Attachment B

Biological Resources Report

1.0 VEGETATION AND HABITAT

Per SPR BIO-1, Sequoia Ecological Consulting, Inc. (Sequoia) biologists performed a desktop review of biological resources, including sensitive habitat types, special-status plants, and special-status wildlife, to assess these resources' potential to occur within the Las Posadas Demonstration State Forest (LPDSF) project area. Vegetation types were identified using the California Wildlife Habitat Relationship (CWHR) System (CDFW 2023a), the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program vegetation data layer (CAL FIRE 2024), the Conservation Lands Network version 2.0 vegetation mapping data (CLN 2024), and the 2016 update to the Napa Vegetation map of 2004 (Thorne et al. 2019). Vegetation types were quantified into total acreage of each habitat in accordance with the CWHR system (Table B-1). Vegetation types present within the project area were confirmed during field reconnaissance surveys performed by Sequoia biologists on November 16-17, 2023.

Table B-1. Habitat Types Present within the LPDSF Project Area.

Habitat Type	Area (Acres)
Coniferous Forest	
Montane Hardwood	302.16
Montane Hardwood-Conifer	101.07
Ponderosa Pine	91.54
Sierran Mixed Conifer	67.44
Grassland	
Annual Grass	18.36
Oak Woodlands	
Blue Oak-Foothill Pine	23.84
Blue Oak Woodland	18.38
Shrubland	
Chamise-Redshank Chaparral	24.83
Mixed Chaparral	195.63
Total	**842.69**

The LPDSF ranges in elevation from approximately 1,000 feet above mean sea level (MSL) in the far southeast corner, to 1,800 feet MSL in the northern and western portions of the project area. Moore Creek, Uncle John Creek, and associated unnamed tributaries occur within the project area. Serpentine soils also occur within the project area which may host special-status plant species. Lists of special-

status plant and wildlife species with potential to occur (Tables B-2 and B-3) were compiled using a review of the following sources:

- United States Fish and Wildlife Service Information for Planning and Consultation query (IPaC; USFWS 2023)
- California Natural Diversity Database 9-quad search (CNDDB 2023)
- California Native Plant Society 9-quad search (CNPS 2023)
- Appendix BIO-3 from the 2019 Program EIR (Volume II) - Ecoregion Species Tables for the Northern California Coast (Ecological Section 263A)
- Calflora database query (Calflora 2024)
- eBird query (Sullivan et al. 2009)

2.0 AQUATIC RESOURCES

During reconnaissance-level surveys performed by Sequoia biologists on November 16-17, 2023, multiple aquatic resources were observed within the project area. These resources consisted of riverine features comprised of Class II waterways: Moore Creek, Uncle John Creek, and an unnamed tributary of Moore Creek. A pond fed by an unnamed ephemeral stream was observed during botanical surveys in the southwestern portion of the project area. Riparian corridors within the project area were observed to contain a canopy primarily composed of white alder (*Alnus rhombifolia*), and bigleaf maple (*Acer macrophyllum*), along with an understory of sedges (*Carex* spp.) and giant chain fern (*Woodwardia fimbriata*). No wetlands or wetland complexes were observed onsite. Additionally, an old 4-H camp swimming pool full of water was documented onsite, and multiple California newts (*Taricha torosa*) were observed swimming in the pool. This feature is man-made and surrounded by concrete and would not be considered jurisdictional by any state or federal law.

Pursuant to SPR HYD-4, a watercourse and lake protection zone (WLPZ) of 50 to 150 feet would be established around Class II waterways present within the project area. Additional waterways and wetlands may be present within the project area and would require WLPZs sufficient to prevent the degradation of downstream beneficial uses of water. Per MM BIO-4, any potentially state and/or federally protected waterways will be avoided.

3.0 SPECIAL-STATUS SPECIES

Per SPR BIO-1, a review of species occurrence data, species ranges, and habitat requirements was performed to assess the potential for special-status species to occur within the LPDSF project area. All species listed within the Northern California Coast ecoregion, IPaC query, CNDDB 9-quad search, and CNPS 9-quad search were assessed to determine their potential for occurrence. Thirty-five (35) special-status plants and sixteen (16) special-status wildlife species could occur within the project area (Table B-2, Table B-3). An additional 10 wildlife species and 20 plant species were analyzed and determined to

not have potential to occur in the project area. Of these species, eight (8) plants and four (4) wildlife species are known to occur within the project area. These species are discussed in further detail below.

Table B-2. Special-Status Plant Species with Potential to Occur within the LPDSF Project Area.

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
Plants					
Franciscan onion *Allium peninsulare* var. *franciscanum*	-	-	1B.2	Cismontane woodland, valley and foothill grassland. Occurs from 170 to 1,000 feet in elevation. Blooms April through June. Perennial herb.	**May occur.** Suitable woodland and grassland habitat are present in the project area. The species is known to occur within Napa County (Calflora 2024).
Sonoma Alopecurus *Alopecurus aequalis* var. *sonomensis*	FE	-	1B.1	Wetlands, freshwater marsh. Occurs from 20 to 680 feet in elevation. Blooms from May through July. Perennial herb.	**Not expected to occur.** Suitable habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Napa false indigo *Amorpha californica* var. *napensis*	-	-	1B.2	Broadleaved upland forests, chaparral, and cismontane woodlands. Occurs from 170 to 6,500 feet in elevation. Blooms April through July. Perennial shrub.	**Known to occur.** Suitable forest, chaparral, and woodland habitats are known to occur within the project area. The species was observed onsite during reconnaissance surveys in November 2023.
Bent-flowered fiddleneck *Amsinckia lunaris*	-	-	1B.2	Cismontane woodland, coastal bluff scrub, valley and foothill grassland. Occurs from 10 to 1,640 feet in elevation. Blooms March through June. Annual herb.	**May occur.** Suitable woodland and grassland habitat are present in the project area. The species is known to occur within Napa County (Calflora 2024).
Konocti manzanita *Arctostaphylos manzanita* ssp. *elegans*	-	-	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Occurs from 1,295 to 5,300 feet in elevation. Blooms March through May. Perennial shrub.	**May occur.** Suitable chaparral and woodland habitats are present in the project area. The species is known to occur within northern Napa County (Calflora 2024).
Rincon Ridge manzanita *Arctostaphylos standofordia* ssp. *Decumbens*	-	-	1B.1	Chaparral (rhyolitic), cismontane woodland. Occurs from 245 to 1,215 feet in elevation. Blooms February through April. Perennial shrub.	**May occur.** Suitable chaparral and woodland habitats are present in the project area. The species is known to occur within Napa County, with the nearest occurrence approximately 7 miles east of LPDSF (Calflora 2024).
Clara Hunt's milk-vetch *Astragalus claranus*	FE	-	1B.1	Chaparral (openings), cismontane woodland, valley, and foothill grassland. Occurs from 250 to 900 feet in	**May occur.** Suitable chaparral, woodland, and grassland habitat are present in the project area. There are five (5) documented

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
				elevation. Blooms March through May. Annual herb.	occurrences approximately 5 miles south of the project area (Calflora 2024).
Jepson's milk-vetch *Astragalus rattanii* var. *jepsonianus*	-	-	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Occurs from 970 to 2,295 feet in elevation. Blooms March through June. Annual herb.	**May occur.** Suitable chaparral, woodland, and grassland habitats are present in the project area. The species is known to occur within Napa County, with the nearest occurrence approximately 4 miles north of LPDSF (Calflora 2024).
Narrow-anthered brodiaea *Brodiaea leptandra*	-	-	1B.2	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Occurs from 360 to 3,000 feet in elevation. Blooms May through June. Perennial herb.	**Known to occur.** Suitable forest, chaparral, woodland, and grassland habitat are known to occur near the project area. There are several documented occurrences in and adjacent to the project area (Calflora 2024)).
Mead's owls-clover *Castilleja ambigua* var. *meadii*	-	-	1B.1	Meadows and seeps, vernal pools. Occurs from 1,475 to 1,560 feet in elevation. Blooms April through May. Annual herb.	**Not expected to occur.** Suitable habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Rincon Ridge ceanothus *Ceanothus confusus*	-	-	1B.1	Chaparral, cismontane woodland, closed-cone coniferous forest. Occurs from 250 to 3,500 feet in elevation. Blooms February to June. Perennial shrub.	**May occur.** Suitable chaparral, woodland, and forest habitats are present in the project area. Most recent and closest documented occurrence is approximately 6 miles southwest of the project area (Calflora 2024).
Calistoga ceanothus *Ceanothus divergens*	-	-	1B.2	Shrub-covered, rocky, volcanic slopes. Found at 560 to 3,115 feet in elevation. Blooms February through April. Perennial shrub.	**May occur.** Suitable habitat for the species is present within the project area. Two observations are known to the west of the project area (CNDDB 2023 and Calflora 2024).
Holly-leaved ceanothus *Ceanothus purpureus*	-	-	1B.2	Woodland and chaparral habitat. Found at 400 to 2,000 feet in elevation. Blooms March through May. Perennial shrub.	**May occur.** Suitable chaparral and woodland habitat are present in the project area. There are five (5) observations west of the project area within 3 miles (Calflora 2024; CNDDB 2023).
Sonoma ceanothus *Ceanothus sonomensis*	-	-	1B.2	Chaparral habitat. Occurs at 700 to 2,625 feet in elevation.	**May occur.** Suitable chaparral habitat is found within the project area and there is one known

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
				Blooms February through April. Perennial shrub.	occurrence (CNDDB 2023) within 5 miles of the project area.
Pappose tarplant *Centromadia parryi* ssp. *parryi*	-	-	1B.2	Chaparral, coastal prairie, marshes and swamps (coastal salt), meadows and seeps, valley and foothill grassland (vernally mesic). Occurs from 0 to 1,380 feet in elevation. Blooms May through November. Annual herb.	**May occur.** Suitable chaparral habitats are present in the project area. Species is known to occur within northern Napa County (Calflora 2024).
Serpentine cryptantha *Cryptantha dissita*	-	-	1B.2	Chaparral. Occurs from 1,295 to 1,905 feet in elevation. Blooms April through June. Annual herb.	**May occur.** Suitable chaparral habitats are present in the project area. Species is known to occur throughout Napa County (Calflora 2024).
Dwarf downingia *Downingia pusilla*	-	-	2B.2	Valley and foothill grassland (mesic), vernal pools. Occurs from 5 to 1,460 feet in elevation. Blooms March through May. Annual herb.	**May occur.** Suitable chaparral habitats are present in the project area. Species is known to occur throughout southern Napa County (Calflora 2024).
Greene's narrow-leaved daisy *Erigeron greenei (= E. angustatus)*	-	-	1B.2	Chaparral serpentine and/or volcanic habitats from 260 to 3,295 feet in elevation. Blooms from May through September. Perennial herb.	**Known to occur.** Suitable serpentine chaparral habitat occurs onsite. Known occurrences in the project area from historical occurrence data.
Loch Lomond button-celery *Eryngium constancei*	FE	SE	1B.1	Vernal pools, freshwater wetlands. Occurs from 492 to 3,337 feet in elevation. Blooms from April through June. Annual herb.	**Not expected to occur.** Suitable habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Jepson's coyote-thistle *Eryngium jepsonii*	-	-	1B.2	Valley and foothill grasslands and vernal pools, on clay soils. Found from 10 to 990 feet in elevation. Blooms April through August. Perennial herb.	**Not expected to occur.** Suitable valley and foothill grassland habitat is limited in the project area and heavily populated by invasives. The closest occurrence is over 6 miles north.
Fragrant fritillary *Fritillaria liliaceae*	-	-	1B.2	Coastal scrub, coastal prairie, valley and foothill grasslands, cismontane woodlands, often in serpentine soils. Occurs from 0 to 1,180 feet in elevation. Blooms February through April. Perennial herb.	**May occur**. Suitable grassland habitats are found within the project area. Species has historic occurrences in surrounding Sonoma County (Calflora 2024).
Adobe-lily *Fritillaria pluriflora*	-	-	1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Occurs from 195 to	**May occur**. Suitable chaparral and grassland habitats are found within the project area. Species

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
				2,315 feet in elevation. Blooms February through April. Perennial herb.	has historic occurrences throughout Napa County (Calflora 2024).
Hall's harmonia *Harmonia hallii*	-	-	1B.2	Chaparral (serpentinite). Occurs from 1,000 to 3,200 feet in elevation. Blooms April through June. Annual herb.	**May occur**. Suitable chaparral habitats are found the project area. Species has historic occurrences throughout Napa County (Calflora 2024).
Two-carpellate western flax *Hesperolinon bicarpellatum*	-	-	1B.2	Chaparral (serpentinite). Occurs from 195 to 3,295 feet in elevation. Blooms May through June. Annual herb.	**May occur**. Suitable grassland habitats are found within the project area. Species has historic occurrences in Napa County (Calflora 2024).
Sharsmith's western flax *Hesperolinon sharsmithiae*	-	-	1B.2	Serpentine soils. Occurs at 885 to 985 feet in elevation. Blooms May through July. Annual herb.	**Known to occur.** Suitable serpentine soils are known to be onsite from historic occurrence data. There are several known occurrences - two CNDDB observations (CNDDB 2023) and one Calflora observation (Calflora 2024).
Santa Lucia dwarf rush *Juncus luciensis*	-	-	1B.2	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows and seeps, vernal pools. Occurs from 985 to 6695 feet in elevation. Blooms April through July. Annual herb.	**Not expected to occur.** Suitable habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Burke's goldfields *Lasthenia burkei*	FE	SE	1B.1	Meadows and seeps (mesic), vernal pools. Occurs from 50 to 1,970 feet in elevation. Blooms April through June. Annual herb.	**Not expected to occur.** Suitable habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Colusa layia *Layia septentrionalis*	-	-	1B.2	Foothill woodland, chaparral, valley grassland. Occurs at 330 to 3,600 feet in elevation. Blooms April through May. Annual herb.	**May occur**. Suitable woodland, chaparral, and grassland habitats are found within the project area. One known occurrence near the project area (CNDDB 2023).
Jepson's leptosiphon *Leptosiphon jepsonii*	-	-	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland habitats on volcanic soils. Found at 330 to 1,640 feet in elevation. Blooms March through May. Annual herb.	**Known to occur**. Suitable chaparral and cismontane woodland habitats are found within and surrounding the project area. There are four known observations within 3 miles of the project area (CNDDB 2023) and one observation within the project area (Calflora 2024).

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
Sebastopol meadowfoam *Limnanthes vinculans*	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools. Occurs from 50 to 1,000 feet in elevation. Blooms April through May. Annual herb.	**Not expected to occur.** Suitable habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Cobb Mountain lupine *Lupinus sericatus*	-	-	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, and lower montane coniferous forests. Occurs from 900 to 5,005 feet in elevation. Blooms March through June. Perennial herb.	**Known to occur.** Suitable forest, woodland, and chaparral habitat are found within the project area. Known to be onsite from prior botanical surveys conducted by CNPS botanist Amy Patten in 2019 (Agler and Leuzinger 2019). Three observations within 3 miles of the project area (CNDDB 2023) and five observations within project area (Calflora 2024).
Baker's navarretia *Navarretia leucocephala* ssp. *bakeri*	-	-	1B.1	Cismontane woodland, lower montane coniferous forest, meadows and seeps, valley and foothill grassland, vernal pools. Occurs at 15 to 5,710 feet in elevation. Blooms April through July. Annual herb.	**Not expected to occur.** No known occurrences within 3 miles of project area. One known occurrence within 3 miles of the project area in vernal pool habitat, which is absent from the project site (Calflora 2024).
Few-flowered navarretia *Navarretia leucocephala* ssp. *pauciflora*	FE	ST	1B.1	Vernal pools (volcanic ash). Occurs from 1,310 to 2,805 feet in elevation. Blooms May through June. Annual herb.	**Not expected to occur.** Suitable vernal pool habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Small pincushion navarretia *Navarretia myersii* ssp. *deminuta*	-	-	1B.1	Vernal pools. Occurs from 560 to 1,050 feet in elevation. Blooms from April through June. Annual herb.	**Not expected to occur.** Suitable vernal pool habitat is not present within the project site. No occurrences are known within 3 miles of the project site (Calflora 2024).
Porter's navarretia *Navarretia paradoxinota*	-	-	1B.3	Meadows and seeps. Occurs from 540 to 2,755 feet in elevation. Blooms May through June. Annual herb.	**Not expected to occur.** Suitable vernal pool habitat is not present within the project site. Known occurrences are limited to northern Napa County (Calflora 2024).
Marin County navarretia *Navarretia rosulata*	-	-	1B.2	Chaparral, closed-cone coniferous forest. Occurs from 655 to 2,085 feet in elevation. Blooms May through July. Perennial herb.	**May occur**. Suitable chaparral habitats are found within the project area. Species has historic occurrences within Napa County (Calflora 2024).

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
Sonoma beardtongue *Penstemon newberryi* var. *sonomensis*	-	-	1B.3	Chaparral (rocky). Found at 2,300 to 4,500 feet in elevation. Blooms April through August. Perennial herb.	**Not expected to occur.** No known occurrences within 3 miles of the project area. Nearest occurrence is on the eastern slopes of Mt. St. Helena (Calflora 2024).
Calistoga popcornflower *Plagiobothrys strictus*	FE	ST	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools. Occurs from 295 to 525 feet in elevation. Blooms March through June. Annual herb.	**May occur**. Suitable grassland habitats are found within the project area. Nearest known observation occurs approximately 8 miles west of the project site (Calflora 2024).
Napa blue grass *Poa napensis*	FE	SE	1B.1	Meadows and seeps, valley and foothill grassland. Occurs from 330 to 655 feet in elevation. Blooms May through August. Perennial herb.	**Not expected to occur.** The project site ranges from 1000 to 1800 feet making the site not suitable for the known elevation of the species. No known occurrences within 3 miles of the project area (Calflora 2024).
California alkali grass *Puccinellia simplex*	-	-	1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. Occurs from 5 to 3,050 feet in elevation. Blooms March through May. Annual herb.	**Not expected to occur.** No occurrences within 3 miles of the project area. No suitable habitat within the project area is present.
Sanford's arrowhead *Sagittaria sanfordii*	-	-	1B.2	Marshes and swamps (shallow freshwater). Occurs from 0 to 2,135 feet in elevation. Blooms May through October. Perennial herb.	**Not expected to occur.** No occurrences within 3 miles of the project area. No suitable habitat within the project area is present.
Napa checkerbloom *Sidalcea hickmanii* ssp. *napensis*	-	-	1B.1	Chaparral. Occurs from 1,360 to 2,000 feet in elevation. Blooms April through June. Perennial herb.	**May occur**. Suitable chaparral habitats are found the project area. Species has historic occurrences throughout Napa County (Calflora 2024).
Keck's checkerbloom *Sidalcea keckii*	FE	-	1B.1	Cismontane woodland, valley and foothill grassland. Occurs from 245 to 2,135 feet in elevation. Blooms April through May. Annual herb.	**May occur**. Suitable chaparral habitats are found the project area. Species has historic occurrences throughout Napa County (Calflora 2024).
Marsh checkerbloom *Sidalcea oregana* ssp. *hydrophila*	-	-	1B.2	Meadows and seeps, riparian forest. Found at 3,600 to 7,550 feet in elevation. Blooms June through August. Perennial herb.	**Not expected to occur.** No occurrences within 3 miles of the project area. Suitable riparian habitat within and surrounding the project area is present.

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
Kenwood Marsh checkerbloom *Sidalcea oregana* ssp. *valida*	FE	SE	1B.1	Freshwater wetlands. Occurs from 358 to 525 feet in elevation. Blooms June through September. Perennial herb.	**Not expected to occur.** No occurrences within 3 miles of the project area. No suitable habitat within the project area is present.
Long-styled sand-spurrey *Spergularia macrotheca* var. *longistyla*	-	-	1B.2	Marshes and swamps, meadows and seeps. Occurs from 0 to 835 feet in elevation. Blooms February through May. Perennial herb.	**Not expected to occur.** No occurrences within 3 miles of the project area. No suitable habitat within the project area is present.
Socrates Mine jewelflower *Streptanthus brachiatus* ssp. *brachiatus*	-	-	1B.2	Chaparral, closed-cone coniferous forest. Occurs from 1,790 to 3,280 feet in elevation. Blooms May through June. Perennial herb.	**May occur**. Suitable chaparral habitats are found within the project area. Species has historic occurrences near the Napa County and Lake County border (Calflora 2024).
Green jewelflower *Streptanthus hesperidis*	-	-	1B.2	Serpentine barrens and associated openings in chaparral-oak woodland and cypress woodland. Occurs at 425 to 2,500 feet in elevation. Blooms May through July. Annual herb.	**Known to occur.** Known to be onsite from prior botanical surveys conducted by CNPS botanist Amy Patten in 2019 (Agler and Leuzinger 2019). Suitable rocky and serpentine habitats are found within and near the project area. There are two recent observations within project area (CNDDB 2023 and Calflora 2024).
Hoffman's bristly jewelflower *Streptanthus glandulosus* ssp. *hoffmanii*	-	-	1B.3	Chaparral, cismontane woodland, valley and foothill grassland. Occurs from 197 to 2,510 feet in elevation. Blooms March through July. Annual herb.	**May occur**. Suitable chaparral and grassland habitats are found within the project area. No occurrences listed in Napa County, though species is prominent in surrounding counties (Calflora 2024).
Three Peaks jewelflower *Streptanthus morrisonii* ssp. *elatus*	-	-	1B.2	Chaparral (serpentinite). Occurs from 295 to 2,675 feet in elevation. Blooms June through September. Perennial herb.	**May occur**. Suitable chaparral habitats are found within the project area. Species has historic occurrences in northern Napa County (Calflora 2024).
Early jewelflower *Streptanthus vernalis*	-	-	1B.2	Chaparral, forest (serpentine). Occurs from 2,245 to 2,387 feet in elevation. Blooms March through May. Annual herb.	**Not expected to occur**. Suitable chaparral habitats are found within the project area, though the species requires higher elevation ranges than present at LPDSF. Species has historic occurrences near the Napa County

Species	Status Federal	Status State	Status CRPR/ Other	Habitat and Life History	Potential for Occurrence/ Project Impact
					and Lake County border (Calflora 2024).
Napa bluecurls *Trichostema ruygtii*	-	-	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grasslands, and vernal pools. Found from 100 to 2,230 feet in elevation. Blooms June through October. Annual herb.	**Known to occur.** Known to be on site from historic occurrence data. Suitable habitats are found within and near the project area. Three observations within project area and one adjacent to project area (CNDDB 2023 and Calflora 2024).
Two-fork clover *Trifolium amoenum*	FE	-	1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite). Occurs from 15 to 1,360 feet in elevation. Blooms April through June. Annual herb.	**May occur**. Suitable grassland habitats are found within the project area. Few occurrences listed within Napa County, though primarily occurs closer to the coast (Calflora 2024).
Saline clover *Trifolium hydrophilum*	-	-	1B.2	Marshes and swamps, valley and foothill grassland (mesic, alkaline), vernal pools. Occurs from 0 to 985 feet in elevation. Blooms April through June. Annual herb.	**Not expected to occur.** No occurrences within 3 miles of the project area. Habitat within the project site is not suitable for the species.
Oval-leaved viburnum *Viburnum ellipticum*	-	-	2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Occurs from 705 to 4,595 feet in elevation. Blooms May through June. Perennial shrub.	**May occur**. Suitable chaparral and forest habitats are found within the project area. Occurrences are found throughout southern Napa County with the nearest occurrences approximately 24 miles south (Calflora 2024).

Notes: CRPR = California Rare Plant Rank; CEQA = California Environmental Quality Act; ESA = Endangered Species Act; NPPA = Native Plant Protection Act

Legal Status Definitions

Federal:

FE Federally Listed as Endangered (legally protected by ESA)

State:

SE State Listed as Endangered (legally protected by CESA) ST State Listed as Threatened (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).

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)

Potential for Occurrence Definitions

Not expected to occur: The species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.

May occur: Suitable habitat is available and there have been nearby recorded occurrences of the species.

Known to occur: The species has been observed within the treatment areas.

Table B-3. Special-Status Wildlife Species with Potential to Occur within the LPDSF Project Area.

Species	Status Federal	Status State	Status Other	Habitat and Life History	Potential for Occurrence/Project Impact
Herpetofauna					
California giant salamander *Dicamptodon ensatus*	-	-	SSC	Wet coastal forests, such as coastal redwoods in or near clear, cold permanent and semi-permanent streams and seepages.	**Known to occur.** This species is highly associated with streams. Suitable streams in wet coastal forests and riparian habitats are known to occur within the project area. One known occurrence in 2016 on the project site (CNDDB 2023).
Northwestern pond turtle *Emys marmorata*	PT	-	SSC	Freshwater ponds and streams.	**Known to occur.** Suitable freshwater ponds and streams are known to occur within the project area. Drainages within the project area may provide suitable habitat for the species. They are also known to disperse to upland habitats near freshwater and stream habitats. One known occurrence within project area (CNDDB 2023).
Foothill yellow-legged frog - North Coast DPS *Rana boylii*	-	-	SSC	Rocky streams, valley-foothill hardwood, valley-foothill riparian, coastal mixed conifer, mixed chaparral, and wet meadows.	**May occur.** Suitable streams and wet meadows in a variety of habitats are known to occur within the project area. Suitable breeding habitat is also present within the project area. The species is also known to disperse into upland areas. There are two prior occurrences surrounding the project area (CNDDB 2023).
California red-legged frog *Rana draytonii*	FT	-	SSC	Breeds in slow-moving freshwater streams and ponds in riparian, grassland, and woodland habitats. Utilizes refugia such as mammal burrows during dry months.	**Not expected to occur.** No suitable streams for breeding, but suitable dispersal habitat is present. The nearest occurrence is over 3 miles north and considered extirpated as of 2004 (CNDDB 2023).
Red-bellied newt *Taricha rivularis*	-	-	SSC	Inhabits streams and rivers in coastal woodlands and redwood forests of northern California. Aquatic form of rough-skinned newt (*T. granulosa granulosa*), this species breeds in flowing water.	**Not expected to occur.** Suitable streams occur within the project area; however, species is not known to occur within Napa County.
Birds					
Tricolored blackbird *Agelaius tricolor*	-	ST	BCC	Cattail or tule marshes, freshwater marshes, and dense stands of cattails or bulrushes. May also breed in large stands	**Not expected to occur.** No suitable habitat expected in project area. One known occurrence within 3 miles of project area (CNDDB 2023).

Species	Status Federal	Status State	Status Other	Habitat and Life History	Potential for Occurrence/Project Impact
				of Himalayan blackberry (*Rubus armeniacus*).	
Grasshopper sparrow *Ammodramus savannarum*	-	-	SSC	Occurs primarily in grasslands, meadows, and prairies. Nesting sites occur within grasslands where the species will conceal their nests beneath clumps of grass or other vegetation.	**Not expected to occur.** Grassland habitat occurs within the project area but is highly invaded by yellow star thistle and other non-native annual grasses. Species observations in Napa County are concentrated in the southern portion (eBird 2024).
Golden eagle *Aquila chrysaetos*	-	FP -	-	Open mountains, foothills, plains, open country. May build nests in large trees or on rocky cliffs.	**May occur.** Potential suitable nesting, foraging, and overwintering habitat is found within the project area. Closest known observation over 9 miles to the east at Lake Berryessa (CNDDB 2023).
Swainson's hawk *Buteo swainsonii*	-	ST	-	Typically nests in scattered trees within grassland, shrubland, or agricultural landscapes. Forages in open stands of grass-dominated vegetation, sparse shrublands, open woodlands, and agricultural fields.	**Not expected to occur.** Suitable nesting habitat does not occur within the project area.
Olive-sided flycatcher *Contopus cooperi*	-	-	BCC, SSC	Breeds mostly in coniferous forest in mountains, especially around edges of open areas, including bogs, ponds, clearings. Also nests near the coast in California, in tall trees (including eucalyptus) in foothill canyons.	**Known to occur.** Potential suitable breeding, nesting, and foraging habitat present within project area. One occurrence is within the project area, and many are known in the vicinity of the project area (eBird 2024).
Black swift *Cypseloides niger*	-	-	SSC	Occur in areas with cliff ledges behind waterfalls and sea caves for nesting. They occur beneath 7,500 ft and require open country and forests in mountains and lowlands to forage for insects.	**Not expected to occur.** Suitable nesting habitat does not occur within the project area.
White-tailed kite *Elanus leucurus*	-	- FP	-	Occurs in open groves, river valets, marshes, and grasslands. Forages in open habitats, including oak grassland, desert grassland, farm country, marshes.	**May occur.** Suitable nesting habitat occurs within the project area. Species is known to occur throughout Napa County (eBird 2024).
American peregrine falcon *Falco peregrinus anatum*	FD	SD	-	Inhabits open wetlands near cliffs for nesting. May also occur in cities with structures	**Not expected to occur.** Suitable nesting habitat does not occur within the project area.

Species	Status Federal	Status State	Status Other	Habitat and Life History	Potential for Occurrence/Project Impact
				such as bridges or buildings for nesting.	
Bald eagle *Haliaeetus leucocephalus*	-	-	BCC, FP	Requires large bodies of water, free flowing rivers with abundant fish, and adjacent snags or other perches. Nests in large, old-growth snags, or live trees with open branches, typically within 1 mile of water.	**Not expected to occur.** No suitable foraging or nesting habitat (such as open lakes or streams) is present in the project area. Several occurrences from the vicinity of the project area at the Pacific Union College are known from eBird (eBird 2024). The species may be observed in flight from the project area only.
Yellow-breasted chat *Icteria virens*	-	-	SSC	Occurs in areas where dense shrubbery is common. Breeding occurs in dense thickets, often along streams.	**May occur.** Suitable nesting habitat occurs within the project area. Species is known to occur throughout Napa County (eBird 2024).
Belding's savannah sparrow *Passerculus sandwichensis beldingi*	-	SE	BCC	Open fields, meadows, salt marshes, prairies, dunes, shores. Over most of range, found in open meadows, pastures, edges of marshes, alfalfa fields, pastures. Occurs in coastal southern California and Baja California.	**Not expected to occur.** The project area is outside of the species range.
Purple martin *Progne subis*	-	-	SSC	Forages over towns, cities, parks, open fields, dunes, streams, wet meadows, beaver ponds, and other open areas.	**May occur.** Potential for suitable foraging and breeding habitat within the project area. Two known observations are within 3 miles, south of the project area (CNDDB 2023) and multiple eBird observations within the region (eBird 2024).
Yellow warbler *Setophaga petechia*	-	-	SSC	Often found within riparian woodlands. Nesting occurs within riparian woodlands or coniferous forests with a thick understory.	**May occur.** Suitable nesting habitat occurs within the project area. Species is known to occur throughout Napa County (eBird 2024).
Northern spotted owl *Strix occidentalis caurina*	FT	ST	-	Dense canopies of mature and old-growth forests. Nests in tree hollows or old raptor nests.	**Known to occur.** Critical habitat for the species is present in the project area. Many known occurrences within and surrounding the project area (CNDDB 2023).
Invertebrates					
Crotch's bumble bee *Bombus crotchii*	-	CESA candidate	-	Inhabits open grassland and scrub habitats where it nests underground. Nests often located underground in abandoned rodent nests, or above ground in tufts of grass,	**May occur.** Suitable habitat occurs within the project area. No occurrences are known near the project area; however the project area occurs within the known range for the species (CDFW 2023b).

Species	Status Federal	Status State	Status Other	Habitat and Life History	Potential for Occurrence/Project Impact
				old bird nests, rock piles, or cavities in dead trees.	
Western bumble bee *Bombus occidentalis*	-	CESA candidate	-	Occurs historically across the western United States in areas with rich floral resources necessary throughout nesting season. They require above and below ground sites for overwintering and nesting, including logs, stumps, and abandoned burrows.	**Not expected to occur.** Suitable habitat occurs within the project site, however LPDSF occurs out of current range for species (CDFW 2023c).
Monarch butterfly *Danaus plexippus*	- ESA candidate	-	-	Utilizes a wide variety of habitats for foraging, overwintering and reproduction. Depends on milkweed as host plant. Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico.	**Not expected to occur.** Monarchs roost in forested habitat and may lay eggs on milkweed areas in grassland and scrubland habitat that may occur within the project area. No host plants were observed during reconnaissance surveys. Additionally, overwintering habitat is not expected due to distance from the coast.
California freshwater shrimp *Syncaris pacifica*	FE	SE	-	Occurs in slow flowing waterways 1 to 3 feet deep, containing ample exposed roots, edge vegetation, and debris at elevations less than 380 feet.	**Not expected to occur.** Suitable habitat does not occur within the project area.
Mammals					
Pallid bat *Antrozous pallidus*	-	-	SSC	Most common in open, dry habitats with rocky areas for roosting. Roosts in large diameter trees and abandoned buildings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**May occur.** Potential suitable roosting and nesting habitat within the project area. Known observations surrounding the project area (CNDDB 2023).
Ringtail *Bassariscus astutus*	-	-	FP	Found within riparian, scrub, and mixed forest habitats in low to moderate elevations.	**May occur.** Suitable habitat occurs within the project area. The species has no known occurrences near the project area, however as an elusive species occurrence data is considered underreported(CNDDB 2023).
Townsend's big-eared bat *Corynorhinus townsendii*	-	-	SSC	Caves, mines, bridges, buildings, rock crevices, or tree hollows in coastal lowlands and cultivated valleys; prefers roosting in caves or other similar open spaces.	**May occur.** Suitable cave and similar open space habitats are present in the project area. One known occurrence within 3 miles of the project area (CNDDB 2023).

Species	Status Federal	Status State	Status Other	Habitat and Life History	Potential for Occurrence/Project Impact
Western red bat *Lasiurus blossevillii*	-	-	SSC	Roosts primarily in trees. Prefers habitat edges and mosaics with open areas for foraging and trees that are protected from above and open below.	**May occur.** Suitable roosting habitat occurs within the project area. Species is known to occur within Napa County (CNDDB 2023).
American badger *Taxidea taxus*	-	-	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. Cannot live in frequently plowed fields. Preys on burrowing rodents.	**May occur.** Suitable habitat occurs within the project area. Species is known to occur within Napa County (CNDDB 2023).

Notes: CNDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act, California Natural Diversity Database = CNDDB, National Oceanic and Atmospheric Administration = NOAA

Legal Status Definitions

Federal:

FE Federally Listed as Endangered (legally protected)
FT Federally Listed as Threatened (legally protected)
FD Federally Delisted
PT Proposed for Listing as Threatened under the federal Endangered Species Act

State:

SE State Listed as Endangered (legally protected) ST State Listed as Threatened (legally protected)
SC State Candidate for listing (legally protected)
SD State Delisted

Other:

FP Fully Protected (legally protected)
BCC USFWS Bird of Conservation Concern
SSC Species of Special Concern (no formal protection other than CEQA consideration)

Potential for Occurrence Definitions

Not expected to occur: The Species is unlikely to be present because of poor habitat quality, lack of suitable habitat features, or restricted current distribution of the species.
May occur: Suitable habitat is available; however, there are little to no other indicators that the species might be present.
Known to occur: The species has been documented within the treatment site.

3.1 Special-Status Plant Species

Initial treatments have the potential to impact 35 special-status plant species (Table B-2). Eight (8) species are known to occur based on prior observations within the project area: Napa false indigo (*Amorpha californica* var. *napensis*), narrow-anthered brodiaea (*Brodiaea leptandra*), Greene's narrow-leaved daisy (*Erigeron greenei*), Sharsmith's western flax (*Hesperolinon sharsmithiae*), Jepson's leptosiphon (*Leptosiphon jepsonii*), Cobb Mountain lupine (*Lupinus sericatus),* green jewelflower (*Streptanthus hesperidis*), and Napa bluecurls (*Trichostema ruygtii*) (CalFlora 2024). The additional 27 species discussed in Table B-2 were determined to have potential to occur due to LPDSF's proximity to historic occurrences, suitable habitat, and appropriate elevations for the species.

Per SPR BIO-7, rare plant surveys will be performed sitewide according to the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2018a). Per MM BIO-1a and MM BIO-1b, if rare plant populations are discovered within the treatment area, then populations will be provided with an appropriately sized no-disturbance buffer using high-visibility flagging, fencing, stakes, or clear, existing landscape demarcations. Buffers would not be provided if the qualified Registered Professional Forester (RPF) or biologist, in consultation with CDFW

and USFWS, determines that based on substantial evidence, the species would benefit from proposed treatment activities.

3.1.1 Napa False Indigo

Napa false indigo is a perennial shrub species with a California Rare Plant Rank of 1B.2. This species occurs in upland forests, chaparral, and cismontane woodland habitats. Sequoia biologists observed multiple populations of Napa false indigo during the November 2023 reconnaissance surveys. Per MM BIO-1b, populations of Napa false indigo will be provided with a no-disturbance buffer prior to initiation of treatment activities.

3.2 Special-Status Wildlife Species

Initial treatments have the potential to impact 16 special-status wildlife species (Table B-3). Four (4) of these species are known to occur within the LPDSF project area based on historic observations: California giant salamander (*Dicamptodon ensatus*), northwestern pond turtle (*Emys marmorata*), olive-sided flycatcher (*Contopus cooperi*), and northern spotted owl (*Strix occidentalis caurina*). The additional twelve (12) species discussed in Table B-3 were determined to have potential to occur based on LPDSF's proximity to historic occurrences and suitable habitat present within the project area. Twelve additional species were analyzed from the desktop review as initially having potential to occur onsite based on historical range, habitat and elevation, but are not expected to occur onsite. These species are: California red-legged frog (*Rana draytonii*), red-bellied newt (*Taricha rivularis*), tricolored blackbird (*Aegelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), Swainson's hawk (*Buteo swainsonii)*, black swift (*Cypseloides niger*), American peregrine falcon (*Falco peregrinus anatum*), bald eagle (*Haliaeetus leucocephalus*), Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), western bumble bee (*Bombus occidentalis*), monarch butterfly (*Danaus plexippus*), and California freshwater shrimp (*Syncaris pacifica*).

3.2.1 California Giant Salamander

California giant salamander has potential to occur within the LPDSF. The species occurs within perennial and intermittent streams and may also be found in uplands beneath leaf litter and fallen logs. Upland habitat is described as within 165 feet of suitable aquatic habitat (CalHerps 2024). Per SPR HYD-4, WLPZs of 50 to 150 feet will be established around waterways present within the project area. Under MM BIO-2b and due to the threat of individuals being inadvertently harmed by mechanical or burning treatment activities, buffers within suitable upland habitat will be extended to 200 feet to correspond with the appropriate buffer for foothill yellow-legged frog.

If the 200-foot buffer is determined to be infeasible, manual treatments beyond the appropriate WLPZ but within the California giant salamander buffer may be enacted. Under SPR BIO-2, project personnel will receive biological training which will characterize the identification and life history of the species. This understanding will help manual treatment personnel move at a slow pace to adequately identify

and avoid California giant salamanders potentially present within the project area. Treatments will avoid aquatic habitat and associated WLPZs, no loss of habitat function is expected due to project activities.

3.2.2 Foothill Yellow-Legged Frog

Foothill yellow-legged frog occurs in perennial rocky streams, valley and foothill hardwood forests, valley and foothill riparian corridors, coastal mixed conifer forests, mixed chaparral, and wet meadows. Though this species typically occurs along the stream margin, upland habitat may extend up to 200 feet away from aquatic resources (CDFW 2018b). Per SPR HYD-4, WLPZs of 50 to 150 feet will be established around waterways present within the project area. Under MM BIO-2b and due to the threat of individuals being inadvertently harmed by mechanical or burning treatment activities, buffers within suitable upland habitat will be extended to 200 feet.

If the 200-foot buffer is determined to be infeasible, manual treatments beyond the appropriate WLPZ but within the foothill yellow-legged frog buffer may be enacted. Under SPR BIO-2, project personnel will receive biological training which will characterize the identification and life history of the species. This understanding will help manual treatment personnel move at a slow pace to adequately identify and avoid foothill yellow-legged frogs potentially present within the project area. Treatments will avoid aquatic habitat and associated WLPZs, no loss of habitat function is expected due to project activities.

3.2.3 Northwestern Pond Turtle

Northwestern pond turtle is known to occur within freshwater ponds and streams within the project area. Northwestern pond turtles spend most of their time in an aquatic environment, though they may also be found in upland habitats year-round. The average distance for upland habitat is 164 feet from a corresponding water body (Rathbun et al. 2002). Per SPR HYD-4, WLPZs of 50 to 150 feet will be established around waterways present within the project area. Under MM BIO-2b and due to the threat of individuals being inadvertently harmed by mechanical or burning treatment activities, buffers within suitable upland habitat will be extended to 200 feet to correspond with the appropriate buffer for foothill yellow-legged frog.

If the 200-foot buffer is determined to be infeasible, manual treatments beyond the appropriate WLPZ but within the northwestern pond turtle buffer may be enacted. Under SPR BIO-2, project personnel will receive biological training which will characterize the identification and life history of the species. This understanding will help manual treatment personnel move at a slow pace to adequately identify and avoid northwestern pond turtles potentially present within the project area. Treatment will avoid aquatic habitat and associated WLPZs, no loss of habitat function is expected due to project activities.

3.2.4 Northern Spotted Owl

Northern spotted owl occurs in dense canopies of mature and old growth forest, nesting within tree hollows or old raptor nests. The nesting season for the coastal California region occurs from February 1 through July 31, with fledging occurring through September 15 (USFWS 2012). Northern spotted owls are susceptible to disturbance from treatment activities during the nesting season, as they are unable to

leave their nesting location. Manual and mechanical vegetation removal, prescribed burning, and prescribed herbivory treatment activities would result in disturbance to nesting owls. Additionally, northern spotted owl critical habitat occurs within the entire LPDSF project area. The project area occurs within Critical Habitat Unit 11 and is comprised of 842.69 acres. Approximately 50 acres of suitable nesting habitat consisting of mature Douglas firs (*Pseudotsuga menziesii* var. *menziesii*) and coast redwoods (*Sequoia sempervirens*) was observed during the November 2023 reconnaissance surveys. Therefore, under SPR BIO-10, protocol level surveys will be enacted in accordance with the "Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls" (USFWS 2011). Active nesting sites observed during protocol surveys would be protected with a 0.25-mile no-disturbance buffer, as required under MM BIO-2a. Treatment activities are not expected to result in loss of habitat function for northern spotted owls as no large tree removals that would change the forest structure are proposed. As the northern spotted owls prefer structural complexity within their habitat, clearing of dense, dead and dying vegetation within the understory of suitable habitat may be beneficial to the species.

3.2.5 Other Special-Status Birds

Seven (7) additional species-status birds may occur within the LPDSF project area: olive-sided flycatcher, white-tailed kite, yellow warbler, yellow-breasted chat, golden eagle, and purple martin. Manual treatment, mechanical treatment, prescribed burning, and prescribed herbivory conducted during the nesting bird season (February 1–September 15) could result in direct loss of active nests if trees or shrubs containing nests are removed or burned. Per SPR BIO-1, adverse effects of treatment activities on suitable habitat may be avoided by performing work outside of the nesting bird season. If work occurs within the nesting bird season, a qualified RPF or biologist will perform nesting bird surveys before treatment activities pursuant to SPR BIO-10. Under MM BIO-2a and MM BIO-2b, a 0.5-mile no-disturbance buffer will be enacted around any golden eagle nesting site, a 0.25-mile no-disturbance buffer will be enacted around any white-tailed kite nesting site, and a 100-foot no-disturbance buffer would be enacted around any other special-status bird nest. The 100-foot no-disturbance may be adjust by an RFP or biologist based on site and species-specific information including but not limited to species sensitivity to noise and visual disturbance, vegetation cover, topography, and nest location. as determined by an RFP or biologist. Additionally, trees retaining a golden eagle nest would remain pursuant to the federal Bald and Golden Eagle Protection Act (USFWS 2023). No loss of special-status bird habitat function is expected due to project activities.

3.2.6 Special-Status Bats

Forest habitat, rocky areas, caves, and human-made structures in and around the LPDSF may provide suitable habitat for pallid bat, Townsend's big-eared bat, and western red bat. The maternity season for special-status bats is April 1 – August 31 (Caltrans 2004). Manual treatment, mechanical treatments, and prescribed burning may provide disturbance that would cause abandonment of roosting habitat and loss of young. Adverse effects of project activities may be mitigated by avoiding working during the bat maternity season.

If implementation of manual treatment, mechanical treatments, or prescribed burning is expected during the bat maternity season, surveys by a qualified RPF or biologist would be performed under SPR BIO-10. Under MM BIO-2b, a no-disturbance buffer of 250 feet would be enacted around any pallid bat, western red bat, or Townsend's big-eared bat roosting sites to ensure project activities would not affect potential young.

3.2.7 Special-Status Bumble Bees

Western bumble bee and Crotch's bumble bee were designated a candidate for the California Endangered Species Act by the California Fish and Game Commission on June 12, 2019. The LPDSF project site falls within the known range for the Crotch's bumble bee (CDFW 2023b). Western bumble bee has historic occurrences within Napa County; however the species range has generally receded from the coast and the project site is not located within the species current range (CDFW 2023c). Though no historical occurrences are found within project site for either species, suitable foraging and overwintering habitat occurs for Crotch's bumble bee. Bumble bee species require habitat with suitable floral resources for foraging during the colonization period (spring, summer, and fall) and suitable overwintering site for queens. Bumble bee overwintering sites are often comprised of downed woody debris.

Pre-treatment surveys would combine a focused survey (SPR BIO-1, SPR BIO-3, SPR BIO-10) to identify burrows and suitable habitat within the project site. CDFW (2023) issued "Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species" which offers a survey methodology for western bumble bee among others. In lieu of or in addition to surveys, the Project proponent may choose to assume presence and rely on habitat as an indicator of presence. Crew members and contractors would be trained to identify and avoid these burrows if encountered (SPR BIO-2), and a biologist would be available as needed to provide guidance when crews are working within suitable western bumble bee and Crotch's bumble bee habitat. If identified, these burrows would be protected with an avoidance buffer (SPR AD-2 and MM BIO-2A). The project has been designed to protect non-target vegetation and special-status species from herbicides (SPR HYD-5). A Spill Prevention and Response Plan (SPR HAZ-5) will be developed as part of Project implementation, and the Project proponent will comply with herbicide application regulations (SPR HAZ-6) and restrict use of herbicide to avoid native plants.

Adverse effects to special-status bumble bee species may be avoided by avoiding prescribed burning and limiting herbicide application during the dispersal and nesting season (March through September), in accordance with Mitigation Measure BIO-2g. Additionally, treatments will be implemented to preserve patches of floral resources, as feasible. No loss of special-status bees habitat function is expected due to project activities.

3.2.8 Ringtail

Ringtails are a primarily nocturnal species which occurs within riparian, mixed forest, or shrub habitats. This species will utilize rock outcrops, snags, and crevices for denning. The maternity period for the

species in which young may be present within a den occurs from April 15 through July 31. Outside of the maternity period, ringtails are likely to flee from disturbance resulting from treatment activities.

Under MM BIO-2a, adverse effects to ringtail may be avoided by limiting treatment within suitable denning habitat during the maternity period. Mechanical treatment and prescribed burning would pose the highest risk of inadvertent impact to dens within the maternity period and potential loss or abandonment of young. Therefore, these treatment activities will not be implemented within suitable denning habitat from April 15 to July 31. Additionally, no habitat function lose would occur due to project activities. Under SPR BIO-2, project personnel will receive biological training which will characterize the identification and life history of the species. This understanding will help manual treatment personnel move at a slow pace to adequately identify and avoid ringtail potentially present within the project area.

3.2.9 American badger

American badgers have potential to occur within grassland and open woodland habitat within LPDSF. The maternity period for this species occurs from February 15 to July 1. Outside of the maternity period, American badgers are likely to avoid areas subject to disturbance from treatment activities.

Similar to ringtail, mechanical treatment and prescribed burning pose the highest risk of inadvertent impact to dens. Under MM BIO-2b, these treatment activities will not be implemented within suitable denning habitat from February 15 to July 1. As badgers use their dens year-round, any dens found within the project area would be provided, with an appropriately sized buffer, by a qualified RPF or biologist. Under SPR BIO-2, project personnel will receive biological training characterizing the identification and life history of the species. This understanding will help manual treatment personnel move at a slow pace to adequately identify and avoid ringtail potentially present within the project area.

4.0 SENSITIVE NATURAL COMMUNITIES

Through implementation of SPR BIO-1, it was determined that the project area contains sensitive natural communities of Oregon white oak (S3), redwood-Douglas fir (S3), tanoak (S3), ultramafic mixed chaparral (S3), and willow (riparian scrub, S2). Several of these habitats are suitable for plant species listed under CNPS Rare Plant Rank groups 1 and 2. Protocol-level surveys in accordance with CDFW "Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities" (CDFW 2018a) will be required under SPR BIO-7 prior to treatments. Special-status plants and sensitive natural communities discovered during rare plant surveys will be mapped and digitally recorded.

Ultramafic mixed chaparral habitats are present within the project area. Under SPR BIO-5, treatments within this habitat type would be designed to avoid type conversion from chaparral and ensure that the habitat maintains chaparral function, including retaining at least 35 percent relative density of mature chaparral vegetation.

Willow (riparian scrub) habitats present within the project area would be protected by the inaction of 50- to 150-foot no-disturbance buffers, per SPR HYD-4. Additionally, as these habitats may present upland habitat for foothill yellow-legged frog, California giant salamander, and northwestern pond turtle, a no-disturbance buffer of 200 feet may be required based on proximity to suitable aquatic habitat.

Oregon white oak, redwood-Douglas fir, and tanoak habitat also occur within the project area. In treatment areas where multiple age classes are represented, the proposed treatment will promote heterogeneity, resiliency, and health in the residual stand by creating different influences of sunlight through the canopy to the forest floor, adding to a mosaic of diversity in the understory. In areas where these habitats exist, MM BIO-3a will be enacted to ensure that the Wildland-Urban Interface fuel reduction further enhances sensitive communities by removing any diseased, overgrown, or infested trees from stands and removing no more than 20 percent of the native vegetation cover.

Table B-4. Sensitive Natural Communities Documented or with Potential to Occur Within the LPDSF Project Area.

Sensitive Natural Community	Rarity Rank	Napa County Vegetation Mapping (Thorne et al. 2019)
Willow (Riparian Scrub)	S2	white alder (mixed willow – California bay – bigleaf maple) riparian forest
Ultramafic Mixed Chaparral	S3	white leaf manzanita – leather oak – (chamise – Ceanothus ssp. (foothill pine)) xeric serpentine
Tanoak	S3	tanbark oak
Redwood-Douglas Fir	S3	coast redwood – Douglas-fir / California bay
Oregon White Oak	S3	Oregon white oak

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