

Appendix B

Special-Status Species

Table B-1 Special-Status Plant Species Known to Occur in the Vicinity of the Project Area and Potential for Occurrence in the Project Area

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Mountain bent grass <i>Agrostis humilis</i>	–	SE	2B.3	–	Sometimes on calcareous substrates. High elevation grass. 5,000–11,155 feet in elevation. Blooms July–September.	<i>May occur.</i> This species has been documented west of the project area which is within the species elevation range.
Tiehm's rockcress <i>Boechea tiehmii</i> (Synonym: <i>Arabis tiehmii</i>)	USFS-S	–	1B.3	–	Species is known to occur in the open rocky soils in the Mt. Rose Wilderness, outside the LTBMU. 9,745–11,780 feet in elevation. Blooms July–August.	<i>Not expected to occur.</i> Subalpine habitat is not present in the project area.
Galena Creek rockcress <i>Boechea rigidissima</i> (Synonym: <i>Arabis rigidissima</i> var. <i>Demota</i>)	USFS-S	–	1B.2	Special Interest Species	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. 5,900–10,020 feet in elevation. Blooms July–August.	<i>May occur.</i> Project area contains forest edge habitat potentially suitable for this species, although known occurrences in the Tahoe Basin are above 7,000 feet elevation.
Threetip sagebrush <i>Artemisia</i> ssp. <i>Tripartita</i>	–	–	2B.3	–	Openings in the forest. Rocky, volcanic soils. 6,770–8,000 feet in elevation. Blooms August.	<i>May occur.</i> Project area contains rocky volcanic soils and open forested habitat potentially suitable for this species.
Austin's astragalus <i>Astragalus austini</i>	USFS-WL	–	1B.3	–	Alpine boulder and rock field, Subalpine coniferous forest. 8,000–9,730 feet in elevation. Blooms July–September.	<i>Not expected to occur.</i> Project area is outside of the known range of this species.
Tulare rockcress <i>Boechea tularensis</i>	USFS-S	–	1B.3	–	Shaded, mostly east-facing subalpine rocky areas, including rocky slopes, rock-lined streams and seeps, rocky outcrops, saddles, and canyons. 5,990–11,010 feet in elevation. Blooms June–July.	<i>Not expected to occur.</i> Subalpine habitat is not present in the project area.
Upswept moonwort <i>Botrychium ascendens</i>	USFS-S	–	2B.3	–	Primarily in open habitats. In California and NV, mountain meadows, shrublands, and near seeps, fens, and streams. ≥5,000 feet in elevation. Blooms July–August.	<i>May occur.</i> Project area has open habitat near creek potentially suitable for this species.
Scalloped moonwort <i>Botrychium crenulatum</i>	USFS-S	–	2B.2	–	One of the most hydrophilic of <i>Botrychiums</i> ; grows in saturated soils or seeps along the stabilized margins of small streams, often among dense herbaceous vegetation. Also, in seasonally wet roadside ditches and drainageways. In these habitats it is usually found in partly shaded to heavily shaded sites at mid to high elevations. 2,000–10,760 feet in elevation. Blooms June–September.	<i>May occur.</i> Project area contains riparian creek habitat potentially suitable for this species. The nearest known occurrence is approximately 1.4 miles southwest of the project area.

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Slender moonwort <i>Botrychium lineare</i>	USFS-S	–	1B.1	–	Mid-successional perennial herbaceous meadow vegetation developed over calcareous bedrock or soils influenced by calcareous seepage. Also associated with fen-like seeps and gravelly roadsides resulting from past (15–50 years) disturbance. In California, plants grow on the margins of fen seeps and streams where their roots reach mineral soil. California site is 8,531 feet in elevation.	<i>Not expected to occur.</i> The project area is below the known elevation range in California for this species.
Common moonwort <i>Botrychium lunaria</i>	USFS-S	–	2B.3	–	Varied habitat associations. At high latitudes and elevations, it is associated with open to lightly wooded meadows as well as sparsely vegetated scree slopes. At lower elevations and latitudes, it occurs in deep woods as well as meadows and sparsely vegetated sand dunes. It most commonly occurs on moist but well-drained soils with a neutral pH. 7,500–11,200 feet in elevation. Blooms August.	<i>Not expected to occur.</i> The project area is below the known elevation range for this species.
Mingan moonwort <i>Botrychium minganense</i>	USFS-S	–	2B.2	–	Habitat varies widely from dense forest to open meadow and from summer-dry meadows to permanently saturated fens and seeps. In meadows, plants may be in open sun or under dense herbaceous cover. Often associated with old (i.e., greater than 10 years) disturbances such as logging roads and road shoulders. May be less closely associated with calcareous soils than most moonworts. 4,800–6,800 feet in elevation. Blooms July–September.	<i>May occur.</i> Project area contains montane forest with grassland and riparian habitat potentially suitable for this species.
Western goblin <i>Botrychium montanum</i>	USFS-S	–	2B.1	–	Associated with areas that have a continuous supply of moisture and a high mineral content either in fens, seeps, and meadows along streams or under incense cedar (<i>Calocedrus decurrens</i>) adjacent to streams. 4,700–7,000 feet in elevation. Blooms July–September.	<i>May occur.</i> Project area contains montane forest alongside creek habitat potentially suitable for this species
Watershield <i>Brasenia schreberi</i>	–	–	2B.3	–	Aquatic from water bodies both natural and artificial in California. 100–7,220 feet in elevation. Blooms June–September.	<i>May occur.</i> Project area contains creek habitat potentially suitable for the species

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Bolander's candle moss <i>Bruchia bolanderi</i>	USFS-S	–	4.2	–	Mainly in montane meadows and stream banks, but also on bare, slightly eroding soil where competition is minimal. 5,300–10,950 feet in elevation.	<i>May occur.</i> Project area contains montane riparian habitat in the western portion of the project area alongside Meeks creek potentially suitable for the species.
Davy's sedge <i>Carex davyi</i>	USFS-WL	–	1B.3	–	Subalpine coniferous forest, upper montane coniferous forest. 4,790–10,600 feet in elevation. Blooms May–August.	<i>May occur.</i> Project area contains upper montane coniferous forest habitat potentially suitable for the species.
Woolly-fruited sedge <i>Carex lasiocarpa</i>	–	–	2B.3	–	Sphagnum bogs, freshwater marsh, lake margins. 1,970–6,900 feet in elevation. Blooms June–July.	<i>May occur.</i> Project area contains riparian creek habitat potentially suitable for the species.
Mud sedge <i>Carex limosa</i>	–	–	2B.2	–	Grows in upper and lower montane coniferous forest, fens, seeps, soggy meadows, floating bogs, and edges of lakes. 4,500–9,200 feet in elevation. Blooms June–August.	<i>May occur.</i> Project area contains montane coniferous forest alongside creek and lake habitat potentially suitable for the species. This species has been documented north of the project area in Sugar Pine Point State Park.
Alpine dusty maidens <i>Chaenactis douglasii</i> var. <i>alpina</i>	USFS-WL	–	2B.3	–	Open, subalpine to alpine gravel and crevices; granitic substrate. 7,750–11,010 feet in elevation. Blooms July–September.	<i>Not expected to occur.</i> Project area out of elevation range of this species.
Fell-fields claytonia <i>Claytonia megarhiza</i>	USFS-WL	–	2B.3	–	In the crevices between rocks, rocky or gravelly soil. 8,530–10,940 feet in elevation. Blooms July–September.	<i>Not expected to occur.</i> Project area out of elevation range of this species.
Branched collybia <i>Dendrocollybia racemosa</i>	USFS-S	–	–	–	On old decayed or blackened mushrooms or occasionally in coniferous duff, usually within old growth stands. Fruiting from late-fall to mid-winter.	<i>Not expected to occur.</i> Old growth stands not present in the project area.
Tahoe draba <i>Draba asterophora</i> var. <i>asterophora</i> ³	USFS-S	–	1B.2	Special Interest Species	Rock crevices and open granite talus slopes at high elevations on north-east facing slopes. 8,000 to 10,200 feet in elevation. Blooms July–August.	<i>Not expected to occur.</i> Subalpine habitat is not present in the project area.
Cup Lake draba <i>Draba asterophora</i> var. <i>Macrocarpa</i> ³	USFS-S	–	1B.1	Special Interest Species	This species is found on steep, gravelly or rocky slopes. 8,400–9,300 feet in elevation. Blooms July–August.	<i>Not expected to occur.</i> The project area is below the known elevation range for this species.
Mineral King draba <i>Draba cruciata</i>	USFS-S	–	1B.3	–	Subalpine gravelly or rocky slopes, ridges, crevices, cliff ledges, sink holes, boulder and small drainage edges. 7,800–13,000 feet in elevation. Blooms June–August.	<i>Not expected to occur.</i> Subalpine habitat is not present in the project area.
Starved daisy <i>Erigeron miser</i>	USFS-S	–	1B.3	–	Rocky, granitic outcrops. 5,600–8,100 feet in elevation. Blooms June–October.	<i>Not expected to occur.</i> Suitable rock outcrop habitat is not present in the project area.

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Goldencarpet buckwheat <i>Eriogonum luteolum</i> var. <i>saltuarium</i>	USFS-S	SE	1B.2	–	Sandy granitic flats and slopes, sagebrush communities, montane conifer woodlands. 5,600-7,400 feet in elevation. Blooms July–September.	<i>Not expected to occur.</i> Montane conifer woodland habitat is present in the project area east of SR 89; however, this habitat is significantly disturbed due to the campground, marina, and other facilities. In addition, this habitat contains very little understory vegetation.
Donner Pass buckwheat <i>Eriogonum umbellatum</i> var. <i>torreyanum</i>	USFS-S	–	1B.2	–	Dry gravelly or stony sites in meadows, seeps, and upper montane coniferous forests; often on harsh exposures (e.g., ridge tops, steep slopes). 6,900–8,600 feet in elevation. Blooms July–September.	<i>Not expected to occur.</i> Suitable microhabitat is not present in the project area which is below the known elevation range for this species.
Subalpine aster <i>Eurybia merita</i> (Synonym: <i>Aster sibiricus</i> var. <i>meritus</i>)	–	–	2B.3	–	Upper montane coniferous forest. 4,265–6,560 feet in elevation.	<i>May occur.</i> Project area contains coniferous forest habitat potentially suitable for the species.
American manna grass <i>Glyceria grandis</i>	–	–	2B.3	–	Wet meadows, ditches, streams, and ponds, in valleys and lower elevations in the mountains. 50–6,710 feet in elevation. Blooms June–August.	<i>May occur.</i> Project area contains meadow habitat potentially suitable for the species.
Blandow's bog moss <i>Helodium blandowii</i>	USFS-S	–	2B.3	–	Bogs, fens, wet meadows, and along streams under willows. In the Sierra Nevada, the elevation and habitat range appears to be limited to fens. 6,100 to 8,900 feet (Rowe and Stevens 2016).	<i>Not expected to occur.</i> Project area does not contain habitat (i.e., fens) that is suitable for the species.
Short-leaved hulsea <i>Hulsea brevifolia</i>	USFS-S	–	1B.2	–	Red fir forest, but also in mixed conifer forests; found on gravelly soils. 4,900-8,900 feet in elevation. Blooms May–August.	<i>May occur.</i> There are no known occurrences in LTBMU (Rowe and Stevens 2016). Mixed conifer forest is present in the project area east of SR 89; however, this habitat is significantly disturbed due to the campground, marina, and other facilities. In addition, this habitat contains very little understory vegetation. Although not expected to occur in the project area due to degraded conditions, project-related surveys to confirm absence or presence have not been completed.

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Plumas ivesia <i>Ivesia sericoleuca</i>	USFS-S	–	1B.2	–	Associated with seasonally wet meadows, meadow ecotones, alkaline flats, vernal pools within sagebrush scrub or lower montane coniferous forest, terraces and toeslopes on soils that are primarily volcanic in origin. The plant has not been located on granitic soils. All of the associated soil types have slow permeability and incur periodic saturation from fluctuating water tables, and have subterranean flow associated with seeps and snow melt (USDA Forest Service 1992). 4,200 to 7,200 feet in elevation. Blooms May–October.	<i>May occur.</i> Project area has montane riparian habitat potentially suitable for the species. This species has a documented occurrence from 1989, at Sugar Pine Point State Park, northwest of the project area.
Hutchison's lewisia <i>Lewisia kelloggii</i> ssp. <i>hutchisonii</i>	USFS-S	–	3.2	–	Ridgetops or flat open spaces with widely spaced trees and sandy granitic to erosive volcanic soil. 5,000-7,000 feet in elevation. Blooms May–August.	<i>Not expected to occur.</i> Suitable microhabitat is not present in the project area.
Kellogg's lewisia <i>Lewisia kelloggii</i> ssp. <i>kelloggii</i>	USFS-S	–	3.2	–	Ridge tops or flat open spaces with widely spaced trees and sandy granitic to erosive volcanic soil. 5,000-7,000 feet in elevation. Blooms May–August.	<i>Not expected to occur.</i> Suitable microhabitat is not present in the project area.
Long-petaled lewisia <i>Lewisia longipetala</i> (Synonym: <i>L. pygmaea</i> ssp. <i>longipetala</i>)	USFS-S	–	1B.3	Special Interest Species	Northerly exposures on slopes and ridge tops where snowbanks persist throughout the summer. Often found near the margins of snowbanks in wet soils. 8,000-12,500 feet in elevation. Blooms July–August.	<i>Not expected to occur.</i> The project area is below the known elevation range for this species.
Three-ranked hump moss <i>Meesia triquetra</i>	–	–	4.2	–	Moss growing on mesic soil. Saturated bogs, fens, seeps and meadows in coniferous to subalpine forests. 4,265–9,695 feet in elevation. Blooms July.	<i>May occur.</i> Project area contains meadows in coniferous forest alongside creek habitat potentially suitable for the species.
Broad-nerved hump moss <i>Meesia uliginosa</i>	USFS-S	–	2B.2	–	Bogs and fens, and permanently wet meadows, typically spring fed, in subalpine and upper montane coniferous forest; 4,265 to 9,200 feet. Blooms July–October.	<i>May occur.</i> Project area contains montane riparian habitat potentially suitable for the species.
Orthotrichum moss <i>Orthotrichum praemorsum</i>	USFS-S	–	–	–	Shaded, moist microhabitats of rock outcrops; eastern Sierra to intermountain West. ≤ 8,200 feet in elevation.	<i>Not expected to occur.</i> Suitable rock outcrop habitat is not present in the project area.

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Western waterfan lichen <i>Peltigera gowardii</i>	USFS-S	–	4.2	–	Aquatic. Must be in cool, unpolluted water that flows all year. Can be found in splash zones within small creeks. Cannot tolerate drying or heavy flows of water that can scour. Streams are usually less than 8 inches deep and often have many other aquatic mosses and bryophytes. It often grows on bedrock or cobbles but can be found on soil. 3,500–8,500 feet in elevation.	<i>May occur.</i> Project area contains stream habitat that may be suitable for this species.
Stebbins' phacelia <i>Phacelia stebbinsii</i>	–	–	1B.2	–	Among rocks and rubble on metamorphic rock benches, meadows, and lower montane coniferous forest. 2,000–6,595 feet in elevation. Blooms May–July.	<i>Not expected to occur.</i> Suitable microhabitat is not present in the project area.
Whitebark pine <i>Pinus albicaulis</i>	USFS-S FT	–	–	–	Subalpine and at timberline on rocky, well-drained granitic or volcanic soils. 6,600–12,140 in elevation. Blooms July–August	<i>Not expected to occur.</i> Subalpine habitat is not present in the analysis area.
Nuttall's ribbon-leaved pondweed <i>Potamogeton epiphydrus</i>	–	–	2B.2	–	Shallow water, ponds, lakes, streams, irrigation ditches. 970–8,660 feet in elevation. Blooms July–September.	<i>May occur.</i> Project area contains riparian creek habitat potentially suitable for the species.
Alder buckthorn <i>Rhamnus alnifolia</i>	–	–	2B.2	–	Mesic sites including wet meadow edges, seeps and stream sides. 4,690–7,005 feet in elevation. Blooms May–July.	<i>May occur.</i> Project area contains riparian creek habitat potentially suitable for the species.
Tahoe yellow cress <i>Rorippa subumbellata</i>	USFS-S	SE	1B.1	Special Interest Species	Endemic to the shorezone of Lake Tahoe, typically in back beach areas. Can be present on lakeside margins and in riparian communities on decomposed granite sand. 6,220–6,235 feet in elevation. Blooms May–September.	<i>Known to occur.</i> This species has been documented in the Meeks Bay beach area, along the shore of Meeks Creek/Marina area, and on a sandbar within Meeks Creek in the project area.
Marsh skullcap <i>Scutellaria galericulata</i>	–	–	2B.2	–	Swamps and wet places. 0–6,400 feet in elevation. Blooms June–September.	<i>May occur.</i> Project area contains riparian habitat potentially suitable for the species. This species has been documented in the west portion of the project area and north of Meeks Creek.
Munro's desert mallow <i>Sphaeralcea munroana</i>	–	–	2B.2	–	Great Basin scrub. 6,560 feet in elevation. Blooms May–June.	<i>Not expected to occur.</i> Habitat suitable for this species is not present in the project area.
Northern slender pondweed <i>Stuckenia filiformis</i> ssp. <i>Alpina</i>	–	–	2B.2	–	Shallow, clear waters of lakes and drainage channels. 15–7,630 feet in elevation. Blooms May–July.	<i>May occur.</i> Project area contains creek habitat potentially suitable for the species.

Species ¹	Listing Status ² Federal	Listing Status ² State	CRPR ²	TRPA Special Interest	Habitat	Potential for Occurrence
Flat-leaved bladderwort <i>Utricularia intermedia</i>	–	–	2B.2	–	Mesic meadows, lake margins, marshes, fens. 2,200–8,710 feet in elevation. Blooms July–August.	<i>May occur.</i> Project area contains meadow alongside creek habitat potentially suitable for this species.

Notes: CRPR = California Rare Plant Rank; CEQA = California Environmental Quality Act; TRPA = Tahoe Regional Planning Agency

¹ Nomenclature according to Jepson Flora Project 2021.

² Listing Status Definitions

Federal:

- FT Federally Listed as Threatened (legally protected)
- FP Proposed for Listing under ESA (Not legally protected by ESA)
- USFS-S USDA Forest Service Sensitive Plant Species
- USFS-WL USDA Forest Service Watch List Species

State:

- SE State Listed as Endangered (legally protected by CESA)

California Rare Plant Ranks (CRPR):

- 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).
- 3 Plant species for which the necessary information to assign them to one of the other ranks or to reject them is lacking. Many of the plants constituting California Rare Plant Rank 3 meet the definitions of the California Endangered Species Act of the California Fish and Game Code and are eligible for state listing (protected under CEQA, but not legally protected under ESA or CESA).
- 4 Plant species with limited distribution or are infrequent throughout a broader area in California whose status should be monitored regularly (protected under CEQA, but not legally protected under ESA or CESA).

CRPR Threat Ranks:

- 0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
- 0.2 Moderately threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)
- 0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

³ This taxon is not recognized in The Jepson Manual, nomenclature here is according to USDA Plants 2021.

Sources: CNDDDB 2021; CNPS 2021; USFS 2013a; LTBMU 2021.

Table B-2 Special-Status Wildlife Species Known to Occur in the Vicinity of the Project Area and Potential for Occurrence in the Project Area

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
Amphibians					
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.	<i>Not expected to occur.</i> The project area is outside of the current known range of this species.
Sierra Nevada yellow-legged frog <i>Rana sierrae</i>	FE USFS-S	ST	–	Sierra Nevada yellow-legged frog is highly aquatic, rarely moving far from water. The species primarily occurs in alpine lakes and other deep, perennial aquatic habitats (with sufficient depth to prevent freezing) above timberline in the central Sierra Nevada (Jennings and Hayes 1994, Vredenburg 2004), although habitat suitable for the species may occur in other aquatic settings above 4,500 feet in elevation (USFWS 2014a). Most populations in the Sierra Nevada are found between 6,000–12,000 feet elevation. Sierra Nevada yellow-legged frog can also occur in streams but appear absent from the smallest creeks presumably because of the lack of sufficient depth for aquatic refugia and year-round water for overwintering habitat (USFWS 2014a). Sierra Nevada yellow-legged frog requires aquatic habitat with shallow or gently sloping edge habitats and solar exposure to support necessary food resources; suitable sites for basking and cover, strongly favoring aquatic habitat with concealed underwater refugia; and uplands adjacent to aquatic habitat suitable for foraging and movement (USFWS 2014a). Habitat suitability is impaired by the presence of nonnative salmonids, such as rainbow trout, brook trout, and brown trout, and American bullfrog, which is known to prey on tadpoles (Knapp and Mathews 2000).	<i>Not expected to occur.</i> Sierra Nevada yellow-legged frog has not been documented in the project area or vicinity, and the presence of predators (e.g., nonnative salmonids, crayfish) limits habitat suitability for Sierra Nevada yellow-legged frog in the project area. Amphibian surveys in Meeks Meadow and Meeks Creek conducted by LTBMU in 2013, 2016, and 2017 did not detect Sierra Nevada yellow-legged frog. Outside the project area and vicinity, the highest elevations of the southwest and south portions of the Tahoe Basin and adjacent lands contain occurrences of Sierra Nevada yellow-legged frog. Specific locations in the Tahoe Basin where Sierra Nevada yellow-legged frog has been documented in the last 50 years include Desolation Wilderness at Tamarack Lake, Fontanillis Lake, Heather Lake area, Lower Velma Lake, and the Eagle Creek drainage upstream of the lake (Muskopf, pers. comm., 2020; CNDDDB 2021), near Upper Velma Lake, and a pond west of Echo Lake; and Hell Hole bog and vicinity near Armstrong Pass and Freel Peak inside the south-southeast boundary of the Lake Tahoe Basin (CNDDDB 2021). Additionally, outside the Tahoe Basin, the nearest documented Sierra Nevada yellow-legged frog occurrences are from the surrounding mountain lakes and drainages within Desolation Wilderness and Eldorado National Forest, including Lake Aloha, Lake of the Woods, Pyramid Lake, Gefo Lake, and Waca Lake. Important areas for recovery identified in the 2016 Lake Tahoe Basin Management Unit Land and Resource Management Plan include the headwaters of Glen Alpine Creek and Trout Creek.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
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, usually within approximately 330 feet (100 meters) of aquatic habitat.	<i>Known to occur.</i> The project area is within the known range of southern long-toed salamander and adult salamanders and larvae have been observed within the project area in Meeks Creek (CNDDDB 2021). Aquatic habitat suitable for this species is present in Meeks Creek. While southern long-toed salamanders are known to use upland habitats within approximately 330 feet (100 meters) of aquatic habitat, much of the upland areas within 330 feet of Meeks Creek is developed and highly disturbed (i.e., campgrounds). Therefore, upland habitat suitable for southern long-toed salamanders is only present within approximately 100 feet or less from Meeks Creek.
Yosemite toad <i>Anaxyrus canorus</i>	FT	SSC	–	Vicinity of wet meadows in central High Sierra, 6,400–11,300 feet in elevation. Primarily occurs in montane wet meadows and in seasonal ponds associated with lodgepole pine and subalpine conifer forest.	<i>Not expected to occur.</i> The project area is outside of the current known range of this species.
Birds					
American peregrine falcon <i>Falco peregrinus anatum</i>		FP	Special Interest Species	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.	<i>Not expected to occur.</i> The project area does not contain nesting habitat suitable for American peregrine falcon. American peregrine falcons could occasionally forage or perch within, or otherwise move through, portions of the project area; however, regular or concentrated use of the project area by this species is not expected.
Bald eagle <i>Haliaeetus leucocephalus</i>	USFS-S	SE FP	Special Interest Species	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.	<i>May occur.</i> Nesting bald eagles have been documented approximately 1.6 miles north and 5 miles southeast of the project area (CNDDDB 2021; TRPA 2020). The project area does not contain nesting habitat suitable for bald eagle; however, this species may forage within the project area. The project area may also provide habitat for wintering bald eagles.
Bank swallow <i>Riparia</i>	–	ST	–	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	<i>Not expected to occur.</i> Bank or cliff nesting habitat suitable for this species is not present in the project area. Bank swallow is considered extirpated from this portion of its historic range.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
California spotted owl <i>Strix occidentalis</i>	USFS-S FC	SSC	–	Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure greater than 40 percent. Most often found in deep-shaded canyons, on north-facing slopes, and within approximately 1,000 feet of water.	<i>Not expected to occur</i> (). There have been no documented detections of California spotted owl in the project area and there are no USDA Forest Service-designated spotted owl Protected Activity Centers (PACs) in the project area. Habitat suitable for California spotted owl is not present in the project area. Forest habitat in the project area does not provide nesting habitat suitable for California spotted owl due to development, intensive summer recreation uses, and marginal forest structure. California spotted owls could occasionally forage or perch within, or otherwise move through, portions of the project area; however, regular or concentrated use of the project area by this species is not expected.
Golden eagle <i>Aquila chrysaetos</i>	–	FP	Special Interest Species	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	<i>Not expected to occur</i> . The project area does not contain nesting or foraging habitat suitable for golden eagle.
Great gray owl <i>Strix nebulosa</i>	USFS-S	SE	–	Resident of mixed conifer or red fir forest habitat, in or on edge of meadows. Requires large diameter snags in a forest with high canopy closure, which provide a cool sub-canopy microclimate.	<i>Not expected to occur</i> . The project area is outside of the current range of great gray owl. Project implementation would have no effect on great gray owl, and this species is not analyzed further.
Long-eared owl <i>Asio otus</i>	–	SSC	–	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	<i>May occur</i> . Most of the nesting habitat potentially suitable for this species in the project area (e.g., forest) is characterized by development and intensive summer recreation uses, which would typically preclude long-eared owls from establishing nests in the area. However, long-eared owls may nest in forest habitat in the western portion of the project area adjacent to Meeks Meadow.
Northern goshawk <i>Accipiter gentilis</i>	USFS-S	SSC	Special Interest Species	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.	<i>Not expected to occur</i> . The Upper General Creek northern goshawk PAC is located approximately 0.4-mile northwest of the project area. Forest habitat in the project area does not provide nesting habitat suitable for northern goshawk due to development, intensive summer recreation uses, and marginal forest structure. Goshawks could occasionally forage or perch within, or otherwise move through, the project area; however, regular use of the project area by northern goshawk is not expected.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
Olive-sided flycatcher <i>Contopus cooperi</i>	–	SSC	–	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas fir, redwood, red fir and lodgepole pine. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes, or other open terrain.	<i>May occur.</i> Most of the nesting habitat potentially suitable for this species in the project area (e.g., forest) is characterized by development and intensive summer recreation uses, which would typically preclude olive-sided flycatchers from establishing nests in the area. Higher quality nesting habitat for olive-sided flycatchers is present in the western portion of the project area adjacent to Meeks Meadow.
Osprey <i>Pandion haliaetus</i>	–	–	Special Interest Species	Osprey is associated with large fish-bearing waters. In the Tahoe Basin, osprey nests are distributed primarily along the northern portion of the east shore and the southern portion of the west shore of Lake Tahoe. Other osprey nests in the Tahoe Basin are located along the shorelines of smaller lakes (such as Fallen Leaf Lake) and in forest uplands up to 1.5 miles from water. Ospreys forage in Lake Tahoe as well as several other fish-bearing lakes, streams, and rivers within the Tahoe Basin.	<i>May occur.</i> The nearest documented osprey nest is approximately 2.8 miles south of the project area near Rubicon Point (TRPA 2020). Nesting habitat suitable for osprey is present in the project area and the species also likely forages in the project area.
Willow flycatcher <i>Empidonax traillii</i>	USFS-S	SE	–	Inhabits extensive thickets of low, dense willows on edge of wet meadows, ponds, or backwaters; 2,000-8,000 feet elevation Requires dense willow thickets for nesting/roosting. Low, exposed branches are used for singing posts/hunting perches.	<i>Not expected to occur.</i> Nesting habitat suitable for willow flycatcher is not present in the project area; the riparian and meadow habitat in the project area lacks the specific biophysical conditions required to support nesting willow flycatcher (i.e., suitable hydrology, riparian shrub density, and meadow size). However, the species has been observed in Meeks Meadow (in 2005; eBird 2022) and two audible detections of willow flycatcher were documented (2010, 2019) in Meeks Meadow approximately 0.2-mile west of the project area (USDA Forest Service 2021). Willow flycatchers could occasionally forage or perch within, or otherwise move through, the project area; however, regular use of the project area by the species is not expected.
Yellow warbler <i>Setophaga petechia</i>	–	SSC	–	Riparian habitat. 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.	<i>May occur.</i> Riparian nesting habitat potentially suitable for yellow warbler is present in the western portion of the project area (i.e., Meeks Meadow) near Meeks Creek.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
Yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	–	SSC	–	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds. Nests only where large insects such as Odonata are abundant, nesting timed with maximum emergence of aquatic insects.	<i>Not expected to occur.</i> Wetland habitat in the project area does not contain deep water or dense vegetation suitable for nesting yellow-headed blackbirds.
Waterfowl	–	–	Special Interest Species	Several waterfowl species occur in the Tahoe Basin during spring and summer months, including Canada goose (<i>Branta canadensis</i>), mallard (<i>Anas platyrhynchos</i>), green-winged teal (<i>Anas crecca</i>), common merganser (<i>Mergus merganser</i>), ruddy duck (<i>Oxyura jamaicensis</i>), northern pintail (<i>Anas acuta</i>), northern shoveler (<i>Anas clypeata</i>), cinnamon teal (<i>Anas cyanoptera</i>), American widgeon (<i>Anas americana</i>), gadwall (<i>Anas strepera</i>), ring-necked duck (<i>Aythya collaris</i>), and others. Most of these species nest along shallow-water margins of streams or lakes, in areas of emergent vegetation or other vegetation that provides concealment. Typically, nests are in marshes or adjacent meadows.	<i>May occur.</i> The project area does not contain waterfowl habitat as defined by TRPA (TRPA 2020); however, waterfowl species may forage within aquatic habitat in the project area.
Invertebrates					
Monarch <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 Apocynaceae 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.	<i>May occur.</i> Suitable breeding and migratory habitat for monarch butterfly are widespread across the western U.S., and the project area is within the spring/summer breeding and spring/fall migration ranges. The Western Monarch Milkweed Mapper (WMMM) reports observations of the species north of the project area near Tahoe City and Alpine Meadows as well as east of the project area along the eastern shore of Lake Tahoe (Xerces Society et al. 2022). Breeding monarchs have been documented east of the project area near the East Fork Carson River (Xerces Society et al. 2022). Breeding in the project area has not been documented in WMMM; however, the presence of milkweed in suitable habitats, particularly in meadows and other open-canopy settings, is expected and monarch butterfly breeding could occur in the project area. The project area is not located within the overwintering range of monarch butterfly.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
Western bumble bee <i>Bombus occidentalis</i>	USFS-S	–	–	Bumble bees have three basic habitat requirements: 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. Western bumble bee is currently largely restricted to high elevation areas in the Sierra Nevada.	<i>May occur.</i> There have been no documented occurrences of western bumble bee in the project area, and only one known collection of the species in the Tahoe Basin since 2000 (CNDDDB 2021). However, foraging habitat (i.e., nectar and pollen resources) and nesting habitat (e.g., rodent burrows) are likely present in the project area.
Mammals					
American badger <i>Taxidea taxus</i>	–	SSC	–	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	<i>May occur.</i> An American badger was detected on Meeks Meadow Road in 2003 by a LTBMU wildlife biologist (USFW, pers. comm., 2021). The next nearest known occurrence of American badger was documented recently (October 2021) in South Lake Tahoe, approximately 11 miles southeast of the project area. Another badger record is located approximately 15 miles south of the project area near Echo Lake (CNDDDB 2021). Habitat in the project area potentially suitable for American badgers (i.e., forest, Meeks meadow) is characterized by development and intensive summer recreation uses, which would typically preclude badgers from establishing dens in the area. However, it is possible that a badger could den in less disturbed areas of Meeks Meadow.
California wolverine <i>Gulo</i>	USFS-S FT	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.	<i>Not expected to occur.</i> While the project area is located within the historic range of California wolverine, the only recently confirmed wolverine in California occurs in Tahoe National Forest (CNDDDB 2021). The location of this known wolverine is a considerable distance from the project area (approximately 28 miles northwest), and this species is therefore not expected to occur in the project area.
Fisher – West Coast Distinct Population Segment (DPS) <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.	<i>Not expected to occur.</i> Fisher is considered to be extirpated from most of the northern and central Sierra Nevada (Zielinski et al. 1995; Sweitzer et al. 2015) and has not been detected within or in the vicinity of the project since the 1980s (CNDDDB 2021).

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
Sierra Nevada red fox – Sierra Nevada DPS (<i>Vulpes vulpes necator</i>)	FE	ST	–	Suitable habitat for Sierra Nevada red fox includes high-elevation alpine and subalpine habitats, including meadows, forest (e.g., subalpine conifer, lodgepole pine, red fir, aspen, mixed conifer, ponderosa pine), montane chaparral, talus, and fell fields. Sierra Nevada red fox typically moves from high elevation areas to lower elevation areas during the winter. Dens are typically found in rock outcrops, hollow logs and stumps, and burrows (USFWS 2015, 2020, 2021).	<i>Not expected to occur.</i> The historic range of Sierra Nevada red fox included the Lake Tahoe region. However, the current range of the species has contracted significantly from its historic range and no longer includes the Lake Tahoe region; the only extant population of this DPS within its historic or current range is located south of the Tahoe region near Sonora Pass, Mono County (USFWS 2020, 2021). Accordingly, the species is not known or considered to presently occur in or adjacent to the Lake Tahoe region, including the project area. Additionally, where the species occurs, Sierra Nevada red fox typically uses high-elevation alpine and subalpine habitats above the elevation range of the project area.
Fringed myotis <i>Myotis thysanodes</i>	USFS-S	–	–	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.	<i>May occur.</i> Fringed myotis has been detected in Meeks Meadow, approximately 0.1-mile west-northwest of the project area (LBTMU 2021). The Meeks Meadow portion of the project area contains some large snags and trees that may provide suitable roost habitat for fringed myotis. The bridge over Meeks Creek does not have features that would support critical roosting for bats. Facilities buildings in the project area east of SR 89 may provide additional potential roost habitat.
Mule deer <i>Odocoileus hemionus</i>	–	–	Special Interest Species	Common to abundant with a widespread distribution throughout most of California. Occur along major river corridors, in scattered desert mountain areas, and intermediate successional stages of most forest, woodland, and brush habitats.	<i>Not expected to occur (fawning or core migration).</i> Mule deer is designated by TRPA as a special interest species. While mule deer may forage or move through the project area, the project area does not contain deer fawning habitat as defined by TRPA (TRPA 2022; Figure 3.4-3); and the project area is not positioned within an important deer migration route.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
Pallid bat <i>Antrozous pallidus</i>	USFS-S	SSC	–	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	<i>May occur.</i> Though not considered abundant in the region, pallid bat has been detected increasingly on the LTBMU. In 2019, pallid bat was detected in Meeks Meadow during acoustic surveys along the north boundary of the project area (USDA Forest Service 2021). The Meeks Meadow portion of the project area contains some large snags and trees that may provide roost habitat suitable for pallid bat. The bridge over Meeks Creek does not have features that would support critical roosting for bats. Facilities buildings in the project area east of SR 89 may provide additional potential roost habitat.
Ringtail <i>Bassariscus astutus</i>	–	FP	–	Riparian habitats, forest habitats, and shrub habitats in lower to middle elevations.	<i>May occur.</i> The project area contains riparian and forest habitat potentially suitable for ringtail. The Meeks Meadow portion of the project area contains some large snags and trees that may provide den habitat suitable for ringtail. Ringtail in the Tahoe Basin is considered extremely rare, and occurrences are not well-known. The only documented occurrence is from the Glenbrook area, detected by Forest Service biologists during carnivore track-plate surveys conducted for the Multi-Species Inventory and Monitoring Program in 2002–2005 (USDA Forest Service 2007).
Pacific marten <i>(Martes caurina)</i>	USFS-S	–	–	Mixed evergreen forests with more than 40 percent crown closure along Sierra Nevada and Cascade mountains. Needs variety of different-aged stands, particularly old-growth conifers and snags which provide cavities for dens/nests.	<i>Not expected to occur.</i> Martens are known to occur in the vicinity of the project area (CNDDDB 2021); however, denning habitat suitable for this species is not present in the project area due to development, intensive summer recreation uses, and marginal forest structure. Marten could occasionally move through portions of the project area, particularly in Meeks Meadow west of SR 89. However, regular marten use of the core project area east of SR 89 is not expected due to development and intensive human uses discussed previously. Additionally, the SR 89 corridor and fencing around much of the resort/campground west perimeter are likely functional barriers to significant movements and may isolate the property from larger blocks of habitat suitable for the species west of SR 89.

Species	Listing Status ¹ Federal	Listing Status ¹ State	TRPA Special Interest	Habitat	Potential for Occurrence
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.	<i>Not expected to occur.</i> The project area does not contain dense, contiguous riparian shrub habitat suitable for Sierra Nevada mountain beaver.
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.	<i>May occur.</i> The project area contains riparian habitat potentially suitable for Sierra Nevada snowshoe hare.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	USFS-S	SSC	–	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	<i>May occur.</i> This species has been detected only infrequently in the Tahoe Basin, and optimal roosting habitat (e.g., caves, mines, tunnels) is not present in the project area. However, the Meeks Meadow portion of the project area includes some large snags and trees that may provide roost sites suitable for the species. The bridge over Meeks Creek does not have features that would support critical roosting for bats. Facilities buildings in the project area east of SR 89 may provide additional potential roost sites.
Western red bat <i>Lasiurus blossevillii</i>	–	SSC	–	Roosts primarily in trees, 2-40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.	<i>May occur.</i> This species has been detected only infrequently in the Tahoe Basin; however, the Meeks Meadow portion of the project area contains habitat potentially suitable for this species (i.e., willows).
Western white-tailed jackrabbit <i>Lepus townsendii</i>	–	SSC	–	Preferred habitats are sagebrush, subalpine conifer, juniper, alpine dwarf-shrub, and perennial grassland. Also uses low sagebrush, wet meadow, and early successional stages of various conifer habitats.	<i>May occur.</i> The project area contains conifer, grassland, and meadow habitat potentially suitable for western white-tailed jackrabbit.

Notes: CNDDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act

¹ Listing Status Definitions

Federal:

- FC Candidate for Listing under ESA (Not legally protected by ESA)
- FE Federally Listed as Endangered (legally protected)
- FT Federally Listed as Threatened (legally protected)
- USFS-S USDA Forest Service Sensitive Wildlife Species

State:

- FP Fully protected (legally protected)
- SSC Species of special concern (no formal protection other than CEQA consideration)
- SE State Listed as Endangered (legally protected)
- ST State Listed as Threatened (legally protected)

Sources: CNDDDB 2021; LTBMU 2021; TRPA 2020; TRPA 2021c; USFWS 2022; USFS 2013b; USDA Forest Service 2021.