

APPENDIX D
NATURAL ENVIRONMENT STUDY (NES)

San Bernardino Class 1 Bike Path Project Natural Environment Study



West and East San Bernardino Avenues
from North Upper Truckee Road to Apache Avenue
Meyers, CA
District 3-El Dorado County
STPL 5925(162)
July 2019

Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
and El Dorado County

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Summary

This summary presents the results of the impact analysis, findings of the supporting technical reports, and a summary of the general biological environment. This section also includes a discussion of any potential impacts, and proposed mitigation measures and project permits that are anticipated for this project.

El Dorado County, in cooperation with Caltrans, proposes to construct a new quarter-mile class 1 bike path connecting East and West San Bernardino Avenues. The trail alignment will pass through Tahoe Paradise Park and include a bridge over the Upper Truckee River near an existing South Tahoe Public Utility District sheet metal/water line protection wall. The bridge will be constructed to minimize impacts on the river floodplain. The proposed path would be located on land owned or managed by the Tahoe Paradise Recreation and Park District, the United States Forest Service and the County. A new class 3 bike route would be established along West and East San Bernardino Avenues that will connect to each side of the new class 1 bike path (El Dorado County 2017).

The purpose of this project is to connect the residential areas on the west and east sides of the Upper Truckee River with non-motorized routes. The County desires to provide better non-motorized circulation and recreational opportunities and reduce dependency on the automobile throughout the Meyers area. This project is part of a larger Tahoe Regional Planning Agency (TRPA) goal to improve bicycling and walking, provide multiple mobility options, and maintain healthy communities in their Linking Tahoe: Active Transportation Plan.

Temporary impacts to migratory nesting birds could occur during construction of the bike path. Pre-construction clearance surveys, discussed later in further detail, are recommended to minimize potential impacts to migratory nesting birds. The construction of the shared use bike path over a dirt path will permanently impact existing vegetation; however, the majority of the existing vegetation is composed of ruderal species including noxious weeds and/or non-native grasses.

The area where the bridge is being installed contains potential habitat for federally listed Sierra Nevada yellow legged frog (SNYLF) and Lahontan cutthroat trout (LCT). The construction of the bridge has been specifically designed to stay out of the channel of the Upper Truckee River avoiding any direct impacts to this habitat. All TRPA best management practices and other regulatory requirements and permit conditions will be deployed during construction to minimize water quality related impacts in the project area.

A United States Fish and Wildlife Service species list was accessed through the Information Planning and Conservation website for the proposed project. Effects to federally listed species were assessed and are discussed in further detail in this Natural Environment Study, but the results of the Information Planning and Conservation report indicate no critical habitat exists within the project area. As a result, it was determined that the project is not likely to adversely affect federally listed species; therefore, no Section 7 consultation is proposed.

Based on our review of the biological factors and waters of the State conditions we believe the following permits may be required but will depend on final project improvements and impacts.

- Lahontan Regional Water Quality Control Board Section 401 Water Quality Certification

Natural Environment Study

- Lahontan Regional Water Quality Control Board Report of Waste Discharge
- Lahontan Lake Tahoe Construction General Permit
- Tahoe Regional Planning Agency Project Permit
- El Dorado County Encroachment Permit
- USFS Special Use Permit

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List of Abbreviated Terms

AOI	Area of Impact
BSA	Biological Study Area
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CDFG	California Fish and Game
CDFW	California Department Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CPESC	Certified Professional in Erosion and Sediment Control
CWA	Clean Water Act
ESA	Federal Endangered Species Act
EIP	Environmental Improvement Program
Ft	foot/feet
IPaC	Information Planning and Conservation
m	meter(s)
NES	Natural Environment Study
NOAA Fisheries	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
OHWM	Ordinary High Water Mark
PM	post mile
SSS	special status species
TRPA	Tahoe Regional Planning Agency
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geological Survey
USFWS	United States Fish and Wildlife Service
WOUS	Waters of the United States

Chapter 1 - Introduction

The purpose of this Natural Environmental Study (NES) is to describe the existing biological environment and how this project will affect that environment including plants, animals, and natural communities occurring in the biological study area. We have defined two boundaries that are discussed in this report including the Project Impact Area and the Biological Study Area. The Project Impact Area is approximately 6.7 acres. The Biological Study Area (BSA) includes the Project Impact Area plus a one-mile buffer. The project is located along East and West San Bernardino Avenues between North Upper Truckee Road and Tahoe Paradise Park in South Lake Tahoe, California.

Project History

The purpose of the Project is to provide a non-motorized transportation and recreation corridor to improve connectivity to the surrounding recreation and residential areas. The Meyers Area Plan seeks to encourage pedestrian and bicycle linkages between residential areas, recreation sites, and commercial areas while accommodating pedestrians throughout the Area Plan by providing safe and functional pathways. This Project is also part of a region wide Link Tahoe: Active Transportation Plan to promote non-motorized transportation. The Project builds upon the Meyers Bikeway and provides a critical link to the bicycle network between the residential areas of North Upper Truckee Road and the surrounding Meyers community. In addition, the bike path will connect subdivisions off of North Upper Truckee Road to the Lake Valley State Recreation Area (Washoe Meadows) and the Lake Tahoe Golf Course which provide numerous recreational opportunities and are located directly adjacent to the existing County pathway network.

Project Description

Located in eastern El Dorado County, within unincorporated El Dorado County in the Lake Tahoe Basin, the project aims to construct a bike path facility along West San Bernardino Avenue and East San Bernardino Avenue from North Upper Truckee Road to Apache Avenue. The bike path will cross County rights of way (ROW), Tahoe Paradise Park, and United States Forest Service parcels. The path will cross the Upper Truckee River and provide connections to Washoe Meadows State Park, Tahoe Paradise Park, and the Lake Tahoe Environmental Science Magnet School. The project builds upon the Meyers Bikeway and provides a critical link to the bicycle network between the residential areas off of North Upper Truckee Road and the surrounding Meyers community.

Existing Conditions

The Project Impact Area is located about six miles southwest of Lake Tahoe in Meyers and approximately one-half mile north of Highway 50 (Appendix A, **Figure 1**). No bike facilities (class 1, class 2, etc.) are present along the road in the existing condition along West and East San Bernardino Avenues. There is an existing informal dirt path mainly used for utility (sewer/water) access along the proposed alignment of the new bike path on USFS land. This proposed class 1 bike path between the East and West San Bernardino Avenues is bisected by the Upper Truckee River.

Appendix B includes an alternatives exhibit (**Exhibit A**) and the preliminary 30% drawings for the Project (**Exhibit B**). The alternatives are described in more detail below.

Preferred Alternative 1

- Path alignment generally follows the existing disturbed trail;
- Class 1 bike path from the end of the subdivision limits at West San Bernardino Ave, bridge over the Upper Truckee River to the paved parking lot at Tahoe Paradise Park; and,
- Class 3 (Bike Route) and associated roadway signage within the residential areas along West San Bernardino Ave and East San Bernardino Avenues.

Alternative 2

- Similar to Alternative 1 with a differing alignment and crossing point over the Upper Truckee River downstream of the existing steel sheet pile, to the paved parking lot at Tahoe Paradise Park.

Alternative 3

- A longer alignment veering to the north along the utility access road and crosses Tahoe Paradise Park just south of the existing picnic area.

Chapter 2 - Study Methods

Regulatory Requirements

The following regulatory requirements are applicable for the Project. The Project intends to satisfy all applicable Federal and State regulations as well as local ordinances and regulations that protect biological resources.

2.1. Federal Regulatory Requirements

2.1.1.1 Endangered Species Act

The Federal Endangered Species Act (ESA) protects plants and wildlife that are listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS). Section 9 of the ESA prohibits the taking of endangered wildlife, where taking is defined as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct” (50 CFR 17.3). This statute also governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging-up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law.

Under Section 7 of the ESA, federal agencies are required to consult with the USFWS or National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) as applicable if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS or NOAA Fisheries may issue an incidental take statement allowing take of the species that is incidental to another authorized activity provided the action will not jeopardize the continued existence of the species. Section 10 of ESA provides for issuance of incidental take permits to private parties provided a habitat conservation plan is developed.

2.1.1.2. Clean Water Act

The United States Army Corps of Engineers (USACE) Regulatory Branch regulates activities that discharge dredged or fill materials into Waters of the United States, which includes wetlands (WOUS) under Sections 401 and 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. A Section 404 permit will most likely not be required as the Project is not proposing to impact federally jurisdictional waters.

Section 401 of the CWA requires that an applicant proposing to conduct any activity that may result in a discharge to a WOUS must apply for and secure a Section 401, Water Quality Certification prior to construction activities. The Lahontan Regional Water Quality Control Board (Lahontan), Region 6 will administer the Section 401 Water Quality Certification for this project. As there is a potential to impact water quality, a Section 401 Water Quality Certification is required.

2.1.1.3. Migratory Bird Treaty Act

The Migratory Bird Treaty Act makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California

Fish and Game (CDFG) Code (Section 3500) also prohibits the destruction of any nest, egg, or nestling.

If vegetation removal or ground disturbance near potential migratory bird or SSS nesting habitat is proposed during the nesting season (typically February 1 through September 1), a survey for active bird nests shall be conducted by a qualified biologist no more than two weeks prior to initiation of these activities. If nests are identified, then avoidance, minimization, or other mitigation measures must be implemented.

2.1.1.4. Executive Order 13112 – Invasive Species

Executive Order 13112 requires federal agencies to combat the introduction or spread of invasive species in the United States. Invasive species are defined as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.”

Federal Highway Administration (FHWA) guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive plants that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.1.1.5. United States Forest Service Special-Use Permit

A Special-Use Permit will be obtained by the County for building on US Forest Service (USFS) land.

2.1.2. State Regulatory Requirements

2.1.2.1. California Environmental Quality Act

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the CDFG Code, an Incidental Take Permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could result in the “take” of a State listed threatened or endangered species. Under the CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species proposed for listing (called “candidates” by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. A Section 2081 permit is issued when a project is consistent with an existing Biological Opinion. The Project is not expected to adversely affect any species listed by the CESA at this time consultation with the CDFW pursuant to CESA is not required for the Project.

2.1.2.2. California Endangered Species Act

Pursuant to the CESA and Section 2081 of the CDFG Code, an Incidental Take Permit from the California Department of Fish and Wildlife (CDFW) is required for projects that could result in the “take” of a State listed threatened or endangered species. Under the CESA, “take” is defined as an activity that would directly or indirectly kill an individual of a species proposed for listing (called “candidates” by the state). Section 2080 of the CDFG Code prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. A Section 2081 permit is issued when a

project is consistent with an existing Biological Opinion. The project is not expected to adversely affect any species listed by the CESA at this time consultation with the CDFW pursuant to CESA is not required for the project.

2.1.2.3. Porter-Cologne Water Quality Control Act

The Porter-Cologne Act provides the State with very broad authority to regulate “waters of the State” (which are defined as any surface water or groundwater, including saline waters). The State Regional Water Quality Control Board is granted ultimate authority over water quality policy in the State of California. Before allowing discharges that may affect the quality of Waters of the State, a Report of Waste Discharge must be filed with the LRWQCB. A Report of Waste Discharge will be prepared for LRWQCB’s approval.

2.1.2.4. California State Water Resources Control Board, Construction General Permit Order 2009-0009-DWQ

If the Project disturbs more than one (1) acre of land disturbance, then the project owner will need to apply for coverage under the Construction General Permit Order R6T-2016-0010. This permit is issued by the LRWQCB. If the Project will disturb more than one acre of land; the County will need to apply for coverage under the Tahoe Construction General Permit.

2.1.2.5. California Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (CDFG Code Sections 1900-1913) was created in order to “preserve, protect and enhance rare and endangered plants in this State.” The NPPA is administered by CDFW. The Fish and Wildlife Commission has the authority to designate native plants as “endangered” or “rare” and to protect endangered and rare plants from take. CESA provided further protection for rare and endangered plant species, but the NPPA remains part of the CDFG Code. No species protected by the California NPPA have been identified in the Project Impact Area. 2.1.2.6. California Department of Fish and Wildlife Section 1602 Streambed Alteration Agreement

Sections 1600–1616 of the CDFG Code protect waters of the State. Section 1602 of the code regulates any work that will: (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. For project activities that may affect stream channels and/or riparian vegetation regulated under Sections 1600 through 1603, CDFW authorization is required in the form of a Streambed Alteration Agreement. This project may need to obtain a streambed alteration agreement from the CDFW.

2.1.3. El Dorado County

2.1.3.1. Encroachment Permit

For work being conducted within a County-maintained right-of-way, an Encroachment Permit will be needed pursuant to California Streets and Highway Codes and County Ordinance Code Section 12.04.010. This Project will need an Encroachment Permit for the work.

2.1.3.2. Grading Permit

Grading permits are not required for capital improvement projects.

2.1.4. Tahoe Regional Planning Agency

A permit from TRPA will be required for this Project through their Environmental Improvement Program (EIP).

2.2 Studies Required

2.2.1 Biological Study Area

The BSA includes an area where special status species or their habitat may exist that is outside of the footprint of the proposed improvements. The BSA is important because it considers the possible movement of species, impacts to SSS as a result of the project that extend beyond the Project Impact Area, and allows the biologist to evaluate possible affects to SSS as a result of changes to Project limits and Project design.

The 6.7-acre Project Impact Area is located along West and East San Bernardino Avenues between North Upper Truckee Road and Apache Avenue (Appendix A, **Figure 1**).

2.2.2 Literature Search

NCE conducted a literature and database review to identify existing biological and botanical information within and adjacent to the Project Impact Area. The purpose of this review was to identify vegetation communities in the BSA and to develop a list of potential special status species (SSS) and critical habitat occurring within the BSA (1-mile radius). Special status species are all listed biological or botanical species with special protection or consideration under federal, state, and local regulatory policies.

NCE scientists conducted reconnaissance-level surveys in order to inventory habitats, SSS, and non-SSS observed within the Project Impact Area. These surveys are discussed in more detail below. Vegetation types were initially identified with the CALVEG Alliances GIS data (USDA 2016) (Appendix A, **Figure 2**), and then verified based on the NCE reconnaissance-level surveys. The most relevant searches, reviews, and requests included:

- California Natural Diversity Data Base (CNDDDB)
 - 2019 Natural Diversity Data
- California Native Plant Society (CNPS)
 - 2019 Inventory of Rare and Endangered Plants
- Natural Resource Conservation Service (NRCS)
 - Web Soil Survey
- NOAA National Marine Fisheries Service (NOAA Fisheries) Species List
 - The Project is located outside of NOAA Fisheries jurisdiction; therefore, a NOAA Fisheries species list is not required.
- TRPA Special Interest Species
 - Suitable meadow and fawning habitat that could sustain the reproductive and cover needs for mule deer is not present within the project area.
 - Suitable nesting habitat for the northern goshawk is not present within the Project Impact Area.
 - No improvements are proposed along the Lake Tahoe shoreline.
 - TRPA-approved temporary Best Management Practices (BMP) will be utilized during construction to minimize any disturbance due to project construction.
- USFWS
 - 2019 Federally endangered and threatened species that occur in or may be affected by the Project
- USACE
 - 1987 Corps of Engineers Wetlands Delineation Manual
- USFWS and CDFW
 - Federal and state listed species that may be affected by the Project
- US Department of Agriculture (USDA)
 - 2018 CALVEG GIS Layers

2.2.3 Personnel and Survey Dates

On July 10, 2019 a WOUS delineation survey was conducted by NCE scientists Debra Lemke (18 years of experience) and Sarah Bryan (2 years of experience). A reconnaissance-level botanical survey, wildlife survey, SNYLF Visual Encounter Survey (VES) and habitat assessment were performed on June 11 and July 10, 2019 by NCE scientist Quinn Radford (8 years of experience).

2.2.4 Survey Methods

The purpose of the reconnaissance-level survey was to 1) evaluate and verify on site vegetation communities, 2) verify no critical wildlife habitats were present in the Project Impact Area, and 3) develop an inventory for any possible SSS and non-SSS biological and botanical resources.

A VES was performed to look for the presence of SNYLF. Survey equipment consisted of a dip net and binoculars. The field survey involved walking to scan the entirety of the survey area. The survey followed VES protocol to determine occupancy. This involved visually scanning the search area, searching in a zigzag fashion where appropriate, searching microhabitats, waving dip nets over grass and bank vegetation to flush frogs and periodically dipping dip nets where appropriate. The survey was conducted at the appropriate time of day and season, consistent with the survey

protocol. During the VES, the biologist approached the area where the proposed bridge is being installed and used binoculars from a distance, to not startle any potential individuals, in an effort to positively identify SNYLF. The biologist scanned each shoreline of the river 100 feet on either side of the proposed bridge crossing. The biologist also scanned the river and shallow areas for any individuals.

Botanical surveys were conducted by walking the entire study area following the CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). While walking the Project Impact Area and documenting observed plant species, the biologist frequently scanned trees and the sky for birds with binoculars and made note of any animals observed. All plant and animal species observed were identified and recorded in **Table 1** (Section 3.1.3 below).

The WOUS delineation of aquatic resources followed the methods described in the 1987 Corps of Engineers Wetland Delineation Manual and regional supplements.

2.2.5 Agency Coordination and Professional Contacts

Agency coordination has been limited to discussions with the County and USFWS to date.

Further coordination with the USFWS, CDFW, RWQCB, and/or USACE will be based on the results of this NES and technical studies. Any additional survey requirements will be determined during this coordination which will be administered by the County and Caltrans.

2.2.6 Limitations That May Influence Results

There are no known limitations or constraints that may influence the results of the analysis or field surveys. Surveys were timed appropriately, and standard protocols were followed. There was no atypical weather and no accelerated schedule.

The survey took place during the 2019 growing season to ensure that plant species within the BSA would be actively growing and identifiable at the time of the survey.

Chapter 3 - Results: Environmental Setting

3.1. Study Area

Land use in the BSA includes both private and public lands. The BSA is generally made up of privately-owned parcels and public right-of-way with some large sections of federal and state land in the central section of the BSA. (Appendix A, **Figure 3**)

3.1.2 Physical Conditions

The Project Impact Area is located in the Echo Lake USGS 7.5-minute topographic quadrangle. The elevation within the project impact area ranges from 6,400 ft. to 6,300 ft. above mean sea level. The topography of the Project Impact Area slopes gently downward from the eastern and western edges of the project impact area toward the Upper Truckee River, near the center of the Project Impact Area (Appendix A, **Figure 1**; Appendix C **Photo 1**).

The regional climate where the Project Impact Area is located consists of warm dry summers and cold, wet winters. Temperatures vary throughout the year from an average maximum temperature of 79.7 degrees Fahrenheit in July to an average minimum temperature in January of 16.4 degrees Fahrenheit (WRCC 2019). The majority of precipitation falls from October to April averaging approximately 41 inches per year. Annual snowfall is approximately 200 inches per year (WRCC 2019).

Per the NRCS Soil Web Survey, the Project Impact Area contains 67.3% Celio loamy coarse sand, 0 to 5 percent slopes; 27.2% Meeks gravelly loamy coarse sand, 5 to 15 percent slopes, stony; and 5.5% Tahoe complex, 0 to 5 percent slopes, gravelly. Below we describe each soil unit in more detail.

Celio loamy coarse sand is a soil component that occurs on outwash terraces. The parent material consists of alluvium and/or outwash. Depth to a root restrictive layer is 35 to 59 inches. The natural drainage class is somewhat poorly drained. Water movement in the most limiting layer is high. Available water storage in profile is very low. Depth to water table is 12 to 30 inches. Frequency of flooding is rare. Frequency of ponding is occasional. This component is in the F022AE005CA, *Pinus contorta* var. *murrayana*-*Juniperus occidentalis*/*Ribes*/*Carex rossii* ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Meeks gravelly loamy coarse sand is a soil component that occurs on moraines. The parent material consists of outwash and/or till derived from granodiorite. Depth to a root restrictive layer 41 to 73 inches. The natural drainage class is somewhat excessively drained. Water movement in the most limiting layer is moderately low to moderately high. Available water storage in profile is very low. Depth to water table is more than 80 inches. Frequency of flooding is none. Frequency of ponding is none. This component is in the F022AE007CA, *Abies concolor* - *Pinus jeffreyi*/*Ceanothus cordulatus* -*Symphoricarpos mollis*/*Kelloggia galioides* ecological site. Nonirrigated land capability classification is 6s. This soil does not meet hydric criteria.

Tahoe complex is a soil component that occurs in valley flats and flood plains. The parent material consists of Alluvium derived from granitic and volcanic rock. Depth to a root restrictive layer is more than 80 inches. The natural drainage class is poorly drained. Water movement in the most

limiting layer is moderately high to very high. Available water storage in profile is low. Depth to water table is 0 to 12 inches. Frequency of flooding is occasional. Frequency of ponding is occasional. The component is in the R022AE214CA, gravelly flats ecological site. Nonirrigated land capability classification is 6w. This soil is considered hydric.

3.1.3 Biological Conditions in the Biological Study Area

3.1.3.1 Vegetation

The majority of the BSA is composed of a Jeffrey pine forest and Lodgepole pine forest. Sierran mixed conifer, sagebrush alliance and urban areas are also present within the BSA. Thickets of willow and alder occur along riparian corridors. None of the plant communities in the Project Impact Area or the BSA qualify as Natural Communities of Special Concern (Sawyer et al. 2009).

Jeffrey Pine Forest

The Jeffrey pine (*Pinus jeffreyi* Forest Alliance) plant community is composed of Jeffrey pine and white fir (*Abies concolor*) as co-dominant species in the canopy layer. This association occurs throughout the Sierra Nevada mountains raised stream benches, ridges, and plateaus on all slopes and aspects. Soils are generally infertile and shallow.

Lodgepole Pine Forest

Lodgepole pine (*Pinus contorta* ssp. *murrayana*) is the dominant or co-dominant in the tree canopy with White fir (*Abies concolor*). This alliance grows in a variety of conditions and occurs in terraces, lake and meadow margins, and depressions that flood seasonally; upland slopes and ridges to the tree line. Stands are most common and extensive in the Sierra Nevada. This conifer attains a height of 100 feet and can live to over 600 years old and are moderately shade tolerant.

Perennial Grassland

Perennial grassland habitat occurs on ridges and south facing slopes, alternating with forest and scrub in valleys and north facing slopes. This is a wide ranging and variable habitat throughout the state based on climactic and land use considerations. Key grasses include Idaho fescue (*Festuca idahoensis*), Red fescue (*Festuca rubra*), and Italian wild rye (*Festuca perennis*).

Sagebrush Alliance

Sagebrush (*Artemesia tridentata*) is a dominant or codominant in the shrub canopy and is associated with Jeffrey pine at low cover. This plant is found in many vegetation types. Many forests and woodlands in the ponderosa pine, Jeffrey pine, single-leaf pinyon, lodgepole pine may have sagebrush as an understory component. Stands without trees occur as openings in these forests. Stands occurs in drier portions and microsites throughout most of the Sierra Nevada range. Soils are deep lacking well developed hardpans, gravel, and rock fragments. Shrubs live to 50 years.

Sierran Mixed Conifer

The Sierran mixed conifer is a mix of hardwood and conifer species that forms a multilayered forest. Historically burning and logging have caused a wide variability in stand structure. Five conifers and one hardwood typify the mixed conifer forest. White fir tends to be the most common species due to its shade tolerance and ability to survive long periods in brush fields. Jeffrey pine dominates at high elevations and on cold sites with incense cedar (*Calocedrus decurrens*), ponderosa pine (*Pinus ponderosa*), sugar pine (*Pinus lambertiana*) and California black oak (*Quercus kelloggii*). At maturity these conifers range from 100 to 200 feet tall.

Montane Chaparral:

This community of plants can vary from treelike (up to 30 ft) to prostrate often forming impenetrable thickets. The structure of this habitat is affected by influence of browsing animals, fire, erosion, logging, and site quality. On shallow granite soils in the Sierra Nevada, low dense growths of pine mat manzanita (*Arctostaphylos nevadensis*) and huckleberry oak (*Quercus vacciniifolia*) make up an edaphic climax community, associate with scattered conifers and exposed granite.

Urban Land:

Developed urban land areas are characterized by built infrastructure and impermeable surfaces. Vegetated areas are landscaped. Developed areas within the Project Impact Area include the paved corridors of East and West San Bernardino Avenue as well as developed private lots. Often these developed areas are located adjacent to disturbed natural communities.

Reconnaissance-level surveys resulted in neither botanical nor wildlife SSS detections. An inventory of common plants and animals encountered during the survey is presented in **Tables 1** and **2** below.

Table 1. Plant Species Identified Within the Project Area, July 2019

Scientific Name	Common Name	Native: Y, N
<i>Abies concolor</i>	White fir	Y
<i>Achillea millefolium</i>	Yarrow	Y
<i>Acmispon nevadensis</i>	Nevada birdsfoot trefoil	Y
<i>Alnus incana</i>	Alder	Y
<i>Aquilegia formosa</i>	Columbine	Y
<i>Arctostaphylos</i> sp.	Manzanita	Y
<i>Artemesia douglasiana</i>	California mugwort	Y
<i>Artemesia tridentata</i>	Sagebrush	Y
<i>Calocedrus decurrens</i>	Incense cedar	Y
<i>Castilleja miniata</i>	Scarlet paintbrush	Y
<i>Carex</i> sp.	Sedge	Y
<i>Ceanothus leucodermis</i>	Whitethorn	Y
<i>Dactylis glomerata</i>	Orchard grass	N
<i>Collomia grandiflora</i>	Grand collomia	Y

Scientific Name	Common Name	Native: Y, N
<i>Delphinium patens</i>	Larkspur	Y
<i>Equisetum arvense</i>	Common horsetail	Y
<i>Equisetum hyemale</i>	Scouring horsetail	Y
<i>Festuca idahoensis</i>	Blue fescue	Y
<i>Festuca perennis</i>	Italian rye grass	N
<i>Fragaria vesca</i>	Strawberry	Y
<i>Heracleum maximum</i>	Common cowparsnip	Y
<i>Juncus</i> sp.	Rush	Y
<i>Lomatium multifidum</i>	Fernleaf biscuitroot	Y
<i>Lupinus breweri</i>	Brewer's lupine	Y
<i>Lupinus lepidus</i>	Lobb's lupine	Y
<i>Lupinus polyphyllus</i>	Meadow lupine	Y
<i>Pinus contorta</i> ssp. <i>murrayana</i>	Lodgepole pine	Y
<i>Pinus jeffreyi</i>	Jeffrey pine	Y
<i>Pinus ponderosa</i>	Ponderosa pine	Y
<i>Potentilla recta</i>	Sulphur cinquefoil	N
<i>Rumex crispus</i>	Curly dock	N
<i>Rosa californica</i>	Wild rose	Y
<i>Salix lasiolepis</i>	Arroyo willow	Y
<i>Salix scouleriana</i>	Scouler willow	Y
<i>Scirpus microcarpus</i>	Mountain bog bulrush	Y
<i>Symphoricarpos mollis</i>	Snowberry	Y
<i>Trifolium pretense</i>	Red clover	N
<i>Veratrum californicum</i>	California false hellebore	Y
<i>Verbascum thapsus</i>	Woolly mullein	N
<i>Viola pupurea</i>	Goosefoot Violet	Y

3.1.3.2 Invasive species

Reconnaissance-level surveys resulted in two invasive plant detections. In support of the project environmental documentation, an Invasive Plant Risk Assessment was prepared (NCE 2019). For the purposes of this report, noxious weeds are those plants which are designated as “noxious” by the United States Department of Agriculture (USDA), or the California Department of Food and Agriculture (CDFA), and any plants listed on the California Invasive Plant Council’s (CalIPC) Invasive Plant Inventory. These plants are:

- Sulphur cinquefoil (*Potentilla recta*)
- Woolly mullein (*Verbascum thapsus*)

3.1.3.3 Wildlife

Ten bird and two mammal species were observed in the Project Impact Area during the two reconnaissance-level surveys. All wildlife species observed during the surveys were documented and are presented in the table below.

Table 2: Observed wildlife species during June 11 and July 10, 2019 surveys

Scientific Name	Common Name
Birds	
<i>Branta canadensis</i>	Canada goose
<i>Cyanocitta stelleri</i>	Steller's jay
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Mergus merganser</i>	Common merganser
<i>Poecile gambeli</i>	Mountain chickadee
<i>Sitta pygmaea</i>	Pygmy nuthatch
<i>Sphyrapicus ruber</i>	Red-breasted sapsucker
<i>Spinus pinus</i>	Pine siskin
<i>Turdus migratorius</i>	American robin
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
Mammals	
<i>Neotamias speciosus</i>	Lodgepole chipmunk
<i>Sciurus griseus</i>	Western gray squirrel

3.1.3.4 Wildlife Corridors

A wildlife corridor is an area of habitat connecting wildlife populations and larger areas of similar wildlife habitat. These corridors generally consist of native vegetation and allow wildlife species to find water, food, shelter, and potential mates. Corridors enable the movement of animals and the continuation of viable populations thus playing a role in the maintenance of biodiversity. The Project Impact Area includes portions of a wildlife corridor between the Lake Baron parking lot and the southern section of East San Bernardino Avenue. However, the project improvements will have little to no impact on the wildlife corridor due to the path not obstructing the movement of animals and the proposed path not altering the existing condition in any meaningful way.

The Upper Truckee River is a known corridor for two federally listed species including the federally threatened Lahontan cutthroat trout (LCT) and the federally endangered Sierra Nevada yellow-legged frog (SNYLF). The construction of this project will not adversely affect fish passage in the Upper Truckee River. While the Upper Truckee River and nearly all wet areas in the Lake Tahoe basin have been identified as suitable habitat for SNYLF, no SNYLF were observed following the two visual encounter surveys.

3.1.3.5 Wetlands and Other Jurisdictional Waters

NCE delineated a total of approximately 6.74 acres. NCE delineated three unnamed drainages that are potentially jurisdictional WOUS due to the presence of ordinary high-water mark (OHWM) indicators and a connection to the Upper Truckee River, which is a tributary to Lake Tahoe, a

traditional navigable waterway. NCE also delineated the Upper Truckee River which is a potentially jurisdictional WOUS due to the presence of OHWM indicators and the Upper Truckee River is a tributary to Lake Tahoe. These four drainages are presented on Appendix A, **Figure 4**.

- Unnamed Drainage 1 was dry during the survey. This drainage is a non-relatively permanent water, Cowardin classified as Intermittent, Riverine, and is approximately 0.0015 acres in size within the survey area.
- Unnamed Drainage 2 contained flow during the survey. This drainage is a relatively permanent water, Cowardin classified as Lower Perennial Riverine, and is approximately 0.0025 acres in size within the survey area.
- Unnamed Drainage 3 contained flow during the survey. The drainage is a relatively permanent water, Cowardin classified as Lower Perennial Riverine, and is approximately 0.0102 acres in size within the survey area.
- Upper Truckee River contained flow during the survey. This drainage is a relatively permanent water, Cowardin as Lower Perennial Riverine, and is approximately 0.1442 acres in size within the survey area.

3.1.3.5 Regional Species and Habitats and Natural Communities of Concern

Special status species databases were reviewed to determine the potential for SSS to occur within the Project Impact Area. The following site-specific references and background information was reviewed:

- *California Natural Diversity Database (CNDDDB)*. 2019. California Department of Fish and Wildlife, Sacramento, CA. Accessed online.
- California Native Plant Society. 2019. *Inventory of Rare and Endangered Vascular Plants of California* (online edition, v8-03). Accessed online.
- Natural Resource Conservation Service. United States Department of Agriculture. *Web Soil Survey*. Accessed online.
- Information for Planning and Conservation (IPaC). 2019. United States Fish and Wildlife Service. Accessed online.

The database review identified a total of 33 special status species known to occur or with the potential to occur within the BSA. Of these species with potential to occur within the BSA, eight have the potential to occur within the Project Impact Area itself due to the presence of suitable habitat, elevation, and other factors. **Table 3** lists all of the special status species that have potential to occur within the BSA as well as a brief rationale as to the possible presence or absence of the species within the Project Impact Area.

Table 3: List of Special Status Species Known to Occur in the Vicinity of Project Impact Area

Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
Plant Species							
<i>Arabis rigidissima</i> <i>var. demota</i> Galena Creek rockcress			SI	1B.2	Broad-leaved upland forests, upper montane coniferous forests on rocky substrates. Known in CA from only two occurrences near Martis Peak and in NV from eleven occurrences in the Carson Range. Elevation range 7,398 to 8,398 feet.	August	Absent. Outside of elevation range and site lacks suitable habitat.
<i>Astragalus austiniiae</i> Austin's astragalus				1B.3	Alpine boulder and rock field, subalpine coniferous forest. Elevation range 8,005 to 9727 feet.	July to September	Absent. Outside of elevation range.
<i>Boechea tularensis</i> Tulare rockcress				1B.3	Perennial herb that prefers rocky slopes, subalpine coniferous forest, and upper montane coniferous forest. Elevation range is from 6,000 to 11,000 feet.	June to July	Unlikely. Rocky slopes and rocky areas they prefer are not present on site.
<i>Bolandra californica</i> Sierra bolandra				4.3	Perennial herb that prefers rock crevices and wet cliffs. Elevation range is 3198 to 8040 feet.	June to July	Unlikely. Lacks preferred habitat.
<i>Botrychium ascendens</i> Upswept moonwort				2B.3	Wet or moist soils in lower montane coniferous forests, such as along the edges of lakes and streams. Elevation range 4,950 to 6,039 feet.	Fertile early July to early September	Absent. Outside of elevation range.
<i>Botrychium crenulatum</i> Scalloped moonwort				2B.2	Lower montane coniferous forests, meadows and seeps, marshes and swamps. Elevation range 4,950 to 10,800 feet.	Fronds mature June to September	Unlikely. Not encountered.

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Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<i>Botrychium minganense</i> Mingan moonwort				2B.2	Wet or moist soils in lower montane coniferous forests, such as along the edges of lakes and streams. Elevation range 4,950 to 6,039 feet.	Fronds mature June to September	Unlikely. Not encountered.
<i>Botrychium montanum</i> Western goblin				2B.1	Lower and upper montane coniferous forests, meadows and seeps, on mesic soils. Elevation range 2,100 to 4,800.	Fronds mature July to September	Absent. Project area is outside of elevation range. Not encountered.
<i>Carex davyi</i> Davy's sedge				1B.3	Perennial herb that prefers subalpine and upper montane coniferous forests between 5,000 to 10,500 feet; usually in wetlands.	May to August	Unlikely. Site contains little suitable habitat. Not encountered.
<i>Carex limosa</i> Mud sedge		S3		2B.2	Perennial rhizomatous herb that prefers bogs, fens, meadows, seeps, marshes, swamps, and both lower and upper montane coniferous forests. Elevation range is between 3,900 and 8,900 feet.	June to August	Unlikely. Site contains little suitable habitat. Not encountered. Documented sighting occurs within the Biological Study Area but not within the Project Impact Area.
<i>Epilobium oregonum</i> Oregon fireweed				1B.2	Perennial herb that prefers mesic habitat including bogs and fens, but also lower and upper montane coniferous forests. Elevation range is between 1,650 and 7,300 feet.	June to September	Possible. Site contains potential habitat. Not encountered.
<i>Erigeron miser</i> Starved daisy				1B.3	Upper montane coniferous forests in rocky areas. Elevation range is between 2,600 and 8,600 feet.	June to October	Unlikely. Site lacks suitable habitat.
<i>Lewisia longipetala</i> Long-petaled lewisia			SI	1B.3	Alpine boulder and rock fields in subalpine coniferous forests. Elevation range 8,325 to 9,740 feet.	June to August	Absent. Outside of elevation range.

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Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<i>Meesia triquetra</i> Three-ranked hump moss				4.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic). Elevation 4265 to 13992 feet.	July	Unlikely. Unsuitable habitat in Project Impact Area.
<i>Meesia uliginosa</i> Broad-nerved hump-moss				2B.2	Bogs and fens, meadows and seeps in montane coniferous forests. Elevation range 4,290 to 8,250 feet.	July to October	Unlikely. Unsuitable habitat in Project Impact Area. Documented occurrence exists within the Biological Study Area but is not within the Project Impact Area.
<i>Polystichum lonchitis</i> Northern holly fern				3	Subalpine coniferous forest, upper montane coniferous forest. Prefers shaded, moist, and wet granite or limestone crevices or bluffs. Elevation range 5905 to 8530 feet.	June to September	Unlikely. Unsuitable habitat in Project Impact Area.
<i>Scutellaria galericulata</i> Marsh scullcap		S2		2B.2	Lower montane coniferous forest, Meadows and seeps (mesic), marshes and swamps. Elevation range 0 to 6900 feet.	June to September	Possible. CNDDDB sighting of one individual less than ½ mile away. Not detected.
<i>Silene occidentalis ssp. occidentalis</i> Western campion				4.3	Chaparral, Lower montane coniferous forest, Upper montane coniferous forest. Elevation range 4035 to 6560 feet.	June to August	Possible. Suitable habitat exists. Not detected.
Herptile Species							

Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<i>Rana sierrae</i> Sierra Nevada yellow-legged frog	FE	ST, WL			Typical habitat includes lakes, ponds, marshes, meadows, and streams at high elevations – typically ranging from about 4,500 to 12,000 feet. Sierra Nevada yellow-legged frogs are highly aquatic. They are rarely found more than 3.3 feet from water. Waters that do not freeze to the bottom and which do not dry up are required for breeding.	N/A	Absent. Not encountered during surveys and has not been detected near the Project Impact Area for 20 years. The closest observation was near the headwaters of the Upper Truckee River in 2008.
Mammal Species							
<i>Aplodontia rufa californica</i> Sierra Nevada mountain beaver		SSC			Found throughout the Cascade, Klamath, and Sierra Nevada Ranges. Distribution often is scattered; populations local and uncommon in the Sierra Nevada and other interior areas. Occur in dense riparian-deciduous and open, brushy stages of most forest types. Typical habitat in the Sierra Nevada is montane riparian with a dense understory near water. Deep, friable soils are required for burrowing, along with a cool, moist microclimate (Zeiner et al. 1990).	N/A	Unlikely. Habitat requirements for cover, breeding, and foraging are marginal within the Project Impact Area. Sighting reported in BSA but not in Project Impact Area.
<i>Gulo gulo luscus</i> California wolverine	PT	ST, FP			Extensive wilderness dominated by coniferous forest. Wolverines generally den in areas with snags, downed logs, large hollow trees, or talus.	N/A	Absent. Suitable alpine habitat is not present in the Project Impact Area. There are very few documented occurrences in the region.

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Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<i>Lepus americanus tahoensis</i> Sierra Nevada snowshoe hare		SSC			Dense deciduous streamside vegetation, forest undergrowth, dense thickets of young conifers, and patches of chaparral composed of ceanothus and manzanita. Generally associated with brush situated close to meadows.	N/A	Unlikely. Suitable habitat does not occur within Project Impact Area.
<i>Odocoileus hemionus</i> Mule Deer			SI		Mule deer have a widespread distribution throughout most of California (CDFW 2018a). Locally, they are common to abundant migrants. Shrubs provide food, cover, and thermoregulation, making them essential habitat criteria. Openings interspersed through dense thickets and abundant edges are preferred. Deer require 3 quarts of water/day/100 lb. (Zeiner et al. 1990), so access to water and mineral licks are also critical features to suitable habitat.	N/A	Unlikely. No Potential to Impact TRPA Threshold Standard. Suitable fawning habitat is located within 1 mile of the Project Impact Area. Habitat is not suitable for fawning due to existing disturbance levels.
<i>Taxidea taxus</i> American badger		SSC			Uncommon, permanent resident found throughout most of the state, except in the northern North Coast area (Grinnell et al. 1937). Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Suitable habitat for badgers is characterized by herbaceous, shrub, and open stages of most habitats with dry, friable soils (Zeiner et al. 1990).	N/A	Unlikely. Habitat requirements for cover, breeding, and foraging are lacking within the Project Impact Area. Documented sighting occurs within BSA but does not occur within the Project Impact Area.
Fish Species							

Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<i>Oncorhynchus clarkii henshawi</i> Lahontan cutthroat trout	FT				Cold-water habitats including large terminal alkaline lakes, and alpine lakes, slow meandering rivers, mountain rivers, and small headwater tributary streams.	N/A	Absent. Suitable aquatic habitat is present within the Upper Truckee River but this species has not been seen in the Project Impact Area for twenty-three years.
Bird Species							
<i>Accipiter gentilis</i> Northern goshawk		SSC	SI		Northern goshawk are distributed throughout California in middle to higher elevation forested areas, particularly in the North Coast Ranges through Sierra Nevada, Klamath, Cascade, and Warner Mountains (Zeiner et al. 1990). Locally, they can be yearlong residents and seasonal migrants. Goshawks usually nest on north-facing slopes near water and require mature conifer or aspen forests with large diameter trees, dense canopy cover, and an open under story interspersed with meadows or shrub patches. Open areas provide foraging opportunities, while logs, snags, and broken-top trees are used as "plucking posts" to de-feather prey. Nests are usually located within the largest tree in the stand, next to the bole of the tree, in the lower third of the canopy.	N/A	Possible. No Potential to Impact TRPA Threshold Standard. There have been reported sightings of Northern Goshawk outside of the Project Impact Area but within the 1-mile buffer. This species could pass through the Project Impact Area, but suitable breeding habitat is not present in the Project Impact Area.
<i>Aquila chrysaetos</i> Golden eagle	BCC	FP	SI		Partially or completely open terrain around mountains, hills, and cliffs mostly in the western half of the United States. Builds large stick nests, often on cliff faces.	N/A	Unlikely. No Potential to Impact to TRPA Threshold Standard. The Project Impact Area is impacted by human use and suitable habitat is lacking.

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Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<i>Carpodacus cassinii</i> Cassin's finch	BCC				Evergreen forests in mountainous area between 3,000- and 10,000-foot elevation. Nesting usually occurs near the top of conifer trees.	N/A	Unlikely. Suitable nesting habitat is present within Project Impact Area, but ongoing human use makes nesting unlikely.
<i>Contopus cooperi</i> Olive-sided flycatcher	BCC	SSC			Breeds in montane and northern coniferous forests, at forest edges and openings, such as meadows and ponds.	N/A	Possible. Suitable nesting habitat is present within the Project Impact Area.
<i>Haliaeetus leucocephalus</i> Bald eagle	BCC	SE, FP	SI		Bald eagles have an expansive range with breeding areas in Northern California, wintering mostly in the Klamath Basin, and a few favored inland areas of Southern California. Locally, they are yearlong residents and migrants in the Tahoe Basin. Bald eagles use shorelines along large bodies of water and river courses for both nesting and wintering. Snags, broken-topped trees, or rocks near water are required for foraging and nesting. Most nests are located in large trees with open branches within 1 mile of a water body. In Lake Tahoe, known nesting sites include Emerald Bay and Marlette Lake. Wintering sites are located in Taylor, Tallac, Pope, and Upper Truckee Marshes (Romsos 2000)	N/A	Unlikely. No Potential to Impact TRPA Threshold Standard. Suitable habitat does not exist within the project boundary. This species could pass through the Project Impact Area, but preferred breeding habitat is not present in the project area.

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Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
Waterfowl (collectively)			SI		Mallards and other waterfowl are found throughout California in wetlands and waters such as lakes, creeks, drainages, marshes, and wet meadows. Locally, some species such as mallards are common, yearlong residents. While breeding, they need shallow-water areas with nest sites nearby. Usually nests in fairly dry sites in tall, dense herbaceous vegetation or low shrubbery within 300 feet of water, rarely up to 5 miles (Bellrose 1976).	N/A	Unlikely. No Potential to Impact TRPA Threshold Standard. TRPA designated Wildlife Habitat for Waterfowl is located within the project area. Waterfowl are known to use nearby Lake Baron for foraging, but existing disturbances and lack of suitable habitat make it unlikely they would nest in the Project Impact Area.
<i>Selasphorus rufus</i> Rufous hummingbird	BCC				Rufous Hummingbirds typically breed in open or shrubby areas, forest openings, yards, and parks, and sometimes in forests, thickets, swamps, and meadows from sea level to about 6,000 feet. During their migration, Rufous Hummingbirds can be found in mountain meadows up to 12,600 feet elevation.	N/A	Possible. Suitable habitat exists for this species.
<i>Sphyrapicus thyroideus</i> Williamson's sapsucker	BCC				Breeding habitat is open forested areas with conifers. Nests within tree cavities.	N/A	Possible. Suitable habitat exists for this species.

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Species	Regulatory Status				Habitat Requirements	Blooming Period	Potential for Occurrence in the Project Area
	Federal	State	TRPA	CNPS			
<p>Present: Species observed on the sites at time of field surveys or during recent past.</p> <p>Possible: Species not observed on the sites, but it could occur there from time to time.</p> <p>Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.</p> <p>Absent: Species not observed on the site and precluded from occurring there because habitat requirements not met.</p>			<p>Federally Listed Species (Federal):</p> <p>FE = Federally Endangered</p> <p>FT = Federally Threatened</p> <p>FD = Federally Delisted</p> <p>PT = Proposed Threatened</p> <p>FCE = Federally Endangered Candidate</p> <p>FPD = Proposed for Delisting</p> <p>BCC = Bird of Conservation Concern</p> <p>Tahoe Regional Planning Agency (TRPA):</p> <p>SI = TRPA Special Interest Species</p>	<p>California State Listed Species (CA):</p> <p>SE = State Endangered</p> <p>ST = State Threatened</p> <p>SCT = State Candidate Threatened</p> <p>SR = State Rare</p> <p>SC = State Candidate</p> <p>WL = CDFW Watch List</p> <p>SSC = CDFW Species of Special Concern</p> <p>FP = CDFW Fully Protected</p>	<p>California Native Plant Society (CNPS) List Categories:</p> <p>1 = Rare in California and elsewhere</p> <p>2 = Rare in California, but not elsewhere</p> <p>A = Presumed extirpated or extinct</p> <p>B = Rare, threatened, or endangered</p> <p>3 = Plants about which we need more information</p> <p>4 = Plants of limited distribution</p> <p>CNPS Threat Code Extensions:</p> <p>.1 = Seriously endangered in California (Over 80% of occurrences threatened)</p> <p>.2 = Fairly endangered in California (20-80% occurrences threatened)</p> <p>.3 = Not very endangered in California (<20% of occurrences threatened)</p>		
<p>Sources: CDFW 2019, TRPA 2019, USFWS 2019</p>							

Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

4.1 Habitats and Natural Communities of Special Concern

Habitats are of special concern based on (1) federal, state, and local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special status plants or animals occurring on site. None of the plant communities in the Project Impact Area qualify as Natural Communities of Special Concern (Sawyer et al. 2009). WOUS (which includes wetlands) are also considered sensitive by both federal and state agencies but are discussed in more detail in Section 3.1.3.5.

4.1.1 Impacts to Riparian Habitat

Riparian habitat exists within the Project Impact Area along the Upper Truckee River. The Upper Truckee River is the largest tributary of Lake Tahoe and drains over 33 square miles. Its confluence is near Tahoe Keys housing development in Lake Tahoe after flowing north about 24 miles from its headwaters in Meiss Meadows near Carson Pass.

Project Impacts

Conceptual plans indicate there will be impacts to the riparian habitat due to the construction of bridge abutments on each side of the river near the river channel.

Avoidance and Minimization Efforts

The Upper Truckee River is the largest source of sediment to Lake Tahoe; therefore, a rigorous suite of BMP's per TRPA standards will be included in the project's stormwater pollution and prevention plan to protect water quality during construction.

Compensatory Mitigation

Due to the abutments being constructed in the riverbank and possible removal of vegetation in the riparian zone it is likely a Lake and Streambed Alteration Agreement (LSAA) will be required for the project. This agreement will require permit conditions and possible mitigation to offset the potential impacts. If coverage is obtained under the 1602 permit, these requirements will be presented in the final permit document.

Cumulative Impacts

No cumulative impacts are anticipated due to the enactment of compensatory mitigation measures required by the LSAA.

4.2 Special Status Plant Species

A total of 18 special status plant species were identified within a nine-quad search in the vicinity of the Project Impact Area based on historical documentation in the California Natural Diversity Database and the California Native Plant Society's Rare Plant Inventory (**Table 3**). Four of the 18

species have the potential to occur within the Project Impact Area due to the presence of suitable habitat within or adjacent to the Project Impact Area. The four plants listed are considered to be of special concern based on federal, state, or local laws regulating their protection; however, none of these species are federally listed. No plant SSS with potential to occur were identified during field visits on June 11 or July 10, 2019. Based on the urbanized nature and history of ground disturbance within the majority of Project Impact Area, it is unlikely that any special status species would occur within or adjacent to the Project Impact Area in the future. Since no special status plant species were found to be present, avoidance and minimization efforts, project impacts, compensatory mitigation, and cumulative impacts are not being proposed.

4.3 Special Status Animal Species Occurrences

Animals are considered to be of special concern based on (1) federal, State, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. No special status animal species were found to be present within the Project Impact Area.

A total of 16 special status animal species were identified during the database research of the BSA. Four of the 16 species have the potential to occur with the Project Impact Area due to the presence of suitable habitat as noted in **Table 3**.

Based on suitable habitat for two federal ESA-listed animal species, surveys were conducted for SNYLF and LCT within the Project Impact Area. After two thorough surveys neither of these species was observed in the Project Impact Area.

Survey Results of Special Status Species

Olive-sided flycatchers frequent coniferous forests, especially with tall standing trees. They are strongly associated with spruce, fir, pine, or mixed woodland near edges and clearings. The USFS land for the proposed path alignment could potentially harbor this species due the prevalence of foraging and singing perches located in a recently thinned forest. These birds were not observed or heard during two separate surveys.

Rufous hummingbirds typically breed north of the Sierra Nevada and at lower elevations than the Project Impact Area. They could potentially be found in the Project Impact Area foraging on their migration flights north or south. These birds are attracted to colorful tubular flowers including paintbrush, columbine, and larkspur. These birds were not observed or heard during two separate surveys.

Williamson's sapsuckers are year-round residents of the Sierra Nevada that prefer higher conifer forests. They nest in tree cavities usually in pine, fir, or aspen. Nests are found 5 to 60 feet above ground and are usually found in trees with a living outer layer and dead heartwood. They feed on sap from tiny holes drilled in bark that excrete sap. Insects and some small fruits are also part of their diet. These birds could be foraging in the Project Impact Area but were not observed or heard during any surveys.

Northern goshawks can be year-round residents or migratory depending on their prey population size and distribution. They typically construct nests in large conifer trees just below canopy level often in the largest tree in the stand. Foraging goshawks move rapidly through the forest, perch

to perch, punctuated with brief periods of prey searching. Northern goshawks hunt by flying rapidly along forest edges, across openings, and through dense vegetation to surprise prey. Easily startled by human activity, northern goshawks prefer to forage near intact large forests. These birds could pass through the Project Impact Area, but low-quality habitat on and nearby the project impact area suggest breeding and primary foraging will occur elsewhere. Northern goshawks were not observed or heard during the reconnaissance-level surveys.

During the two reconnaissance-level surveys conducted on June 11 and July 10, 2019, no LCT were observed. The reach of the Upper Truckee River near the Project Impact Area is characterized by a rapid stream velocity with deep eroding cut banks and no vegetated cover. LCT generally occur in cool flowing water with available cover and well-vegetated, stable stream banks, in areas where there are stream velocity breaks, and in relatively silt free, rocky riffle-run areas (Purdy et al., 2014).

Two visual encounter surveys for SNYLF were performed on June 11 and July 10, 2019 due to the presence of suitable habitat for this for species next to the upper Truckee River. The VES surveys were conducted at the proposed bridge crossing location. No SNYLF individuals were observed during the surveys.

Project Impacts

The SNYLF is listed as an endangered species in accordance with the federal Endangered Species Act. The criterion for the listing was based on the danger of extinction throughout the species entire range and on the immediacy, severity, and scope of the threats to its continued existence. These threats include predation, habitat degradation and fragmentation, poor regulatory protection, climate change and the impact of these various stressors on existing remnant populations. A drastic reduction in the former abundance and geographic extent of these frogs has occurred after decades of stocking predatory fish, habitat fragmentation, and a disease epidemic. All these factors that contribute to population stress makes survival of the species tenuous throughout the currently occupied range in the Sierra Nevada range.

Based on 2019 surveys, historical occurrences, the proposed project improvements, and our professional opinion, the proposed project will have no effect on SNYLF. There are several lines of evidence that support this conclusion. The flow rate within the Upper Truckee River channel is too great to support SNYLF's foraging and breeding requirements. There is an overall lack of nearby inlet streams that accommodate breeding. The presence of introduced predatory fish in the river system have "eliminated or reduced mountain yellow legged frog population frogs in stocked habitats" which precludes successful breeding of SNYLF in the Upper Truckee River. (US Fish and Wildlife Service 2014) It is important to recognize that, throughout the vast majority of its range, Sierra Nevada yellow-legged frogs did not co-evolve with any species of fish, as they predominantly occur in water bodies above natural fish barriers." (US Fish and Wildlife Service 2014) Finally, historic nearby occurrences are nearly a decade old (last sighting 2011) at much higher alpine elevations near Desolation Wilderness.

The LCT have been extirpated from 95 percent of their habitat in California. The introduction of non-native trout, logging, mining, road and railroad building, human land use activities, and commercial harvest of this species rapidly reduced the distribution and abundance of this species. The only high elevation, self-sustaining population of LCT in the Sierra Nevada range is located near Meiss Meadows (USDA 2015).

The large amount of non-native trout living in the Upper Truckee River are highly predatory on young LCT making their reproductive success extremely difficult. Also absent from the Project Impact Area are key habitat factors including available cover, velocity breaks, and well-vegetated stable stream banks.

This project was specifically designed to avoid any adverse effects to the river channel. With measures being taken to keep bridge footings out of the river and to keep construction work completely out of the river channel, no effect on LCT is anticipated.

Avoidance and Minimization Efforts

The Upper Truckee River is the largest source of sediment to Lake Tahoe; therefore, a rigorous suite of BMP's per TRPA standards will be included in the project's stormwater pollution and prevention plan to protect water quality during construction.

Compensatory Mitigation

By staying outside of the river channel, there will be no effect on LCT from construction activities. Therefore, no compensatory mitigation is proposed for the LCT or SNYLF.

Cumulative Impacts

The Tahoe Paradise Recreation and Park District are in the initial planning stages for potential improvements to Park facilities including improvements to the to the clubhouse, courts, playground, erosion control along the river, enhanced ball fields, picnic area, and new facilities (e.g., ADA loop trail around Lake Baron, pavilion near the picnic area, and restroom across from the clubhouse).

Because erosion control projects would be the only improvements at the location of the proposed river crossing, Park improvements will not result in cumulatively significant impacts to the LCT or SNYLF. Besides ongoing maintenance of existing Park facilities, proposed Park improvements and facilities, and the identification of necessary restoration of erosion along the banks of the Upper Truckee River, no other cumulative effects are anticipated in the Project Impact Area for any special status species or federally listed species.

Chapter 5 – Conclusions and Regulatory Determinations

5.1 Federal Endangered Species Act Consultation Summary

A USFWS species list was acquired for this Project on April 25, 2019 (**Appendix D**). According to this list, federally listed species that may occur in the BSA include Sierra Nevada yellow-legged frog and Lahontan cutthroat trout.

Two VES for SNYLF were conducted with negative detections within and nearby the Project Impact. Historical occurrences of SNYLF are dated and geographically disparate from the Project Impact Act. The construction footprint of the bridge in the area of potential habit has been designed to avoid impacts to the edge of the river and the channel of the river. Therefore, the proposed projects are anticipated to have no effect on SNYLF.

Essential Fish Habitat Consultation Summary

Essential Fish Habitat consultation was not initiated with NOAA Fisheries since no Essential Fish Habitat was identified within the Project Impact Area.

California Endangered Species Act Consultation Summary

No take of state-listed species is anticipated, and no state-listed species have been identified during reconnaissance-level surveys. Due to lack of quality habitat and the fragmented nature of native vegetation, the species listed in the California ESA are not likely to be present in the Project Impact Area. Therefore, no effects to California-listed endangered species are anticipated as a result of project activities. A California Endangered Species Act consultation has not occurred due to the lack of designated critical habitat for California-listed endangered species within the Project Impact Area.

Wetlands and Other Waters Coordination Summary

A formal WOUS delineation was conducted within the Project Impact Area. Approximately 6.74 acres were delineated within the Project Impact Area. A total of four drainages were delineated as potentially jurisdictional as WOUS and Waters of the State of California. Three drainages are unnamed drainages, and the fourth drainage is the Upper Truckee River. Below is the proposed jurisdictional acreage per drainage:

- Unnamed Drainage 1 is approximately 0.0015 acres in size within the survey area.
- Unnamed Drainage 2 is approximately 0.0025 acres in size within the survey area.
- Unnamed Drainage 3 is approximately 0.0102 acres in size within the survey area.

Upper Truckee River is approximately 0.1442 acres in size within the survey area.

The Aquatic Resources Delineation Report will be submitted to the USACE for a Jurisdictional Determination. NCE is requesting that a USACE Approved Jurisdictional Determination be provided for this Project.

The following permits are not required for the project:

- There are no proposed impacts to the Upper Truckee River or the three unnamed drainages. Due to this, a Section 404 permit is not needed from the USACE.

The following permit is required for the project:

- Due to the potential to indirectly impacts waters of the State of California, an *Application for Clean Water Act Section 401 Water Quality Certification and/or Waste Discharge Requirements for Projects Involving Discharge of Dredged and/or Fill Material to Waters of the U.S. and/or Waters of the State* application will be completed and submitted to the Lahontan Regional Water Quality Control Board.

Invasive Species

Two invasive weeds were identified within the Project Impact Area: Curly dock (*Rumex crispus*), and mullein (*Verbascum Thapsus*). According to the California Invasive Plant Council woolly mullein and curly dock are rated as “limited”.

The following weed best management practices will be implemented in order to prevent the spread of noxious weeds during project activities:

- All hay, straw, hay bales, straw bales, seed, mulch or other material used for erosion control or landscaping shall be free of noxious weed seeds and propagules. Noxious weeds are defined in Title 3, Division 4, Chapter 6, Section 4500 of the California Code of Regulations and the California Quarantine Policy – Weeds.
- All equipment brought to a project site for construction shall be thoroughly cleaned of all dirt and vegetation prior to entering the site in order to prevent importing noxious weeds.
- All materials brought to a project site, including rock, gravel, road base, sand, and topsoil, shall be free of noxious weed seeds and propagules.
- The property owner shall maintain and implement an effective program for the monitoring and control of noxious weeds.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, or kill migratory birds. The law applies to the removal of nests (such as swallow nests on bridges) occupied by migratory birds during the breeding season. California Fish and Game (CDFG) Code (Section 3500) also prohibits the destruction of any nest, egg, or nestling. If vegetation removal or construction occurs during the nesting season (typically February 1 through September 1) then a survey for active bird nests shall be conducted by a qualified biologist no more than two weeks prior to initiation of construction activities. If nests are identified, then mitigation measures must be implemented.

Chapter 6 – References

- Baldwin, B.G., (2016). *The Jepson Manual*. Third Edition. University of California Press, Berkeley, CA.
- Bellrose, F. C., & Kortright, F. H. (1976). *Ducks, geese & swans of North America: A completely new and expanded version of the classic work by F.H. Kortright*. Harrisburg, Pa: Stackpole Books.
- Boreal Songbird Initiative, Olive-sided flycatcher.(n.d.). Retrieved from <https://www.borealbirds.org/bird/olive-sided-flycatcher>. Accessed 6/14/19.
- El Dorado County, Tahoe Regional Planning Agency (2017). Meyers Area Plan. https://www.edcgov.us/Government/meyers/Documents/Meyers_AP_IS_IEC_Final_Environmental_Doc_110617.pdf. Accessed 7/9/19.
- Fry, M.E, & Risser R.J. (n.d.). Montane *Chaparral Vegetation*. California Wildlife Habitat Relationships System, California Department of Fish and Game California Interagency Wildlife Task Group
- National Resource Conservation Service, Soil Web Survey. <http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx> Accessed 5/23/2019.
- Romsos, S. (2000). "Species Accounts for Select Focal Species: bald eagle." in: *Lake Tahoe Watershed Assessment, App. O*. Knopp and D. Murphy, eds. PWS-GTR-175, Vol. 2(G). USDA Forest Service Pacific Southwest Research Station, Albany, CA.
- USDA Forest Service (2015). Upper Truckee River Lahontan Cutthroat Trout Restoration Project 2015 Annual Report. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd485864.pdf. Accessed 11/26/19.
- U.S. Fish and Wildlife Service. (2014). Endangered and Threatened Wildlife and Plants; Endangered Species Status for Sierra Nevada Yellow-Legged Frog and Northern Distinct Population Segment of the Mountain Yellow-Legged Frog, and Threatened species Status for Yosemite Toad. <https://www.federalregister.gov/documents/2014/04/29/2014-09488/endangered-and-threatened-wildlife-and-plants-endangered-species-status-for-sierra-nevada>. Accessed 11/29/19.
- U.S. Fish and Wildlife Service, Lahontan cutthroat trout (n.d). Retrieved from https://www.fws.gov/nevada/protected_species/fish/species/lct.html. Accessed 7/3/19.
- U.S. Fish and Wildlife Service, Sierra Nevada yellow-legged frog *Rana sierra* (n.d.). Retrieved from https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/sn_yellow_legged_frog/. Accessed 7/3/19.
- Sawyer, J.O., T. Keeler-Wolf, and J Evens. (2009). *A Manual of California Vegetation*. Second Edition. California Native Plant Society, Sacramento, CA.

- Purdy, S., Fesenmyer K., Henerey, R. (2014). *The Upper Truckee River: Aquatic Habitat Monitoring for Restoration and Adaptive Management*. Trout Unlimited, Arlington, VA.
- Tahoe Regional Planning Agency. (2010). *Lake Tahoe Region Bicycle and Pedestrian Plan*. https://www.gotahoenorth.com/wp.content/uploads/2015/09/LakeTahoeRegionBicycle_PedestrianPlan.pdf. Accessed 8/9/19.
- Tahoe Metropolitan Planning Agency. (2016). *Linking Tahoe: Active Transportation Plan*. http://tahoempo.org/ActiveTransportationPlan/docs/ATP_FINAL_NoAppendices.pdf. Accessed 8/5/19.
- Western Regional Climate Center, Tahoe City, California (nd). <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5572> Accessed 5/23/2019
- Zeiner, D., Laudenslayer, W., Mayer, K., and White, M. (1990). *California Wildlife*. CDFW, Sacramento, CA.

Appendix A – Figures

Appendix B – Preliminary Construction Plans

Appendix C – Photos

Appendix D – USFWS Species List