

12572

Attachment B



Biological Resource Assessment

Biological Resource Assessment for Highway 36 Homestead

APN 210-191-049

February 2019

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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 project area is located off Hwy 36 in Bridgeville (Section 8, T1N, R5E) in Humboldt County, California. The project is located on a 45.5-acre parcel within the U.S. Geological Survey's (USGS) Larabee Valley 7.5-minute quadrangle map. The parcel is zoned unclassified and the land-use code is rural-residential. Elevation is approximately 2500-2750 feet. Property is located in the Eel River Watershed. The regional climate is Mediterranean in nature with warm summers and cool winters.

Soil, Topography, Hydrology

Two soil types are mapped in the project area on the Web Soil Survey. The parcel is primarily composed of Highyork-Elkcamp-Airstrip complex, 15 to 30 percent slopes (4421), and Pasturerock-Coyoterock-Maneze complex, 15 to 50 percent slopes, dry (4426). These soils are not considered hydric and are on deep, well drained soils that formed in colluvium derived from sandstone and mudstone found on hills and mountains.²

The Highyork series consists of very deep, somewhat poorly drained soils that formed in material weathered from chloritic schist and other metasedimentary rocks. Highyork soils are on mountains and have slopes of 15 to 50 percent. The mean annual precipitation is about 2160 millimeters and the mean annual temperature is about 11 degrees C. Airstrip soils are on convex positions, contain more than 35 percent coarse fragments, and have lithic contact below 50 centimeters. Elkcamp soils contain less than 35 percent clay and are on hummocky slopes.

The Coyoterock series consists of very deep, moderately well drained soils formed in colluvium and residuum derived from sandstone and mudstone. Coyoterock soils are on mountains and have slopes of 15 to 50 percent. Mean annual precipitation is about 2290 mm and the mean annual temperature is about 13 degrees C. Pasturerock soils have less than 35 percent clay in the particle size control section. Maneze soils have greater than 35 percent rock fragments in the particle size control section and lack an

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

² Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. (Accessed via <https://websoilsurvey.sc.egov.usda.gov/>.)

argillic horizon. The Pasturerock soils are on uniform positions and Maneze soils are on convex position on slopes in drier locations above or alongside the Coyoterock soils. Native vegetation is oak woodland.

The project area has up to 30% sloping at approximately 2500-2700 feet above sea level. Project area does not include any blue line streams on USGS layers. Nearest watercourse, a tributary to Van Duzen River is approximately 560 feet to the east. The area is mapped as possessing high levels of instability in the Humboldt County GIS database near the Eaton Roughs fault zone.

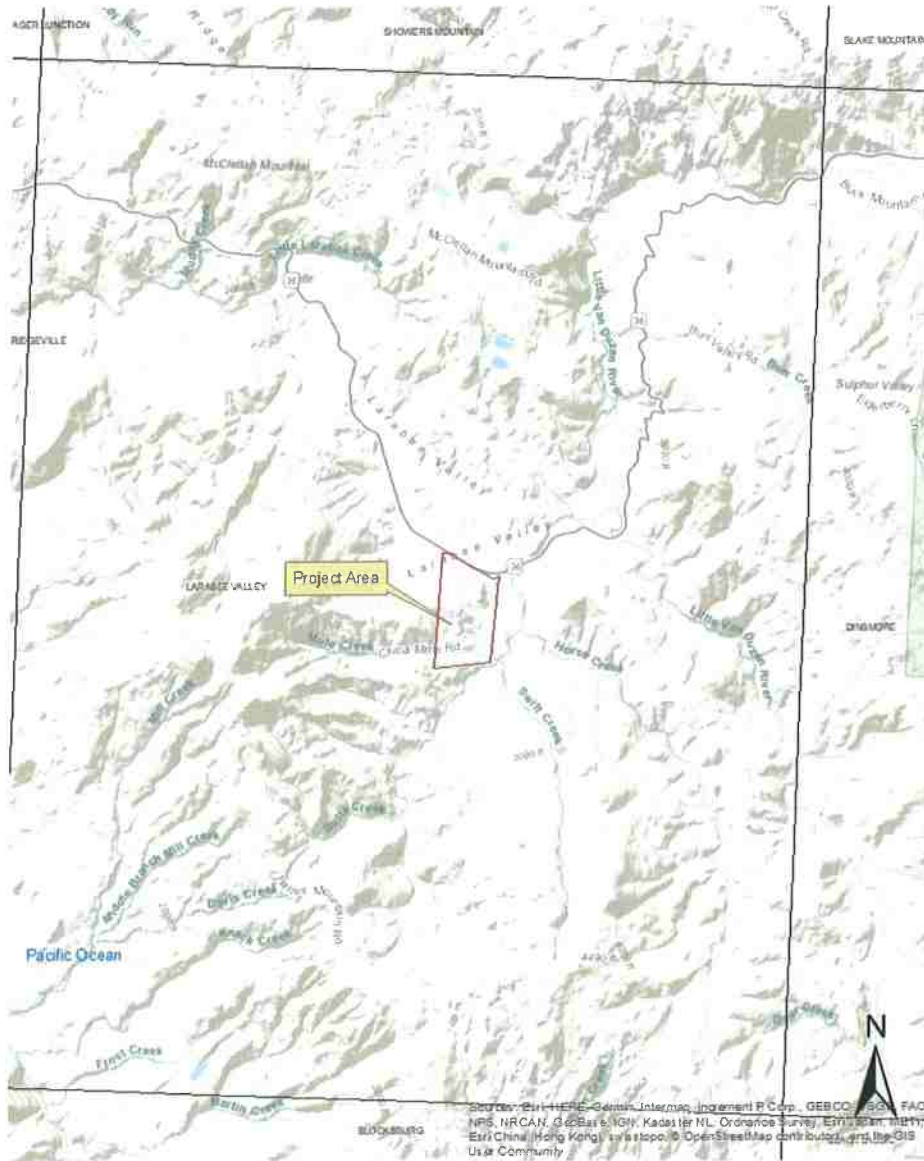
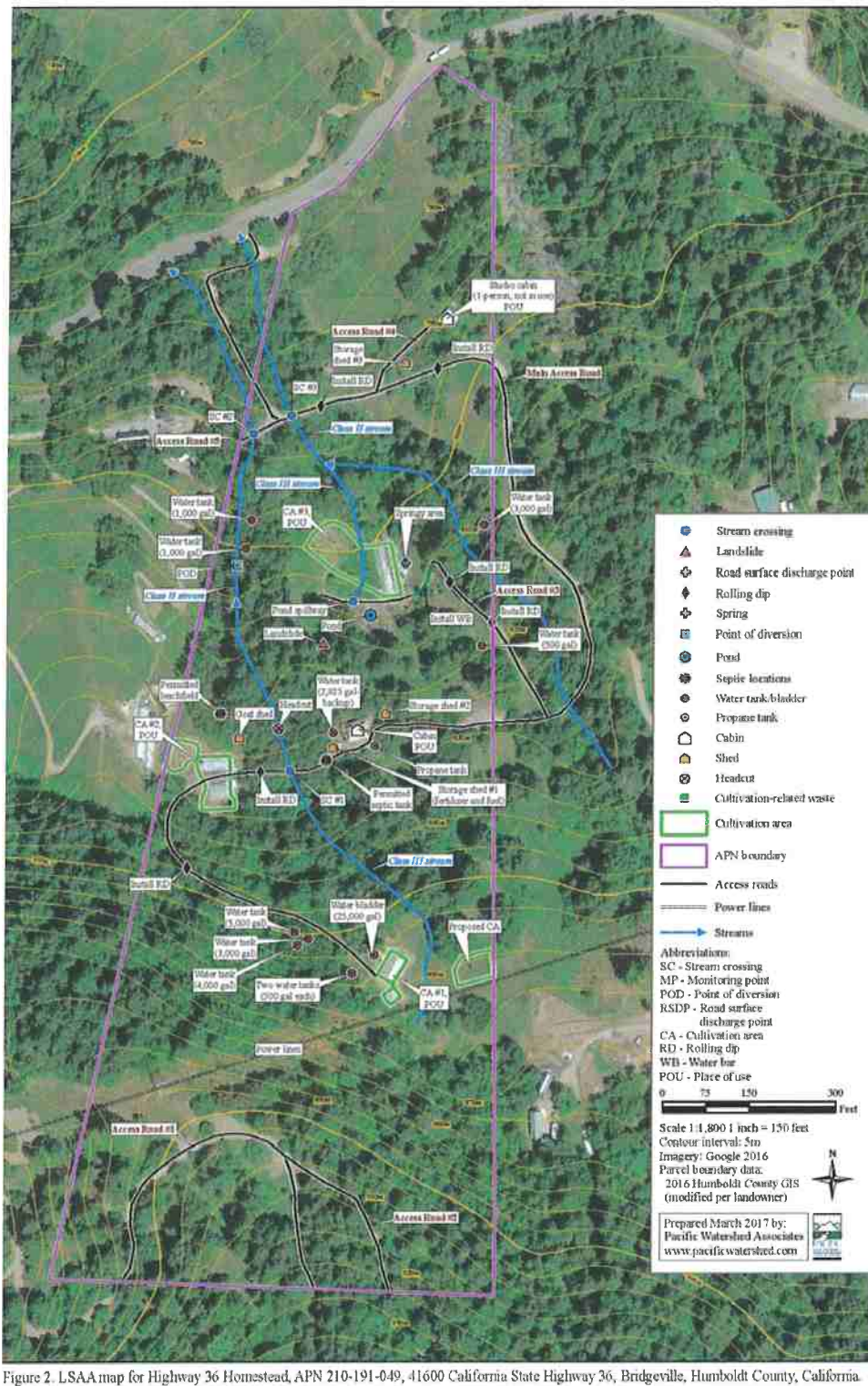


Figure 1. Project locations. (Map created using ArcMap 10.6 and Humboldt County GIS database-NTS)



Figure 2. Streamside Management Areas and National Wetland Inventory (NWI) wetlands mapped near project site³

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



Methods

The California Natural Diversity Database (CNDDDB) 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 September 29, 2018. 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 CNDDDB 9-Quad area was queried to generate occurrences of special-status animal species.

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), *Acer macrophyllum* (big leaf maple), *Quercus kelloggii* (California black oak), *Fraxinus latifolia* (Oregon ash), and *Arbutus menziesii* (madrone). Shrub species and density were variable depending upon hydrology and canopy. Most areas were dominated by *Rosa gymnocarpa* (wood rose), *Baccharis pilularis* (coyote brush), *Rubus armeniacus* (Himalayan blackberry), *R. parviflorus* (thimbleberry), *R. leucodermis* (white-stemmed raspberry), *Pteridium aquilinum* var. *pubescens* (Western bracken fern), *Toxicodendron diversilobum* (poison oak), *Symphoricarpos mollis* (creeping snowberry), *Holodiscus discolor* (oceanspray), *Cotoneaster* sp. (cotoneaster), and *Rhamnus purshiana* (coffeeberry) as well as small tree species. The herb layer ranged from very dense to sparse, also dependent upon canopy and hydrology. Species observed included *Equisetum telmateia* spp. *braunii* (giant horsetail), *Juncus effuses* (common 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), *Parentucillia viscosa* (yellow glandweed), *Briza major* (large rattlesnake grass), *Cynosurus echinatus* (hedgehog dogtail grass),

Trientalis latifolia (Pacific starflower), *Clinopodium douglasii* (yerba buena), *Ranunculus repens* (creeping buttercup), *Lonicera hispidula* (hairy honeysuckle), *Whipplea modesta* (modesty), *Anaphalis margaritacea* (pearly everlasting), *Trifolium* sp. (clover), *Cirsium* sp. (thistle), *Avena* sp. (oatgrass).

Nomenclature follows the most current scientific names in The Jepson Manual of Higher Plants of California Second Edition to the greatest degree feasible⁴

Wetlands and SMA areas

As stated previously, there are watercourses in the area, as well as springs, crossing and points of diversion (Figure 4). A jurisdictional wetland delineation was not requested or conducted for this assessment.

Northern Spotted Owl⁵

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 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

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>)

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 Guidance⁶.

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

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>)

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 grasslands 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 1.3 miles of an historical activity center. The NSO activity center Hum 0155 pair was last observed in 2002 with negative observations from 2003-2005 and no known surveys after 2005). Surveys have not been conducted within a five-mile radius since 2015 when Able Forestry conducted surveys for HUM0704. HUM0339 and HUM03532 were identified in 2012 via THP and Rob Hewitt conducted various surveys in 2011.

The project is not proposing to use any generators and 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, HUM0155 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.

CNDDDB and Other Database Results

The CDFW CNDDDB, 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. A complete list of occurrences of rare and species of concern are listed below in Table 1 and Table 2

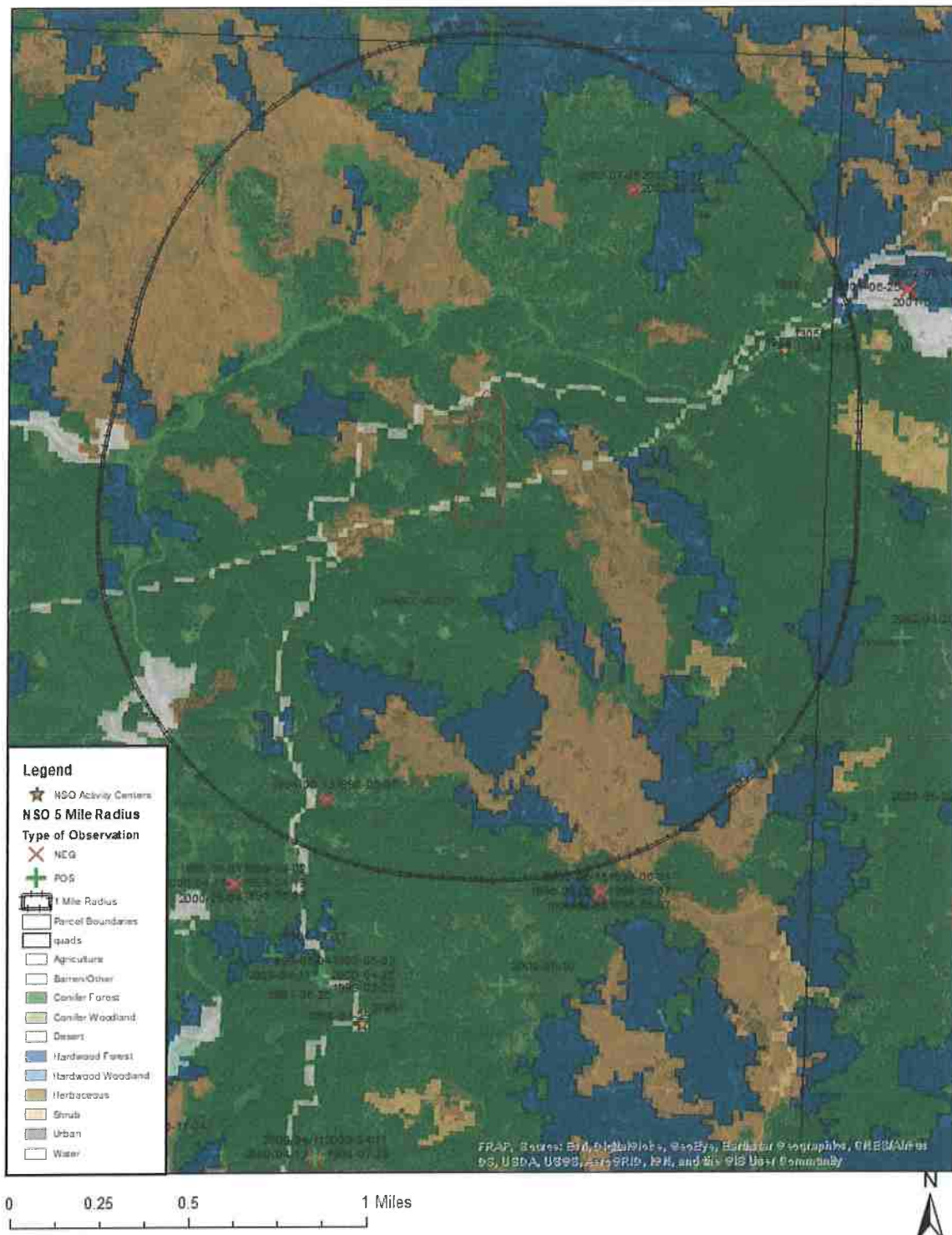


Figure 4. WHR habitat types show the area as conifer forest surrounding by a mosaic of Hardwood Forest and Herbaceous. Activity center HUM 0155 (13058) is located within one mile of the project area.

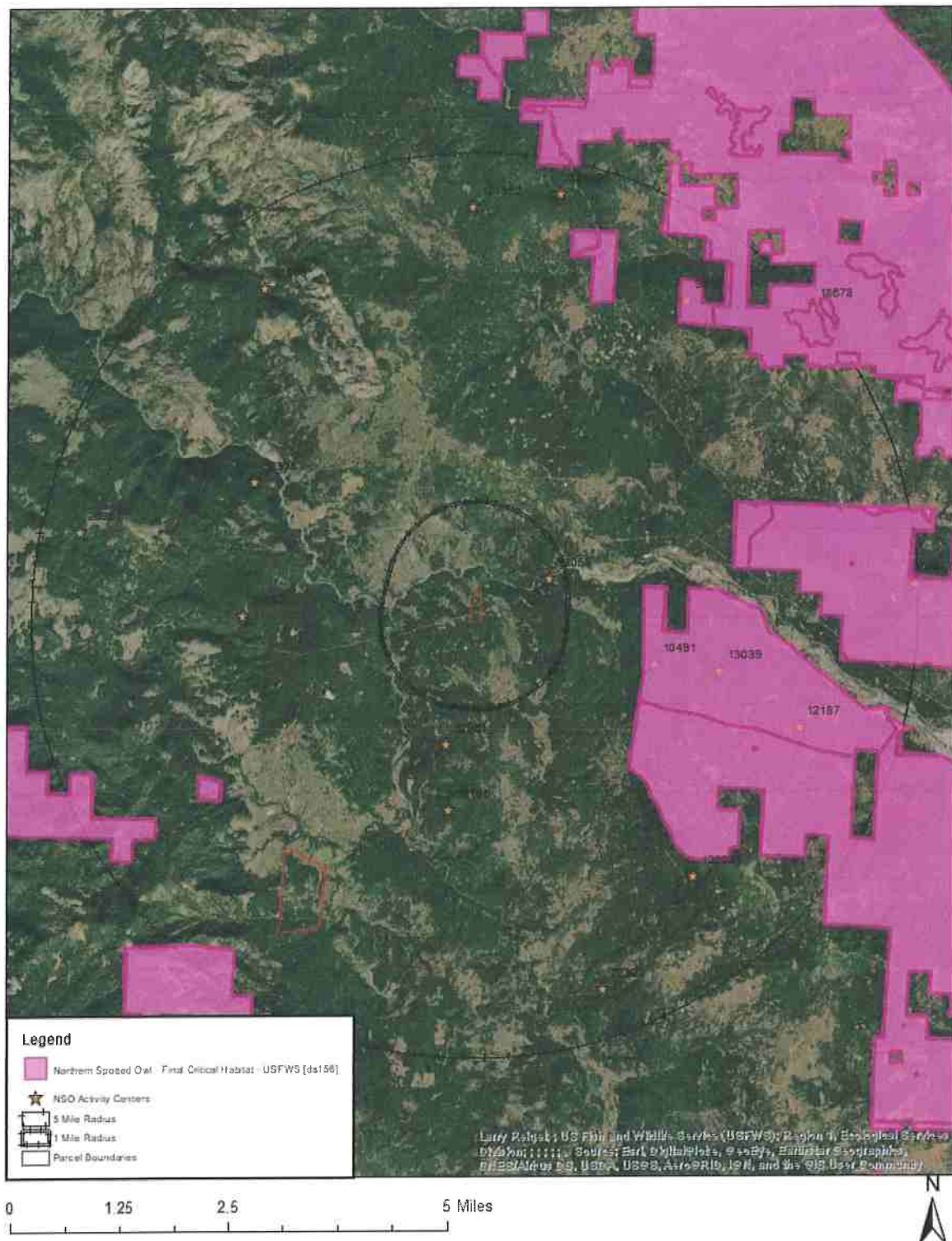


Figure 5. Activity centers within 5 miles of the project site. Final critical habitat is located approximately 1.8 miles from the project site.

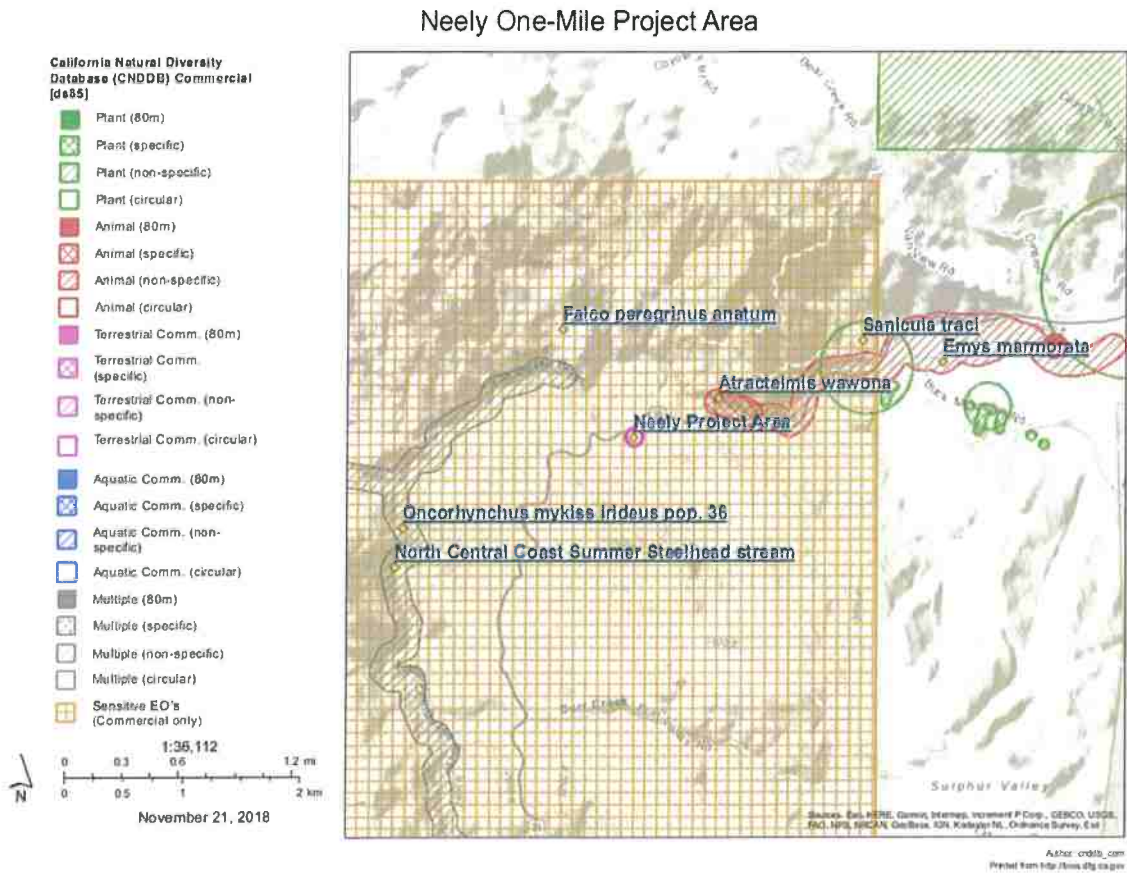


Figure 6. CNDDDB search results of observed rare plant and sensitive animal occurrences found one mile near property.

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

Scientific Name	Common Name	FESA	CESA	General Habitat	Micro Habitat
Aquila chrysaetos	golden eagle	None	None	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
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.
Accipiter cooperii	Cooper's hawk	None	None	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.
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.
Arborelmus pumo	Sonoma tree vole	None	None	North coast fog belt from Oregon border to Sonoma County. In Douglas-fir, redwood & montane hardwood-conifer forests.	Feeds almost exclusively on Douglas-fir needles. Will occasionally take needles of grand fir, hemlock or spruce.
Ascapthus 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.
Atractelmlis wawona	Wawona riffle beetle	None	None	Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2000-5000 ft elev.	Strong preference for inhabiting submerged aquatic mosses
Bombus caliginosus	obscure bumble bee	None	None	Coastal areas from Santa Barbara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.
Bombus occidentalis	western bumble bee	None	None	Once common & widespread, species has declined precipitously	

from central CA to southern B.C., perhaps from disease.				
Corynorhinus townsendii	Townsend's big-eared bat	None	None	Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
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.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.
Martes caurina humboldtensis	Humboldt marten	None	Candidate Endangered	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County.
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.
Myotis volans	long-legged myotis	None	None	Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.
Noyo intersessa	Ten Mile shoulderband	None	None	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	None	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.

Pandion haliaetus	osprey	None	None	Ocean shore, bays, freshwater lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
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 streamside 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 boylei	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	Lifeform	CRPR	Habitat	Micro Habitat
Allium hofmanii	Beegum onion	perennial bulbiferous herb	4.3	Lower montane coniferous forest (serpentine)	
Anisocarpus scabridus	scabrid alpine tarplant	perennial herb	1B.3	Upper montane coniferous forest (metamorphic, rocky)	
Arctostaphylos hispidula	Howell's manzanita	perennial evergreen shrub	4.2	Chaparral (serpentine or sandstone)	
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	perennial evergreen shrub	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	volcanic
Arnica spathulata	Klamath arnica	perennial rhizomatous herb	4.3	Lower montane coniferous forest (serpentine)	
Astragalus agnicidus	Humboldt County milk- vetch	perennial herb	1B.1	Broadleaved upland forest, North Coast coniferous forest	openings, disturbed areas, sometimes roadsides
Astragalus rattanii var. rattanii	Rattan's milk- vetch	perennial herb	4.3	Chaparral, Cismontane woodland, Lower montane coniferous forest	gravelly streambanks
Astragalus umbraticus	Bald Mountain milk-vetch	perennial herb	2B.3	Cismontane woodland, Lower montane coniferous forest	sometimes roadside
Calycadenia micrantha	small-flowered calycadenia	annual herb	1B.2	Chaparral, Meadows and seeps (volcanic), Valley and foothill grassland	Roadsides, rocky, talus, scree, sometimes serpentine, sparsely vegetated areas
Carex praticola	northern meadow sedge	perennial herb	2B.2	Meadows and seeps (mesic)	
Carex scabriuscula	Siskiyou sedge	perennial rhizomatous herb	4.3	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	mesic, sometimes serpentine seeps
Collomia tracyi	Tracy's collomia	annual herb	4.3	Broadleaved upland forest, Lower montane coniferous forest	rocky, sometimes serpentine

<i>Coptis laciniata</i>	Oregon goldthread	perennial rhizomatous herb	4.2	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic
<i>Cryptantha rostellata</i>	red-stemmed cryptantha	annual herb	4.2	Cismontane woodland, Valley and foothill grassland	Often gravelly, volcanic openings; often roadsides
<i>Cypripedium fasciculatum</i>	clustered lady's- slipper	perennial rhizomatous herb	4.2	Lower montane coniferous forest, North Coast coniferous forest	usually serpentine seeps and streambanks
<i>Cypripedium montanum</i>	mountain lady's- slipper	perennial rhizomatous herb	4.2	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, North Coast coniferous forest	
<i>Epilobium oreganum</i>	Oregon fireweed	perennial herb	1B.2	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	mesic
<i>Epilobium septentrionale</i>	Humboldt County fuchsia	perennial herb	4.3	Broadleaved upland forest, North Coast coniferous forest	sandy or rocky
<i>Erigeron manipotamicus</i>	Mad River fleabane daisy	perennial herb	1B.2	Lower montane coniferous forest, Meadows and seeps (open, dry)	open, disturbed areas (road cuts); rocky
<i>Erythronium oregonum</i>	giant fawn lily	perennial bulbiferous herb	2B.2	Cismontane woodland, Meadows and seeps	sometimes serpentine, rocky, openings
<i>Erythronium revolutum</i>	coast fawn lily	perennial bulbiferous herb	2B.2	Bogs and fens, Broadleaved upland forest, North Coast coniferous forest	Mesic, streambanks
<i>Eucephalus glabratus</i>	Siskiyou aster	perennial herb	4.3	Lower montane coniferous forest, Upper montane coniferous forest	rocky openings
<i>Fritillaria glauca</i>	Siskiyou fritillaria	perennial bulbiferous herb	4.2	Alpine boulder and rock field, Subalpine coniferous forest, Upper montane coniferous forest	serpentine, talus slopes
<i>Gilia capitata ssp. pacifica</i>	Pacific gilia	annual herb	1B.2	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	
<i>Hosackia yollabollensis</i>	Yolla Bolly Mtns. bird's-foot trefoil	perennial herb	1B.2	Meadows and seeps, Upper montane coniferous forest (openings)	dry barren exposed slopes, often gravelly

Howellia aquatilis	water howellia	annual herb (aquatic)	2B.2	Marshes and swamps (freshwater)	
Kopsiopsis hookeri	small groundcone	perennial rhizomatous herb (parasitic)	2B.3	North Coast coniferous forest	
Lathyrus biflorus	two-flowered pea	perennial herb	1B.1	Lower montane coniferous forest (serpentine)	
Lilium rubescens	redwood lily	perennial bulbiferous herb	4.2	Broadleaved upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	Sometimes serpentine, sometimes roadsides
Listera cordata	heart-leaved twayblade	perennial herb	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	
Lupinus constancei	The Lassics lupine	perennial herb	1B.1	Lower montane coniferous forest (serpentine)	
Lupinus elmeri	South Fork Mountain lupine	perennial herb	1B.2	Lower montane coniferous forest	
Lycopodium clavatum	running-pine	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	moss	4.2	Bogs and fens, Meadows and seeps, Subalpine coniferous forest, Upper montane coniferous forest (mesic)	soil
Mitella caulescens	leafy-stemmed mitrewort	perennial rhizomatous herb	4.2	Broadleaved upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	mesic, sometimes roadsides
Montia howellii	Howell's montia	annual herb	2B.2	Meadows and seeps, North Coast coniferous forest, Vernal pools	vernally mesic, sometimes roadsides

Packera bolanderi var. bolanderi	seacoast ragwort	perennial rhizomatous herb	2B.2	Coastal scrub, North Coast coniferous forest	Sometimes roadsides
Piperia candida	white-flowered rein orchid	perennial herb	1B.2	Broadleaved upland forest, Lower montane coniferous forest, North Coast coniferous forest	sometimes serpentinite
Pityopus californicus	California pinefoot	perennial herb (achlorophyllous)	4.2	Broadleaved upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest	mesic
Platanthera stricta	slender bog- orchid	perennial herb	4.2	Lower montane coniferous forest, Meadows and seeps	mesic
Ptilidium californicum	Pacific fuzz wort	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	perennial deciduous shrub	4.3	North Coast coniferous forest	sometimes roadside
Sabulina decumbens	The Lassies sandwort	perennial herb	1B.2	Lower montane coniferous forest, Upper montane coniferous forest	serpentinite
Sanicula tracyi	Tracy's sanicle	perennial herb	4.2	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	openings
Sedum laxum ssp. flavidum	pale yellow stonecrop	perennial herb	4.3	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	Serpentinite or volcanic
Sidalcea malachroides	maple-leaved checkerbloom	perennial herb	4.2	Broadleaved upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Often in disturbed areas
Sidalcea maliflora ssp. patula	Siskiyou checkerbloom	perennial rhizomatous herb	1B.2	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	often roadcuts

Thermopsis robusta	robust false lupine	perennial rhizomatous herb	1B.2	Broadleafed upland forest, North Coast coniferous forest	
Usnea longissima	Methuselah's beard lichen	fruticose lichen (epiphytic)	4.2	Broadleafed upland forest, North Coast coniferous forest	On tree branches; usually on old growth hardwoods and conifers
Wyethia longicaulis	Humboldt County wyethia	perennial herb	4.3	Broadleafed upland forest, Coastal prairie, Lower montane coniferous forest	sometimes roadsides

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. These 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 Guidelines⁸, USFWS Endangered Species Program⁹ and CNPS Botanical Survey Guidelines¹⁰

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)

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-Principal-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

MASTEROWL	TYPEOBS	OBSERVER	DATEOBS	AGESEX	PAIR	NEST	MTRS
HUM0013	POS	via THP	2012-05-23	UM			H 01S 04E 01
HUM0013	POS	BURROWS	1983	UMUF	Y		H 01N 04E 36
HUM0019	AC	HOLZER-ROBINSON	1991-05-07	UMUF	Y	Y	H 02N 05E 22
HUM0019	NEG	VIA NRM	1993				H 02N 05E 22
HUM0019	NEG	HEWITT	2011-07-28				H 02N 05E 17
HUM0019	NEG	HEWITT	2011-05-22				H 02N 05E 17
HUM0019	NEG	VIA THP BY NRM	1994-05-23				H 02N 05E 22
HUM0019	NEG	NRM-KEOWN	1994-06-22				H 02N 05E 22
HUM0019	NEG	HEWITT	2011-05-22				H 02N 05E 21
HUM0019	NEG	VIA THP BY NRM	1994-05-18				H 02N 05E 22
HUM0019	NEG	VIA THP BY NRM	1994-05-03				H 02N 05E 22
HUM0019	NEG	HEWITT	2011-07-28				H 02N 05E 21
HUM0019	NEG	VIA THP BY NRM	1994-06-08				H 02N 05E 22
HUM0019	POS	OB	2001-05-21	UU			H 02N 05E 22
HUM0019	POS	NAT RES MGRS	1992	UF			H 02N 05E 22
HUM0019	POS	HOLZER-ROBINSON	1991-07-09	UF			H 02N 05E 22
HUM0019	POS	AE	2001-06-30	UM			H 02N 05E 22
HUM0019	POS	MCMILLIAN	1988-08-25	UF			H 02N 05E 22
HUM0019	POS	ROSENBERG	1978-08-25	UU			H 02N 05E 21
HUM0019	POS	AE-OB	2001-08-20	UMUF	Y		H 02N 05E 22
HUM0019	POS	OB	2001-06-25	UU			H 02N 05E 22
HUM0019	POS	HOGERVORST	1988-08-04	UU			H 02N 05E 22
HUM0019	POS	NAT RES MGRS	1992	UF			H 02N 05E 27
HUM0019	POS	NRM-KEOWN	1994-05-16	UM			H 02N 05E 22
HUM0019	POS	NAT RES MGRS	1992	UF			H 02N 05E 27
HUM0019	POS	SRNF	1992-05-12	UMUF	Y	Y	H 02N 05E 22
HUM0019	POS	NAT RES MGRS	1992	UU			H 02N 05E 22
HUM0019	POS	NAT RES MGRS	1992	UF			H 02N 05E 21
HUM0019	POS	OB	2001-07-31	UU			H 02N 05E 22
HUM0019	POS	SRNF	1991-05-06	UM			H 02N 05E 22
HUM0019	POS	MCMILLIAN	1988-08-27	UF			H 02N 05E 22
HUM0019	POS	BLM UKIAH	1978-08-28	UU			H 02N 05E 21
HUM0019	POS	via USFS NRIS - SRNF	2001-06-07	SMAF	Y		H 02N 05E 22
HUM0019	POS	OB	2001-08-14	UU			H 02N 05E 21
HUM0019	POS	NAT RES MGRS	1992	UU			H 02N 05E 22
HUM0019	POS	OB	2001-06-25	UU			H 02N 05E 22
HUM0019	POS	MCMILLIAN	1988-08-22	UF			H 02N 05E 22
HUM0019	POS	NRM-KEOWN	1994-05-24	UM			H 02N 05E 22
HUM0019	POS	MCMILLIAN	1988-08-10	UMUF	Y		H 02N 05E 22
HUM0019	POS	NAT RES MGRS	1992	UF			H 02N 05E 21
HUM0019	POS	MCMILLIAN	1988-09-15	UMUF	Y		H 02N 05E 22
HUM0043	NEG	BRACK	1985-05-16				H 01N 05E 01
HUM0043	POS	TILGHMAN-PATON	1987	UMUF	Y		H 01N 05E 01
HUM0043	POS	SRNF	1984	UM			H 01N 05E 02
HUM0043	POS	via SRNF	1980	AU			H 01N 05E 02
HUM0043	POS	BRACK	1985-05-14	UM			H 01N 05E 01
HUM0043	POS	MCMILLIAN	1988-08-04	UM			H 01N 05E 01
HUM0043	POS	BINDER	1980	UM			H 01N 05E 02
HUM0043	POS	HILL-CORYELL	1976-06-01	UU			H 01N 05E 02
HUM0043	POS	BINDER	1980	UM			H 02N 05E 35
HUM0043	POS	TILGHMAN-PATON	1988	UM			H 01N 05E 01
HUM0043	POS	SRNF	1986-08-05	UM			H 01N 05E 01
HUM0043	POS	SRNF	1988	UM			H 01N 05E 01
HUM0043	POS	via SRNF	1979	AU			H 01N 05E 02
HUM0043	POS	SRNF	1985-05-01	UMUF	Y		H 01N 05E 01
HUM0043	POS	BRACK	1985-05-29	UM	Y		H 01N 05E 01

HUM0043	POS	via SRNF	1980	AU			H 01N 05E 02
HUM0043	POS	BRACK	1985-05-15	UM			H 01N 05E 01
HUM0043	POS	LOVELACE	1995-08-03	UUUU	Y		H 01N 05E 01
HUM0043	POS	SRNF	1990-05-10	UM			H 01N 05E 01
HUM0043	POS	VIA SOLIS	1979	UU			H 01N 05E 02
HUM0043	POS	via SRNF	1980	AU			H 01N 05E 02
HUM0043	POS	SRNF	1990-04-10	UMUF	Y		H 01N 05E 02
HUM0043	POS	via SRNF	1979	AU			H 01N 05E 02
HUM0043	POS	SRNF	1986-08-01	UMUF	Y		H 01N 05E 01
HUM0043	POS	SRNF	1986	UU			H 01N 05E 02
HUM0043	POS	via SRNF	1980	AU			H 01N 05E 02
HUM0047	AC	SRNF	1987-05-01	UMUF	Y	Y	H 01N 05E 10
HUM0047	NEG	PAH-JFW	1999-04-13				H 01N 05E 17
HUM0047	NEG	PAH-KMS	1999-04-04				H 01N 05E 17
HUM0047	NEG	SMURR	1996-06-05				H 01N 05E 17
HUM0047	NEG	SMURR	1997-03-05				H 01N 05E 16
HUM0047	NEG	OB	2001-08-01				H 01N 05E 09
HUM0047	NEG	AE	2004-04-02				H 01N 05E 09
HUM0047	NEG	HERRERA	1999-04-02				H 01N 05E 17
HUM0047	NEG	OB	2002-03-29				H 01N 05E 16
HUM0047	NEG	OB	2001-06-26				H 01N 05E 09
HUM0047	NEG	SMURR	1996-06-06				H 01N 05E 17
HUM0047	NEG	SMURR	1996-04-04				H 01N 05E 17
HUM0047	NEG	GAH-SBT	1999-06-28				H 01N 05E 17
HUM0047	NEG	AE	2003-05-10				H 01N 05E 16
HUM0047	NEG	via GALEA	1994-06-22				H 01N 05E 09
HUM0047	NEG	HERRERA	1999-05-22				H 01N 05E 17
HUM0047	NEG	SMURR	1996-05-09				H 01N 05E 17
HUM0047	NEG	OB	2001-05-22				H 01N 05E 09
HUM0047	NEG	SMURR	1996-03-25				H 01N 05E 17
HUM0047	NEG	LUNDE	1996-06-30				H 01N 05E 17
HUM0047	NEG	SMURR	1996-05-07				H 01N 05E 17
HUM0047	NEG	HERRERA	1999-05-07				H 01N 05E 17
HUM0047	NEG	AE	2002-05-10				H 01N 05E 10
HUM0047	NEG	SMURR	1997-07-06				H 01N 05E 16
HUM0047	NEG	HERRERA	2000-05-15				H 01N 05E 17
HUM0047	NEG	HERRERA-WARD	1999-06-01				H 01N 05E 17
HUM0047	NEG	OB	2001-04-16				H 01N 05E 09
HUM0047	NEG	OB	2001-05-01				H 01N 05E 09
HUM0047	NEG	OB	2002-06-02				H 01N 05E 10
HUM0047	POS	ESCANO	1978-03-29	UU			H 01N 05E 10
HUM0047	POS	AE	2004-03-31	UM			H 01N 05E 09
HUM0047	POS	GOLNICK	1977-09-19	UU			H 01N 05E 10
HUM0047	POS	BRACK	1985-05-13	UM			H 01N 05E 10
HUM0047	POS	SHERER	1977-09-16	UU			H 01N 05E 10
HUM0047	POS	OB	2002-05-09	UU			H 01N 05E 10
HUM0047	POS	BRACK	1985-05-21	UM			H 01N 05E 10
HUM0047	POS	BRACK	1985-06-03	UM			H 01N 05E 10
HUM0047	POS	OB	2001-08-14	UU			H 01N 05E 16
HUM0047	POS	MICHAELIS	2011-06-02	UM			H 01N 05E 10
HUM0047	POS	BRACK	1985-06-04	UM			H 01N 05E 10
HUM0047	POS	AE	2003-05-30	AMAF	Y	N	H 01N 05E 16
HUM0047	POS	AE	2003-05-08	UM			H 01N 05E 16
HUM0047	POS	AE	2004-04-28	AM			H 01N 05E 10
HUM0047	POS	LAHAYE	1984-06-06	UMUF	Y		H 01N 05E 10
HUM0047	POS	AE	2001-08-16	AM			H 01N 05E 16
HUM0047	POS	AE	2004-04-26	UM			H 01N 05E 09
HUM0047	POS	AE	2003-05-29	UMUF	Y		H 01N 05E 16

HUM0047	POS	MCMILLIAN	1988	AMAF	Y		H 01N 05E 10
HUM0047	POS	SRNF	1984-05-01	UMUF	Y		H 01N 05E 15
HUM0047	POS	BRACK	1985-05-22	UM			H 01N 05E 10
HUM0047	POS	SRNF	1986-08-04	UM			H 01N 05E 10
HUM0047	POS	AE	2004-05-24	UM			H 01N 05E 16
HUM0047	POS	ESCANO-KAHL	1978-05-09	UU			H 01N 05E 10
HUM0047	POS	via GALEA	1994-06-21	UF			H 01N 05E 09
HUM0047	POS	BRACK-LESTER	1985-06-26	UMUF	Y		H 01N 05E 10
HUM0047	POS	ESCANO	1978-03-29	AU			H 01N 05E 10
HUM0047	POS	TILGHMAN-PATON	1988	UMUF	Y		H 01N 05E 16
HUM0047	POS	OGON	1988-10-04	UMUF	Y		H 01N 05E 10
HUM0047	POS	HESS	1995-05-16	AM			H 01N 05E 10
HUM0047	POS	SRNF	1987-04-15	UM			H 01N 05E 10
HUM0047	POS	SRNF	1987-07-01				H 01N 05E 10
HUM0048	POS	SRNF	1990-05-25	UM			H 01N 05E 13
HUM0048	POS	ROVELL-BREES	1990-04-24	AM			H 01N 05E 13
HUM0048	POS	SRNF	1990-03-27	UMUF	Y		H 01N 05E 13
HUM0048	POS	SRNF	1990-03-27	UMUF	Y		H 01N 05E 24
HUM0048	POS	ESCANO	1978-03-29	UU			H 01N 05E 24
HUM0048	POS	SRNF	1985-05-22	UMUF	Y		H 01N 05E 24
HUM0048	POS	SRNF	1984	UM			H 01N 05E 24
HUM0048	POS	SRNF	1990-04-24	UM			H 01N 05E 13
HUM0048	POS	BRACK	1985-05-28	UMUF	Y		H 01N 05E 24
HUM0048	POS	BRACK	1986-08-05	UM			H 01N 05E 24
HUM0048	POS	SRNF	1990-05-09	UM			H 01N 05E 13
HUM0048	POS	ESCANO	1978-03-29	UUUU			H 01N 05E 24
HUM0111	AC	TILGHMAN	1987	UMUF	Y	Y	H 01N 05E 14
HUM0111	NEG	SRNF	1992-06-30				H 01N 05E 23
HUM0111	NEG	SRNF	1992-04-21				H 01N 05E 23
HUM0111	NEG	SRNF	1992-08-06				H 01N 05E 23
HUM0111	NEG	SRNF	1990-05-31				H 01N 05E 14
HUM0111	NEG	SRNF	1990-04-24				H 01N 05E 14
HUM0111	NEG	SRNF	1992-07-20				H 01N 05E 23
HUM0111	NEG	SRNF	1992-06-02				H 01N 05E 23
HUM0111	NEG	SRNF	1990-05-24				H 01N 05E 14
HUM0111	POS	BRACK	1985-06-26	UM			H 01N 05E 13
HUM0111	POS	FRANKLIN ET AL.	1985-05-24	UMUF	Y		H 01N 05E 14
HUM0111	POS	BRACK	1985-05-29	UMUF	Y		H 01N 05E 14
HUM0111	POS	SEEGER	2011-08-17	AM			H 01N 05E 13
HUM0111	POS	MCMILLIAN	1988-06-15	UMUF	Y	Y	H 01N 05E 14
HUM0111	POS	SRNF	1992-07-07	UF			H 01N 05E 23
HUM0111	POS	CANTER	2011-05-19	UM			H 01N 05E 13
HUM0111	POS	BRACK	1985-05-28	UMUF	Y		H 01N 05E 14
HUM0111	POS	BRACK	1986-08-05	UM			H 01N 05E 14
HUM0111	POS	BRACK	1986-08-05	UF			H 01N 05E 14
HUM0111	POS	BRACK	1985-06-03	UMUF	Y		H 01N 05E 14
HUM0111	POS	TILGHMAN-PATON	1988	UMUF	Y		H 01N 05E 14
HUM0111	POS	BINDER	1980	UM			H 01N 05E 14
HUM0111	POS	MCMILLIAN	1988-10-04	UMUF	Y	Y	H 01N 05E 14
HUM0111	POS	CAT YOUNG	1989-07-27	UU			H 01N 05E 14
HUM0111	POS	SRNF	1992-08-04	UU			H 01N 05E 14
HUM0125	NEG	OBRIEN	2006-06-30				H 01N 04E 16
HUM0125	NEG	OBRIEN	2006-06-21				H 01N 04E 15
HUM0125	NEG	RAM-RD	2007-04-10				H 01N 04E 16
HUM0125	NEG	RAM	2007-05-23				H 01N 04E 16
HUM0125	NEG	OBRIEN	2006-07-08				H 01N 04E 15
HUM0125	NEG	RAM-RD	2007-05-15				H 01N 04E 15
HUM0125	NEG	OBRIEN	2006-05-25				H 01N 04E 15

HUM0125	NEG	OBRIEN	2006-07-08				H 01N 04E 16
HUM0125	NEG	RAM	2007-05-23				H 01N 04E 15
HUM0125	NEG	OBRIEN-DIAZ	2006-04-28				H 01N 04E 15
HUM0125	NEG	RAM-RD	2007-04-10				H 01N 04E 15
HUM0125	NEG	OBRIEN	2006-06-21				H 01N 04E 16
HUM0125	NEG	RAM-RD	2007-04-04				H 01N 04E 16
HUM0125	NEG	RAM-RD	2007-04-04				H 01N 04E 15
HUM0125	NEG	OBRIEN-DIAZ	2006-04-28				H 01N 04E 16
HUM0125	NEG	OBRIEN	2006-05-25				H 01N 04E 16
HUM0125	POS	HSU via BLM	1995	UMUF	Y		H 01N 04E 21
HUM0125	POS	FRANKLIN	2002-05-14	UF			H 01N 04E 21
HUM0125	POS	OBRIEN	2006-06-30	UM			H 01N 04E 15
HUM0125	POS	MOEN-BLAKESLEY	1989-07-12	UF			H 01N 04E 16
HUM0125	POS	MOEN-BLAKESLEY	1989-07-11	UMUF			H 01N 04E 16
HUM0125	POS	HSU via BLM	1996	UMUF	Y		H 01N 04E 21
HUM0128	NEG	GILLOTT	2000-03-20				H 01N 04E 16
HUM0128	NEG	TREADWAY	2000-04-12				H 01N 04E 21
HUM0128	NEG	GILLOTT	1999-08-04				H 01N 04E 16
HUM0128	NEG	DEYOUNG-GALEA	2001-05-07				H 01N 04E 21
HUM0128	NEG	GILLOTT	1998-05-04				H 01N 04E 21
HUM0128	POS	HSU via BLM	1996	UMUF	Y		H 01N 04E 21
HUM0128	POS	DEYOUNG	2001-05-06	UM			H 01N 04E 21
HUM0128	POS	MOEN	1989-07-24	UMUF			H 01N 04E 21
HUM0128	POS	HSU-FRANKLIN ET AL.	1997	UMUF	Y	N	H 01N 04E 16
HUM0128	POS	GILLOTT	2000-04-11	UM			H 01N 04E 21
HUM0128	POS	FRANKLIN	1989-06-26	UF			H 01N 04E 21
HUM0128	POS	GILLOTT	1999-06-24	UF			H 01N 04E 21
HUM0128	POS	GILLOTT	1997-05-28	UMUM			H 01N 04E 21
HUM0128	POS	SCALVINI	2001-06-05	UMUF	Y		H 01N 04E 21
HUM0128	POS	GILLOTT	1998-06-11	UM	Y		H 01N 04E 16
HUM0128	POS	GILLOTT	1999-06-24	UF			H 01N 04E 16
HUM0128	POS	BLM	1992	UMUF	Y		H 01N 04E 16
HUM0128	POS	GILLOTT	1998-06-11	UF	Y		H 01N 04E 16
HUM0128	POS	BLM ARCATA	1993-07-13	UMUF	Y		H 01N 04E 16
HUM0128	POS	via BLM	1978-08-13	UU			H 01N 04E 22
HUM0128	POS	LAHAYE	1984-06-07	UM			H 01N 04E 21
HUM0128	POS	HSU via BLM	1995	UMUF	Y		H 01N 04E 21
HUM0152	AC	MCMILLIAN	1988	UMUF	Y	Y	H 01N 05E 10
HUM0152	POS	BRACK-LESTER	1985-06-26	UM			H 01N 05E 11
HUM0152	POS	TILGHMAN-PATON	1988	UMUF	Y		H 01N 05E 11
HUM0152	POS	BINDER	1980	UM			H 01N 05E 15
HUM0152	POS	TILGHMAN-PATON	1987-05-13	UMUF	Y		H 01N 05E 10
HUM0152	POS	BRACK	1985-07-17	UM			H 01N 05E 11
HUM0155	AC	TILGHMAN-PATON	1988	UMUF	Y	Y	H 01N 05E 05
HUM0155	NEG	OB	2001-08-14				H 01N 05E 04
HUM0155	NEG	OB	2002-06-02				H 01N 05E 04
HUM0155	NEG	AE	2005-03-25				H 01N 05E 04
HUM0155	NEG	AE	2004-05-24				H 01N 05E 04
HUM0155	NEG	PAGLIUGH	2002-06-25				H 01N 05E 05
HUM0155	NEG	OB	2002-04-08				H 01N 05E 09
HUM0155	NEG	OB	2001-05-01				H 01N 05E 04
HUM0155	NEG	AE	2005-04-06				H 01N 05E 04
HUM0155	NEG	AE	2003-06-16				H 01N 05E 04
HUM0155	NEG	AE	2005-03-09				H 01N 05E 04
HUM0155	NEG	AE	2003-05-12				H 01N 05E 03
HUM0155	NEG	OB	2001-04-16				H 01N 05E 04
HUM0155	NEG	PAGLIUGH	2002-07-05				H 01N 05E 05
HUM0155	NEG	AE	2004-04-26				H 01N 05E 04

HUM0155	NEG	SWP-DJM	2002-07-13				H 01N 05E 05
HUM0155	NEG	OB	2001-05-21				H 01N 05E 04
HUM0155	NEG	AE	2003-05-29				H 01N 05E 04
HUM0155	NEG	AE	2004-03-31				H 01N 05E 04
HUM0155	NEG	OB	2001-06-25				H 01N 05E 04
HUM0155	NEG	OB	2001-07-31				H 01N 05E 04
HUM0155	NEG	OB	2002-05-09				H 01N 05E 04
HUM0155	POS	AE	2003-05-09	UU			H 01N 05E 03
HUM0155	POS	OGON	1988-10-04	UMUF	Y		H 01N 05E 05
HUM0155	POS	OB	2002-03-29	UUUU			H 01N 05E 09
HUM0155	POS	MCMILLIAN	1988	UMUF	Y		H 01N 05E 05
HUM0174	AC	BRESSLER-MICHAELIS	2011-06-11	AMAF	Y		H 01N 05E 27
HUM0174	NEG	SRNF	1992-06-30				H 01N 05E 27
HUM0174	NEG	THP	1991				H 01N 05E 27
HUM0174	NEG	THP	1989			Y	H 01N 05E 27
HUM0174	NEG	SRNF	1992-04-21				H 01N 05E 27
HUM0174	NEG	SRNF	1992-08-05				H 01N 05E 27
HUM0174	NEG	SRNF	1992-07-09				H 01N 05E 27
HUM0174	POS	MCMILLIAN	1987-07-11	UM			H 01N 05E 27
HUM0174	POS	MCMILLIAN	1987-10-06	UF			H 01N 05E 27
HUM0174	POS	SRNF	1992-06-02	UM			H 01N 05E 27
HUM0174	POS	BRESSLER-MICHAELIS	2011-06-02	UF			H 01N 05E 27
HUM0174	POS	CANTER	2011-05-19	AU			H 01N 05E 27
HUM0174	POS	MCMILLIAN	1988-09-20	UMUF	Y		H 01N 05E 27
HUM0174	POS	SRNF	1992-06-03	UMUF	Y		H 01N 05E 27
HUM0174	POS	MCMILLIAN	1988-08-11	UM			H 01N 05E 27
HUM0174	POS	MCMILLIAN	1988-08-03	UMUF	Y		H 01N 05E 27
HUM0174	POS	ROBINSON-GOLDEN	1994-06-22	UM	Y		H 01N 05E 22
HUM0174	POS	SRNF	1988	UMUF	Y		H 01N 05E 22
HUM0174	POS	SRNF	1992-06-02	UF			H 01N 05E 27
HUM0339	AC	HUNT von ARB	2005-04-18	AMAF	Y	Y	H 01N 05E 19
HUM0339	NEG	ROBINSON	2000-07-18				H 01N 05E 19
HUM0339	NEG	DUDLEY	2004-04-16				H 01N 05E 19
HUM0339	NEG	DUDLEY	2001-05-18				H 01N 05E 29
HUM0339	NEG	HUNT von ARB	2005-04-26				H 01N 05E 29
HUM0339	NEG	THP	1992-05-20				H 01N 05E 29
HUM0339	NEG	ROBINSON	2000-07-25				H 01N 05E 19
HUM0339	NEG	DUDLEY	2001-03-18				H 01N 05E 29
HUM0339	NEG	DUDLEY	2003-04-07				H 01N 05E 29
HUM0339	NEG	DUDLEY	2003-04-25				H 01N 05E 29
HUM0339	NEG	DUDLEY	2003-05-24				H 01N 05E 29
HUM0339	NEG	DUDLEY	2003-04-25				H 01N 05E 29
HUM0339	NEG	DUDLEY	2002-03-28				H 01N 05E 29
HUM0339	NEG	DUDLEY	2003-04-26				H 01N 05E 19
HUM0339	NEG	DUDLEY	2001-04-13				H 01N 05E 29
HUM0339	NEG	HERRERA	2000-05-10				H 01N 05E 19
HUM0339	NEG	HERRERA	2000-04-11				H 01N 05E 19
HUM0339	NEG	DUDLEY	2002-05-18				H 01N 05E 29
HUM0339	NEG	HERRERA	2000-05-15				H 01N 05E 20
HUM0339	NEG	DUDLEY	2002-04-12				H 01N 05E 29
HUM0339	NEG	ROBINSON	2000-06-26				H 01N 05E 19
HUM0339	NEG	HUNT von ARB-HUNT	2005-03-12				H 01N 05E 19
HUM0339	NEG	HERRERA	2000-05-25				H 01N 05E 18
HUM0339	NEG	DUDLEY	2004-05-14				H 01N 05E 29
HUM0339	NEG	DUDLEY	2004-03-21				H 01N 05E 19
HUM0339	NEG	SMURR	1996-03-28				H 01N 05E 19
HUM0339	NEG	ROBINSON	2000-05-21				H 01N 05E 19
HUM0339	NEG	ROBINSON	2000-06-16				H 01N 05E 19

HUM0339	NEG	ROBINSON-PIEPER	2000-08-01				H 01N 05E 19
HUM0339	NEG	HUNT	2005-04-02				H 01N 05E 19
HUM0339	NEG	DUDLEY	2003-04-11				H 01N 05E 19
HUM0339	NEG	GAH-SBT	1999-06-28				H 01N 05E 20
HUM0339	POS	via THP	2012-07-30	UM			H 01N 05E 30
HUM0339	POS	HUNT	2005-04-01	UM			H 01N 05E 19
HUM0339	POS	HERRERA	1999-07-28	UU			H 01N 05E 19
HUM0339	POS	THP	1991-08-28	UU			H 01N 05E 19
HUM0339	POS	via THP	2012-05-23	UM			H 01N 05E 30
HUM0339	POS	HOWARD	1991-07-20	UU			H 01N 05E 19
HUM0339	POS	HERRERA	2000-04-25	UM			H 01N 05E 19
HUM0339	POS	via THP	2012-07-02	UM			H 01N 05E 32
HUM0339	POS	O'BRIEN	2010-07-08	UU			H 01N 05E 29
HUM0339	POS	via THP	2012-07-02	UM			H 01N 05E 19
HUM0339	POS	via THP	2012-07-31	UMUF	Y		H 01N 05E 30
HUM0339	POS	via THP	2012-06-06	UM			H 01N 05E 32
HUM0339	POS	HUNT von ARB	2005-03-11	UM			H 01N 05E 19
HUM0339	POS	HOWARD	1991-07-22	UU			H 01N 05E 19
HUM0339	POS	THP	1992-05-11	UMUF	Y		H 01N 05E 29
HUM0339	POS	via THP	2012-05-23	UU			H 01N 05E 30
HUM0339	POS	THP	1991-08-20	UU			H 01N 05E 19
HUM0339	POS		1991-07-22	UU			H 01N 05E 19
HUM0339	POS	via THP	2012-06-07	UM			H 01N 05E 30
HUM0339	POS	THP	1992-06-09	UU			H 01N 05E 29
HUM0339	POS	THP	1992-07-08	UMUF	Y		H 01N 05E 29
HUM0368	AC	ROBINSON-PRESCHER	1991-07-02	UMUF	Y		H 02N 05E 23
HUM0368	POS	MCMILLIAN	1988-08-27	UMUF	Y		H 02N 05E 23
HUM0368	POS	VIA THP BY NRM	1993	UU			H 02N 05E 26
HUM0368	POS	SRNF	1991-07-09	UMUF	Y		H 02N 05E 23
HUM0368	POS	VIA THP BY NRM	1993	UF			H 02N 05E 23
HUM0368	POS	SRNF	1991-05-14	UM			H 02N 05E 23
HUM0368	POS	NAT RES MGRS	1992	UU			H 02N 05E 23
HUM0532	AC	THP	1991	UMUF	Y	Y	H 01N 05E 33
HUM0532	NEG	DUDLEY	2002-05-18				H 01N 05E 33
HUM0532	NEG	DUDLEY	2002-03-28				H 01N 05E 33
HUM0532	NEG	DUDLEY	2003-04-07				H 01N 05E 33
HUM0532	NEG	HUNT	2005-04-22				H 01N 05E 33
HUM0532	NEG	DUDLEY	2002-04-12				H 01N 05E 33
HUM0532	NEG	DUDLEY	2004-04-16				H 01N 05E 33
HUM0532	NEG	DUDLEY	2004-05-14				H 01N 05E 33
HUM0532	NEG	HUNT von ARB	2005-03-11				H 01N 05E 33
HUM0532	NEG	HUNT	2005-04-01				H 01N 05E 33
HUM0532	NEG	DUDLEY	2004-03-21				H 01N 05E 33
HUM0532	NEG	DUDLEY	2003-04-25				H 01N 05E 33
HUM0532	NEG	DUDLEY	2003-05-25				H 01N 05E 33
HUM0532	POS	via THP	2012-07-16	UM			H 01N 05E 33
HUM0532	POS	ALUZAS-COLLINS	1991	UMUF	Y		H 01N 05E 33
HUM0532	POS	MARTIN-CFA	1992	UMUF	Y		H 01N 05E 33
HUM0532	POS	MARTIN-CFA	1991-07-08	UMUF	Y		H 01N 05E 33
HUM0704	AC	CARROLL	1994-08-15	UMUF	Y		H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2014				H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2014				H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2014-06-24				H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2013-06-14				H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2015				H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2013-06-25				H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2014-05-28				H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2015				H 01N 04E 04

HUM0704	NEG	ABLE FORESTRY VIA THP	2013-08-12					H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2013					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2015-05-20					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2015-04-29					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2014-07-15					H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2014-05-21					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2013-06-26					H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2013-06-04					H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2014-06-24					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2013					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2014-08-11					H 02N 04E 33
HUM0704	NEG	ABLE FORESTRY VIA THP	2013-08-01					H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2013-07-24					H 01N 04E 04
HUM0704	NEG	ABLE FORESTRY VIA THP	2015-05-20					H 01N 04E 04
HUM0704	POS	ABLE FORESTRY VIA THP	2014-07-24	UM				H 01N 04E 04
HUM0704	POS	ABLE FORESTRY VIA THP	2014-07-23	UM				H 02N 04E 33
HUM0704	POS	ABLE FORESTRY VIA THP	2013-06-13	UM				H 01N 04E 04
HUM0704	POS	ABLE FORESTRY VIA THP	2014-07-15	UM				H 02N 04E 33
HUM0704	POS	ABLE FORESTRY VIA THP	2015-04-14	UU				H 02N 04E 33
HUM0704	POS	ABLE FORESTRY VIA THP	2014-06-25	UM				H 01N 04E 04
HUM0742	AC	FRANKLIN ET AL.	2001-07-19	AMAF	Y	N		H 02N 05E 17
HUM0742	NEG	HEWITT	2011-05-22					H 02N 05E 17
HUM0742	NEG	HEWITT	2011-05-22					H 02N 05E 17
HUM0742	NEG	HEWITT	2011-05-22					H 02N 05E 17
HUM0742	POS	HEWITT	2011-07-28	UM				H 02N 05E 17
HUM0742	POS	HEWITT	2011-07-28	UM				H 02N 05E 17
HUM0755	NEG	OBRIEN	2006-06-21					H 01N 04E 15
HUM0755	NEG	TLB	1999-03-29					H 01N 04E 15
HUM0755	NEG	HERRERA-MELODY	1999-06-02					H 01N 04E 15
HUM0755	NEG	KMS	1999-04-26					H 01N 04E 15
HUM0755	NEG	TLB	1999-05-26					H 01N 04E 15
HUM0755	NEG	OBRIEN	2006-06-30					H 01N 04E 15
HUM0755	NEG	GALEA	2001-04-13					H 01N 04E 15
HUM0755	NEG	OBRIEN	2006-07-08					H 01N 04E 15
HUM0755	NEG	KMS	1999-04-14					H 01N 04E 15
HUM0755	NEG	RAM-RD	2007-04-04					H 01N 04E 15
HUM0755	NEG	OBRIEN	2006-05-29					H 01N 04E 15
HUM0755	NEG	RAM-RD	2007-04-10					H 01N 04E 15
HUM0755	NEG	OBRIEN-DIAZ	2006-04-28					H 01N 04E 15
HUM0755	POS	OBRIEN	2006-05-25	UM	Y			H 01N 04E 15
HUM0755	POS	DEYOUNG	2001-05-06	UM				H 01N 04E 15
HUM0755	POS	GILLOT	1997-05-27	UMUF	Y			H 01N 04E 16
HUM0755	POS	OBRIEN	2006-04-19	UM				H 01N 04E 15
HUM0755	POS	RAM	2007-05-17	UMUF	Y			H 01N 04E 15
HUM0755	POS	RAM	2007-05-17	UMUF	Y			H 01N 04E 15
HUM0755	POS	RAM-RD	2007-05-15	UMUF	Y			H 01N 04E 15
HUM0755	POS		1994-06-20	UMUF	Y	Y		H 01N 04E 16
HUM0755	POS	OBRIEN	2006-05-25	UF	Y			H 01N 04E 15
HUM0925	AC	HERRERA	1999-04-02	UMUF	Y			H 01N 04E 11
HUM0925	NEG	OBRIEN	2006-06-21					H 01N 04E 10
HUM0925	NEG	OBRIEN	2006-06-30					H 01N 04E 10
HUM0925	NEG	KMS	1999-04-14					H 01N 04E 10
HUM0925	NEG	OBRIEN-DIAZ	2006-04-28					H 01N 04E 10
HUM0925	NEG	KMS	1999-04-29					H 01N 04E 10
HUM0925	NEG	HERRERA-MELODY	1999-06-02					H 01N 04E 10
HUM0925	NEG	OBRIEN	2006-05-25					H 01N 04E 10
HUM0925	NEG	TLB	1999-05-26					H 01N 04E 10
HUM0925	NEG	SLAUSON	1999-03-18					H 01N 04E 11

HUM0925	POS	BARTLETT	1999-05-26	UMUF	Y	H 01N 04E 11
HUM0925	POS	HERRERA	1999-04-02	UMUF	Y	H 01N 04E 11
HUM0925	POS	OBRIEN	2006-07-08	UM	Y	H 01N 04E 10
HUM0925	POS	OBRIEN	2006-07-08	UF	Y	H 01N 04E 10
HUM0925	POS	TLB	1999-03-29	UU		H 01N 04E 11
HUM0926	AC	HERRERA-HEWITT	1999-03-16	UMUF	Y	H 02N 04E 23
HUM0926	NEG	HUNT-STOLFUS	2003-05-01			H 02N 04E 23
HUM0926	NEG	HEWITT	2011-07-28			H 02N 04E 24
HUM0926	NEG	HUNT	2005-05-17			H 02N 04E 23
HUM0926	NEG	HUNT	2004-05-24			H 02N 04E 23
HUM0926	NEG	LBJ-RWH	1999-06-12			H 02N 04E 26
HUM0926	NEG	HUNT	2005-05-25			H 02N 04E 23
HUM0926	NEG	LBJ-HERRERA	2000-06-01			H 02N 04E 26
HUM0926	NEG	HEWITT	2011-05-24			H 02N 04E 24
HUM0926	NEG	HUNT	2004-03-15			H 02N 04E 23
HUM0926	NEG	HEWITT	2011-05-24			H 02N 04E 24
HUM0926	NEG	HUNT	2003-06-02			H 02N 04E 23
HUM0926	NEG	HEWITT	2011-07-28			H 02N 04E 24
HUM0926	NEG	HEWITT	2011-06-11			H 02N 04E 24
HUM0926	NEG	HUNT-STOLFUS	2003-04-17			H 02N 04E 23
HUM0926	NEG	HEWITT	2011-06-11			H 02N 04E 24
HUM0926	NEG	HEWITT	2011-06-11			H 02N 04E 24
HUM0926	NEG	HEWITT	2011-07-28			H 02N 04E 24
HUM0926	NEG	HUNT	2003-06-09			H 02N 04E 23
HUM0926	NEG	LBJ-PAH-KMS	1999-04-04			H 02N 04E 23
HUM0926	NEG	HUNT	2004-05-07			H 02N 04E 23
HUM0926	NEG	LBJ-PAH	1999-05-03			H 02N 04E 26
HUM0926	NEG	HEWITT	2011-06-11			H 02N 04E 24
HUM0926	NEG	HEWITT	2011-05-24			H 02N 04E 24
HUM0926	NEG	HEWITT	2011-05-24			H 02N 04E 24
HUM0926	NEG	HUNT	2003-05-25			H 02N 04E 23
HUM0926	NEG	HUNT	2003-05-19			H 02N 04E 23
HUM0926	NEG	HEWITT	2011-05-24			H 02N 04E 24
HUM0926	NEG	HEWITT	2011-07-28			H 02N 04E 24
HUM0926	NEG	HUNT	2005-05-08			H 02N 04E 23
HUM0926	POS	LBJ-HERRERA-WARD	1999-03-23	AMAF	Y	H 02N 04E 23
HUM0926	POS	HERRERA	2000-05-05	AF	Y	H 02N 04E 23
HUM0926	POS	HERRERA	2000-04-25	UMAF	Y	H 02N 04E 23
HUM0926	POS	LBJ-HERRERA	1999-05-22	UF		H 02N 04E 26
HUM0926	POS	LBJ-HERRERA	1999-03-18	UMUF	Y	H 02N 04E 23
HUM0926	POS	LBJ-HEWITT	1999-05-24	AMAF		H 02N 04E 23
HUM0926	POS	LBJ-JFW	1999-04-13	UU		H 02N 04E 26
HUM0947	AC	HERRERA	2000-05-05	UM		H 02N 04E 35
HUM0947	NEG	LBJ-RWH	1999-06-12			H 02N 04E 35
HUM0947	NEG	LBJ-HERRERA	1999-05-22			H 02N 04E 35
HUM0947	NEG	LBJ-HERRERA-RPW	1999-06-01			H 02N 04E 35
HUM0947	NEG	LBJ-HERRERA	2000-06-01			H 02N 04E 35
HUM0947	NEG	LBJ-PAH	1999-05-03			H 02N 04E 35
HUM0947	NEG	LBJ-PAH-KMS	1999-04-04			H 02N 04E 35
HUM0947	NEG	LBJ-HERRERA-HOINESS	2000-04-25			H 02N 04E 35
HUM0947	NEG	LBJ-PAH-JFW	1999-04-13			H 02N 04E 35
HUM0951	NEG	GWR	2002-03-19			H 01N 04E 27
HUM0951	NEG	GWR	2002-04-02			H 01N 04E 27
HUM0951	NEG	GWR	2002-03-08			H 01N 04E 27
HUM0983	AC	SPI	1998-04-29	UM		H 01N 05E 18
HUM0983	NEG	RWH	2002-07-17			H 01N 05E 18
HUM0983	NEG	TALLMAN	2004-05-17			H 01N 04E 14
HUM0983	NEG	SWP	1998-06-13			H 01N 05E 18

HUM0983	NEG	DUDLEY	1997-04-29	H 01N 05E 18
HUM0983	NEG	HERRERA	1999-06-01	H 01N 05E 18
HUM0983	NEG	PAH-JFW	1999-04-13	H 01N 05E 18
HUM0983	NEG	RWH-PAH	2001-04-22	H 01N 05E 18
HUM0983	NEG	SMURR	1996-06-05	H 01N 05E 18
HUM0983	NEG	HERRERA	2000-04-28	H 01N 04E 13
HUM0983	NEG	LUNDE	1996-06-30	H 01N 05E 18
HUM0983	NEG	HERRERA-HOINESS	2000-04-19	H 01N 05E 19
HUM0983	NEG	HERRERA-MELODY	1999-06-02	H 01N 04E 14
HUM0983	NEG	HERRERA-HOINESS	2000-04-19	H 01N 04E 13
HUM0983	NEG	DUDLEY	1997-04-22	H 01N 05E 18
HUM0983	NEG	HERRERA	2000-05-15	H 01N 05E 18
HUM0983	NEG	HERRERA-HOINESS	2000-04-19	H 01N 05E 18
HUM0983	NEG	PAH-RWH	2001-04-13	H 01N 05E 18
HUM0983	NEG	SMURR	1996-03-25	H 01N 05E 18
HUM0983	NEG	PAGLIUGH	2002-06-25	H 01N 05E 18
HUM0983	NEG	ROBINSON	2000-07-25	H 01N 04E 13
HUM0983	NEG	PAGLIUGH	2002-07-05	H 01N 05E 18
HUM0983	NEG	ROBINSON-PIEPER	2000-08-01	H 01N 04E 13
HUM0983	NEG	DUDLEY	1997-05-13	H 01N 05E 18
HUM0983	NEG	DUDLEY	1997-05-05	H 01N 05E 18
HUM0983	NEG	RWH	2002-06-27	H 01N 05E 18
HUM0983	NEG	HERRERA	2000-04-28	H 01N 05E 19
HUM0983	NEG	TALLMAN	2004-05-04	H 01N 04E 14
HUM0983	NEG	DUDLEY	1997-05-21	H 01N 05E 18
HUM0983	NEG	HERRERA	1999-05-22	H 01N 05E 18
HUM0983	NEG	HERRERA	2000-05-04	H 01N 04E 13
HUM0983	NEG	TALLMAN	2004-04-07	H 01N 04E 14
HUM0983	NEG	SMURR	1996-06-06	H 01N 05E 18
HUM0983	NEG	TLB	1999-05-26	H 01N 04E 14
HUM0983	NEG	HERRERA	1999-04-02	H 01N 05E 18
HUM0983	NEG	HERRERA	2001-03-15	H 01N 05E 18
HUM0983	NEG	SWP-DJM	2002-07-13	H 01N 05E 18
HUM0983	NEG	SMURR	1996-05-07	H 01N 05E 18
HUM0983	NEG	KMS	1999-04-26	H 01N 04E 14
HUM0983	NEG	HERRERA	1999-05-07	H 01N 05E 18
HUM0983	NEG	ROBINSON	2000-06-16	H 01N 04E 13
HUM0983	NEG	TALLMAN	2004-05-25	H 01N 04E 14
HUM0983	NEG	PAH-RWH	2001-04-13	H 01N 04E 13
HUM0983	NEG	SMURR	1997-03-05	H 01N 05E 18
HUM0983	NEG	ROBINSON	2000-07-18	H 01N 04E 13
HUM0983	NEG	HERRERA-HOINESS	2000-04-19	H 01N 04E 13
HUM0983	NEG	ROBINSON	2000-06-26	H 01N 04E 13
HUM0983	NEG	SMURR	1996-04-04	H 01N 05E 18
HUM0983	NEG	HERRERA	2000-04-13	H 01N 05E 18
HUM0983	NEG	SWP	1998-06-07	H 01N 05E 18
HUM0983	NEG	RWH	2002-04-22	H 01N 05E 18
HUM0983	NEG	HERRERA	2001-03-15	H 01N 04E 13
HUM0983	NEG	HERRERA	2000-04-28	H 01N 05E 18
HUM0983	NEG	DUDLEY	1997-06-03	H 01N 05E 18
HUM0983	NEG	TLB	1999-03-29	H 01N 04E 12
HUM0983	NEG	HERRERA-HOINESS	2000-04-19	H 01N 05E 18
HUM0983	NEG	SMURR	1997-07-06	H 01N 05E 18
HUM0983	NEG	HERRERA	2000-05-25	H 01N 04E 13
HUM0983	NEG	HERRERA	1999-05-07	H 01N 05E 18
HUM0983	NEG	HERRERA	1999-05-22	H 01N 05E 18
HUM0983	NEG	TALLMAN	2004-04-22	H 01N 04E 14
HUM0983	NEG	TALLMAN	2004-04-13	H 01N 04E 14

HUM0983	NEG	RWH-PAH	2001-04-22			H 01N 04E 12
HUM0983	NEG	HERRERA	2000-04-13			H 01N 05E 18
HUM0983	NEG	HERRERA	2000-05-04			H 01N 05E 18
HUM0983	NEG	HERRERA-HOINESS	2000-04-19			H 01N 05E 19
HUM0983	NEG	HERRERA	2000-04-13			H 01N 05E 19
HUM0983	NEG	SMURR	1996-05-09			H 01N 05E 18
HUM0983	NEG	PAH-JFW	1999-04-13			H 01N 05E 18
HUM0983	NEG	HERRERA-WARD	1999-06-01			H 01N 05E 18
HUM0983	NEG	ROBINSON	2000-05-21			H 01N 04E 13
HUM0983	NEG	HERRERA	1999-04-02			H 01N 05E 18
HUM0983	POS	KMS	1999-04-29	UM		H 01N 04E 13
HUM0983	POS	KMS	1999-04-29	UM		H 01N 05E 18
HUM0983	POS	HERRERA	2000-04-11	UM		H 01N 05E 18
HUM0983	POS	HERRERA	2000-05-10	UM		H 01N 05E 19
HUM0983	POS	GALEA ET AL.	1991-07-17	AM		H 01N 05E 18
HUM0983	POS	SPI	1998-05-03	UM		H 01N 05E 18
HUM0983	POS	HERRERA-HONESS	2000-04-25	UM		H 01N 05E 18
HUM0983	POS	HERRERA	2000-11-04	UM		H 01N 05E 19
HUM0983	POS	PAH	2000-04-11	UM		H 01N 05E 18
HUM0983	POS	GALEA ET AL.	1991-06-26	AM		H 01N 05E 18
HUM0983	POS	HERRERA	1999-03-29	UM		H 01N 05E 18
HUM0983	POS	PAH-GAH	2000-04-25	UM		H 01N 05E 18
HUM0983	POS	Cruisers	1998-07-28	UM		H 01N 05E 19
HUM0983	POS	MARTIN-CFA	1991-07-17	UM		H 01N 05E 18
HUM0983	POS	TLB-KMS	1999-03-16	UM		H 01N 04E 14
HUM0983	POS	HERRERA	2000-04-11	UM		H 01N 05E 19
HUM0983	POS	HERRERA	1999-05-04	AM		H 01N 05E 18
HUM0983	POS	PAH	2000-05-10	UM		H 01N 05E 17
HUM0983	POS	HERRERA	2000-04-11	UM		H 01N 05E 19
HUM0983	POS	HERRERA	1999-05-03	UM		H 01N 05E 18
HUM1021	AC	HEWITT	2011-06-11	UMUF	Y	H 02N 05E 18
HUM1021	NEG	HEWITT	2011-06-11			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-06-11			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-08-30			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-07-28			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-07-28			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-07-28			H 02N 05E 20
HUM1021	NEG	HEWITT	2011-05-24			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-06-09			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-08-30			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-08-30			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-08-30			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 17
HUM1021	NEG	HEWITT	2011-06-09			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-06-11			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-07-28			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-06-11			H 02N 04E 24
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-05-24			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-07-28			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 19
HUM1021	NEG	HEWITT	2011-05-22			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-08-30			H 02N 05E 18
HUM1021	NEG	HEWITT	2011-06-09			H 02N 05E 18

HUM1021	NEG	HEWITT	2011-05-24				H 02N 05E 19
HUM1021	NEG	HEWITT	2011-07-28				H 02N 04E 24
HUM1021	NEG	HEWITT	2011-05-22				H 02N 05E 20
HUM1021	NEG	HEWITT	2011-07-28				H 02N 05E 20
HUM1021	NEG	HEWITT	2011-05-24				H 02N 05E 19
HUM1021	NEG	HEWITT	2011-05-24				H 02N 04E 24
HUM1021	NEG	HEWITT	2011-07-28				H 02N 05E 19
HUM1021	POS	HEWITT	2011-05-22	UM			H 02N 05E 20
HUM1021	POS	HEWITT	2011-06-09	UM			H 02N 05E 18
HUM1021	POS	HEWITT	2011-05-22	UM			H 02N 05E 19
HUM1021	POS	HEWITT	2011-06-09	UM			H 02N 05E 18
HUM1021	POS	HEWITT	2011-06-28	UMUF	Y		H 02N 05E 18
HUM1021	POS	HEWITT	2011-05-22	UM			H 02N 05E 18
NEG	NEG	OBRIEN	2006-06-30				H 01N 04E 15
NEG	NEG	HEWITT	2011-05-24				H 02N 05E 30
NEG	NEG	ABLE FORESTRY VIA THP	2014				H 02N 04E 33
NEG	NEG	OBRIEN-DIAZ	2006-04-28				H 01N 04E 15
NEG	NEG	OBRIEN	2006-07-08				H 01N 04E 15
NEG	NEG	ABLE FORESTRY VIA THP	2015				H 02N 04E 33
NEG	NEG	HEWITT	2011-05-24				H 02N 05E 30
NEG	NEG	ABLE FORESTRY VIA THP	2013				H 02N 04E 33
NEG	NEG	HEWITT	2011-08-30				H 02N 05E 30
NEG	NEG	HEWITT	2011-08-30				H 02N 05E 30
NEG	NEG	HEWITT	2011-06-09				H 02N 05E 30
NEG	NEG	OBRIEN	2006-06-21				H 01N 04E 15
TRI0045	AC	BRACK	1985-06-27	UMUF	Y	Y	H 01N 06E 06