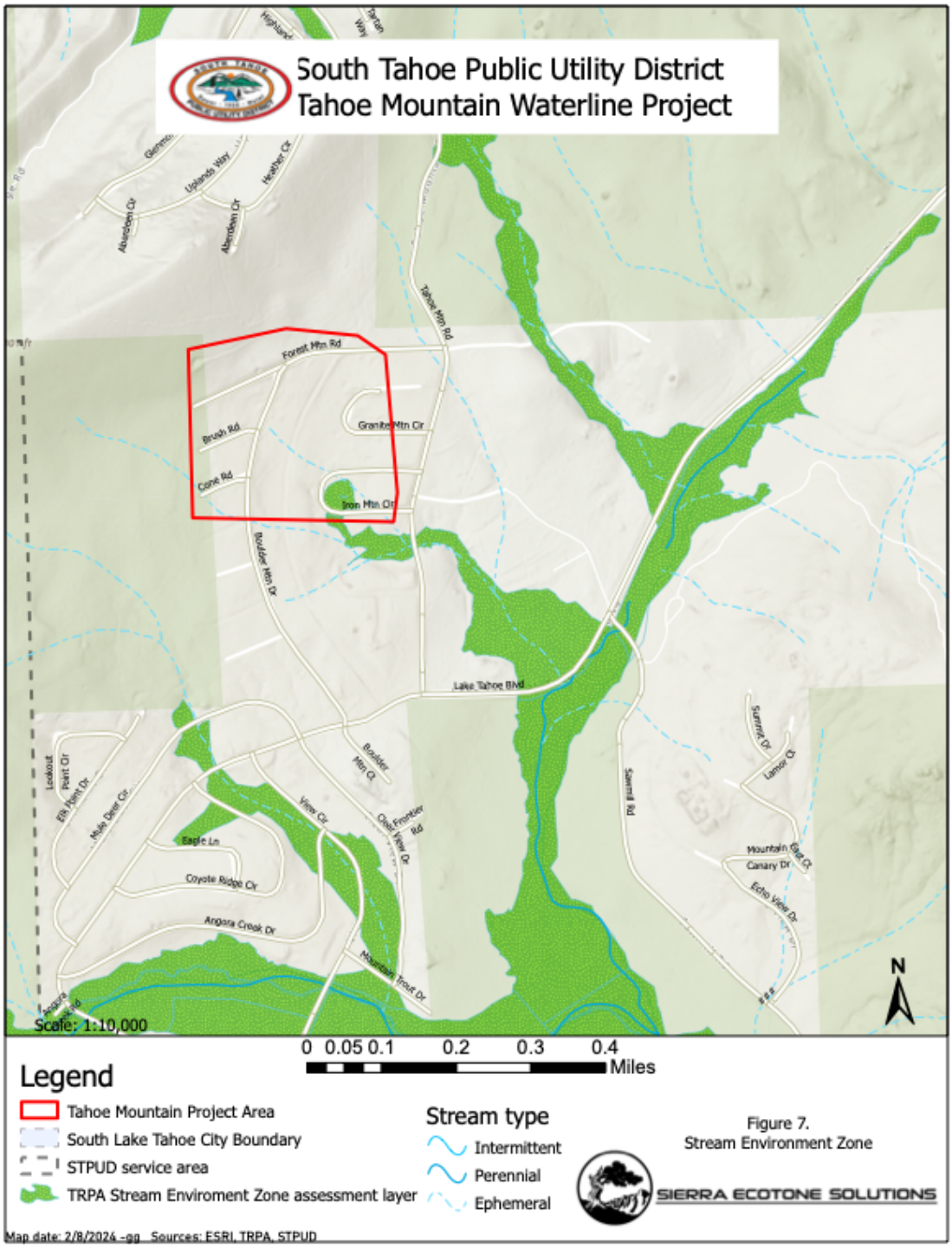


Figure 7 – SEZ


South Tahoe Public Utility District
Tahoe Mountain Waterline Project
Forest Mtn Rd
Brush Rd
Cone Rd
Granite Mtn Cir
Iron Mtn Cir
Tahoe Mtn Rd
Boulder Mtn Dr
Lake Tahoe Blvd
Eagle Ln
Coyote Ridge Cir
Angora Creek Dr
Mountain Trout Dr
Sawmill Rd
Summit Dr
Lamor Ct
Canary Dr
Echo View Dr
Scale: 1:10,000
0 0.05 0.1 0.2 0.3 0.4
Miles
N
Legend
Tahoe Mountain Project Area
South Lake Tahoe City Boundary
STPUD service area
TRPA Stream Enviroment Zone assessment layer
Stream type
Intermittent
Perennial
Ephemeral
Figure 7.
Stream Environment Zone
SIERRA ECOTONE SOLUTIONS
Map date: 2/8/2024 -gg Sources: ESRI, TRPA, STPUD

2.5 CULTURAL RESOURCES

2.5.A Environmental and Regulatory Settings

Federal Guidelines

The National Historic Preservation Act (NHPA) of 1966, as amended (16 USC§ 470 et seq.), is the primary federal legislation that outlines the federal government's responsibility to cultural resources. A cultural resource is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. Section 106 of the NHPA requires the federal government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places. Those resources that are on or eligible for inclusion on the National Register are referred to as historic properties. The Section 106 process is outlined in the federal regulations at 36 Code of Federal Regulations (CFR) Part 800. If the District utilizes federal funding for the Project, the environmental review must comply with Section 106 of the National Historic Preservation Act.

State Guidelines

As part of baseline environmental studies, the cultural resource study needs to comply with El Dorado County mandates under the California Environmental Quality Act (CEQA Section 5024, Public Resource Code) The applicable CEQA process is outlined in CEQA Guidelines Section 15060-15065. Significant "historical resources" and "unique archaeological resources" are defined as (Section 15064.5[a]):

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

Mandates under State of California Assembly Bill (AB) 52 specify that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. AB52 directs a lead agency (or their designated representative) to consult with the Native American Heritage Commission and request a search of the Sacred Lands Files. To complete the AB52 requirements, follow-up

communications with all groups/individuals on the Commission's contact list are generally recommended to incorporate tribal opinions, knowledge and sentiments regarding the project

TRPA Code of Ordinances
The Tahoe Regional Planning Agency (TRPA) has adopted guidelines for the identification, recognition, protection, and preservation of the region's significant cultural, historical, archaeological, and paleontological resources as listed in Chapter 67 of the Code of Ordinances. Sections 67.3.2, 67.4 and 67.5 require a site survey by a qualified archaeologist, provide for their designation as cultural resources and require consultation with the appropriate Native American group. Provisions for a report documenting compliance with the TRPA Code are contained in Section 67.7.

To satisfy federal, state, and local guidelines, the District contracted with Susan Lindström, Ph.D., a Consulting Archaeologist who meets the Secretary of Interior's Professional Qualifications Standards (48 FR 44738-44739). She has over four decades of professional experience in regional prehistory and history, holds a doctoral degree in anthropology/archaeology and has maintained certification by the Register of Professional Archaeologists (RPA, former Society of Professional Archaeologists) since 1982. The tasks completed include:

- review historical and archaeological background research of the project area
- conduct a record search at the California Historical Resources Information System, North Central Information Center (NCIC) at California State University
- request a review of the Sacred Lands File by the Native American Heritage Commission and initiate contacts with local tribal organizations identified by the Commission (accomplished by the STPUD)
- conduct systematic reconnaissance level cultural resource field survey of the project area.

Dr. Lindström completed the above task and subsequently conducted an intensive archaeological field survey on May 19, 2022. The completed report may be found in Appendix D. With the completion and submittal of the report, federal, state and county requirements for a cultural resource inventory have been accomplished.

2.5.B Checklist

CEQA Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
A) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐

B) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
C) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
D) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

2.5.C Discussion

A-B) Less than Significant Impact

According to the completed cultural report found in Appendix D, neither pre-field research nor archaeological field survey identified any existing historical or unique archeological resources, as defined by CEQA guidelines (section 15064.5), within the Project Area. In terms regional TRPA guidelines (Code of Ordinances Chapter 67), the Project will not have the potential to cause a physical change that would affect unique ethnic (including Native American) cultural values or restrict religious or sacred uses.

As described in section 1.3.G, Cultural Protection Measures will be included in construction contracts to ensure that there will be no impacts to previously undiscovered resources. In the event of unanticipated discoveries, project activities should cease near the find and a qualified archaeologist should be consulted to evaluate the cultural resource in accordance with federal, state and TRPA guidelines. Measures to mitigate project impacts (if appropriate) should be implemented before ground-disturbing work near the resource continues.

Because no historical resources as defined in PRC section 15064.5 will be disturbed, and unknown resources would be protected as described in Section 1.3.G, the Project would have a less than significant impact on historical and archeological resources.

C) Less than Significant Impact

There are no mapped paleontological resources or known unique geologic features within the Project Area, and unique paleontological or unique geologic features are not expected to occur on Project Area parcels. The existing environments do not usually contain intact fossils. The Project requires excavation and disturbance in areas that have been previously disturbed for water tank and residential development and that are not mapped as a high or moderate resource potential geologic deposit, formation or rock unit. Additionally, in the unlikely event that paleontological resources are discovered during construction, section 1.3.G, Cultural Protection Measures requires that ground disturbance activities cease and until consultation with a qualified archaeologist occurs. As a result, the Project will avoid and protect encountered resources and would result in less than significant impacts to paleontological resources.

D) Less than Significant Impact

No known burial sites exist within the Project Area. If human remains are unearthed, the El Eldorado County Coroner will be contacted in compliance with CEQA Guidelines Section

15064.5(e) and 43 CFR 10, Native American Graves Protection and Repatriation Regulations. If the remains are determined to be of Native American origin, the designated Most Likely Descendants should be notified and provide recommendations for the proper treatment of the burial remains within 24 hours.

2.6 GEOLOGY, SOILS, SEISMIC & LAND COVERAGE

2.6.A Environmental and Regulatory Settings

The Lake Tahoe basin is bounded by the Sierra Nevada Mountain Range to the west and the Carson Mountain Range to the east and is part of the Walker Lane fault complex that includes many normal and strike-slip faults (Seitz 2015). The Lake Tahoe basin was formed by the same normal faulting that created the Basin and Range physiographic province to the east of the Tahoe Basin in Nevada. The region is seismically complex containing three major faults within the area: the West Tahoe Fault; the Stateline Fault; and the Incline Village Fault. There are no active faults within the Project Area, but the West Tahoe Fault lies several miles to the west.

The topography of the Lake Tahoe Basin is varied with at times complex terrain and elevations ranging from 6,220 feet at lake level to 10,000 feet at Monument and Freel Peaks outside of South Lake Tahoe, California. The Project Area consists of relatively flat slopes within the El Dorado County ROW.

The Alquist-Priolo Earthquake Fault Zoning Act (1972; PRC Section 2621-2630) regulates construction in active fault corridors and prohibits the location of most types of structures intended for human occupancy across the traces of active faults. The act defines criteria for identifying active faults, giving legal support to terms such as active and inactive and establishes a process for reviewing building proposals in Earthquake Fault Zones. An active fault is one that has had surface displacement within Holocene time or the last 11,000 years, as defined by the Alquist-Priolo Earthquake Fault Zoning Act.

The Seismic Hazards Mapping Act (1990 PRC Section 2690-2699.6) directs the State Geologist to delineate “Zones of Required Investigation”. A Seismic Hazard Zone is a regulatory zone that encompasses areas prone to ground failure and other earthquake-related hazards including soil liquefaction, earthquake-induced landslides, surface fault rupture, and tsunami inundation. Cities and Counties located within the zones must regulate certain projects for purposes of reducing the risk to life and property from surface fault rupture during earthquakes.

The California Geological Survey produces official maps that delineate the required zones. The official maps for the Emerald Bay quadrangle depicts the West Tahoe Fault approximately 1 mile to the west of the Project Area (https://www.conservation.ca.gov/cgs/information-warehouse (accessed February 5, 2024)

Soils in the Project Area were mapped using the National Resource Conservation Service NRCS Web Soils Survey https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx; accessed 5 February 2024. The map may be found in Appendix E. Only two soil map units are contained within the small Project Area. The soil within the Project Area is Tallac gravelly loamy coarse sand (5-15% slope; very stony) and Jabu coarse sandy loam 9-30% slope.

2.6.B Checklist

CEQA Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
A) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
B) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
E) Have soils incapable of adequately supporting the use?	☐	☐	☐	☒

2.6.C Discussion

A i-iv) No Impact

The West Tahoe Fault stretches from Dollar Point south to Emerald Bay and then skirts the southwestern edges of both Cascade and Fallen Leaf Lakes. The fault line is approximately 1

miles to the west of the Project Area, as delineated on the 2016 map for the Emerald Bay Quadrangle issued by the State Geologist, (https://www.conservation.ca.gov/cgs/information-warehouse) accessed February 5 2024.

Although the Seismic Hazard Zones for soil liquefaction and earthquake induces landslides have not been officially evaluated for the Project Area, the Project components would be installed within the existing ROW that is highly disturbed. Therefore, the Project would not result in exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving the i) rupture of the existing fault, ii) seismic ground shaking, iii) seismic-related ground failure, including liquefaction, or iv) landslides.

B) No Impact

The Project will not result in substantial soil erosion or the loss of topsoil because all Project components will result in temporary impacts within the existing disturbed ROW. After completion of the Project, the ROW will be re-paved. Therefore, the Project has no impact on soil erosion or topsoil.

C) No Impact

The Project would have no impact on the potential for on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse because the Project Area within the ROW is primarily flat and no unstable soil conditions exist that would lead to these events.

D) No Impact

The Project will not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), and therefore, would not pose substantial risks to life or property from unstable soil conditions.

E) No Impact

The Project will not require the use of new septic tanks or alternative on-site wastewater disposal systems. Therefore, no impacts from the installation and use of septic tanks or alternative wastewater disposal systems would occur as a result of the Project.

2.9 HYDROLOGY AND WATER QUALITY

2.9.A Environmental and Regulatory Settings

The Lake Tahoe watershed (USGS HUC 18100200) is 505 sq. miles (1,310 km^2) and includes the land area of the Lake Tahoe Basin in California and Nevada that drains to the lake. A total of 63 tributaries drain an area about the same size as the lake and produce half its water, with the balance entering as rain or snow falling directly on it. The Truckee River is the lake's only outlet, flowing northeast through Reno, Nevada, into Pyramid Lake. The river carries one third of the water that leaves the lake, with the balance evaporating from the lake's surface. The flow of the

Truckee River and the height of the lake are controlled by the Lake Tahoe Dam at the outlet in Tahoe City. The natural rim of the lake is at 6,223 ft. above sea level. A spillway at the dam controls overflow and allows the lake to fill with an additional 6 feet of water storage to a maximum legal limit of 6,229.1 ft.

Lake Tahoe is oligotrophic, meaning it is nutrient limited, largely because of the high proportion of nutrient poor granitic rock in the basin. This nutrient limitation is what gives the lake its famed clarity. However, the lake is becoming increasingly eutrophic (having an excessive richness of nutrients), with primary productivity increasing every year and clarity decreasing. Suspended particulate matter from urban stormwater runoff is the dominant cause of the loss of clarity. Historic clarity was around 100 feet in depth but annual clarity depth has been between 60-78 feet in recent decades.

The State of California Lahontan Regional Water Quality Control Board (Lahontan) is directed by the federal Clean Water Act, the Porter-Cologne Water Quality Control Act, and other federal and state laws to set water quality standards and to regulate activities in the Lahontan Region of California, which includes the California portion of the Lake Tahoe Basin. Water quality management plans are required for certain areas under Section 208 of the Clean Water Act. The Lake Tahoe (208) Water Quality Management Plan outlines water quality standards and non-point source management and control in the Lake Tahoe Basin in both the California and Nevada.

In California, Regional Water Quality Control Boards maintain Water Quality Control Plans (Basin Plans) for each major hydrologic basin within the state. Lake Tahoe is within the North Lahontan Basin which includes parts of Modoc County in the north and south to Bridgeport in Mono County. The Lahontan Basin Plan outlines water quality conditions, designates beneficial uses for water bodies, identifies water quality problems associated with human activities, and establishes water quality objectives and measures to protect beneficial uses. The Basin Plan sets forth water quality standards, waste discharge prohibitions and control measures for surface and ground waters of the entire Lahontan Region. Chapter 5 of the plan is specific to the Lake Tahoe Basin and specifies water quality standards and control measures.

The TRPA Regional Plan establishes a number of goals and policies that address water quality in the Lake Tahoe Region, as implemented through the Code of Ordinances Chapter 33, Grading and Construction, Chapter 35, Natural Hazard Standards, Chapter 36, Design Standards, and Chapter 60, Water Quality, which detail the requirements for soil and water protection, water quality controls, and BMPs. The District's MOU with TRPA for Public Works Providers allows for repair and maintenance of underground facilities without TRPA's review (See Appendix A).

2.9.B Checklist

CEQA Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Would the project:				
A) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
B) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
C) Substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
D) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	☐	☐	☐	☒
E) Create or contribute runoff water which would exceed the capability of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
F) Otherwise substantially degrade water quality?	☐	☐	☐	☒
G) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
H) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?	☐	☐	☐	☒
I) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
J) Cause inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

2.9.C Discussion

A) Less than Significant Impact

A violation of any federal, regional or State of California water quality standards or waste discharge requirements would constitute a significant impact. Project activities are limited to the ROW within El Dorado County. Project operation would not result in direct or indirect impacts to surface water quality that would violate standards because the waterlines are located underground in the ROW.

During construction, storm water runoff could occur from the existing road ROW. Best Management Practices (BMPs) to limit storm water runoff (1.3.D BMPs to Protect Surface and Ground Water/Sediment and Erosion Control Plan) will be installed and maintained throughout the construction period. The Project design also includes measures to limit emissions (1.3.B Construction Emission Control Plan) and control dust (1.3.C Fugitive Dust Control Plan) from construction. In addition, the Project contractor will be required to identify methods and techniques to minimize the potential for spill and implement approved containment and spill-control practices (1.3. I Hazard and Safety Control Plan spill control) during construction. Following excavation and trenching, paved areas will be returned to existing grade and repaved. Unpaved areas will be revegetated to minimize the potential for erosion from wind and surface water.

The District will require the selected contractor to comply with all federal, State, and local water quality regulations and implement specified Project design measures. Therefore, Project construction would not result in a violation of water quality standards or waste discharge requirements and the risk to water quality is less than significant.

B) No Impact

Project activities that substantially deplete groundwater supplies or interfere with aquifer recharge or existing hydrologic conditions would constitute a significant impact. The proposed Project does not involve new extraction of groundwater and would not create new or additional impervious surfaces that could significantly alter groundwater recharge. Therefore, the Project has no impact on groundwater supplies.

C) No Impact

If a project substantially alters the existing drainage pattern of an area in a manner that results in substantial erosion or siltation on or off-site, the impacts would be considered significant. Project operation would not alter existing drainage patterns or alter the course of a stream or river because no rivers or streams are near the Project. Therefore, the Project will not that would result in substantial erosion or siltation on-or off-site and the Project has no impact.

D) No Impact

If a project substantially alters the existing drainage pattern of an area or alters the course of a stream or river that would substantially increase the rate or amount of surface run-off in a manner that results in flooding on-or off-site, the impacts would be considered significant. Project operation would not alter existing drainage patterns or increase the rate or amount of surface run-off because no rivers or streams are near the Project. Therefore, the Project would not result in substantial flooding on-or off-site and the Project has no impact.

E) Less than Significant Impact

If a project creates or contributes runoff water that would exceed the capability of existing or planned stormwater drainage systems or substantially increases polluted runoff, the impacts would be considered significant.

Storm water runoff could occur through existing storm water drainage systems, including curb and gutter systems and drop inlets along the road ROW. The Project design includes Best Management Practices (BMPs) to limit storm water runoff (1.3.D BMPs to Protect Surface and Ground Water/Sediment and Erosion Control Plan) that will be installed and maintained throughout the construction period. The District will require the selected contractor to implement specified Project design measures to limit storm water runoff during construction. Following excavation and trenching, paved areas will be returned to existing grade and repaved. Unpaved areas will be revegetated to minimize the potential for erosion from wind and surface water. Project operation would not result in storm runoff because the components are primarily below ground or are very small (fire hydrants). Therefore, the Project would have a less than significant impact on source of polluted runoff.

F) No Impact

Project activities are limited to the ROW within El Dorado County. Other than potential storm runoff, construction activities in paved areas would not be expected to result in substantial direct or indirect other impacts that degrade water quality because Project components are below ground. Therefore, the Project would have no impact on water quality.

G) No Impact

Significant impacts may result if the Project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. As shown in **Figure 8,** the Project Area is not within any FEMA floodplain. The Project does not involve the installation of housing and therefore, no impacts to property flood risk would result.

H) No Impact

Significant impacts may result if the Project would place structures within a 100-year flood hazard area that would impede or redirect flood flows. As shown in **Figure 8,** the Project Area is not within the 100-year floodplain mapped by FEMA. The Project does not involve any structure that could

impede flows because the pipelines are below ground surface and the fire hydrants are very small. Therefore, no impacts to flood risk would result.

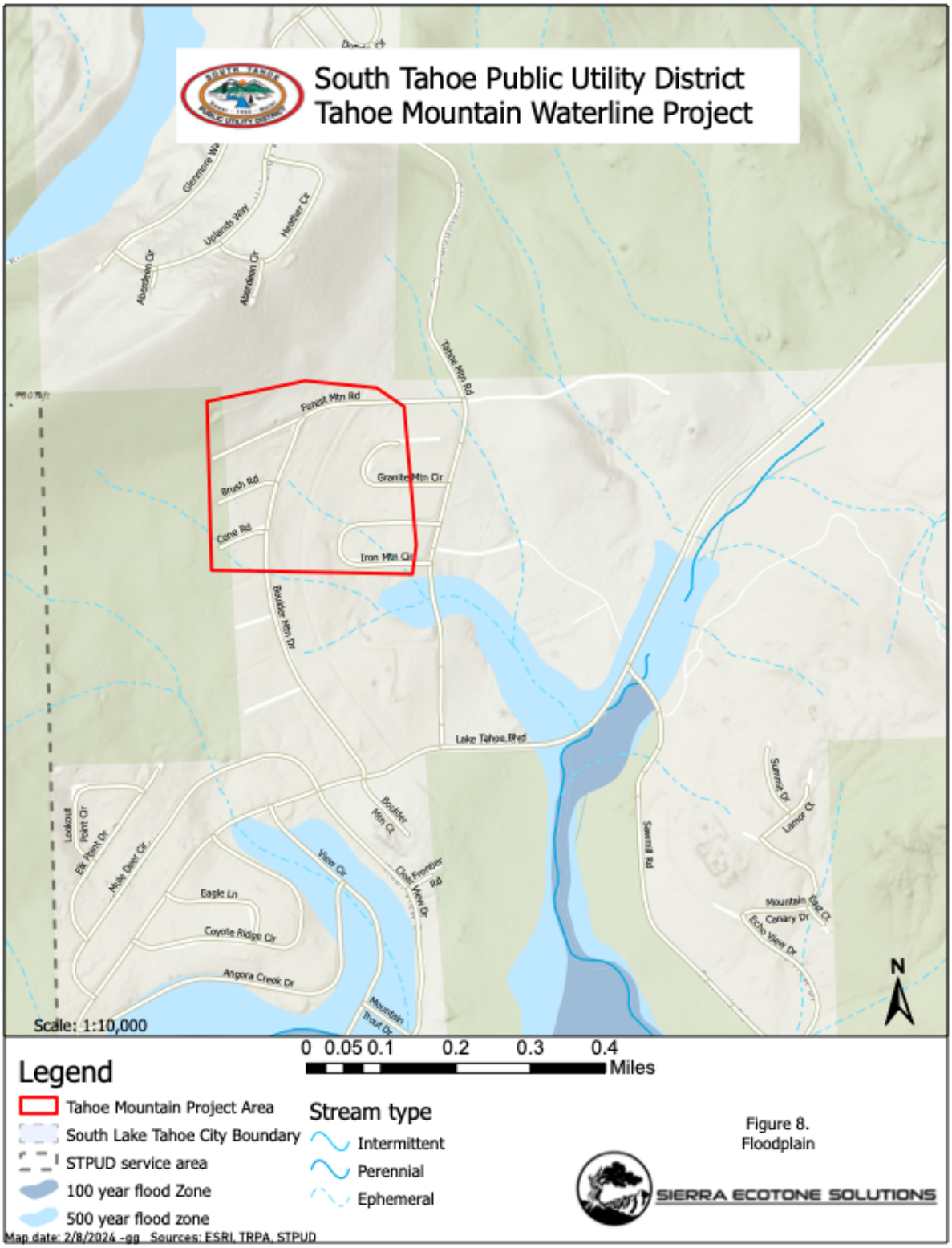
I) No Impact

A project that would expose people or structures to a new significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam, would result in significant impacts. The installation of water pipelines would have no impact on flood risk because the Project components are located below ground or have an insignificant footprint. No Project activities would occur in the vicinity of a levee or dam. Therefore, the Project has no impact on flood risk.

J) No Impact

A Project that would cause inundation by seiche, tsunami, or mudflow would constitute a significant impact. The installation of water pipelines and fire hydrants would not increase the risk of large waves occurring on Lake Tahoe or increase the potential for mudflows because the Project components are located below ground. Therefore, the Project would have no impact on the inundation risk from these natural disasters.

FIGURE 8 - FEMA FLOODPLAINS



2.18 MANDATORY FINDINGS OF SIGNIFICANCE

2.18.A Checklist

CEQA Environmental Issues	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
Does the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
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.)	☐	☐	☐	☒
c) Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

2.18.B Discussion

A) No Impact

The Project is very small scale and of short duration. Construction impacts will be temporary and limited to the existing ROW. Therefore, the Project will not substantially degrade the quality of the environment; reduce the habitat of fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of a rare or endangered plant or animal; or eliminate important examples of the major periods of California history or prehistory.

B) No Impact

In the context of the proposed Project's negligible environmental effects and the short duration of construction activities within the ROW, the Project will not result in impacts that are would be cumulatively considerable, when viewed in connection with the effects of past, current, or probable future projects in the vicinity of the project site.

C) No Impact

The Project will not result in environmental effects that will cause substantial adverse direct or indirect effects on human beings. The Project will result in benefits to humans through the conservation of water resources, reduced energy consumption, hazard mitigation, and improved water supply for firefighting and suppression.

Chapter 3. Determination

CEQA Determination

On the basis of the evaluation presented in this document, the South Tahoe Public Utility District concludes that:

X The proposed project is exempt from CEQA pursuant to the general exemption, a statutory exemption, and/or a categorical exemption. If the project is categorically exempt, none of the exceptions to the exemption apply. A NOTICE OF EXEMPTION will be prepared.

____ On the basis of the Initial Study, there is no substantial evidence that the project will have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.

____ On the basis of the Initial Study and implementation of all proposed mitigation measures, there is no substantial evidence that the project as mitigated may have a significant effect on the environment. A MITIGATED NEGATIVE DECLARATION will be prepared.

____ There is substantial evidence that the project may result in a significant environmental impact. An ENVIRONMENTAL IMPACT REPORT will be prepared.

Chapter 4 List of Preparers

Garth Alling – Principal, Sierra Ecotone Solutions LLC

Alison E Stanton – Sierra Ecotone Solutions LLC

Adrian Combes – South Tahoe Public Utility District

Chapter 5 References

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USFWS 2021.

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Chapter 6. Appendices

Appendix A: STPUD – TRPA Memorandum of Understanding

TAHOE REGIONAL PLANNING AGENCY

Mail
PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
Fax: 775-588-4527
www.trpa.org

MEMORANDUM OF UNDERSTANDING
for
PUBLIC WORKS PROVIDERS

This Memorandum of Understanding (MOU) is entered between the Tahoe Regional Planning Agency (TRPA) and the public works provider(s) listed in Attachment "A," herein referred to as "MOU Partner." TRPA's authority to enter into this MOU with local governmental authorities rests in Article VI (m) of the TRPA Compact (Public Law 96-551) and Section 2.6 of the TRPA Code of Ordinances ("Code"). The authority of the MOU Partner to enter into this MOU is described in Attachment "A." This MOU shall become part of the TRPA Code under Section 2.6 upon signing by TRPA and the MOU Partner.

PART 1 – GENERAL PROVISIONS

COMMON OBJECTIVES	TRPA and the MOU Partner (the "Parties) have a common objective to wisely use and conserve the waters and resources in the Lake Tahoe Region, and enhance the effectiveness of government through the efficient implementation of the TRPA Regional Plan.
TERM OF AGREEMENT	This MOU is effective upon the signing of Attachment "A" by the Parties and shall remain in effect until terminated by either party following a 60-day notice in writing.
DEFINITION OF TERMS	Terms in this MOU shall be defined in accordance with the TRPA Code.
INTERPRETATION AND SEVERABILITY	The provisions of this MOU are subject to the interpretation and severability provisions of Section 1.6 of the TRPA Code.
DISTRIBUTION OF FUNCTIONS	Activities authorized by TRPA under this MOU are described in Attachment B (Table of Exempt (E) and Qualified Exempt (QE) Activities). These activities are designated as either "Exempt" or "Qualified Exempt." Attachment B modifies the scope of Exempt and Qualified Exempt activities otherwise allowed in Section 2.3 of the TRPA Code. Activities that are not Exempt or Qualified Exempt are subject to the project review requirements of Section 2.2 of the Code and are subject to TRPA review and approval.
LOSS OF EXEMPTION	Any "exempt" or "qualified exempt" activity set forth herein shall be considered a "project" outside the scope and authorities granted under this MOU if the TRPA Executive Director, or his/her designee, determines that the activity may have a substantial effect on natural resources in the TRPA Region as defined in the TRPA Code.

COMMUNICATION	The Parties shall each designate a liaison for direct communication of matters related to this MOU. The MOU Partner liaison and the TRPA MOU Coordinator shall meet at least once per year to review this MOU and to establish policy directives, training needs, and renew communications.
TRAINING	TRPA shall provide initial training to the MOU Partner regarding the provisions of this MOU. Subsequent training shall be provided for matters affecting this MOU, including but not limited to: changes to the TRPA Code or other provisions of the Regional Plan; policy or procedural changes; and training needed for corrective actions or to clarify MOU provisions.
EXAMINATION OF RECORDS	Every record of activity under this MOU shall be open for examination in accordance with Article VI (o) of the TRPA Compact.
PROCEDURES FOR RESOLVING DISPUTES	In the event of a dispute, difference of interpretation, or appeal of a decision regarding the terms or conditions of this MOU, settlement shall first be pursued by the MOU liaisons, and if the liaisons are unable to resolve the dispute then by the executive officers of the Parties. If the executive officers are unable to resolve a dispute, the TRPA Executive Director may terminate the MOU or recommend that the matter be heard by the TRPA Governing Board.
EMERGENCIES	TRPA may issue an emergency permit for a situation or circumstance which poses immediate danger to life, property or the environment and demands immediate action in order to comply with the Compact, Regional Plan, Code and/or Rules of Procedure. Emergency permit requests may be made by letter, if time allows, or by telephone or in person, if time does not allow. Requests shall include a description of the nature and location of the emergency and the work to be performed. Upon TRPA determination that an emergency does exist, initial permit approval may be given orally. In the event an emergency exists and the TRPA offices are closed, or a means of communication is not readily available, the MOU Partner may proceed to take necessary action while diligently continuing to contact TRPA.
ENVIRONMENTAL DOCUMENTATION	The MOU Partner shall certify that a Qualified Exempt Activity allowed under this MOU shall not have a negative impact on the environment by completing a TRPA Initial Environmental Checklist (IEC) for the activity. Activities requiring a TRPA Environmental Assessment (EA) or Environmental Impact Statement (EIS) are not covered by this MOU.
RECORD KEEPING AND REPORTING	The MOU Partner shall keep records of Exempt activities commenced pursuant to this MOU for a period of thirteen months following the cessation of the activity. The MOU Partner shall also report Qualified Exempt (QE) activities to the TRPA MOU Coordinator on a TRPA reporting form at least three business days prior to commencement of the activity. Activities allowed under this MOU may be subject to an annual audit by TRPA.

AMENDMENT	This MOU may be amended from time to time by mutual agreement of the Parties in writing. Proposed amendments shall be presented to the liaisons (for approval by their respective agencies) as soon as possible to facilitate timely consideration of proposed amendments.
ASSIGNMENT	None of the authorities, duties or responsibilities set forth in this MOU shall be assigned, transferred or subcontracted to a party other than that named in Attachment A, without written consent by TRPA.

PART 2 – PERFORMANCE STANDARDS

The following standards shall apply to activities authorized under this MOU. The Parties shall consult with each other regarding any uncertainties about these standards. Alternative standards may be approved by the TRPA MOU Coordinator when the results are determined to be equal or superior to these standards.

GENERAL STANDARDS

1. Project Area

   Project area shall be calculated for Qualified Exempt activities in accordance with Subparagraph 30.4.1.C.2 of the TRPA Code. Project areas shall not overlap except for activities that do not involve land coverage or land use.

2. Land Coverage

   The following land coverage calculations shall be made for Qualified Exempt activities subject to the land coverage provisions of Chapter 30 of the TRPA Code:

   - Project Area
   - Allowable land coverage by project area and land capability district
   - Existing land coverage by project area and land capability district
   - Existing excess land coverage by project area and land capability district
   - Relocated land coverage by project area and land capability district
   - New land coverage by project area and land capability district
   - Transferred land coverage by project area and land capability district

3. Findings

   The MOU Partner shall keep, as part of their Exempt Activity records, all written findings required in the TRPA Code for the activities allowed under this MOU.

4. Work in State and Federal Highways

Activities requiring the closure of a traffic lane or intersection of a state or federal highway for more than one hour, or the closure of U.S. Highway 50 at any point between the South Wye and Kingsbury Grade for any period of time are not exempt under this MOU.

CONSTRUCTION AND GRADING STANDARDS

1. Sediment and Erosion Control

Appropriate measures shall be taken to control sediment and prevent erosion from graded or unstable ground. Erosion control structures shall be installed and maintained in an operable condition for ground disturbing activities. Sediment and erosion control measures shall, at minimum, conform to the following provisions of the TRPA Code of Ordinances:

- Chapter 33, Grading and Construction
- Section 60.1, Water Quality Control
- Section 60.3, Source Water Protection
- Section 60.4 , Best Management Practice Requirements

Erosion control structures shall be installed before activities commence and shall remain in place until disturbed sites are stabilized or winterized (see Subparagraph 33.3.1D of the TRPA Code for winterization requirements). Erosion control measures shall include revegetation with TRPA approved plant species and soil mulching with composted organic materials when necessary to increase soil moisture holding capacity of soils. Revegetated areas shall be protected from future disturbance and irrigated as necessary to ensure plant growth during the first growing season.

2. Vegetation Protection

Vegetation within, or adjacent to, construction areas shall be protected in accordance with Chapter 61 and other applicable provisions of the TRPA Code. All trees and native vegetation to remain on or adjacent to a construction site shall be fenced for protection in accordance with all applicable provisions of the TRPA Regional Plan, including but not limited to Section 33.8 of the TRPA Code. No equipment shall enter into, and no materials shall be placed within, areas protected by fencing.

3. Dust Control

Appropriate measures shall be taken to prevent the transport of fugitive dust from ground disturbing activities in accordance with all applicable provisions of the TRPA Regional Plan, including but not limited to Subsection 33.3.3 of the TRPA Code. These measures shall be employed when activities commence and shall continue until disturbed sites are stabilized.

4. Noise and Hours of Operation

Construction, maintenance, and demolition activities creating noise in excess of the TRPA single event noise or community noise level standards in Section 68.9 of the TRPA Code shall be considered exempt provided that such work is conducted between the hours of 8:00 a.m. and 6:30 p.m. Emergency work to protect life or property is also exempt from the TRPA noise standards.

MEMORANDUM OF UNDERSTANDING
for
PUBLIC WORKS PROVIDERS

ATTACHMENT "A"

Between Tahoe Regional Planning Agency
and South Tahoe Public Utility District

TRPA's authority to enter into this Memorandum of Understanding (MOU) with local entities rests in Article VI (m) of the TRPA Compact (Public Law 96-551) and Section 2.6 of the TRPA Code of Ordinances. The authority of the MOU Partner to enter into this MOU rests in Section 9g the Public Utility District Act of 1921.

This MOU shall become effective when signed by the parties listed below.

TAHOE REGIONAL PLANNING AGENCY

Date: 3/6/2012

By: Joanne Marchetta
Executive Director

SOUTH TAHOE PUBLIC UTILITY DISTRICT

Date: 3/23/2012

By: Richard Solbrig
District Manager

MEMORANDUM OF UNDERSTANDING

for

PUBLIC UTILITY DISTRICTS

ATTACHMENT "B"

Table of Exempt (E) and Qualified Exempt (QE) Activities

Note: The activities described in this table expand upon the Exempt (E) and Qualified Exempt (QE) activities otherwise allowed in Subsection 2.3 and Subparagraph 2.3.7 of the TRPA Code of Ordinances, provided the activities are consistent with Part 1 (General Provisions) and Part 2 (Performance Standards) of this Memorandum of Understanding.

Line No.	Activity Level	Activity
		Roadways, Trails, Sidewalks & Parking Facilities
1	E	**Routine non-structural maintenance** provided the activities do not modify the shape or location of the facility, create or relocate land coverage, add new structural appurtenances or modify existing drainage.
2	E	**Structural maintenance, repair and replacement** of existing facilities (such as pavement, curb and gutter, compacted shoulders, culverts, pipes, vaults, and similar structures), provided no new land coverage is created and any relocated land coverage and/or disturbance is limited to 120 square feet in low capability land (Classes 1a, 1b, 1c, 2, and 3) and 500 square feet in high capability land (Classes 4, 5, 6 and 7).
3	E	**Installation of vehicle barriers** (such as bollards, fencing and boulders) along travel ways provided the barriers conform to applicable highway standards and boulders are placed partially in the ground to prevent rolling and to give a natural appearance.
4	QE	**Modifications** to existing facilities to improve public safety and/or environmental protection provided any new or relocated land coverage or disturbance is limited to 240 square feet in low capability land (Classes 1a, 1b, 1c, 2, and 3) and 1,000 square feet in high capability land (Classes 4, 5, 6 and 7).

		Erosion Control & Water Quality Protection Facilities
5	E	**Routine non-structural maintenance** of existing storm water treatment facilities (such as dry wells, infiltration trenches, drop inlets, and vaults), including removal of sediment, vegetative overgrowth and organic material, without limit on material volume or land capability, provided removed materials are deposited outside of the Tahoe Basin or at a TRPA-approved disposal site.
6	E	**Structural maintenance, repair, and in-kind replacement** of existing facilities, provided no new land coverage is created and relocated land coverage or disturbance is limited to 120 square feet in low capability land (Classes 1a, 1b, 1c, 2, and 3)and 500 square feet in high capability land (Classes 4, 5, 6 and 7).
7	QE	**Modifications to existing facilities** to improve effectiveness, meet new regulatory standards, or correct system inefficiencies, provided new structures such as rock slope protection and retaining walls are not visible from any TRPA-designated scenic roadway or shorezone travel unit, Class I bicycle paths, or recreation areas designated in the TRPA Scenic Quality Improvement Program (SQIP).
		Water Distribution and Wastewater Collection & Treatment Facilities
8	E	**Testing, locating, and maintenance** of existing facilities (such as mechanical and electrical equipment, piping and plumbing, pumps and similar devices).
9	E	**Structural maintenance, repair, in-kind replacement** of facilities, provided excavation is limited to areas under existing pavement, road shoulder, or compacted soil; no new land coverage is created, and relocated land coverage or disturbance is limited to 120 square feet in low capability land (Classes 1a, 1b, 1c, 2, and 3) and 500 square feet in high capability land (Classes 4, 5, 6 and 7).
10	QE	**Modifications to existing facilities** provided the modifications do not result in any increases in water or sewer treatment capacity or growth inducing activity, and any new or relocated land coverage or disturbance is limited to 240 square feet in low capability land (Classes 1a, 1b, 1c, 2 or 3) and 1,000 square feet in high capability land (Classes 4, 5, 6 and 7).
		Public Service and Recreation Buildings
11	E	**Interior remodeling** of existing buildings in accordance with Subparagraph 2.3.2.A of the TRPA Code, except that the allowable structural cost of the remodel allowed is increased to $80,000.
12	E	**Demolition** of structures, improvements or facilities **less than 50 years of age** in accordance with Subparagraph 2.3.2.G of the TRPA Code, except that the excavation and backfill limits are increased to the grading limits in this MOU.
13	QE	**Demolition** of structures, improvements or facilities **greater than 50 years of age** that are not designated, or pending designation, on the TRPA Historic Resource Map in accordance with Subparagraph 2.3.7.A.6 of the TRPA Code if the MOU Partner determines that the structure does not qualify for historic protection in accordance with Chapter 67 based on a report prepared by a qualified professional acceptable to the appropriate State Historic Preservation Officer (SHPO).
		Public Service and Recreation Buildings (continued)

14	QE	**Structural repair** to existing buildings in accordance with Subparagraph 2.3.7.A of the TRPA Code, except that the structural repair cost in 2.3.7.A.1 is increased to $42,000 per year and excavation and backfilling limits in 2.3.7.A.1.a are increased to the grading limits in this MOU.
15	QE	**Structural modifications** to existing buildings in accordance with Subparagraph 2.3.7.A.2 of the TRPA Code, except that the grading limits in 2.3.7.A.2.c (i) are increased to the grading limits of this MOU.
16	QE	**Structural remodeling or additions** to existing buildings in accordance with Subparagraph 2.3.7.A.3 of the TRPA Code, except that the grading limits in 2.3.7.A.3.a (i) are increased to the limits of this MOU, and the BMP retrofit plan required in 2.3.7.A.a (b) is consistent with the requirements of this MOU.
		Vegetation Management and Soil Preparation for Vegetation Planting
17	E	**Pruning of vegetation**, including hazardous tree limb removal, beyond the limits allowed in Subparagraph 2.3.2.H of the TRPA Code to maintain adequate sight distance along roadways and other travel routes.
18	QE	**Scarification of disturbed high capability soils** (Classes 4, 5, 6 and 7) as preparation for revegetation with native plant species in accordance with Subparagraph 2.3.2.H of the TRPA Code provided the scarification is less than one acre in area and does not exceed six inches in depth.
19	QE	**Hazardous tree removal** around MOU Partner facilities in accordance with Subparagraph 61.1.7.A of the TRPA Code, except that TRPA approval is not required unless the tree was planted as a scenic mitigation measure pursuant to a TRPA permit (including permits issued by local government in accordance with Section 2.5).
		Grading (Including Grading in Combination with Other Activities)
20	E	**Excavations under existing hard land coverage** to an amount that can be backfilled, stabilized and swept clean within a 24-hour period.
21	E	**Excavations otherwise allowed in Subparagraph 2.3.2.D of the TRPA Code**, except that the volume limit of the excavation is increased to 15 cubic yards in all land capability districts.
22	QE	**Excavations otherwise allowed in Subparagraph 2.3.7.A.5 of the TRPA Code**, except that the volume limit of the excavation is increased to 50 cubic yards.

Appendix B: Biological Species Lists (CNDDB, CNPS, USFWS) and Biological Assessment and Evaluation

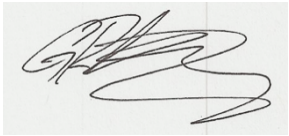
BIOLOGICAL EVALUATION/BIOLOGICAL ASSESSMENT

for the

South Lake Tahoe Public Utility District
Tahoe Mountain Waterline Replacement Projects

South Lake Tahoe Public Utility District

Lahontan Regional Water Quality Control Board



PREPARED BY_ DATE: 13 February 2024

Garth Alling
WILDLIFE BIOLOGIST, Sierra Ecotone Solutions LLC

I. INTRODUCTION

This Biological Evaluation (BE) and Biological Assessment (BA) has been prepared to evaluate potential effects of the South Tahoe Public Utility District (District) Tahoe Mountain Waterline Replacement Projects on animals and plants listed as threatened or endangered by the U.S. Fish and Wildlife Service (Endangered Species Act of 1973 (ESA; 16 U.S.C. § 1531 et seq.) or designated as sensitive, threatened or endangered by the State of California under the California Endangered Species Act (Fish and Game Code Sections 2050-2098) and designated as sensitive on the 2013 United States Forest Service Region 5 Sensitive Species List (USDA 2013). The Biological Evaluation (BE) portion specifically addresses whether the project may result in a loss of viability of Forest sensitive species, general wildlife species, or cause a sensitive species to trend toward federal listing. The Biological Assessment (BA) portion of this document has been prepared to document analysis of the potential direct and indirect effects of the proposed project on federally listed threatened, endangered, proposed, and candidate species known or expected to occur within the project area. This BE/BA was prepared in accordance with Appendix G of the California Environmental Quality Act (CEQA) and Forest Service Manual (FSM) direction 2672.42 and meets legal requirements set forth under section 7 of the Endangered Species Act of 1973, as amended and implementing regulations [19 U.S.C. 1536 (c, 50 CFR 402.12 (f) and 402.14 (c)].

II. PROJECT DESCRIPTION

Purpose

The South Tahoe Public Utility District (District) owns and operates the water distribution system and waste water collection and treatment system within its Service Area in the City of South Lake Tahoe, California. The District regularly conducts condition assessments of existing water facilities to identify opportunities to optimize the system to better provide reliable water services safely, efficiently and cost effectively. The Tahoe Mountain Waterline Replacement Project (Project) would replace and upgrade waterlines and install new fire hydrants to improve capacity and reliability, enhance fire protection, and provide an increased level of service within the surrounding community. The Project Area is located on the western edge of the Service Area in an unincorporated area of El Dorado County in the Tahoe Mountain neighborhood, east of Fallen Leaf Lake (Figure 1).

The Project will replace approximately 4,100 linear feet of existing waterlines in a residential neighborhood, including a waterline that fills the Forest Mountain Tank. The existing 6-inch and 8-inch steel waterlines were installed in the early 1960's, possibly earlier, and the District has seen an increasing number of leaks in this area, indicating that the waterlines are at the end of useful life. The new waterline will be 8-inches and either C900 PVC or ductile iron. In addition, a total of eight dead-ends that cannot be connected due to land issues will have a flush-out installed so that the lines can be cleared annually. A total of 40 new water services and 7 fire

hydrants will be placed within the Right-of-Way of the following streets: Iron Mountain, Forest Mountain, Granite Mountain, Brush, and Cone (Figure 2). The Forest Mountain Tank is located within an existing easement on US Forest Service property. The hydrants will be spaced every 500 feet to meet fire standards that require developed properties to be no more than 250 feet from a fire hydrant and undeveloped properties to be no more than 500 feet from a fire hydrant.

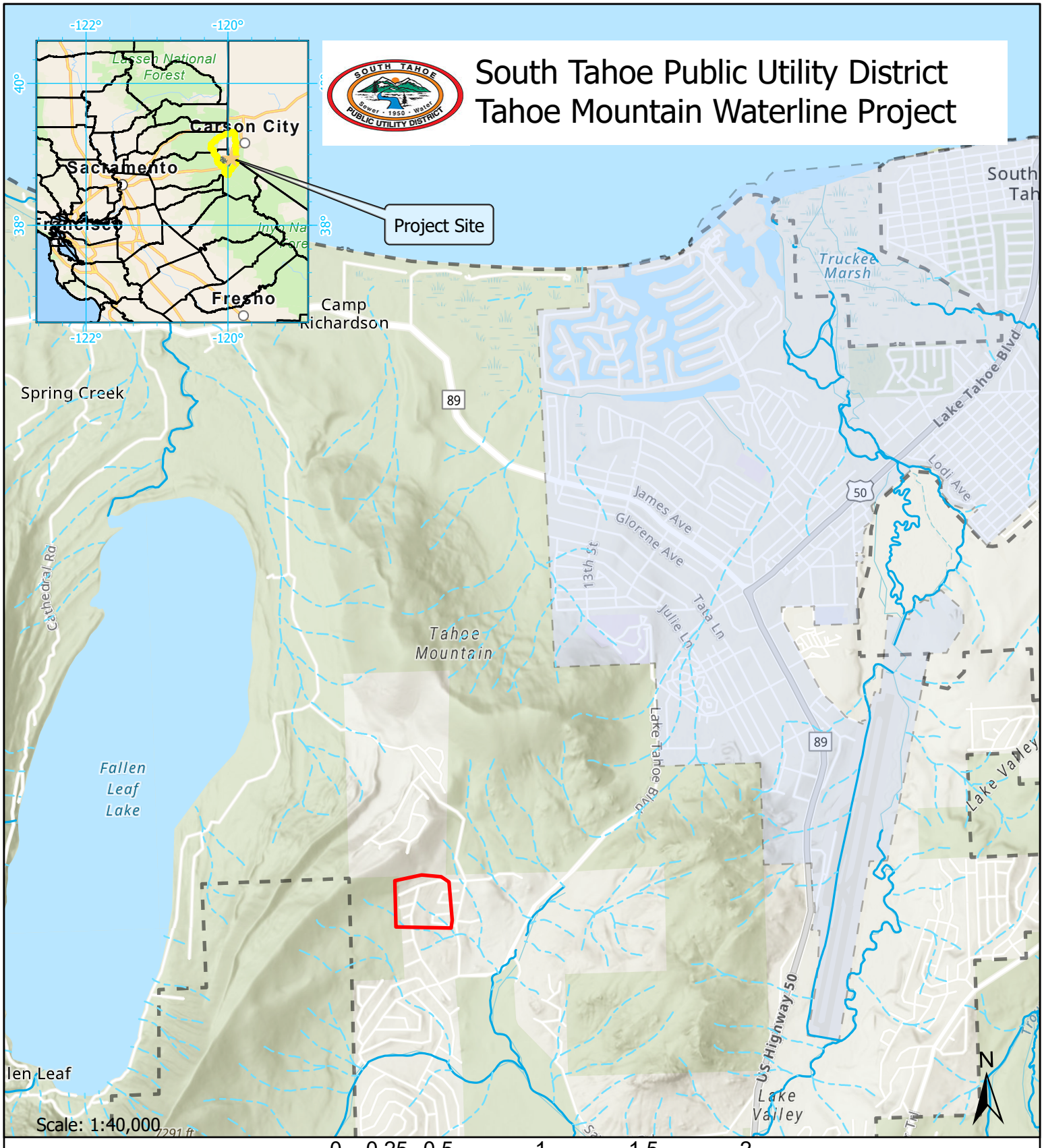
In 2015, the District completed an assessment of its water system service that serves over 16,000 residential and commercial customers to determine how the system could be optimized to provide reliable water services more safely, efficiently and cost effectively. The result was the 2016 Water System Optimization Plan (WSOP) that is used by the District to guide its operations and capital investments to meet the goal of maintaining a reliable potable water service.

The WSOP included a comprehensive condition assessment of existing water facilities that identified deficiencies within the water system. The District used the results of the assessment to develop a prioritized Capital Improvement Program (CIP) to correct deficiencies in water system condition, capacity, and Level of Service (LOS). On an annual basis, the District presents an Annual Plan Update to the CIP that identifies and prioritizes capital projects based on current needs and the adopted budget. The annual plan document is intended to be a desktop resource for basic information regarding the scope, cost, and need for proposed projects. The annual update for FY24-33 identifies the proposed Tahoe Mountain Waterline Replacement Project as a high priority project for implementation in 2025.

Location

The Project is located in unincorporated El Dorado County, outside the boundary of the City of South Lake Tahoe, California (Figure 1). The Project Area is in the Tahoe Mountain neighborhood, approximately three miles south of the "Y" and east of Fallen Leaf Lake (Figure 2). Tahoe Mountain Drive heads north from Lake Tahoe Blvd toward Fallen Leaf Lake Road. The neighborhood is the access point for Angora Ridge Road, which provides access to the popular recreation area of Angora Lakes Resort.

The Project Area is contained within the Emerald Bay United States Geological Society (USGS) 7.5 Minute Quadrangle Topographic Map and occurs within Township 12N Range 18E, Section 18 on the Mt Diablo Meridian.



Legend

- Tahoe Mountain Project Area
- South Lake Tahoe City Boundary
- STPUD service area

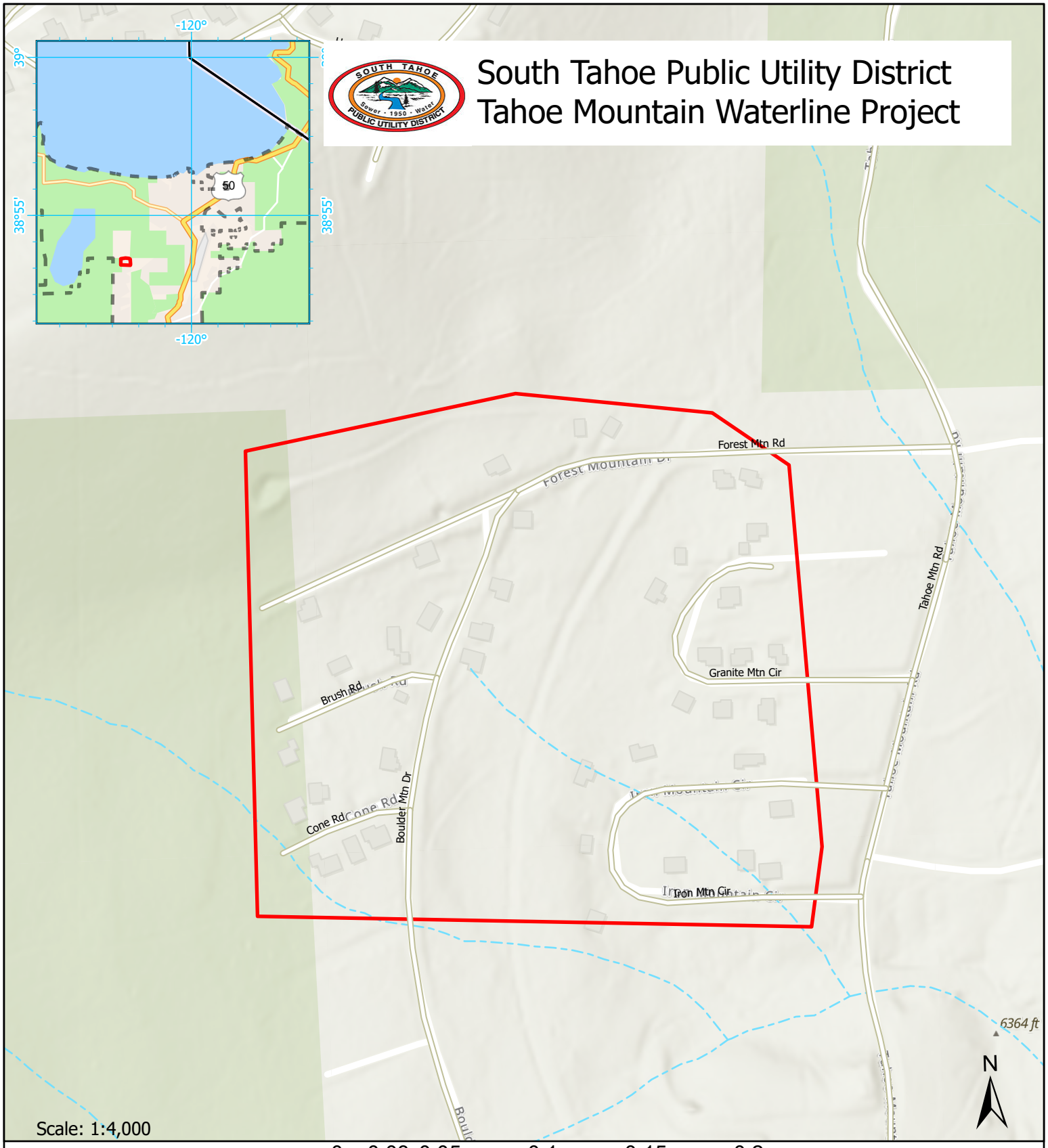
Stream type

- Intermittent
- Perennial
- Ephemeral

Figure 1.
Project vicinity

SIERRA ECOTONE SOLUTIONS

Map date: 2/4/2024 -gg Sources: ESRI, TRPA, STPUD



Legend

- Tahoe Mountain Project Area
- South Lake Tahoe City Boundary
- STPUD service area

Stream type

- Intermittent
- Perennial
- Ephemeral

Figure 2.
Project Area

SIERRA ECOTONE SOLUTIONS

Map date: 2/4/2024 -gg Sources: ESRI, TRPA, STPUD

Project Overview

The purpose of the Tahoe Mountain Waterline Replacement Project (Project) is to mitigate existing deficiencies within the water system to provide an increased level of service and enhanced fire protection capability. The District has conducted hydraulic capacity and condition assessments of existing waterlines, primarily based on diameter and pressure, but also age, or piping material. Existing water pipelines have been identified in the Project Area that are either small diameter (8-inch and under) or nearing the end of their useful life. The District proposes to replace these aging and small diameter water pipelines to increase water system efficiency and improve fire flows. New fire hydrants would also be installed to meet current standards. Each of these components are described in further detail below.

Project Components

Waterline Replacement

The Project will replace approximately 4,100 linear feet of existing 6-inch and 8-inch steel waterlines with new 8-inch waterline made of either C900 PVC or ductile iron. A total of eight dead-ends that cannot be connected due to land issues will have a flush-out installed so that the lines can be cleared annually. A total of 40 new water services and 7 fire hydrants will be placed within the Right-of-Way of the following streets: Iron Mountain, Forest Mountain, Granite Mountain, Brush, and Cone (Figure 2). A waterline that fills the Forest Mountain Tank, located within an existing easement on US Forest Service property, will also be replaced

Waterlines that would be replaced include mains and service laterals. All water lines are expected to be installed within the road right-of-way and/or existing easements and under existing pavement or compacted road shoulder encompassing up to 10 feet out from the edge of pavement. Generally, waterlines are installed four feet below grade, with a maximum depth of excavation of five feet. Ancillary facilities (e.g., valve clusters, fire hydrants, vaults, utility crossings, etc.) may require additional excavation depth up to eight feet. The waterline replacement would begin with pipeline trenching and excavation within the road. A section of new mainline would be installed along with "in line" appurtenances and might include pressure relief valves (PRV), pressure relief stations, or meters. Generally, these projects entail installation of a vault or manhole in the street or compacted road shoulder with the mechanical equipment installed inside. A PRV might also include a roadside control panel in a box. Each completed section would be tested for leakage and disinfected. After testing, the new mainline would be tied into the existing system and the new services would be tied to the existing services at the property. The portion of the system being replaced would generally remain in service until the new system has been tied in. Then the old system would be abandoned in place. Upon completion of the install, the trenches would be backfilled and the roadway replaced. Existing guardrail and signage would be protected throughout construction along with any existing curb and gutter

New Fire Hydrant Installation

The installation of new fire hydrants within the Service Area is necessary to meet fire standards that require developed properties to be no more than 250 feet from a fire hydrant and undeveloped properties to be no more than 500 feet from a fire hydrant. A total of 7 new fire hydrants would be installed with 500-foot spacing. Each hydrant would be connected to the new waterline via a 6-inch fire hydrant lateral and gate valve off of the hydrant tee.

Construction Phasing, Schedule and Equipment

Construction is planned for 2025 and is anticipated to occur within one TRPA grading season between May 1st to October 15th. The Lake Tahoe Boulevard portion will take place in 2025. The new fire hydrants would be installed in conjunction with the water pipeline replacement and all new components would be pressure tested and disinfected at the same time. When testing is complete, the new components would be tied in with the existing system.

The contractor shall comply with the TRPA standard conditions of approval. Construction that is not completed during the TRPA construction season for earth moving activities between May 1st and October 15th would require a TRPA Grading Season Exception. On-site work would be performed from 8 am to 6 pm Monday through Friday. Work outside these hours would be approved by the District a minimum of 48-hours before the abnormal working hours are scheduled to begin.

General construction equipment that would be utilized for waterline projects include excavator, mini-excavator, loader, water truck, service vehicles, small remote sheep's-foot compactor, vacuum truck, sweeper, milling machine, smooth drum compactor, and a paving machine. All but the paving equipment (the last 3 on the list) are used every day.

Earthwork and Excavations

Earthwork and excavations that result in temporary disturbance will be necessary for Project implementation. Excavation is defined as being 18 or more inches of depth below the existing surface. Water pipeline trenches are expected to be 3 to 5 feet wide and generally require excavations of 5 feet deep. Excavations will primarily occur within the City of South Lake Tahoe ROW. A TRPA pre-grade inspection shall be completed prior to any excavation or saw-cutting activities.

Pipeline and Utility Trenching and Excavations

The contractor shall be responsible for contacting all utility companies, local agencies and/or utility districts as to the location of all underground facilities. Location and depth of existing utilities where shown on plans are based on best available information. No guarantee is made as to the accuracy of this information or that all utilities are shown. It shall be the contractor's responsibility to locate, protect, and maintain all existing utilities. The contractor or any subcontractor for this contractor shall notify members of underground service alert 48 hours in advance of performing excavation work by calling underground service alert #811. Excavation is

defined as being 18 or more inches of depth below the existing surface.
The contractor shall pothole all utility and storm drain crossings along the pipeline alignment in advance of installation. The contractor shall report the results of the pothole in writing to the engineer 48 hours (not to include weekends or holidays) prior to undertaking any corrective action. Should any corrective work be done prior to notification, the District assumes no liability for the costs incurred for this work.
All interties between new water mains and the existing water system, including new water service connections, and fire hydrant installations and transfers, shall only be made after all pressure testing and disinfection requirements are satisfactorily met. The contractor shall be responsible to provide all blow offs necessary for flushing and sampling of all new water mains as required by the California State Water Resources Control Board and project specifications.
The thickness of replacement pavement is 4 inches in the ROW as specified in the project plans. Trench pavement replacement exceeding this shall be completed at no additional expense to the District.
The contractor shall protect and be responsible for any disturbance or contamination to any dry wells, storm water collection or retainage systems including storm drain pipe, curb & gutter, valley gutters and horizontal drains through-out the project area. Any damage shall be repaired at no additional cost to District. The contractor shall not stock pile any material upon any drainage facilities. All sewer pipes damaged during the execution of the project shall be repaired per plan details.

Fill Materials and Placement

All excavations shall be backfilled or trench plated at the end of each day's work per the plan specifications. Within paved areas, trenches will be backfilled with a combination of sand, native material, Class II aggregate base and slurry. Excavations within existing paved areas shall be cold patched or covered with steel plates as required per specifications to match the existing pavement at the end of each day’s work. All trench plates shall be non- skid type and have cold patch applied to the edge for traffic approach and departure.

After the new main is placed into service, the existing water mains, where shown on the project drawings, are to be abandoned in place by cutting out a section of pipe and installing a cap or plug on the end of the pipeline. Existing fire hydrants to be abandoned will be removed and capped below grade.

Only new water service connections where shown on the project plans shall be installed per the Districts standard details and project drawings. After Project completion, the locations of all existing water services shall be verified and marked in the field.

Disposal of Excess Excavated Materials

All excess material from the project is to be removed from the site and disposed of at a site approved by the TRPA. For this Project, excess spoil may be temporarily stored at the Contractor staging area at the District Wastewater Treatment Plant. No material shall be stored in any stream environment zone or wet area. The contractor shall not stock pile any material upon any drainage facilities. Contractor shall remove all material generated by any asphalt saw cutting operation during or immediately after saw cutting by using adequately sized vacuuming equipment to accommodate the removal process.

Site Cleanup and Restoration

All disturbed areas shall be restored to match pre-existing conditions. Unimproved areas and areas not landscaped shall be revegetated with native species in accordance with the TRPA handbook of best management practices. Existing vegetation removed during construction shall be chipped and mulched on site and stored for use during revegetation. Application of a mulch may enhance vegetative establishment. Any disturbance of private property shall be restored by the contractor at their expense. All traffic striping that is disturbed during construction shall be replaced by the contractor.

Site Access, Staging Areas, and Parking

The District would likely provide a Contractor staging area at the Wastewater Treatment Facility located off of Al Tahoe Blvd. Additional staging may occur within compacted shoulder areas of Pioneer Trail if allowed by El Dorado County. Contractors' equipment and employee vehicles shall park on existing paved surfaces or existing compacted road shoulders. Contractor shall provide crushed rock in areas of temporary construction access to minimize migration of sediment.

Project Design Features and Best Management Practices

A. Best Management Practices to Protect Surface and Ground Water/Sediment and Erosion Control Plan

A pre-grade inspection shall be completed prior to any saw cutting or excavation activities. The Contractor shall comply with the State Water Resource Control Board waste water discharge requirements for the project and the City of South Lake Tahoe's encroachment permit. To ensure that potential impacts to surface water and ground water are avoided, reduced and minimized, the following measures and BMPs will be implemented as necessary based on site conditions at individual work sites:

- During construction, environmental protection devices, such as erosion control, dust control and vegetation protection devices shall be maintained at all times.

- Soil and construction material shall not be tracked off the construction site. Grading operations shall cease in the event that this condition is in danger of being violated.

- Loose soil mounds or surface shall be protection from wind or water erosion by being appropriately covered at the end of each work day or when required by TRPA.
- The contractor shall not stock pile any material upon any drainage facilities. Excavated material shall be stored upgrade from the excavated area whenever possible. No material shall be stored in any stream environment zone or wet area.
- All excess material from the project is to be removed from the site and disposed of at a site approved by the TRPA. No excess material shall be stored on site after hours. Contractor shall remove all material generated by any asphalt saw cutting operation during or immediately after saw cutting by using adequately sized vacuuming equipment to accommodate the removal process.
- No equipment or vehicles shall be placed outside the state, city, or county right of way. Contractor shall provide crushed rock in areas of temporary construction access to minimize migration of sediment.
- The contractor shall protect and be responsible for any disturbance or contamination to any dry wells, storm water collection or retainage systems including storm drain pipe, curb & gutter, valley gutters and horizontal drains throughout the project area. Any damage shall be repaired at no additional cost to the District.
- If groundwater is intercepted during some excavations, dewatering may need to be implemented onsite. The contractor shall be responsible for the handling and proper disposal of distribution system water encountered during system tie-ins in accordance with the plan specifications.

B. Construction Noise Reduction

To reduce construction related noise, the following measures will be implemented:

- Noise shall be reduced by mandatory use of mufflers on all construction vehicles and equipment. Where feasible solenoid pavement breakers will be used in lieu of air powered jack hammers.
- Construction activities will be limited to the hours of 8:00 AM and 6:00 PM, pursuant to TRPA Code of Ordinances Chapter 68, Noise Limitations.

C. Migratory Bird Nest Site Protection Program

For construction activities proposed to occur during the nesting season (March 15 through August 15), and outside of paved areas, the contractor and District shall review the Project Area to identify any migratory bird nest sites that may be present. If a nest is present in the immediate vicinity, a qualified biological monitor shall be contacted to evaluate whether any migratory

birds are impacted by the project. The biological monitor shall have the authority to stop construction near occupied sites if it appears to be having a negative impact on nesting migratory birds or their young. If construction must be stopped, the monitor must consult with USFWS and CDFW staff within 24 hours to determine appropriate actions to restart construction while reducing impacts to identified migratory bird nests.

D. Prevent and Control Invasive Species

To prevent the spread of invasive plant species, the following measures and BMPs will be implemented:

- Construction vehicles, including off-road vehicles, will be cleaned when they come into the Basin or come from a known invasive plant infested area. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other such debris.

- Equipment will be staged in weed-free areas to prevent vehicles from introducing or spreading invasive species.

- Earth-moving equipment, gravel, fills, or other materials are required to be weed-free. Onsite sand, gravel, rock, or organic matter will be used when possible or weed-free materials from gravel pits and fill sources that have been surveyed and approved will be used.

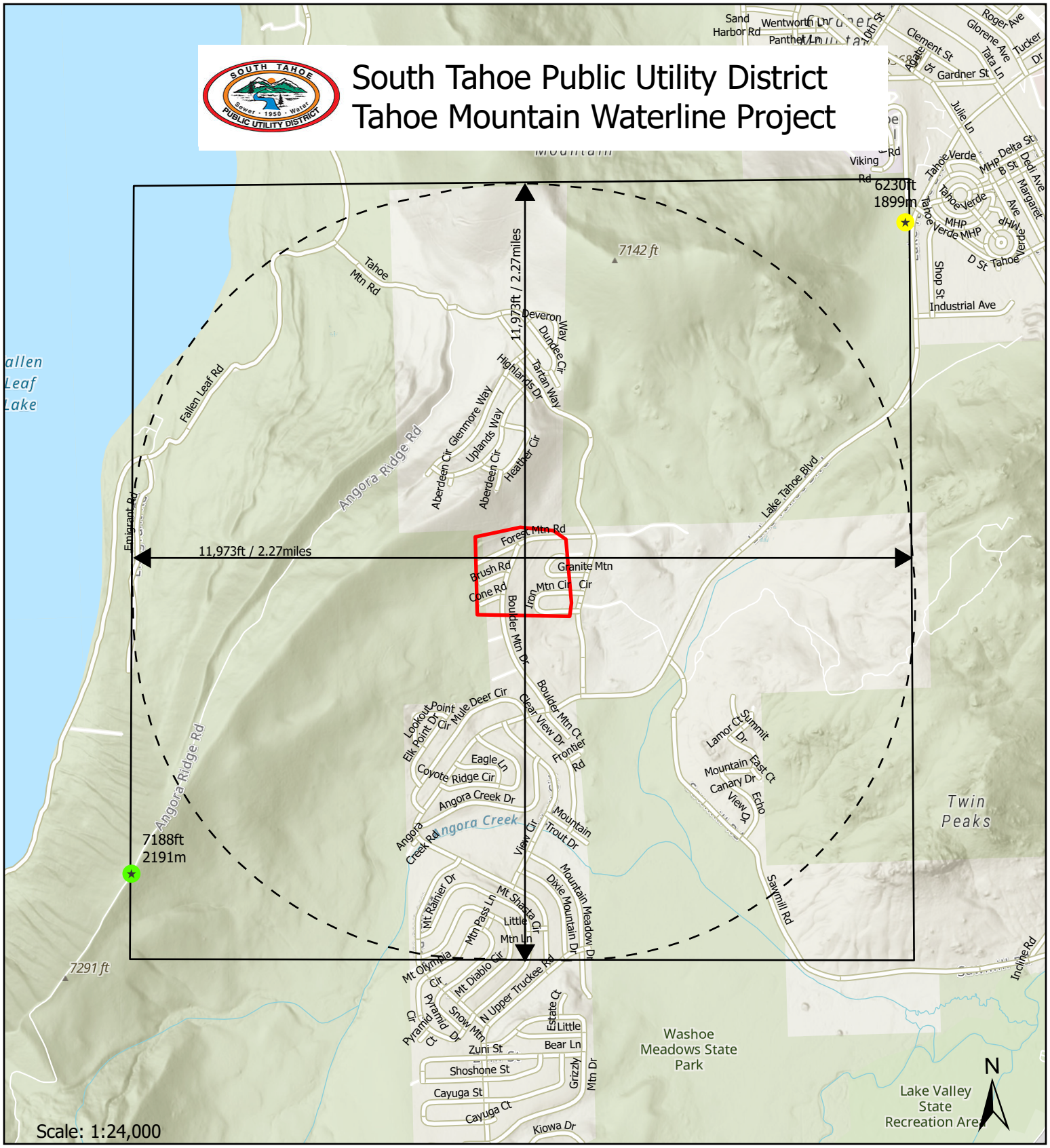
- Minimize the amount of ground and vegetation disturbance in the construction areas. Upon completion of construction, vegetation will be reestablished in the footprint to minimize weed establishment after the removal.

III. ACTION AREA

The Project is located in unincorporated El Dorado County, outside the boundary of the City of South Lake Tahoe, California (Figure 1). The Project Area is in the Tahoe Mountain neighborhood, approximately three miles south of the "Y" and east of Fallen Leaf Lake (Figure 2). Tahoe Mountain Drive heads north from Lake Tahoe Blvd toward Fallen Leaf Lake Road. The neighborhood is the access point for Angora Ridge Road, which provides access to the popular recreation area of Angora Lakes Resort.

The Project Area is contained within the Emerald Bay United States Geological Society (USGS) 7.5 Minute Quadrangle Topographic Map and occurs within Township 12N Range 18E, Section 18 on the Mt Diablo Meridian.

South Tahoe Public Utility District
Tahoe Mountain Waterline Project



Legend

- Tahoe Mountain Project Area
- Action Area (2,688 acres)
- Highest Elevation within the Action Area
- Lowest Elevation within the Action Area

Figure 3
Action Area

SIERRA ECOTONE SOLUTIONS

Map date: 2/21/2024 -gg Sources: ESRI, TRPA, STPUD

Project Area Description

Regional land uses within the District's Service Area include commercial, residential, mixed use, recreation, resort recreation, open space, conservation, and the tourist core area in California. A large number of Area Plans, Community Plans, and Plan Area Statements are in effect within the Service Area. Zoning designations within the Service Area are also comprehensive. However, the Project Area only includes the easement area of the ROW within the streets and roads in the unincorporated parts of El Dorado County within the Service Area. The ROW within the Project Area is located in a residential neighborhood. The Project Area was visited in person August 2023 and December 2024.

Topography and Soils

As shown in **Figure 3**, the elevations within the Action Area range from a low point of 6,230-feet to a high point of 7,188 feet. The dimension of the Action area is 11,973 feet long in a north-south direction and 11,973 feet wide from the west to the east for a total area of 2,688 acres.

The topography of the Lake Tahoe Basin is varied with at times complex terrain and elevations ranging from 6,220 feet at lake level to 10,000 feet at Monument and Freel Peaks outside of South Lake Tahoe, California. The City of South Lake Tahoe and surrounding communities are relatively flat at its center and the Project Area consists of moderate to flat cross-slopes within the ROW.

According to the California Division of Mines and Geology and California Geological Survey mapping, the District's service area overlies Quaternary period non-marine alluvium, lake, playa and terrace deposits, both unconsolidated and semi- consolidated. Results from the NRCS Web Soils Survey of the Project Area may be found in Appendix 6. (NRCS 2007; http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, Accessed 7 February 2024). A total of six soil map units from the Tahoe Soil Survey are contained within the Project Area in the vicinity of Lake Tahoe Boulevard. The predominant soil types in the Area of Interest (AOI) include the Jabu coarse sandy loam (0-30% slopes) and the Tallac gravely coarse sandy loam (5-70% slopes).

Hydrology

The Project Area lies approximately 0.6 miles to the north of crosses Angora Creek. Within the road rights-of-way where Project work will occur, existing stormwater drop inlets and swales that are maintained by the El Dorado County. The stormwater conveyances are ultimately connected to Lake Tahoe, via Angora Creek and the Upper Truckee River.

Vegetation

The proposed Project Areas are within the road right-of-way in the unincorporated areas of El Dorado County. The proposed Project Areas contain existing disturbance in the form of road

shoulder, road base, existing compacted dirt, gravel, landscaping, pavement, existing facilities or a combination of the above. Vegetation within the Action Area is primarily Jeffrey Pine (*Pinus jeffreyi*) forest (Keeler-Wolf 2013) with an open canopy. The shrub layer is sparse and comprised of white leaf manzanita (*Arctostaphylos patula*), antelope bitterbrush (*Purshia tridentata*), and chinquapin (*Chrysolepis sempervirens*). The herbaceous layer is very minimal and includes common species like sulfur buckwheat (*Eriogonum ovalifolium var. ovalifolium*), groundsmoke (*Gayophytum diffusum*), and tansy mustard (*Descurania incisa*). The area surrounding the project area was burned (3,100 acres total) during the Angora Fire in 2007.

IV. PROJECT REVIEW AND PERMITTING

For work performed on the valves within the right-of-way, the District is allowed access for maintenance and construction based on the Service Agreement Contracts they hold with each individual customer and El Dorado County. Each property owner/customer will be notified prior to work that may interrupt water service for their respective property. Minor periods of water shut-off will occur during the installation process, which is anticipated to last less than four hours each day during instillation.

Tahoe Regional Planning Agency

The Tahoe Regional Planning Agency (TRPA) enters into agreements with local agencies to streamline the permitting process. These agreements allow local agencies to perform environmental review on projects for conformance with TRPA standards. The agreements are in the form of Memorandum of Understanding (MOU) that are signed by each partner. The District currently has a Memorandum of Understanding with the Tahoe Regional Planning Agency dated 23 March 2012. The District's MOU with TRPA is an MOU for Public Works Providers that allows for repair and maintenance of underground facilities without TRPA's review. This allows for increased efficiency and provides for increased protection of local and natural resources as agreed to in the MOU. The Memorandum of Understanding between Tahoe Regional Planning Agency and South Tahoe Public Utility District can be located here:

http://www.trpa.org/wp-content/uploads/FINAL_Public_Works_MOU.pdf

Attachment A, identifying STPUD on page 5 of 9 can be found here:

http://www.trpa.org/wp-content/uploads/FINAL-Public-Works-MOU-Attachment-A.pdf

The listing of Exempt and Qualified Exempt Activities can be found here:

http://www.trpa.org/wp-content/uploads/FINAL_Public_Works_MOU_Attachment_B.pdf

Lahontan Regional Water Quality Control Board

The District must comply with General Waste Discharge Requirements specified by the Regional Water Quality Control Board and the Water Quality Control Plan for the Lahontan Region (Basin Plan). Board Order R6T-2016-0010 outlines the requirements for project coverage under what is commonly referred to as the Tahoe General Construction Permit. This General Permit regulates discharges of pollutants in storm water associated with construction activity (storm water discharges) to waters of the United States within the Lake Tahoe Hydrologic Unit from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs one or more acres of land surface. However, activities associated with municipal facilities under an approved NPDES Storm Water Management Program for routine maintenance on existing facilities are not required or eligible to be covered under this permit.

US Forest Service

No Project activities will occur on National Forest System lands.

V. USFWS CONSULTATION HISTORY

The District requested consultation with the Reno Office of the US Fish and Wildlife Service (Service) for the Project through IPaC. The Service provided a species list on dated 12 February 2024. (see Appendix A Consultation Code: 2024-0048099). A total of seven species were identified to have the potential to occur within the Action Area: Sierra Nevad Red Fox (*Vulpes vulpes necator*) North American wolverine (*Gulo gulo luscus*), California spotted owl (*Strix occidentalis occidentalis*) Sierra Nevada yellow-legged frog (*Rana sierrae*), Northwestern Pond Turtle (*Actinemys marmorata*), Lahontan cutthroat trout (*Oncorhynchus clarkii henshawi*) and Monarch Butterfly (*Danaus plexippus*).

According to the letter: "A Biological Assessment is required for construction projects that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Guidelines for preparing a Biological Assessment can be found at: http://www.fws.gov/midwest/endangered/section7/ba_guide.html."

This BA has been prepared in response to the above referenced Consultation Code and at the request of the California State Water Resources Control Board.

VI. SPECIES/CRITICAL HABITAT CONSIDERED FOR THE BIOLOGICAL ASSESSMENT

The Biological Assessment (BA) portion of this document has been prepared to document analysis of the potential direct, indirect, and cumulative effects of the proposed project on federally listed threatened and endangered species known or expected to occur within the project area. If suitable habitat or known occurrences of proposed or candidate species is present within the project area analysis will be performed. The USFWS identified the following species for evaluation in this BA; no critical habitat is present:

Sierra Nevad red fox (*Vulpes vulpes necator*) – *Endangered*
North American wolverine (*Gulo gulo luscus*) – *Proposed Threatened*
Sierra Nevada yellow-legged frog (*Rana sierrae*) – *Endangered*
California spotted owl (*Strix occidentalis occidentalis*) *– Proposed Threatened*
Northwestern Pond Turtle (*Actinemys marmorata*) *– Proposed Threatened*
Lahontan cutthroat trout (*Oncorynchus clarki henshawi*)- *Threatened*
Monarch butterfly (*Danaus plexippus*) – *Condidate*

VII. SPECIES/CRITICAL HABITAT CONSIDERED FOR THE BIOLOGICAL EVALUATION

The Biological Evaluation (BE) portion specifically addresses whether the project may result in a loss of viability of State-listed species or cause a sensitive species to trend toward federal listing. The list of CA Endangered, Threatened, Candidate Endangered, Candidate Threatened, Sensitive, Delisted or Rare species is provided by the California Natural Diversity Database (CNDDB) RareFind 5. A CNDDB occurrence report was generated for the 7.5 min. map - South Lake Tahoe and Emerald Bay (Appendix A; accessed February 2024) as well as the CNPS Rare and Endangered Plant Database (February 2024). The occurrence reports identified two State-listed wildlife species with occurrences in those quadrangles willow flycatcher, *Empidonax traillii;* Sierra Nevada yellow-legged frog, *Rana sierrae*; and the following (Rare, Threatened or Endangered) plant species *Arabis rigidissima var. demote* (Carson Range rockcress), *Asragalus austiniae (*Austin's milkvetch), *Botrychium ascendens* (upswept moonwort), *Botrychium crenulatum (*scalloped moonwort), *Botrychium minganense* (Mingan moonwort), *Bruchia bolanderii* (Bolander's bruchia moss), *Carex limosa* (Mud sedge), *Draba asterophora var. asterophora* (Tahoe draba), *Meesia uliginosa* (broad-nerved hump moss), *Rorippa subumbellata* (Tahoe yellow cress), *Scutellaria galericulata* (marsh skullcap)(as noted in Table 4 below).

The proposed Project Areas were then imported into GIS and a one-mile radius surrounding the Project Areas delineating the Action Area was searched for recorded occurrences in the BIOS database (CNDDB 2022; accessed February 2024). **Figure 4** represents the locations of the proposed project in relation to known occurrences of sensitive species within 1-mile of the Project Areas.

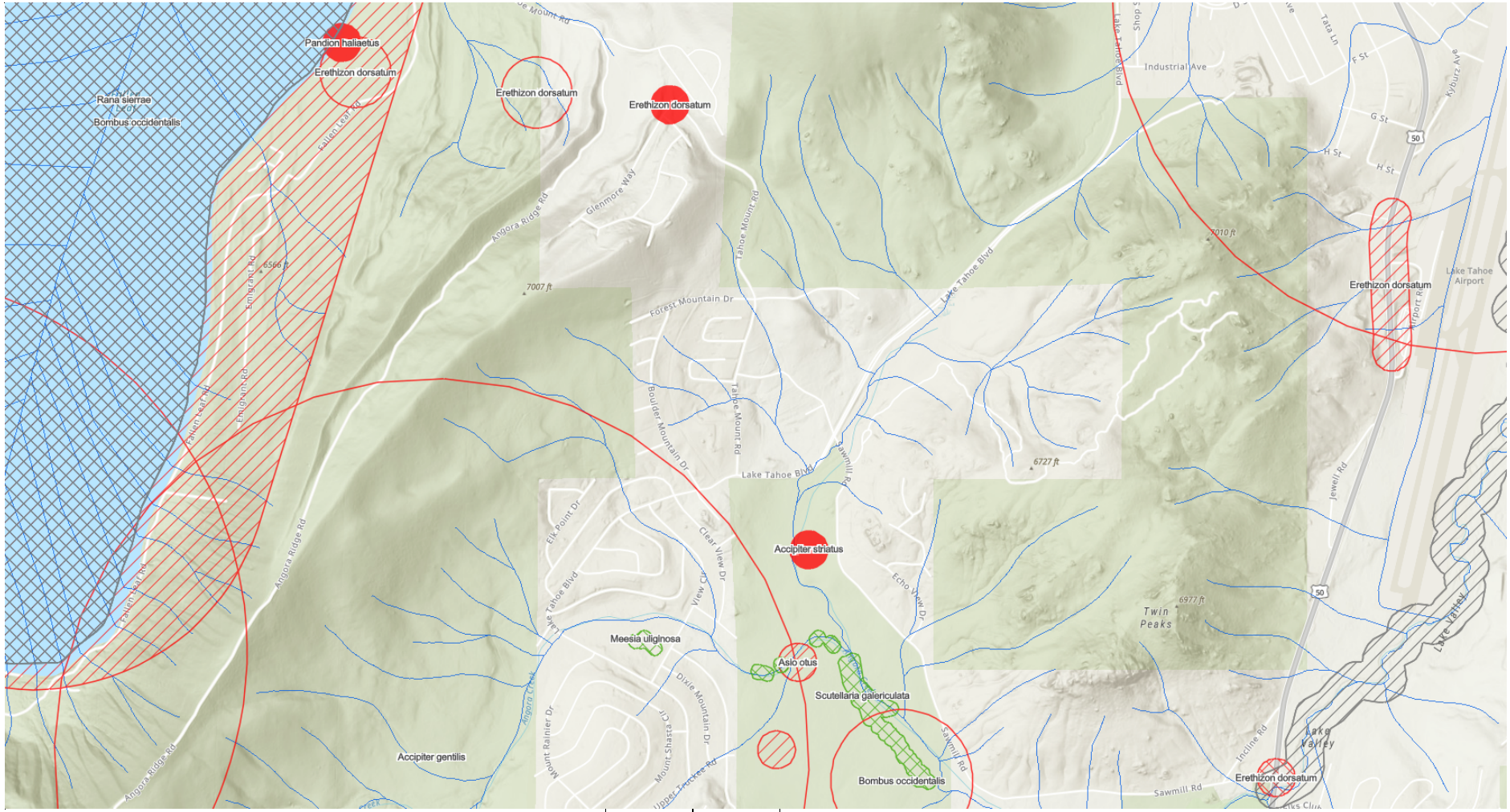

Pandion haliaetus
Erethizon dorsatum
Rana sierrae
Bombus occidentalis
Erethizon dorsatum
Erethizon dorsatum
Accipiter striatus
Meesia uliginosa
Asio otus
Scutellaria galericulata
Accipiter gentilis
Bombus occidentalis
Erethizon dorsatum
Erethizon dorsatum
Fallen Leaf Rd
Emigrant Rd
Angora Ridge Rd
Glenmore Way
Tahoe Mount Rd
Forest Mountain Dr
Lake Tahoe Blvd
Boulder Mountain Dr
Sawmill Rd
Elk Point Dr
Clear View Dr
Echo View Dr
Dixie Mountain Dr
Mount Rainier Dr
Mount Shasta Ct
Upper Truckee Rd
Angora Creek
Industrial Ave
Tata Ln
F St
G St
H St
Kyburz Ave
Airport Rd
Lake Tahoe Airport
Jewell Rd
Twin Peaks
Lake Valley
Incline Rd
Sawmill Rd
7007 ft
6566 ft
7010 ft
6727 ft
6977 ft
50
459 meters
1504 feet
1/29/2024

Table 1 identifies the 9 wildlife species with the potential to occur in the Project Area based on the database searches described above. **Table 2** identifies the 14 plant species with the potential to occur in the Project Area (HP = Habitat Present, SP = Species Present).

TABLE 1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
Fish:					
Oncorhynchus clarkii henshawi Lahontan cutthroat trout	Federally Threatened TRPA Special Interest Species	Historically occurred in all accessible cold waters of the Lahontan Basin in a wide variety of water temps and conditions. Cannot tolerate presence of other salmonids. Gravel riffles in streams required for breeding.	No	No	Project activities are limited to the Right-of-Way of paved roads.There is no suitable fish habitat.
Wildlife:					
Gulo gulo luscus North American wolverine	Federally Proposed Threatened	Wolverines do not appear to require specific habitats, but instead select cold areas that reliably maintain deep persistent snow late into the warm season. Wolverines are opportunistic feeders and therefore, require a lot of space. The availability and distribution of food is likely the primary factor in determining wolverine movements and home range size.	No	No	There are no records of detections in the Lake Tahoe Basin. High levels of existing human presence and activity are not suitable for wolverine.
Strix occidentalis occidentalis	Federally Proposed Threatened	Spotted owls in the Sierra Nevada often reside in late seral	No	No	Project activities are located in residential

TABLE 1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
California spotted owl		mixed conifer stands that include very large old trees and multiple canopy layers.			neighborhood with no late seral forest habitat present within the project or action area. No spotted owls are known to occur within the Action Area.
Haliaeetus leucocephalus bald eagle	Federally Delisted California Endangered	Bald eagle are known to forage and nest adjacent to large bodies of water in mid to late successional types of forest with standing dead trees or snags	No	No	Project activities will occur in a residential neighborhood that lacks suitable roosting habitat.
Empidonax traillii willow flycatcher	California Endangered	In the Sierra Nevada, this species typically breeds in willow-dominated riparian vegetation among perennial streams in moist meadows or spring-fed or boggy areas.	No	No	Project activities will not occur within any riparian habitat.
Riparia riparia bank swallow	California Threatened	Species requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, to dig nesting hole.	No	No	The Project area does not contain suitable habitat for the species due to the lack of vertical banks and/or cliffs to dig nesting hole.
Danaus plexippus monarch butterfly	Federal Candidate	Monarchs lay their eggs on their obligate host plant, primarily milkweeds (*Asclepias spp.*). Their life cycle varies by geographic location. In many	No	No	There is no potential habitat for monarch within the project area as work will be performed in the road right-of-

TABLE 1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
		regions monarchs breed year-round, but many individuals in western North America fly south and west to overwintering groves along the California coast into northern Baja California.			way and will not impact any milkweed or flowering plants.
Vulpes vulpes necator Sierra Nevada red fox	Federally Endangered	Sierra Nevada red fox sightings have consistently occurred in subalpine habitat from 8,100 to 11,608 feet. Subalpine habitat is characterized by a mosaic of high-elevation meadows, rocky areas, scrub vegetation, and relatively open and patchy conifer forest.	No	No	Project activities will occur in a residential neighborhood at low elevation that does not provide suitable habitat for this species.
Actinemys marmorata Western pond turtle	Proposed Threatened	This aquatic turtle lives in streams, ponds, lakes, and permanent and ephemeral wetlands. Pond turtles spend most of their lives in water, but they also require terrestrial habitats for nesting.	No	No	Project activities are limited to the Right-of-Way of paved roads. There is no suitable habitat.
Rana sierrae Sierra Nevada yellow-legged frog (SNYLF)	Federally Endangered California Threatened	The SNYLF is strongly associated with montane riparian habitats and wet meadow vegetation (Zeiner et al. 1988). SNYLFs prefer well illuminated, sloping banks of meadow	No	No	Project activities are limited to the Right-of-Way of paved roads. No SNYLF suitable habitat exists within the project area.

TABLE 1

WILDLIFE SPECIES OF CONCERN

Species	Status	Habitat	HP	SP	Comments
		streams, riverbanks, isolated pools, and lake borders with vegetation that is continuous to the water's edge.			

Source: Sierra Ecotone Solutions 2024

Table 2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
Arabis rigidissima var. *demota*	Galena Creek rockcress	1B.2	None	None	July-Aug	Open, rocky areas along forest edges of conifer and/or aspen stands; usually found on north aspects; 7,500 ft. & above.		No. Project Area is too low elevation and lacks suitable forest habitat.
Astragalus austiniae	Austin's astragalus	1B.3	None	None	(May)Jul-Sep	Alpine boulder and rock field, Subalpine coniferous forest. 8,000 feet and above.		No. Project Area is too low elevation.
Boechera tularensis	Tulare rockcress	1B.3	None	None	(May)Jun-Jul(Aug)	Subalpine coniferous forest, Upper montane coniferous forest	Rocky slopes	No. Project Area is too low elevation.
Botrychium ascendens	upswept moonwort	2B.3	None	None	(Jun)Jul-Aug	Suitable habitat for upswept moonwort includes the wet edges of streams.	On the LTBMU, this species has been found on shady	No. Project Area does not include any shady

Table 2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
							streams with dense cover of incense cedar.	streams with cedar.
Botrychium crenulatum	scalloped moonwort	2B.2	None	None	Jun-Sep	Meadows, bogs, fens, marshes, swamps, and seeps in upper and lower montane coniferous forest from 4,100 to 10,800 ft.		No. Project Area does not have any seeps, bogs or fens.
Botrychium minganense	Mingan moonwort	2B.2	None	None	Jul-Sep	Bogs, fens, meadows or riparian corridors in upper and lower montane coniferous forests; 5,100 to 10,300 ft.		No. Project Area does not include bogs or fens or riparian corridors.
Brasenia schreberi	watershield	2B.3	None	None	Jun-Sep	Marshes and swamps (freshwater)		No. Project area does not have marshes and swamps.

Table 2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
Carex davyi	Davy's sedge	1B.3	None	None	May-Aug	Subalpine coniferous forest, Upper montane coniferous forest		No. Project area only contains disturbed paved areas.
Claytonia megarhiza	Fell field claytonia	2B.3	None	None		Alpine boulder and rock field, Subalpine coniferous forest (gravelly, rocky); 8,500-11,590 ft.		No. Project Area does not have fell fields and is too low elevation
Glyceria grandis	American manna grass	2B.3	None	None	Jun-Aug	Bogs and fens, meadows and seeps, marshes and swamps (streambanks and lake margins)		No. Project Area does not have any very wet habitats.
Meesia uliginosa	broad-nerved hump moss	2B.2	None	None	Jul-Oct	Bogs and fens, but also very wet meadows from 4,000-9,200 feet.		No. Project Area does not have any bogs or fens.

Table 2 Plant Species of Concern								
Scientific Name	**Common Name**	**CA Rare Plant Rank**	**CESA**	**FESA**	**Blooming Period**	**Habitat**	**Micro Habitat**	**Suitable Habitat in Project Area?**
Scutellaria galericulata	marsh skullcap	2B.2	None	None	Jun-Sep	Meadows and seeps in lower montane coniferous forest. Also marshes and swamps		No. Project Area does not have any very wet habitats.
Stuckenia filiformis ssp. alpina	Northern pondweed	2B.2	None	None	May-Jul	Marshes and swamps or shallow fresh water.		No. Project Area does not have any very wet habitats.
Rorippa subumbellata	Tahoe yellow cress	1B.1	CE	None	May-Sep	Beaches of Lake Tahoe below high water 6,220-6,229 feet (Stanton et. al 2015).	Favors the areas around the outlets of creeks at Lake Tahoe.	No. Project area does not include beaches of Lake Tahoe.

CE: CA Endangered

Source: CNPS 2024

As noted in Table 1 and Table 2 above, there are a number of wildlife and plant species that have known occurrences within the Action Area but no suitable habitat within the Project Area. The proposed Project Area is within the road right-of-way in the unincorporated area of El Dorado County. The proposed Project Areas contain existing disturbance in the form of road shoulder, road base, existing compacted dirt, gravel, landscaping, pavement, existing facilities or a combination of the above. This heavily human dominated and modified environment present within the project area is not suitable for many of the wildlife and plant species noted above.

VIII. SPECIES ACCOUNTS AND EFFECTS ANALYSIS

A. Federally Listed Species (Biological Assessment)

Only Federally listed species are analyzed below, the above Candidate (monarch butterfly) and Proposed Species (western pond turtle, California spotted owl and North American wolverine) do not have any potential for occurrence within the project area and are not listed; therefore not included in the analysis below.

SIERRA NEVADA RED FOX

Range, Distribution, and Status*:* The Sierra Nevada red fox (Vulpes vulpes necator, SNRF) distinct population segment of the Sierra Nevada is listed as Endangered under the US Endangered Species Act. Sierra SNRF sightings have consistently occurred in subalpine habitat (Sacks et al. 2015). The majority of the detections in the Sierra of SNRF have occurred in the Sonora Pass area.

Habitat Requirements and Natural History: In the Sonora Pass area used by Sierra SNRF, subalpine habitat is characterized by a mosaic of high-elevation meadows, rocky areas, scrub vegetation, and woodlands (largely mountain hemlock (Tsuga mertensiana), whitebark pine, and lodgepole pine (Pinus contorta)) (Fites-Kaufman et al. 2007, Sacks et al. 2015, Quinn 2017). Snow cover is typically heavy, and the growing season lasts only 7 to 9 weeks (Verner and Purcell 1988, p. 3). Forested areas are typically relatively open and patchy (Verner and Purcell 1988, Lowden 2015), and trees may be stunted and bent (krumholtz) by the wind and low temperatures (Verner and Purcell 1988, p. 3; Sacks et al. 2015, p. 11).

High-elevation forested habitat below the subalpine zone in the Sierras (and in the southern Cascades near Lassen Peak) consists primarily of red fir forests (Abies magnifica), occupying an elevational band across the Sierras from Kern County northwards that runs from about 6,000 to 9,000 ft (Barrett 1988, Perrine 2005, Fites-Kaufman et al. 2007). Sierra red fir forests may also include Jeffrey pine (Pinus jeffreyi) and lodgepole pine (Fites-Kaufman et al. 2007, p. 456).

Potential for Occurrence: There have been no SNRF detections within the LTBMU however, a recent photograph of a cross phase individual near Round Top Peak and Carson pass was recorded in 2021. Genetic analyses of the recovered scat in the area determined the individual was a male that was a migrant from the Great Basin with little SNRF ancestry (USFWS 2021).

An additional detection of a red fox was recorded in Washoe Valley, NV in early 2022. It has not been determined if this individual is a SNRF or from the Great Basin. No specific SNRF surveys have been performed in the project area, however mesocarnivore surveys have not detected them to date in the surround areas (personal communication Shay Zanetti LTBMU).

Determination: Based on the above assessment, it is my determination there will be **no effect** to Sierra Nevada red fox from Project activities and no further analysis for this species will be conducted.

LAHONTAN CUTTHROAT TROUT

Range, Distribution, and Status*:* The Lahontan cutthroat trout (*Oncorynchus clarki henshawi*)*;* LCT) was listed as an endangered species in 1970. In 1975, under the Endangered Species Act of 1973, the LCT was reclassified as threatened to facilitate management and to allow for regulated angling. In 1995, the U.S. Fish and Wildlife Service (FWS) released its recovery plan for LCT, encompassing six river basins within LCT historic range.

Historically, the Lahontan cutthroat trout was endemic to the physiographic Lahontan basin of northern Nevada, eastern California, and southern Oregon (USDI 1995). In California, the subspecies historically occurred in the streams and lakes of the Lahontan system, on the east side of the Sierra Nevada. The current distribution is a fraction of the historic distribution. Lake Tahoe's population was extinct by 1930. In the summer of 2011, the Nevada Department of Wildlife NDOW planted LCT on Lake Tahoe's Nevada shore where they are presumed to occur in the lake waters and tributary creeks. However, competition and inbreeding with introduced trout species, predation by introduced species, and disease decrease the likelihood that this fish species occupies these streams (NNHP 2019).

Habitat Requirements and Natural History: Lahontan cutthroat trout are obligatory stream spawners and spawn from April to July, with eggs being deposited in one fourth to one half inch gravels within riffles, pocket water, or pool crests (USDI 1995). In the Sierra Nevada, native Lahontan habitat primarily consists of eastern high mountain meadow streams (over 6,000 feet elevation). Optimal habitat for Lahontan cutthroat trout is characterized by: clear cold water and relatively stable summer water temperatures, with an average maximum summer temperature of less than 43 deg F to 72 deg F. and variations of no more than 37 deg F.; one to one pool to riffle ratios and a relatively silt free, rocky substrate in the riffle run area; well vegetated, stable stream banks; approximately 25 percent of the stream area providing cover; and relatively stable water flow regimes, with daily fluctuations less than 50 percent of the average annual daily flow (Hickman and Raleigh 1982).

Potential for Occurrence: Occupied habitat for LCT is present outside the Action Area within the waters of Lake Tahoe, where LCT is presumed to occur. Lake Tahoe is outside of the defined

work areas surrounding the Project Area. Angora Creek that runs under the project area does not provide suitable habitat for LCT, due to unsuitable aquatic organism passage downstream. Furthermore, the Project would be constructed within existing paved public roads and no activities will occur within any drainages or have an effect on waters flowing into Angora Creek due to implementation of BMPs.

Determination: Based on the above assessment, it is my determination there will be **no effect** to Lahontan cutthroat trout from Project activities and no further analysis for this species will be conducted.

SIERRA NEVADA YELLOW-LEGGED FROG

Range, Distribution, and Status*:* The federal listed endangered Sierra Nevada yellow-legged frogs (*Rana sierrae*; SNYLF) historically inhabited ponds, tarns, lakes, and streams from 4,500 to over 12,000 ft. (1370 to over 3650 m) (Stebbins 1985) and was once the most common amphibian in high elevation aquatic ecosystems of the Sierra Nevada (Bradford et. al. 1993). This species is endemic to California and a small area of western Nevada and occurs in two distinct regions – the Sierra Nevada and several mountain ranges of coastal southern California. Large groups of populations in the northern Sierra Nevada and local populations elsewhere have since become extinct and have disappeared from 70-90% of its historic range in the bioregion (Jennings 1994). The Sierra Nevada yellow-legged frog was listed as an Endangered species under the Endangered Species Act on April 29, 2014.

Habitat Requirements and Natural History: The SNYLF is strongly associated with montane riparian habitats in lodgepole pine, yellow pine sugar pine, white fir whitebark pine and wet meadow vegetation types (Zeiner et al. 1988). Typically, SNYLFs prefer well illuminated, sloping banks of meadow streams, riverbanks, isolated pools, and lake borders with vegetation that is continuous to the water's edge. In high elevations, breeding occurs between May and August as soon as the meadows and lakes are free of snow and ice. Sierra Nevada yellow-legged frogs usually lay their eggs in clusters submerged along stream banks or on emergent vegetation. Tadpoles and adults of this species overwinter in deep pools with undercut banks that provide cover. Adults are highly aquatic and are typically associated with near shore areas for reproduction, cover, foraging, and over-wintering. They are most abundant along lake shores and low gradient streams with irregular shores and rocks (Mullaly and Cunningham 1956). It is believed that adult frogs use the deepest sections of lakes for overwintering (Bradford et al. 1993).

Potential for Occurrence: The current distribution of SNYLFs is well documented and does not include the Action Area. The nearest known occurrence is approximately 3.25 miles to the south west at Echo Lake. Furthermore, the Project would be constructed within existing paved public roads and no activities will occur within any drainages. Angora Creek that runs south of the

project area contains marginally suitable habitat for SNYLF but is outside the project work area. Furthermore, the Project would be constructed within existing paved public roads and no activities will occur within any drainages or have an effect on waters flowing into Angora Creek due to implementation of BMPs. There are no known occurrences of SNYLF in the vicinity of the project.

Determination: Based on the above assessment, it is my determination there will be **no effect** to Sierra Nevada yellow-legged frogs or their habitat from Project activities and no further analysis for this species will be conducted.

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Appendix A – USFWS Species List and CNDDB Database Search Results

Multiple Occurrences per Page

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Emerald Bay (3812081) OR South Lake Tahoe (3811988))
 AND (Federal Listing Status IS (Endangered OR Threatened OR Proposed Endangered OR Proposed Threatened OR Candidate OR Delisted) OR State Listing Status IS (Endangered OR Threatened OR Rare OR Delisted OR Candidate Endangered OR Candidate Threatened))

Rana sierrae **Element Code:** AAABH01340

Sierra Nevada yellow-legged frog

Listing Status:	**Federal:**	Endangered	**CNDDB Element Ranks:**	**Global:**	G1
	State:	Threatened		**State:**	S2
	Other:	CDFW_WL-Watch List, IUCN_EN-Endangered, USFS_S-Sensitive			
Habitat:	**General:**	ALWAYS ENCOUNTERED WITHIN A FEW FEET OF WATER. TADPOLES MAY REQUIRE 2 - 4 YRS TO COMPLETE THEIR AQUATIC DEVELOPMENT.			
	Micro:				

Occurrence No.	62	**Map Index:**	44169	**EO Index:**	44169	**Element Last Seen:**	1913-09-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1913-09-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-09-05

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.90221 / -120.06183	**Accuracy:**	specific area
UTM:	Zone-10 N4310029 E754795	**Elevation (ft):**	6400
PLSS:	T12N, R17E, Sec. 11 (M)	**Acres:**	1384.4

Location: FALLEN LEAF LAKE, SOUTH OF LAKE TAHOE.

Detailed Location: COLLECTION LOCALITIES GIVEN ONLY AS "NEAR FALLEN LEAF LAKE" AND "FALLEN LEAF." MAPPED BY CNDDB NON-SPECIFICALLY ACROSS THE EXTENT OF THE LAKE.

Ecological:

General: A COLLECTION WAS MADE HERE BY BURKE; DATE WAS NOT PROVIDED, BUT APPEARS ON HANDWRITTEN CATALOGE WITH OTHER YEARS BETWEEN 1887 AND 1907. A SET OF COLLECTIONS WERE MADE HERE BY SLEVIN IN SEP 1913.

Owner/Manager: UNKNOWN

Occurrence No.	243	**Map Index:**	70205	**EO Index:**	71086	**Element Last Seen:**	1935-08-18
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1935-08-18
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-12-18

Quad Summary: Woodfords (3811977), Freel Peak (3811978), Minden (3811987), South Lake Tahoe (3811988)

County Summary: Alpine, El Dorado

Lat/Long:	38.87994 / -119.88147	**Accuracy:**	4/5 mile
UTM:	Zone-11 N4307401 E250044	**Elevation (ft):**	9000
PLSS:	T12N, R19E, Sec. 29 (M)	**Acres:**	0.0

Location: 0.5 MILE NE OF STAR LAKE, SE OF LAKE TAHOE.

Detailed Location: COLLECTION LOCALITY DESCRIBED AS "0.5 MI NE STAR LAKE" IN EL DORADO COUNTY. THE DRAINAGE NEAREST TO 0.5 MILE NE OF STAR LAKE IS THE HEAD OF STUTLER CANYON, JUST OVER THE COUNTY LINE INTO ALPINE COUNTY. UNCERTAIN IF NW WAS MEANT.

Ecological:

General: COLLECTION MADE BY R. SMITH ON 18 AUG 1935.

Owner/Manager: USFS-TOIYABE NF

Haliaeetus leucocephalus **Element Code:** ABNKC10010

bald eagle

Listing Status:	**Federal:**	Delisted	**CNDDB Element Ranks:**	**Global:**	G5
	State:	Endangered		**State:**	S3
	Other:	BLM_S-Sensitive, CDF_S-Sensitive, CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive			
Habitat:	**General:**	OCEAN SHORE, LAKE MARGINS, AND RIVERS FOR BOTH NESTING AND WINTERING. MOST NESTS WITHIN 1 MILE OF WATER.			
	Micro:	NESTS IN LARGE, OLD-GROWTH, OR DOMINANT LIVE TREE WITH OPEN BRANCHES, ESPECIALLY PONDEROSA PINE. ROOSTS COMMUNALLY IN WINTER.			

Occurrence No.	96	**Map Index:** 14269	**EO Index:**	26908	**Element Last Seen:** 2005-05-19
Occ. Rank:	Good		**Presence:**	Presumed Extant	**Site Last Seen:** 2005-05-19
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 2009-06-12

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.96568 / -120.08684	**Accuracy:**	80 meters
UTM:	Zone-10 N4317005 E752399	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 22, SE (M)	**Acres:**	0.0

Location: EMERALD POINT, AT THE NORTH SIDE OF THE MOUTH OF EMERALD BAY, SW LAKE TAHOE, EMERALD BAY STATE PARK.

Detailed Location: "EMERALD BAY" NEST TERRITORY. STATE PARKS NEST ID: EMB16. BALD EAGLES WINTER IN VICINITY OF NEST AT EMERALD BAY, CASCADE LAKE AND THE SW EDGE OF LAKE TAHOE UP TO A 3 MI RADIUS SOUTHWARD.

Ecological: NEST TREE IS A 150' TALL, 72" DBH JEFFREY PINE; HABITAT SURROUNDING NEST TREE CONSISTED OF MIXED CONIFER FOREST, WITH PATCHY UNDERSTORY OF MAINLY MANZANITA, ON A FLAT PENINSULA.

General: IN 1981, INTACT NEST (BUT IN POOR CONDITION) OBSERVED. LAST OCCUPIED IN 1970. REOCCUPIED IN 1997; 1 FLEDGED. ACTIVE, 2000-2003, INACTIVE IN 2004. ACTIVE IN 2005; 1 FLEDGED.

Owner/Manager: DPR-EMERALD BAY SP

Empidonax traillii **Element Code:** ABPAE33040

willow flycatcher

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	Endangered		**State:**	S3
	Other:	IUCN_LC-Least Concern, USFS_S-Sensitive			
Habitat:	**General:**	INHABITS EXTENSIVE THICKETS OF LOW, DENSE WILLOWS ON EDGE OF WET MEADOWS, PONDS, OR BACKWATERS; 2000-8000 FT ELEVATION.			
	Micro:	REQUIRES DENSE WILLOW THICKETS FOR NESTING/ROOSTING. LOW, EXPOSED BRANCHES ARE USED FOR SINGING POSTS/HUNTING PERCHES.			

Occurrence No.	123	**Map Index:**	58879	**EO Index:**	58915	**Element Last Seen:**	2004-06-22
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2004-06-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2006-09-05

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.94155 / -120.06255	**Accuracy:**	non-specific area
UTM:	Zone-10 N4314394 E754591	**Elevation (ft):**	6250
PLSS:	T13N, R17E, Sec. 26, S (M)	**Acres:**	178.0

Location: TAYLOR CREEK MARSH, TALLAC CREEK, AND BALDWIN BEACH, JUST SOUTH OF LAKE TAHOE.

Detailed Location:

Ecological: HABITAT CONSISTS OF A WET MEADOW WITH WILLOW CLUMPS, GRASSES. CREEK RUNS THROUGH OR ALONG MEADOW. THERE IS SOME DISTURBANCE FROM PEOPLE WALKING THROUGH MEADOW.

General: 2 BREEDING ADULTS OBSERVED ON EAST SIDE OF CREEK ON 24 JUN 1992. 2 BREEDING ADULTS OBSERVED ON WEST SIDE OF CREEK ON 26 JUN 1992. BREEDING & NESTING SITE. 4 ADULTS OBSERVED FROM 22 JUN 2004 THROUGHOUT SUMMER. NUMBER OF FLEDGLINGS UNKNOWN.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	124	**Map Index:**	59165	**EO Index:**	59201	**Element Last Seen:**	1935-06-29
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1935-06-29
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2005-01-07

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.91453 / -119.97244	**Accuracy:**	non-specific area
UTM:	Zone-11 N4311493 E242276	**Elevation (ft):**	6250
PLSS:	T12N, R18E, Sec. 03 (M)	**Acres:**	135.3

Location: VICINITY OF TROUT CREEK IN LAKE VALLEY NEAR SIERRA HOUSE.

Detailed Location: 11 EGG SET COLLECTIONS FROM "LAKE VALLEY, NEAR SIERRA HOUSE" AND 1 EGG SET COLLECTION FROM "TROUT CREEK, NEAR SIERRA HOUSE".

Ecological:

General: MVZ #9088 - #9099. ALL COLLECTIONS BY MILTON RAY. 3 COLLECTIONS FROM 30 JUN 1910, 3 FROM 1 JUL 1910. 4 COLLECTIONS FROM 26-28 JUN 1912. 1 COLLECTION FROM 5 JUL 1922 & 1 COLLECTION FROM 29 JUN 1935.

Owner/Manager: UNKNOWN

Riparia riparia **Element Code:** ABPAU08010

bank swallow

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	Threatened		**State:**	S3
	Other:	BLM_S-Sensitive, IUCN_LC-Least Concern			
Habitat:	**General:**	COLONIAL NESTER; NESTS PRIMARILY IN RIPARIAN AND OTHER LOWLAND HABITATS WEST OF THE DESERT.			
	Micro:	REQUIRES VERTICAL BANKS/CLIFFS WITH FINE-TEXTURED/SANDY SOILS NEAR STREAMS, RIVERS, LAKES, OCEAN TO DIG NESTING HOLE.			

Occurrence No.	145	**Map Index:** 14341	**EO Index:** 12973	**Element Last Seen:**	1976-06-12
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1976-06-12
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	1989-08-10

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93490 / -120.01963	**Accuracy:**	1 mile
UTM:	Zone-10 N4313777 E758336	**Elevation (ft):**	6240
PLSS:	T12N, R18E, Sec. 05, NE (M)	**Acres:**	0.0

Location: TAHOE KEYS, JUST N OF TOWN OF SOUTH LAKE TAHOE, ON LAKE TAHOE.

Detailed Location:

Ecological:

General: DFG COLONY #ED01. ONE BIRD OBSERVED IN 1976; ALSO, 10 BIRDS OBSERVED AT LAKE TAHOE, EL DORADO COUNTY, IN 1962.

Owner/Manager: PVT

Oncorhynchus clarkii henshawi **Element Code:** AFCHA02081

Lahontan cutthroat trout

Listing Status:	**Federal:**	Threatened	**CNDDB Element Ranks:**	**Global:**	G5T3
	State:	None		**State:**	S2
	Other:	AFS_TH-Threatened			
Habitat:	**General:**	HISTORICALLY IN ALL ACCESSIBLE COLD WATERS OF THE LAHONTAN BASIN IN A WIDE VARIETY OF WATER TEMPS AND CONDITIONS.			
	Micro:	CANNOT TOLERATE PRESENCE OF OTHER SALMONIDS. REQUIRES GRAVEL RIFFLES IN STREAMS FOR SPAWNING.			

Occurrence No.	19	**Map Index:**	14294	**EO Index:**	14865	**Element Last Seen:**	1939-XX-XX
Occ. Rank:	None			**Presence:**	Extirpated	**Site Last Seen:**	1939-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	1996-01-11

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.93035 / -120.05444	**Accuracy:**	specific area
UTM:	Zone-10 N4313174 E755334	**Elevation (ft):**	6280
PLSS:	T13N, R17E, Sec. 36, W (M)	**Acres:**	115.8

Location:	TAYLOR CREEK, BETWEEN FALLEN LEAF LAKE AND LAKE TAHOE.
Detailed Location:	
Ecological:	SPAWN TAKEN FROM CREEK AND RAISED IN SISSON HATCHERY. ALL CUTTHROAT FROM LAKE TAHOE ARE PROBABLY HYBRIDIZED.
General:	POPULATION PRESENT IN 1895, THE LAST WILD CUTTHROAT TROUT WAS OBSERVED IN 1939.
Owner/Manager:	USFS-ELDORADO NF

Gulo gulo **Element Code:** AMAJF03010

wolverine

Listing Status:	**Federal:**	Threatened	**CNDDB Element Ranks:**	**Global:**	G4
	State:	Threatened		**State:**	S1
	Other:	CDFW_FP-Fully Protected, IUCN_LC-Least Concern, USFS_S-Sensitive			
Habitat:	**General:**	FOUND IN THE NORTH COAST MOUNTAINS AND THE SIERRA NEVADA. FOUND IN A WIDE VARIETY OF HIGH ELEVATION HABITATS.			
	Micro:	NEEDS WATER SOURCE. USES CAVES, LOGS, BURROWS FOR COVER AND DEN AREA. HUNTS IN MORE OPEN AREAS. CAN TRAVEL LONG DISTANCES.			

Occurrence No.	188	**Map Index:** 34774	**EO Index:**	29198	**Element Last Seen:** 1990-07-XX
Occ. Rank:	Good		**Presence:**	Presumed Extant	**Site Last Seen:** 1990-07-XX
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:** 1996-03-14

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.95199 / -120.11756	**Accuracy:**	non-specific area
UTM:	Zone-10 N4315400 E749786	**Elevation (ft):**	7000
PLSS:	T13N, R17E, Sec. 20, SE (M)	**Acres:**	4.7

Location: WEST OF EMERALD BAY; 0.3 MILE WEST OF EAGLE CREEK X HIGHWAY 89; NNE OF EAGLE LAKE.

Detailed Location: TAKE EAGLE FALLS TRAILHEAD, OFF HWY 89, AND LEAVE TRAIL AND GO IN NW DIRECTION JUST BEFORE BRIDGE CROSSING EAGLE CREEK, CLIMB UNTIL DISTINCT SOUTHEAST-FACING GRANITE PLATEAU IS REACHED (ABOUT 7000 FT ELEVATION).

Ecological: UPPER MONTANE/SUBALPINE CONIFEROUS FOREST INTERGRADE (SPARSE, OPEN, GRANITIC); HABITAT CONSISTS OF: PINUS JEFFREYI, ABIES CONCOLOR, JUNIPERUS OCCIDENTALIS AUSTRALIS, ARTEMISIA SSP, ARCTOSTAPHYLOS SPP.

General: 1 OBSERVED ROAMING ON PLATEAU IN THE AFTERNOON/EVENING; SITE IS WITHIN DESOLATION WILDERNESS BOUNDARY, SO DIRECT HABITAT ALTERATION IS NOT ANTICIPATED; FALCO PEREGRINUS ANATUM, PANDION HALIAETUS, ACCIPITER COOPERII, AQUILA CHRYSAETOS OBS.

Owner/Manager: USFS-LAKE TAHOE BMU

Bombus occidentalis **Element Code:** IIHYM24252

western bumble bee

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	Candidate Endangered		**State:**	S1
	Other:	IUCN_VU-Vulnerable, USFS_S-Sensitive			
Habitat:	**General:**	ONCE COMMON AND WIDESPREAD, SPECIES HAS DECLINED PRECIPITOUSLY FROM CENTRAL CA TO SOUTHERN B.C., PERHAPS FROM DISEASE.			
	Micro:	□			

Occurrence No.	150	**Map Index:**	98425	**EO Index:**	99851	**Element Last Seen:**	1975-09-19
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1975-09-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-12-07

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93683 / -120.02692	**Accuracy:**	3/5 mile
UTM:	Zone-10 N4313970 E757696	**Elevation (ft):**	6250
PLSS:	T12N, R18E, Sec. 06 (M)	**Acres:**	0.0

Location: POPE BEACH, LAKE TAHOE.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF POPE BEACH, SOUTH LAKE TAHOE.

Ecological:

General: COLLECTIONS FROM 15 SEP 1975 AND 19 SEP 1975.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	153	**Map Index:**	98447	**EO Index:**	99875	**Element Last Seen:**	1915-07-02
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1915-07-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-12-08

Quad Summary: Echo Lake (3812071), Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.87215 / -120.09207	**Accuracy:**	1 mile
UTM:	Zone-10 N4306609 E752277	**Elevation (ft):**	6800
PLSS:	T12N, R17E, Sec. 22 (M)	**Acres:**	0.0

Location: GLEN ALPINE CREEK, TAHOE.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF GLEN ALPINE CREEK, WITHIN THE DESOLATION WILDERNESS, SOUTHEAST OF FALLEN LEAF LAKE.

Ecological:

General: COLLECTED 2 JUL 1915.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	154	**Map Index:**	70026	**EO Index:**	99877	**Element Last Seen:**	1917-09-08
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1917-09-08
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-12-08

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.90676 / -120.09849	**Accuracy:**	4/5 mile
UTM:	Zone-10 N4310432 E751599	**Elevation (ft):**	9000
PLSS:	T12N, R17E, Sec. 09 (M)	**Acres:**	0.0

Location: MOUNT TALLAC.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB CENTERED ON MOUNT TALLAC, DESOLATION WILDERNESS, WEST OF LAKE TAHOE.

Ecological:

General: COLLECTED 8 SEP 1917.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	155	**Map Index:**	98452	**EO Index:**	99883	**Element Last Seen:**	1915-07-23
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1915-07-23
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2015-12-09

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.90218 / -120.06184	**Accuracy:**	non-specific area
UTM:	Zone-10 N4310027 E754794	**Elevation (ft):**	6500
PLSS:	T12N, R17E, Sec. 11 (M)	**Acres:**	2222.0

Location: FALLEN LEAF LAKE, LAKE TAHOE.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF FALLEN LEAF LAKE, SOUTH OF LAKE TAHOE.

Ecological:

General: COLLECTED 23 JUL 1915.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	297	**Map Index:**	B6155	**EO Index:**	119194	**Element Last Seen:**	2007-07-17
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2007-07-17
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2020-09-09

Quad Summary: Echo Lake (3812071), Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.87543 / -120.02362	**Accuracy:**	1/5 mile
UTM:	Zone-10 N4307164 E758206	**Elevation (ft):**	6289
PLSS:	T12N, R18E, Sec. 19 (M)	**Acres:**	70.0

Location: WASHOE MEADOWS STATE PARK, ABOUT 1.0 MI W OF CA-89 AT SAWMILL RD & 1.4 MI SW OF THE LAKE TAHOE AIRPORT.

Detailed Location: MAPPED TO COORDINATES GIVEN WITH SPECIMEN LOCALITY, "SOUTH LAKE TAHOE." ACCURACY UNCERTAIN.

Ecological:

General: COLLECTED ON 17 JUL 2007.

Owner/Manager: DPR-WASHOE MEADOWS SP

Rorippa subumbellata **Element Code:** PDBRA270M0

Tahoe yellow cress

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G1
	State:	Endangered		**State:**	S1
	Other:	Rare Plant Rank - 1B.1, SB_BerrySB-Berry Seed Bank, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive			
Habitat:	**General:**	LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.			
	Micro:	SANDY BEACHES, ON LAKESIDE MARGINS AND IN RIPARIAN COMMUNITIES; ON DECOMPOSED GRANITE SAND. 1895-2410 M.			

Occurrence No.	1	**Map Index:**	14462	**EO Index:**	8257	**Element Last Seen:**	2017-09-28
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2017-09-28
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.95461 / -119.95451	**Accuracy:**	specific area
UTM:	Zone-11 N4315892 E243976	**Elevation (ft):**	6232
PLSS:	T13N, R18E, Sec. 28, SE (M)	**Acres:**	19.0

Location:	FROM STATELINE SW TO BIJOU PARK, LAKE TAHOE.
Detailed Location:	OCCURRENCE EXTENDS UP INTO NV. INCLUDES EDGEWOOD SITE (PORTIONS OF THIS SITE IN NEVADA NOT MAPPED), TAHOE MEADOES SITE, AND BIJOU PARK SITE. MAPPED AS 3 POLYGONS ACCORDING TO A 1979 KNAPP MAP, 1981 FERREIRA MAP, AND 2017 TYC DIGITAL DATA.
Ecological:	IN BEACH SAND WITH PHACELIA FRIGIDA AND PHLOX SP. ALONG BEACH AND IN BANKS OF DITCH ENTERING LAKE. LAKE INUNDATED IN 1979 AND 1982.
General:	DETAILED POP INFO AVAILABLE AT CNDDB. PORTIONS OF SITE WERE SEEN IN 1979-1981, NO PLANTS IN 1982, SEEN IN 1990 & 1993, NO PLANTS IN 1994-1997, SEEN IN 1998-2009 AND 2017. INCLUDES FORMER EO #2 & #3.
Owner/Manager:	PVT

Occurrence No.	4	**Map Index:**	14433	**EO Index:**	8255	**Element Last Seen:**	2015-06-09
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2015-06-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-21

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.94771 / -119.96571	**Accuracy:**	specific area
UTM:	Zone-11 N4315157 E242981	**Elevation (ft):**	6230
PLSS:	T13N, R18E, Sec. 33, NW (M)	**Acres:**	6.0

Location:	TAHOE LAKESHORE LODGE, BETWEEN TIMBER COVE MARINA AND THE TAHOE MARINA INN, SOUTH LAKE TAHOE.
Detailed Location:	TIMBER COVE SITE. ON THE PROPERTY OF TAHOE LAKESHORE LODGE AND SPA, 930 BALBIJOU RD. 2013 OBSERVATION AT ELEVATION 6242' IS HIGHER THAN PREVIOUS POPULATIONS FOUND BETWEEN 6223' & 6230'; PLANTS TRANSPLANTED TO TYC MITIGATION SITE.
Ecological:	ON DECOMPOSED GRANITE BEACH WITH SCATTERING OF GRASSES AND FORBS. COARSE SAND. ASSOCIATED WITH ACHILLEA MILLEFOLIUM, CAREX DOUGLASII, CHAMOMILLA SUAVEOLENS, ERIOGONUM NUDUM, GAYOPHYTUM DIFFUSUM, LEYMUS TRITICOIDES, LUPINUS LEPIDUS, ETC.
General:	PLANTS SEEN IN 1981-1988 AND 1990, NO PLANTS FOUND IN 1993-2001, PLANTS SEEN IN 2002-2005, NO PLANTS IN 2006, PLANTS SEEN IN 2007-2009, 2013 (214 PLANTS) & 2015 (304 PLANTS). ADDITIONAL POPULATION INFORMATION IS AVAILABLE AT CNDDB.
Owner/Manager:	PVT

Occurrence No.	5	**Map Index:**	14397	**EO Index:**	8251	**Element Last Seen:**	2019-06-12
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-06-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	South Lake Tahoe (3811988), Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.94022 / -120.00389	**Accuracy:**	specific area
UTM:	Zone-10 N4314412 E759682	**Elevation (ft):**	6233
PLSS:	T12N, R18E, Sec. 5, N (M)	**Acres:**	42.0

Location:	FROM REGAN BEACH WEST TO THE EAST END OF POPE BEACH, SOUTH LAKE TAHOE.
Detailed Location:	INCLUDES THE FOLLOWING SITE NAMES: TAHOE KEYS, UPPER TRUCKEE WEST, UPPER TRUCKEE EAST, REGAN/AL TAHOE, POPE BEACH, LIGHTHOUSE. PORTIONS OF OCCURRENCE MAY BE EXTIRPATED. MAPPED AS SEVERAL POLYGONS BY CNDDB.
Ecological:	ON DECOMPOSED GRANITE BEACH, DENSE GROWTH OF RUSHES/GRASSES ABOVE BEACH, AND IN MOIST BACKSHORE AREAS. WITH PHACELIA FRIGIDA, LEPIDIUM, SALIX, LUPINUS, AND GRASSES.
General:	DETAILED POP INFO AVAILABLE AT CNDDB. PORTIONS OF SITE WERE SEEN IN 1979-1983, 1985, 1986, 1988, 1990-2010, 2017, 2019. INCLUDES FORMER EO #7, 8, 9, & 23.
Owner/Manager:	PVT, CTC, USFS

Occurrence No.	6	**Map Index:**	14422	**EO Index:**	8254	**Element Last Seen:**	1979-XX-XX
Occ. Rank:	None			**Presence:**	Extirpated	**Site Last Seen:**	2009-09-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.94545 / -119.97324	**Accuracy:**	80 meters
UTM:	Zone-11 N4314928 E242319	**Elevation (ft):**	6229
PLSS:	T13N, R18E, Sec. 32, SE (M)	**Acres:**	0.0

Location:	EL DORADO BEACH, BETWEEN BIJOU AND AL TAHOE, LAKE TAHOE.
Detailed Location:	FOUND IN A HEAVILY USED PORTION OF THE BEACH, NEAR THE SECTION LINE BETWEEN SECTIONS 32 AND 33, APPROXIMATELY 50 FT EAST OF A DRAINAGE CULVERT DISCHARGE ON THE BEACH. PLANT WAS WEDGED BETWEEN TWO ROCKS IN AN AREA OF HEAVY FOOT TRAFFIC.
Ecological:	ON BEACH WEDGED BETWEEN ROCKS.
General:	1 PLANT SEEN IN 1979. NO PLANTS FOUND DURING SURVEYS IN 1980-1983, 1985, 1986, 1988, 1990, 1993-2009. SITE WAS EXTENSIVELY DISTURBED IN THE EARLY 1980'S BY A BANK STABILIZATION PROJECT.
Owner/Manager:	PVT, CITY OF SOUTH LAKE TAHOE

Occurrence No.	10	**Map Index:**	14215	**EO Index:**	3105	**Element Last Seen:**	18XX-XX-XX
Occ. Rank:	None			**Presence:**	Possibly Extirpated	**Site Last Seen:**	1994-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2000-03-02

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.91207 / -120.11204	**Accuracy:**	80 meters
UTM:	Zone-10 N4310985 E750405	**Elevation (ft):**	7900
PLSS:	T12N, R17E, Sec. 04, SW (M)	**Acres:**	0.0

Location:	TALLAC LAKE, SOUTHWEST OF LAKE TAHOE.
Detailed Location:	MAPPED ALONG THE SHORELINE OF TALLAC LAKE BECAUSE TYPICALLY HABITAT IS ALONG THE BEACHES OF LAKES.
Ecological:	
General:	PLANT SEEN IN THE 1800'S (CITATION BY STUCKEY). KNAPP COULD NOT FIND IN 1980, HE PRESUMES IT TO BE EXTIRPATED. SEARCHED FOR BUT NOT SEEN IN 1994.
Owner/Manager:	USFS-ELDORADO NF

Occurrence No.	11	**Map Index:**	14293	**EO Index:**	3911	**Element Last Seen:**	2020-09-20
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2020-09-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.94327 / -120.0681	**Accuracy:**	specific area
UTM:	Zone-10 N4314570 E754104	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 26 (M)	**Acres:**	55.0

Location:	BETWEEN CASCADE CREEK AND KIVA BEACH, LAKE TAHOE.
Detailed Location:	MAPPED AS MANY POLYGONS FROM 1990 & 1991 MAPS, LTBMU DIGITAL DATA, & TYC DIGITAL DATA. SURVEYS INCLUDE PLANTED INDIVIDUALS. NW POLYGON IS NONSPECIFIC; MAPPED ALONG SHORELINE OF CA TAHOE CONSERVANCY PROPERTY. INCLUDES FORMER OCCS #12 & 32.
Ecological:	ON COARSE SANDY BEACHES OF DECOMPOSED GRANITE, ALONG CREEK & EDGES OF MEADOW. GROWING WITH JUNCUS BALTICUS, VERBASCUM THAPSUS, RORIPPA CURVISILIQUA, EPILOBIUM SP, ETC. ADJACENT LAGOON AND CREEK MOUTH HAVE DRASTICALLY ALTERED HABITAT.
General:	PLANTS PRESENT AT VARIOUS SITES FROM 1979-2009. POPULATION COUNT FOR PORTIONS OF OCCURRENCE: 3030 IN 2010, ~2321 IN 2013, ~3718 IN 2014, ~3245 IN 2016, 302 IN 2017, 1244 IN 2019, SEEN IN 2020. ADDITIONAL POPULATION INFO AVAILABLE AT CNDDB.
Owner/Manager:	USFS-LAKE TAHOE BMU, PVT

Occurrence No.	13	**Map Index:**	14314	**EO Index:**	3910	**Element Last Seen:**	2008-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-09-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2013-11-15

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.93822 / -120.03881	**Accuracy:**	non-specific area
UTM:	Zone-10 N4314091 E756661	**Elevation (ft):**	6229
PLSS:	T13N, R17E, Sec. 25, S (M)	**Acres:**	27.0

Location:	JAMESON BEACH AND KIVA BEACH, NEAR CAMP RICHARDSON, LAKE TAHOE.
Detailed Location:	KIVA BEACH/VALHALLA AND JAMESON SITES. W POLYGON: KIVA BEACH BETWEEN POPE ESTATE AND VALHALLA ESTATE, MAPPED ACCORDING TO 1979 MAP. E POLYGON: NON-SPECIFIC, MAPPED BY CNDDB PARALLEL TO JAMESON BEACH RD BASED ON SITE NAME AND VAGUE 2010 MAP.
Ecological:	ON BEACH. ONLY NARROW, MARGINAL HABITAT REMAINS.
General:	KIVA BEACH/VALHALLA (INCL EO#11): SEEN IN 1979, 1981, 1991, 1992, NONE IN 1995-2002, SEEN IN 2003-2005, 0 IN 2006 & 2007, SEEN IN 2008, 0 IN 2009. JAMESON: UNK WHEN ORIGINALLY SEEN (PLANTED?), NONE IN 2001-2004, 13 IN 2006, 0 IN 2007-2009.
Owner/Manager:	USFS-LAKE TAHOE BMU, PVT

Occurrence No.	14	**Map Index:**	14245	**EO Index:**	3914	**Element Last Seen:**	2008-XX-XX
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-09-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.95979 / -120.09599	**Accuracy:**	80 meters
UTM:	Zone-10 N4316326 E751628	**Elevation (ft):**	6225
PLSS:	T13N, R17E, Sec. 22, NW (M)	**Acres:**	5.0

Location:	NW SIDE OF EMERALD BAY, 0.5 AIR MILE NE OF FANNETTE ISLAND.
Detailed Location:	ABOUT 25 FEET NORTHEAST OF BOAT DOCK AT EMERALD BAY BOAT CAMP.
Ecological:	PLANTS UNDER A LEANING SNAG.
General:	<15 PLANTS SEEN IN 1979, NONE SEEN IN 1980-83 & 1986, 8 IN '90, 0 IN '91-92, UNK # IN '93-94, 0 IN '95-96, '98, '00, 5 IN '01, UNK # IN '02, 0 IN '03, 24 IN '04, 77 IN '05, 0 IN '06-07, 6 IN '08, 0 IN '09.
Owner/Manager:	DPR-EMERALD BAY SP

Occurrence No.	15	**Map Index:**	14226	**EO Index:**	3915	**Element Last Seen:**	2019-08-31
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-08-31
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.9492 / -120.10331	**Accuracy:**	specific area
UTM:	Zone-10 N4315131 E751032	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 28, NE (M)	**Acres:**	9.0

Location: SOUTHWEST EMERALD BAY, FROM VIKINGSHOLM BOAT HARBOR EAST ABOUT 0.3 MILE, LAKE TAHOE.

Detailed Location: EAGLE CREEK/AVALANCHE SITE. PLANTS FOUND SOUTHEAST OF MOUTH OF EAGLE CREEK IN VICINITY OF AVALANCHE DEBRIS. MAPPED AS 4 POLYGONS ACCORDING TO KERBAVAZ MAPS, 2017 TYC DIGITAL DATA, AND DEAN COORDINATES. ADDITIONAL POP INFO AT CNDDB.

Ecological: FINE TO COARSE-GRAINED SAND. ASSOCIATES VARY FROM SITE TO SITE AND INCLUDE CAREX, RUMEX, ALNUS, SALIX, VERBASCUM, EPILOBIUM, AND MIMULUS.

General: <15 IN 1979, 27 IN '90, 150 IN '91, 220 IN '92, 155 IN '93, 0 PLANTS IN '95, '96, '98, & 2000, 51 IN '01, 35 IN '02, 265 IN '03, 493 IN '04, 601 IN '05, 71 IN '06, 404 IN '07, 354 IN '08, 373 IN '09, SEEN IN 2017, 40 IN 2018, 1 IN 2019.

Owner/Manager: DPR-EMERALD BAY SP

Occurrence No.	24	**Map Index:**	32012	**EO Index:**	3948	**Element Last Seen:**	2016-08-02
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-08-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-26

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.97783 / -120.09404	**Accuracy:**	specific area
UTM:	Zone-10 N4318334 E751733	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 15, NW (M)	**Acres:**	1.0

Location: DL BLISS STATE PARK, ABOUT 1 MILE NORTHWEST OF EMERALD POINT, LAKE TAHOE.

Detailed Location: ALONG THE SHORE OF A SHALLOW COVE SOUTH OF LIGHTHOUSE. MAPPED BY CNDDB FROM 2016 MCNAIR COORDINATES IN THE NW 1/4 OF THE NW 1/4 OF SECTION 15.

Ecological: GROWING IN COARSE GRANITE SAND ON BENCH AT THE BASE OF SLOPE LOCATED ABOUT 15 FEET FROM THE WATER'S EDGE. PRIMARILY ON BARE SAND WITH SOME CAREX, ALNUS, AND CHRYSOTHAMNUS.

General: 33 PLANTS SEEN IN 1992. 84 PLANTS SEEN IN 1993. 12 PLANTS SEEN IN 2016.

Owner/Manager: DPR-DL BLISS SP

Occurrence No.	25	**Map Index:**	32013	**EO Index:**	3947	**Element Last Seen:**	2018-08-31
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2018-08-31
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-09

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.9659 / -120.0839	**Accuracy:**	specific area
UTM:	Zone-10 N4317038 E752654	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 22, NE (M)	**Acres:**	9.0

Location: EMERALD POINT AND EAGLE POINT, MOUTH OF EMERALD BAY, LAKE TAHOE.

Detailed Location: 7 COLONIES TOTAL. 4 COLONIES MAPPED ON EMERALD POINT AND 3 COLONIES MAPPED ON EAGLE POINT. ADDITIONAL POPULATION INFORMATION IS AVAILABLE AT CNDDB. INCLUDES FORMER OCCURRENCE #S 26 & 27.

Ecological: IN COARSE SAND AMONG SMALL COBBLES AND SANDY PATCHES OF DECOMPOSED GRANITE. ASSOCIATED WITH VERBASCUM, TRIFOLIUM, SALIX, POPULUS TREMULOIDES, GRASSES, AND CAREX. PLANTS ABOUT 15 TO 25 FEET FROM THE LAKE AND 1 FOOT ABOVE THE WATER LEVEL.

General: EMERALD POINT: SEEN IN 1979, 0 IN 1980-86, SEEN IN 1990-94, 0 IN 1995-98 & 2000, SEEN IN 2001-05, 2007-09, 2016, & 2018. EAGLE POINT: SEEN IN 1991-94, 0 IN 1995-1998, 2000-03, SEEN IN 2004-05, 0 IN 2006-07, SEEN IN 2008-09.

Owner/Manager: DPR-EMERALD BAY SP, DL BLISS

Occurrence No.	35	**Map Index:**	A6100	**EO Index:**	107854	**Element Last Seen:**	2014-09-04
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2020-07-08
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-02

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93674 / -120.02515	**Accuracy:**	specific area
UTM:	Zone-10 N4313966 E757851	**Elevation (ft):**	6235
PLSS:	T12N, R18E, Sec. 6, NE (M)	**Acres:**	1.0

Location: POPE BEACH PICNIC AREA NORTH OF TRUCKEE MARSH, LAKE TAHOE.

Detailed Location: AT PICNIC TABLES ABOUT 200 FEET WEST OF THE BATHROOM, JUST SOUTH OF PARKING AREA. MAPPED BY CNDDB FROM 2014 & 2016 LTBMU DIGITAL DATA, IN THE NE 1/4 OF THE NE 1/4 OF PROJECTED SECTION 6.

Ecological: WITH CAREX SP, WILLOWS AND PINES. AREA USED TO BE FENCED.

General: 12 PLANTS OBSERVED IN 2014. NO PLANTS OBSERVED IN 2020.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	36	**Map Index:**	A6103	**EO Index:**	107855	**Element Last Seen:**	2016-08-02
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-08-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-26

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.98684 / -120.09443	**Accuracy:**	specific area
UTM:	Zone-10 N4319333 E751668	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 10, W (M)	**Acres:**	1.0

Location:	BEACH COVE ABOUT 1.5 AIR MILES NNW OF TIP OF EMERALD POINT, D.L. BLISS STATE PARK.
Detailed Location:	MAPPED BY CNDDB IN THE WEST HALF OF SECTION 10, BASED ON 2016 MCNAIR COORDINATES.
Ecological:	IN OPEN SAND ON HIGHER PART OF BEACH.
General:	5 PLANTS OBSERVED IN 2016.
Owner/Manager:	DPR-DL BLISS SP

Multiple Occurrences per Page

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Emerald Bay (3812081) OR South Lake Tahoe (3811988))
 AND CNPS List IS (1A OR 1B OR 1B.1 OR 1B.2 OR 1B.3 OR 2A OR 2B OR 2B.1 OR 2B.2 OR 2B.3 OR 3 OR 3.1 OR 3.2 OR 3.3 OR 4 OR 4.1 OR 4.2 OR 4.3)

Bruchia bolanderi **Element Code:** NBMUS13010

Bolander's bruchia

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 4.2, USFS_S-Sensitive			
Habitat:	**General:**	LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS, UPPER MONTANE CONIFEROUS FOREST.			
	Micro:	MOSS WHICH GROWS ON DAMP CLAY SOILS. SEEMS TO COLONIZE BARE SOIL ALONG STREAMBANKS, MEADOWS, FENS AND SPRINGS. THIS SPECIES HAS AN EPHEMERAL NATURE AND IS DISTURBANCE ADAPTED. 1610-3340 M.			

Occurrence No.	15	**Map Index:** 73118	**EO Index:** 74049	**Element Last Seen:**	2009-07-27
Occ. Rank:	Good		**Presence:** Presumed Extant	**Site Last Seen:**	2009-07-27
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2010-04-27

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.90058 / -119.90247	**Accuracy:**	80 meters
UTM:	Zone-11 N4309750 E248294	**Elevation (ft):**	7800
PLSS:	T12N, R18E, Sec. 12, SE (M)	**Acres:**	0.0

Location: NE END OF HIGH MEADOWS, APPROXIMATELY 5 MILES SE OF SOUTH LAKE TAHOE.

Detailed Location: MAPPED BY CNDDB IN THE NE1/4 OF THE SE1/4 OF SECTION 12 ACCORDING TO 2006 GPS COORDINATES PROVIDED BY LEVY. DIRECTLY ACROSS FROM ROAD ON EAST SIDE OF MEADOW.

Ecological: HIGH OPEN MEADOW HABITAT. WOODED AREA SURROUNDING MEADOW HAS AN OVERSTORY DOMINATED BY PINUS CONTORTA. POPULATION FOUND HIDDEN IN CAREX SP. AT THE BASE OF A SMALL PINUS CONTORTA THAT HAS ENCROACHED INTO THE MEADOW.

General: 5 CLUMPS OF PLANTS SEEN IN 2006. A SAMPLE WAS COLLECTED IN 2007 AND ID OF PLANTS WAS VERIFIED AS BRUCHIA BOLANDERI. 5 CLUMPS OF PLANTS SEEN IN JULY OF 2009; SITE WAS VERY DRY AND SHOULD BE VISITED EARLIER NEXT TIME.

Owner/Manager: USFS-LAKE TAHOE BMU

Meesia uliginosa **Element Code:** NBMUS4L030

broad-nerved hump moss

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 2B.2, USFS_S-Sensitive			
Habitat:	**General:**	MEADOWS AND SEEPS, BOGS AND FENS, UPPER MONTANE CONIFEROUS FOREST, SUBALPINE CONIFEROUS FOREST.			
	Micro:	MOSS ON DAMP SOIL. OFTEN FOUND ON THE EDGE OF FENS OR RAISED ABOVE THE FEN ON HUMMOCKS/SHRUB BASES. 1095-2805 M.			

Occurrence No.	10	**Map Index:**	66664	**EO Index:**	66812	**Element Last Seen:**	2014-09-16
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2014-09-16
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-22

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.8927 / -119.98782	**Accuracy:**	specific area
UTM:	Zone-11 N4309114 E240864	**Elevation (ft):**	6335
PLSS:	T12N, R18E, Sec. 16, NE (M)	**Acres:**	1.0

Location: JUST EAST OF THE LAKE TAHOE AIRPORT AND THE UPPER TRUCKEE RIVER, SOUTH LAKE TAHOE.

Detailed Location: FOUND AT THE BASE OF A SALIX IN THE NE SECTION OF THE MEADOW AREA. MAPPED ACCORDING TO 2014 MCKNIGHT COORDINATES. WITHIN THE NE 1/4 OF THE NE 1/4 OF SECTION 16. THIS SITE IS LTBMU POPULATION MEUL2.

Ecological: SALIX IS THE DOMINANT SHRUB WITH SCATTERED JUNCUS AND EQUISETUM AS THE DOMINANT GROUND COVER. SLIGHTLY RAISED ABOVE WATER, SURROUNDED BY CIRSIUM VULGARE. MEESIA TRIQUETRA IS ALSO FOUND IN THE AREA.

General: UNKNOWN NUMBER OF INDIVIDUALS OBSERVED IN 2005. 5% COVER OF THIS SPECIES OBSERVED IN 2009 & 2014; GROSS AREA WAS 5 X 5 FT. THE AREA APPEARED VERY DRY IN 2009 (POSSIBLY RESULTING FROM WATER DIVERSION?).

Owner/Manager: USFS-TAHOE NF

Occurrence No.	11	**Map Index:**	66665	**EO Index:**	66813	**Element Last Seen:**	2014-09-17
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2014-09-17
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-22

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.88067 / -120.03612	**Accuracy:**	specific area
UTM:	Zone-10 N4307710 E757102	**Elevation (ft):**	6330
PLSS:	T12N, R18E, Sec. 18, SW (M)	**Acres:**	2.0

Location: ANGORA CREEK, WEST OF WASHOE MEADOW STATE PARK, EAST OF FALLEN LEAF LAKE.

Detailed Location: MAPPED ACCORDING TO 2009 HEARD COORDINATES AND 2014 MCKNIGHT COORDINATES, IN THE SOUTH 1/2 OF THE SW 1/4 OF SECTION 18. THIS SITE IS LTBMU POPULATION MEUL1.

Ecological: TYPICAL FEN. GROUND IS SATURATED AND SOIL IS ORGANIC. VEGETATION CONSISTS OF CAREX, SALIX OLESTRA, VACCINIUM ULIGINOSUM, BRYUM ULIGINOSUM, B. PSEUDOTRIQUETRUM, TOMENTYPNUM NITENS, DREPANOCLADUS SORDIDUS, MEESIA TRIQUETRA, ETC.

General: UNKNOWN NUMBER OF INDIVIDUALS OBSERVED IN 2005. 95% COVER OF THIS SPECIES WAS OBSERVED IN 3 SMALL CLUSTERS IN 2009 & 2014. MENTIONED AS AN ASSOCIATE IN THREE 2007 COLLECTIONS OF TOMENTYPNUM NITENS BY WISHNER.

Owner/Manager: USFS-TAHOE NF

Erigeron miser **Element Code:** PDAST3M2K0

starved daisy

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3?
	State:	None		**State:**	S3?
	Other:	Rare Plant Rank - 1B.3, SB_UCSC-UC Santa Cruz, USFS_S-Sensitive			
Habitat:	**General:**	UPPER MONTANE CONIFEROUS FOREST.			
	Micro:	ROCKY, GRANITIC OUTCROPS. 1550-2775 M.			

Occurrence No.	24	**Map Index:** 97677	**EO Index:** 99007	**Element Last Seen:**	1913-07-18
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1913-07-18
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2015-10-01

Quad Summary: Echo Lake (3812071), Pyramid Peak (3812072), Emerald Bay (3812081), Rockbound Valley (3812082)

County Summary: El Dorado

Lat/Long:	38.88350 / -120.12897	**Accuracy:**	3/5 mile
UTM:	Zone-10 N4307768 E749036	**Elevation (ft):**	
PLSS:	T12N, R17E, Sec. 17 (M)	**Acres:**	0.0

Location: SLOPE ABOVE SUZY LAKE, TAHOE.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB AROUND SUZIE LAKE SOUTHWEST OF LAKE TAHOE BASED ON A 1913 SMILEY COLLECTION.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1913 SMILEY COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-LAKE TAHOE BMU

Arabis rigidissima var. demota **Element Code:** PDBRA061R1

Galena Creek rockcress

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3T3Q
	State:	None		**State:**	S1
	Other:	Rare Plant Rank - 1B.2, USFS_S-Sensitive			
Habitat:	**General:**	BROADLEAFED UPLAND FOREST, UPPER MONTANE CONIFEROUS FOREST.			
	Micro:	WELL-DRAINED, STONY SOIL UNDERLAIN BY BASIC VOLCANIC ROCK. 2270-2805 M.			

Occurrence No.	3 **Map Index:** 95692	**EO Index:**	96831	**Element Last Seen:**	2012-XX-XX
Occ. Rank:	Fair	**Presence:**	Presumed Extant	**Site Last Seen:**	2015-09-24
Occ. Type:	Natural/Native occurrence	**Trend:**	Unknown	**Record Last Updated:**	2018-03-22

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.93407 / -119.91226	**Accuracy:**	specific area
UTM:	Zone-11 N4313494 E247565	**Elevation (ft):**	9200
PLSS:	T12N, R18E, Sec. 1, NE (M)	**Acres:**	17.0

Location: HEAVENLY SKI RESORT; VICINITY OF GONDOLA JUST NORTH AND SOUTH OF ROAD 12N40, JUST WEST OF THE CA/NV STATE LINE.

Detailed Location: LTBMU POP ARRID 3A-C. MAPPED BY CNDDB AS 3 POLYGONS ACCORDING TO 2009 HEARD AND JENNINGS COORDINATES/MAP AND 2012 COORDINATES. N POLYGON NEEDS CONFIRMATION; COORDINATES DO NOT MATCH WRITTEN DESCRIPTION FOR THIS SITE ACC TO HEARD & JENNINGS.

Ecological: FORB AND GRAMINOID COVER IS SPARSE. GRANITE-SAND OPEN AREA SURROUNDED BY PINUS ALBICAULIS, P. CONTORTA, P. MONTICOLA, ERIOGONUM SP., ARABIS PLATYSPERMA, PHLOX SP., AND PERENNIAL GRASSES. PLANTS FOUND AT LOWER EDGE OF ARCTOSTAPHYLOS STAND.

General: N POLY: 2 PLANTS IN 2005, 0 IN 2009, 2012, 2014, & 2015; KEY TO B. LYALLII, B. SPARSIFLORA, & B. PINETORUM. MIDDLE POLY: 2 PLANTS IN 2009, 0 IN 2012 & 2015; KEY TO A. HOWELLII & A. PINETORUM. S POLY: 5 ARRID/ARPL HYBRIDS SEEN IN 2012.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	4 **Map Index:** 95693	**EO Index:**	96832	**Element Last Seen:**	2009-08-07
Occ. Rank:	Fair	**Presence:**	Presumed Extant	**Site Last Seen:**	2014-08-15
Occ. Type:	Natural/Native occurrence	**Trend:**	Unknown	**Record Last Updated:**	2018-03-29

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.92050 / -119.92196	**Accuracy:**	specific area
UTM:	Zone-11 N4312015 E246675	**Elevation (ft):**	8800
PLSS:	T12N, R18E, Sec. 01, SE (M)	**Acres:**	9.0

Location: HEAVENLY SKI RESORT; ALONG POWDERBOWL LIFT LINE NEAR END OF ROAD 13N52L, ABOUT 2 MILES WEST OF THE CA/NV STATE LINE.

Detailed Location: LTBMU POPULATION ARRID 4A & 4B. MAPPED BY CNDDB ACCORDING TO 2009 HEARD COORDINATES, IN THE NW 1/4 OF THE SE 1/4 OF SECTION 1.

Ecological: ASSOCIATED WITH PINUS MONTICOLA, ARCTOSTAPHYLOS NEVADENSIS (DOMINANT SHRUB), PENSTEMON SP., CERCOCARPUS LEDIFOLIUS, AND BROMUS SP. SEVERAL LARGE BOULDERS IN AREA. BOECHERA ELKOENSIS IS ABUNDANT IN THE AREA.

General: E PORTION OF POLYGON: 1 PLANT SEEN IN 2005, 0 PLANTS IN 2009. W PORTION OF POLYGON: 2 PLANTS SEEN IN 2009; LIKELY HYBRIDS SINCE THERE IS A. PLATYSPERMA AROUND. ALL PLANTS KEY TO A. PLATYSPERMA COMPLEX IN 2012 & 2014; POSSIBLE MIS-ID.

Owner/Manager: USFS-LAKE TAHOE BMU

Draba asterophora var. asterophora

Element Code: PDBRA110D1

Tahoe draba

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2T2?
	State:	None		**State:**	S2?
	Other:	Rare Plant Rank - 1B.2, USFS_S-Sensitive			
Habitat:	**General:**	ALPINE BOULDER AND ROCK FIELD, SUBALPINE CONIFEROUS FOREST.			
	Micro:	ON OPEN TALUS SLOPES, ROCK OUTCROPS, AND CREVICES. ON DECOMPOSED GRANITE. 2770-3505 M.			

Occurrence No.	10	**Map Index:** 51164	**EO Index:** 51164	**Element Last Seen:**	2015-09-24
Occ. Rank:	Good		**Presence:** Presumed Extant	**Site Last Seen:**	2015-09-24
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2016-08-26

Quad Summary: South Lake Tahoe (3811988)

County Summary: Alpine, El Dorado

Lat/Long:	38.92414 / -119.90311	**Accuracy:**	specific area
UTM:	Zone-11 N4312367 E248324	**Elevation (ft):**	9800
PLSS:	T12N, R18E, Sec. 1, E (M)	**Acres:**	111.0

Location: SOUTH AND EAST OF HEAVENLY SKI RESORT, CARSON RANGE, SE OF LAKE TAHOE.

Detailed Location: MAPPED AS 12 POLYGONS ACC TO 2002 MILLER MAP, 2004 GROSS MAP, AND 2003, 2005, 2009, 2010, 2013, 2014 & 2015 COORDINATE INFO/DIGITAL DATA. SITE CONTAINS FS POP DRASA2 (SUB-POP A-F, H-K, N-P). PLANTS THRIVE ON AREAS OF DISTURBANCE.

Ecological: WHITEBARK PINE ZONE DOMINATED BY PINUS ALBICAULIS AND POLYGONUM SHASTENSE BUT MORE COMMON ON EXPOSED, UNFORESTED, SLIDING GRANITIC SAND, OFTEN WITH NO ASSOCIATED SPECIES ON NORTH TO NORTHEAST-FACING SLOPES WHERE SNOW ACCUMULATES.

General: 1000 PLANTS OBSERVED IN 2002 BY MILLER. >980 IN 2003, >2600 IN 2004, 502 IN 2005, ~3140-5290 IN 2009. 780 IN S-MOST POLYGON IN 2010. 183 PLANTS IN 3 SUBPOPULATIONS IN 2013. 16,342+ PLANTS ESTIMATED IN 2014, ~6,628 IN 2015.

Owner/Manager: USFS-LAKE TAHOE BMU,TOIYABE NF

Rorippa subumbellata

Element Code: PDBRA270M0

Tahoe yellow cress

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G1
	State:	Endangered		**State:**	S1
	Other:	Rare Plant Rank - 1B.1, SB_BerrySB-Berry Seed Bank, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive			
Habitat:	**General:**	LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.			
	Micro:	SANDY BEACHES, ON LAKESIDE MARGINS AND IN RIPARIAN COMMUNITIES; ON DECOMPOSED GRANITE SAND. 1895-2410 M.			

Occurrence No.	1	**Map Index:**	14462	**EO Index:**	8257	**Element Last Seen:**	2017-09-28
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2017-09-28
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.95461 / -119.95451	**Accuracy:**	specific area
UTM:	Zone-11 N4315892 E243976	**Elevation (ft):**	6232
PLSS:	T13N, R18E, Sec. 28, SE (M)	**Acres:**	19.0

Location:	FROM STATELINE SW TO BIJOU PARK, LAKE TAHOE.
Detailed Location:	OCCURRENCE EXTENDS UP INTO NV. INCLUDES EDGEWOOD SITE (PORTIONS OF THIS SITE IN NEVADA NOT MAPPED), TAHOE MEADOES SITE, AND BIJOU PARK SITE. MAPPED AS 3 POLYGONS ACCORDING TO A 1979 KNAPP MAP, 1981 FERREIRA MAP, AND 2017 TYC DIGITAL DATA.
Ecological:	IN BEACH SAND WITH PHACELIA FRIGIDA AND PHLOX SP. ALONG BEACH AND IN BANKS OF DITCH ENTERING LAKE. LAKE INUNDATED IN 1979 AND 1982.
General:	DETAILED POP INFO AVAILABLE AT CNDDB. PORTIONS OF SITE WERE SEEN IN 1979-1981, NO PLANTS IN 1982, SEEN IN 1990 & 1993, NO PLANTS IN 1994-1997, SEEN IN 1998-2009 AND 2017. INCLUDES FORMER EO #2 & #3.
Owner/Manager:	PVT

Occurrence No.	4	**Map Index:**	14433	**EO Index:**	8255	**Element Last Seen:**	2015-06-09
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2015-06-09
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-21

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.94771 / -119.96571	**Accuracy:**	specific area
UTM:	Zone-11 N4315157 E242981	**Elevation (ft):**	6230
PLSS:	T13N, R18E, Sec. 33, NW (M)	**Acres:**	6.0

Location:	TAHOE LAKESHORE LODGE, BETWEEN TIMBER COVE MARINA AND THE TAHOE MARINA INN, SOUTH LAKE TAHOE.
Detailed Location:	TIMBER COVE SITE. ON THE PROPERTY OF TAHOE LAKESHORE LODGE AND SPA, 930 BALBIJOU RD. 2013 OBSERVATION AT ELEVATION 6242' IS HIGHER THAN PREVIOUS POPULATIONS FOUND BETWEEN 6223' & 6230'; PLANTS TRANSPLANTED TO TYC MITIGATION SITE.
Ecological:	ON DECOMPOSED GRANITE BEACH WITH SCATTERING OF GRASSES AND FORBS. COARSE SAND. ASSOCIATED WITH ACHILLEA MILLEFOLIUM, CAREX DOUGLASII, CHAMOMILLA SUAVEOLENS, ERIOGONUM NUDUM, GAYOPHYTUM DIFFUSUM, LEYMUS TRITICOIDES, LUPINUS LEPIDUS, ETC.
General:	PLANTS SEEN IN 1981-1988 AND 1990, NO PLANTS FOUND IN 1993-2001, PLANTS SEEN IN 2002-2005, NO PLANTS IN 2006, PLANTS SEEN IN 2007-2009, 2013 (214 PLANTS) & 2015 (304 PLANTS). ADDITIONAL POPULATION INFORMATION IS AVAILABLE AT CNDDB.
Owner/Manager:	PVT

Occurrence No.	5	**Map Index:**	14397	**EO Index:**	8251	**Element Last Seen:**	2019-06-12
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-06-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary: South Lake Tahoe (3811988), Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.94022 / -120.00389	**Accuracy:**	specific area
UTM:	Zone-10 N4314412 E759682	**Elevation (ft):**	6233
PLSS:	T12N, R18E, Sec. 5, N (M)	**Acres:**	42.0

Location: FROM REGAN BEACH WEST TO THE EAST END OF POPE BEACH, SOUTH LAKE TAHOE.

Detailed Location: INCLUDES THE FOLLOWING SITE NAMES: TAHOE KEYS, UPPER TRUCKEE WEST, UPPER TRUCKEE EAST, REGAN/AL TAHOE, POPE BEACH, LIGHTHOUSE. PORTIONS OF OCCURRENCE MAY BE EXTIRPATED. MAPPED AS SEVERAL POLYGONS BY CNDDB.

Ecological: ON DECOMPOSED GRANITE BEACH, DENSE GROWTH OF RUSHES/GRASSES ABOVE BEACH, AND IN MOIST BACKSHORE AREAS. WITH PHACELIA FRIGIDA, LEPIDIUM, SALIX, LUPINUS, AND GRASSES.

General: DETAILED POP INFO AVAILABLE AT CNDDB. PORTIONS OF SITE WERE SEEN IN 1979-1983, 1985, 1986, 1988, 1990-2010, 2017, 2019. INCLUDES FORMER EO #7, 8, 9, & 23.

Owner/Manager: PVT, CTC, USFS

Occurrence No.	6	**Map Index:**	14422	**EO Index:**	8254	**Element Last Seen:**	1979-XX-XX
Occ. Rank:	None			**Presence:**	Extirpated	**Site Last Seen:**	2009-09-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.94545 / -119.97324	**Accuracy:**	80 meters
UTM:	Zone-11 N4314928 E242319	**Elevation (ft):**	6229
PLSS:	T13N, R18E, Sec. 32, SE (M)	**Acres:**	0.0

Location: EL DORADO BEACH, BETWEEN BIJOU AND AL TAHOE, LAKE TAHOE.

Detailed Location: FOUND IN A HEAVILY USED PORTION OF THE BEACH, NEAR THE SECTION LINE BETWEEN SECTIONS 32 AND 33, APPROXIMATELY 50 FT EAST OF A DRAINAGE CULVERT DISCHARGE ON THE BEACH. PLANT WAS WEDGED BETWEEN TWO ROCKS IN AN AREA OF HEAVY FOOT TRAFFIC.

Ecological: ON BEACH WEDGED BETWEEN ROCKS.

General: 1 PLANT SEEN IN 1979. NO PLANTS FOUND DURING SURVEYS IN 1980-1983, 1985, 1986, 1988, 1990, 1993-2009. SITE WAS EXTENSIVELY DISTURBED IN THE EARLY 1980'S BY A BANK STABILIZATION PROJECT.

Owner/Manager: PVT, CITY OF SOUTH LAKE TAHOE

Occurrence No.	10	**Map Index:**	14215	**EO Index:**	3105	**Element Last Seen:**	18XX-XX-XX
Occ. Rank:	None			**Presence:**	Possibly Extirpated	**Site Last Seen:**	1994-XX-XX
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2000-03-02

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.91207 / -120.11204	**Accuracy:**	80 meters
UTM:	Zone-10 N4310985 E750405	**Elevation (ft):**	7900
PLSS:	T12N, R17E, Sec. 04, SW (M)	**Acres:**	0.0

Location:	TALLAC LAKE, SOUTHWEST OF LAKE TAHOE.
Detailed Location:	MAPPED ALONG THE SHORELINE OF TALLAC LAKE BECAUSE TYPICALLY HABITAT IS ALONG THE BEACHES OF LAKES.
Ecological:	
General:	PLANT SEEN IN THE 1800'S (CITATION BY STUCKEY). KNAPP COULD NOT FIND IN 1980, HE PRESUMES IT TO BE EXTIRPATED. SEARCHED FOR BUT NOT SEEN IN 1994.
Owner/Manager:	USFS-ELDORADO NF

Occurrence No.	11	**Map Index:**	14293	**EO Index:**	3911	**Element Last Seen:**	2020-09-20
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2020-09-20
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.94327 / -120.0681	**Accuracy:**	specific area
UTM:	Zone-10 N4314570 E754104	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 26 (M)	**Acres:**	55.0

Location:	BETWEEN CASCADE CREEK AND KIVA BEACH, LAKE TAHOE.
Detailed Location:	MAPPED AS MANY POLYGONS FROM 1990 & 1991 MAPS, LTBMU DIGITAL DATA, & TYC DIGITAL DATA. SURVEYS INCLUDE PLANTED INDIVIDUALS. NW POLYGON IS NONSPECIFIC; MAPPED ALONG SHORELINE OF CA TAHOE CONSERVANCY PROPERTY. INCLUDES FORMER OCCS #12 & 32.
Ecological:	ON COARSE SANDY BEACHES OF DECOMPOSED GRANITE, ALONG CREEK & EDGES OF MEADOW. GROWING WITH JUNCUS BALTICUS, VERBASCUM THAPSUS, RORIPPA CURVISILIQUA, EPILOBIUM SP, ETC. ADJACENT LAGOON AND CREEK MOUTH HAVE DRASTICALLY ALTERED HABITAT.
General:	PLANTS PRESENT AT VARIOUS SITES FROM 1979-2009. POPULATION COUNT FOR PORTIONS OF OCCURRENCE: 3030 IN 2010, ~2321 IN 2013, ~3718 IN 2014, ~3245 IN 2016, 302 IN 2017, 1244 IN 2019, SEEN IN 2020. ADDITIONAL POPULATION INFO AVAILABLE AT CNDDB.
Owner/Manager:	USFS-LAKE TAHOE BMU, PVT

Occurrence No.	13	**Map Index:**	14314	**EO Index:**	3910	**Element Last Seen:**	2008-XX-XX
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-09-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2013-11-15

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.93822 / -120.03881	**Accuracy:**	non-specific area
UTM:	Zone-10 N4314091 E756661	**Elevation (ft):**	6229
PLSS:	T13N, R17E, Sec. 25, S (M)	**Acres:**	27.0

Location:	JAMESON BEACH AND KIVA BEACH, NEAR CAMP RICHARDSON, LAKE TAHOE.
Detailed Location:	KIVA BEACH/VALHALLA AND JAMESON SITES. W POLYGON: KIVA BEACH BETWEEN POPE ESTATE AND VALHALLA ESTATE, MAPPED ACCORDING TO 1979 MAP. E POLYGON: NON-SPECIFIC, MAPPED BY CNDDB PARALLEL TO JAMESON BEACH RD BASED ON SITE NAME AND VAGUE 2010 MAP.
Ecological:	ON BEACH. ONLY NARROW, MARGINAL HABITAT REMAINS.
General:	KIVA BEACH/VALHALLA (INCL EO#11): SEEN IN 1979, 1981, 1991, 1992, NONE IN 1995-2002, SEEN IN 2003-2005, 0 IN 2006 & 2007, SEEN IN 2008, 0 IN 2009. JAMESON: UNK WHEN ORIGINALLY SEEN (PLANTED?), NONE IN 2001-2004, 13 IN 2006, 0 IN 2007-2009.
Owner/Manager:	USFS-LAKE TAHOE BMU, PVT

Occurrence No.	14	**Map Index:**	14245	**EO Index:**	3914	**Element Last Seen:**	2008-XX-XX
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2009-09-10
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.95979 / -120.09599	**Accuracy:**	80 meters
UTM:	Zone-10 N4316326 E751628	**Elevation (ft):**	6225
PLSS:	T13N, R17E, Sec. 22, NW (M)	**Acres:**	5.0

Location:	NW SIDE OF EMERALD BAY, 0.5 AIR MILE NE OF FANNETTE ISLAND.
Detailed Location:	ABOUT 25 FEET NORTHEAST OF BOAT DOCK AT EMERALD BAY BOAT CAMP.
Ecological:	PLANTS UNDER A LEANING SNAG.
General:	<15 PLANTS SEEN IN 1979, NONE SEEN IN 1980-83 & 1986, 8 IN '90, 0 IN '91-92, UNK # IN '93-94, 0 IN '95-96, '98, '00, 5 IN '01, UNK # IN '02, 0 IN '03, 24 IN '04, 77 IN '05, 0 IN '06-07, 6 IN '08, 0 IN '09.
Owner/Manager:	DPR-EMERALD BAY SP

Occurrence No.	15	**Map Index:**	14226	**EO Index:**	3915	**Element Last Seen:**	2019-08-31
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-08-31
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-08

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.9492 / -120.10331	**Accuracy:**	specific area
UTM:	Zone-10 N4315131 E751032	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 28, NE (M)	**Acres:**	9.0

Location: SOUTHWEST EMERALD BAY, FROM VIKINGSHOLM BOAT HARBOR EAST ABOUT 0.3 MILE, LAKE TAHOE.

Detailed Location: EAGLE CREEK/AVALANCHE SITE. PLANTS FOUND SOUTHEAST OF MOUTH OF EAGLE CREEK IN VICINITY OF AVALANCHE DEBRIS. MAPPED AS 4 POLYGONS ACCORDING TO KERBAVAZ MAPS, 2017 TYC DIGITAL DATA, AND DEAN COORDINATES. ADDITIONAL POP INFO AT CNDDB.

Ecological: FINE TO COARSE-GRAINED SAND. ASSOCIATES VARY FROM SITE TO SITE AND INCLUDE CAREX, RUMEX, ALNUS, SALIX, VERBASCUM, EPILOBIUM, AND MIMULUS.

General: <15 IN 1979, 27 IN '90, 150 IN '91, 220 IN '92, 155 IN '93, 0 PLANTS IN '95, '96, '98, & 2000, 51 IN '01, 35 IN '02, 265 IN '03, 493 IN '04, 601 IN '05, 71 IN '06, 404 IN '07, 354 IN '08, 373 IN '09, SEEN IN 2017, 40 IN 2018, 1 IN 2019.

Owner/Manager: DPR-EMERALD BAY SP

Occurrence No.	24	**Map Index:**	32012	**EO Index:**	3948	**Element Last Seen:**	2016-08-02
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2016-08-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-09-26

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.97783 / -120.09404	**Accuracy:**	specific area
UTM:	Zone-10 N4318334 E751733	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 15, NW (M)	**Acres:**	1.0

Location: DL BLISS STATE PARK, ABOUT 1 MILE NORTHWEST OF EMERALD POINT, LAKE TAHOE.

Detailed Location: ALONG THE SHORE OF A SHALLOW COVE SOUTH OF LIGHTHOUSE. MAPPED BY CNDDB FROM 2016 MCNAIR COORDINATES IN THE NW 1/4 OF THE NW 1/4 OF SECTION 15.

Ecological: GROWING IN COARSE GRANITE SAND ON BENCH AT THE BASE OF SLOPE LOCATED ABOUT 15 FEET FROM THE WATER'S EDGE. PRIMARILY ON BARE SAND WITH SOME CAREX, ALNUS, AND CHRYSOTHAMNUS.

General: 33 PLANTS SEEN IN 1992. 84 PLANTS SEEN IN 1993. 12 PLANTS SEEN IN 2016.

Owner/Manager: DPR-DL BLISS SP

Occurrence No.	25	**Map Index:**	32013	**EO Index:**	3947	**Element Last Seen:**	2018-08-31
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2018-08-31
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-09

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.9659 / -120.0839	**Accuracy:**	specific area
UTM:	Zone-10 N4317038 E752654	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 22, NE (M)	**Acres:**	9.0

Location: EMERALD POINT AND EAGLE POINT, MOUTH OF EMERALD BAY, LAKE TAHOE.

Detailed Location: 7 COLONIES TOTAL. 4 COLONIES MAPPED ON EMERALD POINT AND 3 COLONIES MAPPED ON EAGLE POINT. ADDITIONAL POPULATION INFORMATION IS AVAILABLE AT CNDDB. INCLUDES FORMER OCCURRENCE #S 26 & 27.

Ecological: IN COARSE SAND AMONG SMALL COBBLES AND SANDY PATCHES OF DECOMPOSED GRANITE. ASSOCIATED WITH VERBASCUM, TRIFOLIUM, SALIX, POPULUS TREMULOIDES, GRASSES, AND CAREX. PLANTS ABOUT 15 TO 25 FEET FROM THE LAKE AND 1 FOOT ABOVE THE WATER LEVEL.

General: EMERALD POINT: SEEN IN 1979, 0 IN 1980-86, SEEN IN 1990-94, 0 IN 1995-98 & 2000, SEEN IN 2001-05, 2007-09, 2016, & 2018. EAGLE POINT: SEEN IN 1991-94, 0 IN 1995-1998, 2000-03, SEEN IN 2004-05, 0 IN 2006-07, SEEN IN 2008-09.

Owner/Manager: DPR-EMERALD BAY SP, DL BLISS

Occurrence No.	35	**Map Index:**	A6100	**EO Index:**	107854	**Element Last Seen:**	2014-09-04
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2020-07-08
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-04-02

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93674 / -120.02515	**Accuracy:**	specific area
UTM:	Zone-10 N4313966 E757851	**Elevation (ft):**	6235
PLSS:	T12N, R18E, Sec. 6, NE (M)	**Acres:**	1.0

Location: POPE BEACH PICNIC AREA NORTH OF TRUCKEE MARSH, LAKE TAHOE.

Detailed Location: AT PICNIC TABLES ABOUT 200 FEET WEST OF THE BATHROOM, JUST SOUTH OF PARKING AREA. MAPPED BY CNDDB FROM 2014 & 2016 LTBMU DIGITAL DATA, IN THE NE 1/4 OF THE NE 1/4 OF PROJECTED SECTION 6.

Ecological: WITH CAREX SP, WILLOWS AND PINES. AREA USED TO BE FENCED.

General: 12 PLANTS OBSERVED IN 2014. NO PLANTS OBSERVED IN 2020.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	36	**Map Index:** A6103	**EO Index:**	107855	**Element Last Seen:**	2016-08-02
Occ. Rank:	Fair		**Presence:**	Presumed Extant	**Site Last Seen:**	2016-08-02
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2017-09-26

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.98684 / -120.09443	**Accuracy:**	specific area
UTM:	Zone-10 N4319333 E751668	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 10, W (M)	**Acres:**	1.0

Location: BEACH COVE ABOUT 1.5 AIR MILES NNW OF TIP OF EMERALD POINT, D.L. BLISS STATE PARK.

Detailed Location: MAPPED BY CNDDB IN THE WEST HALF OF SECTION 10, BASED ON 2016 MCNAIR COORDINATES.

Ecological: IN OPEN SAND ON HIGHER PART OF BEACH.

General: 5 PLANTS OBSERVED IN 2016.

Owner/Manager: DPR-DL BLISS SP

Boechera tularensis

Element Code: PDBRA40130

Tulare rockcress

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 1B.3, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, USFS_S-Sensitive			
Habitat:	**General:**	SUBALPINE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST.			
	Micro:	ROCKY SLOPES. 1825-3355 M.			

Occurrence No.	27	**Map Index:** 83738	**EO Index:**	84760	**Element Last Seen:**	1930-10-12
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1930-10-12
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2011-09-20

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.95730 / -120.09376	**Accuracy:**	1 mile
UTM:	Zone-10 N4316056 E751830	**Elevation (ft):**	
PLSS:	T13N, R17E, Sec. 22 (M)	**Acres:**	0.0

Location: EMERALD BAY, LAKE TAHOE.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS AROUND EMERALD BAY.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1930 WIGGINS COLLECTION. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Brasenia schreberi

Element Code: PDCAB01010

watershield

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 2B.3, IUCN_LC-Least Concern			
Habitat:	**General:**	FRESHWATER MARSHES AND SWAMPS.			
	Micro:	AQUATIC KNOWN FROM WATER BODIES BOTH NATURAL AND ARTIFICIAL IN CALIFORNIA. 1-2180 M.			

Occurrence No.	9	**Map Index:** 82076	**EO Index:** 83066	**Element Last Seen:**	2002-07-13
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	2002-07-13
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2018-10-17

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93580 / -120.03262	**Accuracy:**	specific area
UTM:	Zone-10 N4313840 E757206	**Elevation (ft):**	6240
PLSS:	T12N, R18E, Sec. 06, N (M)	**Acres:**	4.0

Location: TRUCKEE MARSH AT POPE BEACH, SOUTH LAKE TAHOE, E OF CAMP RICHARDSON.

Detailed Location: ON W END OF MARSH. MAPPED AS 1 POLYGON BASED ON 4 SETS OF COORDINATES FROM VEGETATION PLOTS.

Ecological: AQUATIC BED AND EMERGENT WETLAND. NUPHAR LUTEA SSP. POLYSEPALA IS ABUNDANT WITH BRASENIA SCHREBERI. POLYGONUM AMPHIBIUM, JUNCUS EFFUSUS, AND POTAMOGETON SP. ALSO PRESENT.

General: UNKNOWN NUMBER OF PLANTS SEEN IN 2002. 1886 HAGGIN COLLECTION FROM LAKE TAHOE IS ATTRIBUTED TO THIS SITE.

Owner/Manager: USFS-ELDORADO NF

Astragalus austiniae

Element Code: PDFAB0F120

Austin's astragalus

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G2G3
	State:	None		**State:**	S2S3
	Other:	Rare Plant Rank - 1B.3, SB_UCSC-UC Santa Cruz			
Habitat:	**General:**	ALPINE BOULDER AND ROCK FIELD, SUBALPINE CONIFEROUS FOREST.			
	Micro:	ROCKY. 2440-2965 M.			

Occurrence No.	3	**Map Index:**	70026	**EO Index:**	92240	**Element Last Seen:**	1925-07-06
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2015-06-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-02-02

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.90676 / -120.09849	**Accuracy:**	4/5 mile
UTM:	Zone-10 N4310432 E751599	**Elevation (ft):**	
PLSS:	T12N, R17E, Sec. 09 (M)	**Acres:**	0.0

Location:	MT TALLAC, NEAR FALLEN LEAF LAKE, LAKE TAHOE REGION.
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS AT MT TALLAC.
Ecological:	
General:	SITE BASED ON A 1925 HOWELL COLLECTION. SLOPES FROM THE SUMMIT OF TALLAC DOWN TO THE TREELINE WERE SURVEYED IN 2015 BUT NO ASTRAGALUS AUSTINIAE WERE FOUND.
Owner/Manager:	USFS-LAKE TAHOE BMU

Occurrence No.	4	**Map Index:**	91196	**EO Index:**	92247	**Element Last Seen:**	1976-07-08
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2015-06-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-02-02

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.93822 / -120.11504	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4313879 E750052	**Elevation (ft):**	8400
PLSS:	T13N, R17E, Sec. 28, SW (M)	**Acres:**	0.0

Location:	RIDGE WEST OF GRANITE LAKE, SOUTH OF EMERALD BAY, DESOLATION WILDERNESS AREA.
Detailed Location:	EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS AROUND RIDGE JUST WEST OF GRANITE LAKE.
Ecological:	DRY GRAVELLY SOIL OF DECOMPOSED GRANITE.
General:	SITE BASED ON A 1976 SMITH COLLECTION. ENTIRE RIDGE WEST OF GRANITE LAKE AS WELL AS RIDGE BETWEEN BOTH MAGGIES PEAKS AND THE TOPS OF THE SOUTHERN PEAK WERE SURVEYED IN 2015; NO ASTRAGALUS AUSTINIAE WAS FOUND.
Owner/Manager:	USFS-LAKE TAHOE BMU

Occurrence No.	11	**Map Index:**	B6922	**EO Index:**	119989	**Element Last Seen:**	2019-09-12
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-09-12
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-02-11

Quad Summary: South Lake Tahoe (3811988)

County Summary: Alpine, El Dorado

Lat/Long:	38.93142 / -119.90517	**Accuracy:**	specific area
UTM:	Zone-11 N4313180 E248171	**Elevation (ft):**	9500
PLSS:	T12N, R18E, Sec. 1, NE (M)	**Acres:**	11.0

Location: RIDGE NNW OF MONUMENT PEAK, JUST WEST OF THE CA/NV BORDER, HEAVENLY SKI RESORT AREA.

Detailed Location: MAPPED AS 3 POLYGONS ACCORDING TO USFS DIGITAL DATA.

Ecological: SANDY DECOMPOSED GRANITE AND LARGE BOULDERS SURROUNDED BY PINUS ALBICAULIS BUT OTHERWISE FULL SUN AND DRY. ALSO ASSOCIATED WITH GRANITE GILIA, BOECHERA PLATYSPERMA, AND ERIOGONUM INCANUM.

General: SOUTHERN POLYGON: 300 PLANTS OBSERVED IN 2016, 900 PLANTS IN 2019. MIDDLE POLYGON: 290 PLANTS IN 2016, 1000 PLANTS IN 2019. NORTHERN POLYGON: 300 PLANTS IN 2019.

Owner/Manager: USFS-LAKE TAHOE BMU

Scutellaria galericulata

Element Code: PDLAM1U0J0

marsh skullcap

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 2B.2			
Habitat:	**General:**	MARSHES AND SWAMPS, LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.			
	Micro:	SWAMPS AND WET PLACES. 0-1950 M.			

Occurrence No.	9	**Map Index:**	43331	**EO Index:**	43331	**Element Last Seen:**	2013-08-22
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2013-08-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-05-17

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93924 / -120.07213	**Accuracy:**	specific area
UTM:	Zone-10 N4314111 E753769	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 26, SW (M)	**Acres:**	18.0

Location: TALLAC MARSH, TALLAC CREEK ABOUT 0.3 TO 0.6 MILE UPSTREAM FROM LAKE TAHOE, SOUTH END OF LAKE TAHOE.

Detailed Location: MAPPED BY CNDDB AS 3 POLYGONS IN THE SW 1/4 OF SECTION 26 ACCORDING TO A 1999 PRESTON MAP (SOUTHERN POLYGON) AND 2013 LTBMU DIGITAL DATA (NORTH AND MIDDLE POLYGONS). LAKE TAHOE BASIN MANAGEMENT UNIT OCCURRENCE SCGA1A-C.

Ecological: GROWING IN FRESHWATER MARSH AND OPEN MEADOW NEAR STANDING WATER WITH JUNCUS NEVADENSIS, J. COVILLEI VAR. OBTUSATUM, CAREX UTRICULATA, C. SIMULATA, C. ANGUSTATA, C. LANGUINOSA, AND POTENTILLA GRACILIS SSP. FASTIGIATA.

General: S POLYGON: 30-50 PLANTS OBSERVED IN 1999. N POLYGON: ABOUT 7200 STEMS IN 2009, 684+ PLANTS IN 2012, 1000 IN 2013. MIDDLE POLYGON: 750 PLANTS ESTIMATED IN 2013. 1902 TEVIS COLLECTION FROM "TALLAC" ATTRIBUTED HERE.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	22	**Map Index:**	62287	**EO Index:**	62324	**Element Last Seen:**	2014-08-02
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2014-08-02
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-05-18

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.87831 / -120.0253	**Accuracy:**	specific area
UTM:	Zone-10 N4307479 E758050	**Elevation (ft):**	6290
PLSS:	T12N, R18E, Sec. 19, NE (M)	**Acres:**	19.0

Location: ALONG ANGORA CREEK, ABOUT 0.75 MILE WEST OF TWIN PEAKS.

Detailed Location: MAPPED BY CNDDB AS 4 POLYGONS IN THE NE 1/4 OF SECTION 19 AND THE SE 1/4 OF SECTION 18 ACCORDING TO A 2003 SASAKI MAP AND 2014 DEAN DIGITAL DATA.

Ecological: NEAR CREEK RUNNING THROUGH MONTANE MEADOW, WITH LODGEPOLE PINE FOREST SURROUNDING. OFTEN WITH DOWNED LOGS AND BRANCHES, AMONG CAREX, OR IN AREAS PREVIOUSLY DISTURBED BY CREEK CHANNEL RESTORATION. ASSOCIATED WITH CAREX, MENTHA ARVENSIS, ETC.

General: 11,205 PLANTS SEEN IN 2003. UNKNOWN NUMBER OF PLANTS SEEN IN 2006. "SEVERAL PLANTS" SEEN IN 2010. >10,000 PLANTS SEEN IN 2014.

Owner/Manager: DPR-WASHOE MEADOWS SP

Occurrence No.	37	**Map Index:**	A4781	**EO Index:**	106481	**Element Last Seen:**	2013-08-22
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2013-08-22
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2017-05-22

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.93712 / -120.05841	**Accuracy:**	specific area
UTM:	Zone-10 N4313914 E754967	**Elevation (ft):**	6230
PLSS:	T13N, R17E, Sec. 36, NW (M)	**Acres:**	4.0

Location: TAYLOR CREEK ABOUT 0.1-0.3 AIR MILE UPSTREAM FROM LAKE TAHOE, NORTH OF FALLEN LEAF LAKE, SOUTH END OF LAKE TAHOE.

Detailed Location: MAPPED BY CNDDB AS 3 POLYGONS FROM 2013 LTBMU DIGITAL DATA, IN THE NW 1/4 OF THE NW 1/4 OF SECTION 36 AND THE SW 1/4 OF THE SW 1/4 OF SECTION 25. LAKE TAHOE BASIN MANAGEMENT UNIT OCCURRENCE #SCGA1D-F.

Ecological:

General: IN 2013, ABOUT 150 PLANTS OBSERVED IN WEST POLYGON, <1000 IN MIDDLE POLYGON, AND 1000 IN EAST POLYGON.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	38	**Map Index:** A7648	**EO Index:**	109432	**Element Last Seen:**	2016-07-19
Occ. Rank:	Fair		**Presence:**	Presumed Extant	**Site Last Seen:**	2016-07-19
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2017-12-19

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.96889 / -120.08945	**Accuracy:**	specific area
UTM:	Zone-10 N4317354 E752163	**Elevation (ft):**	6225
PLSS:	T13N, R17E, Sec. 15, SW (M)	**Acres:**	1.0

Location: COVE ON NORTH SIDE OF EMERALD POINT, DL BLISS STATE PARK, WEST SIDE OF TAHOE BASIN.

Detailed Location: MAPPED ACCORDING TO 2016 DEAN COORDINATES, IN THE SE 1/4 OF THE SW 1/4 OF SECTION 15.

Ecological: SMALL GRAVELLY BEACH WITH A MORE DIVERSE ASSEMBLAGE OF PLANTS THAN THE USUAL SHORES WITHIN DL BLISS STATE PARK. PLANTS GROWING IN LARGE COBBLES (ROCKY HABITAT) AND HALF-WAY UP THE BEACH FROM THE WATER'S EDGE.

General: EIGHT STEMS (ABOUT 1/3 OF THE STEMS IN FLOWER) OBSERVED IN 2016. GROWING IN ATYPICAL HABITAT FOR SPECIES; IT IS POSSIBLE THAT PROPAGULES OF SPECIES WASHED DOWN INTO THE LAKE FROM NEARBY MARSHLANDS. POPULATION MAY NOT PERSIST.

Owner/Manager: DPR-DL BLISS SP

Claytonia megarhiza

Element Code: PDPOR030A0

fell-fields claytonia

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 2B.3			
Habitat:	**General:**	ALPINE BOULDER AND ROCK FIELD, SUBALPINE CONIFEROUS FOREST.			
	Micro:	IN THE CREVICES BETWEEN ROCKS, ROCKY OR GRAVELLY SOIL. 2560-3505 M.			

Occurrence No.	20	**Map Index:** B3178	**EO Index:**	115097	**Element Last Seen:**	1976-07-09
Occ. Rank:	Unknown		**Presence:**	Presumed Extant	**Site Last Seen:**	1976-07-09
Occ. Type:	Natural/Native occurrence		**Trend:**	Unknown	**Record Last Updated:**	2019-06-04

Quad Summary: Emerald Bay (3812081), Rockbound Valley (3812082)

County Summary: El Dorado

Lat/Long:	38.90673 / -120.12739	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4310350 E749093	**Elevation (ft):**	9000
PLSS:	T12N, R17E, Sec. 8, N (M)	**Acres:**	280.0

Location: NE SIDE OF RIDGE, EAST OF DICK'S PASS, 2 MILES WEST OF MT. TALLAC, DESOLATION WILDERNESS AREA.

Detailed Location: MAPPED AS BEST GUESS JUST EAST OF DICKS PASS AND TO INCLUDE GIVEN ELEVATION OF 9000 FEET.

Ecological: STEEP TALUS OF METAMORPHIC ROCK.

General: SITE BASED ON A 1976 STEBBINS COLLECTION. A 1976 SMITH & STEBBINS COLLECTION FROM "EAST FACE OF DICKS PEAK, 9300 FT" IS ASSUMED TO BE FROM THE SAME SITE.

Owner/Manager: USFS-LAKE TAHOE BMU

Carex davyi

Element Code: PMCYP033H0

Davy's sedge

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G3
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 1B.3, SB_UCSC-UC Santa Cruz			
Habitat:	**General:**	SUBALPINE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST.			
	Micro:	1605-3230 M.			

Occurrence No.	10	**Map Index:**	82342	**EO Index:**	83357	**Element Last Seen:**	1946-08-31
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1946-08-31
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2011-05-02

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.89913 / -120.10701	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4309562 E750886	**Elevation (ft):**	8800
PLSS:	T12N, R17E, Sec. 09 (M)	**Acres:**	0.0

Location: NE OF GILMORE LAKE, SIERRA NEVADA MOUNTAINS.

Detailed Location: MAPPED NE OF GILMORE LAKE CENTERED ON TRAIL AT ELEVATION PROVIDED ON COLLECTION LABEL.

Ecological:

General: ONLY SOURCE OF INFORMATION IS A 1946 HOWELL COLLECTION. NEEDS FIELDWORK.

Owner/Manager: USFS-LAKE TAHOE BMU

Glyceria grandis

Element Code: PMPOA2Y080

American manna grass

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 2B.3			
Habitat:	**General:**	BOGS AND FENS, MEADOWS AND SEEPS, MARSHES AND SWAMPS.			
	Micro:	WET MEADOWS, DITCHES, STREAMS, AND PONDS, IN VALLEYS AND LOWER ELEVATIONS IN THE MOUNTAINS. 60-2045 M.			

Occurrence No.	10	**Map Index:**	80403	**EO Index:**	81389	**Element Last Seen:**	1907-07-25
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	1907-07-25
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2010-10-18

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.87783 / -120.08883	**Accuracy:**	non-specific area
UTM:	Zone-10 N4307249 E752539	**Elevation (ft):**	6700
PLSS:	T12N, R17E, Sec. 22, NW (M)	**Acres:**	22.0

Location: ROADSIDE NEAR MODJESKA FALLS, GLEN ALPINE SPRINGS, NEAR SOUTH END OF FALLEN LEAF LAKE.

Detailed Location: MODJESKA FALLS ALSO KNOWN AS UPPER GLEN APLINE FALLS. MAPPED AS BEST GUESS BY CNDDB ALONG ROAD NEAR THESE FALLS, BETWEEN LILY LAKE AND GLEN ALPINE SPRING.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1907 COLLECTION BY REED. NEEDS POPULATION INFORMATION.

Owner/Manager: UNKNOWN

Stuckenia filiformis ssp. alpina

Element Code: PMPOT03091

northern slender pondweed

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5T5
	State:	None		**State:**	S2S3
	Other:	Rare Plant Rank - 2B.2			
Habitat:	**General:**	MARSHES AND SWAMPS.			
	Micro:	SHALLOW, CLEAR WATER OF LAKES AND DRAINAGE CHANNELS. 5-2325 M.			

Occurrence No.	9	**Map Index:** 50806	**EO Index:** 50806	**Element Last Seen:**	1929-10-04
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1929-10-04
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2003-03-27

Quad Summary: Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.97217 / -120.10565	**Accuracy:**	1 mile
UTM:	Zone-10 N4317673 E750747	**Elevation (ft):**	
PLSS:	T13N, R17E, Sec. 16 (M)	**Acres:**	0.0

Location: WEST SIDE OF LAKE TAHOE ABOVE EMERALD BAY, 14 MILES FROM TAHOE CITY.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED ON WEST SIDE OF LAKE TAHOE NORTH OF EMERALD BAY.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1929 COLLECTION BY MASON. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Botrychium crenulatum

Element Code: PPOPH010L0

scalloped moonwort

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4
	State:	None		**State:**	S3
	Other:	Rare Plant Rank - 2B.2, USFS_S-Sensitive			
Habitat:	**General:**	BOGS AND FENS, MEADOWS AND SEEPS, UPPER MONTANE CONIFEROUS FOREST, LOWER MONTANE CONIFEROUS FOREST, MARSHES AND SWAMPS.			
	Micro:	MOIST MEADOWS, FRESHWATER MARSH, AND NEAR CREEKS. 1185-3110 M.			

Occurrence No.	49	**Map Index:**	84445	**EO Index:**	85474	**Element Last Seen:**	2019-06-13
Occ. Rank:	Excellent			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-06-13
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-03-02

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.92496 / -119.94742	**Accuracy:**	specific area
UTM:	Zone-11 N4312580 E244484	**Elevation (ft):**	6500
PLSS:	T12N, R18E, Sec. 1, W (M)	**Acres:**	14.0

Location:	BIJOU CREEK AT POWERLINE TRAIL, APPROXIMATELY 1.25 AIR MILES EAST OF LAKE TAHOE COMMUNITY COLLEGE, SOUTH LAKE TAHOE.
Detailed Location:	DIRECTIONS TO SITE: "TOP OF SKI RUN BLVD AND TURN RIGHT ON DEAD END ROAD. FOLLOW POWERLINE TRAIL SOUTH UNTIL IT MEETS BIJOU CREEK." ALONG CREEK ABOVE AND BELOW TRAIL. MAPPED AS A SINGLE POLYGON FROM 2015 LTBMU DIGITAL DATA.
Ecological:	SMALL INTERMITTENT STREAM IN WHITE FIR, JEFFREY PINE, CALOCEDRUS FOREST. PLANTS EMERGING ON OPEN BARE SOIL AND THROUGH LITTER LAYER. ASSOC W/ ALNUS INCANA, SALIX, LISTERA, CAREX SP., RIBES SP., LILIUM, LUPINUS, GALIUM, STELLARIA, ETC.
General:	800-1000 PLANTS SEEN IN 2009. 169 PLANTS IN EASTERN PART OF POPULATION IN 2010; ENTIRE POPULATION PROBABLY NOT SURVEYED. 2011: 800-900 PLANTS IN W PART OF POPULATION, SEVERAL HUNDRED IN E PART. 127 PLANTS IN 2015, 870 IN 2016, 500 IN 2019.
Owner/Manager:	USFS-LAKE TAHOE BMU

Occurrence No.	154	**Map Index:**	B6998	**EO Index:**	120059	**Element Last Seen:**	2019-08-15
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-08-15
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-03-02

Quad Summary:	Emerald Bay (3812081)
County Summary:	El Dorado

Lat/Long:	38.9839 / -120.1168	**Accuracy:**	specific area
UTM:	Zone-10 N4318945 E749740	**Elevation (ft):**	7429
PLSS:	T13N, R17E, Sec. 8, SE (M)	**Acres:**	1.0

Location:	APPROXIMATELY 1 AIR MILE ESE OF RUBICON PEAK, WEST OF LAKE TAHOE.
Detailed Location:	MAPPED IN THE EAST 1/2 OF THE SE 1/4 OF SECTION 8.
Ecological:	PLANTS OCCURRING IN DUFF/DECAYING ORGANIC MATTER ON THE LINE BETWEEN WET AND DRY SOIL. WELL SHADED RIPARIAN HABITAT NEAR A SMALL STEEP STREAM, IN A RELATIVELY FLAT DEPRESSION CLOSE TO WATER. LOW COMPETITION WITH BARE SOIL SHOWING.
General:	4 PLANTS OBSERVED IN 2019. SURVEYED UPSTREAM AND DOWNSTREAM AND FOUND NO OTHER PLANTS, BUT PRESENT SUITABLE BOTRYCHIUM HABITAT.
Owner/Manager:	USFS-LAKE TAHOE BMU

Occurrence No.	155	**Map Index:**	B6999	**EO Index:**	120060	**Element Last Seen:**	2019-08-19
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-08-19
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-02-17

Quad Summary: Emerald Bay (3812081), Rockbound Valley (3812082), Meeks Bay (3912011), Homewood (3912012)

County Summary: El Dorado

Lat/Long:	38.99966 / -120.12614	**Accuracy:**	specific area
UTM:	Zone-10 N4320669 E748875	**Elevation (ft):**	7187
PLSS:	T13N, R17E, Sec. 5, SW (M)	**Acres:**	1.0

Location: APPROXIMATELY 0.8 AIR MILE NNE OF RUBICON PEAK, WEST OF PARADISE FLAT, WEST SIDE OF LAKE TAHOE.

Detailed Location: MAPPED IN THE NE 1/4 OF THE SW 1/4 OF SECTION 5.

Ecological: FOUND ON BANK OF CREEK UNDER ALNUS INCANA AND RUBUS PARVIFLORUS IN DUFF LAYER. ALSO ASSOCIATED WITH PTERIDIUM AQUILINUM.

General: 3 PLANTS OBSERVED IN 2019.

Owner/Manager: USFS-LAKE TAHOE BMU

Botrychium minganense

Element Code: PPOPH010R0

Mingan moonwort

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G5
	State:	None		**State:**	S4
	Other:	Rare Plant Rank - 4.2, USFS_S-Sensitive			
Habitat:	**General:**	LOWER MONTANE CONIFEROUS FOREST, UPPER MONTANE CONIFEROUS FOREST, BOGS AND FENS, MEADOWS AND SEEPS.			
	Micro:	CREEKBANKS IN MIXED CONIFER FOREST. 1190-3295 M.			

Occurrence No.	38	**Map Index:**	73117	**EO Index:**	92466	**Element Last Seen:**	2010-07-14
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2010-07-14
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2014-01-30

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.93158 / -119.94737	**Accuracy:**	80 meters
UTM:	Zone-11 N4313316 E244511	**Elevation (ft):**	6580
PLSS:	T12N, R18E, Sec. 01, NW (M)	**Acres:**	0.0

Location: TRAIL OFF OF SKI RUN BLVD, ~0.15 AIR MI SSW OF ITS INTERSECTION WITH LUPINE WAY, SOUTHWEST OF HEAVENLY VALLEY SKI LODGE.

Detailed Location: AT THE END OF SKI RUN BLVD THROUGH THE GATES THERE IS A TRAIL TO THE SOUTH; POPULATION IS TO THE SOUTHEAST. MAPPED IN THE SW 1/4 OF THE NW 1/4 OF SECTION 1 ACCORDING TO 2010 ENGELHARDT COORDINATES.

Ecological: LEFT SIDE OF SEEP, AT BASE OF ALNINC IN LITTER, WITH CIRCAEA ALPINA AND RIBNEV ABOVE. THE RARE BOTRYCHIUM ASCENDENS IS LOCATED ~5-6 M DOWNSTREAM.

General: 8 PLANTS REPORTED ON A 2010 SURVEY FORM FOR B. ASCENDENS & B. MINGANENSE; POPULATION NUMBER PRESUMED TO BE FOR B. ASCENDENS ONLY, THOUGH IT MAY REPRESENT A COMBINED TOTAL FOR BOTH SPECIES.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	39	**Map Index:**	91355	**EO Index:**	92468	**Element Last Seen:**	2019-06-06
Occ. Rank:	Good			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-06-06
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-02-19

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.89321 / -119.94913	**Accuracy:**	specific area
UTM:	Zone-11 N4309061 E244222	**Elevation (ft):**	6640
PLSS:	T12N, R18E, Sec. 14, NE (M)	**Acres:**	2.0

Location: SOUTHEAST OF SIERRA HOUSE; APPROXIMATELY 2.3 AIR MILES WEST OF HIGH MEADOWS AND 2 AIR MILES NORTHWEST OF TRIMMER PEAK.

Detailed Location: TAKE HIGH MEADOWS ROAD AND PARK AT THE 2ND FOREST SERVICE GATE PARKING LOT. TAKE THE FOOT TRAIL TO POWERLINES (BEARING 194 DEGREES) TO POST 651/652. MAPPED IN THE NE 1/4 OF THE NE 1/4 OF SECTION 14 BASED ON LTBMU DIGITAL DATA.

Ecological: FOUND ON BOTH SIDES OF A SMALL MOSSY STREAMBANK IN PLAGIOMNIUM MOSS WITHIN A POPULUS TREMULOIDES AND MIXED CONIFER STAND. OVERSTORY COMPOSED OF POPULUS TREMULOIDES, CALOCEDRUS DECURRENS, AND ABIES CONCOLOR.

General: 1 PLANT OBSERVED IN 2009. 4 PLANTS OBSERVED IN 2010. 42 PLANTS OBSERVED IN 2015. ONLY 1 PLANT FOUND IN 2017; HEAVY SNOWPACK AND WET SPRING, NOTICEABLE DELAY IN PHENOLOGY THIS SEASON. 3 PLANTS IN 2019. LTBMU POPULATION #BOMI2.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	71	**Map Index:**	99349	**EO Index:**	100805	**Element Last Seen:**	2013-06-11
Occ. Rank:	Fair			**Presence:**	Presumed Extant	**Site Last Seen:**	2013-06-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2016-03-01

Quad Summary: Emerald Bay (3812081), Meeks Bay (3912011)

County Summary: El Dorado

Lat/Long:	38.99995 / -120.12566	**Accuracy:**	specific area
UTM:	Zone-10 N4320702 E748916	**Elevation (ft):**	7100
PLSS:	T13N, R17E, Sec. 5, SW (M)	**Acres:**	1.0

Location: ABOVE RUBICON BAY; APPROXIMATELY 0.7 AIR MILE WEST OF PARADISE FLAT AND 0.8 AIR MILE NNE OF RUBICON PEAK.

Detailed Location: TAKE HWY 89 NORTH OF SOUTH LAKE TAHOE TO RUBICON BAY AND SCENIC DR. TAKE A LEFT ON SCENIC DR HEADING UP THROUGH THE SUBDIVISION TO THE END OF HIGH PARK RD. PARK HERE AND FOLLOW CONTOUR LINE 7160 TO THE PERENNIAL STREAM. N SIDE OF STREAM.

Ecological: ROCKY PERENNIAL STREAM WITH ABUNDANT BRYOPHYTES. E-FACING 45% SLOPE. ASSOCIATED WITH ALNUS INCANA, THALICTRUM FENDLERI, ATHYRIA AMERICANA, VIOLA GLABELLA, LILIUM PARVUM, EPILOBIUM CILIATUM, & GALIUM APARINE. NEAR A FALLEN LOG.

General: 2 PLANTS OBSERVED IN 2012. 8 PLANTS IN 2013. POPULATION NEAR A LOG THAT ENTERS THE STREAM CHANNEL AND A LARGE ALGAE COVERED ROCK. PREVIOUSLY IDENTIFIED AS B. MONTANUM (FORMER EO #25). B. ASCENDENS ALSO OCCURS IN AREA.

Owner/Manager: USFS-LAKE TAHOE BMU

Occurrence No.	151	**Map Index:**	B7037	**EO Index:**	120103	**Element Last Seen:**	2019-07-11
Occ. Rank:	Unknown			**Presence:**	Presumed Extant	**Site Last Seen:**	2019-07-11
Occ. Type:	Natural/Native occurrence			**Trend:**	Unknown	**Record Last Updated:**	2021-02-24

Quad Summary:	South Lake Tahoe (3811988)
County Summary:	El Dorado

Lat/Long:	38.88725 / -119.96546	**Accuracy:**	specific area
UTM:	Zone-11 N4308446 E242784	**Elevation (ft):**	6470
PLSS:	T12N, R18E, Sec. 14, W (M)	**Acres:**	2.0

Location:	ALONG A TRIBUTARY TO TROUT CREEK, ~1.3 AIR MILES SOUTH OF SIERRA HOUSE, EAST OF LAKE TAHOE AIRPORT.
Detailed Location:	MAPPED ACCORDING TO USFS DIGITAL DATA, ON THE CENTER OF THE WESTERN EDGE OF SECTION 14.
Ecological:	ON THE NORTH MOSSY BANK OF A SMALL CHANNEL IN RIPARIAN VEGETATION TYPE. PARTIAL SHADE. ASSOCIATED WITH ABIES CONCOLOR, ALNUS INCANA, AND EQUISETUM ARVENSE.
General:	1 PLANT OBSERVED IN 2019; PLANT DID NOT SHOW ENOUGH PHENOLOGICAL TRAITS FOR FULL ID, BUT USING ALL AVAILABLE TRAITS, IDED AS BOTRYCHIUM MINGANENSE.
Owner/Manager:	USFS-LAKE TAHOE BMU

Botrychium ascendens **Element Code:** PPOPH010S0

upswept moonwort

Listing Status:	**Federal:**	None	**CNDDB Element Ranks:**	**Global:**	G4
	State:	None		**State:**	S2
	Other:	Rare Plant Rank - 2B.3, USFS_S-Sensitive			
Habitat:	**General:**	LOWER MONTANE CONIFEROUS FOREST, MEADOWS AND SEEPS.			
	Micro:	GRASSY FIELDS, CONIFEROUS WOODS NEAR SPRINGS AND CREEKS. 1115-3265 M.			

Occurrence No.	1	**Map Index:** 35111	**EO Index:** 75	**Element Last Seen:**	1906-XX-XX
Occ. Rank:	Unknown		**Presence:** Presumed Extant	**Site Last Seen:**	1906-XX-XX
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	1996-04-03

Quad Summary: Echo Lake (3812071), Emerald Bay (3812081)

County Summary: El Dorado

Lat/Long:	38.87506 / -120.09673	**Accuracy:**	2/5 mile
UTM:	Zone-10 N4306919 E751863	**Elevation (ft):**	6800
PLSS:	T12N, R17E, Sec. 21, NE (M)	**Acres:**	0.0

Location: CAMP AGASSIZ IN THE LAKE TAHOE REGION.

Detailed Location: MAPPED NEAR GLEN ALPINE SPRING SOUTH OF FALLEN LEAF LAKE BASED ON COMMENTS BY A. SANDERS (1993).

Ecological:

General: THIS OCCURRENCE IS BASED UPON A 1906 COLLECTION BY A. EASTWOOD. NO OTHER SITE INFORMATION AVAILABLE.

Owner/Manager: UNKNOWN

Occurrence No.	21	**Map Index:** 73117	**EO Index:** 74048	**Element Last Seen:**	2010-07-14
Occ. Rank:	Fair		**Presence:** Presumed Extant	**Site Last Seen:**	2010-07-14
Occ. Type:	Natural/Native occurrence		**Trend:** Unknown	**Record Last Updated:**	2018-11-05

Quad Summary: South Lake Tahoe (3811988)

County Summary: El Dorado

Lat/Long:	38.93158 / -119.94737	**Accuracy:**	80 meters
UTM:	Zone-11 N4313316 E244511	**Elevation (ft):**	6560
PLSS:	T12N, R18E, Sec. 01, NW (M)	**Acres:**	0.0

Location: APPROXIMATELY 0.15 AIR MI SSW OF THE INTERSECTION OF LUPINE WAY AND SKI RUN BLVD, E OF PIONEER TRAIL, SOUTH LAKE TAHOE.

Detailed Location: MAPPED BY CNDDB ACCORDING TO 2007 GPS COORDINATES PROVIDED BY DILLEY IN THE SW 1/4 OF THE NW 1/4 OF SECTION 1.

Ecological: GROWING IN BARE, WET SOIL ON RIGHT SIDE OF MUDDY SEEP (LOOKING DOWNHILL) UNDER ALNUS INCANA AND RIBES NEVADENSIS BY A STREAM IN PINUS JEFFREYI FOREST. SOME PYROLA ASARIFOLIA, GEUM MACROPHYLLUM, AND MOSS SPECIES NEARBY.

General: 4 PLANTS SEEN IN 2007. 1 PLANT SEEN IN 2009 (TWO ADDITIONAL STEMS MAY HAVE ALSO BEEN BOTRYCHIUM ASCENDENS BUT TOP HAD BEEN EATEN). 1 PLANT SEEN IN 2010. WITH THE RARE B. MINGANENSE.

Owner/Manager: USFS-LAKE TAHOE BMU

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
Phone: (775) 861-6300 Fax: (775) 861-6301

In Reply Refer To: February 12, 2024
Project Code: 2024-0048099
Project Name: South Tahoe Public Utility District - Tahoe Mountain Waterline Replacement Project

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

Reno Fish And Wildlife Office
1340 Financial Boulevard, Suite 234
Reno, NV 89502-7147
(775) 861-6300

PROJECT SUMMARY

Project Code: 2024-0048099
Project Name: South Tahoe Public Utility District - Tahoe Mountain Waterline Replacement Project
Project Type: Water Supply Pipeline - Maintenance/Modification - Below Ground
Project Description: Replace existing aged water distraction lines with new pipelines and install fire hydrants.
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.89188455,-120.03396471877963,14z

Counties: El Dorado County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
North American Wolverine *Gulo gulo luscus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5123	Threatened
Sierra Nevada Red Fox *Vulpes vulpes necator* Population: No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4252	Endangered

BIRDS

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

REPTILES

NAME	STATUS
Northwestern Pond Turtle *Actinemys marmorata* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1111	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Sierra Nevada Yellow-legged Frog *Rana sierrae* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9529	Endangered

FISHES

NAME	STATUS
Lahontan Cutthroat Trout *Oncorhynchus clarkii henshawi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3964	Threatened

INSECTS

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

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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 in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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

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, see the PROBABILITY OF PRESENCE SUMMARY below 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. https://ecos.fws.gov/ecp/species/1626	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 Dec 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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

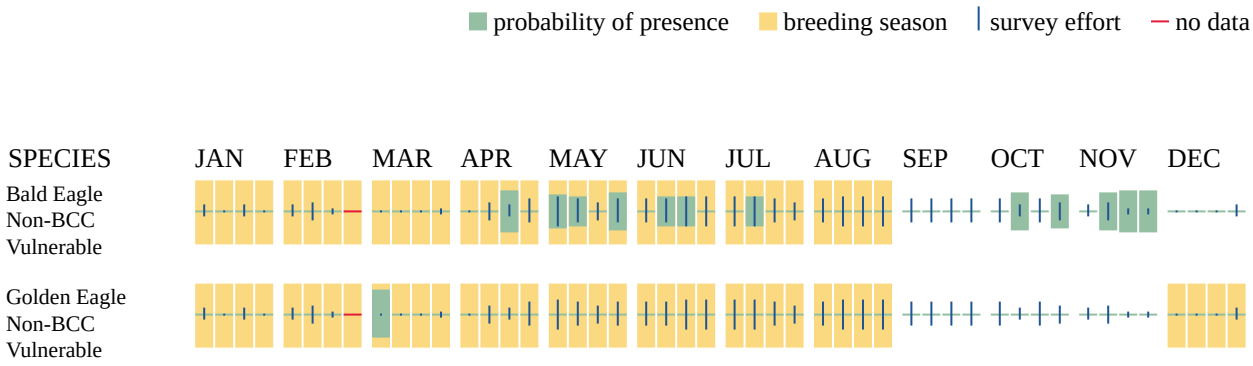
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)

A week is marked as having no data if there were no survey events for that week.



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

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 in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below 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. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black-throated Gray Warbler *Dendroica nigrescens* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9584	Breeds May 1 to Jul 20
California Gull *Larus californicus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10955	Breeds Mar 1 to Jul 31
Cassin's Finch *Carpodacus cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9465	Breeds May 15 to Aug 10
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Lawrence's Goldfinch *Carduelis lawrencei* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Oak Titmouse *Baeolophus inornatus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31

NAME	BREEDING SEASON
Western Grebe *aechmophorus occidentalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6743	Breeds Jun 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 "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
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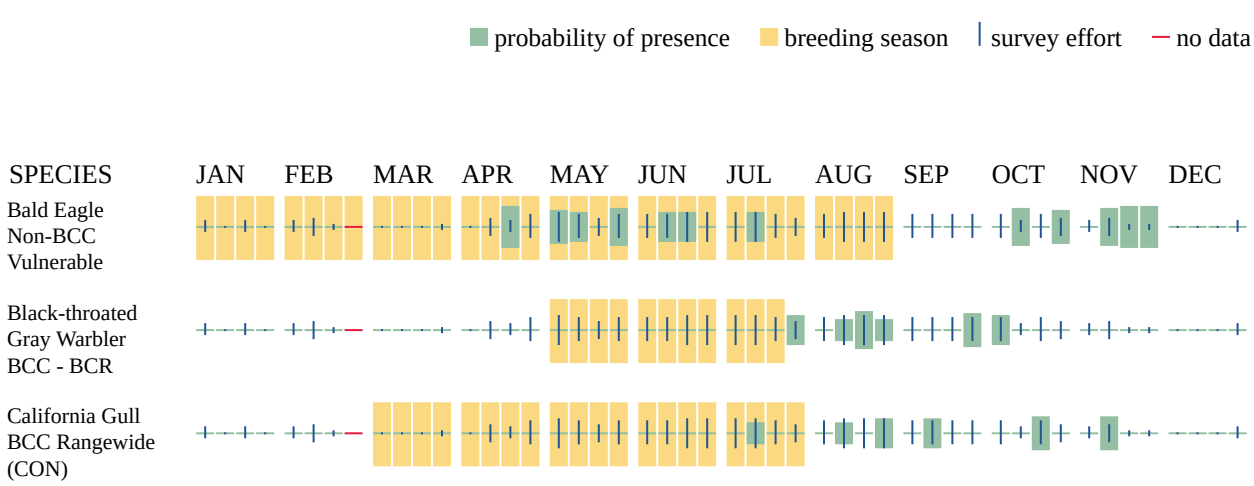

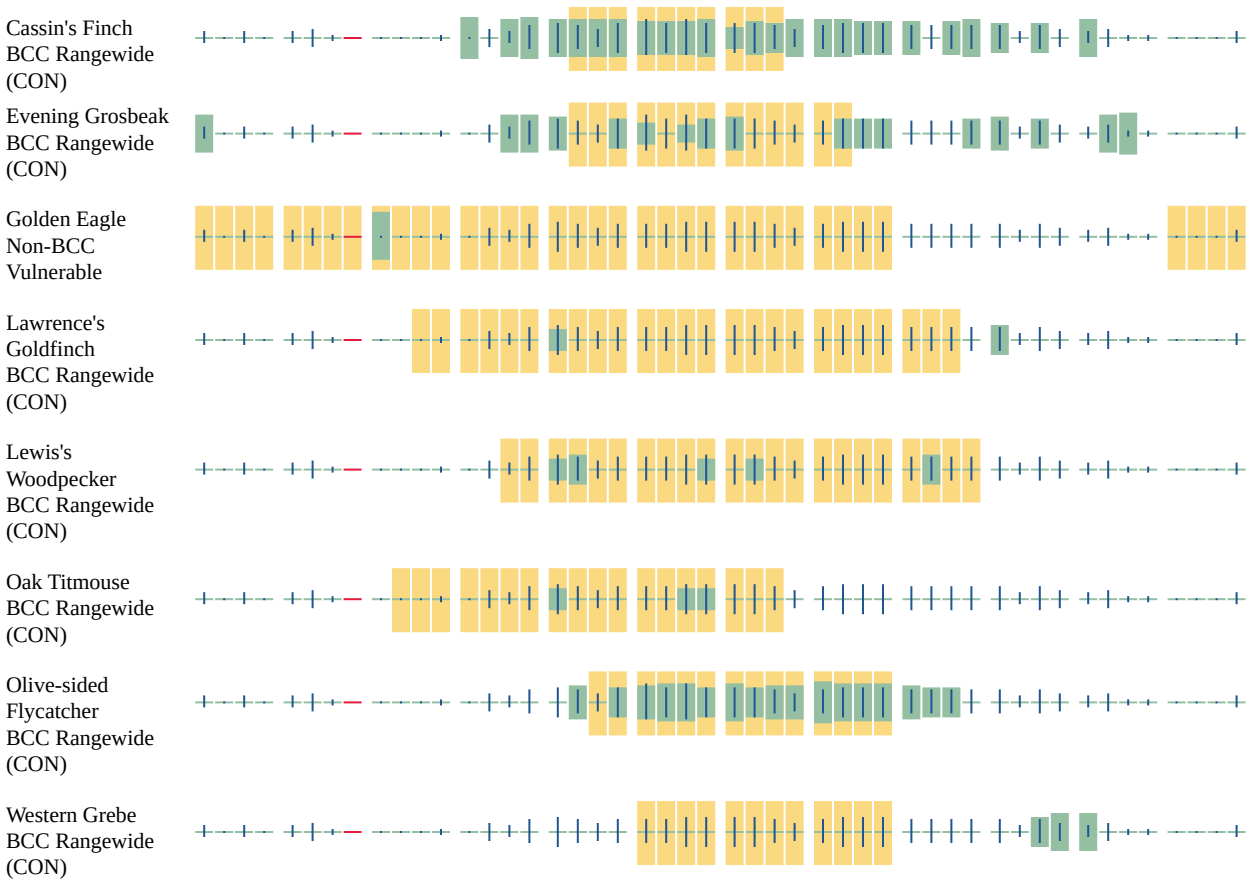

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- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

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.

FRESHWATER EMERGENT WETLAND

- PEM1B

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Garth Alling
Address: PO Box 1297
City: Zephyr Cove
State: NV
Zip: 89448
Email galling@sierraecotonesolutions.com
Phone: 5304162440

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Lahontan Regional Water Quality Control Board (Region 6)
Name: Julie Ryan
Email: jryan@stpud.us