

Attachment B

Biological Resources

VEGETATION AND HABITAT

Pursuant to SPR BIO-1, CAL FIRE conducted a data review of project-specific biological resources, including habitat and vegetation types, and special-status plants, special-status wildlife, and sensitive habitats (i.e., sensitive natural communities, wetlands) with potential to occur in the project area. The project area is located within the Sierra Nevada ecoregion. The project area ranges in elevation from approximately 5,800 feet to 6,600 feet. CAL FIRE conducted reconnaissance surveys on May 16-17 and June 12, 2023, to identify and document sensitive resources (e.g., aquatic habitat, riparian habitat, sensitive natural communities) and to assess the suitability of habitat in the project area for special-status plant and wildlife species. Mapped habitat types were verified where possible, and incidental wildlife observations were recorded.

CAL FIRE's Fire Resource and Assessment Program (FRAP) vegetation mapping was used to identify the California Wildlife Habitat Relationship (CWHR) habitat and vegetation types mapped within the project area. Habitat types within the project area are eastside pine, Sierran mixed conifer, bitterbrush, montane chaparral, sagebrush, annual grassland, lacustrine, and barren land. The CWHR classifications were cross-referenced to *Manual of California Vegetation (MCV)* (CNPS 2023a) alliances to identify sensitive natural communities that may be found within each CWHR type. Table B-1 lists the acreage and relative abundance of each CWHR habitat type in the project area, the corresponding MCV alliances that may be found in each CWHR type, and the alliances that are designated sensitive natural communities or that are dominated by nonnative species. US Fish and Wildlife Service's (USFWS) National Wetland Inventory GIS dataset and the National Hydrography Dataset were used to identify previously mapped wetland and aquatic habitats within the project area.

Table B-1 Vegetation and Habitat Types in the Project Area

Habitat Type (CWHR Classification)	Acres	Percent of Project Area	MCV Alliances
Forest/Woodland			
Eastside Pine	847.88	57.88	Jeffrey pine forest Ponderosa pine forest Washoe pine woodland ⁵
Sierran Mixed Conifer	351.23	23.98	Incense cedar forest and woodland ^{1,4} Ponderosa pine-Douglas fir forest
Forest/Woodland Total	1199.11	81.86	
Shrub/Scrub			
Bitterbrush	2.89	0.2	Bitter brush scrub ⁵
Montane Chaparral	9.13	0.62	Green leaf manzanita chaparral Whiteleaf manzanita chaparral Mountain whitethorn chaparral Deer brush chaparral Tobacco brush or snow bush chaparral Bush chinquapin chaparral ¹ Bitter cherry thicket Choke cherry thicket ⁶ Huckleberry oak chaparral
Sagebrush	110.64	7.55	Little sagebrush scrub Silver sagebrush wet shrubland ^{1,4} Rothrock's sagebrush ¹ Big sagebrush Mountain big sagebrush Curl leaf mountain mahogany scrub Rubber rabbitbrush scrub Bitter brush scrub ¹

Habitat Type (CWHR Classification)	Acres	Percent of Project Area	MCV Alliances
Shrub/Scrub Total	122.66	8.37	
Herbaceous			
Annual Grassland	52.3	3.57	Wild oat grassland ² Upland mustard and other ruderal forbs ² Annual brome grassland ² Red brome or mediterranean grass grassland ² Cheatgrass - medusahead grassland ² Yellow star-thistle field ² Knapweed and purple-flowered star-thistle field ² Needle spike rush stand ¹ Spanish clover field
Herbaceous Total	52.3	3.57	
Aquatic			
Lacustrine	65.46	4.47	N/A
Aquatic Total	65.46	4.47	
Developed/Disturbed/Barren³			
Barren	25.3	1.73	N/A
Developed/Disturbed/Barren Total	25.3	1.73	
All Habitat Types Total:	1,464.83		

¹ These are designated sensitive natural communities with a state rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

² These alliances are dominated by nonnative vegetation.

³ Barren habitats would not be targeted for treatment; however, due to the scale of the habitat mapping, some areas mapped as urban or barren may contain habitats that would be treated (e.g., forested areas close to urban development).

⁴ These alliances have changed names since the original 2019 MCV manual.

⁵ These alliances have been removed since the original 2019 MCV manual.

⁶ These alliances have downlisted to a non-sensitive community since the original 2019 MCV manual

National Wetlands Inventory	Acres	Percent of Project area	MCV Alliances
Aquatic Habitats			
Freshwater Emergent Wetlands	36.47	2.49	N/A
Freshwater Forested/Shrub Wetland	2.08	0.14	N/A
Lake	72.1	4.92	N/A
Riverine	4.46	0.3	N/A

Source: CAL FIRE FRAP vegetation data, compiled by CAL FIRE NEU in 2023; CNPS 2023b; USFWS 2023b.

SPECIAL-STATUS SPECIES

Table B-2 of this attachment presents special-status plant and wildlife species that are known to occur in the project region, which includes the following U.S. Geological Survey (USGS) 7.5' quadrangles surrounding the project area: Martis Peak, Hobart Mills, Boca, Mt. Rose, Mt. Rose NW, Marlette Lake, Kings Beach, Tahoe City, and Truckee. Table B-2 was compiled by completing a review of the California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California database records for the USGS quadrangles containing and surrounding the project area (9 quadrangles total; CNDDDB 2023; CNPS 2023b); the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) tool (USFWS 2023c); and Appendix BIO-3 (Table 13a, Table 13b, and Table 19) in the PEIR (Volume II) for special-status plants and wildlife that could occur in the Sierra Nevada ecoregion.

The table also includes an assessment of species potential to occur in the project area, and summaries of the potential impacts from the project on each special-status plant and wildlife species. This assessment and impact analysis was based on implementation of SPR BIO-1, including review of occurrence data, species ranges, habitat requirements for each species, results of reconnaissance-level surveys, and habitat present within the project area as assessed during reconnaissance surveys. Twenty-two of the special-status plants and eighteen of the special-status wildlife from the complete list of species were determined to potentially occur in the project area.

Table B-2 Special-Status Species Known to Occur in the Project Region and their Potential for Occurrence in the Project Area

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Plants					
mountain bent grass <i>Agrostis humilis</i>			2B.3	High elevation grass growing in subalpine to alpine meadows and alpine scree fields. Sometimes on carbonate substrates. 8,760–10,500 feet in elevation. Perennial herb. Blooms July–September.	Not Expected to Occur: Suitable subalpine and alpine habitats are not present in the project area. The project area is below the known elevation range for this species. The nearest recorded occurrence of the species is 6.5 miles south of project area. No impact is anticipated.
threetip sagebrush <i>Artemisia tripartita</i> ssp. <i>tripartita</i>			2B.3	Openings in the forest. Rocky, volcanic soils. 7,220–8,530 feet in elevation. Perennial shrub. Blooms August.	Not Expected to Occur: Suitable habitat for this species is present within the project area. However, the project area is below the known elevation range for this species. The nearest recorded occurrence of the species is 5 miles southwest of project area. No impact is anticipated.
Galena Creek rockcress <i>Boechea rigidissima</i> (Synonym: <i>Arabis rigidissima</i> var. <i>demota</i>)			1.B2	Open, rocky areas along forest edges of conifer and/or aspen stands; usually found on north aspects. Well-drained, stony soil underlain by basic volcanic rock. 5,900–10,200 feet in elevation. Perennial herb. Blooms July–August.	Could Occur: Suitable habitat for this species is present within the project area. The nearest CNDDDB recorded occurrence of this species is 3 miles southeast of the project area. Although all known nearby recorded occurrences of this species exist above 7,450 feet in elevation and are, above the elevation of the project area, suitable habitat is present for species within project area and project area is within the species' known elevation range. . Species is known to exist in open and rocky areas, where project work is unlikely to occur. Treatments could result in direct or indirect adverse effects on <i>Boechea rigidissima</i> . However, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
upswept moonwort <i>Botrychium ascendens</i>			2B.3	Lower montane coniferous forest, meadows, and seeps. Grassy fields, coniferous woods near springs and creeks. 3,655–10,715 feet in elevation. Perennial rhizomatous herb. Blooms July–August.	Could Occur: Suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 8.5 miles northwest of the project area. Treatments could result in direct or indirect adverse effects on <i>Botrychium ascendens</i> . However, this species occurs in meadows and seeps where project activity is unlikely to occur, and suitable habitat will be buffered per SPR HYD-4. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
scalloped moonwort <i>Botrychium crenulatum</i>			2B.2	Wetland. Bogs and fens, meadows and seeps, upper montane coniferous forest, lower montane coniferous forest, marshes, and swamps. Moist meadows, freshwater marsh, and near creeks. 4,160–10,760 feet in elevation. Perennial rhizomatous herb. Blooms June–September.	Could Occur: Suitable habitat for this species is present within the project area. The nearest recorded occurrences of this species are 7.5 miles west and northwest of project area. Treatments could result in direct or indirect adverse effects on <i>Botrychium crenulatum</i> . However, this species occurs in mesic areas where project work is unlikely to occur, and suitable habitat will be buffered per SPR HYD-4. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
North American moonwort <i>Botrychium neolunaria</i> (Synonym: <i>Botrychium lunaria</i>)			2B.3	Species occurs in a variety of habitats. Species is found on gravelly slopes, open fields, meadows, woodland, and occasionally on sandy dunes. Species can tolerate relatively dry soils. It most commonly occurs on moist but well-drained soils. 6,495–11,205 feet in elevation. Perennial rhizomatous herb. Blooms August.	Could Occur: This species can occur in a variety of habitats and suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 9.5 miles northwest of project area. Treatments could result in direct or indirect adverse effects on <i>Botrychium neolunaria</i> . However, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
Davy's sedge <i>Carex davyi</i>			1B.3	Subalpine coniferous forest, upper montane coniferous forest. 4,920–10,500 feet in elevation. Perennial herb. Blooms May-August.	Could Occur: Suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 4 miles southeast of the project area. Treatments could result in direct or indirect adverse effects on <i>Carex davyi</i> . However, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
woolly-fruited sedge <i>Carex lasiocarpa</i>			2B.3	Bogs and fens, marshes and swamps. Sphagnum bogs, freshwater marsh, lake margins. 5,580–6,890 feet in elevation. Perennial rhizomatous herb. Blooms June-July.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 5 miles southeast of project near Tahoe Vista and Kings Beach. Treatments could result in direct or indirect adverse effects on <i>Carex lasiocarpa</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatments activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
mud sedge <i>Carex limosa</i>			2B.2	Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps, upper montane coniferous forest. In floating bogs and soggy meadows and edges of lakes. 3,935–8,860 feet in elevation. Perennial rhizomatous herb. Blooms June-August.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 10 miles northwest of project near Sagehen Hills. Treatments could result in direct or indirect adverse effects on <i>Carex limosa</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatments activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
English sundew <i>Drosera anglica</i>			2B.3	Bogs and fens, meadows and seeps. 4,265–7,400 feet in elevation. Perennial herb (carnivorous). Blooms June-September.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 10 miles northwest of project near Sagehen Hills. Treatments could result in direct or indirect adverse effects on <i>Drosera anglica</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatments activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Donner Pass buckwheat <i>Eriogonum umbellatum</i> var. <i>torreyanum</i>			1B.2	Upper montane coniferous forest, meadows and seeps. Steep slopes and ridgetops; rocky, volcanic soils; usually in bare or sparsely vegetated areas. 6,000–8,600 feet elevation. Perennial herb. Blooms July-September.	Could Occur: Suitable habitat for this species is present within the project area. The nearest recorded occurrence is 6 miles west of project area. Treatments could result in direct or indirect adverse effects on <i>Eriogonum umbellatum</i> var. <i>torreyanum</i> . However, this species occurs in open areas where project work is unlikely to occur. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
subalpine aster <i>Eurybia merita</i>			2B.3	Upper montane coniferous forest. 4,265–6,560 feet in elevation. Perennial herb. Blooms July-August.	Could Occur: Suitable habitat for this species is present within the project area. The nearest recorded occurrence of this species is 5 miles southeast of the project area in Kings Beach. Treatments could result in direct or indirect adverse effects on <i>Eurybia merita</i> . However, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
American manna grass <i>Glyceria grandis</i>			2B.3	Bogs and fens, meadows and seeps, marshes and swamps. Wet meadows, ditches, streams, and ponds, in valleys and lower elevations in the mountains. 50–6,495 feet in elevation. Perennial rhizomatous herb. Blooms June-August.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 9 miles southwest of project near Olympic Valley. Treatments could result in direct or indirect adverse effects on <i>Glyceria grandis</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatment activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
Plumas ivesia <i>Ivesia sericoleuca</i>			1B.2	Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Vernal mesic areas; usually volcanic substrates. 4,300–7,220 feet in elevation. Perennial herb. Blooms May-October.	Known to Occur: This species has been previously recorded in the open meadow and sagebrush area in the southwestern project corner. CAL FIRE NEU Environmental Scientist confirmed the plant's existing presence in May 2023 during project scoping. This species occurs in vernal mesic and open areas and suitable habitat for this species is present within the project area. Any treatments in open areas of the project where species resides could result in direct or indirect adverse effects on <i>Ivesia sericoleuca</i> . Pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
Santa Lucia dwarf rush <i>Juncus luciensis</i>			1B.2	Vernal pools, meadows and seeps, lower montane coniferous forest, chaparral, Great Basin scrub, ephemeral drainages, wet meadow habitats and streamsides. 980-6,700 feet in elevation. Annual herb. Blooms April-July	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 1 mile west of the project boundary, near Truckee Tahoe Airport. Treatments could result in direct or indirect adverse effects on <i>Juncus luciensis</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatment activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Gray's lomatium <i>Lomatium grayi</i>			2B.3	Great Basin scrub, pinyon and juniper woodland. 4,560–6,520 feet in elevation. Perennial herb. Blooms April-June.	Could Occur: Suitable habitat for this species is present within the project area. The nearest recorded occurrence is 2 miles west of project boundary, near Highway 267. There are only four CNDDDB recordings for this species within CA, with the other three recordings 160 miles north in Modoc County. The CNDDDB recording near project area states “this occurrence is much further south than other known locations in California, identification needs to be confirmed”. Treatments could result in direct or indirect adverse effects on <i>Lomatium grayi</i> . However, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
broad-nerved hump moss <i>Meesia uliginosa</i>			2B.2	Meadows and seeps, bogs and fens, upper montane coniferous forest, subalpine coniferous forest. Moss on damp soil. Often found on the edge of fens or raised above the fen on hummocks/shrub bases. 3,970–9,200 feet in elevation. Moss. Gametophytes July-October.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 8 miles northwest of project, near Sagehen Hills. Treatments could result in direct or indirect adverse effects on <i>Meesia uliginosa</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatment activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
Nuttall's ribbon-leaved pondweed <i>Potamogeton epihydrus</i>			2B.2	Marshes and swamps. Shallow water, ponds, lakes, streams, irrigation ditches. 960-8,660 feet in elevation. Perennial rhizomatous herb (aquatic). Blooms in (June) July-September.	Could Occur: Suitable habitat for this species is present within the project area. This species is an aquatic plant and will not be affected by proposed project work. The nearest recorded occurrence is 10 miles southwest of project area and was recorded in 1932. No impact is anticipated.
Robbins' pondweed <i>Potamogeton robbinsii</i>			2B.3	Marshes and swamps. Deep water, lakes. Meadows and seeps, lower montane coniferous forest, upper montane coniferous forest, riparian scrub. 5,000-10,800 feet in elevation. Perennial rhizomatous herb (aquatic). Blooms July-August	Could Occur: Suitable habitat for this species is present within the project area. This species is an aquatic plant and will not be affected by proposed project work. The nearest recorded occurrence is 6.5 miles west of project area in Donner Lake. No impact is anticipated
alder buckthorn <i>Rhamnus alnifolia</i>			2B.2	Meadows and seeps, lower montane coniferous forest, upper montane coniferous forest, riparian scrub. Mesic sites. 4,500-7,000 feet in elevation. Perennial deciduous shrub.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 2 miles southeast of project on Martis Peak Road. Treatments could result in direct or indirect adverse effects on <i>Rhamnus alnifolia</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatment activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.

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Tahoe yellow cress <i>Rorippa subumbellata</i>		SE	1B.1	Lower montane coniferous forest, meadows and seeps. Sandy beaches, on lakeside margins and in riparian communities; on decomposed granite sand. 6,200-6,250 feet in elevation. Perennial rhizomatous herb. Blooms May-September.	Not Expected to Occur: Only known species occurrences are on the shores of Lake Tahoe. The CNDDDB has one recorded occurrence of this species near Truckee River. The CNDDDB recording was mapped in 1970's and was based on 1800's information and was never found to have been present. Project area does not have suitable shore habitat for this species and no impact is anticipated.
marsh skullcap <i>Scutellaria galericulata</i>			2B.2	Marshes and swamps, lower montane coniferous forest, meadows and seeps. Swamps and wet places. 0-6,400 feet in elevation. Perennial rhizomatous herb. Blooms June-September.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 2.5 miles west of project on Truckee River. Treatments could result in direct or indirect adverse effects on <i>Scutellaria galericulata</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatment activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
cut-leaf checkerbloom <i>Sidalcea multifida</i>			2B.3	Lower montane coniferous forest, meadows and seeps, Great Basin scrub, pinyon and juniper woodland. 4,200-9,050 feet in elevation. Perennial Herb. Blooms May-September.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 3.5 miles north of project, along the Little Truckee River and Boca Reservoir. Treatments could result in direct or indirect adverse effects on <i>Sidalcea multifida</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatment activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
Munro's desert mallow <i>Sphaeralcea munroana</i>			2B.2	Great Basin scrub. Tends to grow in dry volcanic places. 6,500 feet in elevation. Perennial herb. Blooms May-June.	Not Expected to Occur: There is one CNDDDB recorded occurrence for this species in CA from a 1922 collection near Olympic Valley. The project area does not have suitable habitat for this species and no impact is anticipated.
hairy marsh hedge-nettle <i>Stachys pilosa</i>			2B.3	Mesic sites in meadows, seeps, and Great Basin Scrub. 3,935-5,805 feet in elevation. Perennial rhizomatous herb. Blooms June-August.	Could Occur: This species occurs in mesic areas and suitable habitat for this species is present within the project area. The nearest recorded occurrence is 9 miles north of the project area, near Boca Reservoir. Treatments could result in direct or indirect adverse effects on <i>Stachys pilosa</i> . Species occurs in mesic areas where project work is unlikely to occur or will see minimal treatments activities. In addition, pre-treatment surveys will be conducted per SPR BIO-7. This species will be flagged and avoided by treatment activities if found.
northern slender pondweed <i>Stuckenia filiformis</i> ssp. <i>alpina</i>			2B.2	Marshes and swamps. Shallow, clear water of lakes and drainage channels. 0-7,600 feet in elevation. Perennial rhizomatous herb (aquatic). Blooms May-July.	Could Occur: Suitable habitat for this species is present within the project area. This species is an aquatic plant and will not be affected by proposed project work. The nearest recorded occurrence is 6 miles southeast in Lake Tahoe. No impact is anticipated.

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Reptiles and Amphibians					
Southern long-toed salamander <i>Ambystoma macrodactylum sigillatum</i>		SSC		High elevation meadows and lakes in the Sierra Nevada, Cascade, and Klamath mountains. Aquatic larvae occur in ponds and lakes. Outside of breeding season adults are terrestrial and associated with underground burrows of mammals and moist areas under logs and rocks.	Could Occur: This species occurs in high elevation meadows and suitable habitat for this species is present within the project area. The nearest CNDDDB recorded occurrence for this species is 7 miles west of project area, near Donner Lake. The project area is 3.5 miles east and outside of the CWHR predicted habitat range for species. Manual treatment and prescribed burning within habitat suitable for Southern long-toed salamander may result in the injury or death of individuals. Pursuant to SPR BIO-10, focused surveys (i.e., walk and turn surveys) will be conducted in habitat suitable for the species within 500 feet of aquatic habitat (i.e., streams, ponds, wetlands, seeps) prior to implementing treatment activities within 500 feet of aquatic habitat. If Southern long-toed salamander is detected during surveys, the surrounding area will be flagged for avoidance and a qualified RPF or biologist with a valid CDFW scientific collecting permit may relocate the individual animal if needed., Along with implementation of SPR BIO-10, SPR HYD-1 and WLPZ setbacks pursuant to SPR HYD-4 would avoid injury or mortality to this species.
Northern leopard frog <i>Lithobates pipiens</i>		SSC		Native range is east of Sierra Nevada-Cascade Crest. Near permanent or semi-permanent water in a variety of habitats. Highly aquatic species. Shoreline cover, submerged and emergent aquatic vegetation are important habitat characteristics.	Not Expected to Occur: The nearest CNDDDB recorded occurrence is 5 miles southeast in Kings Beach from a 1934 collection (CNDDDB 2023). The project area at least 20 miles from multiple CWHR predicted habitat ranges for species. This species is unlikely to be present at the project site. No impact is anticipated for this species.
Sierra Nevada yellow-legged frog <i>Rana sierrae</i>	FE	ST		Sierra Nevada yellow-legged frog (SNYLF) are often encountered within a few feet of water; however, suitable habitat is defined as permanent waters, intermittent waters associated with permanent waters that contain permanent pools, and uplands within 82-feet of aquatic habitat (USFWS 2017) Tadpoles may require 2 - 4 years to complete their aquatic development (CNDDDB 2023). SNYLF live in California's Sierra Nevada mountains in lakes, ponds, marshes, meadows and streams at elevations ranging from 4,500 to 12,000 feet (USFWS 2023a). SNYLF are rarely found in water associated	Could Occur: There is a CNDDDB recorded occurrence of this species 0.5 miles outside the project area from a 1939 collection, located where Martis Creek crosses Highway 267 (CNDDDB 2023). While potentially suitable habitat for this species is present within and adjacent to the project area, habitat quality within the project area is low due to nonnative fish introduction. Martis Creek and East Martis Creek both have Lahontan cutthroat trout CNDDDB recordings (#10 and #11) that are listed as "extirpated" due to the introduction of nonnative trout species such as brown, brook, and rainbow trout and that only hybrid trout species exist as of 2001 (CNDDDB 2023-LCT-OCC#10). The presence of introduced trout species likely means that the population of Sierra Nevada yellow-legged frog collected in 1939 is extirpated or drastically reduced from decades of fish stocking efforts and the current presence of nonnative trout in the waterway. However, a small potential does still exist that the species could be present in the project area due to its historic existence with

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
				<p>with fish as SNYLF and their young both compete for the same food sources and are they themselves prey for native and non-native fish species (NPS 2019, USFWS 2014)</p>	<p>Lahontan cutthroat trout species in the same waterway. The species may occur within meadows or streams with deep enough water that are within the project area.</p> <p>Manual treatment, mechanical treatment and prescribed burning within habitat suitable for Sierra Nevada yellow-legged frog may result in the injury or death of individuals. Implementation of SPR HYD-1 and WLPZ setbacks pursuant to SPR HYD-4 would reduce the likelihood of injury or mortality to this species. In addition, SPR BIO-10 would require a habitat survey and three visual encounter surveys in ten years of all life stages of Sierra Nevada yellow-legged frog ahead of work within a 100-foot buffer of perennial waters or other aquatic habitat suitable for the species, or presence of the species would be assumed. If surveys do not detect the presence of Sierra Nevada yellow-legged frog then no further mitigation would be required. If surveys detect Sierra Nevada yellow-legged frog or presence is assumed mitigation measures BIO-2a would apply. Mitigation measure BIO-2a would require biological monitoring of suitable habitat for Sierra Nevada yellow-legged frog, and if Sierra Nevada yellow-legged frogs are encountered during project activities, all work would stop, and a no-disturbance buffer of 100 feet would be established around any frogs or egg masses detected during surveys or construction, and adults would be allowed to leave the construction area of their own volition. No egg masses would be moved.</p> <p>With implementation of these Avoidance strategies adapted from the June 2017 <i>Amendment of the Programmatic Biological Opinion on Nine Forest Programs on Nine National Forests in the Sierra Nevada of California for the Endangered Sierra Nevada Yellow-Legged Frog, Endangered Northern Distinct Population Segment of the Mountain Yellow-legged Frog, and Threatened Yosemite Toad</i> (USFWS 2017), and with implementation of standard project requirements related to waterway protection, erosion prevention, and hazardous waste disposal, the project is not expected to result in injury, mortality, or disturbance of Sierra Nevada yellow-legged frog and would maintain habitat function for the species.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Birds					
Northern goshawk <i>Accipiter gentilis</i>		SSC		<p>Within, and in vicinity of, coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees. (CNDDDB 2023)</p> <p>Begins breeding in April in southern California, and by mid-June in the north. Female lays eggs in 3-day intervals for average clutch of 3. Female incubates 36-41 days while male provides food. After hatching, female feeds brood 8-10 days, then male helps feed them. Young may leave nest to perch at about 40 days; usually fledge by 45 days. Young begin to hunt by 50 days and are often independent by 70 days (CWHR Life History 2005).</p>	<p>Could Occur: There are two CNDDDB recorded occurrences 0.5 miles (1999) and 3.5 miles (1992) southeast of project area (CNDDDB 2023). This species requires dense, mature conifer and deciduous forest, interspersed with meadows, other openings, and riparian areas required. Nesting habitat includes north-facing slopes near water (CDFW 2023). Over half of the project area has seen previous mechanical and manual vegetation treatment as part of an active Timber Harvest Plan (THP). No northern goshawks have been detected within the project area during any of these previous THP treatments. The project area is also heavily used by the public for recreation. Northern goshawks are extremely defensive of their nesting areas (CWHR Life History 2005), and no record or report of species aggression is known for the area. Large swaths of mature, dense, and undisturbed forest are not present within project area due to multiple previous THP activities.</p> <p>Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for northern goshawk during the nesting bird season could destroy or disturb active nests, potentially resulting in abandonment of the nest and loss of young. Treatment would not remove foraging or nesting habitat for northern goshawk, and treatment activities would reduce vegetation density in this species' foraging habitat and would likely encourage species presence within project area after treatment.</p>
Greater sandhill crane <i>Antigone canadensis tabida</i>		ST FP		<p>Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.</p>	<p>Not Expected to Occur: There are two CNDDDB recorded occurrences 14 miles west and northwest of project area. The project area is outside of CWHR species range and predicted habitat. Some suitable foraging habitat is present in southern meadow and northern Dry Lake sections of project area; however, many locations around the project vicinity are better suited for this species preference of irrigated pasture/wetland sites and would likely be used over habitat in the project area. No impact is anticipated for species.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Willow flycatcher <i>Empidonax traillii</i>		SE		Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2,000-8,000 feet in elevation. Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches. Summer resident of California (May-September).	<p>Could Occur: The nearest CNDDDB recorded occurrences (2004) is 0.5 miles southwest of project area along Martis Creek. The project area is outside of the CWHR predicted habitat and range for species, however suitable habitat for species does exist within the project area. Species inhabits dense willow thickets, which would likely only see manual and prescribed burning treatment due to WLPZ restrictions along waterways.</p> <p>Manual and prescribed burning treatments conducted within habitat suitable for willow flycatcher during summer residency of May-September could disturb species, or disturb or destroy their active nests, potentially resulting in abandonment of the nest and loss of young, if present in treatment areas. If active willow flycatcher nests are observed during focused surveys, then a non-disturbance buffer would be established around the nest to avoid disturbance.</p>
Bald eagle <i>Haliaeetus leucocephalus</i>		SE FP		Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter (CNDDB 2023). Breeds February through July; peak activity March to June. Territories have been abandoned after disturbance from logging, recreational development, and other human activities near nests. Usually does not begin nesting if human disturbance is evident. (CDFW 2023)	<p>Could Occur: The nearest CNDDDB recorded occurrences are 7 miles north near Boca Reservoir and 8 miles west near Donner Lake. Nesting habitat of dense old-growth forest within 1-mile of water required by this species is not present within the project area but may be present in outlying and nearby forested lands adjacent to project area. This species is sensitive to human disturbance and is not likely within or near project area due to heavy recreation, adjacent logging, and multiple long-term THP vegetation treatments of project area.</p> <p>Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for bald eagle during the nesting bird season could destroy or disturb active nests, potentially resulting in abandonment of the nest and loss of young. Treatment would not remove foraging or nesting habitat for bald eagle, and treatment activities would reduce vegetation density in this species' foraging habitat and would likely encourage species presence within project area after treatment. If active bald eagle nests are observed during focused surveys, then a non-disturbance buffer would be established around the nest to avoid disturbance.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Yellow warbler <i>Setophaga petechia</i>		SSC		Riparian plant associations near water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.	<p>Could Occur: The nearest CNDDDB recorded occurrence of this species is 6.5 miles west in the riparian outflow of Donner Lake (1988). Suitable riparian habitat for this species is present and the project area is within the CWHR species range. The riparian areas within the project area would be subject to WLPZ restrictions of SPR HYD-4 and will only see manual or prescribed burning vegetation treatment.</p> <p>Manual and prescribed burning treatments conducted within habitat suitable for yellow warbler during the nesting bird season could destroy or disturb active nests, potentially resulting in abandonment of the nest and loss of young. Treatment would not remove foraging or nesting habitat for yellow warbler, and treatment activities would reduce vegetation density in this species' foraging habitat and would likely encourage species presence within project area after treatment. If active yellow warbler nests are observed during focused surveys, then a non-disturbance buffer would be established around the nest to avoid disturbance.</p>
California spotted owl <i>Strix occidentalis occidentalis</i>		SSC		Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure >40%. Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water (CNDDDB 2023). In northern California, resides in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 7,600 feet. Breeds from early March through June, with peak in April and May. One brood per year. Clutch size 1-4, usually 2. Very sensitive to habitat destruction and fragmentation (CDFW 2023).	<p>Could Occur: Suitable habitat for this species is present within project area. The nearest CNDDDB recorded occurrences are 3.5 miles south and southwest of project area. Species is very sensitive to habitat fragmentation and is not likely to occur within or near the project area due to heavy recreation, adjacent logging, and multiple long-term THP vegetation treatments of project area.</p> <p>Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for California spotted owl during the nesting bird season could destroy or disturb active nests, potentially resulting in abandonment of the nest and loss of young. Treatment would not remove foraging or nesting habitat for California spotted owl, and treatment activities would reduce vegetation density in this species' foraging habitat and would likely encourage species presence within project area after treatment. If active California spotted owl nests are observed during focused surveys, then a non-disturbance buffer would be established around the nest to avoid disturbance.</p>

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Fish					
Lahontan mountain sucker <i>Catostomus lahontan</i>		SSC		Occur in the Truckee River drainage of the Lahontan basin in the eastern Sierra Nevada. Found in shallow (< 2 m), clear, low-gradient streams; associated with diverse substrates, from sand to boulders, in areas with dense cover. Have been found in streams at elevations up to 9,200 feet and at temperatures of 1-25C.	Could Occur: The nearest CNDDDB recorded occurrence is immediately downstream of the project area in Martis Creek, below Martis Creek Lake (2016). East Martis Creek runs through the southern half of the project area and may present suitable habitat for this species. Manual, mechanical, and prescribed burning treatments upslope from waterways could result in inadvertent discharge of silt into streams that could increase turbidity, potentially resulting in adverse effects to Lahontan mountain sucker. However, implementation of erosion and hazardous waste SPRs (SPR HYD-1, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-7, and SPR GEO-8) and implementation of WLPZs and ELZs pursuant to SPR HYD-4 would avoid injury to or mortality to this species.
Lahontan cutthroat trout <i>Oncorhynchus clarkii henshawi</i>	FT			Historically in all accessible cold waters of the Lahontan Basin in a wide variety of water temps and conditions. Cannot tolerate presence of other salmonids. Requires gravel riffles in streams for spawning.	Could Occur: There is one CNDDDB recorded occurrence within the project area in East Martis Creek (Occurrence #10-2001). CNDDDB records within and adjacent to project area are marked as "Extirpated" due to non-native salmonid introduction and that "a few hybrids may still be present". Manual, mechanical, and prescribed burning treatments upslope from waterways could result in inadvertent discharge of silt into streams that could increase turbidity, potentially resulting in adverse effects to Lahontan cutthroat trout. Implementation of erosion and hazardous waste SPRs (SPR HYD-1, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-7, and SPR GEO-8) and implementation of WLPZs and ELZs pursuant to SPR HYD-4 would avoid injury to or mortality to this species.
Mountain whitefish <i>Prosopium williamsoni</i>		SSC		Mountain whitefish historically occupied similar habitats to Lahontan cutthroat trout on both the California and Nevada sides of the Sierra Nevada. Their current range in California includes the Lower, Little, and Upper Truckee, East Fork Carson, and East and West Walker River drainages on the east side of the Sierra Nevada, and perhaps the West Fork Carson River as well. They can also be found in natural lakes, including Tahoe, Independence, Cascade, and Fallen Leaf lakes (CalTrout 2023).	Could Occur: The nearest CNDDDB recorded occurrence is immediately downstream in Martis Creek, below Martis Creek Lake (2016). East Martis Creek runs through the southern half of the project area and may provide suitable habitat for this species. Manual, mechanical, and prescribed burning treatments upslope from waterways could result in inadvertent discharge of silt into streams that could increase turbidity, potentially resulting in adverse effects to mountain whitefish. Implementation of erosion and hazardous waste SPRs (SPR HYD-1, SPR GEO-1, SPR GEO-3, SPR GEO-4, SPR GEO-5, SPR GEO-7, and SPR GEO-8) and implementation of WLPZs and ELZs pursuant to SPR HYD-4 would avoid injury to or mortality to this species.

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Lahontan Lake tui chub <i>Siphateles bicolor pectinifer</i>		SSC		Inhabits large, deep lakes. Tolerates a wide range of physiochemical water conditions. Spawns in near-shore shallow areas over beds of aquatic vegetation.	Not Expected to Occur: There is one CNDDDB recorded occurrence of this species and is mapped within the confines of Lake Tahoe, 5 miles south of project area. Species is a subspecies of tui chub and a single CNDDDB recording states "Lake Tahoe contains the only known population of this subspecies in California". Potential waterbodies within project area where species has potential to inhabit have nonnative piscivorous species and are unlikely to have Lahontan Lake tui chub present. No impact is anticipated for species.
Invertebrates					
Western bumble bee <i>Bombus occidentalis</i>		SC		Once common throughout much of its range, in California, this species is currently largely restricted to high elevation sites in the Sierra Nevada and the northern California coast. Habitat includes open grassy areas, chaparral, scrub, and meadows. Requires suitable nesting sites for the colonies, availability of nectar and pollen from floral resources throughout the duration of the colony period (spring, summer, and fall), and suitable overwintering sites for the queens.	Could Occur: There is one CNDDDB recorded occurrence 3 miles north near Boca (1958), and potentially suitable habitat occurs within the project area. Treatment activities within suitable habitat for western bumble bee may result in the removal of floral resources required for the species; however, habitat function suitable for western bumble bee would be maintained. If western bumble bees are detected during pre-treatment surveys, or if presence of the species in suitable habitat is assumed, treatment of suitable habitat will be designed to maintain patches of floral resources during treatment. Project work does not include use of herbicides and will help protect and minimize impacts to species. Information on bumble bees in general, and western bumble bee specifically, is gradually becoming more available. However, there is limited information on the abundance of western bumble bee in California or colony size (CDFW 2019), and a current lack of published information on the potential magnitude of effects from the loss of individual western bumble bee overwintering queens or nests on populations of the species. Therefore, assessing the significance of impacts on the species due to the potential loss of overwintering queens or nests from this project would be speculative. CEQA Guidelines indicate that after thorough investigation, if an impact is too speculative for meaningful evaluation, this finding should be noted, and further discussion can be concluded (State CEQA Guidelines Section 15145). It is unlikely that populations of these species would be reduced below self-sustaining levels as a result of implementation of the proposed project or that treatment activities would substantially reduce the number or restrict the range of this species.

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Monarch butterfly <i>Danaus plexippus</i>	FC			Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Along migration routes and within summer ranges, monarch butterflies require two suites of plants: (1) host plants for monarch caterpillars, which are primarily milkweeds (<i>Asclepias</i> spp.) within the family <i>Apocynaceae</i> upon which adult monarchs lay eggs; and (2) nectar-producing flowering plants of many other species that provide food for adult butterflies. Having both host and nectar plants available from early spring to late fall and along migration corridors is critical to the survival of migrating pollinators.	<p>Could Occur: Project area is more than 150 miles from the coast or bay and at elevations over 1,400 feet and therefore are not likely to provide overwintering habitat for monarch butterflies (CBD et al. 2014). Monarch require their host plant, milkweed, for breeding and foraging, and they may forage on other common flowering plants While there are limited known occurrences of milkweed host plants in the project area and monarch breeding is not known to occur (Western Milkweed Mapper 2023), monarch host plants may be present and breeding may occur within the project area. Treatments within forests and grasslands may result in the loss of host plants if present. If monarch butterflies or host plants are detected or assumed to occur in suitable habitat, treatment of suitable habitat will be designed to avoid milkweed when feasible and to maintain habitat function for the species.</p> <p>Milkweed studies have shown that prescribed burning during dormant season has positive or neutral effects on milkweed, and milkweed has adaptations which promote fire survivorship and establishment post-fire (wind-blown seeds, deep rhizomes, early successional status) (Ulev 2005). Therefore, prescribed fire treatment in grasslands containing milkweed is recommended to occur during the milkweed dormant season, from October 31 through March 15. Habitat function will be maintained because all areas would not be treated at once; treatment will be spread out over the course of several years. The species is currently a candidate for federal listed under ESA. Should the species be listed, further consultation with the USFWS may be required.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Mammals					
Sierra Nevada mountain beaver <i>Aplodontia rufa californica</i>	–	SSC	–	Dense growth of small deciduous trees and shrubs, wet soil, and abundance of forbs in the Sierra Nevada and east slope. Needs dense understory for food and cover. Burrows into soft soil. Needs abundant supply of water. Mountain beavers breed from December through March (peak in February) (CWHR Life History 2023).	<p>Could Occur: The nearest CNDDDB recorded occurrence is in Juniper Creek, 2.5 miles east of project area (1985). East Martis Creek runs through the southern half of the project area and may provide suitable montane riparian habitat for species. This species has not been observed within project area during prior scoping for multiple long-term THP vegetation treatments.</p> <p>Manual treatment and prescribed burning within habitat suitable for Sierra Nevada mountain beaver may result in the injury or death of individuals. If Sierra Nevada mountain beaver is detected or assumed present in the project area, a limited operating period for manual treatments, mechanical treatments, pile burning, and conducted within 200 feet of suitable aquatic habitat from February 1 to July 31 will be implemented, if feasible, pursuant to SPR BIO-1. If this limited operating period is infeasible, focused surveys (i.e., burrow searches), will be conducted prior to implementing treatment activities during the maternity season (February through July) within 200 feet of suitable aquatic habitat, pursuant to SPR BIO-10. If Sierra Nevada mountain beaver dens are detected, a no-disturbance buffer of 250 feet would be established around the burrow, pursuant to mitigation measure BIO-2b. Along within implementation of WLPZ setbacks pursuant to SPR HYD-4, SPR BIO-1, SPR BIO-10, and mitigation measure BIO-2b would avoid injury or mortality to this species.</p>
Ringtail <i>Bassariscus astutus</i>	–	FP	–	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	<p>Could occur. The documented range of ringtail includes all of Placer and Nevada Counties. Riparian, forest, woodland, and shrub habitats in the project area may provide habitat suitable for ringtail. Ringtail occupy tree cavities, caves, and natural crevices year-round, although they are most sensitive to disturbance during the maternity season from April 15 through June 30.</p> <p>Manual treatment, mechanical treatment, and prescribed burning within habitat suitable for ringtail may result in the injury or death of individuals. Pursuant to SPR BIO-1, a limited operating period during the ringtail maternity den season may be implemented to avoid impacts to the species, or if seasonal avoidance is infeasible, surveys for ringtail will be conducted pursuant to SPR BIO-10. If ringtail is detected during pre-treatment surveys or assumed present, active den avoidance, daily sweeps, additional environmental training, and biological monitoring as described in mitigation measure BIO-2a would avoid injury or mortality to this species.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Wolverine <i>Gulo gulo</i>	FPT	ST FP		Found in the north coast mountains and the Sierra Nevada. Found in a wide variety of high elevation habitats. Needs water source. Uses caves, logs, burrows for cover and den area. Hunts in more open areas. Can travel long distances.	<p>Could Occur: Suitable habitat for wolverine is present throughout the project area. Wolverines are rare in California and few populations are currently known. The nearest CNDDDB recorded occurrences are 9-miles northwest and southwest of project area (1991 and 1953). This species has not been observed within the project area during prior scoping for multiple long-term THP vegetation treatments. This species is not likely within or near project area due to heavy recreation, adjacent logging, and multiple long-term THP vegetation treatments of project area.</p> <p>Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for wolverine could result in destruction of dens and injury or mortality of adults or young, which would be a potentially substantial adverse effect on species. A limited operating period for all treatments from January 1 to June 30 will be implemented within suitable denning habitat for the species, if feasible, pursuant to SPR BIO-1. If seasonal avoidance is infeasible, CDFW would be contacted prior to implementation to obtain information about wolverine activity. If CDFW and the RPF or Biologist conclude that wolverine presence is possible in the project area, then focused pre-treatment surveys for wolverine activities will be conducted prior to treatment as described in SPR BIO-10. If an active wolverine den or rendezvous site is detected, a no-disturbance buffers of 0.5 mile around found wolverine dens would be implemented, and no activities that create loud and continuous noise would occur within the buffer through June 30 or as agreed upon in discussion with CDFW, pursuant to mitigation measure BIO-2a. With implementation of SBIO BIO-1, BIO-10, and mitigation measure BIO-2a, impacts to wolverine will be avoided.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Sierra Nevada snowshoe hare <i>Lepus americanus tahoensis</i>		SSC		Boreal riparian areas in the Sierra Nevada. Thickets of deciduous trees in riparian areas and thickets of young conifers.	<p>Could Occur: The nearest CNDDDB recorded occurrence is 3-miles west of the project area, near Truckee, CA (1915). The project area is bisected by the CWHR range of the species, and no CWHR predicted habitat for this species is present within project area. However, suitable riparian habitat for this species is present within the project area.</p> <p>Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for Sierra Nevada snowshoe hare could result in destruction of dens and injury or mortality of adults or young, which would be a potentially substantial adverse effect on species. Pursuant to SPR BIO-1, a limited operating period for mechanical treatments and prescribed burning activities from April 1 to June 30 will be implemented, if feasible, or pursuant to SPR BIO-10, focused surveys will be conducted prior to implementing mechanical treatments and prescribed burning. If any individuals or dens are detected, no-disturbance buffers of 100 feet around found Sierra Nevada snowshoe hare forms would be implemented, as described in mitigation measure BIO-2b. With implementation of SBIO BIO-1, BIO-10, and mitigation measure BIO-2b, impacts to Sierra Nevada snowshoe hare will be avoided.</p>
Western white-tailed jackrabbit <i>Lepus townsendii townsendii</i>		SSC		Sagebrush, subalpine conifer, juniper, alpine dwarf shrub and perennial grassland. Open areas with scattered shrubs and exposed flat-topped hills with open stands of trees, brush and herbaceous understory.	<p>Could Occur: The nearest CNDDDB recorded occurrence is 9-miles southwest of project area, near Tahoe City, CA (1920). The project area is within the CWHR species range, but only a small portion of the meadow in the southwest of the project area is mapped as predicted habitat for the species. Suitable habitat for species is present within the southwestern section of the project area.</p> <p>Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for Western white-tailed jackrabbit could result in injury or mortality of adults or young, which would be a potentially substantial adverse effect on species. Pursuant to SPR BIO-1, a limited operating period for mechanical treatments and prescribed burning activities from April 1 to June 30 will be implemented, if feasible. If seasonal avoidance is infeasible, focused surveys as described in SPR BIO-10 will be conducted prior to implementing mechanical treatments and prescribed burning. If any individuals or dens are detected, no-disturbance buffers of 100 feet around found western white-tailed jackrabbit forms would be implemented. With implementation of SPR BIO-1, BIO-10, and mitigation measure BIO-2b, impacts to western white-tailed jackrabbit will be avoided.</p>

Species	Status ¹ Federal	Status ¹ State	Status ¹ CRPR/ Other	Habitat and Blooming Period	Potential for Occurrence ² /Potential Impact
Fisher <i>Pekania Pennanti</i>		SSC		Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Could Occur: The nearest CNDDDB recorded occurrence is 10.5-miles northwest of project area, near the Little Truckee River (1981). Suitable habitat for this species exists within project area and much of the project area is mapped as “Medium” or “High” predicted habitat for species suitability. Manual, mechanical, and prescribed burning treatments conducted within habitat suitable for fisher could result in destruction of dens and injury or mortality of adults or young, which would be a potentially substantial adverse effect on species. Pursuant to SPR BIO-1, within habitat determined to be suitable for the species by a qualified RPF or biologist, a limited operating period for manual treatments that use hand-operated power tools (e.g., chainsaws), mechanical treatments, and prescribed burning activities from March 1 to June 30 will be implemented, if feasible. If this limited operating period is infeasible, as described in SPR BIO-10, focused surveys for fisher will be conducted prior to implementing manual treatments that use hand-operated power tools (e.g., chainsaws), mechanical treatments and prescribed burning during the fisher maternity season (May 1–June 30) within habitat suitable for the species. If an active fisher den is detected during focused surveys, a no-disturbance buffer of at least 500 feet will be established around the den, and no treatment activities will occur within this buffer until the den is no longer occupied as determined by a qualified RPF or biologist. Buffer size may be reduced or adjusted if recommended by a qualified biologist in consultation with CDFW, as described under mitigation measure BIO-2b. With implementation of SBIO BIO-1, BIO-10, and mitigation measure BIO-2b, impacts to fisher will be avoided. .
Sierra Nevada red fox - Sierra Nevada DPS <i>Vulpes vulpes necator</i> pop. 2	FE	ST		Use multiple habitat types in the alpine and subalpine zones including high-elevation conifer dominated by whitebark pine, mountain hemlock and lodgepole pine, as well as meadows and fell-fields; typically in areas of heavy snow cover. Generally above 3,900 feet.	Not Expected to Occur: The nearest CNDDDB recorded occurrence is 3.5-miles northwest of project area along Highway 89, near the town of Truckee (1994). All CNDDDB species recordings around the project area are listed as “Possibly Extirpated” and nearest recording (Occurrence #87) states “Expert opinion suggest that Sierra Nevada Red Fox are likely extirpated from much of their historic range”. Project area is outside of the CWHR species range. No impact is anticipated for species.

Note: CNDDDB = California Natural Diversity Database; DPS= Distinct Population Segment; CRPR = California Rare Plant Rank

¹ Legal Status Definitions

Federal:

- FE Endangered (legally protected)
- FT Threatened (legally protected)
- FPT Proposed for listing as Threatened under ESA
- FC Candidate for Listing under ESA

State:

- SE Endangered (legally protected)
- ST Threatened (legally protected)
- SC Candidate for Listing under CESA (legally protected)
- FP Fully protected (legally protected)
- SSC Species of special concern (no formal protection other than CEQA consideration)

California Rare Plant Ranks:

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

Threat Ranks

0.1-Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

0.2-Moderately threatened in California (20-80 percent occurrences threatened/moderate degree and immediacy of threat)

0.3-Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat or no current threats known)

² Potential for Occurrence Definitions

Not expected to occur: Species is unlikely to be present on the project site due to poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

Could occur: Suitable habitat is available at the project site; however, there are little to no other indicators that the species might be present.

Known to occur: The species, or evidence of its presence, was observed at the project site during reconnaissance surveys, or was reported by others.

Sources: CDFW 2023, CNPS 2023b, USFWS 2023c.

SENSITIVE NATURAL COMMUNITIES IMPACT ANALYSIS

Based on review of CAL FIRE FRAP vegetation data and habitat present in the project area as verified during May and June 2023 reconnaissance surveys, the CWHR habitat types present in the project area include eastside pine, Sierran mixed conifer, bitterbrush, montane chaparral, sagebrush, annual grassland, lacustrine (lake), and barren land. Upon review of Table 3.6-22 Sierra Nevada Ecoregion MCV Alliance tables in CALVTP PEIR, there are 32 MCV alliances (natural communities) with potential to occur in the CWHR habitat types present in the project area (Table B1-above). Eight of these communities are addressed as sensitive natural communities in the CALVTP PEIR. These eight sensitive natural communities are Washoe pine woodland, incense cedar forest, bitterbrush scrub, bush chinquapin chaparral, choke cherry thicket, silver sagebrush scrub, Rothrock's sagebrush, and needle spike-rush stand.

During multiple reconnaissance-level surveys in May and June 2023, natural communities observed included Ponderosa pine forest, Jeffrey pine forest, and mountain big sagebrush. Approximately 80 percent of the project area is eastside pine and Sierran mixed conifer CWHR habitat types, which are primarily comprised of a mosaic of previously treated Ponderosa pine and Jeffrey pine forest natural communities (both S4 ranks). Areas in the southern half of the project area consist of sagebrush and annual grassland CWHR types. The primary species of the sagebrush community at the project site are mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) and antelope bitterbrush (*Purshia tridentata*), and most of the area is consistent with the MCV mountain big sagebrush natural community (S4 rank). Three acres in the center of the project area are mapped as CWHR bitterbrush type, but field reconnaissance surveys determined that this area consists of the MCV mountain big sagebrush natural community as well. The entire project area was surveyed and has had multiple prior timber harvests, and the area does not contain vegetation consistent with the MCV alliance incense cedar forest and woodland. Incense cedar (*Calocedrus decurrens*) trees do occur within the project area, but incense cedar trees are very scattered and isolated and no area within the project contains vegetation that meets the MCV incense cedar forest and woodland alliance membership rules. Therefore, the incense cedar forest and woodland sensitive natural communities have been omitted from further review.

Sensitive natural community alliances were not observed within annual grassland habitat during the May and June reconnaissance surveys (needle spike-rush stand alliance). Although this community was not observed, it has the potential to occur in seasonally flooded areas if this species is present at relative cover levels that meet the sensitive natural community membership rules outside of the areas accessed during the reconnaissance surveys. The majority of annual grassland habitat in the project area is dominated by plants including pale agoseris (*Agoseris glauca* var. *glauca*), Great Basin violet (*Viola beckwithii*), slender cinquefoil (*Potentilla gracilis*), grasses, and sedges.

Stands of quaking aspen (*Populus tremuloides*) are present along East Martis Creek (Class I). Cross-reference of quaking aspen species presence with known MCV alliances for the Sierra Nevada ecoregion in Table 3.6-22 in the CALVTP PEIR indicates that the site may have potential to contain the water birch thicket, black cottonwood forest and woodland, or aspen groves sensitive natural community types and are listed in Table B-3 below (three types added for further analysis). Twenty-five acres within the project area are categorized as barren CWHR habitat type and consist of rocky outcroppings and will see no project work or disturbance. Lake Ella is in the northeastern corner of the project area and is mapped as the lacustrine (lake) CWHR habitat type. Nine acres of the project area are recorded as montane chaparral CWHR habitat, and the species composition of these areas are consistent with the MCV green leaf manzanita - Pinemat manzanita chaparral natural community (S3S4 rank). All chaparral habitats are considered sensitive habitat types based on Senate Bill 1260, Statutes of 2018, in that they warrant additional consideration because this statute prohibits type conversion of these vegetation communities. Because this alliance has potential to be an S3 and the above additional law, this sensitive natural community has been included for further analysis.

In total, eight sensitive natural communities are known to occur or were determined to have potential to occur within the CWHR habitat types within the project area (Table B-3 below). A list of sensitive natural communities with potential to occur in the project area was compiled by completing a CNDDDB search of the USGS quadrangles containing and surrounding the project area (CNDDDB 2023) and reviewing Table 3.6-22 (pages 3.6-83 – 3.6-85 in the PEIR (Volume II) for sensitive natural communities that could occur in the Sierra Nevada ecoregion in the habitat types mapped in the project area, as well as the methods described above. Three sensitive natural communities were added to Table B-3 due to the presence of quaking aspen within the project area (aspen groves, water birch thicket, and black cottonwood forest and woodland) and their potential presence within the project area.

As a result, SPR BIO-3 would apply in all treatment areas, and treatments will be designed to maintain the characteristics and membership rules of any vegetation alliance that is designated as a sensitive natural community.

Sensitive habitat types (CWHR types) and sensitive natural communities observed or with the potential to occur in the project area are discussed below Table B-3.

Table B-3 Sensitive Natural Communities Documented or with Potential to Occur in the Project Area

Sensitive Natural Community ¹	Rarity Rank ²	CWHR Habitat Type
Green leaf manzanita - Pinemat manzanita chaparral	S3S4	Montane Chaparral
Bush chinquapin chaparral	S3.3	Montane Chaparral
Silver sagebrush wet shrubland	S3	Montane Chaparral
Rothrock's sagebrush	S3	Montane Chaparral
Needle spike-rush stand	S2	Annual Grassland
Aspen groves	S3.2	Aspen ³
Water birch thicket	S3	Montane Riparian ³
Black cottonwood forest and woodland	S3	Montane Riparian ³

¹ These are designated sensitive natural communities with a state rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable)

² Older ranks, which need to be updated by CDFW, may still contain a decimal "threat" rank of .1, .2, or .3, where .1 indicates very threatened status, .2 indicates moderate threat, and .3 indicates few or no current known threats. A question mark (?) denotes an inexact numeric rank because there are insufficient samples over the full expected range of the type, but existing information points to this rank.

³ Aspen and Montane Riparian CWHR habitat types are not mapped within the project area. Quaking aspen (*Populus tremuloides*) presence within project area may indicate MCV sensitive natural community presence.

Source: CNPS. 2023 A Manual of California Vegetation, Online Edition, Compiled by CAL FIRE in 2023.

SENSITIVE HABITATS

MONTANE RIPARIAN AND WETLAND HABITATS

Riparian and wetland habitat is present in the project area. During the reconnaissance survey, several riparian and wetland areas were observed along East Martis Creek and its tributaries, and the presence of quaking aspen trees indicate that some of these areas may qualify as sensitive natural communities. The project area contains one permanent (Class I) and ephemeral (Class III) streams including East Martis Creek and its tributaries, as well as the ephemeral outflow from Lake Ella in the northwest project area. During the reconnaissance surveys, East Martis Creek contained multiple braided channels and areas of pooled water. Although riparian areas alone are not considered sensitive natural communities, many riparian areas do contain sensitive natural community types pursuant to CEQA. Some areas along and adjacent to East Martis Creek may also consist of the silver sagebrush wet shrubland sensitive natural community type, as well.

Pursuant to SPR BIO-4, the project will be designed to retain or improve riparian and wetland habitat function, and a qualified RPF or biologist will characterize all waterways prior to project activities. Appropriate WLPZs and ELZs would be implemented, and no mechanical treatment will occur within 100 feet of the Class I East Martis Creek. Manual treatment activities may occur within 100 feet of Class II or III streams to improve habitat and reduce undesirable wildfire hazards. Cut vegetation would be left on-site by lopping or chipping with scattering on the landscape. In some areas, removed vegetation would be piled for later pile burning or broadcast burning. While these measures would reduce potential impacts on riparian and wetland habitat, the extent of these habitats within the project area have not been mapped and habitats that exist without the defining characteristics of WLPZs may be present outside of the areas encompassed by WLPZs. If treatment is necessary within riparian or wetland habitat, then Mitigation Measure BIO-3a would apply in these areas to design treatments to maintain habitat function. If habitat function of riparian areas would not be maintained through implementation of Mitigation Measure BIO-3a, unavoidable losses of these resources will be compensated through implementation of Mitigation Measure BIO-3b.

MONTANE CHAPARRAL

As described in Tables B-1 and B-3, montane chaparral is present within the project area. The 1,465-acre project area contains approximately nine acres of montane chaparral. These areas were surveyed and observed species include greenleaf manzanita (*Arctostaphylos patula*), pinemat manzanita (*Arctostaphylos nevadensis*), snowbrush ceanothus (*Ceanothus velutinus*), and creeping snowberry (*Symphoricarpos mollis*). The species composition of these areas is consistent with the green leaf manzanita - Pinemat manzanita chaparral sensitive natural community and have a CA State rank of S3S4. Natural communities with a numeric range rank (e.g., S2S3) are used to indicate any range of uncertainty about the status of the species or community. Due to this uncertainty of the actual rarity of the green leaf manzanita - pinemat manzanita chaparral natural community, the nine acres of the natural community within the project area will be treated as a S3-vulnerable and therefore sensitive natural community. Additionally, all chaparral habitats are considered sensitive habitat types based on Senate Bill 1260, Statutes of 2018, in that they warrant additional consideration because this statute prohibits type conversion of these vegetation communities.

Pursuant to SPR BIO-3, treatments will be designed to maintain the characteristics and membership rules of any vegetation alliance that is designated as a sensitive natural community. SPR BIO-5 requires avoidance of the environmental effects of type conversion within chaparral and that the habitat function of these communities be maintained. The project area has had multiple previous timber harvests and treatments and montane chaparral represents less than one percent of the project area. The spatial scale within which the effects of type conversion are evaluated for this project comprises TTAD-owned lands spanning the East Martis Creek and West Martis Creek Watersheds. This spatial scale is appropriate because the surrounding open space areas in the watersheds contain a similar proportion of chaparral habitat as seen in the treatment area. This is a substantial landscape scale at which ecologically functional habitat capable of meeting the resource needs of species that rely on these habitats can be maintained within the watershed. A larger landscape scale was not deemed appropriate because TTAD does not control the management of habitats outside of their property and therefore has no ability to preserve ecological function of those habitats although, the majority of these outside lands are under various protected status as parks and open space.

Fuel break treatments could occur in up to a maximum of 9.13 acres of montane chaparral habitat. Montane chaparral constitutes approximately 0.62 percent of the 1,464-acre treatment area, and the surrounding landscape to the south, east, and north is composed of open forested land with a similar percentage of montane chaparral. Within the TTAD-owned lands, the chaparral areas will be retained. This treatment would not constitute a landscape-level conversion of montane chaparral to other habitat types because treatments would be designed such that there would not be an overall loss of habitat function for montane chaparral at the landscape level.

Where treatment occurs in montane chaparral habitat, TTAD would design treatment to habitat function. This includes maintaining at least 35 percent relative density of chaparral vegetation and implementing maintenance treatments at a frequency that allows regeneration of the characteristic species of each montane chaparral community. For example, greenleaf manzanita is an obligate seeder that requires fire to establish a sufficient seedbank for regeneration. Therefore, manual and mechanical treatments that remove mature, seed-producing shrubs can deplete the seedbank of greenleaf manzanita. Additionally, many obligate seeding chaparral shrubs, like greenleaf manzanita, require heat and charate to break seed dormancy and stimulate germination. This ecological process cannot be replicated by mechanical disturbances and therefore, these treatments would not be applied to chaparral vegetation types dominated by greenleaf manzanita and other chaparral species that require fire for regeneration, unless prescribed fire can be applied following mechanical treatments, Treatments within montane chaparral communities will be designed to replicate the natural disturbance regime of the vegetation type present.

Due to some chaparral species (i.e., pinemat manzanita) producing new sprouts from an established burl or lignotuber, treatments within chaparral characterized by this type of species should be designed to maintain the root system and root crown of the dominant montane chaparral shrubs. Mechanical treatments may include cutting, crushing/compacting, or chopping existing vegetation. Manual treatments may include chipping, lopping and scattering, pruning, and hand cutting of existing vegetation. For both mechanical and manual treatments, chaparral shrubs would not be uprooted during treatments and the root crown would be maintained to allow dominant shrubs with lignotubers to sprout new shoots following treatment.

Because the treatments would be designed to maintain 35 percent relative density of montane chaparral, replicate the natural disturbance regime of the vegetation type present, and maintain root crowns of resprouting shrubs, ecological function of the montane chaparral communities within the project area would be maintained over the long term. For those chaparral communities dominated by obligate seeders (i.e. greenleaf manzanita), mature nurse shrubs and a mixture of shrubs in all age classes would be maintained to allow for reseeding and regeneration of the characteristic shrub species. While the project is a fuel break treatment type, it is a non-traditional landscape-level fuel break which, in combination with the surrounding properties, will serve to protect the nearby communities from wildfire. As such, the treatment will primarily be composed of shaded fuel break, and when non-shaded fuel breaks are established, their location will be flexible to avoid sensitive habitat areas such as montane chaparral.

The treatment of this vegetation, either through mechanical treatment, manual treatment, or prescribed burning, will not represent a substantial change in the composition of the montane chaparral habitat and type conversion will not occur.

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