

Environmental Report for 1600 Application

Ashely and Jacob Miller LSAA
Prepared by
Hohman and Associates
Hydesville, CA
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For
Ashely and Jacob Miller



P.O. Box 733, Hydesville, CA 95547 . (707) 768-3743 . (707) 768-3747 fax

1.0 Introduction

This environmental report evaluates potential habitat values for the Miller property. The report has been provided to identify resources affected by grading and poor road maintenance on the property. The property is primarily occupied by a Douglas fir/hardwood forest giving way to open grassland on the ridgetops. Species composition of the grassland consists primarily of nonnative grasses, coyote brush, blackberry, and scotch broom. Black oak, Oregon white oak, California bay laurel, Douglas-fir, and live oak occupy the wooded area.

The Miller property is located in Section 5, Township 5 South, Range 5 East, HB&M, Humboldt County, CA on the Harris USGS 7.5' Quad. This site lies within the California Floristic Province, Northwestern California region, and North Coast sub-region. The project area is 8 miles southeast of Garberville, CA in the South Fork Eel River watershed. The parcel covers 60 acres. The property drains to several unnamed tributaries of Tom Long Creek, a tributary to the East Branch South Fork Eel River. Elevation ranges from approximately 2700 feet to 2100 feet, with moderate to steep slopes. The aspect of the entire parcel is southeast and southwest facing. The developed portion of the property has a slight southeast facing aspect.

Hohman and Associates conducted site review pertaining to the impact of grading and poor road maintenance on the property. The property contains a well-designed road network but needs maintenance and upgrades to accommodate traffic associated with cannabis cultivation activities and comply with current standards. Several stream crossings contained improperly installed fords or culverts. Inadequate drainage of the road surface was also observed in several locations.

2.0 – Sensitive Species Biological Assessment

The site was evaluated for potential habitat value to protected, endangered, threatened, rare, and sensitive species by walking around the project area and adjacent habitats to observe species, habitat types, and quality. A list of special-status animal species found in the CNDDDB within the 9-Quad area surrounding the project is in Attachment A. Attachment B contains details on species habitat requirements, and potentially significant impacts. Attachment D shows nearby occurrences of special status species as mapped in CNDDDB.

3.0-Mitigations/Recommendations

- Exposed soil within the watercourse buffer of watercourse construction sites will be treated for reduction of soil loss through a combination of grass seeding and mulching. Approximately 90% of the disturbed soil within 100' of the watercourses shall be treated.
- As part of the 1600 document, there is a water diversion plan. If water is present and diversion of flow around the work site is necessary, then an impoundment will be constructed and gravity flow or pumping flow through a pipe around the work site will be utilized. See diagram in the Project Description Work Order of the 1600 application.

- Foothill yellow legged frog habitat may be present in the class II channel associated with the project. Yellow legged frog surveys will be conducted by a qualified biologist no more than 10 days before work within the wetted portion of any class II channel begins.
- If listed threatened or endangered species are observed at the site during operations, the operator will cease operations. Further mitigations shall be implemented and CDFW contacted for approval before operations begin again.
- The crossing replacements on the CII and Class III watercourses will take place during the dry period between June 1 and October 15.

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Attachment A: Lists of Potentially Occurring Special-Status Species for the 9-Quad Area

Table 1. Birds

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Habitat
<i>Accipiter cooperii</i>	Cooper's hawk	None	None	WL	G5	S4	Potential
<i>Aquila chrysaetos</i>	golden eagle	None	None	FP ; WL	G5	S3	Potential
<i>Empidonax traillii brewsteri</i>	little willow flycatcher	None	Endangered	-	G5	S1S2	Potential
<i>Falco peregrinus anatum</i>	American peregrine falcon	Delisted	Delisted	FP	G4T4	S3S4	Potential
<i>Haliaeetus leucocephalus</i>	Bald eagle	Delisted	Endangered	FP	G5	S3	Potential
<i>Pandion haliaetus</i>	osprey	None	None	WL	G5	S4	Potential
<i>Psiloscops flammeolus</i>	flamulated owl	None	None	-	G4	S2S4	Potential
<i>Strix occidentalis caurina</i>	northern spotted owl	Threatened	Threatened	SSC	G3T3	S2S3	Potential

Table 2. Mammals

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Habitat
<i>Antrozous pallidus</i>	pallid bat	None	None	SSC	G5	S3	Potential
<i>Arborimus pomo</i>	Sonoma tree vole	None	None	SSC	G3	S3	Potential
<i>Pekania pennanti</i>	fisher - West Coast DPS	Proposed Threatened	Candidate Threatened	SSC	G5T2T3Q	S2S3	Potential

Table 3. Amphibians and Reptiles

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Habitat
<i>Emys marmorata</i>	Western pond turtle	None	None	SSC	G3G4	S3	Potential
<i>Rana aurora</i>	northern red-legged frog	None	None	SSC	G4	S3	Potential
<i>Rana boylei</i>	foothill yellow-legged frog	None	Candidate Threatened	SSC	G3	S3	Potential
<i>Rhyacotriton variegatus</i>	southern torrent salamander	None	None	SSC	G3G4	S2S3	Potential

Table 4. Fish

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Habitat
<i>Entosphenus tridentatus</i>	Pacific lamprey	None	None	SSC	G4	S4	Potential
<i>Oncorhynchus kisutch</i> pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	G4T2Q	S2?	Potential
<i>Oncorhynchus kisutch</i> pop. 4	coho salmon - central California coast ESU	Endangered	Endangered	-	G4	S2?	Potential
<i>Oncorhynchus mykiss irideus</i> pop. 16	steelhead - northern California DPS	Threatened	None	-	G5T2T3Q	S2S3	Potential
<i>Oncorhynchus mykiss irideus</i> pop. 36	summer-run steelhead trout	None	Candidate Endangered	SSC	G5T4Q	S2	Potential
<i>Oncorhynchus tshawytscha</i> pop. 17	chinook salmon - California coastal ESU	Threatened	None	-	G5	S1	Potential

Table 5. Invertebrates

Scientific Name	Common Name	FESA	CESA	CDFW	GRank	SRank	Habitat
<i>Bombus caliginosus</i>	obscure bumble bee	None	None	-	G4?	S1S2	Potential
<i>Bombus occidentalis</i>	western bumble bee	None	Candidate Endangered	-	G2G3	S1	Potential

Table 7: Sensitive Plant Species

Scientific Name	Common Name	CESA	FESA	CRPR	Blooming Period	Habitat
<i>Arabis mcdonaldiana</i>	McDonald's rockcress	Endangered	Endangered	1B.1	May-Jul	Potential
<i>Arctostaphylos stanfordiana</i> ssp. <i>raichei</i>	Raiche's manzanita	None	None	1B.1	Feb-Apr	Potential
<i>Astragalus agnicidus</i>	Humboldt County milk-vetch	None	Endangered	1B.1	Apr-Sep	Potential
<i>Carex arcta</i>	northern clustered sedge	None	None	2B.2	Jun-Sep	Potential
<i>Ceanothus foliosus</i> var. <i>vineatus</i>	Vine Hill ceanothus	None	None	1B.1	Mar-May	Potential
<i>Eriogonum kelloggii</i>	Kellogg's buckwheat	Endangered	None	1B.2	(May)Jun-Aug	Potential
<i>Erythronium revolutum</i>	coast fawn lily	None	None	2B.2	Mar-Jul(Aug)	Potential
<i>Frangula purshiana</i> ssp. <i>ultramaffica</i>	Caribou coffeeberry	None	None	1B.2	May-July	Potential
<i>Gentiana setigera</i>	Mendocino gentian	None	None	1B.2	Aug-Sep	Potential
<i>Howellia aquatilis</i>	water howellia	None	Threatened	2B.2	Jun	Unlikely
<i>Kopsiopsis hookeri</i>	small groundcone	None	None	2B.3	Apr-Aug	Potential
<i>Montia howellii</i>	Howell's montia	None	None	2B.2	(Feb)Mar-May	Potential
<i>Piperia candida</i>	white-flowered rein orchid	None	None	1B.2	(Mar)May-Sep	Likely
<i>Pleuropogon hooverianus</i>	North Coast semaphore grass	None	Threatened	1B.1	Apr-Jun	Potential
<i>Sedum laxum</i> ssp. <i>eastwoodiae</i>	Red Mountain stonecrop	None	None	1B.2	May-Jul	Potential
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	None	None	1B.2	May-Aug	Potential
<i>Silene campanulata</i> ssp. <i>campanulata</i>	Red Mountain catchfly	Endangered	None	4.2	Apr-Jul	Potential
<i>Tracyina rostrata</i>	beaked tracyina	None	None	1B.2	May-Jun	Potential
<i>Viburnum ellipticum</i>	oval-leaved viburnum	None	None	2B.3	May-Jun	Potential

Attachment B: Potential Special-Status Species Details

I. Potentially Occurring Special Status Birds

1. Cooper's hawk (*Accipiter cooperii*)

Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4

Family: Accipitridae

Habitat/Life-history Requirements: Cooper's hawks are common year-round residents in wooded areas of California, and they can be found in urban and suburban areas as well (Cornell Lab). The medium-sized hawk builds nests made of piles of sticks over two feet wide in tall trees, typically 25-50 feet off the ground (Cornell Lab). Nesting trees include pines, oaks and Douglas firs (Cornell Lab). Dense stands are typically used for nesting and patchy open areas are commonly used for hunting (Zeiner et al. 1988).

Status within the Project Area: Possible nesting habitat exists within the project area and adjacent to the project. No sightings have been recorded in the area, the nearest recorded observation was more than 5 miles away from the project area as per CNDDB.

Mitigations: Project operations will not significantly impact Cooper's hawks or their habitat.

2. Golden eagle (*Aquila chrysaetos*)

Special Status: CDFW Fully Protected and Watch List; Protected under Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act; NatureServe Ranks: G5, S3

Family: Accipitridae

Habitat/Life-history Requirements: The golden eagle is an uncommon migrant and year-round resident (Zeiner et al. 1988). The golden eagle typically utilizes open habitats away from human environments (Sibley 2003). Small mammals are the primary prey for the golden eagle (Sibley 2003). One of the largest raptors in North America, the golden eagle builds massive nests, about 6 feet across (Cornell Lab). Nests are typically located on cliffs, but may also be found on trees, man-made structures, or on the ground (Cornell Lab).

Status within the Project Area: No habitat exists within the project area. However potential habitat exists adjacent to the project. No sightings have been recorded in the area, the nearest recorded observation was over 5 miles from the project area as per CNDDB.

Mitigations: Project operations will not significantly impact golden eagles or their habitat.

3. Little willow flycatcher (*Empidonax traillii brewsteri*)

Special Status: State Endangered, Protected under Migratory Bird Treaty Act, NatureServe Ranks: G5T3T4, S1S2

Family: Tyrannidae

Habitat/Life-history Requirements: The little willow flycatcher is a rare to locally uncommon summer resident that breeds in the Cascades and the Sierra Nevada (Craig and Williams 1998). The little willow flycatcher breeds in wet meadows and montane riparian habitats at 2,000-8,000 feet elevation (Craig and Williams 1998). The riparian songbird requires dense willow thickets for nesting and roosting (Bombay et al. 2003, Zeiner et al. 1988). Destruction of riparian vegetation, modification of hydrology, and nest parasitism by brown headed cowbirds are the main threats to this species (Bombay et al. 2003).

Potential Impact: No habitat exists within the project area. However potential habitat exists adjacent to the project. No sightings have been recorded in the area, the nearest recorded observation was over 5 miles from the project area as per CNDDB.

Mitigations: Project operations will not significantly impact little willow flycatchers or their habitat.

4. American peregrine falcon (*Falco peregrinus anatum*)

Special Status: Federally Delisted, State Delisted, CDFW Fully Protected; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G4T4, S3S4

Family: Falconidae

Habitat/Life-history Requirements: The formerly federally endangered American peregrine falcon was delisted in 1999 due to recovery (USFWS ECOS). The American peregrine falcon is an uncommon year-round resident and migrant in California (Zeiner et al. 1988). Peregrine falcons typically use cliffs and ledges near bodies of water for cover and nesting areas, but they may also nest on buildings or bridges in the city (Sibley 2003, Cornell Lab). Peregrine falcons may breed in woodland, forest, or coastal habitat (Zeiner et al. 1988). Riparian and wetland areas are important habitat yearlong (Zeiner et al. 1988).

Status within the Project Area: Habitat may exist within the project area however no Peregrine falcons or habitat are mapped in CNDDB within 5 miles of the project.

Mitigations: Project operations are limited to upgrades to an existing road network and will not significantly impact peregrine falcons or their habitat.

5. Bald eagle (*Haliaeetus leucocephalus*)

Special Status: Federally Delisted, State Endangered, CDFW Fully Protected; Protected under Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act; NatureServe Ranks: G5, S3

Family: Accipitridae

Habitat/Life-history Requirements: Federally delisted, but still considered Endangered in California, bald eagles occur along rivers, large creeks, and coastlines throughout Northwestern California (Harris 2005). Fish are a primary source of prey, and bald eagles are typically found in forested areas near large fish-bearing waters (Cornell Lab). Bald eagles build large nests about 6 feet wide. Nests are typically found in large trees, but may be built on other available vegetation or structures (Cornell Lab).

Status within the Project Area: No habitat exists within the project area. However potential habitat exists adjacent to the project. No sightings have been recorded in the area, the nearest recorded observation was over 5 miles from the project area as per CNDDB.

Mitigations: Project operations will not significantly impact bald eagles or their habitat.

6. Osprey (*Pandion haliaetus*)

Special Status: CDFW Watch List; Protected under Migratory Bird Treaty Act; NatureServe Ranks: G5, S4

Family: Accipitridae

Habitat/Life-history Requirements: Ospreys primarily prey on fish and they require large fish-bearing waters for hunting (Zeiner et al. 1988). Ospreys typically make large nests in tall snags or trees high off the ground in open forest habitats (Zeiner et al.).

Status within the Project Area: Ospreys are unlikely to occur in the area directly impacted by the project. Potential habitat exists along the South Fork Eel River east of the project. The nearest occurrence mapped in CNDDDB is more than 5 miles from the project

Mitigations: Project operations will not significantly impact osprey or its habitat.

7. Flammulated owl (*Psilosops flammeolus*)

Special Status: None

NatureServe Ranks: G4 S2S4

Family: Strigidae

Habitat/Life-history Requirements: Flammulated Owls breed in dry mature mountain forests of ponderosa pine or other large coniferous trees, often interspersed with aspen or oak. Relatively open, mature stands of Douglas-fir, fir, limber pine, and yellow pine, including burned forests, also attract this species during the nesting season, especially where natural cavities for nesting are available. In many parts of its range, Flammulated occurs on middle and upper slopes, avoiding lower elevations and valleys. Migrants have been found in a wide array of habitats, including desert oases, riparian corridors, and city parks. Wintering ecology in this species is little known, but scientists think that most birds winter in Mexican pine forests, probably in habitat very similar to breeding habitat. (Cornell Lab).

Status within the Project Area: No suitable nesting habitat is present on the property. Potential nesting habitat may exist adjacent to the project area on neighboring parcels. The nearest occurrence mapped in CNDDDB is over 5 miles from the project area.

Mitigations: Project operations will not significantly impact the flammulated owl or its habitat.

8. Northern spotted owl (*Strix occidentalis caurina*)

Special Status: Federally Threatened, State Threatened, CDFW Species of Special Concern.

NatureServe Ranks: G3T3 S2S3

Family: Strigidae

Habitat/Life-history Requirements: Northern spotted owls typically nest or roost in multi-layered, mature coniferous forest with high canopy closure, large overstory trees, and broken-topped trees or other nesting platforms (USFWS 2012). Confirmed breeding areas are widespread throughout Humboldt County (Hunter et al. 2005). Northern spotted owls may use a broad range of habitats for foraging. Their favored prey, the dusky-footed woodrat (*Neotoma fuscipes*), typically inhabits the forest edge (Harris 2005). USFWS protocol surveys are needed for any activity that may modify nesting, roosting, or foraging habitats for northern spotted owls (USFWS 2012).

Status within the Project Area: No suitable nesting habitat is present on the property. The open grassland may represent potential foraging habitat. Potential nesting habitat may exist adjacent to the project area on neighboring parcels. The nearest NSO Activity Center (HUM0223) mapped in CNDDDB is 1.5 miles northeast of the project area.

Mitigations: Project operations will not significantly impact the Northern Spotted Owl or its habitat.

II. Mammals

1. Pallid bat (*Antrozous pallidus*)

Special Status: CDFW Species of Special Concern, NatureServe Ranks: G5, S3

Family: Vespertilionidae

Habitat/Life-history Requirements: The pallid bat may occupy a wide range of low-elevation habitats, and roost in a wide variety of structures (Zeiner et al. 1988). The bat prefers to roost in outcrops, cliffs, and crevices with access to open areas for foraging (Zeiner et al. 1988).

Status within the Project Area: The project area may provide suitable habitat however; the nearest occurrence mapped in CNDDDB is more than 5 miles from the project.

Mitigations: Project operations will not significantly impact the pallid bat or its habitat.

2. Sonoma tree vole (*Arborimus pomo*)

Special Status: CDFW Species of Special Concern, NatureServe Ranks: G3, S3

Family: Muridae

Habitat/Life-history Requirements: The Sonoma tree vole occurs along the North Coast in in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats (Zeiner et al. 1988). The small rodent specializes in feeding on Douglas-fir and grand fir needles, and typically constructs nests in Douglas-fir trees (Zeiner et al. 1988).

Status within the Project Area: The project area may provide suitable habitat however; the nearest occurrence mapped in CNDDDB is over 5 miles away from the project.

Mitigations: Project operations will not significantly impact the Sonoma tree vole or its habitat.

3. Humboldt marten (*Martes caurina humboldtensis*)

Special Status: California Endangered, CDFW Species of Special Concern Animals List.

NatureServe Ranks: G5T1, S1

Family: Mustelidae

Habitat/Life-history Requirements: Martens use structurally complex conifer forest with large trees and low human disturbance (Zeiner et al. 1988). Martens require old-growth conifers and snags with cavities for denning and nesting (Zeiner et al. 1988). Martens are currently known to inhabit the northern part of Humboldt County near Prairie Creek Redwood State Park and the Klamath Mountains. Historically, martens occupied a great deal of Humboldt and Mendocino Counties.

Status within the Project Area: No habitat occurs in the project area, but potential marten habitat may occur in the surrounding area. The nearest occurrence mapped in CNDDDB is over 5 miles from the project area.

Mitigations: Project operations are not expected to significantly impact the Humboldt marten or its habitat.

4. Fisher - West Coast DPS (*Pekania pennanti*)

Special Status: Federally Proposed as Threatened, State Candidate Threatened, Species of Special Concern; NatureServe Ranks: G5T2T3Q, S2S3

Family: Mustelidae

Habitat/Life-history Requirements: The fisher uses large expanses of forest with moderate to high canopy closure, and will avoid open forest, grasslands, and wetlands (USFWS 2014). Fishers use cavities in live trees, snags and down logs for reproductive dens (USFWS 2014). Structural complexity is a critical element of fisher habitat, necessary to provide cover for resting and denning, and habitat for prey (USFWS 2014).

Status within the Project Area: The project area does not contain fisher habitat. Potential habitat may be found in the surrounding area. The nearest occurrence mapped in CNDDDB is more than 5 miles from the project area.

Mitigations: No large trees will be removed project operations will not significantly impact the fisher or its habitat.

III. Amphibians and Reptiles

1. Western pond turtle (*Emys marmorata*)

Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S3

Family: Emydidae

Habitat/Life-history Requirements: The western pond turtle is associated with permanent or nearly permanent water in ponds, lakes, streams, irrigation ditches or permanent pools along intermittent streams (Ziener et al. 1988). Invasive American bullfrogs prey upon hatchlings and juveniles (Zeiner et al. 1988).

Status within the Project Area: The nearest occurrence mapped in CNDDDB is more than 5 miles from the project. Areas with permanent water are potential habitat.

Mitigations: The applicant will follow the mitigations outlined at the beginning of this report. Any western pond turtles observed during foothill yellow-legged frog surveys shall be documented and protected. Other mitigations listed above will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to wetlands, salmonids, amphibians, and other sensitive species. Project operations are not expected to have significant impacts.

2. Northern red-legged frog (*Rana aurora*)

Special Status: CDFW Species of Special Concern; NatureServe Ranks: G4, S3

Family: Ranidae

Habitat/Life-history Requirements: The northern red-legged frog inhabits low-elevation wetlands of the North Coast Ranges from Del Norte to Mendocino Counties (Zeiner et al. 1988). The northern red-legged frog requires permanent pools in streams, marshes, or ponds (Zeiner et al. 1988).

Status within the Project Area: Permanent streams on the parcel and in the surrounding area could provide habitat for the northern red-legged frog. The nearest occurrence mapped in CNDDDB was over 5 miles away from the project area.

Mitigations: The applicant will follow the mitigations outlined at the beginning of this report. Any sensitive amphibian species observed during foothill yellow-legged frog surveys shall be documented and protected. Other mitigations listed above will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to wetlands, salmonids, amphibians, and other sensitive species. Project operations are not expected to have significant impacts.

3. Foothill yellow-legged frog (*Rana boylei*)

Special Status: State Candidate for listing as Threatened; CDFW Species of Special Concern; NatureServe Ranks: G3, S3

Family: Ranidae

Habitat/Life-history Requirements: The foothill yellow legged frog inhabits rocky streams with permanent water in many habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadows (Zeiner et al. 1988). The invasive American bullfrog and introduced fish species contribute to the reduction of foothill yellow legged frog populations (Zeiner et al. 1988).

Status within the Project Area: Permanent streams on the parcel and in the surrounding area could provide habitat for the foothill yellow-legged frog. The nearest occurrence mapped in CNDDDB was less than 3 miles north of the project area.

Mitigations: The applicant will follow the mitigations outlined at the beginning of this report. Foothill yellow legged frog habitat may be present in the class II channels associated with the project. Yellow legged frog surveys will be conducted by a qualified biologist no more than 10 days before work within the wetted portion of any class II channel begins. Other mitigation measures listed will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to wetlands, salmonids, amphibians, and other sensitive species. Project operations are not expected to have significant impacts to foothill yellow-legged frogs with mitigation incorporated.

4. Southern torrent salamander (*Rhyacotriton variegatus*)

Special Status: CDFW Species of Special Concern; NatureServe Ranks: G3G4, S2S3

Family: Rhyacotritonidae

Habitat/Life-history Requirements: The southern torrent salamander primarily occupies cold, shaded permanent streams and seeps in redwood, Douglas fir, mixed conifer, montane riparian and montane hardwood-conifer habitats in Sonoma, Mendocino, Humboldt and Lake Counties (Zeiner et al. 1988). The newt requires rapid, permanent streams with rocky substrate for breeding and larval development (Zeiner et al. 1988).

Status within the Project Area: Permanent streams on the parcel and in the surrounding area could be habitat for the southern torrent salamander. The nearest occurrence mapped in CNDDDB is more than 5 miles from the project area.

Mitigations: The applicant will follow the mitigations outlined at the beginning of this report. Any sensitive amphibian species observed during foothill yellow-legged frog surveys shall be documented and protected. Other mitigations listed above will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to wetlands, salmonids, amphibians, and other sensitive species. Project operations are not expected to have significant impacts.

IV. Fish

1. Pacific lamprey (*Entosphenus tridentatus*)

Special Status: CDFW Species of Special Concern, NatureServe Ranks: G4, S4

Family: Petromyzontidae

Habitat/Life-history Requirements: Pacific lamprey require cool, permanent streams with a variety of substrates and structural complexity (CalFish). Lamprey are anadromous and must have unimpeded access to the ocean (CalFish).

Status within the Project Area: The small streams on the parcel are not accessible to Pacific lamprey. The South Fork Eel River is about 6 miles from the project and the mainstem Eel River is about 5 miles away. The nearest occurrence of Pacific lamprey mapped in CNDDB is over 5 miles away.

Mitigations: The proposed project consists of upgrades to an existing road system. The applicant will follow the mitigations outlined at the beginning of this report. These mitigations will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to habitat located downstream. Project operations are not expected to have significant impacts on Coho salmon or their habitat.

2. Coho salmon—southern Oregon / northern California ESU (*Oncorhynchus kisutch*)

Special Status: Federally Threatened, State Threatened; NatureServe Ranks: G4T2Q, S2?

Family: Salmonidae

Habitat/Life-history Requirements: Coho salmon are a federally and state-listed anadromous fish that occupy low gradient rivers and coastal streams (CDFW). The anadromous salmonids return to these watersheds in the fall and early winter to spawn in gravel substrate, after the first major rains (Moyle et al. 2008). Coho require cool, clear perennial streams and rivers with structural complexity for cover and low suspended sediment (Moyle et al. 2008). Juveniles are most abundant in well-shaded, deep pools with many structural elements that provide cover (Moyle et al. 2008). The southern Oregon/northern California ESU range includes watersheds from Cape Blanco in Oregon south to the Mattole River (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.

Status within the Project Area: The small streams on the parcel are not accessible to salmonids. The South Fork Eel River is about 6 miles from the project and the mainstem Eel River is about 5 miles away.

Mitigations: The proposed project consists of upgrades to an existing road system. The applicant will follow the mitigations outlined at the beginning of this report. These mitigations will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to habitat located downstream. Project operations are not expected to have significant impacts on Coho salmon or their habitat.

3. Coho salmon – central California coast ESU (*Oncorhynchus kisutch*)

Special Status: Federally Endangered, State Endangered, NatureServe Ranks: G4, S2?

Family: Salmonidae

Habitat/Life-history Requirements: Coho salmon are a federally and state-listed anadromous fish that occupy low gradient rivers and coastal streams (CDFW). The anadromous salmonids return to these watersheds in the fall and early winter to spawn in gravel substrate, after the first major rains (Moyle et al. 2008). Coho require cool, clear perennial streams and rivers with

structural complexity for cover and low suspended sediment (Moyle et al. 2008). Juveniles are most abundant in well-shaded, deep pools with many structural elements that provide cover (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.

Status within the Project Area: The small streams on the parcel are not accessible to salmonids. The South Fork Eel River is about 6 miles from the project and the mainstem Eel River is about 5 miles away.

Mitigations: The proposed project consists of upgrades to an existing road system. The applicant will follow the mitigations outlined at the beginning of this report. These mitigations will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to habitat located downstream. Project operations are not expected to have significant impacts on salmonids or their habitat.

4. Steelhead - northern California DPS (*Oncorhynchus mykiss irideus*)

Special Status: Federally Threatened; NatureServe Ranks: G5T2T3Q, S2S3

Family: Salmonidae

Habitat/Life-history Requirements: Steelhead are anadromous rainbow trout that migrate to the ocean as juveniles and return to freshwater habitats to spawn. The Northern California Distinct Population Segment (DPS) ranges from Redwood Creek to just south of the Gualala River, and includes the Eel River watershed (Moyle et al. 2008). Salmonids, including steelhead, require cool, clear perennial streams and rivers with structural complexity for cover and low suspended sediment. Steelhead may swim upstream in during the winter to spawn in stream segments that are not accessible to other salmonids during low flows (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.

Status within the Project Area: The small streams on the parcel are not accessible to salmonids. The South Fork Eel River is about 6 miles from the project and the mainstem Eel River is about 5 miles away.

Mitigations: The proposed project consists of upgrades to an existing road system. The applicant will follow the mitigations outlined at the beginning of this report. These mitigations will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to habitat located downstream. Project operations are not expected to have significant impacts on steelhead or their habitat.

5. Summer-run steelhead trout (*Oncorhynchus mykiss irideus*)

Special Status: State Candidate Endangered, CDFW Species of Special Concern; NatureServe Ranks: G5T4Q, S2

Family: Salmonidae

Habitat/Life-history Requirements: Summer-run steelhead trout remain in freshwater habitats until they reach maturity (Moyle et al. 2008). These steelhead have similar requirements during their juvenile stages, with an additional need for freshwater habitats to remain suitable throughout the summer (Moyle et al. 2008). Summer steelhead are sensitive to human disturbance and typically are only found in the most remote areas of the watersheds (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.

Status within the Project Area: The small streams on the parcel are not accessible to salmonids. The South Fork Eel River is about 6 miles from the project and the mainstem Eel River is about 5 miles away.

Mitigations: The proposed project consists of upgrades to an existing road system. The applicant will follow the mitigations outlined at the beginning of this report. These mitigations will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to habitat located downstream. Project operations are not expected to have significant impacts on summer-run steelhead or their habitat.

6. Chinook salmon - California coastal ESU (*Oncorhynchus tshawytscha*)

Special Status: Federally Threatened; NatureServe Ranks: G5, S1

Family: Salmonidae

Habitat/Life-history Requirements: The Federally Threatened Chinook salmon is the largest Pacific salmonid (Moyle et al. 2008). The California Coast Evolutionary Significant Unit (ESU) is composed of Chinook spawning in watersheds ranging from Redwood Creek south to the Russian River (Moyle et al. 2008). The anadromous salmonids return to these watersheds in the fall to spawn, after the first major rains (Moyle et al. 2008). Chinook, like other salmonids, require cool, clear perennial streams and rivers with structural complexity for cover and low suspended sediment (Moyle et al. 2008). Juvenile chinook may inhabit estuaries for an extended period (Moyle et al. 2008). Chinook are particularly sensitive to temperature and water quality, and require larger cobble and coarse gravel substrate for spawning compared to other salmonids (Moyle et al. 2008). Sedimentation is a major threat to salmonids in their early life stages.

Status within the Project Area: The small streams on the parcel are not accessible to salmonids. The South Fork Eel River is about 6 miles from the project and the mainstem Eel River is about 5 miles away.

Mitigations: The applicant will follow the mitigations outlined at the beginning of this report. These mitigations will limit potential erosion, runoff, sedimentation, and other pollution that could pose a threat to habitat located downstream. Project operations are not expected to have significant impacts on chinook or their habitat.

V. Invertebrates

5. Obscure bumble bee (*Bombus caliginosus*)

Status: NatureServe Ranks: G4? S1S2

Family: Apidae

Habitat/Life-history Requirements: The obscure bumble bee occupies open grassy coastal prairies and Coast Range meadows (IUCN). This long-tongued species may pollinate flowers with elongated corollas, such as *Keckiella* spp. (IUCN). The obscure bumblebee does not fare well in agricultural or urban/suburban environments, where it is often outcompeted by more common bumblebees (NatureServe). The obscure bumblebee has declined in the San Francisco Bay area, and may be threatened by habitat loss from development (NatureServe).

Status within the Project Area: The project is located 18 miles from the coast and includes some open grassland and may contain potential habitat for the obscure bumble bee. The nearest occurrence mapped in CNDDB is over 5 miles away from the project near the South Fork Eel River.

Mitigations: Project operations are not expected to significantly impact the bumble bee or its habitat.

6. Western bumble bee (*Bombus occidentalis*)

Status: State Candidate Endangered, NatureServe Ranks: G2G3 S1

Family: Apidae

Habitat/Life-history Requirements: The western bumble bee is a generalist short-tongued forager that may be found in open habitats such as grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows (IUCN). Like many bumble bees, the western bumble bee nests underground in abandoned rodent holes (IUCN). The western bumble bee is threatened by disease, habitat loss and degradation, and insecticides.

Status within the Project Area: The project area may provide areas of potential habitat. The nearest occurrence mapped in CNDDDB is more than 5 miles from the project area.

Mitigations: The project is limited to existing roads, project operations are not expected to significantly impact the bumble bee or its habitat.

VI. Potential Rare Plant Details

7. McDonald's rockcress (*Arabis mcdonaldiana*)

Status: CNPS List 1 rare, threatened, or endangered in California and elsewhere; .1 seriously endangered in CA. State and federally listed as endangered. State rank S3: Vulnerable. Global rank G3: Vulnerable.

Family: Brassicaceae

Flowering: May – July

Habitat: serpentinite. Lower montane coniferous forest, Upper montane coniferous forest

Status within Project Area: Potential habitat could exist in nearby serpentine areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

8. Raiche's Manzanita (*Arctostaphylos stanfordiana* ssp. *raichei*)

Status: CNPS List 1 rare, threatened, or endangered in California and elsewhere; .1 seriously endangered in CA. No state or federal listing. State Rank S2: Imperiled. Global Rank G3T2: Vulnerable.

Family: Ericaceae

Flowering: February - April

Habitat: Rocky, often serpentinite. Chaparral, Lower montane coniferous forest (openings)

Status within Project Area: Potential habitat may exist in rocky and open areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

9. Humboldt County milk-vetch (*Astragalus agnicidus*)

Status: CNPS List 1, seriously endangered in CA. State listed as endangered, no federal listing. State S2, Global rank G2.

Family: Fabaceae

Flowering: April - September

Habitat: openings, disturbed areas, sometimes roadsides. Broadleafed upland forest, North Coast coniferous forest

Status within Project Area: Potential habitat exists along roads and in openings and disturbed areas. The nearest occurrence mapped in CNDDDB is 5 miles north of the project.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

10. Northern clustered sedge (*Carex arcta*)

Status: CNPS List 2 Plants Rare, Threatened or Endangered in California, .2, fairly endangered in CA. No state or federal listing. S1: Critically Imperiled. Global rank G5: Secure.

Family: Cyperaceae

Flowering: June-September

Habitat: Bogs and fens, North Coast coniferous forest (mesic)

Status within Project Area: Potential habitat may exist in wet areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

11. Vine hill ceanothus (*Ceanothus foliosus* var. *vineatus*)

Status: CNPS List 1 rare, threatened, or endangered in California or elsewhere; .1 seriously endangered in CA. No state or federal listing. State rank S1: critically imperiled. Global rank G3T1: Vulnerable.

Family: Rhamnaceae

Flowering: March-May

Habitat: Chaparral

Status within Project Area: Potential habitat might exist in any chaparral areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

12. Kellogg's buckwheat (*Eriogonum kelloggii*)

Status: CNPS List 1 rare, threatened, or endangered in California and elsewhere; .2 somewhat endangered in CA. No federal listing. State listed as endangered. State rank S2: Imperiled. Global rank G2: Imperiled.

Family: Polygonaceae

Flowering: May - August

Habitat: Lower montane coniferous forest (rocky, serpentinite)

Status within Project Area: Potential habitat exists in any rocky and serpentine areas of the forest.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

13. Coast fawn lily (*Erythronium revolutum*)

Status: CNPS List 2, fairly endangered in CA. No state or federal listing. State Rank S3, Global Rank G4.

Family: Liliaceae

Flowering: March - August

Habitat: Mesic, streambanks, Bogs and fens, Broadleafed upland forest, North Coast coniferous forest

Status within Project Area: Potential habitat might exist in mesic areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are need

14. Caribou coffeeberry (*Frangula purshiana* ssp. *ultramafica*)

Status: CNPS List 1 rare, threatened, or endangered; .2 somewhat endangered in CA. No state or federal listing. State rank S2S3: imperiled/ vulnerable, Global rank G4T2T3: apparently secure.

Family: Rhamnaceae

Flowering: May - July

Habitat: serpentinite. Chaparral, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest

Status within Project Area: Potential habitat exists in the project area in any serpentine areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

15. Mendocino gentian (*Gentiana setigera*)

Status: CNPS List 1 rare, threatened, or endangered in California and elsewhere; .2 somewhat endangered in CA. No state or federal listing. State rank S1: Critically Imperiled. Global rank G2: Imperiled.

Family: Gentianaceae

Flowering: April - September

Habitat: mesic. Mesic Lower montane coniferous forest, Meadows and seeps

Status within Project Area: Potential habitat exists in forested and wet areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

16. Water howellia (*Howellia aquatilis*)

Status: CNPS List 2 rare, threatened, or endangered in California, .2 fairly endangered in CA. Federally listed as threatened; no state listing. State rank S2: imperiled. Global rank G3: vulnerable.

Family: Campanulaceae

Flowering: June

Habitat: Marshes and swamps (freshwater)

Status within in Project Area: Potential in marshes or swamps; but unlikely to occur in project area.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

17. Small groundcone (*Kopsiopsis hookeri*)

Status: CNPS List 2, not very endangered in CA. Not federally or state listed. State rank S1S2, Global rank G4G5.

Family: Orobanchaceae

Flowering: April - August

Habitat: North Coast coniferous forest

Status within Project Area: Potential habitat exists in conifer-dominated areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

18. Howell's montia (*Montia howellii*)

Status: CNPS List 2, Plants Rare, Threatened or Endangered in California, .2 Moderately threatened in California. No state or federal listing. State Rank S2: Imperiled. Global Rank G3G4: Vulnerable/ Apparently Secure.

Family: Montiaceae

Flowering: February - May

Habitat: vernal mesic, sometimes roadsides, Meadows and seeps, North Coast coniferous forest, Vernal pools.

Status within Project Area: Potential habitat exists in seasonally wet areas and roadsides.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

19. White-flowered rein orchid (*Piperia candida*)

Status: CNPS List 1 Rare or Endangered in California and elsewhere, .2 moderately endangered in California. No state or federal listing. State Rank S3: Vulnerable. Global Rank G3: Vulnerable.

Family: Orchidaceae

Flowering: March - September

Habitat: Sometimes serpentine, Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest

Status within Project Area: Potential habitat exists in the in forested area and roadsides.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

20. North Coast semaphore grass (*Pleuropogon hooverianus*)

Status: CNPS List 1 Rare or Endangered in California and elsewhere, .1 seriously endangered in CA. No state or federal listing. State rank S2: Imperiled; Global Rank G2 Imperiled.

Family: Poaceae

Flowering: April-June

Habitat: open areas, mesic. Broadleafed upland forest, Meadows and seeps, North Coast coniferous forest

Status within Project Area: Potential habitat exists in open, wet areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

21. Red Mountain stonecrop (*Sedum laxum* ssp. *eastwoodiae*)

Status: CNPS List 1 rare threatened or endangered; .2 fairly endangered in CA. No state or federal listing. State Rank S2: Imperiled; Global Rank G5T2: subspecies imperiled.

Family: Crassulaceae

Flowering: May-Jul

Habitat: Lower montane coniferous forest (serpentine)

Potential in Area: Potential habitat might exist in any serpentine areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

22. Siskiyou checkerbloom (*Sidalcea malviflora* ssp. *patula*)

Status: CNPS List 1 Rare or Endangered in California and elsewhere, .2 moderately endangered in California. No state or federal listing, State Rank S2: Imperiled. Global Rank G5T2: Secure.

Family: Malvaceae

Flowering: May - August

Habitat: Often roadcuts, Coastal bluff scrub, Coastal prairie, North Coast coniferous forest.

Habitat within Area: Potential habitat exists within the forested area.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

23. Red Mountain catchfly (*Silene campanulata* ssp. *campanulata*)

Status: State Endangered, no federal listing. CNPS List 4 limited distribution, .2 moderately endangered in CA. State Rank: S3, vulnerable; Global Rank G5T3Q.

Family: Caryophyllaceae

Flowering: Apr-Jul

Habitat: Chaparral, Lower montane coniferous forest, usually serpentinite, rocky

Habitat within Area: Potential habitat may exist in rocky areas.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

24. Beaked tracyina (*Tracyina rostrata*)

Status: CNPS List 1 rare, threatened, or endangered in California and elsewhere; .2 fairly endangered in CA. No state or federal listing. State rank S2: imperiled. Global rank G1: imperiled.

Family: Asteraceae

Flowering: May - June

Habitat: Chaparral, Cismontane woodland, Valley and foothill grassland

Status within Project Area: Potential habitat exists in woodlands and grassy openings.

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

25. Oval-leaved viburnum (*Viburnum ellipticum*)

Status: CNPS List 2 rare, threatened, or endangered in CA; .3 not very endangered in CA. No state or federal listing. State rank S3?: vulnerable. Global rank G4G5: apparently secure/secure.

Family: Adoxaceae

Flowering: May-June

Habitat: Chaparral, Cismontane woodland, Lower montane coniferous forest

Status within Project Area: Potential habitat exists in woodland and forested area

Mitigation: Proposed work is not expected to have a significant impact. No mitigation measures are needed.

Attachment C. Rank Definitions

Global Conservation Status Definition

Listed below are definitions for interpreting NatureServe global (range-wide) conservation status ranks. These ranks are assigned by NatureServe scientists or by a designated lead office in the NatureServe network.

G1 Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2 Imperiled – At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors.

G3 Vulnerable – At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors.

G4 Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

G5 Secure – Common; widespread and abundant.

G#G# Range Rank – A numeric range range (e.g. G2G3, G1G3) is used to indicate the range of uncertainty about the exact status of a taxon or ecosystem type. Ranges cannot skip more than two ranks (e.g., GU should be used rather than G1G4).

Intraspecific Taxon Conservation Status Ranks

T# Intraspecific Taxon (trimonial) – The status of intraspecific taxa (subspecies or varieties) are indicated by a “T-rank” following the species global rank. Rules for assigning T-ranks follow the same principles outlined above. For example, the global rank of a critically imperiled subspecies of an otherwise widespread and common species would be G5T1. A T subrank cannot imply the subspecies or variety is more abundant than the species. For example, a G1T2 subrank should not occur. A vertebrate animal population, (e.g., listed under the U.S. Endangered Species Act or assigned candidate status) may be tracked as an intraspecific taxon and given a T-rank; in such cases a Q is used after the T-rank to denote the taxon’s informal taxonomic status.

Subnational (S) Conservation Status Ranks

S1 Critically Imperiled – Critically imperiled in the jurisdiction because of extreme rarity or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the jurisdiction.

S2 Imperiled – Imperiled in the jurisdiction because of rarity due to very restricted range, very few populations, steep declines, or other factors making it very vulnerable to extirpation from jurisdiction.

S3 Vulnerable – Vulnerable in the jurisdiction due to a restricted range, relatively few populations, recent and widespread declines, or other factors making it vulnerable to extirpation.

S4 Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure – Common, widespread, and abundant in the jurisdiction.

S#S# Range Rank – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem. Ranges cannot skip more than two ranks (e.g., SU is used rather than S1S4).

Rank Qualifiers

? Inexact Numeric Rank – Denotes inexact numeric rank; this should not be used with any of the Variant Global Conservation Status

Q Questionable taxonomy that may reduce conservation priority – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable; resolution of this uncertainty may result in change from a species to a subspecies or hybrid, or inclusion of this taxon or type in another taxon or type, with the resulting taxon having a lower-priority (numerically higher) conservation status rank. The “Q” modifier is only used at a global level and not at a national or subnational level.

The California Rare Plant Ranks

1A. Presumed extirpated in California and either rare or extinct elsewhere

1B. Rare or Endangered in California and elsewhere

2A. Presumed extirpated in California, but more common elsewhere

2B. Rare or Endangered in California, but more common elsewhere

3. Plants for which we need more information – Review list

4. Plants of limited distribution – Watch list

1A: Plants Presumed Extirpated in California and either rare or extinct elsewhere

The plants of Rank 1A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes those plant taxa that are both presumed extinct, as well as those plants which are presumed extirpated in California and rare elsewhere. A plant is extinct if it no longer occurs anywhere. A plant that is extirpated

from California has been eliminated from California, but may still occur elsewhere in its range.

1B: Plants Rare, Threatened or Endangered in California and Elsewhere

(Includes Rare Plant Ranks 1B.1, 1B.2, 1B.3)

The plants of Rank 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century. California Rare Plant Rank 1B plants constitute the majority of plant taxa tracked by the CNDDDB, with more than 1,000 plants assigned to this category of rarity.

2A: Plants Presumed Extirpated in California, but more common elsewhere

The plants of Rank 2A are presumed extirpated because they have not been seen or collected in the wild in California for many years. This rank includes only those plant taxa that are presumed extirpated in California, but that are more common elsewhere in their range. Note: Plants of both Rank 1A and 2A are presumed extirpated in California; the only difference is the status of the plants outside of the state.

2B: Plants Rare, Threatened or Endangered in California, but More Common Elsewhere

(Includes Rare Plant Ranks 2B.1, 2B.2 2B.3)

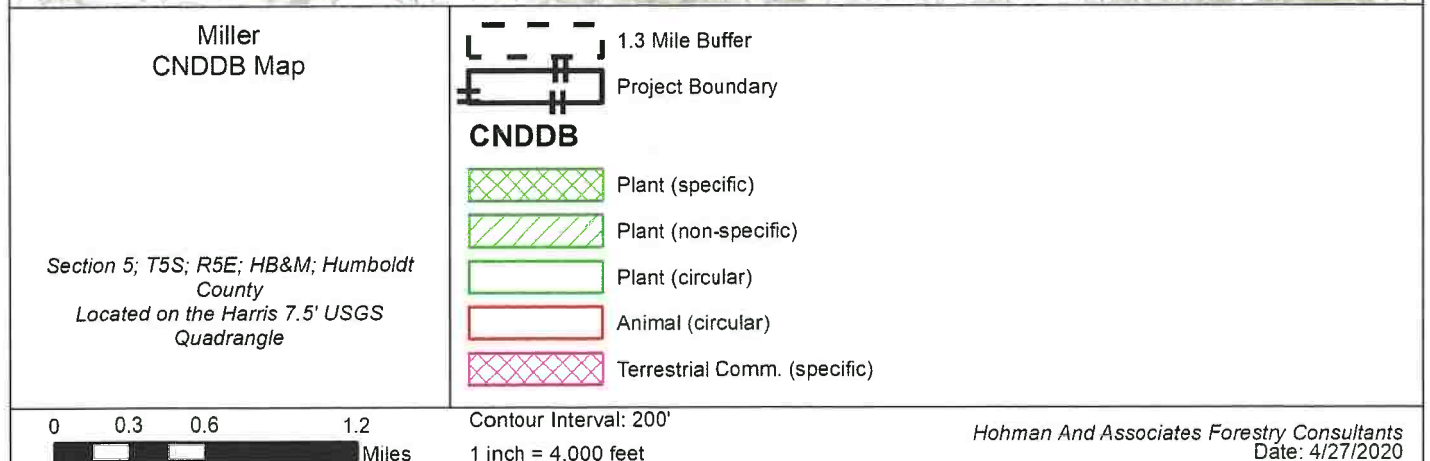
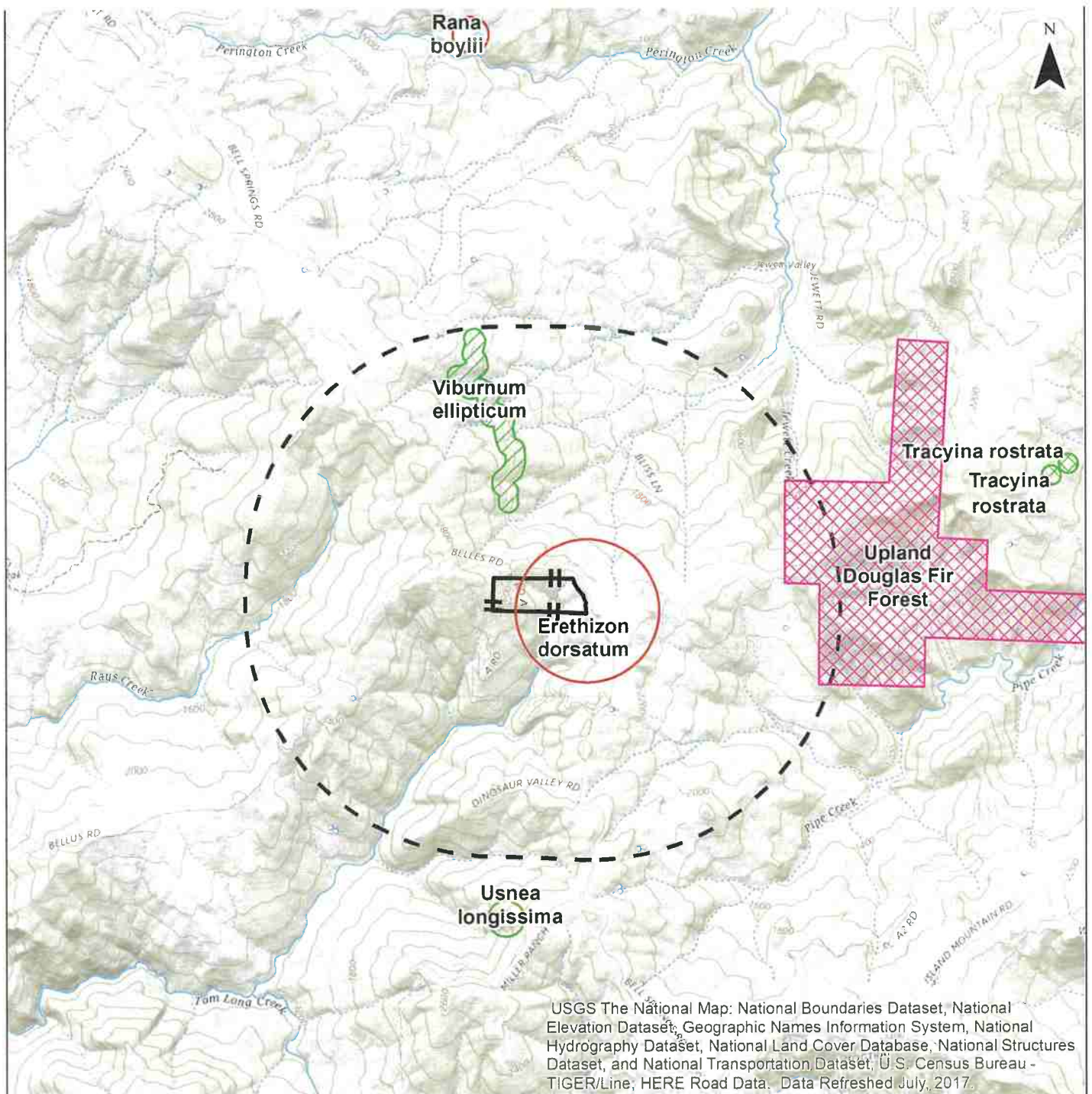
The plants of Rank 2B are rare, threatened or endangered in California, but more common elsewhere. Plants common in other states or countries are not eligible for consideration under the provisions of the Federal Endangered Species Act; however, they are eligible for consideration under the California Endangered Species Act. This rank is meant to highlight the importance of protecting the geographic range and genetic diversity of more widespread species by protecting those species whose ranges just extend into California. Note: Plants of both Rank 1B and 2B are rare, threatened or endangered in California; the only difference is the status of the plants outside of the state.

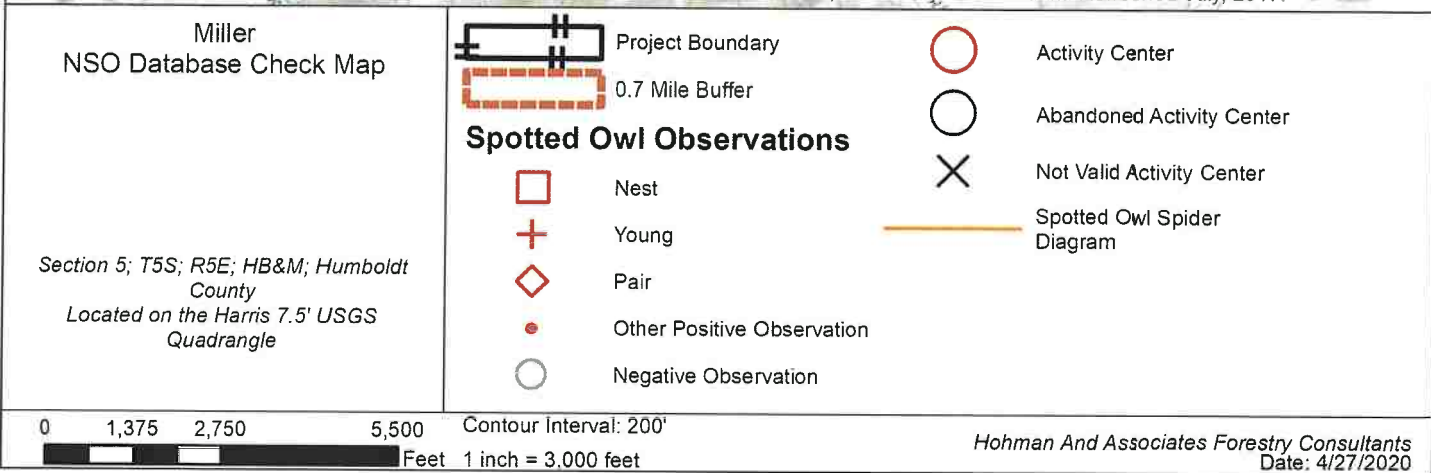
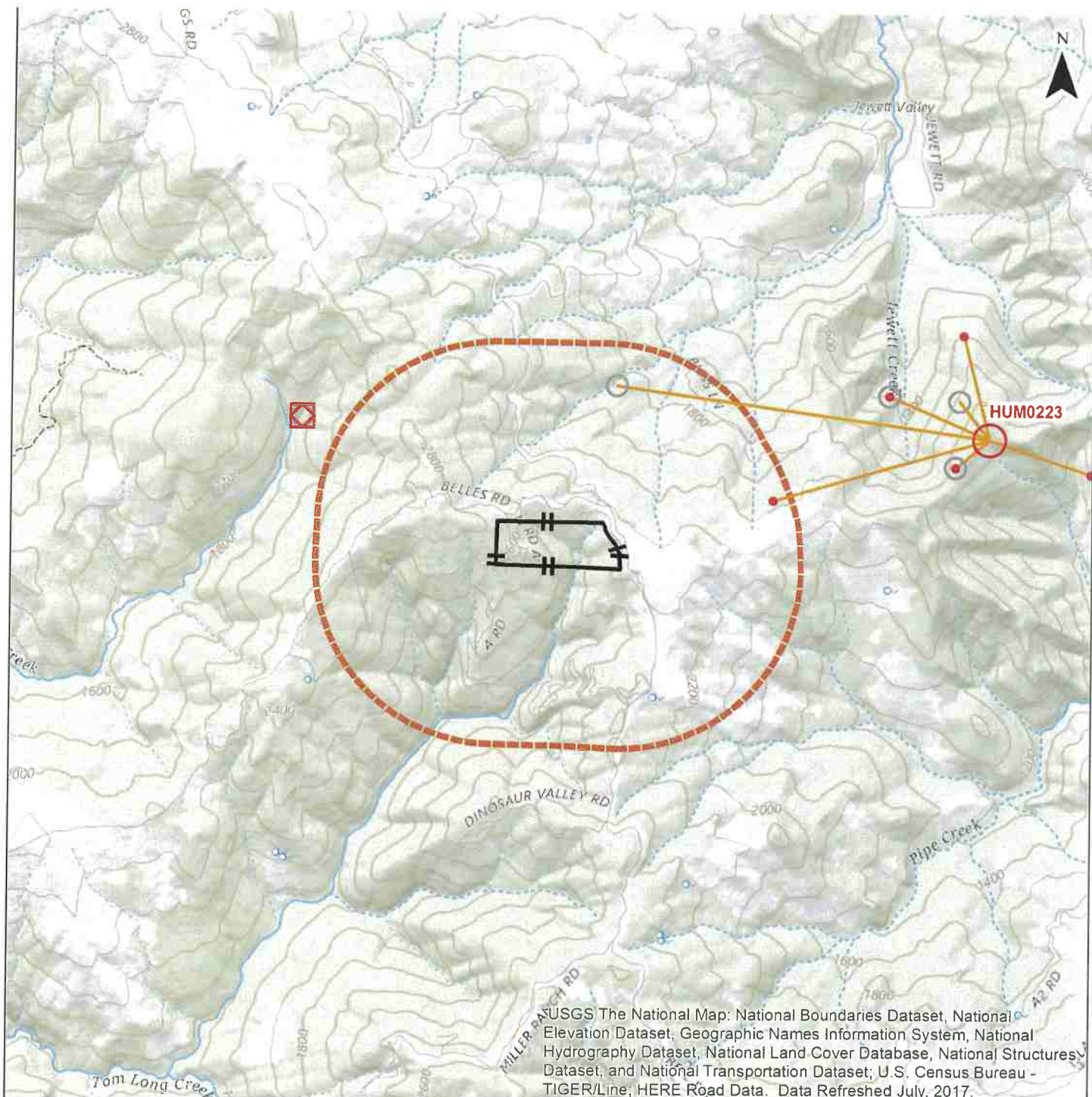
Threat Ranks:

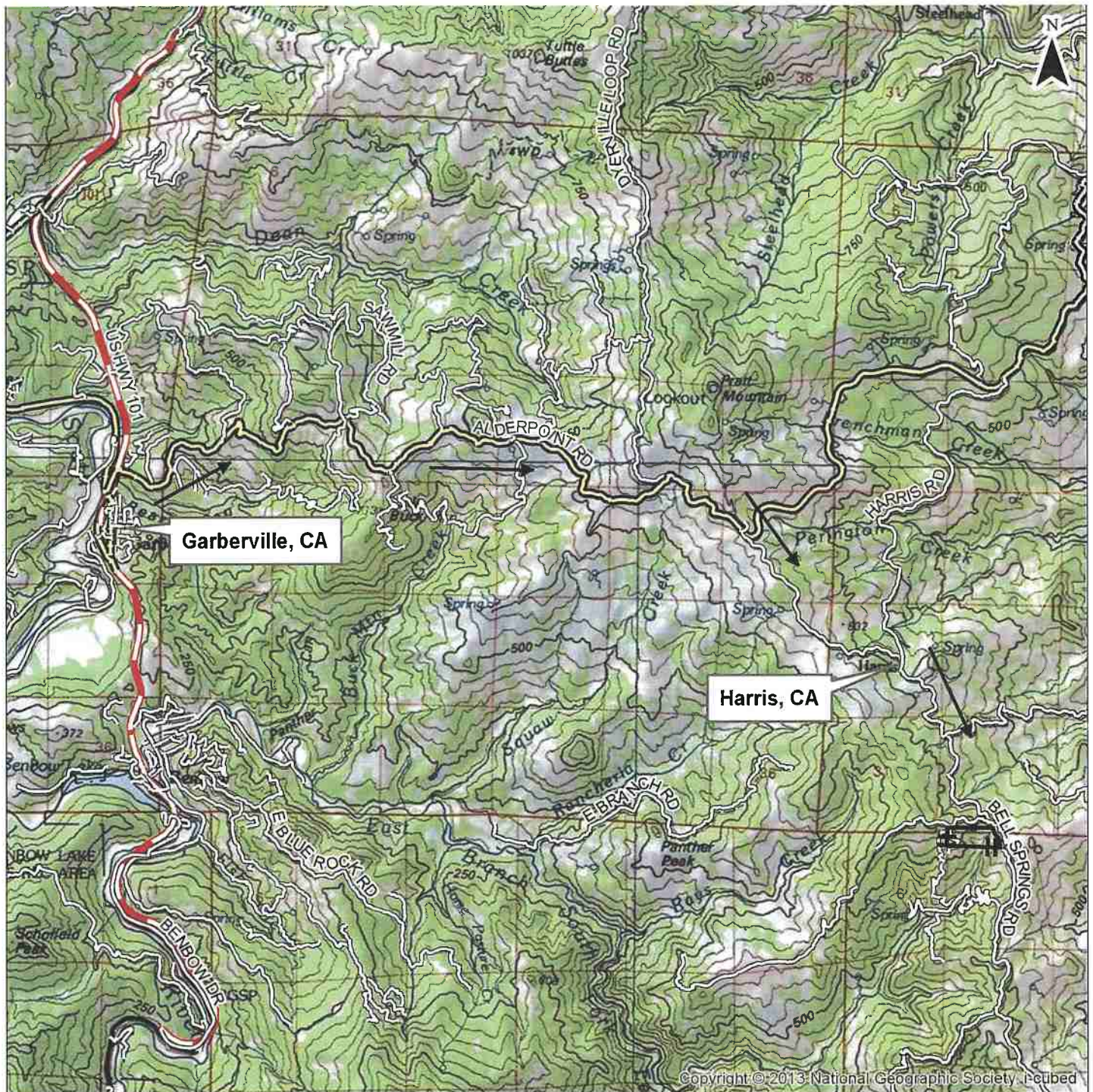
The California Rare Plant Ranks (CRPR) use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. So most CRPRs read as 1B.1, 1B.2, 1B.3, etc. Note that some Rank 3 plants do not have a threat code extension since there are no known extant populations of the plants in California.

Threat Code extensions and their meanings:

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







**Ashley Miller
Location Map**

- Travel Route
- Project Boundary
- Local Road
- Major Road
- Highway

Section 5; T5S; R5E; HB&M; Humboldt
County
Located on the Harris 7.5' USGS
Quadrangle

0 3,200 6,400 12,800 Contour Interval: NA
Feet 1 inch = 7,000 feet

Hohman And Associates Forestry Consultants
Date: 4/22/2020