Biological Report

App# 11841

APN 315-045-004

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Summary of Findings and Conclusion

The Project at parcel APN 315-045-004, located off of Titlow Hill Road near Willow Creek in Humboldt County, California (Figure 1), involves the development of Cannabis cultivation infrastructure.

This Biological Survey and Assessment reviews the Project at the above APN to determine to what extent wildlife species currently listed or proposed for listing would be affected. See Table 1 for a list of reviewed species.

No sensitive wildlife species were found within or near the Project area, though suitable potential habitat exists around the Project Site for species including southern torrent salamander (*Rhyacotriton variegatus),* Northern Spotted Owl (*Strix occidentalis caurina),* West Coast fisher *(Pekania pennanti),* hoary bat (*Lasiurus cinereus),* long-eared myotis (*Myotis evotis),* and western pond turtle (*Emys marmorata).* Based on field observations and review of biological databases, I have determined that the Project operations do not cause an immediate threat to protected species of concern, although ongoing maintenance is integral to preserving any project site that is free of wildlife hazards. The Project and its operations could have minimal effect on one or more of these species on the condition that they are present in the Project vicinity.

Summary of Mitigation Recommendations

Because cultivation was not occurring during the time of the survey, visible threats to wildlife and plant species were minimal and assessment of mitigation is mainly concerned with ongoing maintenance:

- Wildlife hazards such as loose netting and metal wire cages shall be stored in a way that will eliminate or minimize interaction with wildlife.
- Nutrients shall be properly stored in secondary containment.
- If further botanical and/or wildlife identification is required, an additional protocol-level survey will be conducted within the Project footprint and a surrounding buffer.

Introduction, Background and Project Understanding

The purpose of this Biological Report is to review the Project in sufficient detail to determine potential impacts to wildlife species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) or designated as sensitive by the California Department of Fish and Wildlife; these species are hereinafter referred to as special status species. Species with potential habitat present, or whose presence was not confirmed but potentially occur in the general area, are considered in further detail and include but are not limited to southern torrent salamander (*Rhyacotriton variegatus),* Northern Spotted Owl (*Strix occidentalis caurina),* West Coast fisher *(Pekania pennanti),* hoary bat (*Lasiurus cinereus),* long-eared myotis (*Myotis evotis),* western pond turtle (*Emys marmorata,* Mad River fleabane daisy (*Erigeron maniopotamicus),* Tracy's tarplant (*Hemizonia congesta ssp. tracyi),*Yolla Bolly Mtns. bird's-foot trefoil (*Hosackia yollabolliensis),* Howell's clover (*Trifolium howellii),* iskiyou checkerbloom (*Sidalcea malviflora ssp. patula),* Oregon fireweed (*Epilobium oreganum),* and Oregon goldthread (*Coptis laciniata).*

A biological survey of the Project area and the surrounding land and habitats was conducted to evaluate any potential habitat for special status plant or animal species or other environmental issues or concerns. Additionally, the Project area and surrounding areas were surveyed in order to assess and evaluate any threats to wildlife and to describe any presence of terrestrial and aquatic animals or plants occurring in and around the Project area. Particular attention was paid to identifying any indicators of the presence of previously noted special status species.

Project Site

The Project is located in Humboldt County APN 315-045-004, approximately fifteen miles southwest of the community of Willow Creek, off of Highway 299 in the vicinity of Redwood Creek in the Redwood Creek watershed. The latitude and longitude of the Project site is 40.7392N, and -123.6972W. This site has been assessed as eighty-four acres (84ac) and is zoned under both Timberland Production Zone (Zone "TPZ") and Agriculture Exclusive Zone (Zone "AE) the County of Humboldt zoning code. This parcel has elevations ranging from approximately four-thousand feet (4,000 ft.) along the southern border of the parcel, to approximately four-thousand-two-hundred-eighty-two feet (4,282 ft.) on a central peak within the property. The proposed cultivation areas are on existing grades less than %30. Cannabis cultivation is projected to occur within two small open areas surrounded by mixed conifer forest and native oak woodland in the northwest quadrant of the parcel.

Biological Description

The parcel is composed of a mainly mixed conifer forest with the exception of clearings for cultivation, access roads, natural meadows, as well as a PG&E easement. The proposed Project sites are located on existing flats surrounded by mixed conifer forest. Soils on the southern portion of the parcel, where cultivation will ultimately occur, are mapped as Mooncreek-Noisy-

Tossup complex, 9-30 percent slopes, characterized by very deep, well drained soils formed by colluvium and residuum from sandstone and mudstone. The remainder of the parcel is defined by the Mooncreek complex as well. Vegetative species associate with these soils include Douglas fir (*Pseudotsuga menzeiseii),* tanoak (*Notholithocarpus densiflorus)*, dwarf Oregon-grape (*Mahonia nervosa)*, bracken fern (*Pteridium)*, and modesty (*Whipplea modesta)*. Invasion by Douglas-fir and succession to forest is in progress in many areas. Other widely spread vegetation noted during the survey included Pacific madrone (*Arbutus menziesii)*, knobcone pine (*Pinus attenuate)*, Sierra gooseberry (*Ribes roezlii)*, and various wildflower species.

The project meets all riparian setback requirements; a tributary of Redwood creek is the nearest waterway and is approximately 50 ft. south of the southeastern Project Site. The intermittent seep that borders the southern end of northwestern Project Site meets the 100 ft. setback requirement.

Project Description

Previously, the Project site was used for the cultivation of cannabis and created and maintained by the landowner.

Delineation of cultivation placement is indicated in the Site Plan (Exhibit A). Cultivation is proposed to occur in two previously disturbed areas totaling 13,000 ft^2. Cultivation that will occur in northwesterly plot will be comprised of outdoor cultivation area 1 (CA1) totaling 1,200 ft^2 of cultivation, outdoor cultivation area 2 (CA2) totaling 997 ft^2 of cultivation, and greenhouse cultivation area 1 (GH1) totaling 2,400 ft^2. Cultivation Area 3 (CA3) will house 8,403 ft^2 of outdoor cultivation within the southeastern plot.

Protection from overuse of inputs and reuse of these soils shall be a key component of operations. All fertilizers and amendments shall be stored in a designated storage shed. All inputs stored in the shed will be housed in additional secondary containment containers. Measures will be taken to ensure environmental stewardship and watershed protection, including the use of cover crop, mulching, and laying seed and straw on exposed soils surrounding cultivation.

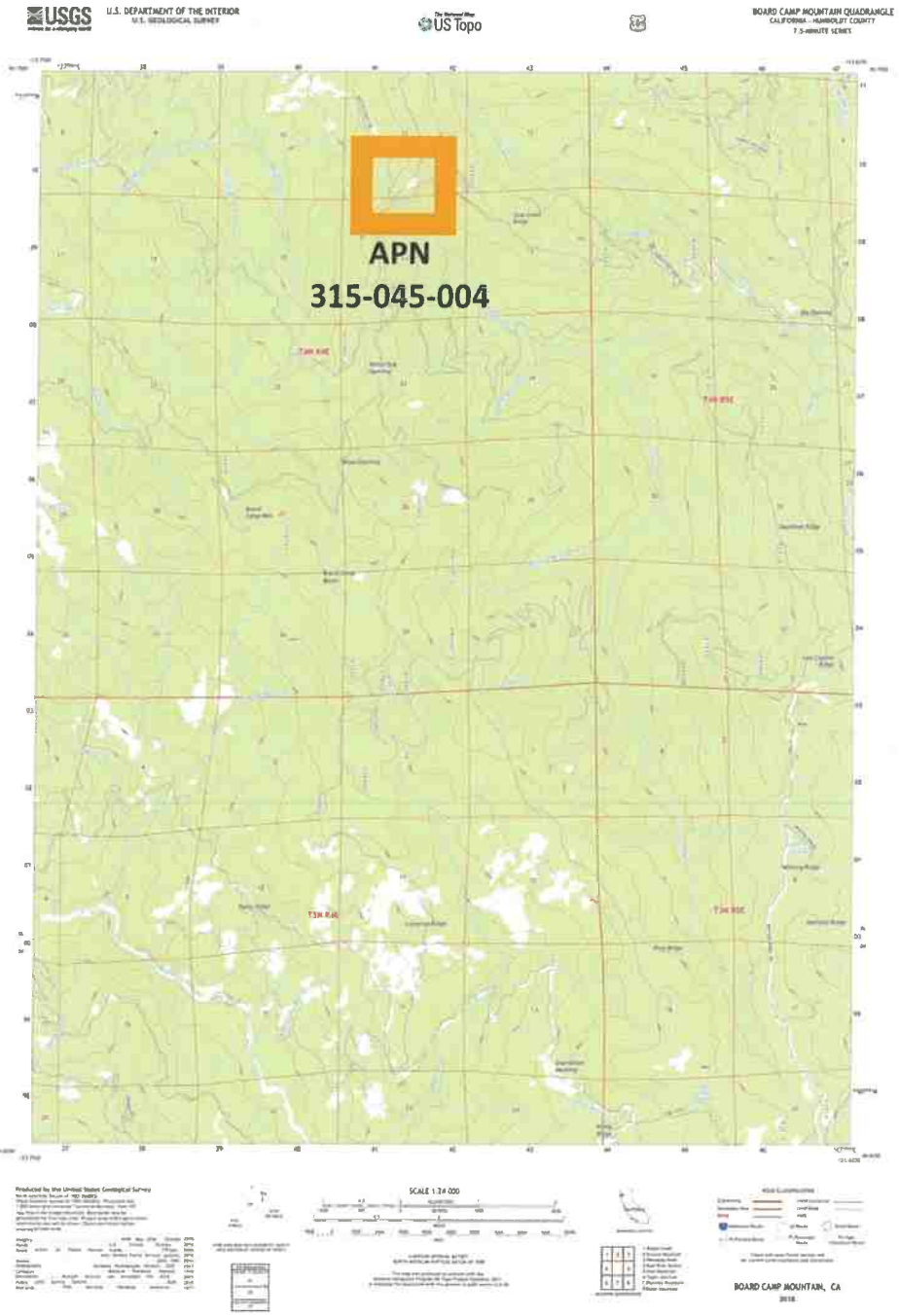

Figure 1: Vicinity Map for APN 315-045-004

Methods

Pre-Field Review

The methods used to develop this report include both field and office components. The field component consisted of a site visit to survey the Project site and surrounding areas for all special status species present, as well as collection of on-site photography and species sampling in said areas. A botanical survey of the Project area and surrounding land and habitats was conducted on May 4, 2020 to evaluate presence of potentially suitable habitat, for potential threat to, or any indications of, existing listed special status species.

Using the suggested interior NSO habitat retention buffer of 1.3 miles from the *Protocol Proposed Management Activities That May Impact Northern Spotted Owls* (USFW 2012), two Northern Spotted Owl (NSO) Activity Center were located within the vicinity of this project: HUM0192 and HUM0095 (Figure 2). The closest distance to the Project vicinity was calculated and is presented in Table 2.

Additional office components consisted of prior examination of the existing California Department of Fish and Wildlife (CDFW) California Natural Diversity Data BASE (CNDDB, 2020) 9-quad map review around the Project site to determine which special status species may occur within the Project area and to compile a target animal species list, examination of United States Department of Agriculture (USDA) Natural Resources Conservation Service Web soil Service (USDA, 2019), GIS mapped field data, review of California Native Plant Society (CNPS), review of on-site photography points, general planning, and review of information gathered from the applicant, which was presented for inclusion in this report.

Table 1. CNDDB list of potential special status wildlife species listed in the Board Camp Mountain nine-quadrant area

Scientific Name	Common Name	Fed/State Listing
AMPHIBIANS		
Ascaphus truei	Pacific tailed frog	Species of Special Concern
Plethodon elongatus	Del Norte salamander	Watch List
Rana aurora	northern red-legged frog	Species of Special Concern
Rana boylii	foothill yellow-legged frog	Candidate Endangered, Species of Special Concern
Rhyacotriton variegatus	southern torrent salamander	Species of Special Concern
BIRDS		
Accipiter cooperii	Cooper's hawk	Watch List
Accipiter gentilis	northern goshawk	Species of Special Concern
Aquila chrysaetos	golden eagle	Federally Protected, Watch list
Haliaeetus leucocephalus	bald eagle	Endangered, Federally Protected
Charadrius montanus	mountain plover	Species of Special Concern
Icteria virens	yellow-breasted chat	Species of Special Concern
Pandion haliaetus	osprey	Watch List
Ammodramus savannarum	grasshopper sparrow	Species of Special Concern
Sphyrapicus ruber	red-breasted sapsucker	None

Psiloscops flammeolus	flammulated owl	None
Strix occidentalis caurina	Northern Spotted Owl	Threatened
Contopus cooperi	olive-sided flycatcher	Species of Special Concern
Entosphenus tridentatus	Pacific lamprey	Species of Special Concern
Oncorhynchus clarkii clarkii	coast cutthroat trout	Species of Special Concern
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	Species of Special Concern
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Threatened
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	Candidate Endangered, Species of Special Concern
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Threatened
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	Candidate Endangered, Species of Special Concern
Bombus caliginosus	obscure bumble bee	None
INSECTS		
Bombus occidentalis	western bumble bee	Candidate Endangered
MAMMALS		
Erethizon dorsatum	North American porcupine	None
Arborimus pomo	Sonoma tree vole	None
Martes caurina humboldtensis	Humboldt marten	Endangered, Species of Special Concern
Pekania pennanti	fisher - West Coast DPS	Threatened, Species of Special Concern
Taxidea taxus	American badger	Species of Special Concern
Corynorhinus townsendii	Townsend's big-eared bat	Species of Special Concern
Lasionycteris noctivagans	silver-haired bat	None
Lasiurus cinereus	hoary bat	None
Myotis evotis	long-eared myotis	None
Myotis lucifugus	little brown bat	None
Myotis thysanodes	fringed myotis	None
Myotis volans	long-legged myotis	None
Myotis yumanensis	Yuma myotis	None
MOLLUSKS		
Monadenia infumata ochromphalus	yellow-based sideband	None
Monadenia infumata setosa	Trinity bristle snail	Threatened
Ancotrema voyanum	hooded lancetooth	None
Margaritifera falcata	western pearlshell	None
Gonidea angulata	western ridged mussel	None
Emys marmorata	western pond turtle	Species of Special Concern
COMMUNITY-AQUATIC		
North Central Coast Summer Steelhead Stream	North Central Coast Summer Steelhead Stream	None
COMMUNITY-TERRESTRIAL		
Upland Douglas Fir Forest	Upland Douglas Fir Forest	None
BRYOPHYTES		
Buxbaumia viridis	buxbaumia moss	2B.2
Ptilidium californicum	Pacific fuzzwort	4.3
LICHENS		
Usnea longissima	Methuselah's beard lichen	4.2
Ramalina thrausta	angel's hair lichen	2B.1
VASCULAR PLANTS		
Allium siskiyouense	Siskiyou onion	4.3
Sanicula tracyi	Tracy's sanicle	4.2
Antennaria suffrutescens	evergreen everlasting	4.3
Arnica cernua	serpentine arnica	4.3
Calycadenia micrantha	small-flowered calycadenia	1B.2
Erigeron maniopotamicus	Mad River fleabane daisy	1B.2
Erigeron robustior	robust daisy	4.3
Eucephalus glabratus	Siskiyou aster	4.3

Hemizonia congesta ssp. tracyi	Tracy's tarplant	4.3
Microseris borealis	northern microseris	2B.1
Packera bolanderi var. bolanderi	seacoast ragwort	2B.2
Wyethia longicaulis	Humboldt County wyethia	4.3
Cornus canadensis	bunchberry	2B.2
Sedum laxum ssp. flavidum	pale yellow stonecrop	4.3
Carex arcta	northern clustered sedge	2B.2
Carex geyeri	Geyer's sedge	4.2
Carex praticola	northern meadow sedge	2B.2
Astragalus rattanii var. rattanii	Rattan's milk-vetch	4.3
Astragalus umbraticus	Bald Mountain milk-vetch	2B.3
Hosackia yollabolliensis	Yolla Bolly Mtns. bird's-foot trefoil	1B.2
Lathyrus glandulosus	sticky pea	4.3
Lupinus elmeri	South Fork Mountain lupine	1B.2
Thermopsis robusta	robust false lupine	1B.2
Trifolium howellii	Howell's clover	4.3
Ribes laxiflorum	trailing black currant	4.3
Erythronium oregonum	giant fawn lily	2B.2
Erythronium revolutum	coast fawn lily	2B.2
Fritillaria glauca	Siskiyou fritillaria	4.2
Fritillaria purdyi	Purdy's fritillary	4.3
Lilium kelloggii	Kellogg's lily	4.3
Lilium pardalinum ssp. vollmeri	Vollmer's lily	4.3
Lilium rubescens	redwood lily	4.2
Lilium washingtonianum ssp. purpurascens	purple-flowered Washington lily	4.3
Lycopodium clavatum	running-pine	4.1
Iliamna latibracteata	California globe mallow	1B.2
Sidalcea malachroides	maple-leaved checkerbloom	4.2
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1B.2
Sidalcea oregana ssp. eximia	coast checkerbloom	1B.2
Pityopus californicus	California pinefoot	4.2
Claytonia serpenticola	serpentine spring beauty	4.3
Montia howellii	Howell's montia	2B.2
Epilobium oreganum	Oregon fireweed	1B.2
Epilobium septentrionale	Humboldt County fuchsia	4.3
Botrypus virginianus	rattlesnake fern	2B.2
Cypripedium californicum	California lady's-slipper	4.2
Cypripedium fasciculatum	clustered lady's-slipper	4.2
Cypripedium montanum	mountain lady's-slipper	4.2
Listera cordata	heart-leaved twayblade	4.2
Piperia candida	white-flowered rein orchid	1B.2
Platanthera stricta	slender bog-orchid	4.2
Kopsiopsis hookeri	small groundcone	2B.3
Erythranthe trinitiensis	pink-margined monkeyflower	1B.3
Glyceria grandis	American manna grass	2B.3
Pleuropogon refractus	nodding semaphore grass	4.2
Collomia tracyi	Tracy's collomia	4.3
Gilia capitata ssp. pacifica	Pacific gilia	1B.2
Leptosiphon acicularis	bristly leptosiphon	4.2
Navarretia leucocephala ssp. bakeri	Baker's navarretia	1B.1
Coptis laciniata	Oregon goldthread	4.2
Rosa gymnocarpa var. serpentina	Gasquet rose	1B.3
Sanguisorba officinalis	great burnet	2B.2
Bensoniella oregona	bensoniella	1B.1
Chrysosplenium glechomifolium	Pacific golden saxifrage	4.3
Micranthes marshallii	Marshall's saxifrage	4.3
Mitellastra caulescens	leafy-stemmed mitrewort	4.2
Tiarella trifoliata var. trifoliata	trifoliate laceflower	3.2

Table 2. NSO activity centers in the vicinity of APN 315-045-004

NSO Activity Center	Last Reported Observations	Approximate Distance to Project Area (miles)
HUM0192	2007	.975
HUM0095	2003	1.13

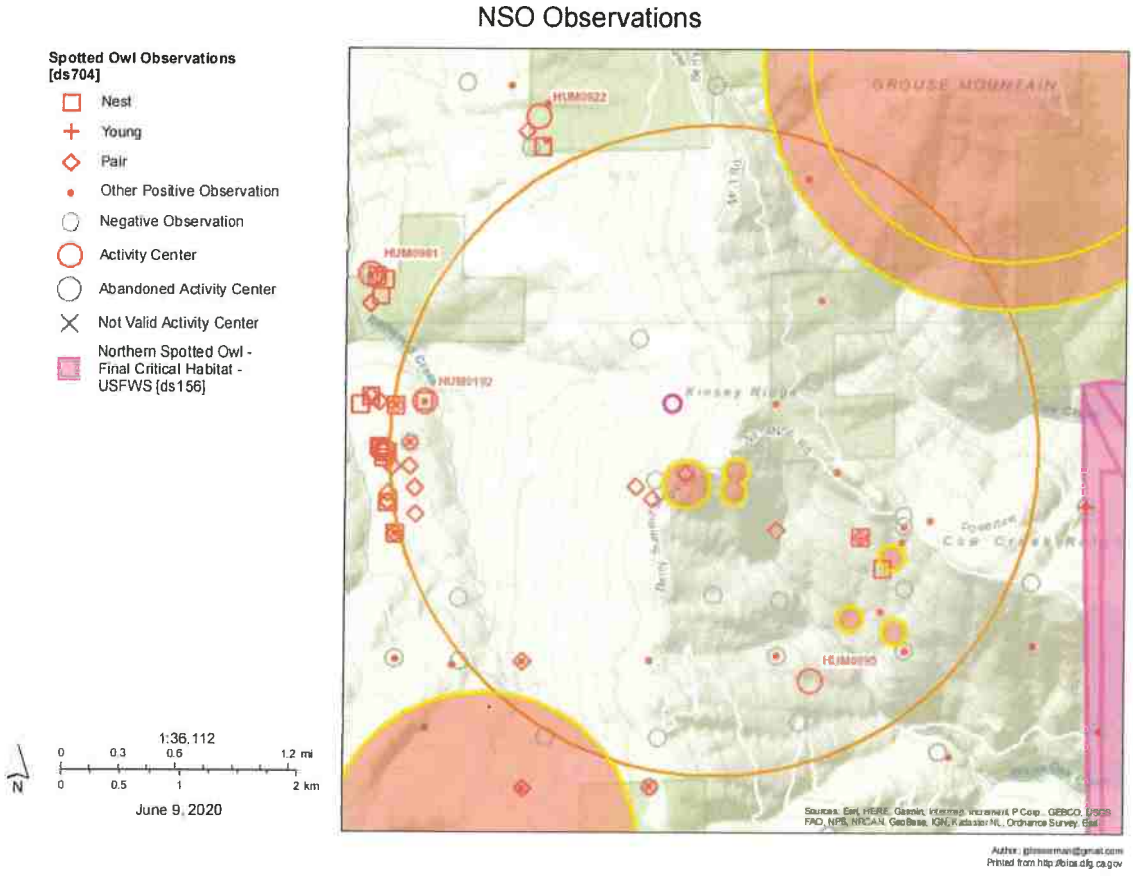

Figure 2: CNDDB Map of Northern Spotted Owl Historic ACs in Project Vicinity

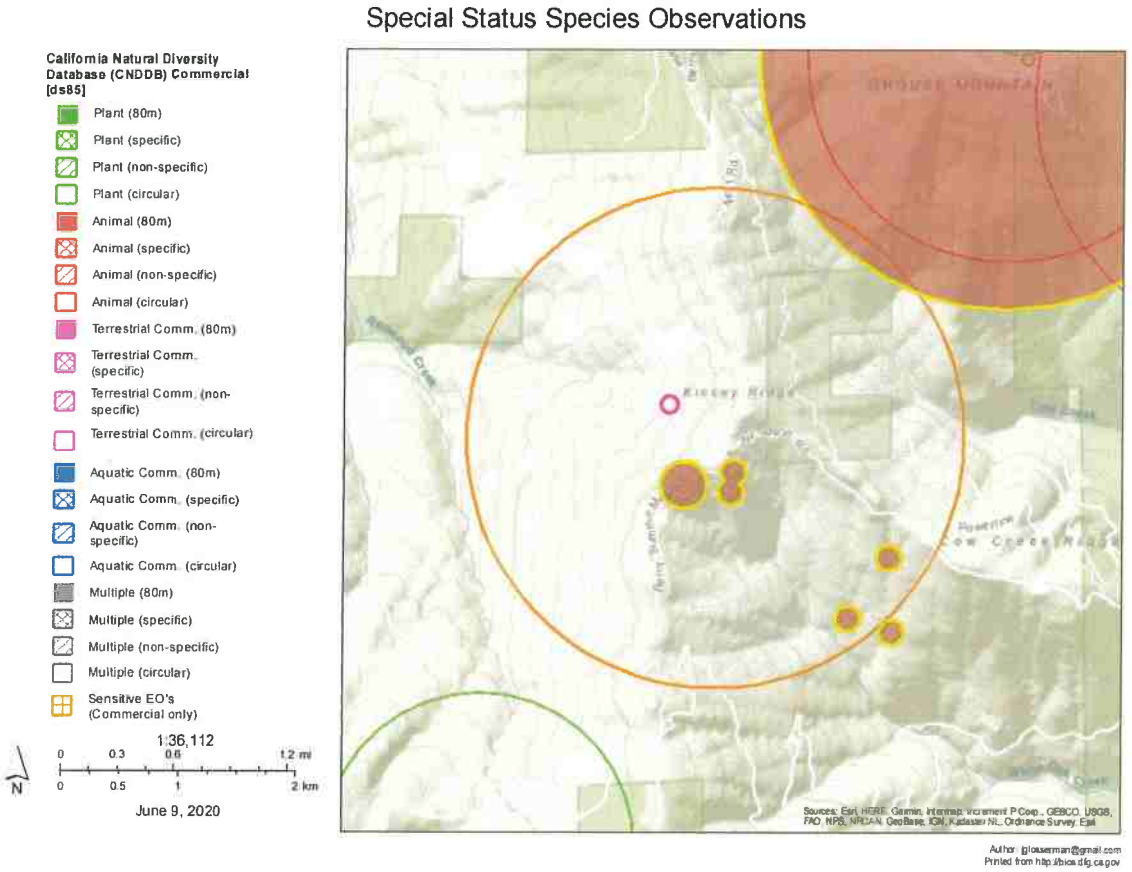

Figure 3: CNDDB Map of Special Status Species Observations in Project Vicinity

Field Survey

On May 4 2020, environmental scientists Mika Cook and Julia Glosserman conducted a two-hour site visit on a sunny (~65°F), clear, morning, to survey the Project site and surrounding area for all sensitive and special status species potentially present. Mika Cook holds a B.A. degree in Conservation Resource Studies from the College of Natural Resources at University of California Berkeley. While walking the area all audible detections of bird and mammal species were noted and the entire area traversed (an approximate 200-foot buffer around the proposed Project area, roads, and other active areas) and scanned for signs of wildlife (tracks and scat). In addition, trees were inspected for activity or signs of use by wildlife (cavities, nests, scrapes or accumulated vegetation) and vegetation was identified.

The Project site was also inspected for signs of hazards towards wildlife such as netting and caging, and improper storage of nutrients and generators.

Results and Discussion

Summary of Findings

For all of the species discussed, direct effects are those which are caused by the action, such as the project, and occur at the same time and place. Indirect effects are defined as those effects caused by the proposed Project and occur later in time from it, but still reasonably certain to occur. There were no listed wildlife species or special status species detected during the survey and very limited detections of wildlife hazards in or around the Project site as discussed later in further detail. Potential of occurrence and/or threat to special status and species of interest are presented in Table 3. Impacts to species from the proposed Project area, either directly or indirectly, are expected to be minimal as noise and light pollution will not occur on the parcel, and no areas will be further disturbed due to cultivation activities. The Project area is outside of NSO critical Habitat range, as evident in Figure 2 and no trees will be removed, minimizing impacts to potential NSO foraging-quality habitat around the Project area.

Survey Results and Discussion

The Project areas area located in on previously disturbed areas surrounded by sloped mixed conifer forest and scattered oak woodland. Examination of the forested area surrounding the Project site, access roads, and other areas of activity revealed appropriate potential habitat for special status wildlife species including the southern torrent salamander (*Rhyacotriton variegatus),* Northern Spotted Owl (*Strix occidentalis caurina)*, West Coast fisher *(Pekania pennanti),* hoary bat (*Lasiurus cinereus),* long-eared myotis (*Myotis evotis),* western pond turtle (*Emys marmorata)*. Potential habitats were delineated during the survey through careful examination of ecosystems in conjunction with information from CDFW's wildlife life history accounts, which describe each species' particular habitat and set of needs as discussed in Table 3. Though no signs of these species were detected during the time of the survey, their potential to occur in these areas is still moderate to high, depending on the species. The dense foliage and composition of the forest surrounding the Project site could be particularly suitable nesting habitat for the noted bat species as well as foraging/roving territory for several bird species, namely the NSO. Additionally, the existence of the spring could provide suitable habitat for the southern torrent salamander and western pond turtle. However, due to the fact that no trees will be removed on the parcel, that the spring will remain undisturbed and is outside of the riparian setback requirements, and that the proposed cultivation area is previously disturbed, the Project will have low risk impacts on previously noted species or current/potentially suitable habitats for said species, should they be present.

NSO activity has been reported as recently as 2011 and as far back as 1978 (Table 2). There are two Activity Centers (AC) within the 1.3-mile buffer zone of the Project area as seen in Figure 3. All ACs were established with reports of both male and female NSOs utilizing the neighboring habitat (CDFW 2020). Detections noted as "pair detections" denote years when both male and

female NSOs were detected, and not necessarily that mating pairs were detected as that information is not made readily available by CDFW. ACs HUM0095 and HUM0012 are the closest in proximity to the Project site at 1.13 and .975 miles away, and the only ACs within the buffer zone. Proximity to NSO AC HUM0095 and HUM0012 suggests that the surrounding habitats of the Project site may still be actively inhabited and used by resident NSOs. Potential threat to NSOs, however, is low due to the lack of noise and light pollution on the parcel, as well as lack of plans for tree removal. Additionally, the parcel is out of NSO critical habitat range, thereby minimizing risk to the NSO.

The CNDDB list of special status plant species in the 9-quad area was examined and all plants were thoroughly inspected to ensure the absence of the special status and listed species. Additionally, querying of the California Native Plant Society's Inventory of Rare and Endangered Plants of California database and the NatureServe Explorer Online Encyclopedia of Life was performed in order to delineate specific habitats for each plant species so that they could be indicated during the time of the survey. No threatened plants were detected, but examination of the Project site and surrounding forest indicated potentially suitable habitat for a number of plant species that may reside in lower montane coniferous forests, cismontane woodland, openings, and/or North Coast coniferous forest. Among these species are Mad River fleabane daisy (*Erigeron maniopotamicus)*, Tracy's tarplant (*Hemizonia congesta ssp. tracyi)*,Yolla Bolly Mtns. bird's-foot trefoil (*Hosackia yollabolliensis),* Howell's clover (*Trifolium howellii),* Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula),* Oregon fireweed (*Epilobium oreganum),* and Oregon goldthread (*Coptis laciniata).* Though no signs of these species were detected during the time of the survey, their potential to occur in these areas is still moderate to high, depending on the species. Is unlikely that sensitive species that tend to grow in open areas are at risk, as they are unlikely to grow within the Project sites due to the pre-disturbed nature of the sites. Special status plant species that may occur in the surrounding forested areas are at low risk of threat as human activity in these areas will be scarce.

A CNDDB database search for all special status species within a 1-mile radius of the Project site revealed records for North American Porcupine (*Erethizon dorsatum),* Oregon fireweed (*Epilobium oreganum),* and Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula),* as evident in Figure 3. None of the noted species were distinguished upon examination of the Project Site, nor are they likely to flourish within the habitat, mainly due to pre disturbance of the area. Though suitable habitat exists adjacent to the southeastern cultivation area for the North American Porcupine, activities will pose low risk to that environment.

The Project is outside of the riparian setback requirements. Water usage will be monitored and recorded on a monthly basis. Operations shall utilize controlled hand watering to ensure no overuse of water. A detailed monthly schedule of watering activities will be developed and conspicuously posted on-site, to ensure compliance to water regulations. These practices should minimize the direct and/or indirect runoff effects on fish and amphibians in nearby streams.

The Project does not plan on using power for cultivation related or other purposes, eliminating any need for generator use and thereby minimize threats of noise disturbance to special status

wildlife communities, namely the NSO. Nor is the Project projected to use mixed-light cultivation, which would additionally minimize direct and indirect effects of light pollution on wildlife species. Furthermore, the Project site will not be fenced, allowing free flowing movement of any terrestrial wildlife that may traverse the area. There will be no rodenticides used on site, further minimizing threat to wildlife species in or around the Project area.

Special status and additional species of interest, and the potential for Project impacts, are presented in Tables 2 below. The site is defined as the Project footprint and surrounding area to approximately 200 feet from Project as well as access roads; species are considered on a case-by-case basis as to the project's effect based on considerations such as home range, habitat and sensitivity to disturbance.

Table 3. List of special status species and other listed species with assessment of potential impacts by project.

Scientific Name	Common Name	Fed/State Listing	General Habitat Description	Potential Occurrence/ Suitable Habitat Ranking	Potential for Effect Ranking
AMPHIBIANS					
Ascaphus truei	Pacific tailed frog	SSC	Montane hardwood-conifer, redwoods, Douglas-fir & ponderosa pine	Medium	Low
Plethodon elongatus	Del Norte salamander	WL	Strongly associated with moist talus and rocky substrates, in redwood or Douglas-fir forests, including riparian zones. Usually found among moss-covered rocks, under bark and other forest litter, or in crevices in rotting logs	Medium	Low
Rana aurora	northern red-legged frog	SSC	Quiet pools of streams, marshes, and occasionally ponds, usually below 3936 ft.	Medium	Low
Rana boylii	foothill yellow-legged frog	CE, SSC	In or near rocky streams in a variety of habitats, including valley-foothill hardwood, valley-foothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types	Medium	Low
Rhyacotriton variegatus	southern torrent salamander	SSC	Coastal forests of northwestern California south to Point Arena in Mendocino, cold, well-shaded permanent streams and spring seepages in redwood, Douglas fir, mixed conifer, montane riparian and montane hardwood-conifer habitats, under 3940 ft.	High	Low
BIRDS					
Accipiter cooperii	Cooper's hawk	WL	Mixed woodland, conifer forest, Hardwood, Suburban/orchard nests in Douglas firs	Medium	Low
Accipiter gentilis	northern goshawk	SSC	Prefers middle and higher elevations, and mature, dense conifer forests, along north coast, throughout foothills, and in northern deserts, where it may be found in pinyon-juniper and low-elevation riparian habitats.	Low	Low
Aquila chrysaetos	golden eagle	FP, WL	Rolling foothills, mountain areas, sage-juniper flats, and deserts, large trees in open areas; cliff walled canyons provide nesting habitat in most parts of range	Low	Low
Haliaeetus leucocephalus	bald eagle	E, FP	Lower elevations, requires large bodies of water, free flowing rivers with abundant fish, and adjacent snags or other perches; requires large, old-growth trees or snags in remote, mixed stands near water	Low	Low

Charadrius montanus	mountain plover	SSC	Open plains with low, herbaceous or scattered shrub vegetation, avoids high and dense cover, winters below 3200 ft.	Low	Low
Icteria virens	yellow-breasted chat	SSC	Second growth, shrubby old pastures, thickets, bushy areas, scrub, woodland undergrowth, and fence rows, including low wet places near streams, pond edges, or swamps; thickets with few tall trees; early successional stages of forest regeneration; commonly in sites close to human habitation	Medium	Low
Pandion haliaetus	osprey	WL	Large, fish-bearing waters, primarily in ponderosa pine through mixed conifer habitats, uses large snags and open trees near large bodies of water	Low	Low
Ammodramus savannarum	grasshopper sparrow	SSC	Old field, grassland, prefer grasslands of intermediate height and are often associated with clumped vegetation interspersed with patches of bare ground	Low	Low
Sphyrapicus ruber	red-breasted sapsucker	None	Mixed hardwood conifer forest, Aspen-pine association and coniferous forest, including humid coastal lowlands	Low	Low
Psiloscops flammeolus	flammulated owl	None	A variety of coniferous habitats from ponderosa pine to red fir forests; montane regions from 6,000-10,000 ft elevation; prefers low intermediate canopy closure	Low	Low
Strix occidentalis caurina	Northern Spotted Owl	T	Dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 7600 ft	High	Low
Contopus cooperi	olive-sided flycatcher	SSC	Various forest and woodland habitats: taiga, subalpine coniferous forest, mixed coniferous-deciduous forest, burned-over forest, spruce or tamarack bogs and other forested wetlands, and along the forested edges of lakes, ponds, and streams	Medium	Low
FISH					
Entosphenus tridentatus	Pacific lamprey	SSC	Freshwater, river mouth, tidal river, bay	Low	Low
Oncorhynchus clarkii clarkii	coast cutthroat trout	SSC	Freshwater, river mouth, tidal river, bay	Low	Low
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	T	Small coastal streams, as well as larger rivers, low gradient reaches of tributary streams	Low	Low
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	SSC	Pacific coast streams	Low	Low
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	T	Pacific coast streams	Low	Low
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	CE, SSC	Pacific coast streams	Low	Low
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	T	Coastal streams from Cape Blanco in Oregon south to the Klamath River	Low	Low
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	CE, SSC	Freshwater, river mouth, tidal river, bay	Low	Low
INSECTS					
Bombus caliginosus	obscure bumble bee	None	Open grassy coastal prairies and coast range meadows	Low	Low
Bombus occidentalis	western bumble bee	CE	Open coniferous, deciduous and mixed-wood forests, wet and dry meadows, montane meadows and prairie grasslands, meadows bordering riparian zones, and along roadsides in taiga adjacent to wooded areas	Medium	Low
MAMMALS					

Erethizon dorsatum	North American porcupine	None	Montane conifer and wet meadow habitats	Medium	Low
Arborimus pomo	Sonoma tree vole	None	Old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood-conifer habitats of the north coast fog belt	High	Low
Martes caurina humboldtensis	Humboldt marten	E, SSC	Favors old-growth, conifer-dominated forests with dense shrub cover in large, contiguous patches.	Low	Low
Pekania pennanti	fisher - West Coast DPS	T, SSC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure	High	Low
Taxidea taxus	American badger	SSC	Drier open stages of most shrub, forest, and herbaceous habitats, with friable soils	Low	Low
Corynorhinus townsendii	Townsend's big-eared bat	Species of Special Concern	Throughout California in all but subalpine and alpine habitats; most common in mesic sites; requires caves, mines, tunnels, buildings, or other human-made structures for roosting	Low	Low
Lasionycteris noctivagans	silver-haired bat	None	Coastal and montane forests; roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark, feeding over streams	Medium	Low
Lasiurus cinereus	hoary bat	None	Woodlands and forests with medium to large-size trees and dense foliage; open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding sea level to 13,200 ft.	High	Low
Myotis evotis	long-eared myotis	None	Brush, woodland, and forest habitats, from sea level to at least 9,000 ft., coniferous woodlands and forests seem to be preferred; roosts in buildings, crevices, spaces under bark, and snags.	High	Low
Myotis lucifugus	little brown bat	None	Mid- to high-elevation forests. Fairly common in sagebrush, bitterbrush, alkali desert scrub, wet meadow, and montane chaparral	Low	Low
Myotis thysanodes	fringed myotis	None	Pinyon-juniper, valley foothill hardwood, and hardwood- conifer; generally at 4000-7000 ft; Roosts in caves, mines, buildings, and crevices; uses open habitats, streams, lakes, and ponds as foraging area	Low	Low
Myotis volans	long-legged myotis	None	This species is most common in woodland and forest habitats above 4000 ft; Also forages in chaparral, coastal scrub, Great Basin shrub habitats, and in early successional stages of woodlands and forests.	Medium	Low
Myotis yumanensis	Yuma myotis	None	Found in a wide variety of habitats ranging from sea level to 11,000 ft, but it is uncommon to rare above 8000 ft; Optimal habitats are open forests and woodlands with sources of water over which to feed	Low	Low
			MOLLUSKS		
Monadenia infumata ochromphalus	yellow-based sideband	None	Old growth and riparian associate found on leaves, sticks, concrete wall of irrigation ditches and mossy boulders and stones	Low	Low
Monadenia infumata setosa	Trinity bristle snail	T	Cool, wet, shade, riparian zones with deciduous understory	Low	Low
Ancotrema voyanum	hooded lancetooth	None	Near streams or intermittent stream channels where substrate is permanently damp	Low	Low
Margaritifera falcata	western pearlshell	None	Freshwater, prefers cold clean creeks and rivers that support salmonid populations	Low	Low
Gonidea angulata	western ridged mussel	None	Freshwater, inhabits creeks and rivers of all sizes and can be found on substrates varying from firm mud to coarse particles	Low	Low
Emys marmorata	western pond turtle	SSC	Associated with permanent or nearly permanent water in a wide variety of suitable aquatic habitat types	High	Low
			COMMUNITY-AQUATIC		
North Central Coast Summer Steelhead Stream	North Central Coast Summer Steelhead Stream	None		Low	Low
			COMMUNITY-TERRESTRIAL		

Upland Douglas Fir Forest	Upland Douglas Fir Forest	None		Low	Low
BRYOPHYTES					
Buxbaumia viridis	buxbaumia moss	2B.2	Fallen, decorticated wood or humus; lower and upper montane coniferous forests, subalpine coniferous forest	Medium	Low
Ptilidium californicum	Pacific fuzzwort	4.3	Usually epiphytic on trees, fallen and decaying logs, and stumps; rarely on humus over boulders; lower and upper montane coniferous forests	Medium	Low
LICHENS					
Usnea longissima	Methuselah's beard lichen	4.2	Habitat occurs near year-round water or in fog zones	Low	Low
Ramalina thrausta	angel's hair lichen	2B.1	Habitat occurs along water or fog zones	Low	Low
VASCULAR PLANTS					
Allium siskiyouense	Siskiyou onion	4.3	Rocky, sometimes serpentinite; lower and upper montane coniferous forests	Low	Low
Sanicula tracyi	Tracy's sanicle	4.2	Openings; lower and upper montane coniferous forests, cismontane woodland	Medium	Medium
Antennaria suffrutescens	evergreen everlasting	4.3	Lower montane coniferous forests	Low	Low
Arnica cernua	serpentine arnica	4.3	Lower montane coniferous forests (serpentinite)	Low	Low
Calycadenia micrantha	small-flowered calycadenia	1B.2	Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas; chaparral, meadows and seeps (volcanic), valley and foothill grassland	Low	Low
Erigeron maniopotamicus	Mad River fleabane daisy	1B.2	Open, disturbed areas (road cuts); rocky; lower montane coniferous forest, meadows and seeps (open, dry)	High	Medium
Erigeron robustior	robust daisy	4.3	Sometimes serpentinite; lower montane coniferous forest, meadows and seeps	Medium	Medium
Eucephalus glabratus	Siskiyou aster	4.3	Rocky openings, lower and upper montane coniferous forests	Low	Low
Hemizonia congesta ssp. tracyi	Tracy's tarplant	4.3	Openings, sometimes serpentinite; coastal prairie, lower montane coniferous forest, north coast coniferous forest	High	Low
Microseris borealis	northern microseris	2B.1	Bogs and fens, lower montane coniferous forest, meadows and seeps	Medium	Low
Packera bolanderi var. bolanderi	seacoast ragwort	2B.2	North coast coniferous forest, coastal shrub, sometimes roadsides	Medium	Low
Wyethia longicaulis	Humboldt County wyethia	4.3	Broadleafed upland forest, coastal prairie, lower montane coniferous forest	Low	Low
Cornus canadensis	bunchberry	2B.2	Bogs and fens, meadows and seeps north coast coniferous forest	Medium	Medium
Sedum laxum ssp. flavidum	pale yellow stonecrop	4.3	Serpentinite or volcanic, broadleafed upland forest, chaparral, cismontane woodland, lower and upper montane coniferous forest	Low	Low
Carex arcta	northern clustered sedge	2B.2	Bogs and fens; north coast coniferous forest (mesic)	Low	Low
Carex geyeri	Geyer's sedge	4.2	Great basin scrub, lower montane coniferous forest	Low	Low
Carex praticola	northern meadow sedge	2B.2	Meadows and seeps	Medium	Low
Astragalus rattanii var. rattanii	Rattan's milk-vetch	4.3	Gravelly streambanks; chaparral, cismontane woodland, lower montane coniferous forest	Low	Low
Astragalus umbraticus	Bald Mountain milk-vetch	2B.3	Sometimes roadsides; cismontane woodland, lower montane coniferous forest	Medium	Low
Hosackia yollabollensis	Yolla Bolly Mtns. bird's-foot trefoil	1B.2	Dry barren exposed slopes, often gravelly; meadow and seeps, upper montane coniferous forest (openings)	High	Medium
Lathyrus glandulosus	sticky pea	4.3	Cismontane woodland	Medium	Low
Lupinus elmeri	South Fork Mountain lupine	1B.2	Lower montane coniferous forest	Medium	Low
Thermopsis robusta	robust false lupine	1B.2	Broadland upland forest, North Coast coniferous forest	Medium	Low

Trifolium howellii	Howell's clover	4.3	Mesic, lower and upper montane coniferous forest, meadows and seeps	High	Medium
Ribes laxiflorum	trailing black currant	4.3	Sometimes roadsides; North Coast coniferous forest	Medium	Low
Erythronium oregonum	giant fawn lily	2B.2	Sometimes serpentinite, rocky, openings, cismontane woodland, meadows and seeps	Low	Low
Erythronium revolutum	coast fawn lily	2B.2	Mesic, streambanks; bogs and fens, broadleafed upland forest, North coast coniferous forest	Low	Low
Fritillaria glauca	Siskiyou fritillaria	4.2	Serpentinite, talus slopes; alpine boulder and rock field, subalpine and upper montane coniferous forests	Low	Low
Fritillaria purdyi	Purdy's fritillary	4.3	Usually serpentinite, chaparral, cismontane woodland, lower montane coniferous forest	Low	Low
Lilium kelloggii	Kellogg's lily	4.3	Openings, roadsides; lower montane coniferous forest, North Coast coniferous forest	Medium	Low
Lilium pardalinum ssp. vollmeri	Vollmer's lily	4.3	Bogs and fens, mesic meadows and seeps	Low	Low
Lilium rubescens	redwood lily	4.2	Sometimes serpentinite, sometimes roadsides; broad land upland forest, chaparral, lower and upper montane coniferous forests, North Coast coniferous forest	Medium	Low
Lilium washingtonianum ssp. purpurascens	purple-flowered Washington lily	4.3	Often serpentinite, chaparral, lower and upper montane coniferous forests	Low	Low
Lycopodium clavatum	running-pine	4.1	Often edges, openings, and roadsides; lower montane coniferous forest (mesic), marshes and swamps, North Coast coniferous forest (mesic)	Low	Low
Iliamna latibracteata	California globe mallow	1B.2	Often in burned areas; chaparral (montane), lower montane coniferous forest, North Coast coniferous forest (mesic), riparian scrub (streambanks)	Low	Low
Sidalcea malachroides	maple-leaved checkerbloom	4.2	Often in disturbed areas, broadleafed upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland	Low	Low
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	1B.2	Often roadsides; coastal bluff, scrub, coastal prairie, North Coast coniferous forest	Medium	Medium
Sidalcea oregana ssp. eximia	coast checkerbloom	1B.2	Lower montane coniferous forest; North Coast coniferous forest, meadows and seeps	Medium	Low
Pityopus californicus	California pinefoot	4.2	Mesic; braodleafed upland forest, lower and upper montane coniferous forests, North Coast coniferous forest	Low	Low
Claytonia serpenticola	serpentine spring beauty	4.3	Recently disturbed areas, moist soils	Medium	Medium
Montia howellii	Howell's montia	2B.2	Vernally mesic, sometimes roadsides; meadows and seeps, North Coast coniferous forest, vernal pools	Medium	Medium
Epilobium oreganum	Oregon fireweed	1B.2	Mesic; bogs and fens, lower and upper montane coniferous forest, meadows and seeps	Medium	Medium
Epilobium septentrionale	Humboldt County fuchsia	4.3	Sand or rocky; broadleafed upland forest, North Coast coniferous forest	Medium	Low
Botrypus virginianus	rattlesnake fern	2B.2	Streams, bogs and fens, lower montane coniferous forest (mesic), meadows and seeps, riparian forest	Low	Low
Cypripedium californicum	California lady's-slipper	4.2	Seeps and streambanks, usually serpentinite, bogs and fens, lower montane coniferous forest	Low	Low
Cypripedium fasciculatum	clustered lady's-slipper	4.2	Usually serpentinite seeps and streambanks; lower montane coniferous forest, North Coast coniferous forest	Low	Low
Cypripedium montanum	mountain lady's-slipper	4.2	North Coast coniferous forest, lower montane coniferous forest, broadleafed upland forest, cismontane woodland	Low	Low
Listera cordata	heart-leaved twayblade	4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest	Medium	Low
Piperia candida	white-flowered rein orchid	1B.2	Sometimes serpentinite, broadleafed upland forest, lower montane coniferous forest, North Coast coniferous forest	Low	Low

Platanthera stricta	slender bog-orchid	4.2	Mesic; lower montane coniferous forest, meadows and seeps	Medium	Medium
Kopsiopsis hookeri	small groundcone	2B.3	North Coast coniferous forest	Low	Low
Erythranthe trinitiensis	pink-margined monkeyflower	1B.3	Often serpentinite, often roadsides; cismontane woodland, lower and upper coniferous forests, meadows and seeps	Medium	Medium
Glyceria grandis	American manna grass	2B.3	Bogs and fens, meadows and seeps, marshes and swamp (streambanks and lake margins)	Medium	Low
Pleuropogon refractus	nodding semaphore grass	4.2	Mesic; lower montane coniferous forest, meadows and seeps, North Coast coniferous forest, riparian forest	Low	Low
Collomia tracyi	Tracy's collomia	4.3	Rocky, sometimes serpentine; broadleafed upland forest, lower montane coniferous forest	Medium	Medium
Gilia capitata ssp. pacifica	Pacific gilia	1B.2	Coastal bluff scrub, chaparral (openings), coastal prairie, valley and foothill grasses	Low	Low
Leptosiphon acicularis	bristly leptosiphon	4.2	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland	Low	Low
Navarretia leucocephala ssp. bakeri	Baker's navarretia	1B.1	Mesic; cismontane woodland, meadows and seeps, lower montane coniferous forest, valley and foothill grassland, vernal ponds	Medium	Low
Coptis laciniata	Oregon goldthread	4.2	Mesic; meadows and seeps, North Coast coniferous forest (streambanks)	High	Medium
Rosa gymnocarpa var. serpentina	Gasquet rose	1B.3	Serpentinite, often roadsides, sometimes ridges, streambanks and openings, chaparral, cismontane woodland	Low	Low
Sanguisorba officinalis	great burnet	2B.2	Often serpentinite, bogs and fens, broadleafed upland forest, meadows and seeps, marshes and swamps, North Coast coniferous forest, riparian forest	Medium	Low
Bensoniella oregona	bensoniella	1B.1	Mesic; bogs and fens, lower montane coniferous forest openings, meadows and seeps	Medium	Low
Chrysosplenium glechomifolium	Pacific golden saxifrage	4.3	Streambanks, sometimes seeps, sometimes roadsides, North Coast coniferous forest, riparian forest	Low	Low
Micranthes marshallii	Marshall's saxifrage	4.3	Rocky streambanks, riparian forest	Low	Low
Mitellastra caulescens	leafy-stemmed mitrewort	4.2	Mesic, sometimes roadsides; broadleafed upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest	Medium	Low
Tiarella trifoliata var. trifoliata	trifoliate laceflower	3.2	Edges, moist shady banks, streambanks; lower montane coniferous forest, North Coast coniferous forest	Medium	Low

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Exhibits

A. Site Plan
B. Photos of Project Site at APN 315-045-004
C. Assessor's Map Bk. 315 Pg.04

Exhibit A

Site Plan

SITE PLAN

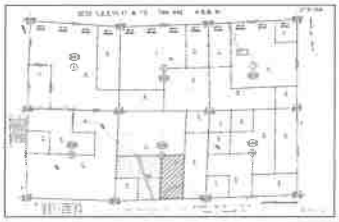
PORTION OF SECTION 11 TOWNSHIP 4 NORTH, RANGE 4 EAST, H.M
APN: 315-045-004
FOR

KINSEY RIDGE FARM
ROUTE 1
WILLOW CREEK, CA 95573

LEGEND

USFS ROUTE 1	STRUCTURE
<all other values>	CULTIVATION AREA
CULVERT	GREENHOUSE
GATE	RAINWATER IMPOUNDMENT STRUCTURE
SPRING	UTILITY EASEMENT
WATER STORAGE	GRADED_AREA
ACCESS ROAD	PROPERTY BOUNDARY - NOT SURVEYED
FENCE	SURROUNDING PARCELS
STREAM	(P) RELOCATED CULTIVATION AREA
50 FT BUFFER	
100 FT BUFFER	

(E)Total Cultivation Area:	**13,000 sq ft**
(E) Cultivation Area:	**10,600 sq ft**
(E)Greenhouse Cultivation Area:	**2,400 sq ft**
(P) Relocated Area	**13,003 sf ft**
**** 4 sq ft from Cultivation Area 3 Not to berelocated/cultivated**	
Total Water Storage:	**11,650 gal**
Water Tanks:	**11,650 gal**
Proposed Water Storage:	**250,000 gal**
Rainwater Impoundment Structure:	**250,000 gal**



GENERAL NOTES

Water: Delivered
Power: Generator
Phone: Verizon Wireless
Septic: On-site-unpermitted
Grading: None

NOTES:

ZONING: TPZ
GENERAL PLAN USE: T (FRWK)
COASTAL ZONE: NO
FIRE RATING: HIGH
FEMA FLOOD ZONE: ND
SEISMIC SAFETY: HIGH INSTABILITY
EARTHQUAKE FAULTS OR HAZARDS: NO
SETBACKS: 30 ft
SLOPE: CALCULATED USING ELEVATION PROFILE TAB ACCURACY ±5%
(PER HUM CO WEB PORTAL)

1 " = 400 FEET
0 400

TVCE

KINSEY RIDGE FARM
315-045-004
SITE PLAN

Exhibit B

Photos of Project Site at APN 315-045-004

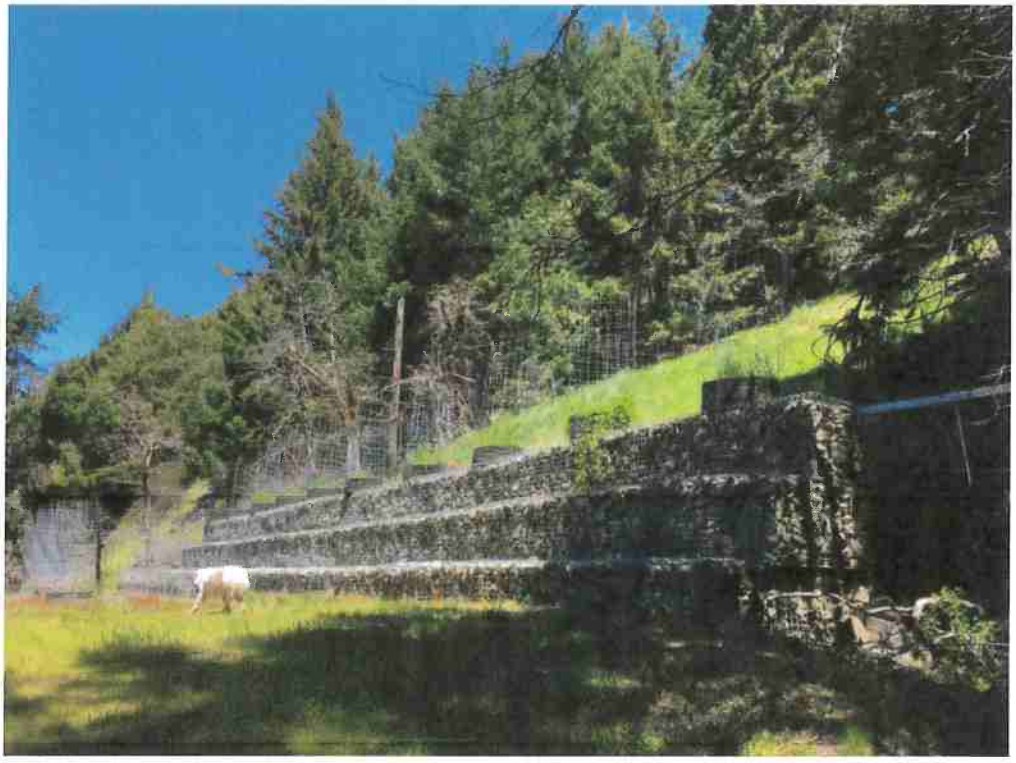


Photo 1: Southeast Cultivation Area (CA 1-2, GH1)

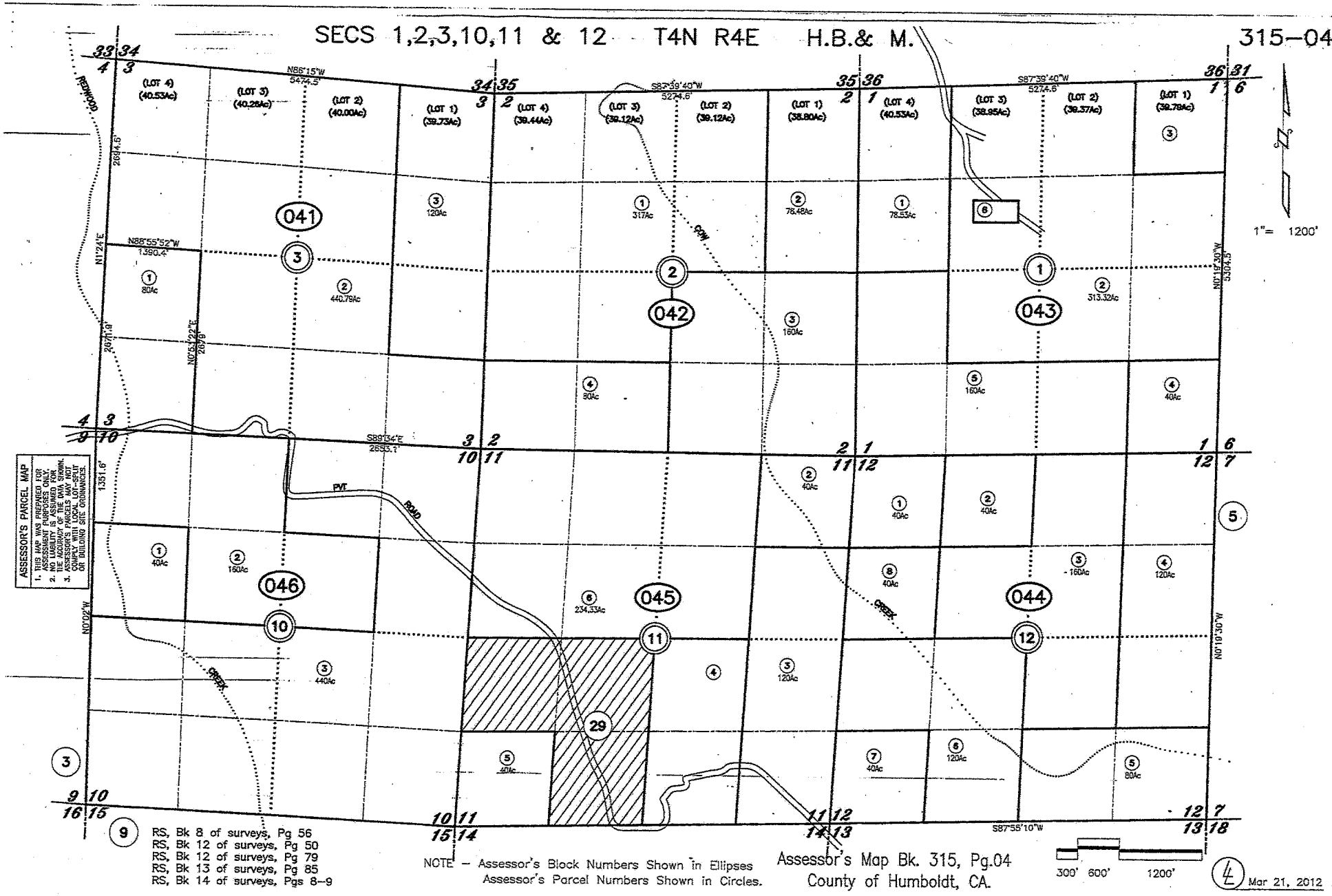
Photo 2: Water storage

Photo 3: Residence

Photo 4: Northwest Cultivation Area (CA3)

Exhibit C

Assessor's Map Bk. 315 Pg.04


SECS 1,2,3,10,11 & 12 T4N R4E H.B.& M.
315-04
ASSESSOR'S PARCEL MAP
1. THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY.
2. NO LIABILITY IS ASSUMED AS TO THE ACCURACY OF THE DATA SHOWN.
3. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL LOT-SPLIT OR BUILDING SITE ORDINANCES.
041
042
043
044
045
046
RS, Bk 8 of surveys, Pg 56
RS, Bk 12 of surveys, Pg 50
RS, Bk 12 of surveys, Pg 79
RS, Bk 13 of surveys, Pg 85
RS, Bk 14 of surveys, Pgs 8-9
NOTE - Assessor's Block Numbers Shown in Ellipses
Assessor's Parcel Numbers Shown in Circles.
Assessor's Map Bk. 315, Pg.04
County of Humboldt, CA.
1"= 1200'
300' 600' 1200'
Mar 21, 2012