Attachment B

Hogback Ridge VTP # 2025-19

Biological Resource Assessment

As per SPR BIO-1, a reconnaissance level survey was conducted by the RPF, to determine what habitats were present within the project area. This habitat analysis informed the subsequent listed and non-listed species impact analysis. The biological survey effort conducted by FRM totals 130 hours. During the field reconnaissance, the following non-sensitive animal species were identified either visually or otherwise (i.e. scatt, tracks, etc…):

Black tail deer, tree squirrel, ground squirrel, coyote, crow, raven, blue jay, red tailed hawk and hummingbird.

- The following are all rare, threatened, endangered, and Species of Special Concern with potential to occur within the project area. Species occurrences listed in the CNDDB within 0.7 miles of the project area were included in this report.

Birds

- A note on birds of prey and the treatments proposed on this project: The treatments proposed will have very little negative effect on the habitat types these species rely on. Most of the treatments are focused on removing dead and down debris, along with understory vegetation. The result will be the creation of better foraging habitat for birds of prey, due to the decrease in places for food sources to hide. A high degree of LWD will be retained throughout the units, as it is infeasible to treat all this material. Also, LWD is not responsible for causing high intensity wildfire. This will ensure habitat is retained for prey species.

  These species usually create nests high off the ground in large old trees. These types of trees are not targeted for removal unless they are a rotten snag near a ridgeline fuel break. These trees will be assessed by an RPF or qualified biologist prior to removal.

Birds

Northern Spotted Owl (*Strix occidentalis caurina*)

Status: FT; ST

Habitat Requirements: Northern spotted owls (NSO) are old growth to second growth forest obligate birds that require permanent water and suitable nesting trees/snags (Zeiner et al. 1990a). Northern spotted owls use dense, old-growth forests, or mid- to late- seral stage forest, with a multi-layered canopy for breeding (Remsen 1978). Northern spotted owl nests are most often found on existing structures (old raptor nest, squirrel nest, red-tree vole nest), or debris piled on a broken topped tree; although, they have been found inside tree cavities.

In evaluating potential NSO habitat, the presence of a nest structure may be more important than the size or species of tree. Successful nest sites have canopy cover immediately above nests exceeding 85%.

The presence of high-quality foraging habitat is also very important. Early seral habitat can provide excellent foraging opportunities for the NSO. Its primary prey in this area is the dusky-footed woodrat (*Neotoma fuscipes*). The NSO breeds from southwestern British Columbia south through western Washington and western Oregon to Marin County, California. The breeding season is between February 1st to July 31st.

Potential for Occurrence: There are 7 documented activity centers within 0.7 miles of the project area. They are NAP0004, NAP0008, NAP0032, NAP0034, NAP0037, NAP0038, and NAP0041. No protocol level NSO surveys have been conducted since these detections were originally made. The project proponent shall assume occupancy at all ACs. There are no activity centers within 500 ft of the project area.

CDFW Consultation Results Regarding NSO Protections:

CDFW was contacted by FRM on 3/27/25 for technical support, regarding protections for these activity centers, as per Mitigation Measure BIO-2a. In the email correspondence, FRM proposed utilizing the U.S Fish and Wildlife document titled "*Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls in Northwestern California*", updated October 10, 2020. After consultation with CDFW, it was determined that the document can be used for guidance to create seasonal buffers for NSO during treatment. The guidance provides information for determining the appropriate nest buffer distance based on activities, and their potential increase to the ambient noise level. Shown in Table One below is disturbance distances by action generated sound and pre-project sound level. The Hogback Ridge CalVTP generally falls in the "Natural Ambient" category for pre project sound level. Table Two references the equipment that will be used during the project. By taking an average of the decibel level created by the equipment, the action generated sound falls within the "High" category. Thereby requiring a buffer distance of 500 feet. A copy of the email correspondence in its entirety is located at the end of Attachment B for reference.

Project Specific Mitigation measures for NSO ACs:

- There are 7 known Activity Centers within 0.7 miles of the project area, but none of these are within 500 ft of the project boundary.

- SPR BIO-2: Require training on identification of NSO to all workers prior to beginning operations. If an NSO is observed during operations, all treatments shall stop within 500 ft of the location and an RPF shall be notified.

- If NSO ACs are discovered within 500 ft of the treatment area, MM BIO-2a will go into effect with the following provisions:

    - Mechanical treatments, manual treatments, and prescribed burning shall require a seasonal no treatment buffer within **500 ft** of the AC, between February 1st and July 31st.

    - Prior to mechanical, manual, or prescribed fire treatments, the project proponent shall have an RPF or their supervised designee flag an STZ around the discovered AC within the proposed treatment area.

    - Prescribed herbivory and herbicide use shall not require a seasonal restriction.

Table 1. Estimated disturbance distance (in feet) due to elevated action-generated sound levels affecting the northern spotted owl and marbled murrelet, by sound level.

Existing (Ambient) Pre-Project Sound Level (dB) [1, 2]	Anticipated Action-Generated Sound Level (dB) [2, 3]			
	Moderate (71-80)	High (81-90)	Very High (91-100)	Extreme (101-110)
"Natural Ambient" [4] (< = 50)	50 (165)[5,6]	150 (500)	400 (1,320)	400 (1,320)
Very Low (51-60)	0	100 (330)	250 (825)	400 (1,320)
Low (61-70)	0	50 (165)	250 (825)	400 (1,320)
Moderate (71-80)	0	50 (165)	100 (330)	400 (1,320)
High (81-90)	0	50 (165)	50 (165)	150 (500)

Table 2

Equipment Type	Typical Noise Level (dB) at 50 Feet[1]
Chain Saw	85
Dozer	85
Wood Chipper	75[2]
Masticator Head	75

- The masticator head attachment will have the same decibel level, regardless of equipment type. The equipment utilizing this attachment include Feller bunchers, Skid Steers, or Mini Excavators.

Bank swallow (*Riparia riparia*)

Status: ST

Habitat Requirements**:** Bank swallows are a migratory species and can be found in the area in summer months. They are primarily found in riparian and other lowland habitats. They forage predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland.

Potential for Occurrence: There is a low – moderate potential for this species to occur. The closest known occurrence is mapped generally to Sonoma Creek, this creek is over 0.7 miles from the nearest treatment area. According to the CNDDB, an egg set was collected on May 23rd 1893. The record is very old and mapped as best guess by CNDDB. Huichica creek, which falls within the CNDDB mapped polygon, was surveyed for nests, no evidence of current habitation was found. There is a potential for habitat to be found in other class I and class II watercourses throughout the project area.

Potential Project Impact: Due to the potential habitat within the project area, there may be a low to moderate potential for treatments to impact this species if present. However, with the application of the following mitigations and SPRs, this potential impact will be lowered to a level of insignificance.

WLPZ protections prescribed in HYD-4 and BIO-4 will provide refuge for this species, particularly within their optimum foraging habitat. Furthermore, SPR BIO-2 training for workers will ensure operators are trained in the identification of this species. SPR BIO-10, focused surveys were conducted by FRM during preparation of the PSA and this species was not detected. SPR BIO-12 requiring nesting bird surveys between March-July will further reduce potential impact to this species. Overall, with these mitigations and protection measures, there is not expected to be an impact to this species from the proposed treatment activities.

Black swift (*Cypseloides niger*)

Status: SSC

Habitat Requirements: Black swifts nest in moist crevices or caves on sea cliffs above the surf, or on cliffs behind, or adjacent to waterfalls in deep canyons. They forage over a wide variety of habitats and nest in mid-May laying 1 egg per season.

Potential for Occurrence: Per the CNDDB, there is one record of the species which is mapped to an indistinct location around Mt. Veeder. The accuracy of this record is mapped to one mile. During field reconnaissance, no observations of the species nor habitat were found within the treatment area.

Potential Project Impact**:** There will be no impact to this species as there is no potential habitat.

Mammals

Pallid Bat (*Antrozous pallidus*)

Status: SSC

Habitat Requirements: Pallid bats occupy a wide variety of habitats, such as grasslands, shrublands, and forested areas of oak and pine, but prefer rocky outcrops with desert scrub (Zeiner et al. 1990b). The pallid bat roosts in caves, mines, crevices, buildings, under bridges, and occasionally in hollow trees. Day roosts are located at sites that provide protection from the heat of the day; Night roosts are in more open areas such as porches or open buildings (Zeiner et al. 1990b). Pallid bats feed on a wide variety of relatively large ground dwelling or slow flying insects and arachnids (Zeiner et al. 1990b). Colonies of *A. pallidus*, as with most bats, will typically emerge about 1 hour after sunset, return to roost, and then forage again before dawn. This species specializes in foraging on insects on the ground, versus in the air, by listening for the insect footsteps. The pallid bat is found throughout most of the western U. S. and Mexico.

Potential for Occurrence: There is a low-moderate potential for occurrence of this species. Three bats were captured within the Southern Treatment Unit in October 1998. This record is mapped to the Hogback Ridge CalVTP operations map as a Bio STZ. In addition, 32 bats were found along Huichia Creek in September of 1939, Huichia creek is located near the southern treatment unit. The final record states a bat was observed within 0.7 miles of the Southern Hogback Treatment unit. During field reconnaissance, no specific habitat was observed within the treatment area, such as trees that contain basal hollows, which are ideal for Bat species. However, much of the treatment area was severely affected by the Nuns fire in 2017. This has caused mortality in Douglas fir stands which have the potential for current Bat habitation.

Potential Project Impact: There is a low potential for impact within the project area. SPR BIO-2 training for workers will ensure crews are trained in the identification of this species. SPR BIO-10 will be conducted prior to snag removal in areas with a greater potential for Bat habitat such as the Douglas – fir high mortality stands which are labeled as bio STZs in the in the Northern Treatment Unit in attachment C. In addition, the CNDDB record of Pallid Bat occurrence is mapped as the bio STZ in the Southern Hogback Ridge Treatment Unit. If roost trees are detected they will be protected. Overall, with these mitigations and protection measures, there is not expected to be an impact to this species from the proposed treatment activities.

Amphibians and Reptiles

California Giant Salamander (*Dicamptodon ensatus*)

Status: SSC

Habitation Requirements: California *Dicamptodon* salamanders are year round residents of California. In 1989, these salamanders were split into two species – California giant salamander (*Dicamptodon ensatus*) occurring south of the Mendocino County line and the coastal giant salamander (*Dicamptodon tenebrosus*) occurring in the north (Thomas et al. 2016). A hybrid zone exists approximately 6 miles north of Gualala; however outside of this area, the two species are known to be distinct (Thomas et al. 2016). This species occurs in wet coastal forests in or near clear, cold permanent and semi-permanent streams and seepages.

Potential for Occurrence: There is a moderate potential for occurrence within the class I and class II watercourses found within the treatment area. Per the CNDDB, multiple salamanders were collected in Redwood creek. In 2005, one was collected and one was observed upstream of the treatment area. In 1985, ten were collected downstream of the treatment area. The final observation encompasses the northern treatment unit, with one collected along Mount Veeder road near Lokoya, but its exact location is unknown as the accuracy of the record is mapped to one mile.

Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

California Red-Legged Frog (*Rana draytonii*)

Status: FT, SP, SSC

Habitation Requirements: California red-legged frogs (CRLF) primarily inhabit permanent or nearly permanent water sources (quiet streams, marshes, and ponds). Breeding tends to occur primarily in ponds, less likely in streams, and happens from November to April. This ranid frog will also use upland habitats outside of the breeding season and may be discovered under logs, rocks, and other debris during wet conditions. CRLF were historically believed to prefer only habitats and shorelines with extensive vegetation.

Potential for Occurrence: Per the CNDDB, one adult was found in August 2019 in a small pond about half a mile from the northern treatment unit. There is a very low potential for occurrence within class I and class II watercourses.

Potential Project Impact: With the following protection measures and SPRs, the potential for this species to be impacted by treatments will be lowered to a level of insignificance. The WLPZ as outlined in SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

Foothill Yellow-Legged Frog *(Rana boylii)*

Status: SSC; This species became a candidate for listing on July 7th, 2017. In 2019, CDFW published recommendations to list the FYLF based on a geographic Clade. This recommendation provides protection among populations which greatly need it and avoids unnecessary restrictions in areas where populations are healthy. The only Clade not listed is the Northwest/North Coast Clade. The project area falls within this zone, thus the FYLF is not listed under CESA.

Habitation Requirements**:** Foothill Yellow-Legged Frogs (FYLF) are associated with lower elevation streams draining the Pacific slope from west-central Oregon to northwestern Baja California. They have declined from over 50% of their historic range. Foothill yellow-legged frogs occupy a diverse range of ephemeral and permanent streams, rivers, and adjacent moist terrestrial habitats over the course of their complex life history. FYLF reproduce in the spring by depositing egg masses into glide habitats within larger watercourses (typically Class I waters). Egg masses are deposited on the down-stream side of cobble size rocks during April-May. Larval forms (tadpoles) rear in watercourses until early fall. Post-metamorphic frogs tend to stay in close proximity to their water source. Adults can migrate down the drainage network to channels that are broad and more sunlit. Seasonal variation in streamflow has a strong influence on life history and movement. Breeding and rearing typically occur in open sunny portions of class I and II watercourses which are gently flowing and low-gradient.

Potential for Occurrence: Per the CNDDB, there is one record which maps an indistinct location for this species. The habitat consists of a perennial seep, which flows into a small tributary to Dry Creek. The surrounding habitat is chaparral, with patches of mixed evergreen. Dry Creek is over 0.7 miles from the treatment area and the record is mapped to the entirety of the Rutherford quadrant. Given the habitation requirements, there is a moderate potential for occurrence of Foothill yellow legged frog within the treatment area within class I and class II watercourses.

Potential Project Impact: The potential for the project to impact this species is very low. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent ground disturbance during periods of soil saturation, when this species may wander outside the WLPZ. In addition, workers will be trained in the identification of this species through SPR BIO-2.

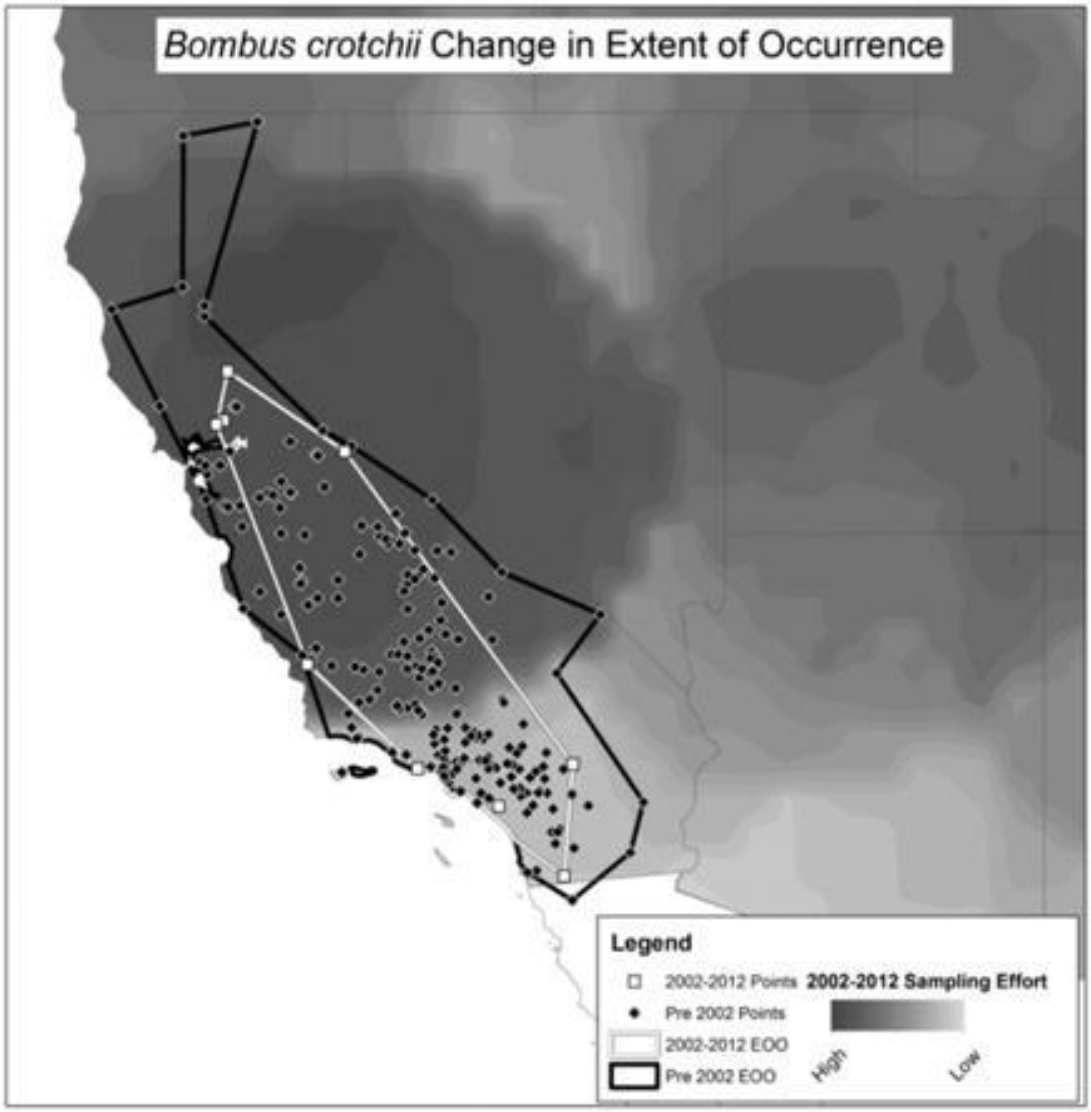
Insects

Crotch Bumblebee

Status: Candidate SE

Habitation Requirements: The crotch bumblebee is native to California, Baja California and has been reported in Nevada. This bee lives in grassland and scrub habitat types. It nests underground and its food plants consist of milkweeds, dusty maidens, lupines, medics, phacelias, and sages. This bee tolerates hotter and drier habitat types than most bumblebees do.

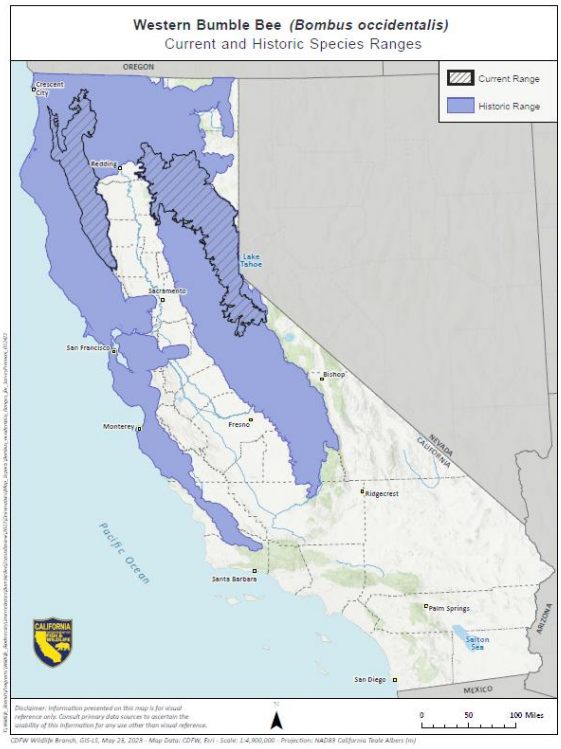
Potential for Occurrence: Although there were no known occurrences within the Biological Assessment Area (BAA), the project area is within the pre 2002 range of the Crotch Bumble bee. However, recent increased survey efforts have suggested a change in the extent of occurrence of this species. See the figure below. This change in extent would indicate a low likelihood of this species occurring within the treatment areas.



Potential Project Impact: Based on the information above, there is low potential for this species to be impacted by the project. Overall, the proposed project is expected to have an increase in potential habitat through the development of early successional forest types, associated with forest thinning. Also, the removal of small conifer trees from oak woodlands will allow for the expansion of grasslands. This is expected to have a net increase in floral resources and habitat creation over the long run.

Western bumblebee (*Bombus occidentalis*)

Status: Candidate State Endangered



Habitation Requirements: The western bumble bee was once very common in the western United States and western Canada. It is mostly currently restricted to high meadows and coastal environments. It requires floral resources, undisturbed nest sites and overwintering sites. Nesting habitat is typically underground, such as in old animal burrows, but also possibly above ground such as in cavities in logs. Overwintering sites are probably under plant litter and debris. The flight period in California is from early February to late November, peaking in late June and late September. Western bumble bees primarily nest in underground cavities such as old squirrel burrows on open west-southwest facing slopes bordered by trees. Colonies can contain as many as 1,685 workers and produce up to 360 new queens.

Potential for Occurrence: Though not observed in the CNDDB database for occurrence in proximity the treatment area, the project area is within the historic range but not the current range of the Western Bumblebee as is shown on the most up to date CDFW "Current and Historic Species Ranges" map. As a result, the potential for this species to occur is low.

Potential Project Impact**:** There is a low potential for project impact due to the potential for occurrence. With treatment in these areas, growing space for floral resources will be created thus improving potential habitat for the species. Overall, a net benefit to this species historical habitat is expected.

Obscure Bumblebee (*Bombus caligninosus)*

Status: SSC

Habitat Requirements**:** The obscure bumble bee is a species of bumblebee native to the west coast of the United States, where its distribution extends from Washington through to Southern California. The workers are most often seen on Fabaceae, the legume family, while queens are most often seen on Ericaceae, the heath family, and males have been observed most often on Asteraceae, the aster family. Common plants visited by the workers include ceanothus, thistles, sweet peas, lupines, rhododendrons, Rubus, willows, and clovers.

Potential for Occurrence: The Hogback Ridge CalVTP is within the current range of the Obscure Bumblebee. A set of collections was made in the 70's with no collections since then. The exact location is unknown and was mapped as best guess by the CNDDB within the vicinity of Mount Veeder, which overlaps with the project area. The accuracy of this record is mapped to one mile. No bumblebee nests were observed during the reconnaissance surveys. In addition, the Nuns fire in 2017 nearly encapsulates the entire polygon mapped by the CNDDB. Any nests that could have occurred in the treatment area were likely destroyed from this fire.

Potential Project Impact: The potential to impact the species is low. With treatment in these areas, growing space for floral resources will be created and fire hazard will be reduced, improving potential habitat for the species.

SPR BIO – 2 will require training for workers to identify this species. If nests are observed, they will be avoided and protected with a 100 ft no disturbance buffer and the RPF will be notified.

Crustaceans

California Freshwater Shrimp (*Syncaris pacifica*)

Status: FT; SE

Habitat Requirements**:** the California Freshwater shrimp can be found in freshwater coastal streams in Marin, Sonoma, and Napa counties. They require low gradients and high water quality along with underwater structure provided by vegetation.

Potential for Occurrence: Data provided by the CNDDB shows a species observation within Huchica creek. There were 87 netted in 1988/89 and 123 Shrimp netted in 1990. Both observations were upstream of Hwy 12. The same record states that 280 Shrimp netted downstream of Hwy 12. The record is mapped within 100 feet of the southern unit and there is potential habitat within the class I watercourses.

Potential Project Impact: There will be no potential impact with the following mitigations. The watercourse protection measures, particularly SPR HYD-4 and BIO-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent sedimentation of watercourses. During periods where overland flow may occur, ground disturbing activity will cease.

Fish

Steelhead *(Oncorhynchus mykiss)* [Central California Coast Distinct Population Segment]

Status: FT; SSC.

Habitat Requirements: Inhabits class I watercourses. Adults return to their natal watercourses in the winter and spring to spawn. Juveniles spend from 1 year to their entire lives rearing in freshwater environments before migrating to the ocean. Habitat requirements for steelhead are similar to Coho, and vary depending on temporal, spatial variables and a fishes' life-stage. The major life stages for most anadromous salmonids include the upstream migration of adults, spawning, incubation, juvenile rearing, and seaward migration of smolts. Combined, the generalized habitat requirements for all life stages of the steelhead include suitable stream flow, accessibility to spawning sites, suitable substrate composition for spawning and rearing, fish food production, water temperature and summer refugia areas. (from NCA description)

Potential for Occurrence: There is high potential for occurrence within class I watercourses in the project area. Per the CNDDB, Steelhead was not found during a visual survey in June 1966 within Hooker Creek. However, in 1977 residents indicated a previous presence of trout within the stream, but not within the previous 2 years. The second record states an observation of five juvenile steelhead in 2003 within Huichica creek.

Potential Project Impact: The potential for the project to impact this species is low. The watercourse protection measures, particularly SPR HYD-4, will ensure protection of individuals and critical habitat from damaging effects of treatments.

There will be no potential impact with the following mitigations and SPRs. The watercourse protection measures, particularly SPR HYD-4 will ensure protection of individuals and critical habitat from damaging effects of treatments. Also, SPRs GEO-1, GEO-2, and GEO-3 will prevent sedimentation of watercourses. During periods where overland flow may occur, ground disturbing activity will cease. SPR BIO-2 will require training for workers to identify and protect this species.

Botany Report for Hogback CalVTP

The goal of the botanical survey and report is to search for special status plant species within the Hogback Ridge CalVTP. The total project area is 431 acres. However, the area surveyed is approximately 340 acres and is depicted on maps in attachment C. It is located within section 1 T06N R06W, Section 6, 7, 8, 15, 16, 17, 21, 27, 28, 33, 34, T06N R 05W, Section 4, 11, 14, 23 , 24, 25 T05N R05W, Section 36 T07N R06W, within Rutherford, Sonoma, and Napa USGS 7.5 Minute Quadrangles.

The entire project area is included in the Hogback Ridge CalVTP. Shaded fuel breaks and ecological restoration treatment types shall be utilized, both of which have a low potential for impacting special status plant species. This is due to the minimal alterations to the vegetation community through the retention of large trees. Vegetation may be cut, masticated, grazed, and/or treated in accordance with the Standard Project Requirements (SPRs) and treatment specifications outlined in the CalVTP PSA. See the PEIR treatment descriptions for more detail.

Nevertheless, there is potential for special status plant species to be impacted individually, albeit not on a large community wide scale. During the initial reconnaissance surveys, it was thus determined that a seasonally specific, floristic survey was necessary to protect special status species from potential impact. With the implementation of these surveys, the potential for impact will be reduced to a level of insignificance.

Soils & Vegetation Types:

The following are the dominant soil types within the project area. Those comprising less than 5% of the total project area were omitted. Approximately 8.6% of the area contains 102, 100, 100n, 102n – Aiken Loam. This soil type is characterized by clay and clay loam with residuum weathered from volcanic rock. Soil depths range from 40 - 60 inches to lithic bedrock.

Approximately 6.9% of the area contains Boomer Gravelly Loam 109 and 108, which consists of slightly decomposed plant material, gravelly loam, and gravelly clay loam. The parent material is residuum and colluvium weathered from volcanic rock, with soil depths ranging from 40 to 60 inches to paralithic bedrock.

Approximately 5.7% of the project area is comprised of 110 – Boomer Forward Felta Complex, which consists of clay, gravelly clay, and a gravelly loam. The parent material for Boomer is residuum weathered from igneous rock. The parent material for Forward is residuum weathered from rhyolite. Lastly, for Felta, it is Alluvium derived from tuff and/or alluvium derived from metavolcanics. The soil depths for Boomer are 40 – 60 inches to paralithic bedrock. For Forward, it is 20 – 40 inches to paralkithic bedrock. Lastly, for Felta, the depth to a restrictive feature is more than 80 inches.

Approximately 25.1% of the area contains 139, 140, FoE – Forward Silt Loam. This soil type is slightly decomposed plant material with silt and gravelly silt loam. The parent material is rhyolitic residuum weathered from volcanic rock. The Soil depths range from 20 – 40 inches to paralithic bedrock.

Approximately 16.7% of the area contains 141, FrG – Forward - Kidd Complex. The Forward soil type consists of slightly decomposed plant material, silt and gravelly silt loam. The parent material is rhyolitic residuum weathered from volcanic rock. The Kidd soil type is gravelly loam

and loam. The parent material for this complex is residuum weathered from rhyolite with the soil depths for the Forward ranging from 20 – 40 inches to paralithic bedrock. The soil depths for the Kidd soil type are within 5 – 20 inches to lithic bedrock.

Approximately 5.0% of the area contains 156 – Kidd Loam, primarily composed of loam. The parent material is residuum weathered from rhyolite, and soil depths are 14 – 18 inches to paralithic bedrock.

The final dominant soil type, comprising of 5.8% of the area is 152, 151,152n – Hambright Rock Outcrop Complex. The soil profile consists of very stony loam for the Hambright soil type, and bedrock for the Rock Outcrop. The parent material for Hambright is residuum weathered from basic volcanic rock, for Rock Outcrop it is Residuum weathered from igneous, metamorphic and sedimentary rock. The soil depths range from 10 – 20 inches to lithic bedrock for Hambright and zero inches to lithic bedrock for Rock Outcrop.

The remaining 26% of the project area is comprised of 22 various soil types. Detailed descriptions of these soils can be found in the full soil report.

The vegetation types present are best characterized as mixed hardwood, regeneration of both mixed hardwood, chapparal, Redwood mixed hardwood and Douglas-fir/ Douglas – fir mixed hardwood forests. The trees present are Pacific madrone (*Arbutus menziesii*), Bay laurel (*Umbellularia californica*), Big-leaf maple (*Acer macrophyllum*), California buckeye (*Aesculus californica*), white alder (*Alnus rhombifolia*), Coast live oak (*Quercus agrifolia*), Black oak (*Quercus kelloggii*), Valley oak (*Quercus lobata*), Oregon white oak (*Quercus garryana*), Interior live oak (*Quercus wislizeni*), Blue oak (*Quercus douglasii*), Douglas-fir (*Pseudotsuga menziesii*), Redwood (*Sequoia sempervirens*), and Knobcone pine (*Pinus attenuata*).

CNDDB & CNPS Special Status Plants Within The 9 Quads

Scientific Name	Common Name	Federal List	California List	Rare Plant Rank
Navarretia leucocephala ssp. pauciflora	Few-flowered navarretia	Endangered	Threatened	1B.1
Chloropyron molle ssp. molle	Soft salty bird's-beak	Endangered	Rare	1B.2
Trifolium amoenum	Two-fork clover	Endangered	None	1B.1
Lasthenia conjugens	Contra costa goldfields	Endangered	None	1B.1
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	Endangered	None	1B.1
Blennosperma bakeri	Sonoma sunshine	Endangered	Endangered	1B.1
Astragalus claranus	Clara hunt's milk-vetch	Endangered	Endangered	1B.1
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	1B.1
Sidalcea oregana ssp. valida	Kenwood marsh checkerbloom	Endangered	Endangered	1B.1
Lilaeopsis masonii	Mason's lilaeopsis	None	Rare	1B.1
Layia septentrionalis	Colusa layia	None	None	1B.2
Brodiaea leptandra	Narrow-anthered brodiaea	None	None	1B.2
Downingia pusilla	Dwarf downingia	None	None	2B.2
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	1B.2
Balsamorhiza macrolepis	Big-scale balsamroot	None	None	1B.2
Viburnum ellipticum	Oval-leaved viburnum	None	None	2B.3
Fritillaria liliacea	Fragrant fritillary	None	None	1B.2
Hemizonia congesta ssp. congesta	Congested-headed hayfield tarplant	None	None	1B.2
Allium peninsulare var. franciscanum	Franciscan onion	None	None	1B.2
Hesperolinon breweri	Brewer's western flax	None	None	1B.2
Eryngium jepsonii	Jepson's coyote-thistle	None	None	1B.2
Ceanothus divergens	Calistoga ceanothus	None	None	1B.2
Erigeron greenei	Greene's narrow-leaved daisy	None	None	1B.2
Penstemon newberryi var. sonomensis	Sonoma beardtongue	None	None	1B.3
Ceanothus sonomensis	Sonoma ceanothus	None	None	1B.2
Ceanothus purpureus	Holly-leaved ceanothus	None	None	1B.2
Amorpha californica var. napensis	Napa false indigo	None	None	1B.2

Ceanothus confusus	Rincon ridge ceanothus	None	None	1B.1
Streptanthus hesperidis	Green jewelflower	None	None	1B.2
Trifolium hydrophilum	Saline clover	None	None	1B.2
Lathyrus jepsonii var. jepsonii	Delta tule pea	None	None	1B.2
Lupinus sericatus	Cobb mountain lupine	None	None	1B.2
Trichostema ruygtii	Napa bluecurls	None	None	1B.2
Symphyotrichum lentum	Suisun marsh aster	None	None	1B.2
Castilleja ambigua var. meadii	Mead's owls-clover	None	None	1B.1
Extriplex joaquinana	San joaquin spearscale	None	None	1B.2
Hesperolinon sharsmithiae	Sharsmith's western flax	None	None	1B.2
Amsinckia lunaris	Bent-flowered fiddleneck	None	None	1B.2
Legenere limosa	Legenere	None	None	1B.1
Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	1B.1
Arctostaphylos stanfordiana ssp. decumbens	Rincon ridge manzanita	None	None	1B.1
Sidalcea hickmanii ssp. napensis	Napa checkerbloom	None	None	1B.1
Polygonum marinense	Marin knotweed	None	None	3.1
Horkelia tenuiloba	Thin-lobed horkelia	None	None	1B.2
Sagittaria sanfordii	Sanford's arrowhead	None	None	1B.2
Carex lyngbyei	Lyngbye's sedge	None	None	2B.2
Rhynchospora californica	California beaked-rush	None	None	1B.1
Astragalus tener var. tener	Alkali milk-vetch	None	None	1B.2
Agrostis hendersonii	Henderson's bent grass	None	None	3.2
Centromadia parryi ssp. parryi	Pappose tarplant	None	None	1B.2

Survey Methods & Pre-field Research

Pre-field research along with reconnaissance surveys were conducted to determine the habitat and soil types present within the project area. Soils data from the USGS Web Soil Survey was analyzed, followed by field observations. See the soil and vegetation assessment above.

Results of this habitat assessment were used to narrow the list of potential special status plants. For instance, plants requiring Ultramafic soils were omitted from the target list because these environments are absent from the study area. Perennial watercourses were noted, however, the CalVTP WLPZ protection measures outlined in SPR HYD-4 and SPR BIO-4 will prevent potential impact to plants within these habitats. Thus, riparian species were not included in the target list. The elevation range and lack of extreme soil pH levels were used to further narrow the list.

The survey dates were chosen based on the overlapping peak blooming periods of the target species list. The project area was surveyed on foot during the 1 seasonally specific blooming period. All plant species encountered during the surveys were identified and are listed at the end of this report.

Special status plants include those which are state/federally listed as rare, threatened, or endangered; or those which have been given a rare plant rank of 1, 2, or 3 by the California Native Plant Society. The CNPS Rare plant rank is as follows:

- 1A: Plants presumed extirpated in California, and either rare or extinct elsewhere
- 1B: Plants rare, threatened or endangered in California and elsewhere.
- 2A: Plants presumed extirpated in California but more common elsewhere
- 2B: Plants rare, threatened, or endangered in California but more common elsewhere.
- 3: Plants on which more information is needed.

California Native Plant Society Threat Codes:

- .1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Botanical Survey Target Species

Common name	Federal Listing	California Listing	Rare Plant Rank	Bloom Period	Habitat
Clara Hunt's milk-vetch	Endangered	Endangered	1B.1	Mar - May	Open grassy areas, thin clay soil
Contra Costa goldfields	Endangered	None	1B.1	Mar - Jun	Vernal pools, wet meadows, valley grasslands
Few-flowered navarretia	Endangered	Threatened	1B.1	May - Jun	Wetlands, vernal pools, chaparral, wetland riparian
Sebastopol meadowfoam	Endangered	Endangered	1B.1	Apr - May	meadows, vernal pools, foothill woodland
Sonoma sunshine	Endangered	Endangered	1B.1	Mar - May	Grassy margins of swales, vernal pools, valley grassland
Two-fork clover	Endangered	None	1B.1	Apr - Jun	Moist, heavy soils, disturbed areas, Valley Grassland, wetland-riparian
Alkali milk-vetch	None	None	1B.2	Mar - Jun	Wetlands, occasionally in non-wetlands, vernal pools
Baker's navarretia	None	None	1B.1	Apr-Jul	Wetlands, meadows, vernal pools. Usually in wetlands but may occur in Meadows.
Bent-flowered fiddleneck	None	None	1B.2	Mar - Jun	Roadsides (sometimes) and serpentine substrates (sometimes) in most forest types, gravelly slopes, grassland, openings in woodland, often serpentine, Foothill Woodland, Valley Grassland
Big-scale balsamroot	None	None	1B.2	Mar - Jun	Open grassy or rocky slopes, valleys
Brewer's western flax	None	None	1B.2	May - Jul	Chaparral or grassland, occasionally on serpentine
Calistoga ceanothus	None	None	1B.2	Feb - Apr	Shady mesic areas in broad-leafed upland forest and chaparral, Volcanic slopes, chaparral, pine/oak woodland
Cobb mountain lupine	None	None	1B.2	Mar - Jun	Yellow Pine Forest, Foothill woodland, chaparral, Open wooded slopes, broadleaf upland forest, chaparral, lower montane conifer forest
Colusa layia	None	None	1B.2	Apr - May	Foothill woodland, valley grassland, Chaparral, Serpentine or sandy soils
Congested-headed	None	None	1B.2	Apr - Nov	Grassy sites, marsh edges

hayfield tarplant					
Franciscan onion	None	None	1B.2	May - Jun	Dry hillsides
Green jewelflower	None	None	1B.2	May - Jul	Serpentine barrens, associated openings in chaparral/oak woodland, cypress woodland
Greene's narrow-leaved daisy	None	None	1B.2	May - Sep	Generally, on serpentine, sometimes rocky alluvium, chaparral, woodland, conifer forest
Henderson's bent grass	None	None	3.2	Apr - Jun	Vernal pools, Wetlands occasionally non wetlands
Holly-leaved ceanothus	None	None	1B.2	Mar - May	Volcanic substrates, slopes, chaparral
Jepson's leptosiphon	None	None	1B.2	Mar - May	Open or partially shaded grassy slopes
Legenere	None	None	1B.1	Apr - Jun	Wet areas, vernal pools, ponds, valley grassland
Napa checkerbloom	None	None	1B.1	Apr - Jun	Chamise chaparral, rocky rhyolitic volcanic soil
Napa false indigo	None	None	1B.2	Apr - July	Chaparral, Occurs usually in non wetlands, occasionally in wetlands
Narrow-anthered brodiaea	None	None	1B.2	May - Jul	Open mixed-evergreen forest, chaparral, gravelly soil
Oval-leaved viburnum	None	None	2B.3	May - Jun	Chaparral, yellow-pine forest, generally north facing slopes;
Pappose tarplant	None	None	1B.2	may - Nov	Grassland, coastal salt marshes, alkaline springs, seep
Rincon Ridge ceanothus	None	None	1B.1	Feb - Jun	Volcanic slopes, chaparral, pine/oak woodland
Rincon Ridge manzanita	None	None	1B.1	Feb - Apr	Chaparral
Saline clover	None	None	1B.2	Apr - Jun	Salt marshes, open areas in alkaline soils
San Joaquin spearscale	None	None	1B.2	Apr - Sept	meadows, Shadscale Scrub, Valley Grassland, Alkaline soils
Sharsmith's western flax	None	None	1B.2	May - Jul	serpentine soils in chaparral
Sonoma beardtongue	None	None	1B.3	Apr - Aug	Outcrops, talus, Chaparral
Sonoma ceanothus	None	None	1B.2	Feb - Apr	Serpentine or volcanic substrates, Chaparral
Thin-lobed horkelia	None	None	1B.2	May - Jul	Sandy soils, open chaparral
Dwarf downingia	None	None	2B.2	Mar - May	Vernal pools, roadside ditches
Napa bluecurls	None	None	1B.2	Jun - Oct	Open areas, generally thin clay soils,

					possibly seasonally saturated
Fragrant fritillary	None	None	1B.2	Feb - Apr	Heavy soil, open hills, fields near coast
Jepson's coyote-thistle	None	None	1B.2	Apr - Aug	Moist clay soil,wetlands
Suisun marsh aster	None	None	1B.2	May-Nov	Freshwater Wetlands, wetland-riparian, freshwater-marsh, brackish-marsh
Lyngbye sedge	None	None	2B.2	Aug-April	Coastal Salt Marsh, wetland-riparian, coastal, salt-marsh, Brackish areas

Survey Results

One mid-season survey was conducted. The survey dates were chosen based on overlapping peak blooming periods for the target species. The survey dates were May 12 – May 16th and May 21st. During these dates the surveyor traversed all areas excluding the non-surveyed areas and identified every species encountered. When an unknown species was confronted, pictures and/or illustrations were obtained to key the individual in the office. Multiple special status species were identified within the Northern Treatment Unit.

Cobb mountain lupine *(Lupinus sericatus)*

CNPS rank 1B.2

Federal: Not listed

State: Not listed

Habitat requirements and description: This species is prevalent in Colusa, Lake, Sonoma and Napa Counties. It can be found on open wooded slopes in broadleaf upland forest, chaparral, and lower montane conifer forest ecosystems. It is a perennial growing 15 – 50 cm. Its leaves are silver to gray green with short appressed hairs, leaves are 30 – 50 mm with 4-7 spoon shaped leaflets and are clustered near the base. Inflorescence is 10 – 30 cm with 12 – 16 mm purple – violet flowers.

Potential for Occurrence: Multiple records of this plant exist within the CNDDB in proximity to the Northern Treatment Unit. One population, towards Trinity Road, was not relocated during field reconnaissance. The second population was found outside of the treatment area adjacent to a winery. However, a population of approximately 82 plants encompassing 0.8 acres were identified in the southernmost forest restoration unit of the Northern Hogback Treatment area. The plants have an average width of 29 inches and an average height of approximately 18 inches. The surrounding vegetation cover type is chapparal and shrubland with Douglas – fir and hardwood snags.

Protection Measures

- These populations will be protected from damaging effects, through the establishment of a 25 ft STZ. See attachment C operations maps for the location of the population. The project proponent shall implement the following protection measures within the STZ:
    - No vegetation debris piles will be left within the STZ.

- The residual Douglas – fir snags should be retained as a wildlife habitat feature and not removed.
- The remaining vegetation and fuels including the hardwood snags and ground fuel will be thinned using hand treatment. These materials will be hand dragged from the STZ, and mechanical treatment is not permitted.
- Workers will be trained in field identification and avoidance measures of the plant under SPR BIO-2.
- The contractor will avoid crushing, cutting, or otherwise harming this plant during treatments.

Redwood lily (*Lilium rubescens*)

CNPS rank 4.2

Federal: Not listed

State: Not listed

Habitat requirements and description:

This species is prevalent throughout Northern California, from the San Francisco Bay Area to the North Coast range. It can be found in plant communities such as Yellow pine and Red fir Forest as well as Chaparral, in gaps or dry soil.. The overall plant is smaller than 2 meters, and its leaves are in whorls with generally wavy margins, providing a unique identifying feature when not in bloom. Its inflorescence is ascending to erect with 1 – 40 flowers per inflorescence. The flower is funnel shaped with a perianth parts 4.2 – 6.6 cm in size.

Potential for Occurrence:

This plant was observed in multiple locations in the southernmost forest restoration unit within the Northern Hogback Ridge treatment unit. Due to its local abundance within the treatment area, it can be assumed that any damage to a small number of individuals will not substantially impact on this species as a community.

Protection Measures

- Workers will be trained for the identification of this plant under SPR BIO-2 and will avoid take where possible.

Napa false indigo (*Amorpha californica Nutt. var. napensis*)

CNPS rank 1B.2

Federal: Not listed

State: Not listed

Habitat requirements and description:

This species is prevalent in Sonoma and Napa Counties. It thrives on cooler sights within mixed conifer and mixed oak woodland ecosystems. Growing to between 1 and 6 ft tall, its leaves are approximately 1 inch long and oppositely arranged. The inflorescence is purple and uniquely arranged vertically from the plant usually between 6 inches to 1 foot long.

Potential for Occurrence:

This plant was identified in the CNDDB as occurring "near Lokoya, 1600 ft." The occurrence was listed as non-specific and needs field work, however, the record intersects the treatment unit. Upon the botanical survey, numerous Napa false indigo were identified utilizing flower and leaf phenology. This plant was found from the northernmost to southernmost end of Northern Hogback treatment unit. Due to its local abundance within the treatment area, it can be assumed that any damage to a small number of individuals will not substantially impact on this species as a community.

Protection Measures:

- Workers will be trained for the identification of this plant under SPR BIO-2 and will avoid take where possible.

Identified Species

Common name	***Scientific name***
Poison oak	*Toxicodendron diversilobum*
Pacific madrone	*Arbutus menziesii*
Bay laurel	*Umbellularia californica*
Douglas - fir	*Pseudotsuga menziesii*
White oak	*Quercus garryana*
Coast live oak	*Quercus agrifolia*
Redwood	*Sequoia sempervirens*
Bigleaf maple	*Acer macrophyllum*
Blackberry	*Rubus ursinus*
California buckeye	*Aesculus californica*
Coastal wood fern	*Dryopteris arguta*
California black oak	*Quercus kelloggii*
French broom	*Genista monspessulana*
Canyon live oak	*Quercus chrysolepis*
Interior live oak	*Quercus wislizeni*
Coyote brush	*Baccharis pilularis*
Napa false indigo	*Amorpha californica var. Napensis*
Licorice fern	*Polypodium calirhiza*
Maiden hair fern	*Adiantum jordanii*
Elderberry	*Sambucus mexicana*
California poppy	*Eschscholzia californica*
Sword fern	*Polystichum munitum*
Knobcone pine	*Pinus attenuata*

Oleander	*Nerium oleander*
Chamise	*Adenostoma fasciculatum*
Blue oak	*Quercus douglasii*
Fennel	*Foeniculum vulgare*
Valley oak	*Quercus lobata*
French lavender	*Lavandula stoechas*
Olive	*Olea europaea*
California sycamore	*Platanus racemosa*
Horsetail	*Equisetum arvens*
Cobb mountain lupine	*Lupinus sericatus*
Blue blossom ceanothus	*Ceanothus thyrsiflorus*
purple owl's clover	*Castilleja exserta ssp. Exserta*
Winecup clarkia	*Clarkia purpurea*
Coyote mint	*Monardella villosa*
Yellow mariposa lily	*Calochortus luteus*
Farewell to spring	*Clarkia amoena*
Woodland clarkia	*Clarkia unguiculata*
Menzies fiddleneck	*Amsinckia menziesii*
Blow wives	*Achyrachaena mollis*
Rusty haired popcorn flower	*Plagiobothrys nothofulvus*
Oregon ash	*Fraxinus latifolia*
Ithuriel's spear	*Triteleia laxa*
Narrow leaved clover	*Trifolium angustifolium*
Harvest brodiaea	*Brodiaea elegans*
Peak rush rose	*Crocanthemum scoparium*
Montana chapparal pea	*Pickeringia montana*
Woodland madia	*Anisocarpus madioides*
Sticky monkey flower	*Diplacus aurantiacus*
Modesty	*Whipplea modesta*
White hawkweed	*Hieracium albiflorum*
Hillside morning glory	*Calystegia collina*
Creeping sage	*Salvia sonomensis*
Bush poppy	*Dendromecon rigida*
Star flower	*Lysimachia latifolia*

Drops of gold	*Prosartes hookeri*
Yellow flag iris	*Iris pseudacorus*
Broadleaf lupine	*Lupinus latifolius*
Purple foxglove	*Digitalis purpurea*
Feathery false lily of the valley	*Maianthemum racemosum*
Rhinotropis californica	*California milkwort*
Broad leaved lotus	*Hosackia crassifolia*
Hypericum perforatum	*Common st. Johnswort*
Northern california black walnut	*Juglans hindsii*
Spreading hedge parsley	*Torilis arvensis*
English walnut	*Juglans regia*
Common cow parsnip	*Heracleum maximum*
Common snowberry	*Symphoricarpos albus*
Hairy vetch	*Vicia villosa*
Hawkbit	*Leontodon saxatilis*
Clustered dock	*Rumex conglomeratus*
Watercress	*Nasturtium officinale*
Cherry plum	*Prunus cerasifera*
Ribwort plaintain	*Plantago lanceolata*
Cotoneaster	*Cotoneaster pannosus*
Century plant	*Agave americana*
Morning glory	*Calystegia purpurata*
Pink honeysuckle	*Lonicera hispidula*
Coffee fern	*Pellaea andromedifolia*
Bigflower agoseris	*Agoseris grandiflora*
Coast man-root	*Marah oregana*
Common wheat	*Triticum aestivum*
Pennroyal	*Mentha pulegium*
Tall flat sedge	*Cyperus eragrostis*
Orchard grass	*Dactylis glomerata*
Bristly ox- tounge	*Helminthotheca echioides*
Mediterranean lineseed	*Bellardia trixago*
Calfornia buttercup	*Ranunculus californicus*

Bulbous canarygrass	*Phalaris aquatica*
Red star thistle	*Centaurea calcitrapa*
Dog rose	*Rosa canina*
Yellow glandweed	*Bellardia viscosa*
Common sow thistle	*Sonchus oleraceus*
Short podded mustard	*Hirschfeldia incana*
Ladies tobacco	*Pseudognaphalium californicum*
Corn poppy	*Papaver rhoeas*
Pride of madeira	*Echium candicans*
Echium candicans	*Centranthus ruber*
Cornflower	*Centaurea cyanus*
Scarlet pimpernel	*Lysimachia arvensis*
Califonria wild rose	*Rosa californica*
Greater periwinkle	*Vinca major*
Cheatgrass	*Bromus tectorum*
Sweet cicely	*Osmorhiza berteroi*
Giant white wakerobin	*Trillium albidum*
Cream bush	*Holodiscus discolor*
Bunchleaf penstemon	*Penstemon heterophyllus*
Spanish clover	*Acmispon americanus*
California rosebay	*Rosa californica*
Yellow star thistle	*Centaurea solstitialis*
Hawksbeard	*Crepis capillaris*
Purple chinese houses	*Collinsia heterophylla*
Seep monkey flower	*Erythranthe guttata*
Tomcat clover	*Trifolium willdenovii*
Wavy leaf soap plant	*Chlorogalum pomeridianum*
Common manzanita	*Arctostaphylos manzanita*
Gumweed madia	*Madia gracilis*
wild radish	*Raphanus sativus*
Spreadung rush	*Juncus patens*
Italian rye grass	*Festuca perennis*
Q tips	*Micropus californicus*
Blue field gilia	*Gilia capitata*

Crimson clover	*Trifolium incarnatum*
Bunchleaf penstemon	*Penstemon heterophyllus*
Western blue eyed grass	*Sisyrinchium bellum*
Nightshade	Solanum xanti
Braken fern	*Pteridium aquilinum*
Golden chinquapin	*Chrysolepis chrysophylla*
Imbricate phacelia	*Phacelia imbricata*
Blue dicks	*Dipterostemon capitatus*
Yerba santa	*Eriodictyon californicum*
Common catchfly	*Silene gallica*
Yarrow	*Achillea millefolium*
Silver bush lupine	Lupinus albifrons
Red larkspur	*Delphinium nudicaule*
California pipe vine	*Aristolochia californica*
French broom	*Genista monspessulana*
Broadleaf forget me not	*Myosotis latifolia*
Crimson columbine	*Aquilegia formosa*
Beaked hazelnut	*Corylus cornuta*
Arroyo willow	Salix lasiolepis
Oxe eye daisy	*Leucanthemum vulgare*
Miners lettuce	*Claytonia perfoliata*
Spiny sowthistle	*Sonchus asper*
Albanian spurge	*Euphorbia characias*
Golden fairy lantern	*Calochortus amabilis*
miniature lupine	*Lupinus bicolor*
Rough hedgenettle	*Stachys rigida*
Mouse barley	*Hordeum murinum*
Cleavers	*Galium aparine*
Calla lily	*Zantedeschia aethiopica*
Califonria goldenbanner	*Thermopsis californica*
Harlequin flower	*Sparaxis tricolor*
Red hot poker	*Kniphofia uvaria*
Slender oat	*Avena barbata*
Narrow leaf mule ears	*Wyethia angustifolia*

Bowl tube iris	*Iris macrosiphon*
American trail plant	*Adenocaulon bicolor*
Bull thistle	*Cirsium vulgare*
California strawberry	*Fragaria vesca*
Cream bush	*Holodiscus discolor*
Poison hemlock	*Conium maculatum*
Eggleaf spurge	*Euphorbia oblongata*
Snooths cats ear	*Hypochaeris glabra*
European plum	*Prunus domestica*
California mugwort	*Artemisia douglasiana*
Checker lily	*Fritillaria affinis*
California angelica	*Angelica californica*
Montana chaparral pea	*Pickeringia montana*
Great hounds tounge	*Adelinia grandis*
Sheep sorrel	*Rumex acetosella*
Great brome	*Bromus diandrus*
White sweet clover	*Melilotus albus*
Ookow	*Dichelostemma congestum*
Big quaking grass	*Briza maxima*
Indian warrior	*Pedicularis densiflora*
Pearly everlasting	*Anaphalis margaritacea*
Herb robert	*Geranium robertianum*
California bedstraw	*Galium californicum*
Common vetch	*Vicia sativa*
Rose clover	*Trifolium hirtum*
Italian thistle	*Carduus pycnocephalus*
Common pacific pea	*Lathyrus vestitus*
Redwood lily	*Lilium rubescens*
Elegant clarkia	*Clarkia unguiculata*
Fiddle dock	*Rumex pulcher*
Common woolly sunflower	*Eriophyllum lanatum*
Small baby blue eyes	*Nemophila heterophylla*
Cranesbill	*Geranium dissectum*
Nightshade	*Solanum xanti*

Silver lupine	*Lupinus albifrons*
Smallflower hawksbeard	*Crepis pulchra*
Canada horseweed	*Erigeron canadensis*
Smooth cat's ear	*Hypochaeris glabra*
Red peavine	*Lathyrus cicera*
Redvein dock	Rumex sanguineus
Spineless yucca	Yucca gloriosa
California brome	Bromus sitchensis var. Carinatus
Gooseberry	Ribes menziesii
Field marigold	Calendula arvensis
Tuna cactus	Opuntia ficus-indica
Chain fern	Woodwardia fimbriata

NSO Consultation

Outlook

RE: NSO Activity Centers Hogback Ridge CalVTP

From Coombes, Julie@Wildlife <Julie.Coombes@wildlife.ca.gov>
Date Thu 3/27/2025 2:21 PM
To Andrew Bagwell <andrew@frmforestry.com>

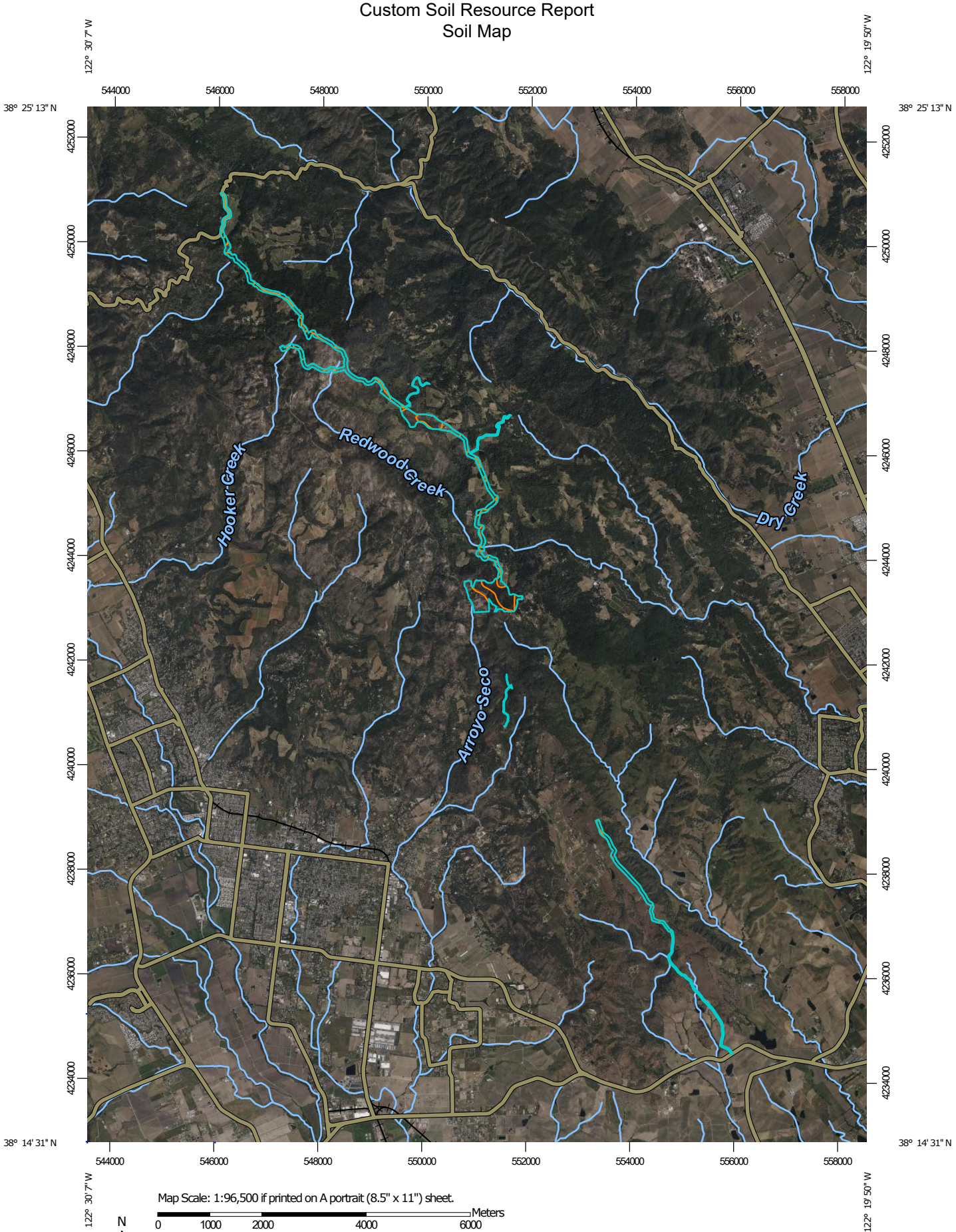
2 attachments (4 MB)
CDFWOutreachFlyerTCPV3.pdf; LSAAInfo.pdf;

Hi Andrew,

Yes, you can certainly use the 2020 USFWS noise document to create buffers for NSO during treatment. I wanted to let you know I lost my positions that review wildfire resiliency projects, so I have been sending project proponents an email with resources. In case this is helpful for you now and/or in the future, here is the message:

Unfortunately, due to state budget cuts, positions that review wildfire resiliency projects have been eliminated in my region, and we are unable to review projects at this time. Despite this loss, we intend to refill the positions in the future when the budget recovers. Please continue to send me via email any wildfire resiliency project review requests so I can track the work that is impacted and inform you when we have staff capacity restored. Please see below for additional resources and guidance for your project.

Lake and Streambed Alteration Agreement Notification
If the project activities may substantially alter the bed, bank, or channel of a watercourse, substantially divert or obstruct the natural flow of a river, stream, or lake, or substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; a Lake and Streambed Alteration Agreement (LSAA) Notification pursuant to Fish and Game Code Section 1602 is required. The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams and watercourses with subsurface flow. Please see the two attached guidance documents for additional information.
This agreement process can be initiated by visiting https://wildlife.ca.gov/Conservation/Environmental-Review/LSA and registering for an Environmental Permit Information Management System (EPIMS) account https://epims.wildlife.ca.gov/index.do.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Hooker Creek
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Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
100	Aiken loam, 2 to 15 percent slopes	2.6	0.6%
102	Aiken loam, 30 to 50 percent slopes	27.7	6.4%
107	Boomer loam, volcanic bedrock, 2 to 35 percent slopes, MLRA 15	8.3	1.9%
108	Boomer gravelly loam, volcanic bedrock, 11 to 43 percent slopes, MLRA 15	2.6	0.6%
109	Boomer gravelly loam, volcanic bedrock, 14 to 60 percent slopes, MLRA 15	27.1	6.3%
110	Boomer-Forward-Felta complex, 30 to 50 percent slopes	24.7	5.7%
126	Diablo clay, 5 to 9 percent slopes, MLRA 15	11.4	2.6%
139	Forward silt loam, 5 to 39 percent slopes, MLRA 15	21.7	5.0%
140	Forward silt loam, 12 to 57 percent slopes, MLRA 15	82.3	19.1%
141	Forward-Kidd complex, 11 to 60 percent slopes, MLRA 15	35.6	8.3%
142	Guenoc loam, 15 to 50 percent slopes, MLRA 15	0.3	0.1%
151	Hambright-Rock outcrop complex, 2 to 30 percent slopes	21.1	4.9%
152	Hambright rock-Outcrop complex, 30 to 75 percent slopes	0.1	0.0%
154	Henneke gravelly loam, 30 to 75 percent slopes	0.1	0.0%
156	Kidd loam, 30 to 75 percent slopes	21.4	5.0%
177	Rock outcrop-Kidd complex, 50 to 75 percent slopes	10.5	2.4%
178	Sobrante loam, 5 to 30 percent slopes	11.1	2.6%
179	Sobrante loam, 30 to 50 percent slopes	1.2	0.3%
CmEsn	Cohasset gravelly loam, 15 to 30 percent slopes	0.5	0.1%
GgFsn	Goulding clay loam, 30 to 50 percent slopes	3.7	0.9%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RaDsn	Raynor clay, 9 to 15 percent slopes	0.2	0.0%
SkFsn	Spreckels loam, 30 to 50 percent slopes	0.2	0.0%
StEsn	Suther loam, 15 to 30 percent slopes	3.5	0.8%
Subtotals for Soil Survey Area		**317.7**	**73.7%**
Totals for Area of Interest		**431.0**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
100n	Aiken loam, 2 to 15 percent slopes	3.0	0.7%
102n	Aiken loam, 30 to 50 percent slopes	3.7	0.9%
107n	Boomer loam, 2 to 15 percent slopes	0.1	0.0%
152n	Hambright rock-Outcrop complex, 30 to 75 percent slopes	4.1	0.9%
BoF	Boomer loam, 30 to 50 percent slopes	8.6	2.0%
CmE	Cohasset gravelly loam, 15 to 30 percent slopes	5.2	1.2%
FoE	Forward silt loam, 5 to 39 percent slopes, MLRA 15	4.5	1.0%
FrG	Forward-Kidd complex, 11 to 60 percent slopes, MLRA 15	36.3	8.4%
GgF	Goulding clay loam, 30 to 50 percent slopes	9.3	2.2%
GrG	Guenoc gravelly silt loam, 30 to 75 percent slopes	1.3	0.3%
LaF	Laniger loam, 30 to 50 percent slopes	0.9	0.2%
RaD	Raynor clay, 9 to 15 percent slopes	8.6	2.0%
RoG	Rock land	19.1	4.4%
SkF	Spreckels loam, 30 to 50 percent slopes	6.8	1.6%
StE	Suther loam, 15 to 30 percent slopes	1.8	0.4%
Subtotals for Soil Survey Area		**113.3**	**26.3%**
Totals for Area of Interest		**431.0**	**100.0%**

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