Biological Resource Assessment for APN:208-221-006

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Prepared For:

George Petrov

Prepared By:

TransTerra Consulting

INTEGRATED ENVIRONMENTAL SERVICES

455 I Street Suite 202, Arcata, CA 95521

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Introduction

This Biological Resource Assessment was prepared to provide data concerning the type and extent of biological resources under the jurisdiction of the California Department of Fish and Wildlife (CDFW) and US Fish and Wildlife Service (USFWS) that are currently or potentially present at the project location. The project includes commercial cannabis cultivation and associated activities (CMMLUO 11809). If required after agency review of the preliminary habitat assessment, protocol level surveys will be completed per recommendations by the Final Environmental Impact Report (FEIR) amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. [1]

Environmental Setting

Project Location

The property is located off Salyer Mad River Road near Dinsmore area in Humboldt County, California (Section 28, Township 2N, Range 5E). The project area is located on a south facing, 40-acre parcel within the U.S. Geological Survey's (USGS) Blake Mountain 7.5-minute quadrangle map. Elevation is approximately 3000-3440 feet above sea level. Property is located in the Mad River Watershed. The regional climate is Mediterranean in nature with warm summers and cool winters.

Soil, Topography, Hydrology

Three (3) soil types are mapped in the project areas on the Web Soil Survey. The property area is primarily composed of Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry (4426), Elkcamp-Airstrip-Highyork complex, 9 to 30 percent slopes (4435), and Hoagland-Chalkmountain-Pasturerock complex, 30 to 50 percent slopes (4417). These soils are not considered hydric and are on deep, well drained soils that formed in colluvium and residuum derived from sandstone and mudstone.

The Pasturerock series consists of very deep, well drained soils formed in colluvium derived from sandstone and mudstone. Pasturerock soils are on mountains and have slopes of 15 to 50 percent. The mean annual precipitation is about 2290 millimeters (90 inches) and the mean annual temperature is about 13 degrees C (55 degrees F). Coyoterock soils are in moist locations on poorly incised drainages, hillslope hollows, and earthflows. Maneze soils lack an argillic horizon and greater than 35 percent rock fragments in the particle-size control section.

The Elkcamp series consists of very deep, well drained soils formed in colluvium and residuum derived from sandstone, siltstone, and mudstone. Elkcamp soils are on mountains and have slopes of 15 to 50 percent. The mean annual precipitation is about 2290 millimeters (90 inches) and the mean annual temperature is about 13 degrees C (55 degrees F). The Airstrip soils are on ridgetops and spur ridges. These soils are loamy-skeletal and 50 to 102 centimeters deep to a lithic contact. The Chalkmountain series consists of very deep, well drained soils formed in colluvium and residuum derived from sandstone and mudstone. Chalkmountain soils are on mountains. Slopes range from 15 to 50 percent.

[1] Final Environmental Impact Report :Amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. January 2018. Prepared by Ascent Environmental. (Accessed via https://humboldtgov.org/DocumentCenter/View/62689/Humboldt-County-Cannabis-Program-Final-EIR-60mb-PDF)#

Mean annual precipitation is about 2160 millimeters and the mean annual temperature is about 13 degrees C.

The Mad River flows approximately 2,550 feet south of the property. An unnamed Class II/III tributary to the Mad River flows down the center of the parcel. The property is located in the Middle Mad River watershed and the Bear Creek – Mad River subwatershed with an average annual precipitation of 64.24 inches[2]. There are a few watercrossings with associated seasonal wetlands. These areas were flowing/ponded at the time of the survey. There is also a man-made drainage

The project area on the property is mapped as possessing high levels of instability. Project areas for this property are relatively flat with slopes less than 15%.

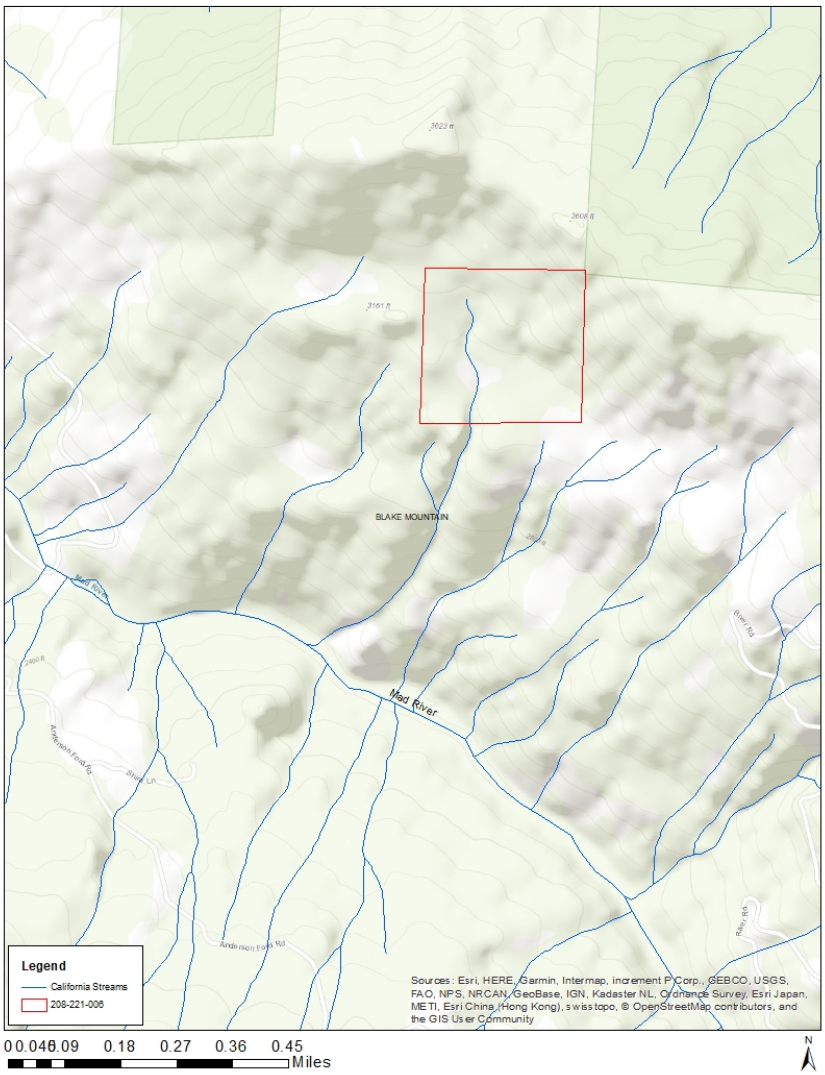

Figure 1. Project locations. (Map created using ArcMap 10.6 and Humboldt County GIS database-NTS

[2] California Department of Transportation Water Quality Planning Tool accessed at: http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx

Figure 2. Streamside Management Areas and National Wetland Inventory (NWI) wetlands mapped on project site[3]

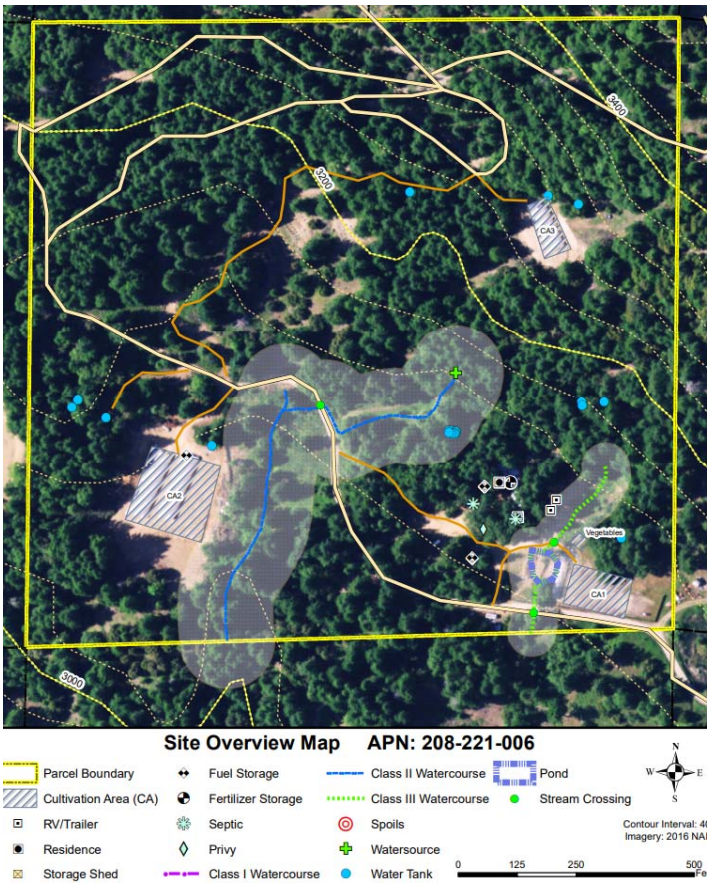

Figure 3. Project Proposal

[3] Humboldt County GIS layer. (Accessed via: http://webgis.co.humboldt.ca.us/HCEGIS2.0/)

Methods

The California Natural Diversity Database (CNDDB) RareFind and Spotted Owl Database, and California Native Plant Society (CNPS) databases were used to assess potential rare species. A habitat assessment was conducted by TransTerra Consulting Principal Biologist Tamara Camper on January 29, 2019. The assessment evaluated listed species and species of special concern (SOC). The study area was scanned for wildlife sign including tracks, scat, tree habitat (cavities, nests scrapes or accumulated vegetation) as well as special habitat types and habitats associated with rare plant species. The observations were concentrated around cultivation sites, roads and watercourses.

The assessment was conducted due to mandatory requirements for cannabis permitting, however the timing of the field visit did not coincide with ideal survey seasons based on phenology and life history cycles for all potential species. Full floristic surveys and/or protocol-level surveys were not conducted in the project area. Based on the timing of the survey, all plant species growing within the study area may not have been observed due to varying flowering phenologies and life forms, such as bulbs, biennials, and annuals. Other potentially dominant species within vegetation communities on site may be present during other times of the year. Therefore, the present study is not floristic in nature. Some of the plant species identified in this report are tentative due to the absence of morphological characters, resulting from immature reproductive structures or seasonal desiccation, which is required to make species-level determinations. Many wildlife species are also not identifiable between August and March and must be surveyed for during the reproductive season. Species-specific surveys will be conducted as appropriate and are further discussed below.

Results and Discussion

Vegetation

Vegetation is variable throughout the parcel, but primarily composed of mixed evergreen forest. Dominant trees species included *Pseudotsuga menziesii* var *menziesii* (Douglas fir), *Umbellularia californica* (California bay), *Quercus kelloggii* (California black oak), *Q. garryana* (Oregon oak) and *Arbutus menziesii* (madrone). The understory was fairly sparse throughout. Shrub species and density were variable depending upon hydrology and canopy. Most areas were dominated by *Arctostaphylos* sp. (manzanita), *Toxicodendron diversilobum* (poison oak), *Symphoricarpos sp.*(snowberry), *Holodiscus discolor* (oceanspray), and *Berberis sp.* (Oregon grape) as well as small tree species. The herb layer was fairly sparse throughout. Openings and roadsides were dominated by ruderal species (not identifiable during survey). Around wetland areas, hydrophytic species observed included Equisetum *telmateia* spp. *braunii* (giant horsetail), *Juncus effuses* (common rush), *J patens* (spreading rush), *Hypericum perforatum* (Klamathweed), *Leucanthemum vulgare* (oxeye daisy), *Holcus lanatus* (velvet grass), *Urtica dioica* (stinging nettle), *Prunella vulgaris* (self-heal), *Rubus ursinus* (California blackberry), *Plantago lanceolata* (English plantain), *Anthoxanthum odoratum* (sweet vernal grass), *Mentha pulegium* (pennyroyal), *and Polystichum munitum* (sword fern) with fairly dense *Salix* sp. (willow) in the shrub layer. One man-made wetland was on-site, however the area was fairly disturbed and no well vegetated. The inundated area contained mostly algae and few vascular species.

Nomenclature follows the most current scientific names in The Jepson Manual of Higher Plants of California Second Edition to the greatest degree feasible[4]

Wetlands and SMA areas

As stated previously, there are watercourses in the area, as well as crossing and ponds. A jurisdictional wetland delineation was not requested or conducted for this assessment.

Photographs of man-made pond and stream crossings. Crossing addressed by Green Road.

Cultivation area and setback from SMA, fencing and silt fence material as well as straw wattles are currently in place between cultivation area and SMA

Northern Spotted Owl[5]

The Northern Spotted Owl (*Strix occidentalis caurina*) is a medium-sized dark brown owl with a barred tail, irregular white spots on head, neck, back, and underparts. Males are smaller than females and the species frequently does not reproduce until three years of age. Courtship initiates in February or March, with eggs laid in late March through April. Delayed nesting occurs at higher elevations and latitude. Clutch size is one to four eggs and incubation is roughly 30 days. Females leave the nest only briefly to

[4] The Jepson Manual :Higher Plants of California Second Edition (Accessed via http://ucjeps.berkeley.edu/jepman.html)

[5] Report to the Fish and Game Commission: A Status Review of the Northern Spotted Owl (Strix Occidentalis) in California (Accessed via https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=116307&inline)

eat prey brought by males, defecate/purge, preen and defend nests. Chicks generally leave the nests in late May or June but are dependent on adults until September when they can fly and hunt on their own.

Northern Spotted Owls (NSO) is relatively long-lived with wild owls living 20 years or more. NSO do not build their own nest, but instead seek naturally occurring nest sites such as broken-top trees, tree cavities, debris accumulations, or nests built by other wildlife.

NSO range extends from southwest British Columbia through the Cascade Range, coastal ranges to California. Nesting and roosting habitat consists of structurally complex forests that also include variable-aged stands and hardwood forest components. Dwarf mistletoe distribution coincides with the distribution and provides an important component of nesting habitat, enabling NSO to nest within younger tree stands. Foraging habitat is composed of a variety of vegetation types and is largely a function of prey abundance and availability. Woodrats are the main component of NSO diet, but other prey items are also taken (smaller birds, rodents, and insects). Dispersal habitat for NSO consists of stands with adequate tree size and canopy to provide protection and foraging opportunities.

Threats to NSO include Barred Owl invasion and loss of habitat. Additional threats include increases in frequency and severity of wildfires, marijuana cultivation, climate change, effects of climate change and the spread of Sudden Oak Death Syndrome.

Regulatory Environment

Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) listed the NSO as threatened under the Endangered Species Act (ESA) in 1990. Critical habitat designation occurred in 1992 and 2008. The 2008 designation was challenged in court and in 2009 the USFWS requested voluntary remand of the 2008 designation. A new final rule designating critical habitat was published in December 2012. The first final recovery plan for the NSO was issued in 2008 and revised in 2011.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act prohibits anyone from taking, killing, or keeping any native bird, its parts, or its nest, without a permit or license. All raptors native to the U.S. are covered by this law. A Special Purpose Possession Permit and/or Endangered Species Permit (depending on species), is required under the Migratory Bird Treaty Act to keep raptors.

California Endangered Species Act

After the Commission voted to accept the petition in December of 2013, the NSO became a State candidate for threatened or endangered status under CESA, commencing with section 2050 of the California Fish and Game Code.

California Bird Species of Special Concern

The Department currently designates the NSO as a Species of Special Concern.

Fish and Game Code

The Fish and Game Code includes certain protections for raptors, including the NSO. Sections applicable to owls include the following:

- Section 3503 - It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

- Section 3503.5 - It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.
- Section 3513 - It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

Impact Assessment Guidance[6].

The Arcata Fish and Wildlife Office (AFWO) developed guidance that addresses the potential effects of disturbance on NSO. The memorandum includes a consistent and reasonable determinations of effects for activities that occur in or near owl suitable habitat, including human generated sounds or human activities near nest trees.

Behaviors Indicating Harassment

The definition of "take" prescribed by the Act includes "harass". The Act's implementing regulations further define harass as "… an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering" [50 CFR §17.3]. Activities that create elevated sound levels or result in close visual proximity of human activities at sensitive locations (e.g., nest trees), have the potential to disrupt normal behavior patterns.

Harassment may occur when owls demonstrate behavior suggesting that the safety or survival of the individual is at risk, or that a reproductive effort is potentially lost or compromised. Examples of this behavior include, but are not limited to:

- An adult or juvenile is flushed from a nest during the incubation, brooding, or fledging period, that potentially results in egg failure or reduced juvenile survival.
- An adult abandons a feeding attempt of a dependent juvenile for an entire daily feeding period, that potentially results in malnutrition or starvation of the young.
- An adult delays feeding attempts of dependent birds on multiple occasions during the breeding season, potentially reducing the growth or likelihood of survival of young.

NSO Observations, Activity Centers and Habitat

The project site does contain conifer forest, hardwood forest and open areas and could be suitable for foraging or possibly nesting habitat. Old growth trees or 'later seral' habitat was not observed on the site. The site is located within 0.4 miles of a historical activity center. The NSO activity center Hum 0119 pair was last observed in 2001 with negative observations during the last calling by Robert Hewitt in

[6] Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets of Northwestern California (Accessed via: https://www.fws.gov/arcata/es/birds/mm/documents/MAMU-NSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf)

2011. Surveys have not been conducted within a five-mile radius since 2015 when studies were conducted for TRI0364 and a nesting pair was observed with two young.

Ambient noise is not expected to increase as a result of the project. Ground disturbing activities adjacent to or within known Northern Spotted Owl habitat is not currently proposed.

Figure 4 below shows nearest activity center, HUM 0119 within one mile of the project area. Figure 5 shows the project in relation to activity centers within a five-mile radius as well as designated Final Critical Habitat. Appendix B contains all observations and activity centers within a five-mile radius of the project.

CNDDB and Other Database Results

The CDFW CNDDB, BIOS, Rarefind and CNPS databases were scoped before and after field site visit to determine habitat potential and known occurrences of rare or listed species of concern in or around the project area.

The project area contains habitat for various species of concern. Oregon Goldthread (Coptis laciniata) was observed in 1970 in the general vicinity. A complete list of occurrences of rare and species of concern are listed below in Table 1 and Table 2

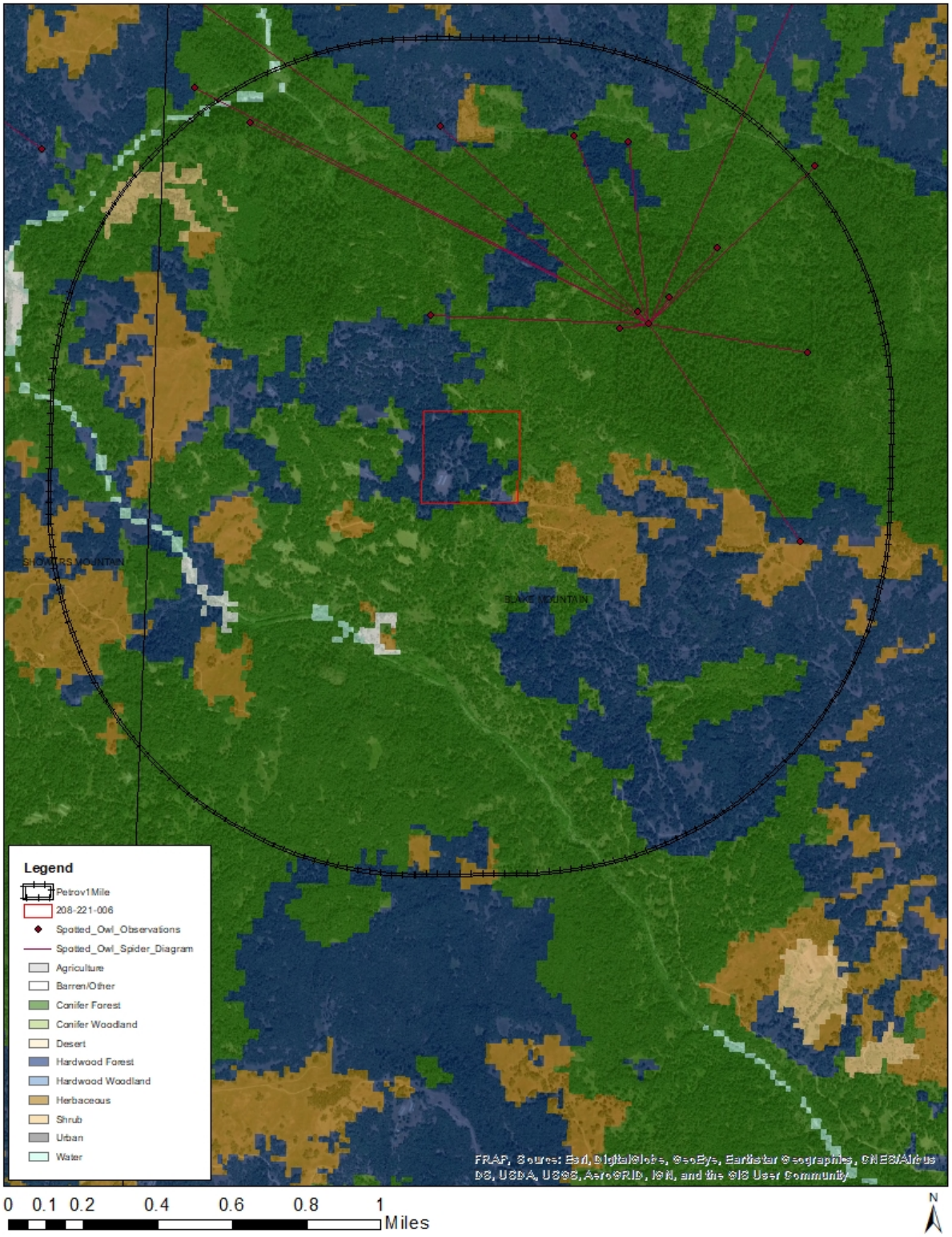

Figure 4. WHR habitat types show the area as hardwood conifer forest surrounding by a mosaic of Hardwood Forest and Herbaceous. Activity center HUM 0155 (13058) is located within one mile of the project area.

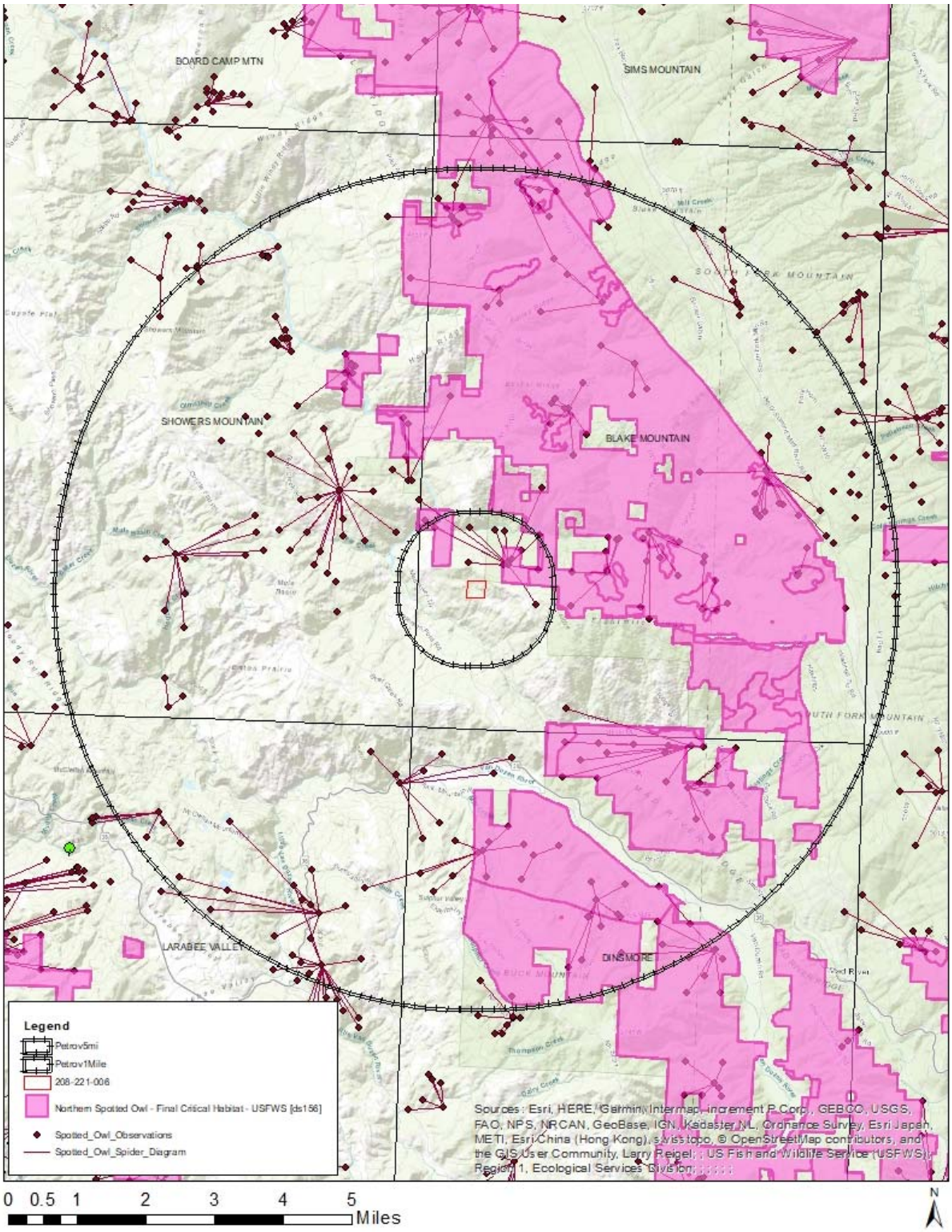

Figure 5. Activity centers within 5 miles of the project site. Final critical habitat is located approximately 0.25 miles from the project site.

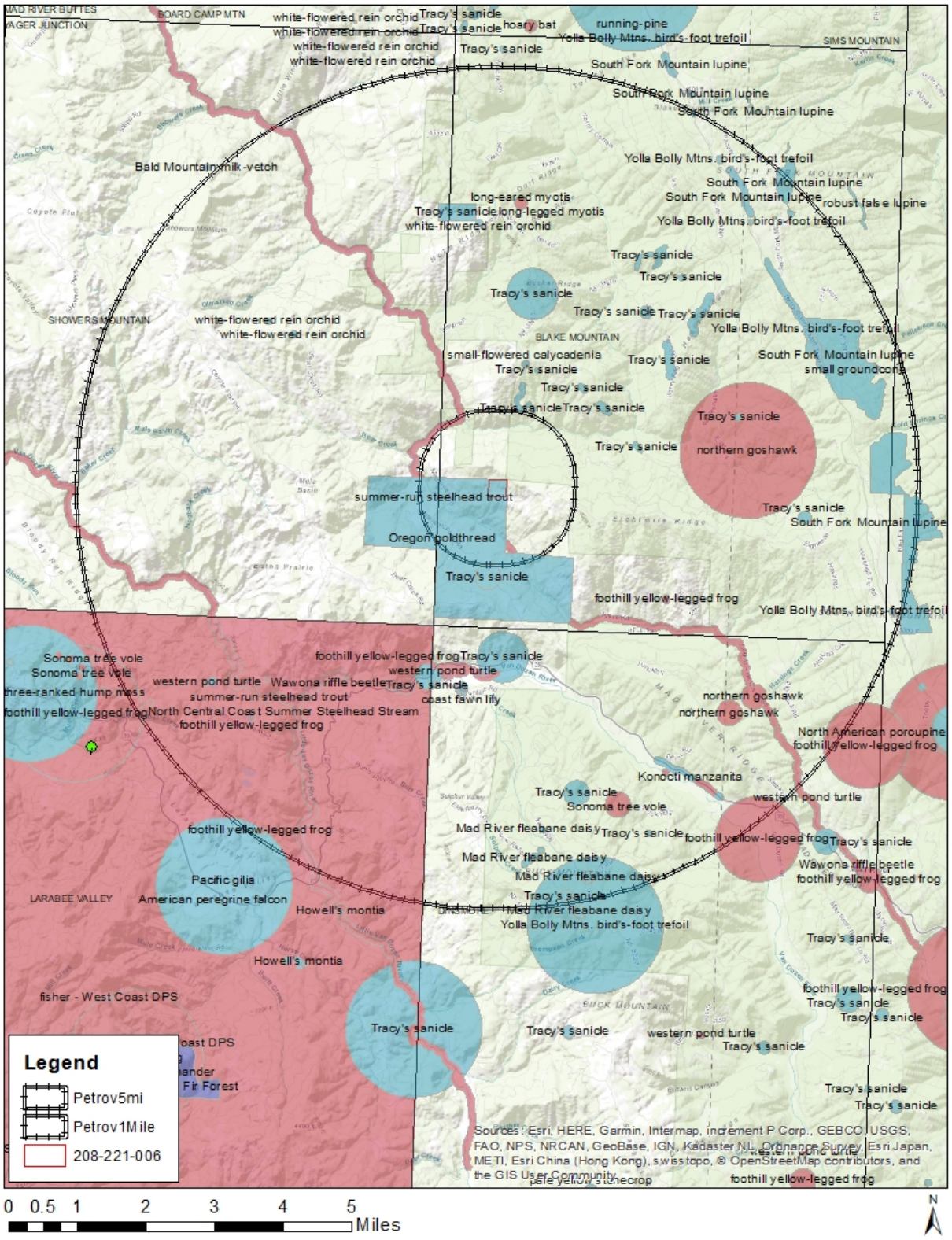

Figure 6. CNDDB search results of observed rare plant and sensitive animal occurrences found one mile near property.

Table 1. CNDDB nine-quad database results for the 7.5' quadrangle (plants listed in CNPS results).

Scientific Name	Common Name	FESA	CESA	General Habitat	MicroHabitat
Accipiter gentilis	northern goshawk	None	None	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites.	Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.
Arborimus pomo	Sonoma tree vole	None	None	North coast fog belt from Oregon border to Somona County. In Douglas-fir, redwood & montane hardwood-conifer forests.	Feeds almost exclusively on Douglas-fir needles. Will occasionaly take needles of grand fir, hemlock or spruce.
Ascaphus truei	Pacific tailed frog	None	None	Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats.	Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.
Atractelmis wawona	Wawona riffle beetle	None	None	Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2000-5000 ft elev.	Strong preferce for inhabiting submerged aquatic mosses
Bombus caliginosus	obscure bumble bee	None	None	Coastal areas from Santa Barabara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.
Calileptoneta briggsi	Briggs' leptonetid spider	None	None	Known only from the type locality, Indian Valley Creek Cave, and nearby Butter Creek Cave, Trinity County.	Troglobitic species.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Emys marmorata	western pond turtle	None	None	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.
Erethizon dorsatum	North American porcupine	None	None	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Wide variety of coniferous and mixed woodland habitat.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.

Helminthoglypta talmadgei	Trinity shoulderband	None	None	Limestone rockslides, litter in coniferous forests, old mine tailings, and along shaded streams in the Klamath Mountains.	
Lasionycteris noctivagans	silver-haired bat	None	None	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas.	Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.
Lasiurus cinereus	hoary bat	None	None	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Monadenia infumata setosa	Trinity bristle snail	None	Threatened	Known only from along a few streams in the Trinity River drainage.	Juveniles are found under bark of standing dead broadleaf trees, and the species may require this habitat.
Myotis evotis	long-eared myotis	None	None	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests.	Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.
Myotis thysanodes	fringed myotis	None	None	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer.	Uses caves, mines, buildings or crevices for maternity colonies and roosts.
Myotis volans	long-legged myotis	None	None	Most common in woodland and forest habitats above 4000 ft. Trees are important day roosts; caves and mines are night roosts.	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.
Myotis yumanensis	Yuma myotis	None	None	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	None	No. Calif coastal streams south to Middle Fork Eel River. Within range of Klamath Mtns province DPS & No. Calif DPS.	Cool, swift, shallow water & clean loose gravel for spawning, & suitably large pools in which to spend the summer.
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	None	None	Spring-run chinook in the Trinity River and the Klamath River upstream of the mouth of the Trinity River.	Major limiting factor for juvenile chinook salmon is temperature, which strongly effects growth and survival.
Pekania pennanti	fisher - West Coast DPS	None	Threatened	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.
Rana aurora	northern red-legged frog	None	None	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover.	Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.

Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
Rhyacotriton variegatus	southern torrent salamander	None	None	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest.	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.

Table 2. CNPS nine-quad database results for the 7.5' quadrangle search

Scientific Name	Common Name	Family	Lifeform	CRPR	Habitat	Micro Habitat
Allium hoffmanii	Beegum onion	Alliaceae	perennial bulbiferous herb	4.3	Lower montane coniferous forest (serpentinite)	
Allium siskiyouense	Siskiyou onion	Alliaceae	perennial bulbiferous herb	4.3	Lower montane coniferous forest, Upper montane coniferous forest	rocky, sometimes serpentinite
Arctostaphylos hispidula	Howell's manzanita	Ericaceae	perennial evergreen shrub	4.2	Chaparral (serpentinite or sandstone)	
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	volcanic
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	perennial herb	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	gravelly streambanks
Astragalus umbraticus	Bald Mountain milk-vetch	Fabaceae	perennial herb	2B.3	Cismontane woodland, Lower montane coniferous forest	sometimes roadside
Bensoniella oregona	bensoniella	Saxifragaceae	perennial herb	1B.1	Bogs and fens, Lower montane coniferous forest (openings), Meadows and seeps	mesic
Buxbaumia viridis	buxbaumia moss	Buxbaumiaceae	moss	2B.2	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest	Fallen, decorticated wood or humus
Calycadenia micrantha	small-flowered calycadenia	Asteraceae	annual herb	1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland	Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas
Carex arcta	northern clustered sedge	Cyperaceae	perennial herb	2B.2	Bogs and fens, North Coast coniferous forest (mesic)	
Collomia tracyi	Tracy's collomia	Polemoniaceae	annual herb	4.3	Broadleafed upland forest, Lower montane coniferous forest	rocky, sometimes serpentinite

Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	4.2	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	4.2	Lower montane coniferous forest, North Coast coniferous forest	usually serpentinite seeps and streambanks
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	4.2	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest	
Epilobium oreganum	Oregon fireweed	Onagraceae	perennial herb	1B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	mesic
Erigeron maniopotamicus	Mad River fleabane daisy	Asteraceae	perennial herb	1B.2	Lower montane coniferous forest, Meadows and seeps (open, dry)	open, disturbed areas (road cuts); rocky
Erythranthe trinitiensis	pink-margined monkeyflower	Phrymaceae	annual herb	1B.3	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	Often serpentinite, often roadsides
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, streambanks
Eucephalus glabratus	Siskiyou aster	Asteraceae	perennial herb	4.3	Lower montane coniferous forest, Upper montane coniferous forest	rocky openings
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	annual herb	1B.2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	
Hosackia yollabolliensis	Yolla Bolly Mtns. bird's-foot trefoil	Fabaceae	perennial herb	1B.2	Meadows and seeps, Upper montane coniferous forest (openings)	dry barren exposed slopes, often gravelly
Iliamna latibracteata	California globe mallow	Malvaceae	perennial herb	1B.2	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)	Often in burned areas
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	2B.3	North Coast coniferous forest	

Lathyrus biflorus	two-flowered pea	Fabaceae	perennial herb	1B.1	Lower montane coniferous forest (serpentinite)	
Lilium kelloggii	Kellogg's lily	Liliaceae	perennial bulbiferous herb	4.3	Lower montane coniferous forest, North Coast coniferous forest	Openings, roadsides
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Sometimes serpentinite, sometimes roadsides
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	
Lupinus elmeri	South Fork Mountain lupine	Fabaceae	perennial herb	1B.2	Lower montane coniferous forest	
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	often edges, openings, and roadsides
Meesia triquetra	three-ranked hump moss	Meesiaceae	moss	4.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic)	soil
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Subalpine coniferous forest	Metamorphic rock, usually acidic, usually vernally mesic, often roadsides, sometimes carbonate
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	mesic, sometimes roadsides
Montia howellii	Howell's montia	Montiaceae	annual herb	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	vernally mesic, sometimes roadsides
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	sometimes serpentinite
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	mesic

Platanthera stricta	slender bog-orchid	Orchidaceae	perennial herb	4.2	Lower montane coniferous forest, Meadows and seeps	mesic
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic
Ptilidium californicum	Pacific fuzz wort	Ptilidiaceae	liverwort	4.3	Lower montane coniferous forest, Upper montane coniferous forest	Usually epiphytic on trees, fallen and decaying logs, and stumps; rarely on humus over boulders
Ribes laxiflorum	trailing black currant	Grossulariaceae	perennial deciduous shrub	4.3	North Coast coniferous forest	sometimes roadside
Sanicula tracyi	Tracy's sanicle	Apiaceae	perennial herb	4.2	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	openings
Sedum laxum ssp. flavidum	pale yellow stonecrop	Crassulaceae	perennial herb	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	Serpentinite or volcanic
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	
Sidalcea oregana ssp. eximia	coast checkerbloom	Malvaceae	perennial herb	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	
Thermopsis robusta	robust false lupine	Fabaceae	perennial rhizomatous herb	1B.2	Broadleafed upland forest, North Coast coniferous forest	
Tiarella trifoliata var. trifoliata	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	3.2	Lower montane coniferous forest, North Coast coniferous forest	
Wyethia longicaulis	Humboldt County wyethia	Asteraceae	perennial herb	4.3	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest	

Potential Direct and Indirect Impacts

The proposed project includes existing activities and structures. New development is not currently proposed. The project will most likely require some stream work for water quality impact minimization. Any impacts for those activities will most likely be addressed through the Lake and Streambed Alteration Agreement (LSAA) and Water Resource Protection Plan (WRPP).

The historic effects of the land clearing, residential development, and cultivation activities potentially included removal of vegetation and canopy cover, disturbance and compaction of soil, alteration of hydrologic regime, sedimentation and erosion, increase in invasive species, and noise, solid and chemical waste pollution, visual impacts, and air quality impacts. Theses impacts are difficult to estimate and are not addressed in this document. The project is not expected to have any significant impacts to listed species as currently proposed for permitting. New development (new roads, structures, vegetation removal and grading) are not currently proposed.

Agency personnel from CDFW and USFWS can further analyze the potential impacts and provide technical assistance for any listed species if additional activities are proposed that may result in take of a listed species including Northern Spotted Owl.[7] If required, pre-construction reconnaissance surveys should follow the guidelines set forth in the Humboldt County Cannabis Program EIR, CDFW Survey and Monitoring Protocols and Guidelines[8,] USFWS Endangered Species Program[9] and CNPS Botanical Survey Guidelines[10]

Recommendations

Follow all recommendations outlined by existing agency policies for minimizing impacts to natural resources. Impacts from light, noise and chemicals can be addressed in the operations plan and best management practices can be employed to minimize impacts. It is recommended that netting made of natural fibers be used in lieu of plastic netting for cultivation and erosion control to minimize entrapment. Additional disturbance, clearing, and road cuts would likely modify existing groundwater, and surface water patterns and could impact water quality and/or hydrophytic species.

Please contact me with any comments or concerns regarding this memorandum or future work required for your project. I can be reached at tami@trans-terra.com or (707) 845-7483. I have included my project experience as an attachment to this report as it is often requested by agency personnel reviewing work of this nature. (Appendix A)

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[7] Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelet in Northwestern California: (Accessed via https://www.fws.gov/arcata/es/birds/nso/documents/MAMUNSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf)

[8] California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines (Accessed via https://www.wildlife.ca.gov/conservation/survey-protocols)

[9] USFWS Arcata Fish and Wildlife Office Endangered Species Program (Accessed via https://www.fws.gov/arcata/es/default.htm)

[10] California Native Plant Society (CNPS) Botanical Survey Guidelines (Accessed via https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf)

APPENDIX A-Qualifications

Tamara Camper

455 I Street · Arcata, CA 95521 · (707) 845-7483

tami@trans-terra.com · www.linkedin.com/in/tamaracamper/ @itstransterra

In-depth knowledge of biology, ecology, environmental laws, natural resources policy, and land use planning with experience implementing policies related to listed species including CEQA/NEPA, CESA/ESA and other regulations. Refined relationship-building and strategic thinking skills and experience working collaboratively with multiple agencies and stakeholders on a wide range of complex projects

Education

December 2007-M.A. Biology, **HUMBOLDT STATE UNIVERSITY**
December 1999-B.S. Environmental Science, **WESTERN WASHINGTON UNIVERSITY**

Experience

May 2018-Present-Principle-Environmental scientist, TRANSTERRA CONSULTING LLC

Principal Owner at TransTerra Consulting. Providing Environmental Consulting Services including Biological Assessments, Rare Species Surveys, Vegetation and Habitat Typing/Mapping, Stream and Wetland Surveys, Environmental Impact Assessments, Permitting, Land Use/Planning, and CEQA/NEPA Documents

November 2011-May 2018-Associate Environmental Planner, CALTRANS

Promoted through increasingly responsible positions based on performance and experience in Humboldt, Del Norte and Mendocino. Served as Coastal Liaison, Restoration Specialist and CEQA/NEPA Coordinator. Developed programmatic interagency guidelines, workload coordination, permit process training, budgets, contracts, and internal process efficiency. Wrote and reviewed environmental documents including EAs and IS-MNDs, BAs, Section 7 and 10 consultations, oversaw and conducted biological/wetland surveys, mitigation and monitoring work and reporting.

October 2008-November 2011-Biologist/Environmental Planner, STREAMLINE PLANNING CONSULTANTS

Provided natural resource and policy expertise for a wide-range of public and private projects affecting natural resources. Conducted stream/riparian assessments, botanical surveys, wetland delineation, impact assessments and mitigation/monitoring reports in accordance with CEQA, FPR, ESA, NEPA, the Water Quality Act, Coastal Act and other relevant laws for private landowners. Assisted with consultation, coordination and permit applications for listed species. Developed alternatives and mitigation design and negotiated sensitive and complex issues with multiple stakeholders.

March 2003-November 2008-Owner-Biologist, CAMPER CONSULTING

Provided botanical/wildlife surveys, wetland delineation, impact assessments and mitigation reports in accordance with CEQA and other relevant laws for private land owners. Extensive experience working on commercial and private timberlands for THP/NTMP work.

January 2001-March 2003-Wildlife Technician, CAMPBELL TIMBERLAND MANAGEMENT

Developed a botanical program including the coordination and conduction of botanical surveys, impact assessments, mitigation reports, monitoring studies. Maintained public relations and relationships with state and federal agency personnel. Developed and maintained GIS and other databases for survey findings. Assisted with NSO, anadromous fish and amphibian monitoring, surveying and habitat analysis.

March 2000-October 2000-Fisheries Technician, MENDOCINO REDWOOD COMPANY

Conducted anadromous fish and amphibian monitoring, surveying and habitat analysis. Utilized dive counts, electrofishing, sediment sampling, fish trapping, insect sampling and water quality monitoring to assess impacts to salmonids and other aquatic species in conjunction with the Department of Fish and Wildlife.

May 1998-January 1999-Botanical Propagation Specialist, SKAGIT ROSE FARMS

Identified, propagated and maintained an inventory of native plants of the Northwest Coastal Region. Researched and developed interpretive gardens of native plant ecosystems

Skills

- CEQA/NEPA Document Writing and Review
- Regulation and Policy Review and Guidance including Permitting and Mitigation
- Scientific Writing and Editing Research
- Design and Statistical Analysis
- Vegetation and Wetland Surveys
- ArcMap, Microsoft Office and Statistical Software
- Teamwork, Negotiations and Strategic Thinking
- Project Budget, Scope and Scheduling
- Contract Oversight and Management
- Navigation of Rough Terrain Wildlife,

Activities

Membership in Rotary Arcata Sunrise, California Native Plant Society, and The Wildlife Society. Various workshops and certifications including wetland delineation, vegetation mapping, monocot identification, hydric soils, CRAM training, negotiation techniques and conflict resolution, Lean Six Sigma

APPENDIX B-NSO Within 5 Mile Radius

OBSID	MASTEROWL	TYPEOBS	OBSERVER	DATEOBS	NUMADOBS	AGESEX	PAIR	NEST	NUMYOUNG
9865	HUM0019	AC	HOLZER-ROBINSON	1991-05-07	2	UMUF	Y	Y	
9875	HUM0019	NEG	VIA NRM	1993	0				
120842	HUM0019	NEG	HEWITT	2011-07-28	0				
121154	HUM0019	NEG	HEWITT	2011-05-22	0				
9879	HUM0019	NEG	VIA THP BY NRM	1994-05-23	0				
9882	HUM0019	NEG	NRM-KEOWN	1994-06-22	0				
121213	HUM0019	NEG	HEWITT	2011-05-22	0				
9878	HUM0019	NEG	VIA THP BY NRM	1994-05-18	0				
9876	HUM0019	NEG	VIA THP BY NRM	1994-05-03	0				
120791	HUM0019	NEG	HEWITT	2011-07-28	0				
9881	HUM0019	NEG	VIA THP BY NRM	1994-06-08	0				
9883	HUM0019	POS	OB	2001-05-21	1	UU			
9871	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9866	HUM0019	POS	HOLZER-ROBINSON	1991-07-09	1	UF			
9887	HUM0019	POS	AE	2001-06-30	1	UM			
9884	HUM0019	POS	via PSW	2001-06-07	2	UMAF	Y		
9861	HUM0019	POS	MCMILLIAN	1988-08-25	1	UF			
9856	HUM0019	POS	ROSENBERG	1978-08-25	1	UU			
9890	HUM0019	POS	AE-OB	2001-08-20	2	UMUF	Y		
9885	HUM0019	POS	OB	2001-06-25	1	UU			
9858	HUM0019	POS	HOGERVORST	1988-08-04	1	UU			
9872	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9877	HUM0019	POS	NRM-KEOWN	1994-05-16	1	UM			
9873	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9874	HUM0019	POS	SRNF	1992-05-12	2	UMUF	Y	Y	
9867	HUM0019	POS	NAT RES MGRS	1992	1	UU			
9870	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9888	HUM0019	POS	OB	2001-07-31	1	UU			
9864	HUM0019	POS	SRNF	1991-05-06	1	UM			
9862	HUM0019	POS	MCMILLIAN	1988-08-27	1	UF			
9857	HUM0019	POS	BLM UKIAH	1978-08-28	1	UU			
10624	HUM0019	POS	via USFS NRIS - SRNF	2001-06-07	2	SMAF	Y		
9889	HUM0019	POS	OB	2001-08-14	1	UU			
9868	HUM0019	POS	NAT RES MGRS	1992	1	UU			
9886	HUM0019	POS	OB	2001-06-25	1	UU			
9860	HUM0019	POS	MCMILLIAN	1988-08-22	1	UF			
9880	HUM0019	POS	NRM-KEOWN	1994-05-24	1	UM			
9859	HUM0019	POS	MCMILLIAN	1988-08-10	2	UMUF	Y		
9869	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9863	HUM0019	POS	MCMILLIAN	1988-09-15	2	UMUF	Y		
10370	HUM0043	AC	BRACK	1985-05-30	2	UMUF	Y		1
10368	HUM0043	NEG	BRACK	1985-05-16	0				
10374	HUM0043	POS	TILGHMAN-PATON	1987	2	UMUF	Y		
10364	HUM0043	POS	SRNF	1984	1	UM			
10359	HUM0043	POS	via SRNF	1980	1	AU			0
10366	HUM0043	POS	BRACK	1985-05-14	1	UM			
10377	HUM0043	POS	MCMILLIAN	1988-08-04	1	UM			
10363	HUM0043	POS	BINDER	1980	1	UM			
10353	HUM0043	POS	HILL-CORYELL	1976-06-01	1	UU			
10361	HUM0043	POS	BINDER	1980	1	UM			
10375	HUM0043	POS	TILGHMAN-PATON	1988	1	UM			
10373	HUM0043	POS	SRNF	1986-08-05	1	UM			
10376	HUM0043	POS	SRNF	1988	1	UM			
10355	HUM0043	POS	via SRNF	1979	1	AU			0
10365	HUM0043	POS	SRNF	1985-05-01	2	UMUF	Y		
10369	HUM0043	POS	BRACK	1985-05-29	1	UM	Y		1
10360	HUM0043	POS	via SRNF	1980	1	AU			0
10367	HUM0043	POS	BRACK	1985-05-15	1	UM			
10380	HUM0043	POS	LOVELACE	1995-08-03	2	UUUU	Y		0
10357	HUM0043	POS	SRNF	1979-06-02	1	UU			
10379	HUM0043	POS	SRNF	1990-05-10	1	UM			
10354	HUM0043	POS	VIA SOLIS	1979	1	UU			
10358	HUM0043	POS	via SRNF	1980	1	AU			0

10378	HUM0043	POS	SRNF	1990-04-10	2	UMUF	Y		
10356	HUM0043	POS	via SRNF	1979	1	AU			0
10372	HUM0043	POS	SRNF	1986-08-01	2	UMUF	Y		
10371	HUM0043	POS	SRNF	1986	1	UU			
10362	HUM0043	POS	via SRNF	1980	1	AU			0
10491	HUM0047	AC	SRNF	1987-05-01	2	UMUF	Y	Y	
10510	HUM0047	NEG	PAH-JFW	1999-04-13	0				
10509	HUM0047	NEG	PAH-KMS	1999-04-04	0				
10503	HUM0047	NEG	SMURR	1996-06-05	0				
10506	HUM0047	NEG	SMURR	1997-03-05	0				
10520	HUM0047	NEG	OB	2001-08-01	0				
10532	HUM0047	NEG	AE	2004-04-02	0				
10508	HUM0047	NEG	HERRERA	1999-04-02	0				
10523	HUM0047	NEG	OB	2002-03-29	0				
10519	HUM0047	NEG	OB	2001-06-26	0				
10504	HUM0047	NEG	SMURR	1996-06-06	0				
10500	HUM0047	NEG	SMURR	1996-04-04	0				
10514	HUM0047	NEG	GAH-SBT	1999-06-28	0				
10528	HUM0047	NEG	AE	2003-05-10	0				
10497	HUM0047	NEG	via GALEA	1994-06-22	0				
10512	HUM0047	NEG	HERRERA	1999-05-22	0				
10502	HUM0047	NEG	SMURR	1996-05-09	0				
10518	HUM0047	NEG	OB	2001-05-22	0				
10499	HUM0047	NEG	SMURR	1996-03-25	0				
10505	HUM0047	NEG	LUNDE	1996-06-30	0				
10501	HUM0047	NEG	SMURR	1996-05-07	0				
10511	HUM0047	NEG	HERRERA	1999-05-07	0				
10525	HUM0047	NEG	AE	2002-05-10	0				
10507	HUM0047	NEG	SMURR	1997-07-06	0				
10515	HUM0047	NEG	HERRERA	2000-05-15	0				
10513	HUM0047	NEG	HERRERA-WARD	1999-06-01	0				
10516	HUM0047	NEG	OB	2001-04-16	0				
10517	HUM0047	NEG	OB	2001-05-01	0				
10526	HUM0047	NEG	OB	2002-06-02	0				
10478	HUM0047	POS	ESCANO	1978-03-29	1	UU			
10531	HUM0047	POS	AE	2004-03-31	1	UM			
10477	HUM0047	POS	GOLNICK	1977-09-19	1	UU			
10483	HUM0047	POS	BRACK	1985-05-13	1	UM			
10476	HUM0047	POS	SHERER	1977-09-16	1	UU			
10524	HUM0047	POS	OB	2002-05-09	1	UU			
10484	HUM0047	POS	BRACK	1985-05-21	1	UM			
10486	HUM0047	POS	BRACK	1985-06-03	1	UM			
10521	HUM0047	POS	OB	2001-08-14	1	UU			
125695	HUM0047	POS	MICHAELIS	2011-06-02	1	UM			
10487	HUM0047	POS	BRACK	1985-06-04	1	UM			
10530	HUM0047	POS	AE	2003-05-30	2	AMAF	Y	N	0
10527	HUM0047	POS	AE	2003-05-08	1	UM			
10534	HUM0047	POS	AE	2004-04-28	1	AM			
10482	HUM0047	POS	LAHAYE	1984-06-06	2	UMUF	Y		
10522	HUM0047	POS	AE	2001-08-16	1	AM			
10533	HUM0047	POS	AE	2004-04-26	1	UM			
10529	HUM0047	POS	AE	2003-05-29	2	UMUF	Y		
10493	HUM0047	POS	MCMILLIAN	1988	2	AMAF	Y		0
10481	HUM0047	POS	SRNF	1984-05-01	2	UMUF	Y		
10485	HUM0047	POS	BRACK	1985-05-22	1	UM			
10489	HUM0047	POS	SRNF	1986-08-04	1	UM			
10535	HUM0047	POS	AE	2004-05-24	1	UM			
10480	HUM0047	POS	ESCANO-KAHL	1978-05-09	1	UU			
10496	HUM0047	POS	via GALEA	1994-06-21	1	UF			
10488	HUM0047	POS	BRACK-LESTER	1985-06-26	2	UMUF	Y		
10479	HUM0047	POS	ESCANO	1978-03-29	1	AU			0
10494	HUM0047	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
10495	HUM0047	POS	OGON	1988-10-04	2	UMUF	Y		
10498	HUM0047	POS	HESS	1995-05-16	1	AM			
10490	HUM0047	POS	SRNF	1987-04-15	1	UM			
10492	HUM0047	POS	SRNF	1987-07-01	0				2

10562	HUM0048	POS	SRNF	1990-05-25	1	UM			
10560	HUM0048	POS	ROVELL-BREES	1990-04-24	1	AM			0
10557	HUM0048	POS	SRNF	1990-03-27	2	UMUF	Y		
10558	HUM0048	POS	SRNF	1990-03-27	2	UMUF	Y		
10537	HUM0048	POS	MILLER ET AL.	1978-03-21	1	UU			
10538	HUM0048	POS	ESCANO	1978-03-29	1	UU			
10546	HUM0048	POS	SRNF	1985-05-22	2	UMUF	Y		2
10542	HUM0048	POS	SRNF	1984	1	UM			
10559	HUM0048	POS	SRNF	1990-04-24	1	UM			
10547	HUM0048	POS	BRACK	1985-05-28	2	UMUF	Y		
10550	HUM0048	POS	BRACK	1986-08-05	1	UM			
10561	HUM0048	POS	SRNF	1990-05-09	1	UM			
10540	HUM0048	POS	ESCANO	1978-03-29	2	UUUU			
10773	HUM0057	AC	SRNF	1991-05-23	2	UMUF	Y		
10769	HUM0057	NEG	SRNF	1991-04-29	0				
10772	HUM0057	POS	SRNF	1991-05-22	1	UF			
10770	HUM0057	POS	SRNF	1991-05-06	1	UM			
10764	HUM0057	POS	SRNF	1984	2	UMUF	Y		
10776	HUM0057	POS	VIA THP BY NRM	1993	1	UU			
10771	HUM0057	POS	SRNF	1991-05-06	1	UM			
10767	HUM0057	POS	MENDEZ	1984-07-18	2	UMUF	Y		2
10775	HUM0057	POS	SRNF	1991-05-28	1	UU			
10768	HUM0057	POS	FRANKLIN ET AL.	1984-07-25	2	UMUF	Y		
125699	HUM0057	POS	BRESSLER-MICHAELIS	2010-06-24	2	AMAF	Y		
10777	HUM0057	POS	VIA THP BY NRM	1993	1	UF			
10766	HUM0057	POS	SRNF	1984-05-29	1	UM			
10774	HUM0057	POS	SRNF	1991-05-28	1	UU			
10763	HUM0057	POS	YOST-ADAMSON	1979-07-06	1	UM			
10765	HUM0057	POS	SRNF	1984-05-23	1	UM			
11425	HUM0077	AC	J ROBINSON-S POLLAR	1993-06-23	1	UM			0
11426	HUM0077	POS	J HUNTER	1993-08-10	1	UM			0
11424	HUM0077	POS	SAKAI	1979-08-29	1	UU			
11427	HUM0077	POS	J HUNTER	1993-08-11	1	UM			0
12187	HUM0111	AC	TILGHMAN	1987	2	UMUF	Y	Y	2
12197	HUM0111	NEG	SRNF	1992-06-30	0				
12195	HUM0111	NEG	SRNF	1992-04-21	0				
12201	HUM0111	NEG	SRNF	1992-08-06	0				
12194	HUM0111	NEG	SRNF	1990-05-31	0				
12192	HUM0111	NEG	SRNF	1990-04-24	0				
12199	HUM0111	NEG	SRNF	1992-07-20	0				
12196	HUM0111	NEG	SRNF	1992-06-02	0				
12193	HUM0111	NEG	SRNF	1990-05-24	0				
12184	HUM0111	POS	BRACK	1985-06-26	1	UM			
12180	HUM0111	POS	FRANKLIN ET AL.	1985-05-24	2	UMUF	Y		1
12182	HUM0111	POS	BRACK	1985-05-29	2	UMUF	Y		1
125845	HUM0111	POS	SEEGER	2011-08-17	1	AM			
12189	HUM0111	POS	MCMILLIAN	1988-06-15	2	UMUF	Y	Y	
12198	HUM0111	POS	SRNF	1992-07-07	1	UF			
125844	HUM0111	POS	CANTER	2011-05-19	1	UM			
12181	HUM0111	POS	BRACK	1985-05-28	2	UMUF	Y		
12186	HUM0111	POS	BRACK	1986-08-05	1	UM			
12185	HUM0111	POS	BRACK	1986-08-05	1	UF			
12183	HUM0111	POS	BRACK	1985-06-03	2	UMUF	Y		
12188	HUM0111	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
12179	HUM0111	POS	BINDER	1980	1	UM			
12190	HUM0111	POS	MCMILLIAN	1988-10-04	2	UMUF	Y	Y	
12191	HUM0111	POS	CAT YOUNG	1989-07-27	1	UU			
12200	HUM0111	POS	SRNF	1992-08-04	1	UU			
154157	HUM0117	AC	STNF	2012-07-19	1	AM			
12281	HUM0117	NEG	STNF	1991-06-19	0				
12283	HUM0117	NEG	STNF	1991-06-24	0				
154187	HUM0117	POS	STNF	2010-07-29	1	UM			
154188	HUM0117	POS	STNF	2010-07-30	1	AM			
12280	HUM0117	POS	SIMPSON	1990-06-16	2	AMUF	Y		
154186	HUM0117	POS	STNF	1993-07-28	1	AF			
12279	HUM0117	POS	STOKELY	1983-09-06	1	UU			

12282	HUM0117	POS	STNF-ENGLESON ET AL.	1991-06-20	1	UF			
13039	HUM0152	AC	MCMILLIAN	1988	2	UMUF	Y	Y	1
13035	HUM0152	POS	BRACK-LESTER	1985-06-26	1	UM			
13038	HUM0152	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
13034	HUM0152	POS	BINDER	1980	1	UM			
13037	HUM0152	POS	TILGHMAN-PATON	1987-05-13	2	UMUF	Y		2
13036	HUM0152	POS	BRACK	1985-07-17	1	UM			
13058	HUM0155	AC	TILGHMAN-PATON	1988	2	UMUF	Y	Y	1
13065	HUM0155	NEG	OB	2001-08-14	0				
13069	HUM0155	NEG	OB	2002-06-02	0				
13081	HUM0155	NEG	AE	2005-03-25	0				
13079	HUM0155	NEG	AE	2004-05-24	0				
13070	HUM0155	NEG	PAGLIUGHI	2002-06-25	0				
13067	HUM0155	NEG	OB	2002-04-08	0				
13061	HUM0155	NEG	OB	2001-05-01	0				
13082	HUM0155	NEG	AE	2005-04-06	0				
13076	HUM0155	NEG	AE	2003-06-16	0				
13080	HUM0155	NEG	AE	2005-03-09	0				
13074	HUM0155	NEG	AE	2003-05-12	0				
13060	HUM0155	NEG	OB	2001-04-16	0				
13071	HUM0155	NEG	PAGLIUGHI	2002-07-05	0				
13078	HUM0155	NEG	AE	2004-04-26	0				
13072	HUM0155	NEG	SWP-DJM	2002-07-13	0				
13062	HUM0155	NEG	OB	2001-05-21	0				
13075	HUM0155	NEG	AE	2003-05-29	0				
13077	HUM0155	NEG	AE	2004-03-31	0				
13063	HUM0155	NEG	OB	2001-06-25	0				
13064	HUM0155	NEG	OB	2001-07-31	0				
13068	HUM0155	NEG	OB	2002-05-09	0				
13073	HUM0155	POS	AE	2003-05-09	1	UU			
13059	HUM0155	POS	OGON	1988-10-04	2	UMUF	Y		1
13066	HUM0155	POS	OB	2002-03-29	2	UUUU			
126088	HUM0155	POS	MCMILLIAN	1988	2	UMUF	Y		1
13792	HUM0174	POS	ROBINSON-GOLDEN	1994-06-22	1	UM	Y		0
13779	HUM0174	POS	SRNF	1988	2	UMUF	Y		
13793	HUM0175	AC	SHIPMAN	1987-09-02	2	UMUF	Y		
126092	HUM0175	POS	MACHEK	2010-07-13	1	UM			
13794	HUM0175	POS	SRNF	1992-07-27	1	UM			
13795	HUM0175	POS	SRNF	1992-07-29	1	UM			
126095	HUM0220	AC	SRNF	2000	0			Y	
15107	HUM0220	NEG	SRNF	1989-08-31	0				
15106	HUM0220	NEG	SRNF	1989-08-02	0				
15101	HUM0220	POS	THOMAS	1989-07-01	1	UU			
15109	HUM0220	POS	SRNF	1991-07-09	1	UM			
15114	HUM0220	POS	SRNF	1992-07-27	1	UM			
15104	HUM0220	POS	HARRIS ET AL.	1989-07-11	1	UU			
15112	HUM0220	POS	SRNF	1992-06-17	1	UM			
15116	HUM0220	POS	via PSW	2000-09-01	2	UMUF	Y		1
15103	HUM0220	POS	HARRIS ET AL.	1989-07-07	1	UM			
15105	HUM0220	POS	SRNF	1989-07-12	2	UMUF	Y		1
15102	HUM0220	POS	HARRIS ET AL.	1989-07-06	1	UM			
15113	HUM0220	POS	SRNF	1992-06-18	2	UMUF	Y		1
141367	HUM0220	POS	via USFS NRIS - SRNF	2000-09-01	0				1
15115	HUM0220	POS	SRNF	1992-07-27	1	UF			
15108	HUM0220	POS	SRNF	1990-08-07	1	UM			
16310	HUM0269	POS	SRNF	1991-07-01	1	UM			
16309	HUM0269	POS	SRNF	1991-06-25	1	UM			
17469	HUM0311	AC	BUNNELL	1997-04-26	2	UMUF	Y	Y	
17476	HUM0311	NEG	SPI via CDF & USFWS	2006	0				
17478	HUM0311	NEG	SPI via CDF & USFWS	2008	0				
17477	HUM0311	NEG	SPI via CDF & USFWS	2007	0				
17471	HUM0311	NEG	SIMPSON	1999	0				
17474	HUM0311	NEG	SIMPSON	2003	0				
17472	HUM0311	POS	SIMPSON	2000	2	UMUF	Y		
17470	HUM0311	POS	SIMPSON	1998	2	UMUF	Y		
17460	HUM0311	POS	DILLER (SIMPSON)	1991	2	UMUF	Y	Y	1

17462	HUM0311	POS	DILLER (SIMPSON)	1993	2	UMUF	Y		
17465	HUM0311	POS	SIMPSON	1996	2	UMUF	Y		2
17459	HUM0311	POS	DILLER ET AL.	1990-06-16	2	UMUF	Y		
17473	HUM0311	POS	SIMPSON	2001	1	UM			
17461	HUM0311	POS	SIMPSON	1992	2	UMUF	Y	Y	
17458	HUM0311	POS	DILLER ET AL.	1990-04-09	2	UMUF	Y	Y	
17463	HUM0311	POS	SIMPSON	1994	2	UMUF	Y	Y	2
17467	HUM0311	POS	BUNNELL-CARPENTER	1996-07-02	2	UMUF	Y		2
17468	HUM0311	POS	SIMPSON	1997	2	UMUF	Y	Y	0
17466	HUM0311	POS	SIMPSON	1996	2	UMUF	Y	Y	2
17475	HUM0311	POS	SPI via CDF & USFWS	2005	1	UU			
17464	HUM0311	POS	SIMPSON	1995	2	UMUF	Y		0
17888	HUM0330	AC	SIMPSON	1997	2	UMUF	Y	Y	2
120949	HUM0330	NEG	HEWITT	2011-05-24	0				
17895	HUM0330	NEG	SIMPSON	2003	0				
120751	HUM0330	NEG	HEWITT	2011-06-09	0				
17889	HUM0330	NEG	SIMPSON	1998	0				
120807	HUM0330	NEG	HEWITT	2011-08-30	0				
17885	HUM0330	POS	SIMPSON	1994	2	UMUF	Y	Y	2
17892	HUM0330	POS	SIMPSON	2000	2	UMUF	Y		
17893	HUM0330	POS	SIMPSON	2001	2	AMAF	Y	Y	0
17882	HUM0330	POS	AVERY	1991-05-01	1	UM			
17891	HUM0330	POS	SIMPSON	1999	2	UMUF	Y		
17890	HUM0330	POS	SPI	1998	2	UMUF	Y		
17884	HUM0330	POS	DILLER (SIMPSON)	1993	2	UMUF	Y		
17894	HUM0330	POS	SIMPSON	2002	1	UM			
17883	HUM0330	POS	SIMPSON	1992	2	UMUF	Y	Y	1
17887	HUM0330	POS	SIMPSON	1996	2	UMUF	Y	Y	2
17886	HUM0330	POS	SIMPSON	1995	1	UM			
18105	HUM0339	AC	HUNT von ARB	2005-04-18	2	AMAF	Y	Y	
18083	HUM0339	NEG	ROBINSON	2000-07-18	0				
18099	HUM0339	NEG	DUDLEY	2004-04-16	0				
18084	HUM0339	NEG	ROBINSON	2000-07-25	0				
18096	HUM0339	NEG	DUDLEY	2003-04-26	0				
18077	HUM0339	NEG	HERRERA	2000-05-10	0				
18075	HUM0339	NEG	HERRERA	2000-04-11	0				
18078	HUM0339	NEG	HERRERA	2000-05-15	0				
18082	HUM0339	NEG	ROBINSON	2000-06-26	0				
18102	HUM0339	NEG	HUNT von ARB-HUNT	2005-03-12	0				
18080	HUM0339	NEG	HERRERA	2000-05-25	0				
18098	HUM0339	NEG	DUDLEY	2004-03-21	0				
18072	HUM0339	NEG	SMURR	1996-03-28	0				
18079	HUM0339	NEG	ROBINSON	2000-05-21	0				
18081	HUM0339	NEG	ROBINSON	2000-06-16	0				
18085	HUM0339	NEG	ROBINSON-PIEPER	2000-08-01	0				
18104	HUM0339	NEG	HUNT	2005-04-02	0				
18093	HUM0339	NEG	DUDLEY	2003-04-11	0				
18073	HUM0339	NEG	GAH-SBT	1999-06-28	0				
18103	HUM0339	POS	HUNT	2005-04-01	1	UM			
18074	HUM0339	POS	HERRERA	1999-07-28	1	UU			
18067	HUM0339	POS	THP	1991-08-28	1	UU			
18063	HUM0339	POS	HOWARD	1991-07-20	1	UU			
18076	HUM0339	POS	HERRERA	2000-04-25	1	UM			
18101	HUM0339	POS	HUNT von ARB	2005-03-11	1	UM			
18066	HUM0339	POS	THP	1991-08-20	1	UU			
18065	HUM0339	POS		1991-07-22	1	UU			
126195	HUM0367	AC	FOSTER-RUSSELL	2012-06-07	1	UM			
126193	HUM0367	POS	SHASTA TRINITY NF	2010-08-10	1	UM			
126192	HUM0367	POS	SHASTA TRINITY NF	2010-08-09	1	UM			
126191	HUM0367	POS	SHASTA TRINITY NF	2010-07-28	1	UM			
18678	HUM0368	AC	ROBINSON-PRESCHEL	1991-07-02	2	UMUF	Y		
18683	HUM0368	POS	VIA THP BY NRM	1993	1	UU			
18682	HUM0368	POS	NAT RES MGRS	1992	1	UU			
18674	HUM0368	POS	MCMILLIAN	1988-08-27	2	UMUF	Y		
18685	HUM0368	POS	VIA THP BY NRM	1993	1	UU			
18675	HUM0368	POS	SRNF	1991-05-13	2	UMUF	Y		

18679	HUM0368	POS	SRNF	1991-07-09	2	UMUF	Y		
18677	HUM0368	POS	SRNF	1991-07-01	2	UMUF	Y		
18684	HUM0368	POS	VIA THP BY NRM	1993	1	UF			
126198	HUM0368	POS	BRESSLER-MICHAELIS	2010-06-23	2	AMAF	Y		
18676	HUM0368	POS	SRNF	1991-05-14	1	UM			
18680	HUM0368	POS	NAT RES MGRS	1992	1	UU			
18686	HUM0368	POS	LIDGATE	1996-10-08	1	UU			0
18681	HUM0368	POS	NAT RES MGRS	1992	1	UF			
20490	HUM0441	AC	SIMPSON	2002	2	UMUF	Y	Y	1
20494	HUM0441	NEG	SPI via CDF & USFWS	2008	0				
20493	HUM0441	NEG	SPI via CDF & USFWS	2007	0				
20476	HUM0441	POS	DILLER (SIMPSON)	1993	2	UMUF	Y		
20486	HUM0441	POS	SIMPSON	1998	2	AMAF	Y		
20480	HUM0441	POS	BRYANT	1995-07-02	2	UMUF	Y		
20475	HUM0441	POS	SIMPSON	1992	2	UMUF	Y		
132524	HUM0441	POS	GREEN DIAMOND	1995	1	UU			
20484	HUM0441	POS	SIMPSON	1997	2	UMUF	Y	Y	0
20482	HUM0441	POS	BRYANT	1995-07-25	2	UMUF	Y		
20479	HUM0441	POS	BRYANT	1995-05-25	2	UMUF	Y		
20483	HUM0441	POS	SIMPSON	1996	2	UMUF	Y	N	0
20478	HUM0441	POS	BRYANT	1995-04-22	1	UU			
20491	HUM0441	POS	SIMPSON	2003	2	UMUF	Y	N	0
20487	HUM0441	POS	SIMPSON	1999	2	UMUF	Y	N	0
20489	HUM0441	POS	SIMPSON	2001	2	AMAF	Y	Y	2
20492	HUM0441	POS	SPI via CDF & USFWS	2005	1	UU			
20481	HUM0441	POS	BRYANT	1995-07-17	2	UMUF	Y		
20485	HUM0441	POS	BUNNELL	1997-04-26	2	UMUF	Y	Y	
20488	HUM0441	POS	SIMPSON	2000	2	UMUF	Y		
20477	HUM0441	POS	SIMPSON	1994	2	UMUF	Y	Y	2
21060	HUM0471	AC	SRNF	1992-06-16	1	UU			
21061	HUM0471	POS	SRNF	1992-07-06	1	UU			
21059	HUM0471	POS	SRNF	1992-06-15	1	UF			
21062	HUM0471	POS	SRNF	1992-07-06	1	UU			
21589	HUM0490	AC	J.ROBINSON	1993-06-22	2	UMUF	Y		0
21585	HUM0490	POS	SRNF	1992-07-20	1	UF			
21587	HUM0490	POS	SRNF	1992-07-30	2	UMUF	Y		
21588	HUM0490	POS	J ROBINSON-S POLLAR	1993-06-21	1	UM			0
21586	HUM0490	POS	SRNF	1992-07-29	2	UMUF			
21584	HUM0490	POS	SRNF	1992-07-07	1	UM			
21583	HUM0490	POS	SRNF	1992-07-06	1	UM			
21590	HUM0490	POS	HOWARTER	1996-07-15	1	AU			0
22524	HUM0541	AC	RISLEY-ARSENAULT	1991-06-13	2	UMUF	Y	Y	1
22527	HUM0541	POS	SRNF	1991-08-07	1	UU			
22529	HUM0541	POS	SRNF	1992-06-18	1	UM			
22526	HUM0541	POS	SRNF	1991-07-25	2	UMUF	Y		2
126218	HUM0541	POS	HUNT VON ARB	2010-06-26	2	AUUU			
22523	HUM0541	POS	SRNF	1991-06-12	2	UMUF	Y		
22528	HUM0541	POS	SRNF	1992-06-17	1	UM			
22525	HUM0541	POS	ARSENAULT-ROBINSON	1991-06-25	1	AM			0
126226	HUM0742	AC	FRANKLIN ET AL.	2001-07-19	2	AMAF	Y	N	
27649	HUM0742	NEG	SIMPSON	1999	0				
120992	HUM0742	NEG	HEWITT	2011-05-22	0				
27652	HUM0742	NEG	SIMPSON	2002	0				
129210	HUM0742	NEG	GREEN DIAMOND	2003	0				
121053	HUM0742	NEG	HEWITT	2011-05-22	0				
27651	HUM0742	NEG	SIMPSON	2001	0				
121099	HUM0742	NEG	HEWITT	2011-05-22	0				
132858	HUM0742	NEG	GREEN DIAMOND	2000	0				
27648	HUM0742	POS	SIMPSON	1998	1	AM			
27646	HUM0742	POS	SIMPSON	1994	2	UMUF	Y	Y	1
27650	HUM0742	POS	SIMPSON	2000	1	UM			
27647	HUM0742	POS	MAEHLER	1995-07-27	1	UF			0
121816	HUM0742	POS	HEWITT	2011-07-28	1	UM			
121806	HUM0742	POS	HEWITT	2011-07-28	1	UM			
30184	HUM0839	NEG	SIMPSON	1999	0				
30185	HUM0839	POS	SIMPSON	2000	1	UM			

31882	HUM0925	AC	HERRERA	1999-04-02	2	UMUF	Y
31879	HUM0925	NEG	SLAUSON	1999-03-18	0		
31886	HUM0925	POS	BARTLETT	1999-05-26	2	UMUF	Y
31881	HUM0925	POS	HERRERA	1999-04-02	2	UMUF	Y
31880	HUM0925	POS	TLB	1999-03-29	1	UU	
31888	HUM0926	AC	HERRERA-HEWITT	1999-03-16	2	UMUF	Y
31901	HUM0926	NEG	HUNT-STOLFUS	2003-05-01	0		
121543	HUM0926	NEG	HEWITT	2011-07-28	0		
31910	HUM0926	NEG	HUNT	2005-05-17	0		
31908	HUM0926	NEG	HUNT	2004-05-24	0		
31896	HUM0926	NEG	LBJ-RWH	1999-06-12	0		
31911	HUM0926	NEG	HUNT	2005-05-25	0		
31899	HUM0926	NEG	LBJ-HERRERA	2000-06-01	0		
121493	HUM0926	NEG	HEWITT	2011-05-24	0		
31906	HUM0926	NEG	HUNT	2004-03-15	0		
121556	HUM0926	NEG	HEWITT	2011-05-24	0		
31904	HUM0926	NEG	HUNT	2003-06-02	0		
121587	HUM0926	NEG	HEWITT	2011-07-28	0		
120920	HUM0926	NEG	HEWITT	2011-06-11	0		
31900	HUM0926	NEG	HUNT-STOLFUS	2003-04-17	0		
120759	HUM0926	NEG	HEWITT	2011-06-11	0		
120718	HUM0926	NEG	HEWITT	2011-06-11	0		
121532	HUM0926	NEG	HEWITT	2011-07-28	0		
31905	HUM0926	NEG	HUNT	2003-06-09	0		
31891	HUM0926	NEG	LBJ-PAH-KMS	1999-04-04	0		
31907	HUM0926	NEG	HUNT	2004-05-07	0		
31893	HUM0926	NEG	LBJ-PAH	1999-05-03	0		
120677	HUM0926	NEG	HEWITT	2011-06-11	0		
121511	HUM0926	NEG	HEWITT	2011-05-24	0		
121535	HUM0926	NEG	HEWITT	2011-05-24	0		
31903	HUM0926	NEG	HUNT	2003-05-25	0		
31902	HUM0926	NEG	HUNT	2003-05-19	0		
121482	HUM0926	NEG	HEWITT	2011-05-24	0		
121510	HUM0926	NEG	HEWITT	2011-07-28	0		
31909	HUM0926	NEG	HUNT	2005-05-08	0		
31890	HUM0926	POS	LBJ-HERRERA-WARD	1999-03-23	2	AMAF	Y
31898	HUM0926	POS	HERRERA	2000-05-05	1	AF	Y
31897	HUM0926	POS	HERRERA	2000-04-25	2	UMAF	Y
31894	HUM0926	POS	LBJ-HERRERA	1999-05-22	1	UF	
31889	HUM0926	POS	LBJ-HERRERA	1999-03-18	2	UMUF	Y
31895	HUM0926	POS	LBJ-HEWITT	1999-05-24	2	AMAF	
31892	HUM0926	POS	LBJ-JFW	1999-04-13	1	UU	
32375	HUM0947	AC	HERRERA	2000-05-05	1	UM	
32373	HUM0947	NEG	LBJ-RWH	1999-06-12	0		
32371	HUM0947	NEG	LBJ-HERRERA	1999-05-22	0		
32372	HUM0947	NEG	LBJ-HERRERA-RPW	1999-06-01	0		
32376	HUM0947	NEG	LBJ-HERRERA	2000-06-01	0		
32370	HUM0947	NEG	LBJ-PAH	1999-05-03	0		
32368	HUM0947	NEG	LBJ-PAH-KMS	1999-04-04	0		
32374	HUM0947	NEG	LBJ-HERRERA-HOINESS	2000-04-25	0		
32369	HUM0947	NEG	LBJ-PAH-JFW	1999-04-13	0		
32941	HUM0982	NEG	COLLINS	2005-03-24	0		
32942	HUM0982	NEG	COLLINS	2005-04-02	0		
32940	HUM0982	NEG	COLLINS	2005-03-16	0		
32961	HUM0983	AC	SPI	1998-04-29	1	UM	
33028	HUM0983	NEG	RWH	2002-07-17	0		
32964	HUM0983	NEG	SWP	1998-06-13	0		
32955	HUM0983	NEG	DUDLEY	1997-04-29	0		
32984	HUM0983	NEG	HERRERA	1999-06-01	0		
32972	HUM0983	NEG	PAH-JFW	1999-04-13	0		
33022	HUM0983	NEG	RWH-PAH	2001-04-22	0		
32950	HUM0983	NEG	SMURR	1996-06-05	0		
33001	HUM0983	NEG	HERRERA	2000-04-28	0		
32952	HUM0983	NEG	LUNDE	1996-06-30	0		
32997	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0		
32993	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0		

32954	HUM0983	NEG	DUDLEY	1997-04-22	0	
33008	HUM0983	NEG	HERRERA	2000-05-15	0	
32996	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
33020	HUM0983	NEG	PAH-RWH	2001-04-13	0	
32946	HUM0983	NEG	SMURR	1996-03-25	0	
33024	HUM0983	NEG	PAGLIUGHI	2002-06-25	0	
33014	HUM0983	NEG	ROBINSON	2000-07-25	0	
33026	HUM0983	NEG	PAGLIUGHI	2002-07-05	0	
33015	HUM0983	NEG	ROBINSON-PIEPER	2000-08-01	0	
32957	HUM0983	NEG	DUDLEY	1997-05-13	0	
32956	HUM0983	NEG	DUDLEY	1997-05-05	0	
33025	HUM0983	NEG	RWH	2002-06-27	0	
33003	HUM0983	NEG	HERRERA	2000-04-28	0	
32958	HUM0983	NEG	DUDLEY	1997-05-21	0	
32980	HUM0983	NEG	HERRERA	1999-05-22	0	
33005	HUM0983	NEG	HERRERA	2000-05-04	0	
32951	HUM0983	NEG	SMURR	1996-06-06	0	
32969	HUM0983	NEG	HERRERA	1999-04-02	0	
33017	HUM0983	NEG	HERRERA	2001-03-15	0	
33027	HUM0983	NEG	SWP-DJM	2002-07-13	0	
32948	HUM0983	NEG	SMURR	1996-05-07	0	
32979	HUM0983	NEG	HERRERA	1999-05-07	0	
33011	HUM0983	NEG	ROBINSON	2000-06-16	0	
33019	HUM0983	NEG	PAH-RWH	2001-04-13	0	
32953	HUM0983	NEG	SMURR	1997-03-05	0	
33013	HUM0983	NEG	ROBINSON	2000-07-18	0	
32994	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
33012	HUM0983	NEG	ROBINSON	2000-06-26	0	
32947	HUM0983	NEG	SMURR	1996-04-04	0	
32991	HUM0983	NEG	HERRERA	2000-04-13	0	
32963	HUM0983	NEG	SWP	1998-06-07	0	
33023	HUM0983	NEG	RWH	2002-04-22	0	
33018	HUM0983	NEG	HERRERA	2001-03-15	0	
33002	HUM0983	NEG	HERRERA	2000-04-28	0	
32959	HUM0983	NEG	DUDLEY	1997-06-03	0	
32967	HUM0983	NEG	TLB	1999-03-29	0	
32995	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
32960	HUM0983	NEG	SMURR	1997-07-06	0	
33010	HUM0983	NEG	HERRERA	2000-05-25	0	
32978	HUM0983	NEG	HERRERA	1999-05-07	0	
32981	HUM0983	NEG	HERRERA	1999-05-22	0	
33021	HUM0983	NEG	RWH-PAH	2001-04-22	0	
32992	HUM0983	NEG	HERRERA	2000-04-13	0	
33004	HUM0983	NEG	HERRERA	2000-05-04	0	
32998	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
32990	HUM0983	NEG	HERRERA	2000-04-13	0	
32949	HUM0983	NEG	SMURR	1996-05-09	0	
32971	HUM0983	NEG	PAH-JFW	1999-04-13	0	
32983	HUM0983	NEG	HERRERA-WARD	1999-06-01	0	
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32970	HUM0983	NEG	HERRERA	1999-04-02	0	
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32975	HUM0983	POS	KMS	1999-04-29	1	UM
32987	HUM0983	POS	HERRERA	2000-04-11	1	UM
33006	HUM0983	POS	HERRERA	2000-05-10	1	UM
32944	HUM0983	POS	GALEA ET AL.	1991-07-17	1	AM
32962	HUM0983	POS	SPI	1998-05-03	1	UM
32999	HUM0983	POS	HERRERA-HONESS	2000-04-25	1	UM
33016	HUM0983	POS	HERRERA	2000-11-04	1	UM
32988	HUM0983	POS	PAH	2000-04-11	1	UM
32943	HUM0983	POS	GALEA ET AL.	1991-06-26	1	AM
32968	HUM0983	POS	HERRERA	1999-03-29	1	UM
33000	HUM0983	POS	PAH-GAH	2000-04-25	1	UM
32965	HUM0983	POS	Cruisers	1998-07-28	1	UM
32945	HUM0983	POS	MARTIN-CFA	1991-07-17	1	UM
32966	HUM0983	POS	TLB-KMS	1999-03-16	1	UM

32989	HUM0983	POS	HERRERA	2000-04-11	1	UM	
32977	HUM0983	POS	HERRERA	1999-05-04	1	AM	
33007	HUM0983	POS	PAH	2000-05-10	1	UM	
32986	HUM0983	POS	HERRERA	2000-04-11	1	UM	
32976	HUM0983	POS	HERRERA	1999-05-03	1	UM	
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121187	HUM1021	NEG	HEWITT	2011-08-30	0		
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120685	HUM1021	NEG	HEWITT	2011-05-22	0		
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121611	HUM1021	NEG	HEWITT	2011-05-22	0		
120722	HUM1021	NEG	HEWITT	2011-05-22	0		
121458	HUM1021	NEG	HEWITT	2011-05-24	0		
120695	HUM1021	NEG	HEWITT	2011-08-30	0		
121499	HUM1021	NEG	HEWITT	2011-07-28	0		
120844	HUM1021	NEG	HEWITT	2011-08-30	0		
121128	HUM1021	NEG	HEWITT	2011-08-30	0		
121581	HUM1021	NEG	HEWITT	2011-05-22	0		
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122195	HUM1021	POS	HEWITT	2011-05-22	1	UM	
121831	HUM1021	POS	HEWITT	2011-06-09	1	UM	
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121762	HUM1021	POS	HEWITT	2011-05-22	1	UM	
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121009	NEG	NEG	HEWITT	2011-08-30	0		
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150361	NEG	NEG	RENZULLO	2015-05-04	0		
121060	NEG	NEG	HEWITT	2011-08-30	0		
120909	NEG	NEG	HEWITT	2011-08-30	0		
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120876	NEG	NEG	HEWITT	2011-06-09	0				
150370	NEG	NEG	RENZULLO	2015-07-20	0				
150364	NEG	NEG	RENZULLO	2015-06-02	0				
150348	NEG	NEG	RENZULLO	2015	0				
150356	NEG	NEG	RENZULLO	2015-03-18	0				
120705	NEG	NEG	HEWITT	2011-05-24	0				
150360	NEG	NEG	RENZULLO	2015-04-17	0				
150362	NEG	NEG	RENZULLO	2015-05-05	0				
150343	NEG	NEG	RENZULLO	2015	0				
121649	NEG	NEG	HEWITT	2011-06-09	0				
150344	NEG	NEG	RENZULLO	2015	0				
121455	NEG	NEG	HEWITT	2011-05-24	0				
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150342	NEG	NEG	RENZULLO	2015	0				
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120951	NEG	NEG	HEWITT	2011-08-30	0				
150369	NEG	NEG	RENZULLO	2015-07-20	0				
120700	NEG	NEG	HEWITT	2011-06-09	0				
121580	NEG	NEG	HEWITT	2011-06-09	0				
150372	POS	POS	RENZULLO	2015-03-18	1	UU			
150374	POS	POS	RENZULLO	2015-06-02	1	UU			
150373	POS	POS	RENZULLO	2015-05-04	1	UU			
103487	TRI0003	AC	MCMILLIAN	1988-08-05	2	UMUF	Y		
103485	TRI0003	POS	LUCICH	1974-07-01	1	UUUU			
103486	TRI0003	POS	GOULD	1979	1	UU			
103484	TRI0003	POS	GOULD	1973-09-04	1	UU			
103488	TRI0003	POS	MCMILLIAN	1988-08-05	1	UM			
103483	TRI0003	POS	CONDOR	1926-06-01	1	UU			
104086	TRI0045	AC	BRACK	1985-06-27	2	UMUF	Y	Y	1
104090	TRI0045	POS	BRACK	1986-08-05	1	UF			
104091	TRI0045	POS	TILGHMAN-PATON	1987	2	UMUF	Y		
104087	TRI0045	POS	BRACK-STEVENSON	1985-06-27	1	AU			0
104089	TRI0045	POS	SRNF	1986-08-05	1	UU			
104083	TRI0045	POS	MARCOT	1978-05-17	1	UU			
104094	TRI0045	POS	MCMILLIAN	1988	2	AMAF	Y		0
104095	TRI0045	POS	MCMILLIAN	1988-10-04	2	UMUF	Y		
104097	TRI0045	POS	SRNF	1990-05-10	1	UM			
104084	TRI0045	POS	LEISTEN	1979-04-24	2	UMUF	Y		
104085	TRI0045	POS	BRACK-MENDEZ	1985-06-20	1	UU			
104088	TRI0045	POS	BRACK-STEVENSON	1985-07-02	2	UMUF	Y		1
104093	TRI0045	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
104098	TRI0045	POS	SRNF	1990-05-24	1	UM			
104092	TRI0045	POS	TILGHMAN-PATON	1987	2	UMUF	Y		
104096	TRI0045	POS	SRNF	1990-04-10	2	UMUF	Y		
126879	TRI0187	AC	ST. PIERRE ET AL.	2011-08-08	2	AMAF	Y		
126878	TRI0187	POS	CUTLER-OWENS	2011-07-12	1	AU			
106703	TRI0187	POS	SRNF	1984-05-23	2	UMUF	Y		
106704	TRI0187	POS	MCMILLIAN	1988-08-05	2	UMUF			
106705	TRI0187	POS	MCMILLIAN	1988-08-27	2	UMUF			
126877	TRI0187	POS	CUTLER ET AL.	2011-07-11	1	UM			
154167	TRI0364	AC	STNF	2015-05-18	2	AMAF	Y	Y	1
127003	TRI0364	NEG	SRNF	2000	0			Y	
150385	TRI0364	NEG	RENZULLO	2015-07-20	0				
150380	TRI0364	NEG	RENZULLO	2015	0				

150381	TRI0364	NEG	RENZULLO	2015-03-18	0			
150382	TRI0364	NEG	RENZULLO	2015-04-17	0			
150383	TRI0364	NEG	RENZULLO	2015-05-04	0			
108877	TRI0364	NEG	STNF	1992-06-16	0			
150384	TRI0364	NEG	RENZULLO	2015-06-22	0			
108878	TRI0364	POS	STNF	1992-06-30	1	UM		
127005	TRI0364	POS	SHASTA TRINITY NF	2010-07-28	1	UU		
127004	TRI0364	POS	CUTLER ET AL.	2010-07-27	1	UU		
154168	TRI0364	POS	STNF	2015-06-11	2	AMAF	Y	2
108882	TRI0364	POS	KUDRNA-PLUMAGE	1996-02-06	1	AU		0
108881	TRI0364	POS	SRNF	1992-07-29	1	UM		
108880	TRI0364	POS	STNF-DIAS-GONZALES	1992-07-14	2	UMUF	Y	1
127007	TRI0364	POS	ST. PIERRE-CUTLER	2011-06-30	1	UM		
108884	TRI0364	POS	via PSW	2001-06-02	2	UMAF	Y	
127010	TRI0364	POS	HUYNH ET AL.	2011-07-27	2	AMAF	Y	
127011	TRI0364	POS	FOSTER-RUSSELL	2012-06-06	2	UMUF	Y	
127009	TRI0364	POS	CUTLER ET AL.	2011-07-14	1	UU		
108883	TRI0364	POS	via PSW	2000-06-24	2	AMAF	Y	1
108879	TRI0364	POS	STNF	1992-07-13	1	UM		
127006	TRI0364	POS	CUTLER-ST. PIERRE	2011-06-29	1	UF		
127008	TRI0364	POS	CUTLER ET AL.	2011-07-11	1	UF		
104788	TRI0467	NEG	AREY-SHIPLEY	1981-04-28	0			
104799	TRI0467	NEG	STNF	1991-07-10	0			
104798	TRI0467	POS	STNF-PHILLIPS ET AL.	1991-07-08	1	UM		

Biological Resource Assessment for APN:208-221-006

February 2019

Prepared For:

George Petrov

Prepared By:

TransTerra Consulting
INTEGRATED ENVIRONMENTAL SERVICES

455 I Street Suite 202, Arcata, CA 95521

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Introduction

This Biological Resource Assessment was prepared to provide data concerning the type and extent of biological resources under the jurisdiction of the California Department of Fish and Wildlife (CDFW) and US Fish and Wildlife Service (USFWS) that are currently or potentially present at the project location. The project includes commercial cannabis cultivation and associated activities (CMMLUO 11809). If required after agency review of the preliminary habitat assessment, protocol level surveys will be completed per recommendations by the Final Environmental Impact Report (FEIR) amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. [1]

Environmental Setting

Project Location

The property is located off Salyer Mad River Road near Dinsmore area in Humboldt County, California (Section 28, Township 2N, Range 5E). The project area is located on a south facing, 40-acre parcel within the U.S. Geological Survey's (USGS) Blake Mountain 7.5-minute quadrangle map. Elevation is approximately 3000-3440 feet above sea level. Property is located in the Mad River Watershed. The regional climate is Mediterranean in nature with warm summers and cool winters.

Soil, Topography, Hydrology

Three (3) soil types are mapped in the project areas on the Web Soil Survey. The property area is primarily composed of Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry (4426), Elkcamp-Airstrip-Highyork complex, 9 to 30 percent slopes (4435), and Hoagland-Chalkmountain-Pasturerock complex, 30 to 50 percent slopes (4417). These soils are not considered hydric and are on deep, well drained soils that formed in colluvium and residuum derived from sandstone and mudstone.

The Pasturerock series consists of very deep, well drained soils formed in colluvium derived from sandstone and mudstone. Pasturerock soils are on mountains and have slopes of 15 to 50 percent. The mean annual precipitation is about 2290 millimeters (90 inches) and the mean annual temperature is about 13 degrees C (55 degrees F). Coyoterock soils are in moist locations on poorly incised drainages, hillslope hollows, and earthflows. Maneze soils lack an argillic horizon and greater than 35 percent rock fragments in the particle-size control section.

The Elkcamp series consists of very deep, well drained soils formed in colluvium and residuum derived from sandstone, siltstone, and mudstone. Elkcamp soils are on mountains and have slopes of 15 to 50 percent. The mean annual precipitation is about 2290 millimeters (90 inches) and the mean annual temperature is about 13 degrees C (55 degrees F). The Airstrip soils are on ridgetops and spur ridges. These soils are loamy-skeletal and 50 to 102 centimeters deep to a lithic contact. The Chalkmountain series consists of very deep, well drained soils formed in colluvium and residuum derived from sandstone and mudstone. Chalkmountain soils are on mountains. Slopes range from 15 to 50 percent.

[1] Final Environmental Impact Report :Amendments to the Humboldt County Code Regulating Commercial Cannabis Activities. January 2018. Prepared by Ascent Environmental. (Accessed via https://humboldtgov.org/DocumentCenter/View/62689/Humboldt-County-Cannabis-Program-Final-EIR-60mb-PDF)#

Mean annual precipitation is about 2160 millimeters and the mean annual temperature is about 13 degrees C.

The Mad River flows approximately 2,550 feet south of the property. An unnamed Class II/III tributary to the Mad River flows down the center of the parcel. The property is located in the Middle Mad River watershed and the Bear Creek – Mad River subwatershed with an average annual precipitation of 64.24 inches[2]. There are a few watercrossings with associated seasonal wetlands. These areas were flowing/ponded at the time of the survey. There is also a man-made drainage

The project area on the property is mapped as possessing high levels of instability. Project areas for this property are relatively flat with slopes less than 15%.

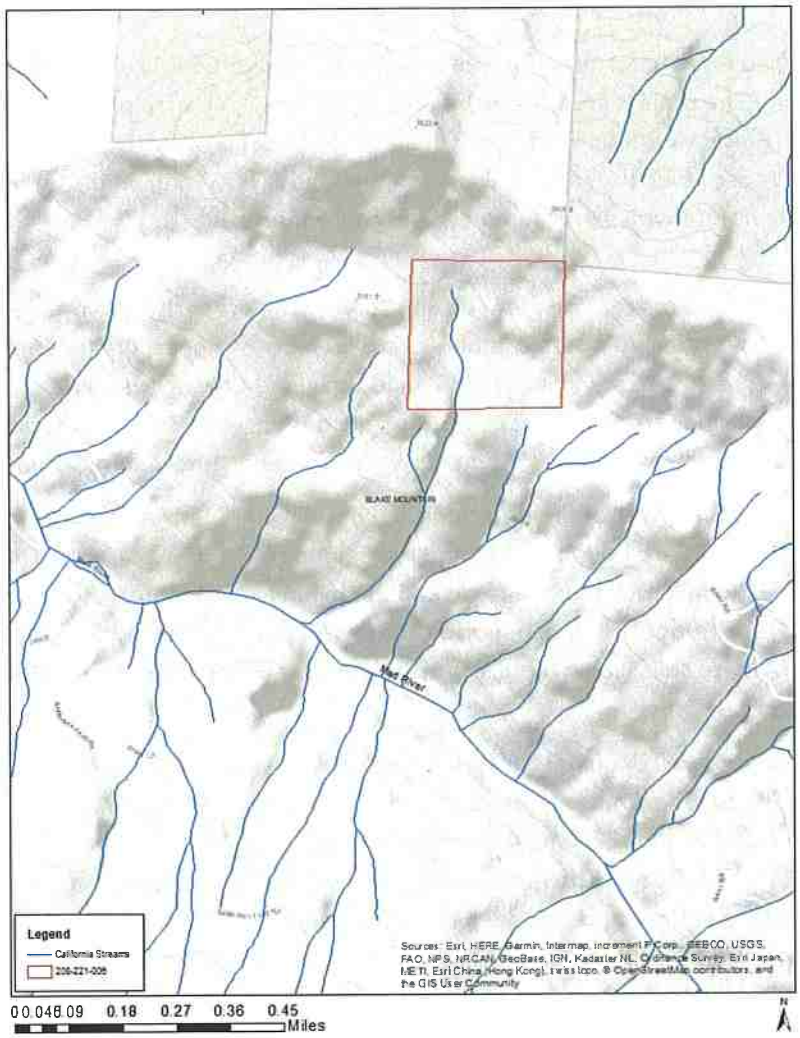

Figure 1. Project locations. (Map created using ArcMap 10.6 and Humboldt County GIS database-NTS

[2] California Department of Transportation Water Quality Planning Tool accessed at: http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx

Figure 2. Streamside Management Areas and National Wetland Inventory (NWI) wetlands mapped on project site[3]

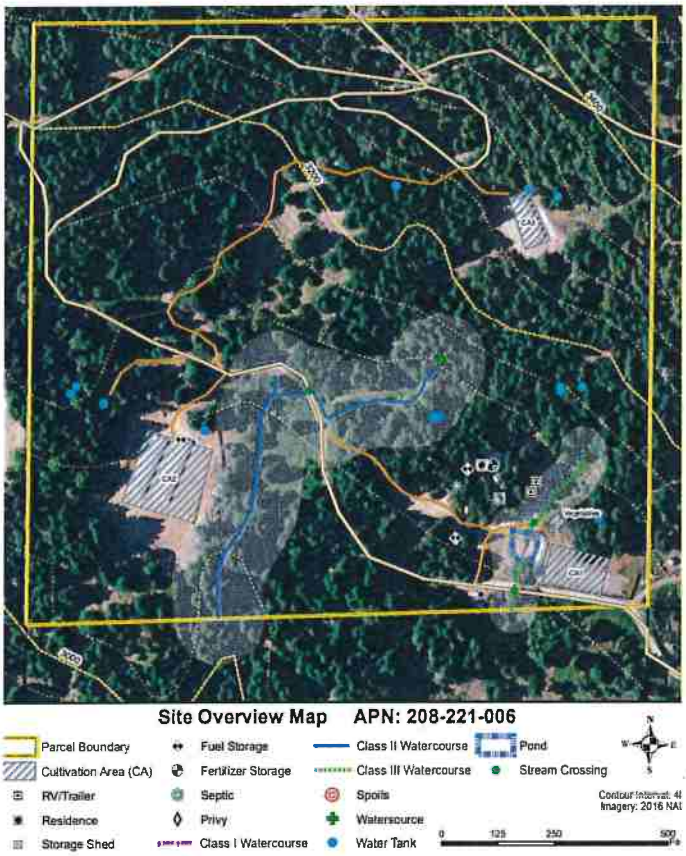

Figure 3. Project Proposal

[3] Humboldt County GIS layer. (Accessed via: http://webgis.co.humboldt.ca.us/HCEGIS2.0/)

Methods

The California Natural Diversity Database (CNDDB) RareFind and Spotted Owl Database, and California Native Plant Society (CNPS) databases were used to assess potential rare species. A habitat assessment was conducted by TransTerra Consulting Principal Biologist Tamara Camper on January 29, 2019. The assessment evaluated listed species and species of special concern (SOC). The study area was scanned for wildlife sign including tracks, scat, tree habitat (cavities, nests scrapes or accumulated vegetation) as well as special habitat types and habitats associated with rare plant species. The observations were concentrated around cultivation sites, roads and watercourses.

The assessment was conducted due to mandatory requirements for cannabis permitting, however the timing of the field visit did not coincide with ideal survey seasons based on phenology and life history cycles for all potential species. Full floristic surveys and/or protocol-level surveys were not conducted in the project area. Based on the timing of the survey, all plant species growing within the study area may not have been observed due to varying flowering phenologies and life forms, such as bulbs, biennials, and annuals. Other potentially dominant species within vegetation communities on site may be present during other times of the year. Therefore, the present study is not floristic in nature. Some of the plant species identified in this report are tentative due to the absence of morphological characters, resulting from immature reproductive structures or seasonal desiccation, which is required to make species-level determinations. Many wildlife species are also not identifiable between August and March and must be surveyed for during the reproductive season. Species-specific surveys will be conducted as appropriate and are further discussed below.

Results and Discussion

Vegetation

Vegetation is variable throughout the parcel, but primarily composed of mixed evergreen forest. Dominant trees species included *Pseudotsuga menziesii* var *menziesii* (Douglas fir), *Umbellularia californica* (California bay), *Quercus kelloggii* (California black oak), *Q. garryana* (Oregon oak) and *Arbutus menziesii* (madrone). The understory was fairly sparse throughout. Shrub species and density were variable depending upon hydrology and canopy. Most areas were dominated by *Arctostaphylos* sp. (manzanita), *Toxicodendron diversilobum* (poison oak), *Symphoricarpos sp.*(snowberry), *Holodiscus discolor* (oceanspray), and *Berberis sp.* (Oregon grape) as well as small tree species. The herb layer was fairly sparse throughout. Openings and roadsides were dominated by ruderal species (not identifiable during survey). Around wetland areas, hydrophytic species observed included Equisetum *telmateia* spp. *braunii* (giant horsetail), *Juncus effuses* (common rush), *J patens* (spreading rush), *Hypericum perforatum* (Klamathweed), *Leucanthemum vulgare* (oxeye daisy), *Holcus lanatus* (velvet grass), *Urtica dioica* (stinging nettle), *Prunella vulgaris* (self-heal), *Rubus ursinus* (California blackberry), *Plantago lanceolata* (English plantain), *Anthoxanthum odoratum* (sweet vernal grass), *Mentha pulegium* (pennyroyal), *and Polystichum munitum* (sword fern) with fairly dense *Salix* sp. (willow) in the shrub layer. One man-made wetland was on-site, however the area was fairly disturbed and no well vegetated. The inundated area contained mostly algae and few vascular species.

Nomenclature follows the most current scientific names in The Jepson Manual of Higher Plants of California Second Edition to the greatest degree feasible[4]

Wetlands and SMA areas

As stated previously, there are watercourses in the area, as well as crossing and ponds. A jurisdictional wetland delineation was not requested or conducted for this assessment.

Photographs of man-made pond and stream crossings. Crossing addressed by Green Road.

Cultivation area and setback from SMA, fencing and silt fence material as well as straw wattles are currently in place between cultivation area and SMA

Northern Spotted Owl[5]

The Northern Spotted Owl (*Strix occidentalis caurina*) is a medium-sized dark brown owl with a barred tail, irregular white spots on head, neck, back, and underparts. Males are smaller than females and the species frequently does not reproduce until three years of age. Courtship initiates in February or March, with eggs laid in late March through April. Delayed nesting occurs at higher elevations and latitude. Clutch size is one to four eggs and incubation is roughly 30 days. Females leave the nest only briefly to

[4] The Jepson Manual :Higher Plants of California Second Edition (Accessed via http://ucjeps.berkeley.edu/jepman.html)

[5] Report to the Fish and Game Commission: A Status Review of the Northern Spotted Owl (Strix Occidentalis) in California (Accessed via https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=116307&inline)

eat prey brought by males, defecate/purge, preen and defend nests. Chicks generally leave the nests in late May or June but are dependent on adults until September when they can fly and hunt on their own.

Northern Spotted Owls (NSO) is relatively long-lived with wild owls living 20 years or more. NSO do not build their own nest, but instead seek naturally occurring nest sites such as broken-top trees, tree cavities, debris accumulations, or nests built by other wildlife.

NSO range extends from southwest British Columbia through the Cascade Range, coastal ranges to California. Nesting and roosting habitat consists of structurally complex forests that also include variable-aged stands and hardwood forest components. Dwarf mistletoe distribution coincides with the distribution and provides an important component of nesting habitat, enabling NSO to nest within younger tree stands. Foraging habitat is composed of a variety of vegetation types and is largely a function of prey abundance and availability. Woodrats are the main component of NSO diet, but other prey items are also taken (smaller birds, rodents, and insects). Dispersal habitat for NSO consists of stands with adequate tree size and canopy to provide protection and foraging opportunities.

Threats to NSO include Barred Owl invasion and loss of habitat. Additional threats include increases in frequency and severity of wildfires, marijuana cultivation, climate change, effects of climate change and the spread of Sudden Oak Death Syndrome.

Regulatory Environment

Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) listed the NSO as threatened under the Endangered Species Act (ESA) in 1990. Critical habitat designation occurred in 1992 and 2008. The 2008 designation was challenged in court and in 2009 the USFWS requested voluntary remand of the 2008 designation. A new final rule designating critical habitat was published in December 2012. The first final recovery plan for the NSO was issued in 2008 and revised in 2011.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act prohibits anyone from taking, killing, or keeping any native bird, its parts, or its nest, without a permit or license. All raptors native to the U.S. are covered by this law. A Special Purpose Possession Permit and/or Endangered Species Permit (depending on species), is required under the Migratory Bird Treaty Act to keep raptors.

California Endangered Species Act

After the Commission voted to accept the petition in December of 2013, the NSO became a State candidate for threatened or endangered status under CESA, commencing with section 2050 of the California Fish and Game Code.

California Bird Species of Special Concern

The Department currently designates the NSO as a Species of Special Concern.

Fish and Game Code

The Fish and Game Code includes certain protections for raptors, including the NSO. Sections applicable to owls include the following:

- Section 3503 - It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

- Section 3503.5 - It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.
- Section 3513 - It is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

Impact Assessment Guidance[6].

The Arcata Fish and Wildlife Office (AFWO) developed guidance that addresses the potential effects of disturbance on NSO. The memorandum includes a consistent and reasonable determinations of effects for activities that occur in or near owl suitable habitat, including human generated sounds or human activities near nest trees.

Behaviors Indicating Harassment

The definition of "take" prescribed by the Act includes "harass". The Act's implementing regulations further define harass as "... an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding or sheltering" [50 CFR §17.3]. Activities that create elevated sound levels or result in close visual proximity of human activities at sensitive locations (e.g., nest trees), have the potential to disrupt normal behavior patterns.

Harassment may occur when owls demonstrate behavior suggesting that the safety or survival of the individual is at risk, or that a reproductive effort is potentially lost or compromised. Examples of this behavior include, but are not limited to:

- An adult or juvenile is flushed from a nest during the incubation, brooding, or fledging period, that potentially results in egg failure or reduced juvenile survival.
- An adult abandons a feeding attempt of a dependent juvenile for an entire daily feeding period, that potentially results in malnutrition or starvation of the young.
- An adult delays feeding attempts of dependent birds on multiple occasions during the breeding season, potentially reducing the growth or likelihood of survival of young.

NSO Observations, Activity Centers and Habitat

The project site does contain conifer forest, hardwood forest and open areas and could be suitable for foraging or possibly nesting habitat. Old growth trees or 'later seral' habitat was not observed on the site. The site is located within 0.4 miles of a historical activity center. The NSO activity center Hum 0119 pair was last observed in 2001 with negative observations during the last calling by Robert Hewitt in

[6] Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelets of Northwestern California (Accessed via: https://www.fws.gov/arcata/es/birds/mm/documents/MAMU-NSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf)

2011. Surveys have not been conducted within a five-mile radius since 2015 when studies were conducted for TRI0364 and a nesting pair was observed with two young.

Ambient noise is not expected to increase as a result of the project. Ground disturbing activities adjacent to or within known Northern Spotted Owl habitat is not currently proposed.

Figure 4 below shows nearest activity center, HUM 0119 within one mile of the project area. Figure 5 shows the project in relation to activity centers within a five-mile radius as well as designated Final Critical Habitat. Appendix B contains all observations and activity centers within a five-mile radius of the project.

CNDDB and Other Database Results

The CDFW CNDDB, BIOS, Rarefind and CNPS databases were scoped before and after field site visit to determine habitat potential and known occurrences of rare or listed species of concern in or around the project area.

The project area contains habitat for various species of concern. Oregon Goldthread (Coptis laciniata) was observed in 1970 in the general vicinity. A complete list of occurrences of rare and species of concern are listed below in Table 1 and Table 2

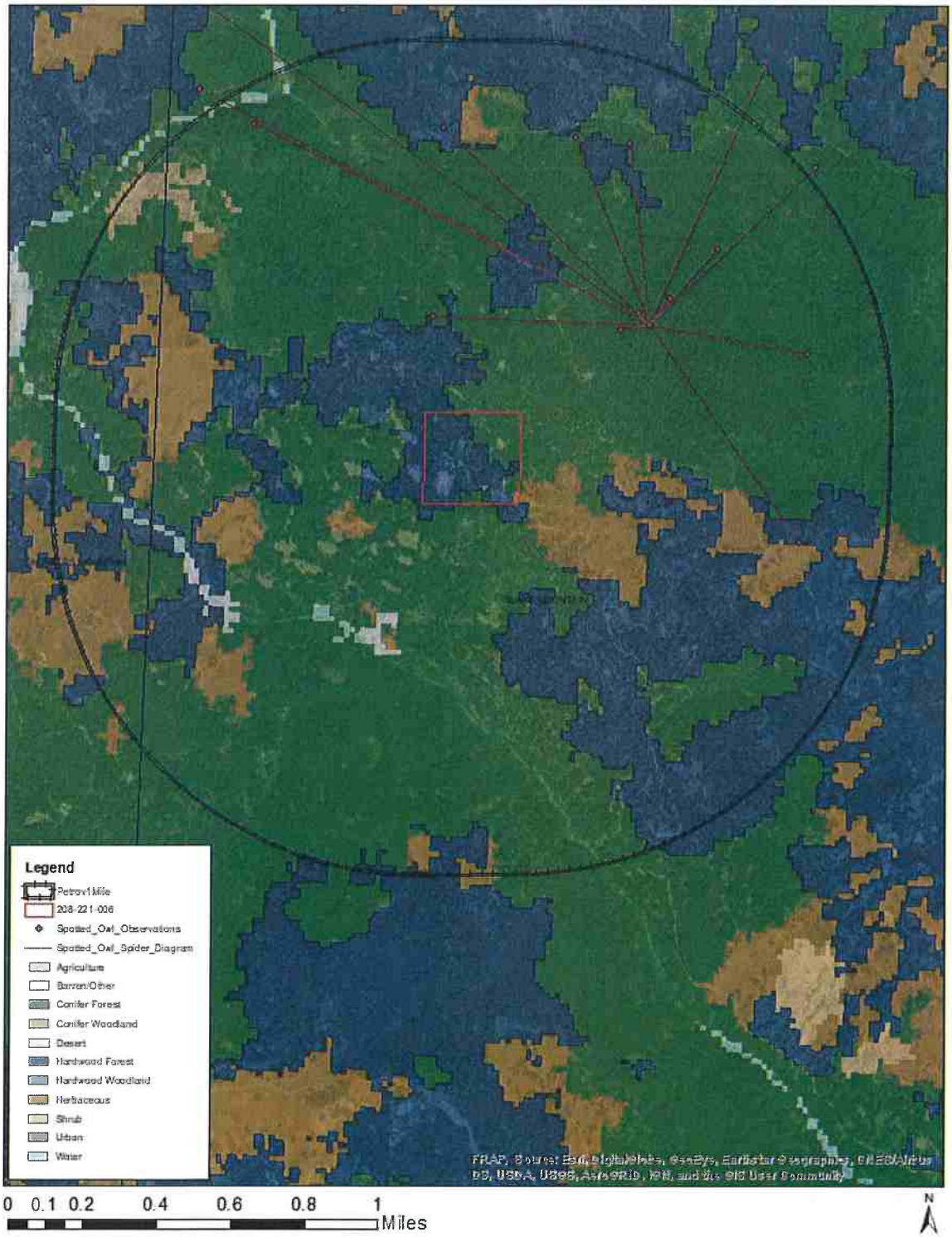

Figure 4. WHR habitat types show the area as hardwood conifer forest surrounding by a mosaic of Hardwood Forest and Herbaceous. Activity center HUM 0155 (13058) is located within one mile of the project area.

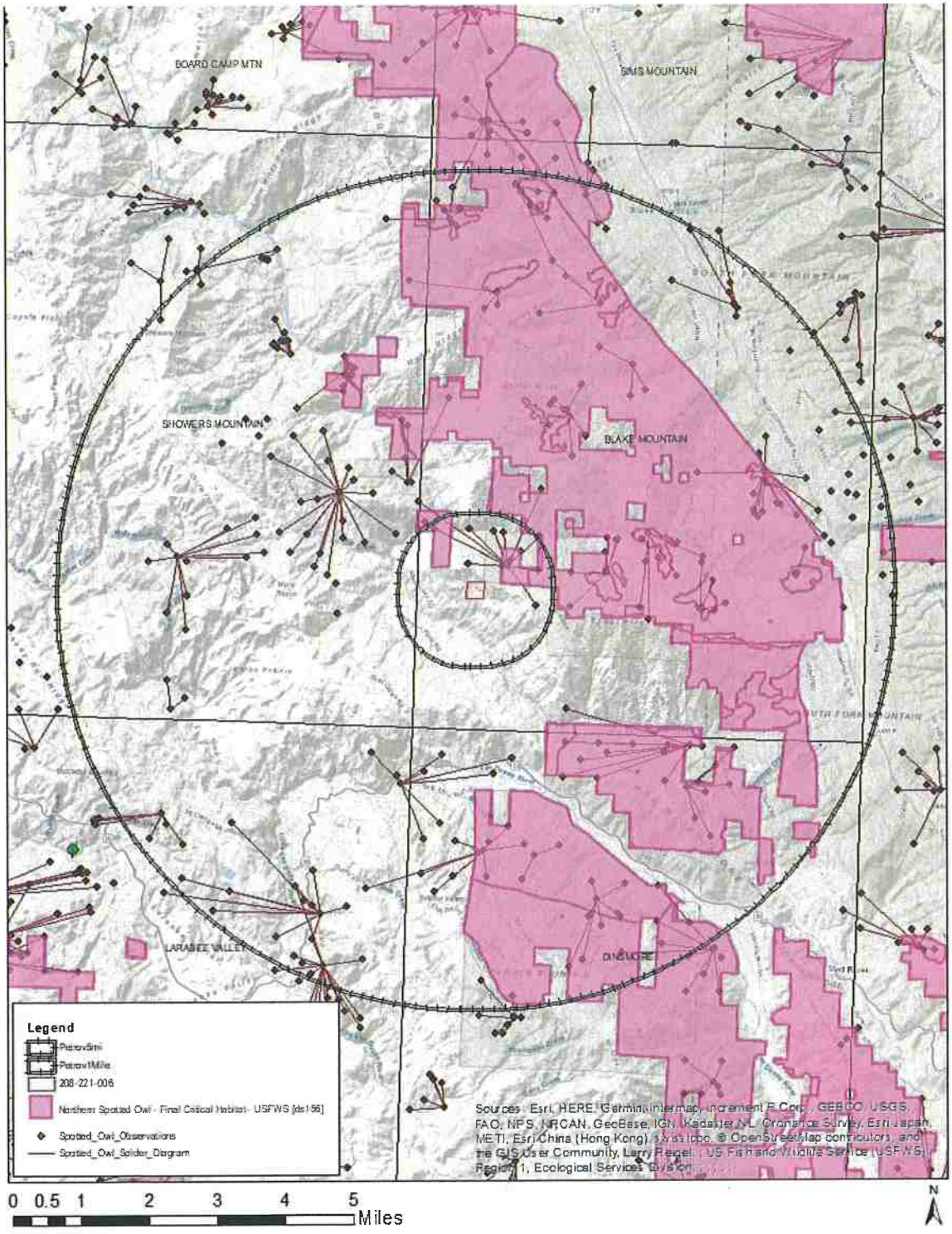

Figure 5. Activity centers within 5 miles of the project site. Final critical habitat is located approximately 0.25 miles from the project site.

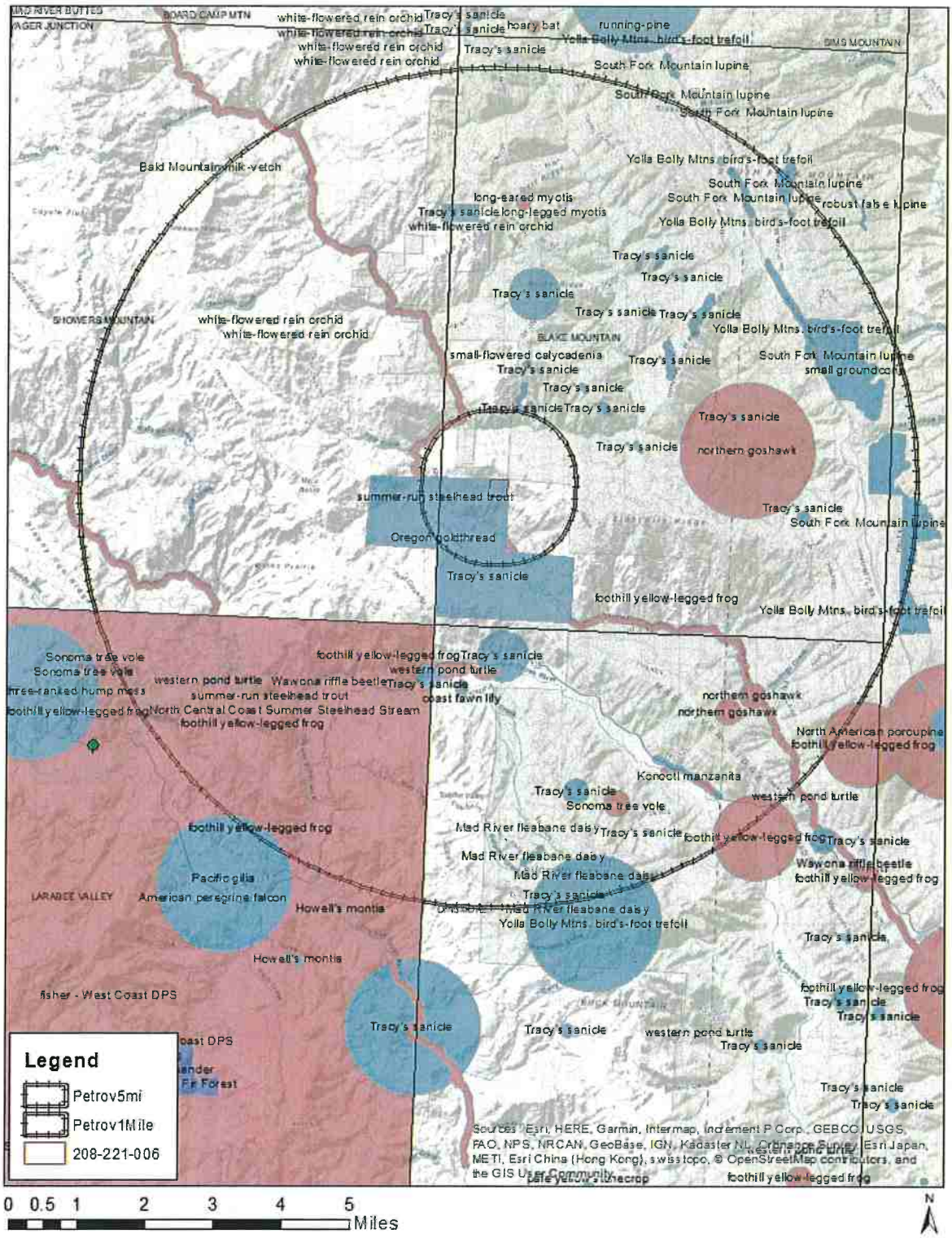

Figure 6. CNDDB search results of observed rare plant and sensitive animal occurrences found one mile near property.

Table 1. CNDDB nine-quad database results for the 7.5' quadrangle (plants listed in CNPS results).

Scientific Name	Common Name	FESA	CESA	General Habitat	MicroHabitat
Accipiter gentilis	northern goshawk	None	None	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites.	Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.
Arborimus pomo	Sonoma tree vole	None	None	North coast fog belt from Oregon border to Somona County. In Douglas-fir, redwood & montane hardwood-conifer forests.	Feeds almost exclusively on Douglas-fir needles. Will occasionaly take needles of grand fir, hemlock or spruce.
Ascaphus truei	Pacific tailed frog	None	None	Occurs in montane hardwood-conifer, redwood, Douglas-fir & ponderosa pine habitats.	Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.
Atractelmis wawona	Wawona riffle beetle	None	None	Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2000-5000 ft elev.	Strong preferce for inhabiting submerged aquatic mosses
Bombus caliginosus	obscure bumble bee	None	None	Coastal areas from Santa Barabara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.
Calileptoneta briggsi	Briggs' leptonetid spider	None	None	Known only from the type locality, Indian Valley Creek Cave, and nearby Butter Creek Cave, Trinity County.	Troglobitic species.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	Throughout California in a wide variety of habitats. Most common in mesic sites.	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Emys marmorata	western pond turtle	None	None	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.
Erethizon dorsatum	North American porcupine	None	None	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Wide variety of coniferous and mixed woodland habitat.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.

Helminthoglypta talmadgei	Trinity shoulderband	None	None	Limestone rockslides, litter in coniferous forests, old mine tailings, and along shaded streams in the Klamath Mountains.	
Lasionycteris noctivagans	silver-haired bat	None	None	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas.	Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.
Lasiurus cinereus	hoary bat	None	None	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding.	Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Monadenia infumata setosa	Trinity bristle snail	None	Threatened	Known only from along a few streams in the Trinity River drainage.	Juveniles are found under bark of standing dead broadleaf trees, and the species may require this habitat.
Myotis evotis	long-eared myotis	None	None	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests.	Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.
Myotis thysanodes	fringed myotis	None	None	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer.	Uses caves, mines, buildings or crevices for maternity colonies and roosts.
Myotis volans	long-legged myotis	None	None	Most common in woodland and forest habitats above 4000 ft. Trees are important day roosts; caves and mines are night roosts.	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.
Myotis yumanensis	Yuma myotis	None	None	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	None	No. Calif coastal streams south to Middle Fork Eel River. Within range of Klamath Mtns province DPS & No. Calif DPS.	Cool, swift, shallow water & clean loose gravel for spawning, & suitably large pools in which to spend the summer.
Oncorhynchus tshawytscha pop. 30	chinook salmon - upper Klamath and Trinity Rivers ESU	None	None	Spring-run chinook in the Trinity River and the Klamath River upstream of the mouth of the Trinity River.	Major limiting factor for juvenile chinook salmon is temperature, which strongly effects growth and survival.
Pekania pennanti	fisher - West Coast DPS	None	Threatened	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.	Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.
Rana aurora	northern red-legged frog	None	None	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover.	Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.

Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
Rhyacotriton variegatus	southern torrent salamander	None	None	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest.	Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.

Table 2. CNPS nine-quad database results for the 7.5' quadrangle search

Scientific Name	Common Name	Family	Lifeform	CRPR	Habitat	Micro Habitat
Allium hoffmanii	Beegum onion	Alliaceae	perennial bulbiferous herb	4.3	Lower montane coniferous forest (serpentinite)	
Allium siskiyouense	Siskiyou onion	Alliaceae	perennial bulbiferous herb	4.3	Lower montane coniferous forest, Upper montane coniferous forest	rocky, sometimes serpentinite
Arctostaphylos hispidula	Howell's manzanita	Ericaceae	perennial evergreen shrub	4.2	Chaparral (serpentinite or sandstone)	
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	perennial evergreen shrub	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	volcanic
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	perennial herb	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	gravelly streambanks
Astragalus umbraticus	Bald Mountain milk-vetch	Fabaceae	perennial herb	2B.3	Cismontane woodland, Lower montane coniferous forest	sometimes roadside
Bensoniella oregona	bensoniella	Saxifragaceae	perennial herb	1B.1	Bogs and fens, Lower montane coniferous forest (openings), Meadows and seeps	mesic
Buxbaumia viridis	buxbaumia moss	Buxbaumiaceae	moss	2B.2	Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest	Fallen, decorticated wood or humus
Calycadenia micrantha	small-flowered calycadenia	Asteraceae	annual herb	1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland	Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas
Carex arcta	northern clustered sedge	Cyperaceae	perennial herb	2B.2	Bogs and fens, North Coast coniferous forest (mesic)	
Collomia tracyi	Tracy's collomia	Polemoniaceae	annual herb	4.3	Broadleafed upland forest, Lower montane coniferous forest	rocky, sometimes serpentinite

Coptis laciniata	Oregon goldthread	Ranunculaceae	perennial rhizomatous herb	4.2	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	perennial rhizomatous herb	4.2	Lower montane coniferous forest, North Coast coniferous forest	usually serpentinite seeps and streambanks
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	perennial rhizomatous herb	4.2	Broadleafed upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest	
Epilobium oreganum	Oregon fireweed	Onagraceae	perennial herb	1B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	mesic
Erigeron maniopotamicus	Mad River fleabane daisy	Asteraceae	perennial herb	1B.2	Lower montane coniferous forest, Meadows and seeps (open, dry)	open, disturbed areas (road cuts); rocky
Erythranthe trinitiensis	pink-margined monkeyflower	Phrymaceae	annual herb	1B.3	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	Often serpentinite, often roadsides
Erythronium revolutum	coast fawn lily	Liliaceae	perennial bulbiferous herb	2B.2	Bogs and fens, Broadleafed upland forest, North Coast coniferous forest	Mesic, streambanks
Eucephalus glabratus	Siskiyou aster	Asteraceae	perennial herb	4.3	Lower montane coniferous forest, Upper montane coniferous forest	rocky openings
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	annual herb	1B.2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	
Hosackia yollabolliensis	Yolla Bolly Mtns. bird's-foot trefoil	Fabaceae	perennial herb	1B.2	Meadows and seeps, Upper montane coniferous forest (openings)	dry barren exposed slopes, often gravelly
Iliamna latibracteata	California globe mallow	Malvaceae	perennial herb	1B.2	Chaparral (montane), Lower montane coniferous forest, North Coast coniferous forest (mesic), Riparian scrub (streambanks)	Often in burned areas
Kopsiopsis hookeri	small groundcone	Orobanchaceae	perennial rhizomatous herb (parasitic)	2B.3	North Coast coniferous forest	

Lathyrus biflorus	two-flowered pea	Fabaceae	perennial herb	1B.1	Lower montane coniferous forest (serpentinite)	
Lilium kelloggii	Kellogg's lily	Liliaceae	perennial bulbiferous herb	4.3	Lower montane coniferous forest, North Coast coniferous forest	Openings, roadsides
Lilium rubescens	redwood lily	Liliaceae	perennial bulbiferous herb	4.2	Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Sometimes serpentinite, sometimes roadsides
Listera cordata	heart-leaved twayblade	Orchidaceae	perennial herb	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	
Lupinus elmeri	South Fork Mountain lupine	Fabaceae	perennial herb	1B.2	Lower montane coniferous forest	
Lycopodium clavatum	running-pine	Lycopodiaceae	perennial rhizomatous herb	4.1	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	often edges, openings, and roadsides
Meesia triquetra	three-ranked hump moss	Meesiaceae	moss	4.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic)	soil
Mielichhoferia elongata	elongate copper moss	Mielichhoferiaceae	moss	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Meadows and seeps, Subalpine coniferous forest	Metamorphic rock, usually acidic, usually vernally mesic, often roadsides, sometimes carbonate
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	perennial rhizomatous herb	4.2	Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	mesic, sometimes roadsides
Montia howellii	Howell's montia	Montiaceae	annual herb	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	vernally mesic, sometimes roadsides
Piperia candida	white-flowered rein orchid	Orchidaceae	perennial herb	1B.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest	sometimes serpentinite
Pityopus californicus	California pinefoot	Ericaceae	perennial herb (achlorophyllous)	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	mesic

Platanthera stricta	slender bog-orchid	Orchidaceae	perennial herb	4.2	Lower montane coniferous forest, Meadows and seeps	mesic
Pleuropogon refractus	nodding semaphore grass	Poaceae	perennial rhizomatous herb	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic
Ptilidium californicum	Pacific fuzz wort	Ptilidiaceae	liverwort	4.3	Lower montane coniferous forest, Upper montane coniferous forest	Usually epiphytic on trees, fallen and decaying logs, and stumps; rarely on humus over boulders
Ribes laxiflorum	trailing black currant	Grossulariaceae	perennial deciduous shrub	4.3	North Coast coniferous forest	sometimes roadside
Sanicula tracyi	Tracy's sanicle	Apiaceae	perennial herb	4.2	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	openings
Sedum laxum ssp. flavidum	pale yellow stonecrop	Crassulaceae	perennial herb	4.3	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	Serpentinite or volcanic
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	perennial rhizomatous herb	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	
Sidalcea oregana ssp. eximia	coast checkerbloom	Malvaceae	perennial herb	1B.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	
Thermopsis robusta	robust false lupine	Fabaceae	perennial rhizomatous herb	1B.2	Broadleafed upland forest, North Coast coniferous forest	
Tiarella trifoliata var. trifoliata	trifoliate laceflower	Saxifragaceae	perennial rhizomatous herb	3.2	Lower montane coniferous forest, North Coast coniferous forest	
Wyethia longicaulis	Humboldt County wyethia	Asteraceae	perennial herb	4.3	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest	

Potential Direct and Indirect Impacts

The proposed project includes existing activities and structures. New development is not currently proposed. The project will most likely require some stream work for water quality impact minimization. Any impacts for those activities will most likely be addressed through the Lake and Streambed Alteration Agreement (LSAA) and Water Resource Protection Plan (WRPP).

The historic effects of the land clearing, residential development, and cultivation activities potentially included removal of vegetation and canopy cover, disturbance and compaction of soil, alteration of hydrologic regime, sedimentation and erosion, increase in invasive species, and noise, solid and chemical waste pollution, visual impacts, and air quality impacts. Theses impacts are difficult to estimate and are not addressed in this document. The project is not expected to have any significant impacts to listed species as currently proposed for permitting. New development (new roads, structures, vegetation removal and grading) are not currently proposed.

Agency personnel from CDFW and USFWS can further analyze the potential impacts and provide technical assistance for any listed species if additional activities are proposed that may result in take of a listed species including Northern Spotted Owl.[7] If required, pre-construction reconnaissance surveys should follow the guidelines set forth in the Humboldt County Cannabis Program EIR, CDFW Survey and Monitoring Protocols and Guidelines[8], USFWS Endangered Species Program[9] and CNPS Botanical Survey Guidelines[10]

Recommendations

Follow all recommendations outlined by existing agency policies for minimizing impacts to natural resources. Impacts from light, noise and chemicals can be addressed in the operations plan and best management practices can be employed to minimize impacts. It is recommended that netting made of natural fibers be used in lieu of plastic netting for cultivation and erosion control to minimize entrapment. Additional disturbance, clearing, and road cuts would likely modify existing groundwater, and surface water patterns and could impact water quality and/or hydrophytic species.

Please contact me with any comments or concerns regarding this memorandum or future work required for your project. I can be reached at tami@trans-terra.com or (707) 845-7483. I have included my project experience as an attachment to this report as it is often requested by agency personnel reviewing work of this nature. (Appendix A)

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[7] Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturbance to Northern Spotted Owls and Marbled Murrelet in Northwestern California: (Accessed via https://www.fws.gov/arcata/es/birds/nso/documents/MAMUNSO%20Harassment%20Guidance%20NW%20CA%202006Jul31.pdf)

[8] California Department of Fish and Wildlife Survey and Monitoring Protocols and Guidelines (Accessed via https://www.wildlife.ca.gov/conservation/survey-protocols)

[9] USFWS Arcata Fish and Wildlife Office Endangered Species Program (Accessed via https://www.fws.gov/arcata/es/default.htm)

[10] California Native Plant Society (CNPS) Botanical Survey Guidelines (Accessed via https://cnps.org/wp-content/uploads/2018/03/cnps_survey_guidelines.pdf)

APPENDIX A-Qualifications

Tamara Camper

455 I Street · Arcata, CA 95521 · (707) 845-7483

tami@trans-terra.com · www.linkedin.com/in/tamaracamper/ @itstransterra

In-depth knowledge of biology, ecology, environmental laws, natural resources policy, and land use planning with experience implementing policies related to listed species including CEQA/NEPA, CESA/ESA and other regulations. Refined relationship-building and strategic thinking skills and experience working collaboratively with multiple agencies and stakeholders on a wide range of complex projects

Education

December 2007-M.A. Biology, **HUMBOLDT STATE UNIVERSITY**
December 1999-B.S. Environmental Science, **WESTERN WASHINGTON UNIVERSITY**

Experience

May 2018-Present-Principle-Environmental scientist, **TRANSTERRA CONSULTING LLC**
Principal Owner at TransTerra Consulting. Providing Environmental Consulting Services including Biological Assessments, Rare Species Surveys, Vegetation and Habitat Typing/Mapping, Stream and Wetland Surveys, Environmental Impact Assessments, Permitting, Land Use/Planning, and CEQA/NEPA Documents

November 2011-May 2018-Associate Environmental Planner, **CALTRANS**
Promoted through increasingly responsible positions based on performance and experience in Humboldt, Del Norte and Mendocino. Served as Coastal Liaison, Restoration Specialist and CEQA/NEPA Coordinator. Developed programmatic interagency guidelines, workload coordination, permit process training, budgets, contracts, and internal process efficiency. Wrote and reviewed environmental documents including EAs and IS-MNDs, BAs, Section 7 and 10 consultations, oversaw and conducted biological/wetland surveys, mitigation and monitoring work and reporting.

October 2008-November 2011-Biologist/Environmental Planner, **STREAMLINE PLANNING CONSULTANTS**
Provided natural resource and policy expertise for a wide-range of public and private projects affecting natural resources. Conducted stream/riparian assessments, botanical surveys, wetland delineation, impact assessments and mitigation/monitoring reports in accordance with CEQA, FPR, ESA, NEPA, the Water Quality Act, Coastal Act and other relevant laws for private landowners. Assisted with consultation, coordination and permit applications for listed species. Developed alternatives and mitigation design and negotiated sensitive and complex issues with multiple stakeholders.

March 2003-November 2008-Owner-Biologist, CAMPER CONSULTING

Provided botanical/wildlife surveys, wetland delineation, impact assessments and mitigation reports in accordance with CEQA and other relevant laws for private land owners. Extensive experience working on commercial and private timberlands for THP/NTMP work.

January 2001-March 2003-Wildlife Technician, CAMPBELL TIMBERLAND MANAGEMENT

Developed a botanical program including the coordination and conduction of botanical surveys, impact assessments, mitigation reports, monitoring studies. Maintained public relations and relationships with state and federal agency personnel. Developed and maintained GIS and other databases for survey findings. Assisted with NSO, anadromous fish and amphibian monitoring, surveying and habitat analysis.

March 2000-October 2000-Fisheries Technician, MENDOCINO REDWOOD COMPANY

Conducted anadromous fish and amphibian monitoring, surveying and habitat analysis. Utilized dive counts, electrofishing, sediment sampling, fish trapping, insect sampling and water quality monitoring to assess impacts to salmonids and other aquatic species in conjunction with the Department of Fish and Wildlife.

May 1998-January 1999-Botanical Propagation Specialist, SKAGIT ROSE FARMS

Identified, propagated and maintained an inventory of native plants of the Northwest Coastal Region. Researched and developed interpretive gardens of native plant ecosystems

Skills

- CEQA/NEPA Document Writing and Review
- Regulation and Policy Review and Guidance including Permitting and Mitigation
- Scientific Writing and Editing Research
- Design and Statistical Analysis
- Vegetation and Wetland Surveys
- ArcMap, Microsoft Office and Statistical Software
- Teamwork, Negotiations and Strategic Thinking
- Project Budget, Scope and Scheduling
- Contract Oversight and Management
- Navigation of Rough Terrain Wildlife,

Activities

Membership in Rotary Arcata Sunrise, California Native Plant Society, and The Wildlife Society. Various workshops and certifications including wetland delineation, vegetation mapping, monocot identification, hydric soils, CRAM training, negotiation techniques and conflict resolution, Lean Six Sigma

APPENDIX B-NSO Within 5 Mile Radius

OBSID	MASTEROWL	TYPEOBS	OBSERVER	DATEOBS	NUMADOBS	AGESEX	PAIR	NEST	NUMYOUNG
9865	HUM0019	AC	HOLZER-ROBINSON	1991-05-07	2	UMUF	Y	Y	
9875	HUM0019	NEG	VIA NRM	1993	0				
120842	HUM0019	NEG	HEWITT	2011-07-28	0				
121154	HUM0019	NEG	HEWITT	2011-05-22	0				
9879	HUM0019	NEG	VIA THP BY NRM	1994-05-23	0				
9882	HUM0019	NEG	NRM-KEOWN	1994-06-22	0				
121213	HUM0019	NEG	HEWITT	2011-05-22	0				
9878	HUM0019	NEG	VIA THP BY NRM	1994-05-18	0				
9876	HUM0019	NEG	VIA THP BY NRM	1994-05-03	0				
120791	HUM0019	NEG	HEWITT	2011-07-28	0				
9881	HUM0019	NEG	VIA THP BY NRM	1994-06-08	0				
9883	HUM0019	POS	OB	2001-05-21	1	UU			
9871	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9866	HUM0019	POS	HOLZER-ROBINSON	1991-07-09	1	UF			
9887	HUM0019	POS	AE	2001-06-30	1	UM			
9884	HUM0019	POS	via PSW	2001-06-07	2	UMAF	Y		
9861	HUM0019	POS	MCMILLIAN	1988-08-25	1	UF			
9856	HUM0019	POS	ROSENBERG	1978-08-25	1	UU			
9890	HUM0019	POS	AE-OB	2001-08-20	2	UMUF	Y		
9885	HUM0019	POS	OB	2001-06-25	1	UU			
9858	HUM0019	POS	HOGERVORST	1988-08-04	1	UU			
9872	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9877	HUM0019	POS	NRM-KEOWN	1994-05-16	1	UM			
9873	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9874	HUM0019	POS	SRNF	1992-05-12	2	UMUF	Y	Y	
9867	HUM0019	POS	NAT RES MGRS	1992	1	UU			
9870	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9888	HUM0019	POS	OB	2001-07-31	1	UU			
9864	HUM0019	POS	SRNF	1991-05-06	1	UM			
9862	HUM0019	POS	MCMILLIAN	1988-08-27	1	UF			
9857	HUM0019	POS	BLM UKIAH	1978-08-28	1	UU			
10624	HUM0019	POS	via USFS NRIS - SRNF	2001-06-07	2	SMAF	Y		
9889	HUM0019	POS	OB	2001-08-14	1	UU			
9868	HUM0019	POS	NAT RES MGRS	1992	1	UU			
9886	HUM0019	POS	OB	2001-06-25	1	UU			
9860	HUM0019	POS	MCMILLIAN	1988-08-22	1	UF			
9880	HUM0019	POS	NRM-KEOWN	1994-05-24	1	UM			
9859	HUM0019	POS	MCMILLIAN	1988-08-10	2	UMUF	Y		
9869	HUM0019	POS	NAT RES MGRS	1992	1	UF			
9863	HUM0019	POS	MCMILLIAN	1988-09-15	2	UMUF	Y		
10370	HUM0043	AC	BRACK	1985-05-30	2	UMUF	Y		1
10368	HUM0043	NEG	BRACK	1985-05-16	0				
10374	HUM0043	POS	TILGHMAN-PATON	1987	2	UMUF	Y		
10364	HUM0043	POS	SRNF	1984	1	UM			
10359	HUM0043	POS	via SRNF	1980	1	AU			0
10366	HUM0043	POS	BRACK	1985-05-14	1	UM			
10377	HUM0043	POS	MCMILLIAN	1988-08-04	1	UM			
10363	HUM0043	POS	BINDER	1980	1	UM			
10353	HUM0043	POS	HILL-CORYELL	1976-06-01	1	UU			
10361	HUM0043	POS	BINDER	1980	1	UM			
10375	HUM0043	POS	TILGHMAN-PATON	1988	1	UM			
10373	HUM0043	POS	SRNF	1986-08-05	1	UM			
10376	HUM0043	POS	SRNF	1988	1	UM			
10355	HUM0043	POS	via SRNF	1979	1	AU			0
10365	HUM0043	POS	SRNF	1985-05-01	2	UMUF	Y		
10369	HUM0043	POS	BRACK	1985-05-29	1	UM	Y		1
10360	HUM0043	POS	via SRNF	1980	1	AU			0
10367	HUM0043	POS	BRACK	1985-05-15	1	UM			
10380	HUM0043	POS	LOVELACE	1995-08-03	2	UUUU	Y		0
10357	HUM0043	POS	SRNF	1979-06-02	1	UU			
10379	HUM0043	POS	SRNF	1990-05-10	1	UM			
10354	HUM0043	POS	VIA SOLIS	1979	1	UU			
10358	HUM0043	POS	via SRNF	1980	1	AU			0

10378	HUM0043	POS	SRNF	1990-04-10	2	UMUF	Y		
10356	HUM0043	POS	via SRNF	1979	1	AU			0
10372	HUM0043	POS	SRNF	1986-08-01	2	UMUF	Y		
10371	HUM0043	POS	SRNF	1986	1	UU			
10362	HUM0043	POS	via SRNF	1980	1	AU			0
10491	HUM0047	AC	SRNF	1987-05-01	2	UMUF	Y	Y	
10510	HUM0047	NEG	PAH-JFW	1999-04-13	0				
10509	HUM0047	NEG	PAH-KMS	1999-04-04	0				
10503	HUM0047	NEG	SMURR	1996-06-05	0				
10506	HUM0047	NEG	SMURR	1997-03-05	0				
10520	HUM0047	NEG	OB	2001-08-01	0				
10532	HUM0047	NEG	AE	2004-04-02	0				
10508	HUM0047	NEG	HERRERA	1999-04-02	0				
10523	HUM0047	NEG	OB	2002-03-29	0				
10519	HUM0047	NEG	OB	2001-06-26	0				
10504	HUM0047	NEG	SMURR	1996-06-06	0				
10500	HUM0047	NEG	SMURR	1996-04-04	0				
10514	HUM0047	NEG	GAH-SBT	1999-06-28	0				
10528	HUM0047	NEG	AE	2003-05-10	0				
10497	HUM0047	NEG	via GALEA	1994-06-22	0				
10512	HUM0047	NEG	HERRERA	1999-05-22	0				
10502	HUM0047	NEG	SMURR	1996-05-09	0				
10518	HUM0047	NEG	OB	2001-05-22	0				
10499	HUM0047	NEG	SMURR	1996-03-25	0				
10505	HUM0047	NEG	LUNDE	1996-06-30	0				
10501	HUM0047	NEG	SMURR	1996-05-07	0				
10511	HUM0047	NEG	HERRERA	1999-05-07	0				
10525	HUM0047	NEG	AE	2002-05-10	0				
10507	HUM0047	NEG	SMURR	1997-07-06	0				
10515	HUM0047	NEG	HERRERA	2000-05-15	0				
10513	HUM0047	NEG	HERRERA-WARD	1999-06-01	0				
10516	HUM0047	NEG	OB	2001-04-16	0				
10517	HUM0047	NEG	OB	2001-05-01	0				
10526	HUM0047	NEG	OB	2002-06-02	0				
10478	HUM0047	POS	ESCANO	1978-03-29	1	UU			
10531	HUM0047	POS	AE	2004-03-31	1	UM			
10477	HUM0047	POS	GOLNICK	1977-09-19	1	UU			
10483	HUM0047	POS	BRACK	1985-05-13	1	UM			
10476	HUM0047	POS	SHERER	1977-09-16	1	UU			
10524	HUM0047	POS	OB	2002-05-09	1	UU			
10484	HUM0047	POS	BRACK	1985-05-21	1	UM			
10486	HUM0047	POS	BRACK	1985-06-03	1	UM			
10521	HUM0047	POS	OB	2001-08-14	1	UU			
125695	HUM0047	POS	MICHAELIS	2011-06-02	1	UM			
10487	HUM0047	POS	BRACK	1985-06-04	1	UM			
10530	HUM0047	POS	AE	2003-05-30	2	AMAF	Y	N	0
10527	HUM0047	POS	AE	2003-05-08	1	UM			
10534	HUM0047	POS	AE	2004-04-28	1	AM			
10482	HUM0047	POS	LAHAYE	1984-06-06	2	UMUF	Y		
10522	HUM0047	POS	AE	2001-08-16	1	AM			
10533	HUM0047	POS	AE	2004-04-26	1	UM			
10529	HUM0047	POS	AE	2003-05-29	2	UMUF	Y		
10493	HUM0047	POS	MCMILLIAN	1988	2	AMAF	Y		0
10481	HUM0047	POS	SRNF	1984-05-01	2	UMUF	Y		
10485	HUM0047	POS	BRACK	1985-05-22	1	UM			
10489	HUM0047	POS	SRNF	1986-08-04	1	UM			
10535	HUM0047	POS	AE	2004-05-24	1	UM			
10480	HUM0047	POS	ESCANO-KAHL	1978-05-09	1	UU			
10496	HUM0047	POS	via GALEA	1994-06-21	1	UF			
10488	HUM0047	POS	BRACK-LESTER	1985-06-26	2	UMUF	Y		
10479	HUM0047	POS	ESCANO	1978-03-29	1	AU			0
10494	HUM0047	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
10495	HUM0047	POS	OGON	1988-10-04	2	UMUF	Y		
10498	HUM0047	POS	HESS	1995-05-16	1	AM			
10490	HUM0047	POS	SRNF	1987-04-15	1	UM			
10492	HUM0047	POS	SRNF	1987-07-01	0				2

10562	HUM0048	POS	SRNF	1990-05-25	1	UM			
10560	HUM0048	POS	ROVELL-BREES	1990-04-24	1	AM			0
10557	HUM0048	POS	SRNF	1990-03-27	2	UMUF	Y		
10558	HUM0048	POS	SRNF	1990-03-27	2	UMUF	Y		
10537	HUM0048	POS	MILLER ET AL.	1978-03-21	1	UU			
10538	HUM0048	POS	ESCANO	1978-03-29	1	UU			
10546	HUM0048	POS	SRNF	1985-05-22	2	UMUF	Y		2
10542	HUM0048	POS	SRNF	1984	1	UM			
10559	HUM0048	POS	SRNF	1990-04-24	1	UM			
10547	HUM0048	POS	BRACK	1985-05-28	2	UMUF	Y		
10550	HUM0048	POS	BRACK	1986-08-05	1	UM			
10561	HUM0048	POS	SRNF	1990-05-09	1	UM			
10540	HUM0048	POS	ESCANO	1978-03-29	2	UUUU			
10773	HUM0057	AC	SRNF	1991-05-23	2	UMUF	Y		
10769	HUM0057	NEG	SRNF	1991-04-29	0				
10772	HUM0057	POS	SRNF	1991-05-22	1	UF			
10770	HUM0057	POS	SRNF	1991-05-06	1	UM			
10764	HUM0057	POS	SRNF	1984	2	UMUF	Y		
10776	HUM0057	POS	VIA THP BY NRM	1993	1	UU			
10771	HUM0057	POS	SRNF	1991-05-06	1	UM			
10767	HUM0057	POS	MENDEZ	1984-07-18	2	UMUF	Y		2
10775	HUM0057	POS	SRNF	1991-05-28	1	UU			
10768	HUM0057	POS	FRANKLIN ET AL.	1984-07-25	2	UMUF	Y		
125699	HUM0057	POS	BRESSLER-MICHAELIS	2010-06-24	2	AMAF	Y		
10777	HUM0057	POS	VIA THP BY NRM	1993	1	UF			
10766	HUM0057	POS	SRNF	1984-05-29	1	UM			
10774	HUM0057	POS	SRNF	1991-05-28	1	UU			
10763	HUM0057	POS	YOST-ADAMSON	1979-07-06	1	UM			
10765	HUM0057	POS	SRNF	1984-05-23	1	UM			
11425	HUM0077	AC	J ROBINSON-S POLLAR	1993-06-23	1	UM			0
11426	HUM0077	POS	J HUNTER	1993-08-10	1	UM			0
11424	HUM0077	POS	SAKAI	1979-08-29	1	UU			
11427	HUM0077	POS	J HUNTER	1993-08-11	1	UM			0
12187	HUM0111	AC	TILGHMAN	1987	2	UMUF	Y	Y	2
12197	HUM0111	NEG	SRNF	1992-06-30	0				
12195	HUM0111	NEG	SRNF	1992-04-21	0				
12201	HUM0111	NEG	SRNF	1992-08-06	0				
12194	HUM0111	NEG	SRNF	1990-05-31	0				
12192	HUM0111	NEG	SRNF	1990-04-24	0				
12199	HUM0111	NEG	SRNF	1992-07-20	0				
12196	HUM0111	NEG	SRNF	1992-06-02	0				
12193	HUM0111	NEG	SRNF	1990-05-24	0				
12184	HUM0111	POS	BRACK	1985-06-26	1	UM			
12180	HUM0111	POS	FRANKLIN ET AL.	1985-05-24	2	UMUF	Y		1
12182	HUM0111	POS	BRACK	1985-05-29	2	UMUF	Y		1
125845	HUM0111	POS	SEEGER	2011-08-17	1	AM			
12189	HUM0111	POS	MCMILLIAN	1988-06-15	2	UMUF	Y	Y	
12198	HUM0111	POS	SRNF	1992-07-07	1	UF			
125844	HUM0111	POS	CANTER	2011-05-19	1	UM			
12181	HUM0111	POS	BRACK	1985-05-28	2	UMUF	Y		
12186	HUM0111	POS	BRACK	1986-08-05	1	UM			
12185	HUM0111	POS	BRACK	1986-08-05	1	UF			
12183	HUM0111	POS	BRACK	1985-06-03	2	UMUF	Y		
12188	HUM0111	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
12179	HUM0111	POS	BINDER	1980	1	UM			
12190	HUM0111	POS	MCMILLIAN	1988-10-04	2	UMUF	Y	Y	
12191	HUM0111	POS	CAT YOUNG	1989-07-27	1	UU			
12200	HUM0111	POS	SRNF	1992-08-04	1	UU			
154157	HUM0117	AC	STNF	2012-07-19	1	AM			
12281	HUM0117	NEG	STNF	1991-06-19	0				
12283	HUM0117	NEG	STNF	1991-06-24	0				
154187	HUM0117	POS	STNF	2010-07-29	1	UM			
154188	HUM0117	POS	STNF	2010-07-30	1	AM			
12280	HUM0117	POS	SIMPSON	1990-06-16	2	AMUF	Y		
154186	HUM0117	POS	STNF	1993-07-28	1	AF			
12279	HUM0117	POS	STOKELY	1983-09-06	1	UU			

12282	HUM0117	POS	STNF-ENGLESON ET AL.	1991-06-20	1	UF			
13039	HUM0152	AC	MCMILLIAN	1988	2	UMUF	Y	Y	1
13035	HUM0152	POS	BRACK-LESTER	1985-06-26	1	UM			
13038	HUM0152	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
13034	HUM0152	POS	BINDER	1980	1	UM			
13037	HUM0152	POS	TILGHMAN-PATON	1987-05-13	2	UMUF	Y		2
13036	HUM0152	POS	BRACK	1985-07-17	1	UM			
13058	HUM0155	AC	TILGHMAN-PATON	1988	2	UMUF	Y	Y	1
13065	HUM0155	NEG	OB	2001-08-14	0				
13069	HUM0155	NEG	OB	2002-06-02	0				
13081	HUM0155	NEG	AE	2005-03-25	0				
13079	HUM0155	NEG	AE	2004-05-24	0				
13070	HUM0155	NEG	PAGLIUGHI	2002-06-25	0				
13067	HUM0155	NEG	OB	2002-04-08	0				
13061	HUM0155	NEG	OB	2001-05-01	0				
13082	HUM0155	NEG	AE	2005-04-06	0				
13076	HUM0155	NEG	AE	2003-06-16	0				
13080	HUM0155	NEG	AE	2005-03-09	0				
13074	HUM0155	NEG	AE	2003-05-12	0				
13060	HUM0155	NEG	OB	2001-04-16	0				
13071	HUM0155	NEG	PAGLIUGHI	2002-07-05	0				
13078	HUM0155	NEG	AE	2004-04-26	0				
13072	HUM0155	NEG	SWP-DJM	2002-07-13	0				
13062	HUM0155	NEG	OB	2001-05-21	0				
13075	HUM0155	NEG	AE	2003-05-29	0				
13077	HUM0155	NEG	AE	2004-03-31	0				
13063	HUM0155	NEG	OB	2001-06-25	0				
13064	HUM0155	NEG	OB	2001-07-31	0				
13068	HUM0155	NEG	OB	2002-05-09	0				
13073	HUM0155	POS	AE	2003-05-09	1	UU			
13059	HUM0155	POS	OGON	1988-10-04	2	UMUF	Y		1
13066	HUM0155	POS	OB	2002-03-29	2	UUUU			
126088	HUM0155	POS	MCMILLIAN	1988	2	UMUF	Y		1
13792	HUM0174	POS	ROBINSON-GOLDEN	1994-06-22	1	UM	Y		0
13779	HUM0174	POS	SRNF	1988	2	UMUF	Y		
13793	HUM0175	AC	SHIPMAN	1987-09-02	2	UMUF	Y		
126092	HUM0175	POS	MACHEK	2010-07-13	1	UM			
13794	HUM0175	POS	SRNF	1992-07-27	1	UM			
13795	HUM0175	POS	SRNF	1992-07-29	1	UM			
126095	HUM0220	AC	SRNF	2000	0			Y	
15107	HUM0220	NEG	SRNF	1989-08-31	0				
15106	HUM0220	NEG	SRNF	1989-08-02	0				
15101	HUM0220	POS	THOMAS	1989-07-01	1	UU			
15109	HUM0220	POS	SRNF	1991-07-09	1	UM			
15114	HUM0220	POS	SRNF	1992-07-27	1	UM			
15104	HUM0220	POS	HARRIS ET AL.	1989-07-11	1	UU			
15112	HUM0220	POS	SRNF	1992-06-17	1	UM			
15116	HUM0220	POS	via PSW	2000-09-01	2	UMUF	Y		1
15103	HUM0220	POS	HARRIS ET AL.	1989-07-07	1	UM			
15105	HUM0220	POS	SRNF	1989-07-12	2	UMUF	Y		1
15102	HUM0220	POS	HARRIS ET AL.	1989-07-06	1	UM			
15113	HUM0220	POS	SRNF	1992-06-18	2	UMUF	Y		1
141367	HUM0220	POS	via USFS NRIS - SRNF	2000-09-01	0				1
15115	HUM0220	POS	SRNF	1992-07-27	1	UF			
15108	HUM0220	POS	SRNF	1990-08-07	1	UM			
16310	HUM0269	POS	SRNF	1991-07-01	1	UM			
16309	HUM0269	POS	SRNF	1991-06-25	1	UM			
17469	HUM0311	AC	BUNNELL	1997-04-26	2	UMUF	Y	Y	
17476	HUM0311	NEG	SPI via CDF & USFWS	2006	0				
17478	HUM0311	NEG	SPI via CDF & USFWS	2008	0				
17477	HUM0311	NEG	SPI via CDF & USFWS	2007	0				
17471	HUM0311	NEG	SIMPSON	1999	0				
17474	HUM0311	NEG	SIMPSON	2003	0				
17472	HUM0311	POS	SIMPSON	2000	2	UMUF	Y		
17470	HUM0311	POS	SIMPSON	1998	2	UMUF	Y		
17460	HUM0311	POS	DILLER (SIMPSON)	1991	2	UMUF	Y	Y	1

17462	HUM0311	POS	DILLER (SIMPSON)	1993	2	UMUF	Y		
17465	HUM0311	POS	SIMPSON	1996	2	UMUF	Y		2
17459	HUM0311	POS	DILLER ET AL.	1990-06-16	2	UMUF	Y		
17473	HUM0311	POS	SIMPSON	2001	1	UM			
17461	HUM0311	POS	SIMPSON	1992	2	UMUF	Y	Y	
17458	HUM0311	POS	DILLER ET AL.	1990-04-09	2	UMUF	Y	Y	
17463	HUM0311	POS	SIMPSON	1994	2	UMUF	Y	Y	2
17467	HUM0311	POS	BUNNELL-CARPENTER	1996-07-02	2	UMUF	Y		2
17468	HUM0311	POS	SIMPSON	1997	2	UMUF	Y	Y	0
17466	HUM0311	POS	SIMPSON	1996	2	UMUF	Y	Y	2
17475	HUM0311	POS	SPI via CDF & USFWS	2005	1	UU			
17464	HUM0311	POS	SIMPSON	1995	2	UMUF	Y		0
17888	HUM0330	AC	SIMPSON	1997	2	UMUF	Y	Y	2
120949	HUM0330	NEG	HEWITT	2011-05-24	0				
17895	HUM0330	NEG	SIMPSON	2003	0				
120751	HUM0330	NEG	HEWITT	2011-06-09	0				
17889	HUM0330	NEG	SIMPSON	1998	0				
120807	HUM0330	NEG	HEWITT	2011-08-30	0				
17885	HUM0330	POS	SIMPSON	1994	2	UMUF	Y	Y	2
17892	HUM0330	POS	SIMPSON	2000	2	UMUF	Y		
17893	HUM0330	POS	SIMPSON	2001	2	AMAF	Y	Y	0
17882	HUM0330	POS	AVERY	1991-05-01	1	UM			
17891	HUM0330	POS	SIMPSON	1999	2	UMUF	Y		
17890	HUM0330	POS	SPI	1998	2	UMUF	Y		
17884	HUM0330	POS	DILLER (SIMPSON)	1993	2	UMUF	Y		
17894	HUM0330	POS	SIMPSON	2002	1	UM			
17883	HUM0330	POS	SIMPSON	1992	2	UMUF	Y	Y	1
17887	HUM0330	POS	SIMPSON	1996	2	UMUF	Y	Y	2
17886	HUM0330	POS	SIMPSON	1995	1	UM			
18105	HUM0339	AC	HUNT von ARB	2005-04-18	2	AMAF	Y	Y	
18083	HUM0339	NEG	ROBINSON	2000-07-18	0				
18099	HUM0339	NEG	DUDLEY	2004-04-16	0				
18084	HUM0339	NEG	ROBINSON	2000-07-25	0				
18096	HUM0339	NEG	DUDLEY	2003-04-26	0				
18077	HUM0339	NEG	HERRERA	2000-05-10	0				
18075	HUM0339	NEG	HERRERA	2000-04-11	0				
18078	HUM0339	NEG	HERRERA	2000-05-15	0				
18082	HUM0339	NEG	ROBINSON	2000-06-26	0				
18102	HUM0339	NEG	HUNT von ARB-HUNT	2005-03-12	0				
18080	HUM0339	NEG	HERRERA	2000-05-25	0				
18098	HUM0339	NEG	DUDLEY	2004-03-21	0				
18072	HUM0339	NEG	SMURR	1996-03-28	0				
18079	HUM0339	NEG	ROBINSON	2000-05-21	0				
18081	HUM0339	NEG	ROBINSON	2000-06-16	0				
18085	HUM0339	NEG	ROBINSON-PIEPER	2000-08-01	0				
18104	HUM0339	NEG	HUNT	2005-04-02	0				
18093	HUM0339	NEG	DUDLEY	2003-04-11	0				
18073	HUM0339	NEG	GAH-SBT	1999-06-28	0				
18103	HUM0339	POS	HUNT	2005-04-01	1	UM			
18074	HUM0339	POS	HERRERA	1999-07-28	1	UU			
18067	HUM0339	POS	THP	1991-08-28	1	UU			
18063	HUM0339	POS	HOWARD	1991-07-20	1	UU			
18076	HUM0339	POS	HERRERA	2000-04-25	1	UM			
18101	HUM0339	POS	HUNT von ARB	2005-03-11	1	UM			
18066	HUM0339	POS	THP	1991-08-20	1	UU			
18065	HUM0339	POS		1991-07-22	1	UU			
126195	HUM0367	AC	FOSTER-RUSSELL	2012-06-07	1	UM			
126193	HUM0367	POS	SHASTA TRINITY NF	2010-08-10	1	UM			
126192	HUM0367	POS	SHASTA TRINITY NF	2010-08-09	1	UM			
126191	HUM0367	POS	SHASTA TRINITY NF	2010-07-28	1	UM			
18678	HUM0368	AC	ROBINSON-PRESCHEL	1991-07-02	2	UMUF	Y		
18683	HUM0368	POS	VIA THP BY NRM	1993	1	UU			
18682	HUM0368	POS	NAT RES MGRS	1992	1	UU			
18674	HUM0368	POS	MCMILLIAN	1988-08-27	2	UMUF	Y		
18685	HUM0368	POS	VIA THP BY NRM	1993	1	UU			
18675	HUM0368	POS	SRNF	1991-05-13	2	UMUF	Y		

18679	HUM0368	POS	SRNF	1991-07-09	2	UMUF	Y		
18677	HUM0368	POS	SRNF	1991-07-01	2	UMUF	Y		
18684	HUM0368	POS	VIA THP BY NRM	1993	1	UF			
126198	HUM0368	POS	BRESSLER-MICHAELIS	2010-06-23	2	AMAF	Y		
18676	HUM0368	POS	SRNF	1991-05-14	1	UM			
18680	HUM0368	POS	NAT RES MGRS	1992	1	UU			
18686	HUM0368	POS	LIDGATE	1996-10-08	1	UU			0
18681	HUM0368	POS	NAT RES MGRS	1992	1	UF			
20490	HUM0441	AC	SIMPSON	2002	2	UMUF	Y	Y	1
20494	HUM0441	NEG	SPI via CDF & USFWS	2008	0				
20493	HUM0441	NEG	SPI via CDF & USFWS	2007	0				
20476	HUM0441	POS	DILLER (SIMPSON)	1993	2	UMUF	Y		
20486	HUM0441	POS	SIMPSON	1998	2	AMAF	Y		
20480	HUM0441	POS	BRYANT	1995-07-02	2	UMUF	Y		
20475	HUM0441	POS	SIMPSON	1992	2	UMUF	Y		
132524	HUM0441	POS	GREEN DIAMOND	1995	1	UU			
20484	HUM0441	POS	SIMPSON	1997	2	UMUF	Y	Y	0
20482	HUM0441	POS	BRYANT	1995-07-25	2	UMUF	Y		
20479	HUM0441	POS	BRYANT	1995-05-25	2	UMUF	Y		
20483	HUM0441	POS	SIMPSON	1996	2	UMUF	Y	N	0
20478	HUM0441	POS	BRYANT	1995-04-22	1	UU			
20491	HUM0441	POS	SIMPSON	2003	2	UMUF	Y	N	0
20487	HUM0441	POS	SIMPSON	1999	2	UMUF	Y	N	0
20489	HUM0441	POS	SIMPSON	2001	2	AMAF	Y	Y	2
20492	HUM0441	POS	SPI via CDF & USFWS	2005	1	UU			
20481	HUM0441	POS	BRYANT	1995-07-17	2	UMUF	Y		
20485	HUM0441	POS	BUNNELL	1997-04-26	2	UMUF	Y	Y	
20488	HUM0441	POS	SIMPSON	2000	2	UMUF	Y		
20477	HUM0441	POS	SIMPSON	1994	2	UMUF	Y	Y	2
21060	HUM0471	AC	SRNF	1992-06-16	1	UU			
21061	HUM0471	POS	SRNF	1992-07-06	1	UU			
21059	HUM0471	POS	SRNF	1992-06-15	1	UF			
21062	HUM0471	POS	SRNF	1992-07-06	1	UU			
21589	HUM0490	AC	J.ROBINSON	1993-06-22	2	UMUF	Y		0
21585	HUM0490	POS	SRNF	1992-07-20	1	UF			
21587	HUM0490	POS	SRNF	1992-07-30	2	UMUF	Y		
21588	HUM0490	POS	J ROBINSON-S POLLAR	1993-06-21	1	UM			0
21586	HUM0490	POS	SRNF	1992-07-29	2	UMUF			
21584	HUM0490	POS	SRNF	1992-07-07	1	UM			
21583	HUM0490	POS	SRNF	1992-07-06	1	UM			
21590	HUM0490	POS	HOWARTER	1996-07-15	1	AU			0
22524	HUM0541	AC	RISLEY-ARSENAULT	1991-06-13	2	UMUF	Y	Y	1
22527	HUM0541	POS	SRNF	1991-08-07	1	UU			
22529	HUM0541	POS	SRNF	1992-06-18	1	UM			
22526	HUM0541	POS	SRNF	1991-07-25	2	UMUF	Y		2
126218	HUM0541	POS	HUNT VON ARB	2010-06-26	2	AUUU			
22523	HUM0541	POS	SRNF	1991-06-12	2	UMUF	Y		
22528	HUM0541	POS	SRNF	1992-06-17	1	UM			
22525	HUM0541	POS	ARSENAULT-ROBINSON	1991-06-25	1	AM			0
126226	HUM0742	AC	FRANKLIN ET AL.	2001-07-19	2	AMAF	Y	N	
27649	HUM0742	NEG	SIMPSON	1999	0				
120992	HUM0742	NEG	HEWITT	2011-05-22	0				
27652	HUM0742	NEG	SIMPSON	2002	0				
129210	HUM0742	NEG	GREEN DIAMOND	2003	0				
121053	HUM0742	NEG	HEWITT	2011-05-22	0				
27651	HUM0742	NEG	SIMPSON	2001	0				
121099	HUM0742	NEG	HEWITT	2011-05-22	0				
132858	HUM0742	NEG	GREEN DIAMOND	2000	0				
27648	HUM0742	POS	SIMPSON	1998	1	AM			
27646	HUM0742	POS	SIMPSON	1994	2	UMUF	Y	Y	1
27650	HUM0742	POS	SIMPSON	2000	1	UM			
27647	HUM0742	POS	MAEHLER	1995-07-27	1	UF			0
121816	HUM0742	POS	HEWITT	2011-07-28	1	UM			
121806	HUM0742	POS	HEWITT	2011-07-28	1	UM			
30184	HUM0839	NEG	SIMPSON	1999	0				
30185	HUM0839	POS	SIMPSON	2000	1	UM			

31882	HUM0925	AC	HERRERA	1999-04-02	2	UMUF	Y
31879	HUM0925	NEG	SLAUSON	1999-03-18	0		
31886	HUM0925	POS	BARTLETT	1999-05-26	2	UMUF	Y
31881	HUM0925	POS	HERRERA	1999-04-02	2	UMUF	Y
31880	HUM0925	POS	TLB	1999-03-29	1	UU	
31888	HUM0926	AC	HERRERA-HEWITT	1999-03-16	2	UMUF	Y
31901	HUM0926	NEG	HUNT-STOLFUS	2003-05-01	0		
121543	HUM0926	NEG	HEWITT	2011-07-28	0		
31910	HUM0926	NEG	HUNT	2005-05-17	0		
31908	HUM0926	NEG	HUNT	2004-05-24	0		
31896	HUM0926	NEG	LBJ-RWH	1999-06-12	0		
31911	HUM0926	NEG	HUNT	2005-05-25	0		
31899	HUM0926	NEG	LBJ-HERRERA	2000-06-01	0		
121493	HUM0926	NEG	HEWITT	2011-05-24	0		
31906	HUM0926	NEG	HUNT	2004-03-15	0		
121556	HUM0926	NEG	HEWITT	2011-05-24	0		
31904	HUM0926	NEG	HUNT	2003-06-02	0		
121587	HUM0926	NEG	HEWITT	2011-07-28	0		
120920	HUM0926	NEG	HEWITT	2011-06-11	0		
31900	HUM0926	NEG	HUNT-STOLFUS	2003-04-17	0		
120759	HUM0926	NEG	HEWITT	2011-06-11	0		
120718	HUM0926	NEG	HEWITT	2011-06-11	0		
121532	HUM0926	NEG	HEWITT	2011-07-28	0		
31905	HUM0926	NEG	HUNT	2003-06-09	0		
31891	HUM0926	NEG	LBJ-PAH-KMS	1999-04-04	0		
31907	HUM0926	NEG	HUNT	2004-05-07	0		
31893	HUM0926	NEG	LBJ-PAH	1999-05-03	0		
120677	HUM0926	NEG	HEWITT	2011-06-11	0		
121511	HUM0926	NEG	HEWITT	2011-05-24	0		
121535	HUM0926	NEG	HEWITT	2011-05-24	0		
31903	HUM0926	NEG	HUNT	2003-05-25	0		
31902	HUM0926	NEG	HUNT	2003-05-19	0		
121482	HUM0926	NEG	HEWITT	2011-05-24	0		
121510	HUM0926	NEG	HEWITT	2011-07-28	0		
31909	HUM0926	NEG	HUNT	2005-05-08	0		
31890	HUM0926	POS	LBJ-HERRERA-WARD	1999-03-23	2	AMAF	Y
31898	HUM0926	POS	HERRERA	2000-05-05	1	AF	Y
31897	HUM0926	POS	HERRERA	2000-04-25	2	UMAF	Y
31894	HUM0926	POS	LBJ-HERRERA	1999-05-22	1	UF	
31889	HUM0926	POS	LBJ-HERRERA	1999-03-18	2	UMUF	Y
31895	HUM0926	POS	LBJ-HEWITT	1999-05-24	2	AMAF	
31892	HUM0926	POS	LBJ-JFW	1999-04-13	1	UU	
32375	HUM0947	AC	HERRERA	2000-05-05	1	UM	
32373	HUM0947	NEG	LBJ-RWH	1999-06-12	0		
32371	HUM0947	NEG	LBJ-HERRERA	1999-05-22	0		
32372	HUM0947	NEG	LBJ-HERRERA-RPW	1999-06-01	0		
32376	HUM0947	NEG	LBJ-HERRERA	2000-06-01	0		
32370	HUM0947	NEG	LBJ-PAH	1999-05-03	0		
32368	HUM0947	NEG	LBJ-PAH-KMS	1999-04-04	0		
32374	HUM0947	NEG	LBJ-HERRERA-HOINESS	2000-04-25	0		
32369	HUM0947	NEG	LBJ-PAH-JFW	1999-04-13	0		
32941	HUM0982	NEG	COLLINS	2005-03-24	0		
32942	HUM0982	NEG	COLLINS	2005-04-02	0		
32940	HUM0982	NEG	COLLINS	2005-03-16	0		
32961	HUM0983	AC	SPI	1998-04-29	1	UM	
33028	HUM0983	NEG	RWH	2002-07-17	0		
32964	HUM0983	NEG	SWP	1998-06-13	0		
32955	HUM0983	NEG	DUDLEY	1997-04-29	0		
32984	HUM0983	NEG	HERRERA	1999-06-01	0		
32972	HUM0983	NEG	PAH-JFW	1999-04-13	0		
33022	HUM0983	NEG	RWH-PAH	2001-04-22	0		
32950	HUM0983	NEG	SMURR	1996-06-05	0		
33001	HUM0983	NEG	HERRERA	2000-04-28	0		
32952	HUM0983	NEG	LUNDE	1996-06-30	0		
32997	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0		
32993	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0		

32954	HUM0983	NEG	DUDLEY	1997-04-22	0	
33008	HUM0983	NEG	HERRERA	2000-05-15	0	
32996	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
33020	HUM0983	NEG	PAH-RWH	2001-04-13	0	
32946	HUM0983	NEG	SMURR	1996-03-25	0	
33024	HUM0983	NEG	PAGLIUGHI	2002-06-25	0	
33014	HUM0983	NEG	ROBINSON	2000-07-25	0	
33026	HUM0983	NEG	PAGLIUGHI	2002-07-05	0	
33015	HUM0983	NEG	ROBINSON-PIEPER	2000-08-01	0	
32957	HUM0983	NEG	DUDLEY	1997-05-13	0	
32956	HUM0983	NEG	DUDLEY	1997-05-05	0	
33025	HUM0983	NEG	RWH	2002-06-27	0	
33003	HUM0983	NEG	HERRERA	2000-04-28	0	
32958	HUM0983	NEG	DUDLEY	1997-05-21	0	
32980	HUM0983	NEG	HERRERA	1999-05-22	0	
33005	HUM0983	NEG	HERRERA	2000-05-04	0	
32951	HUM0983	NEG	SMURR	1996-06-06	0	
32969	HUM0983	NEG	HERRERA	1999-04-02	0	
33017	HUM0983	NEG	HERRERA	2001-03-15	0	
33027	HUM0983	NEG	SWP-DJM	2002-07-13	0	
32948	HUM0983	NEG	SMURR	1996-05-07	0	
32979	HUM0983	NEG	HERRERA	1999-05-07	0	
33011	HUM0983	NEG	ROBINSON	2000-06-16	0	
33019	HUM0983	NEG	PAH-RWH	2001-04-13	0	
32953	HUM0983	NEG	SMURR	1997-03-05	0	
33013	HUM0983	NEG	ROBINSON	2000-07-18	0	
32994	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
33012	HUM0983	NEG	ROBINSON	2000-06-26	0	
32947	HUM0983	NEG	SMURR	1996-04-04	0	
32991	HUM0983	NEG	HERRERA	2000-04-13	0	
32963	HUM0983	NEG	SWP	1998-06-07	0	
33023	HUM0983	NEG	RWH	2002-04-22	0	
33018	HUM0983	NEG	HERRERA	2001-03-15	0	
33002	HUM0983	NEG	HERRERA	2000-04-28	0	
32959	HUM0983	NEG	DUDLEY	1997-06-03	0	
32967	HUM0983	NEG	TLB	1999-03-29	0	
32995	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
32960	HUM0983	NEG	SMURR	1997-07-06	0	
33010	HUM0983	NEG	HERRERA	2000-05-25	0	
32978	HUM0983	NEG	HERRERA	1999-05-07	0	
32981	HUM0983	NEG	HERRERA	1999-05-22	0	
33021	HUM0983	NEG	RWH-PAH	2001-04-22	0	
32992	HUM0983	NEG	HERRERA	2000-04-13	0	
33004	HUM0983	NEG	HERRERA	2000-05-04	0	
32998	HUM0983	NEG	HERRERA-HOINESS	2000-04-19	0	
32990	HUM0983	NEG	HERRERA	2000-04-13	0	
32949	HUM0983	NEG	SMURR	1996-05-09	0	
32971	HUM0983	NEG	PAH-JFW	1999-04-13	0	
32983	HUM0983	NEG	HERRERA-WARD	1999-06-01	0	
33009	HUM0983	NEG	ROBINSON	2000-05-21	0	
32970	HUM0983	NEG	HERRERA	1999-04-02	0	
32974	HUM0983	POS	KMS	1999-04-29	1	UM
32975	HUM0983	POS	KMS	1999-04-29	1	UM
32987	HUM0983	POS	HERRERA	2000-04-11	1	UM
33006	HUM0983	POS	HERRERA	2000-05-10	1	UM
32944	HUM0983	POS	GALEA ET AL.	1991-07-17	1	AM
32962	HUM0983	POS	SPI	1998-05-03	1	UM
32999	HUM0983	POS	HERRERA-HONESS	2000-04-25	1	UM
33016	HUM0983	POS	HERRERA	2000-11-04	1	UM
32988	HUM0983	POS	PAH	2000-04-11	1	UM
32943	HUM0983	POS	GALEA ET AL.	1991-06-26	1	AM
32968	HUM0983	POS	HERRERA	1999-03-29	1	UM
33000	HUM0983	POS	PAH-GAH	2000-04-25	1	UM
32965	HUM0983	POS	Cruisers	1998-07-28	1	UM
32945	HUM0983	POS	MARTIN-CFA	1991-07-17	1	UM
32966	HUM0983	POS	TLB-KMS	1999-03-16	1	UM

32989	HUM0983	POS	HERRERA	2000-04-11	1	UM	
32977	HUM0983	POS	HERRERA	1999-05-04	1	AM	
33007	HUM0983	POS	PAH	2000-05-10	1	UM	
32986	HUM0983	POS	HERRERA	2000-04-11	1	UM	
32976	HUM0983	POS	HERRERA	1999-05-03	1	UM	
121352	HUM1021	AC	HEWITT	2011-06-11	2	UMUF	Y
121014	HUM1021	NEG	HEWITT	2011-05-24	0		
121542	HUM1021	NEG	HEWITT	2011-06-11	0		
121678	HUM1021	NEG	HEWITT	2011-06-11	0		
121699	HUM1021	NEG	HEWITT	2011-08-30	0		
120686	HUM1021	NEG	HEWITT	2011-07-28	0		
120931	HUM1021	NEG	HEWITT	2011-06-09	0		
121344	HUM1021	NEG	HEWITT	2011-05-22	0		
121694	HUM1021	NEG	HEWITT	2011-07-28	0		
120748	HUM1021	NEG	HEWITT	2011-07-28	0		
121662	HUM1021	NEG	HEWITT	2011-05-24	0		
120814	HUM1021	NEG	HEWITT	2011-05-22	0		
121181	HUM1021	NEG	HEWITT	2011-06-09	0		
121698	HUM1021	NEG	HEWITT	2011-08-30	0		
121187	HUM1021	NEG	HEWITT	2011-08-30	0		
120674	HUM1021	NEG	HEWITT	2011-05-24	0		
120685	HUM1021	NEG	HEWITT	2011-05-22	0		
121700	HUM1021	NEG	HEWITT	2011-08-30	0		
120906	HUM1021	NEG	HEWITT	2011-05-22	0		
121123	HUM1021	NEG	HEWITT	2011-06-09	0		
121621	HUM1021	NEG	HEWITT	2011-06-11	0		
121045	HUM1021	NEG	HEWITT	2011-07-28	0		
120853	HUM1021	NEG	HEWITT	2011-05-22	0		
120969	HUM1021	NEG	HEWITT	2011-06-11	0		
121611	HUM1021	NEG	HEWITT	2011-05-22	0		
120722	HUM1021	NEG	HEWITT	2011-05-22	0		
121458	HUM1021	NEG	HEWITT	2011-05-24	0		
120695	HUM1021	NEG	HEWITT	2011-08-30	0		
121499	HUM1021	NEG	HEWITT	2011-07-28	0		
120844	HUM1021	NEG	HEWITT	2011-08-30	0		
121128	HUM1021	NEG	HEWITT	2011-08-30	0		
121581	HUM1021	NEG	HEWITT	2011-05-22	0		
121674	HUM1021	NEG	HEWITT	2011-05-22	0		
120723	HUM1021	NEG	HEWITT	2011-08-30	0		
121408	HUM1021	NEG	HEWITT	2011-06-09	0		
121473	HUM1021	NEG	HEWITT	2011-05-24	0		
121619	HUM1021	NEG	HEWITT	2011-07-28	0		
121271	HUM1021	NEG	HEWITT	2011-05-22	0		
120717	HUM1021	NEG	HEWITT	2011-07-28	0		
121234	HUM1021	NEG	HEWITT	2011-06-09	0		
121622	HUM1021	NEG	HEWITT	2011-05-24	0		
121579	HUM1021	NEG	HEWITT	2011-05-24	0		
120808	HUM1021	NEG	HEWITT	2011-06-09	0		
121660	HUM1021	NEG	HEWITT	2011-07-28	0		
122104	HUM1021	POS	HEWITT	2011-05-22	1	UM	
121856	HUM1021	POS	HEWITT	2011-06-09	1	UM	
122195	HUM1021	POS	HEWITT	2011-05-22	1	UM	
121831	HUM1021	POS	HEWITT	2011-06-09	1	UM	
121391	HUM1021	POS	HEWITT	2011-06-28	2	UMUF	Y
121762	HUM1021	POS	HEWITT	2011-05-22	1	UM	
150366	NEG	NEG	RENZULLO	2015-06-22	0		
120746	NEG	NEG	HEWITT	2011-05-24	0		
121009	NEG	NEG	HEWITT	2011-08-30	0		
150367	NEG	NEG	RENZULLO	2015-06-22	0		
121453	NEG	NEG	HEWITT	2011-05-24	0		
150349	NEG	NEG	RENZULLO	2015	0		
150346	NEG	NEG	RENZULLO	2015	0		
150361	NEG	NEG	RENZULLO	2015-05-04	0		
121060	NEG	NEG	HEWITT	2011-08-30	0		
120909	NEG	NEG	HEWITT	2011-08-30	0		
150354	NEG	NEG	RENZULLO	2015	0		

120876	NEG	NEG	HEWITT	2011-06-09	0				
150370	NEG	NEG	RENZULLO	2015-07-20	0				
150364	NEG	NEG	RENZULLO	2015-06-02	0				
150348	NEG	NEG	RENZULLO	2015	0				
150356	NEG	NEG	RENZULLO	2015-03-18	0				
120705	NEG	NEG	HEWITT	2011-05-24	0				
150360	NEG	NEG	RENZULLO	2015-04-17	0				
150362	NEG	NEG	RENZULLO	2015-05-05	0				
150343	NEG	NEG	RENZULLO	2015	0				
121649	NEG	NEG	HEWITT	2011-06-09	0				
150344	NEG	NEG	RENZULLO	2015	0				
121455	NEG	NEG	HEWITT	2011-05-24	0				
150358	NEG	NEG	RENZULLO	2015-04-17	0				
150345	NEG	NEG	RENZULLO	2015	0				
120819	NEG	NEG	HEWITT	2011-05-24	0				
150371	NEG	NEG	RENZULLO	2015-07-20	0				
150365	NEG	NEG	RENZULLO	2015-06-03	0				
150357	NEG	NEG	RENZULLO	2015-03-19	0				
150359	NEG	NEG	RENZULLO	2015-04-17	0				
150363	NEG	NEG	RENZULLO	2015-06-02	0				
150368	NEG	NEG	RENZULLO	2015-06-22	0				
150347	NEG	NEG	RENZULLO	2015	0				
121572	NEG	NEG	HEWITT	2011-08-30	0				
121614	NEG	NEG	HEWITT	2011-08-30	0				
120862	NEG	NEG	HEWITT	2011-05-24	0				
150342	NEG	NEG	RENZULLO	2015	0				
120671	NEG	NEG	HEWITT	2011-06-09	0				
120951	NEG	NEG	HEWITT	2011-08-30	0				
150369	NEG	NEG	RENZULLO	2015-07-20	0				
120700	NEG	NEG	HEWITT	2011-06-09	0				
121580	NEG	NEG	HEWITT	2011-06-09	0				
150372	POS	POS	RENZULLO	2015-03-18	1	UU			
150374	POS	POS	RENZULLO	2015-06-02	1	UU			
150373	POS	POS	RENZULLO	2015-05-04	1	UU			
103487	TRI0003	AC	MCMILLIAN	1988-08-05	2	UMUF	Y		
103485	TRI0003	POS	LUCICH	1974-07-01	1	UUUU			
103486	TRI0003	POS	GOULD	1979	1	UU			
103484	TRI0003	POS	GOULD	1973-09-04	1	UU			
103488	TRI0003	POS	MCMILLIAN	1988-08-05	1	UM			
103483	TRI0003	POS	CONDOR	1926-06-01	1	UU			
104086	TRI0045	AC	BRACK	1985-06-27	2	UMUF	Y	Y	1
104090	TRI0045	POS	BRACK	1986-08-05	1	UF			
104091	TRI0045	POS	TILGHMAN-PATON	1987	2	UMUF	Y		
104087	TRI0045	POS	BRACK-STEVENSON	1985-06-27	1	AU			0
104089	TRI0045	POS	SRNF	1986-08-05	1	UU			
104083	TRI0045	POS	MARCOT	1978-05-17	1	UU			
104094	TRI0045	POS	MCMILLIAN	1988	2	AMAF	Y		0
104095	TRI0045	POS	MCMILLIAN	1988-10-04	2	UMUF	Y		
104097	TRI0045	POS	SRNF	1990-05-10	1	UM			
104084	TRI0045	POS	LEISTEN	1979-04-24	2	UMUF	Y		
104085	TRI0045	POS	BRACK-MENDEZ	1985-06-20	1	UU			
104088	TRI0045	POS	BRACK-STEVENSON	1985-07-02	2	UMUF	Y		1
104093	TRI0045	POS	TILGHMAN-PATON	1988	2	UMUF	Y		
104098	TRI0045	POS	SRNF	1990-05-24	1	UM			
104092	TRI0045	POS	TILGHMAN-PATON	1987	2	UMUF	Y		
104096	TRI0045	POS	SRNF	1990-04-10	2	UMUF	Y		
126879	TRI0187	AC	ST. PIERRE ET AL.	2011-08-08	2	AMAF	Y		
126878	TRI0187	POS	CUTLER-OWENS	2011-07-12	1	AU			
106703	TRI0187	POS	SRNF	1984-05-23	2	UMUF	Y		
106704	TRI0187	POS	MCMILLIAN	1988-08-05	2	UMUF			
106705	TRI0187	POS	MCMILLIAN	1988-08-27	2	UMUF			
126877	TRI0187	POS	CUTLER ET AL.	2011-07-11	1	UM			
154167	TRI0364	AC	STNF	2015-05-18	2	AMAF	Y	Y	1
127003	TRI0364	NEG	SRNF	2000	0			Y	
150385	TRI0364	NEG	RENZULLO	2015-07-20	0				
150380	TRI0364	NEG	RENZULLO	2015	0				

150381	TRI0364	NEG	RENZULLO	2015-03-18	0			
150382	TRI0364	NEG	RENZULLO	2015-04-17	0			
150383	TRI0364	NEG	RENZULLO	2015-05-04	0			
108877	TRI0364	NEG	STNF	1992-06-16	0			
150384	TRI0364	NEG	RENZULLO	2015-06-22	0			
108878	TRI0364	POS	STNF	1992-06-30	1	UM		
127005	TRI0364	POS	SHASTA TRINITY NF	2010-07-28	1	UU		
127004	TRI0364	POS	CUTLER ET AL.	2010-07-27	1	UU		
154168	TRI0364	POS	STNF	2015-06-11	2	AMAF	Y	2
108882	TRI0364	POS	KUDRNA-PLUMAGE	1996-02-06	1	AU		0
108881	TRI0364	POS	SRNF	1992-07-29	1	UM		
108880	TRI0364	POS	STNF-DIAS-GONZALES	1992-07-14	2	UMUF	Y	1
127007	TRI0364	POS	ST. PIERRE-CUTLER	2011-06-30	1	UM		
108884	TRI0364	POS	via PSW	2001-06-02	2	UMAF	Y	
127010	TRI0364	POS	HUYNH ET AL.	2011-07-27	2	AMAF	Y	
127011	TRI0364	POS	FOSTER-RUSSELL	2012-06-06	2	UMUF	Y	
127009	TRI0364	POS	CUTLER ET AL.	2011-07-14	1	UU		
108883	TRI0364	POS	via PSW	2000-06-24	2	AMAF	Y	1
108879	TRI0364	POS	STNF	1992-07-13	1	UM		
127006	TRI0364	POS	CUTLER-ST. PIERRE	2011-06-29	1	UF		
127008	TRI0364	POS	CUTLER ET AL.	2011-07-11	1	UF		
104788	TRI0467	NEG	AREY-SHIPLEY	1981-04-28	0			
104799	TRI0467	NEG	STNF	1991-07-10	0			
104798	TRI0467	POS	STNF-PHILLIPS ET AL.	1991-07-08	1	UM		