Biological Assessment Report

Assessor's Parcel Numbers (APNs):
104-291-005 & 104-321-001

Prepared by:

Naiad
Biological
Consulting

Mason London MSc, Owner/Biologist

X _____

Prepared for:

Empress Farms, LLC
37593 Mattole Rd.
Petrolia CA,
95558

Date Prepared:
August 11, 2019

Table of Contents

Section I Summary of Findings and Conclusions

The project applicant seeks a Zoning Clearance Certificate (ZCC) under Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO) for two Retirement, Remediation, and Relocation (RRR) receiving sites (Application #: 12697 & 12698) and one new cultivation permit to cultivate a total of 120,728 ft^2 of cannabis in the place of an existing agricultural field and an open pasture with historic disturbance. The project site is located approximately 5.20 air miles southeast of Petrolia CA, and approximately 0.25 air miles north of Mattole Road. This project occurs entirely within the boundaries of the preexisting field and no vegetation, including trees, will be removed within the project site or in the adjacent area for this project. The ecological habitat and preexisting use of the site makes it unlikely that special status plant and animal species are present within the proposed site location, and/or would be negatively impacted by the project.

Section II Introduction, Background, and Project Understanding

A. Purpose and Need

This Biological Assessment Report has been prepared for Empress Farms, LLC in order to assess the site's existing habitats, determine the potential for presence of special status plant and animal species and determine the biological suitability as a RRR receiving site.

B. Biologist's Qualifications

The biological assessment for this report was conducted by Mason London. Mason holds a Master's of Science degree in Biology with a concentration in aquatic ecology from Humboldt State University. Mason also has 9 collective years of experience working professionally as a botanist, wildlife biologist, and aquatic ecological research scientist.

C. Parcel and Project Site Description

This Biological Assessment Report considers the potentially occurring species and communities that could be affected by the project based on available spatial data, habitat requirements, and observations made during a site visit. The project site was evaluated for potential habitat value to protect endangered, threatened, rare, and sensitive species by walking around the project

area to observe species, habitat types and quality (see Biological Survey Path in Appendix B: Map 1). Other project related aspects, such as water storage, site location and cultivation methods were assessed in terms of ecological and biological impact.

On July 28th, 2019 a biological resource and habitat survey, with regards to special status species, was conducted for the area of potential effects for the cultivation of cannabis within the established project site locations. The acreage of both parcels equate to 42.01 acres (17.85 acres for APN: 104-321-001 and 24.16 acres for APN: 104-291-005). The center location of these parcels is located approximately 5.20 air miles southeast of Petrolia CA, within the Buckeye Mtn. 7.5 minute quadrangle (Quad code: 4012432) in the Mattole River Watershed (CDFW Region: 1). The project site is located approximately 0.25 air miles north of Mattole Road. The center location of these parcels is 40° 16' 23.44"N, 124° 13' 02.97"W. The elevation of the center of the proposed project site is approximately 360 ft (~110 m) above sea level (Google Earth Pro, 2019). These parcels are zoned as Unclassified (U) with a Current General Plan of Residential Agriculture (RA) with a specific designation of RA20 which "... are rural residential designations for lands with slopes generally less than 30% and served by individual water and wastewater systems and good road access" and have allowable use types that include both "general agriculture" and "intensive agriculture" (2017 Humboldt County General Plan, 2017).

The project occurs entirely within open fields, which historically have been utilized for grazing livestock and other agricultural activities such as non-cannabis crop cultivation for over the past century. There are no trees located within the project site. Douglas firs (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus*) surrounds the perimeter of the field which will not be removed for the project.

D. Cultivation

The 120,728 ft^2 (43,560 ft^2 of mixed-light and 77,168 ft^2 outdoor full-sun) of cannabis will be cultivated within greenhouses and out of doors. The mixed-light cannabis within the greenhouses, which will have seasonal supplemental light, will be fully covered at night when they are artificially lit, eliminating any potential for light pollution. Grid power will be used to

run the lights and fans used for the cultivation within the greenhouses. The applicant currently has grid power but is waiting for an upgrade from PG&E. Even though no generators will be used for the cultivation process, the applicant has a 20 kw MultiQuip generator, which will only be used as a backup source of power. The MultiQuip website describes the sound level of this generator and explains how "...the unit features an e-coat and powder-coat, weatherproof steel housing that allows a substantially low operating noise level of 65 db (A0)" (www.multiquip.com, 2019). The sound level will be below 60 db at the nearest tree line, which is approximately 100 ft away from where the generator is housed.

For full-sun outdoor plants, no artificial light and/or generators will be used for cultivation, which means that no noise or light pollution will impact the surrounding area.

E. Water Collection and Storage

There is a well on the southern parcel and a 1,097,350 gallon rainwater catch/storage pond on the northern parcel (Appendix B: Map 2; Figure 1). According to the National Weather Service, the annual average precipitation (averaged between 1961 and 1990), shows this region receiving, on average, between 75 and 100 inches of rain per year. This pond was calculated to be filled when 84 inches is received, which is the lower end of the average for a typical water year. The well will be utilized to fill the pond if less than 84 inches of rainfall is received, or if significant amount of water is lost due to evaporation.

Section III Methods

A. Pre-Site Visit Data Compilation and Preparation

A list of special-status plant and animal species to consider to be potentially present within the parcel was downloaded from the California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB, CDFW, 2019) BIOS, the United State Fish and Wildlife Service Information for Planning and Conservation (IPaC, USFWS 2019), and Calflora Project (Calflora, 2019) for the Buckeye Mtn. 9-quad area. Animals on the CNDDB list were primarily included based on state or federal listing status or CDFW designation. Native pollinators found in the area were also included based on the state rarity and their potential to be affected by cannabis cultivation.

The special status species in the 7.5 minute USGS Buckeye Mtn. quadrangle, and the 8 adjacent quadrangles, resulted in 41 special status animal species (5 amphibians, 12 birds, 6 fishes, 1 insects, 14 mammals, 2 mollusks, 1 reptile) (Appendix A -Table 1) and 36 special status plant (1 1 lichen, 35 Vascular) (Appendix A - Table 2).

B. Biological Resource and Habitat Investigation

A biological resource and habitat investigation was conducted at the project sites between 11:30 and 13:00 on July 28th, 2019 (Appendix B: Map 1). The weather was sunny with no cloud cover. The goal of the investigation was to determine suitable habitat for potential species within the project area. Habitat characteristic on the majority of the parcels (equating to 42.01 acres) was investigated. Dominate species in surrounded habitats, adjacent watercourse locations and project related features (such as water storage locations and methods, and project site setbacks from streams, rivers and other watercourses) were also observed and recorded. A TruPulse 200X laser rangefinder was used to make all of the distance measurements and for determining adequate setbacks. The areas including the project site, as well as the surrounding field habitat, and the adjacent wooded and vegetated areas was more thoroughly surveyed for sensitive species and potential project related impacts.

1. Project Site Location

The project sites exist approximately 1,000 ft setback to the east of the nearest bankfull edge of the Mattole River, which is a Class I perennial watercourse. The project sites are located within fields that have a history of disturbance including livestock grazing and non-cannabis cultivation for over a century. To the north and east of the project sites there is a mixture of scattered hardwood and coniferous trees encroaching into the open field. To the south of the project sites there is more open field that had historically been grazed and cultivated and beyond this field there is a dense mixture of second growth hardwood and coniferous forest. To the west there are hardwood and coniferous trees outlining the perimeter of the parcels.

The project site in the southern parcel (APN: 104-321-001) **(Site 1)** is to exist entirely within the regularly plowed, agricultural field. The project site in the northern parcel (APN: 104-291-005)

(**Site 2**) is to exist entirely within the open field habitat which has experienced historical disturbance due to grazing (Appendix B: Map 2).

2. Sensitive Species

Of the 41 special status animal species, 8 had a moderate potential of occurring at or within the project site with additional species having potential to occur adjacent to the project site. Of the 36 special status plant species, 4 had a moderate potential of occurring at or within the project site with additional species having potential to occur adjacent to the project site.

Section IV Results and Discussion

A. Habitat Area and Existing Site Conditions

The habitat within the 42.01 acre parcels is dominated by mixed second growth hardwood and coniferous forest, plowed agricultural fields, and previously grazed grassland fields (open pasture). The project site is to exist entirely within the open agricultural and grassland field habitat (Figure 4).

1. Terrestrial

The second growth mixed hardwood and coniferous forest habitat is typical of southern Humboldt; dominated by Douglas fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), white oak (*Quercus alba*), and Pacific madrone (*Arbutus menziesii*). Other dominate species in this habitat include canyon live oak (*Quercus chrysolepis*), black oak (*Quercus kelloggii*), California bay (*Umbellularia californica*), California buckeye (*Aesculus californica*), and coast redwood (*Sequoia sempervirens*). However, the majority of the observed species in this habitat were Douglas fir (*Pseudotsuga menziesii*) and tanoak (*Notholithocarpus densiflorus*) (Figure 2). The observed species surrounding edges of this habitat, and scattered throughout its understory, include poison oak (*Toxicodendron diversilobum*), coastal woodfern (*Dryopteris argute*), Scotch broom (*Cytisus scoparius*), Himalayan blackberry (*Rubus armeniacus*) and foxgloves (*Digitalis purpurea*). This habitat type boarders the parcel and is not anticipated to be impacted by this project in anyway.

The plowed, previously cultivated, field in the southern parcel, where project Site 1 is to occur, is dominated by coastal woodfern (*Dryopteris argute*), turkey mullein (*Croton Setiger*), common mullein (*Verbascum thapsus*), spear thistle (*Cirsium vulgare*) and oxeye daisy (*Leucanthemum vulgare*) (Figure 3).

The open pasture in the northern parcel, where project Site 2 is to occur, is dominated by a mixture of grasses and forbs, with scattered shrubs. This field has a historic record of animal grazing, which means there is a history of disturbance, resulting in introduced nonnative species and soil compaction. The major grass species observed were sweet vernal grass (*Anthoxanthum odoratum*), perennial bluegrass (*Poa pratensis*), common wild oat (*Avena fatua*), tall fescue (*Festuca arundinacea*), and common velvet grass (*Holcus lanatus*). Scattered throughout the field there were also coastal woodfern (*Dryopteris argute*), Queen Anne's lace (*Daucus carota*), coyote brush (*Baccharis pilularis*) and Scotch broom (*Cytisus scoparius*). There are also a few very old apple trees throughout this field which will not be removed for this project. Project Site 2 will occur entirely within this previously disturbed area (Figure 2).

Between Site 1 and Site 2, in the southern parcel, is a strip of planted Monterey pine (Pinus radicata) and Douglas fir (*Pseudotsuga menziesii*). Within this forested zone is a spring to the north of Site 1 within the southern parcel (Figure 4).

2. Hydrologic

The spring previously mentioned was flowing out and subsiding back in the ground approximately 10 ft from the point of exit at the time of the site visit investigation. The spring is surrounded by common rush (*juncus effusus*) and western rush (*Juncus occidentalis*) and has the appearance of a perennial wetland seep. A 150 ft buffer was measured from the furthest edge of this habitat and was staked and flagged within the proposed location of Site 1 for the applicant to reference (Figure 5). A radial curve, following this 150 ft buffer is to be followed when the applicant develops Site 1 in order to stay outside of the appropriate boundary (Appendix B: Map 2).

Downslope of the spring there is a slight indentation in the field. There are no visible boundaries or banks to this depression. There is no evidence that this depression is "...[c]apable

of sediment transport to a Class I or II [watercourse] under normal water flow conditions," (Forest Practice Rules Water Course and Lake Protection Zone definitions, California Code of Regulations, title 14, Chapter 4). This indentation also did not appear to meet the requirements of a wetland since there was no standing water, and the soil type and present flora, was the same as the rest of the field in that general area (Figure 6). Because of these factors, it was determined that this indentation is not a Class III watercourse. It does however appear that the entirety of this parcel is likely to sheet water during heavy rain years, though without evidence of any erosion or sediment transport.

There is evidence of a Class III ephemeral watercourse to the east of plowed field (Appendix B: Map 2). There is visible evidence of clearly defined banks and obvious sediment transport under normal water flow conditions (Figure 7). A 50 ft buffer, as mandated by the state and county riparian setback requirements for cannabis cultivators, was measured from the nearest edge of this watercourse and the applicant is required to not encroach on this buffer when developing Site 1.

3. Sensitive Species or Habitats

Each species derived from the previously mentioned databases were evaluated for their potential of occurrence within the project site by the following criteria:

1. "***None***." Species listed as having "none" potential of occurrence are those species for which there is no suitable habitat within the project area (elevation, hydrology, plant community, disturbance regime, etc.)

2. "***Low***." Species listed as having a "low" potential of occurrence are those species for which there is no known occurrence of the species within the project area and there is limited or marginal suitable habitat present at the project area.

3. "***Moderate***." Species listed as having "moderate" potential of occurrence within the project area are those species for which there is a known record of occurrence within or in the vicinity of the project area and/or there is suitable habitat present within the project area.

4. "***High.***" Species listed as having "high" potential of occurrence within the project area are those species for which there is a known record of occurrence within or in the vicinity of the project area and/or there is highly suitable habitat present within the project area.

5. "***Present.***" Species listed as having "present" potential of occurrence within the project area are those species for which the species was observed during the field survey.

Species with a 'low' potential of occurrence were not further investigated for likelihood to exist within or utilize the project site habitat. A rank of low was given to species that most likely will not occur, or are highly unlikely for them to occur, based on their habitat requirements. However, there are always exceptions to natural rules and so these species were not given the rank of 'none' because it is not entirely impossible for them to occur, just extremely unlikely.

B. Special Status Plant Species

Potential habitat for 4 special-status species exist within the project area. These species include maple-leaved checkerbloom (*Sidalcea malachroides*), Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula*), leafy reed grass (*Calamagrostis foliosa*), and Pacific gilia (*Gilia capitata ssp. pacifica*).

Maple-leaved checkerbloom (*Sidalcea malachroides*) has a moderate potential of occurring at the project site. Its elevation range is between 0 and 730 meters. It blooms between April and August and is known to occur in broadleafed upland forests, coastal prairies, coastal scrubs, North Coast coniferous forests, and riparian woodlands and also is often found in disturbed areas. Since the project site does have a history of disturbance, the potential of *Sidalcea malachroides* occurrance could be likely. However, since *Sidalcea malachroides* is a perennial herb with distinct "maple like" leaves, it is easily identified even when not in bloom. No *Sidalcea malachroides* were observed during the site investigation and it is concluded that it is highly unlikely that this species occurs at the project site. The potential habitat areas surrounding the project site will not be disturbed by this proposed project. Also, this species was only recorded to occur within the Petrolia, Taylor Peak, and Scotia 7.5 USGS Quads, and not in the Buckeye Mtn. 7.5 USGS Quad.

Siskiyou checkerbloom (*Sidalcea malviflora ssp. patula*) has a moderate potential of occurring at the project site. Its elevation range is between 15 and 880 meters and is known to occur in costal bluff scrub, coastal prairies, North Coast coniferous forests, and also found in roadcuts. While habitat for this species does exist within the field at the project site, the history and level of disturbance makes it highly unlikely that this species would occur at the project site. Also, this species prefers wetland/wetter areas, which is nonexistent in the project sites that have been established outside of the adequate buffered setbacks from springs and watercourses. *Sidalcea malviflora ssp. patula* is also a perennial herb that was not observed during the project site survey. The potential habitat areas surrounding the project site will not be disturbed by this proposed project. Also, this species was only recorded to occur within Taylor Peak, Capetown, Petrolia and Scotia 7.5 USGS Quads, and not in the Buckeye Mtn. 7.5 USGS Quad.

Leafy reed grass (*Calamagrostis foliosa*) is a perennial bunchgrass found between 0 and 1220 meters in coastal bluff scrub North Coast coniferous forests and prefers rocky places. The habitat of the field makes it moderately likely that *Calmagrostis foliosa* could exist within the project site. Given the history of disturbance from livestock and plowing it is unlikely that this species could be found within the project site. Also, given that this bunch grass is perennial, it is easily identified outside of its blooming period, which is May through September, and no *Calamagrostis foliosa* where observed during the site visit. The potential habitat areas surrounding the project site will not be disturbed by this proposed project.

Pacific gilia (*Gilia capitata ssp. pacifica*) has a moderate potential of occurring at the project site. Its elevation range is between 5 and 1665 meters and is known to occur in coastal bluff scrub, chaparral openings, coastal prairies and valley/foothill grasslands. While habitat for this species does exist within the field at the project site, the history of disturbance, makes it highly unlikely that this species would occur at the project site. The potential habitat areas surrounding the project site will not be disturbed by this proposed project.

C. Special Status Animals Species

Moderate to high potential habitat for 8 special status animal species exists within the project location. Of these 8 species, 6 are either birds or bats and would only utilize the project site for

hunting and would otherwise only fly over the site. None of these species would utilize the project site for nesting or shelter due to the sparseness of canopy cover. Therefore, it is not expected that these 6 species will be impacted in anyway but the proposed project. The remaining 2 special-status species include the Western Bumblebee (*Bombus occidentalis*) and the North American porcupine (*Erethizon dorsatum*).

The **Western Bumblebee (*Bombus occidentalis*)** is widely distributed in California and is known to pollinate a wide variety of flowering plants. This species lives in abandoned burrows and cavities and potential nesting locations may exist within the project area. Due to the project areas regular disturbance regime, it is unlikely that there would be a significant loss of nesting habitat as a result of the project. No new practices will impact this species any more than have by the previous history of cultivation done within this project area. Furthermore, it is unlikely that the project would result in a significant decrease in forage material. It is not anticipated that the project will negatively impact this species.

The **North American Porcupine (*Erethizon dorsatum*)** can be found in forested habitats in broadleaf upland forest, cismontane woodland, and lower and upper montane conifer forest. Even though this species may reside nearby and could pass through the project site while foraging, the lack of cover within the cultivated area make it unlikely that this species would be found in the project area. Also, the frequent human activity that occurs within the project area likely results in *Erethizon dorsatum* not utilizing the site. It is not anticipated that the project will negatively impact this species.

1. Other Special Status Animals Species

There are known **Northern Spotted Owl (*Strix occidentalis caurina*)** Activity Center approximately 1.97 miles (HUM0901) and approximately 2.06 miles (HUM0902) from the project site (Appendix B: Map 4, & Appendix D: Observation Report). Northern spotted owls reside in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300 meters. They usually nest in trees or snag cavities, or in broken tops of large trees (Polite C. 1990). Since the surrounding habitat to the project site on the parcel is dominated by second growth forest, it was determined to not be suitable for

Strix occidentalis caurina, especially within the immediate vicinity of the project site (i.e. with a .25 mile buffer). The Northern Spotted Owl Database contains no known Activity Centers within 0.7 miles. There will be no expected negative impacts to the nearest known Activity Center since it occurs more than 0.7 miles away from the project site. No trees will be removed for this project and therefore no habitat alterations will occur. Furthermore, it is noted that in general, noise levels of 70 dB or less, would not generate a significant disturbance unless within very close proximity (<.25 miles) to an active nest (USFWS 2006). Since the application will not be utilizing a generator, there are no anticipated noise disturbances that could impact owls. For light pollution, the applicant will completely cover their greenhouses to eliminate escaping light when they are being artificially lit.

There is also known presence of other sensitive aquatic species, such as **Chinook salmon (*Oncorhynchus tshawytscha*)**, **Coho Salmon (*O. kisutch*)**, **Steelhead Trout (*O. mykiss*)**, **Coastal rainbow trout (*O. mykiss irideus*)**, and **Pacific Lamprey (*Entosphenus tridentatus*)** in the Mattole River watershed. However, seeing as this project will not cause any disturbance to the terrestrial habitat surrounding the watercourse, and the Mattole River is approximately 1000 ft from the project sites, no disturbance to these species in expected to occur as a result of this project.

Section V Conclusion

A. Potential Impacts and Recommended Mitigation

1. Potential Direct Impacts

Direct impacts are considered to be effects that may occur to the environment from direct interface with the proposed action. The project sites are considered to have no direct impacts to the environment or the surrounding habitat. Given the dominate non-native habitat of the project sites (the open pasture and the plowed agricultural field), the history of disturbance (decades of heavy grazing and non-cannabis cultivation), and no vegetation being removed (within and surrounding the project site), the cultivation plan renders no negative habitat alterations resulting in the only potential direct impacts as disturbance-based.

Other common disturbance based impacts include noise and light pollution. For the project, recommendations to mitigate noise pollution are to create a housing for the generator so that if the generator will need to be used for supplementing light (which is not anticipated to occur), and running fans, to the mixed-light cannabis, it will not exceed 60 dB when 100 ft away. If fans are used in the greenhouse, they too are not to exceed 60 dB when 100 ft away. Light pollution will be mitigated by completely covering the greenhouses when they are being artificially lit. If the greenhouses are covered completely, and the generator (when in use) is in its adequate housing, there will be no expected disturbance-based impacts to the surrounding wildlife.

The applicant is also required to adhere to the established spring and watercourse setbacks described in this report and laid out during the site visit investigation.

2. Potential Indirect Impacts

Given the existing nature of the project sites, as well as the existing disturbance to the proposed cultivation site, the development that will occur should have no significant adverse indirect impacts to the surrounding environment and habitats.

The only foreseeable negative indirect outcome of the cannabis cultivation process is the potential for the water storage pond to harbor the invasive American bullfrog (*Lithobates catesbeianus*). During the growing season the applicant shall search for *Lithobates catesbeianus* after dusk by listening for their distinctive deep calls and searching with a flashlight. This should be done at least twice annually. If *Lithobates catesbeianus* is detected, they should be eradicated. If eradication is unsuccessful, it is recommended that the ponds be drained at the end of each growing season in order to avoid the recruitment of *Lithobates catesbeianus*.

Section VI References

2017 Humboldt County General Plan. Chapter 4 Land Use Element. Adopted October 23, 2017.

33 CFR Part 328: Definition of Waters of the United States. U.S. Army Corps of Engineers. Accessed July 2019.

Calflora database. Berkeley CA: Calflora . Accessed July 2019 http://calflora.org/

California Department of Fish and Wildlife. 2019 "California Natural Diversity Database" (CNDDB) Accessed March 2019 https://www.wildlife.ca.gov/Data/CNDDB

California Department of Fish and Wildlife. 2018 "Biogeographic Information and Observation System" (BIOS) Accessed December 2018 https://map.dfg.ca.gov/bios/

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed July 2019].

Google Earth Pro 2019 Accessed July 2019

Historic Aerials by Netronline. 2019. Accessed July 2019 https://www.historicaerials.com/

National Weather Service Corporate Image Web Team. (2005, October 24). NWS Eureka. Retrieved from https://w2.weather.gov/climate/local_data.php?wfo=eka

National Wetlands Inventory Map Report For North Coast, California. Project ID: R01Y07P08: CA_North_Coast, California. Accessed July 2019 https://www.fws.gov/wetlands/

Polite C. Kiff L, editor. 1990. Spotted Owl. California's Wildlife Vol I-III. California Depart. Fish and Wildlife, Sacramento, California.

Thompson R.C., Wright A.N., and Shaffer H.B. 2016. California amphibian species of special concern. University of California Press, Oakland, CA.

Top 10 Quietest Portable Generators (Under 65db) – Reviews. Accessed July 2019 https://generatorgrid.com/quiet/

US Climate Data. 2019. Accessed July 2019 https://www.usclimatedata.com/climate/eureka/california/united-states/usca0360

U.S. Fish and Wildlife Service (2019) "Information Planning and Conservation System" (IPAC) Accessed March 2019 https://ecos.fws.gov/ipac/

U.S. Fish and Wildlife Service Wetland Mapper. Accessed July 2019 https://www.fws.gov/wetlands/data/mapper.html

U.S. Fish and Wildlife Services. 2006. Transmittal of Guidance: Estimating the Effects of Auditory and Visual Disturabance to Northern Spotted Owls and Marbled Murrelets in Northwestern California.

Appendix A

Photos:

Figure 1. The 1,097,350 gallon pond on parcel APN: 104-291-005. Photo taken facing north west.

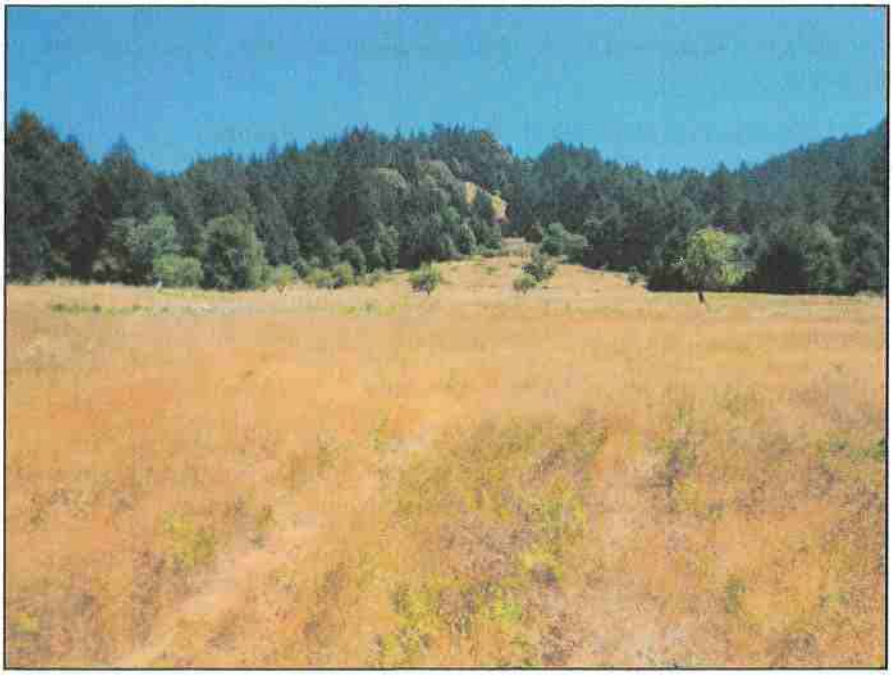


Figure 2. Photo taken in parcel APN: 104-291-005 facing north showing the dominate mixed second growth forest habitat and the open pasture habitat. This open pasture habitat is the proposed location of cultivation Site 2.

Figure 3. Photo taken in parcel APN: 104-321-001 facing east showing the agricultural plowed field which is the proposed location for cultivation Site 1.

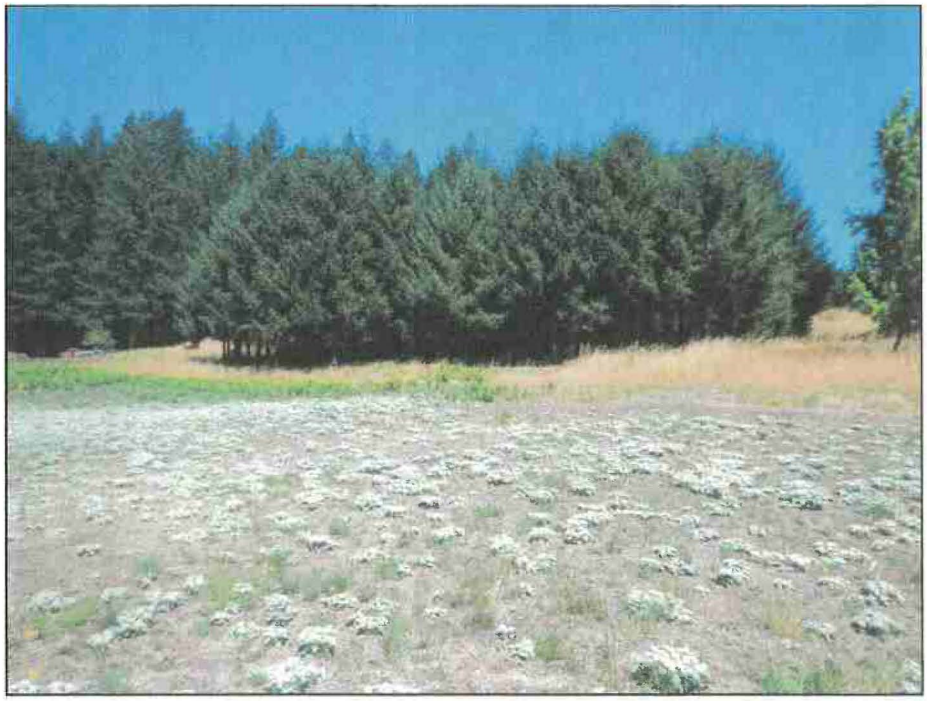


Figure 4. Photo taken in parcel APN: 104-321-001 while standing in the plowed field facing north. Photo shows the planted Monterey pine (Pinus radicata) and Douglas fir (Pseudotsuga menziesii). Spring is located to the right (east) of this cluster of trees.

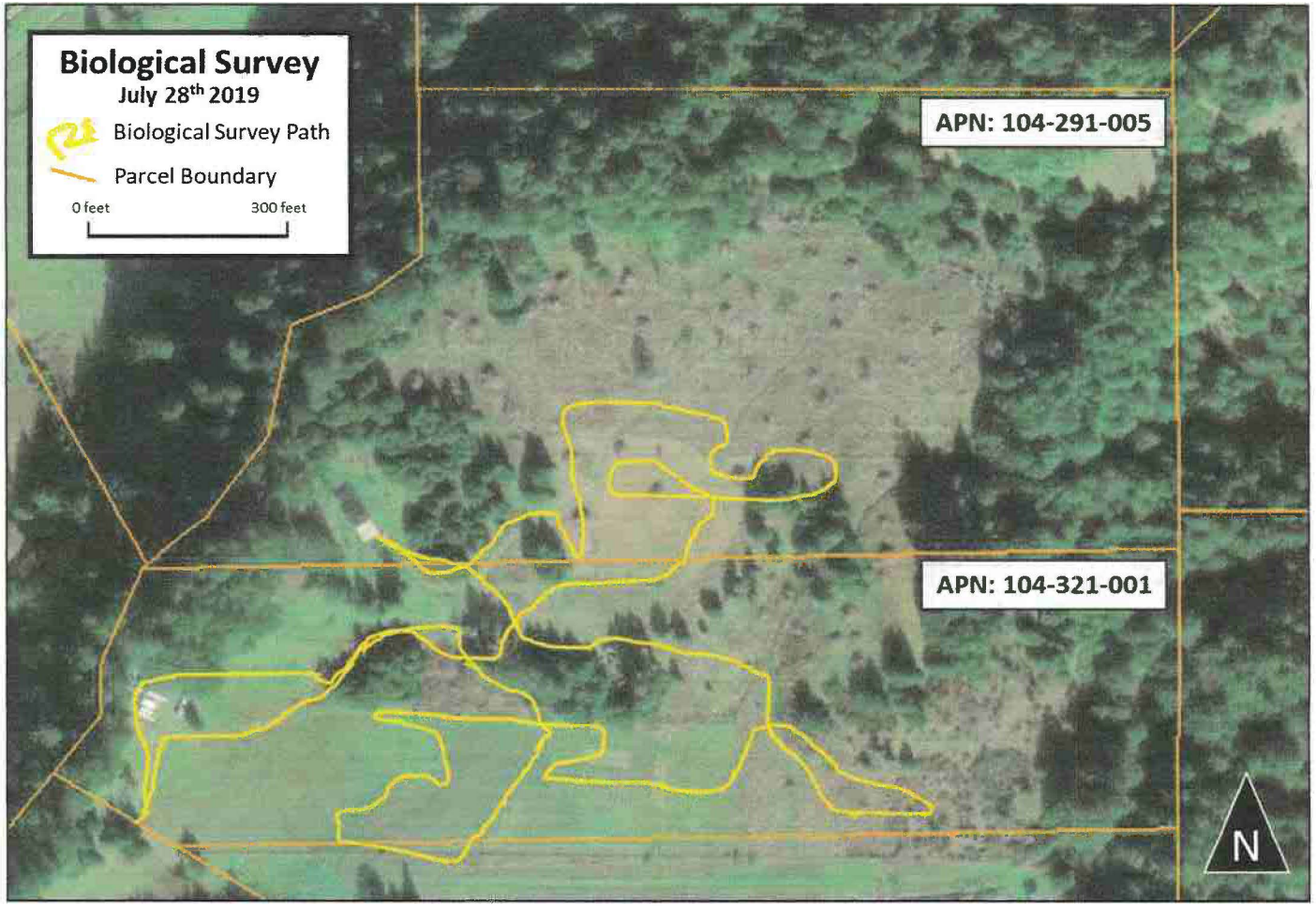
Figure 5. Photo taken in parcel APN: 104-321-001 while standing in the plowed feild facing north showing the flagged 150 ft buffer from the observed spring location.

Figure 6. Photo taken south of parcel APN: 104-321-001 facing north east towards the plowed field showing the described indentation.

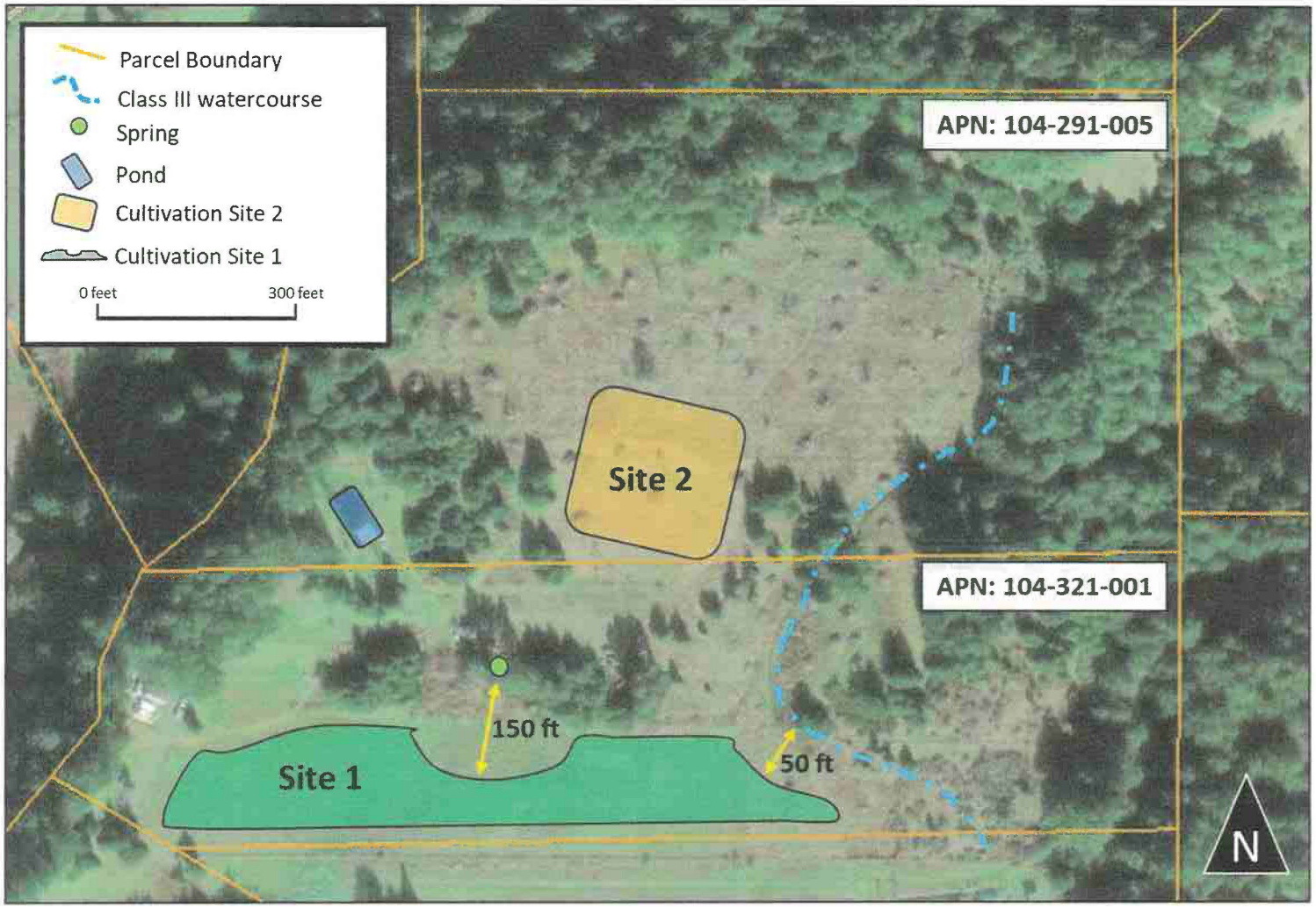
Figure 7. Photo taken in parcel APN: 104-321-001 facing north in the far eastern side of the plowed field showing the described Class III ephemeral water course. Dotted black lines indicating the boundaries of the watercourse used to determine the adequate 50 ft buffer.

Appendix B

Maps:

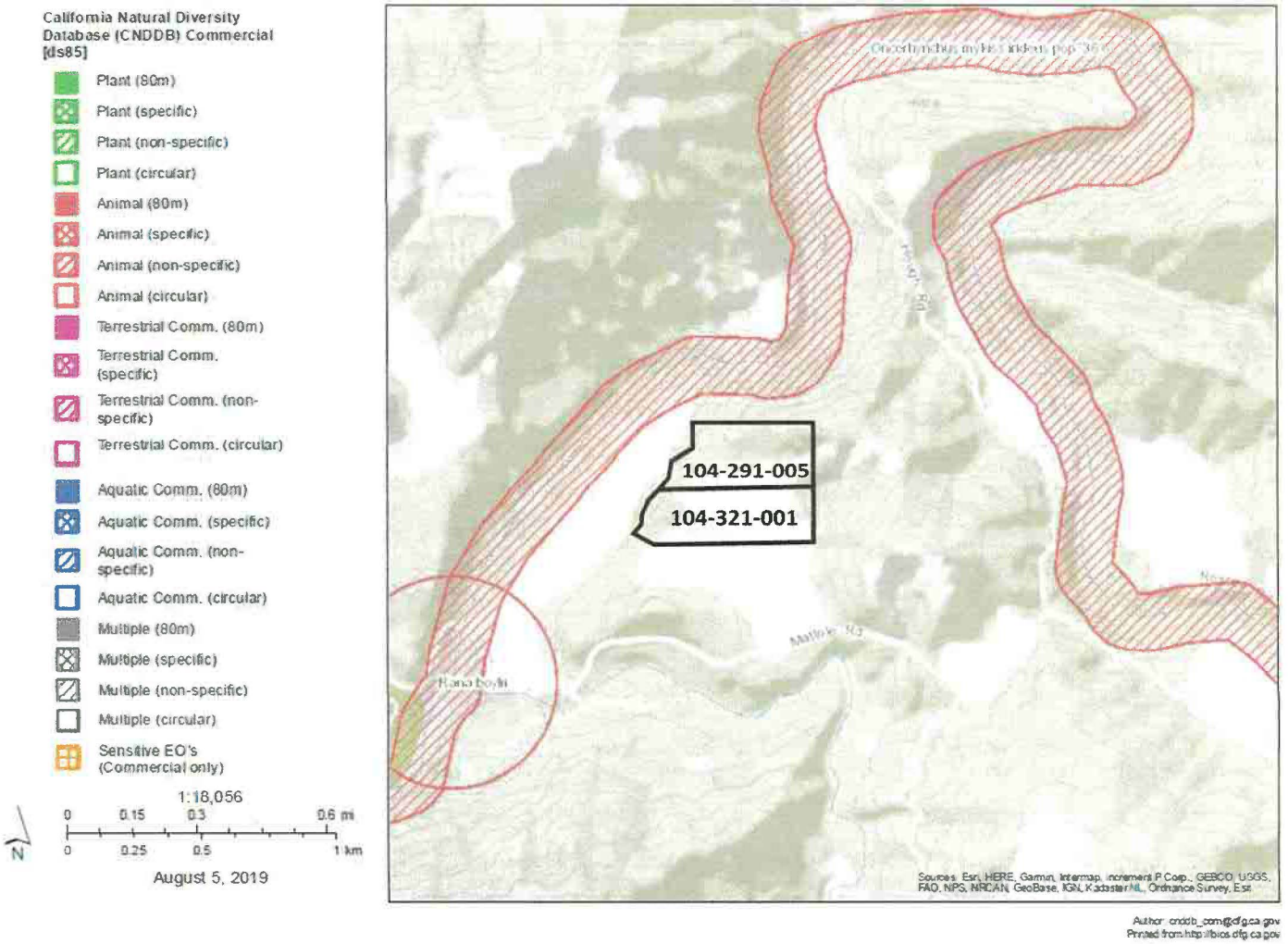


Map 1. The general path taken during the biological survey and site visit investigation on July 28th 2019. (This is not a boundary survey, property lines shown here are approximated and taken from Humboldt County Web GIS)



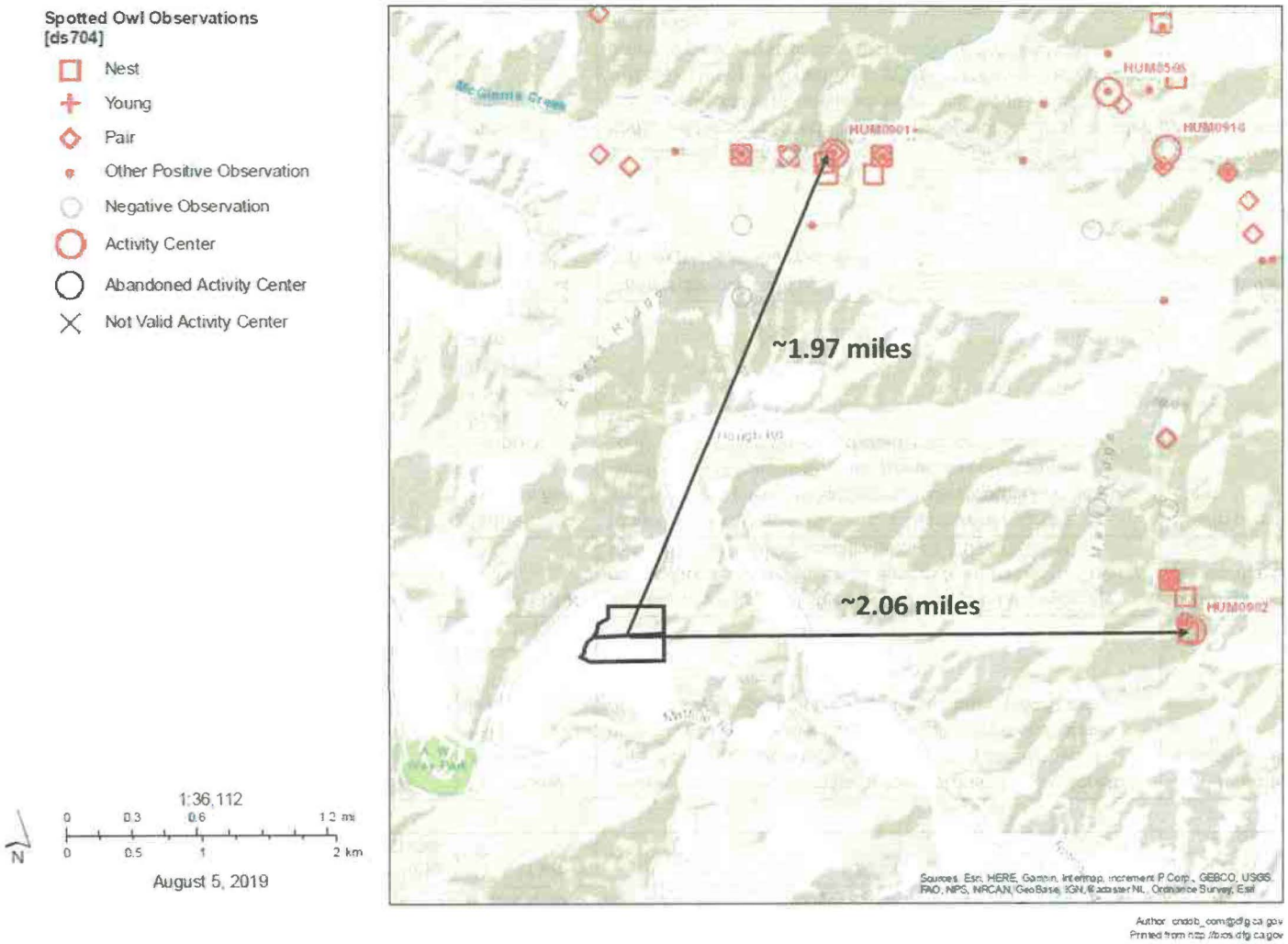
Map 2. The approximate location of the pond, springs, Class III watercourse and proposed cultivation site locations. ***(This is not a boundary survey, property lines shown here are approximated and taken from Humboldt County Web GIS)***

Map of Parcel APN 104-291-005 & 104-321-001 Surrounding Sensitive Species Observations



Map 3. Parcel APN 104-291-005 and APN 104-321-001 and the surrounding area showing occurrence of observed sensitive species.

Map of Nearest Spotted Owl Activity Center to Parcel APN 104-291-005 & 104-321-001 Project Site



Map 5. Distance from project site to the nearest Spotted Owl Activity Center.

Appendix C

Table 1 – Special Status Animal Species – July 2019 – APN 104-291-005 & 104-321-001 – Buckeye Mtn. and surrounding 7.5 min quadrangles

Scientific Name	Common Name	Federal Status	State Status	CDFW Status	Quad Name	Habitats	Potential of Occurrence
Amphibians							
Ascaphus truei	Pacific tailed frog	None	None	SSC	Honeydew Shubrick Peak Bull Creek Petrolia Scotia Capetown	Inhabits cold, clear, permanent rocky streams in wet forests. They do not inhabit ponds or lakes. A rocky streambed is necessary for protective cover for adults, eggs, and larvae. After heavy rains, adults may be found in the woods away from the stream.	Low in project area. Moderate in adjacent area.
Rana aurora	northern red-legged frog	None	None	SSC	Scotia Taylor Peak	inhabits quiet pools of streams, marshes, and occasionally ponds. Occurs along the Coast Ranges from Del Norte County to Mendocino County, usually below 1200 m (3936 ft).	Low in project area. Moderate in adjacent area.
Rana boylii	foothill yellow-legged frog	None	Candidate Threatened	SSC	Scotia Petrolia Bull Creek Shubrick Peak Honeydew Buckeye Mtn. Capetown	found in or near rocky streams in a variety of habitats, including valley-foothill hardwood, valleyfoothill hardwood-conifer, valley-foothill riparian, ponderosa pine, mixed conifer, coastal scrub, mixed chaparral, and wet meadow types.	Low in project area. High in adjacent area.
Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	Taylor Peak Bull Creek Honeydew Shubrick Peak Scotia	This species occurs in cold, well-shaded permanent streams and seepages in shady coastal forests.	Low in project area. Moderate in adjacent area.
Taricha rivularis	red-bellied newt	None	None	SSC	Shubrick Peak Honeydew	Broadleaved upland forest North coast coniferous forest Redwood Riparian forest Riparian woodlandLives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	Low in project area. Moderate in adjacent area.
Birds							
Accipiter cooperii	Cooper's hawk	None	None	WL	Bull Creek Buckeye	A breeding resident throughout most of the wooded portion of the state. Breeds in southern Sierra Nevada foothills, New York Mts., Owens Valley, and other local areas in southern	Moderate in project area (flyover). Moderate in adjacent area.

					Mtn. Scotia Taylor Peak	California. Ranges from sea level to above 2700 m (0-9000 ft). Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently.	
Accipiter gentilis	northern goshawk	None	None	SSC	Taylor Peak	Prefers middle and higher elevations, and mature, dense conifer forests. Casual in winter along north coast, throughout foothills, and in northern deserts, where it may be found in pinyon-juniper and low- elevation riparian habitats.	Low in project area (flyover). Moderate in adjacent area.
Accipiter striatus	sharp-shinned hawk	None	None	WL	Scotia	Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter.	Low in project area (flyover). Moderate in adjacent area.
Aquila chrysaetos	golden eagle	None	None	FP ; WL	Taylor Peak Petrolia Buckeye Mtn. Bull Creek Capetown	Ranges from sea level up to 3833 m (0-11,500 ft) (Grinnell and Miller 1944). Habitat typically rolling foothills, mountain areas, sage-juniper flats, desert.	Low in project area (flyover). Low in adjacent area.
Brachyramphus marmoratus	marbled murrelet	Threatened	Endangered	-	Scotia	requires dense, mature forests of redwood and Douglas-fir for breeding (Cogswell 1977, Remsen 1978). In California, probably prefers to nest in tall trees; nest made of moss and lichen. In summer, individuals or pairs commonly seen 1-2 km (0.6 to 1.2 mi) off the coast, and typically 6-8 km (4-5 mi) inland in coniferous forests (Cogswell 1977).	None in project area. Low in adjacent area.
Ardea alba	great egret	None	None	-	Petrolia	Brackish marsh, Estuary, Freshwater marsh, Marsh & swamp, Riparian forest, Wetland:Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Low in project area. Moderate in adjacent area.
Ardea herodias	great blue heron	None	None	-	Petrolia	The great blue heron is fairly common all year throughout most of California, in shallow estuaries and fresh and saline emergent wetlands. Less common along riverine and rocky marine shores, in croplands, pastures, and in mountains above foothills.	Low in project area. Moderate in adjacent area.
Riparia riparia	bank swallow	None	Threatened	-	Scotia	A neotropical migrant found primarily in riparian and other lowland habitats in California west of the deserts during the spring-fall period. A spring and fall migrant in the interior, less common on coast; an uncommon and very local summer resident. Casual in southern California in winter; a few winter records along central coast to San Mateo Co. (McCaskie et al. 1988). In summer, restricted to riparian, lacustrine, and	None in project area. Low in adjacent area.

						coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes.	
Pandion haliaetus	osprey	None	None	WL	Scotia	Riparian forest. Ocean shore, bays, lakes and larger freshwater streams.	None in project area. Low in adjacent area.
Pelecanus occidentalis californicus	California brown pelican	Delisted	Delisted	FP	Petrolia Cooskie Creek	Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	None.
Asio otus	long-eared owl	None	None	SSC	Honeydew	Cismontane woodland Great Basin scrub Riparian forest Riparian woodland Upper montane coniferous forest: Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.	Moderate in project area (flyover). Moderate in adjacent area.
Strix occidentalis caurina	Northern spotted owl	Threatened	Threatened	SSC		Northern spotted owls typically nest or roost in multilayered, mature coniferous forest with high canopy closure, large overstory trees, and broken-topped trees or other nesting platforms (USFWS 2012). Confirmed breeding areas are widespread throughout Humboldt County (Hunter et al. 2005). Northern spotted owls may use a broad range of habitats for foraging. Their favored prey, the dusky-footed woodrat (Neotoma fuscipes), typically inhabits the forest edge (Harris 2005).	Low in project area (flyover). Low in adjacent area.
Fish							
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	Buckeye Mtn. Petrolia	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. High in adjacent area.
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	-	Petrolia Scotia Taylor Peak Buckeye Mtn. Honeydew Shubrick Peak Bull Creek	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. High in adjacent area.
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	None	None	SSC	Scotia Taylor Peak	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. High in adjacent area.
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Threatened	None	-	Taylor Peak Scotia Petrolia Honeydew	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. High in adjacent area.

					Buckeye Mtn. Bull Creek		
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	None	SSC	Buckeye Mtn. Honeydew Shubrick Peak Petrolia	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. High in adjacent area.
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	Threatened	None	-	Petrolia Scotia Taylor Peak Honeydew Bull Creek	Aquatic, klamath northcoast flowing waters sacramento san joaquin flowing waters swift current gravel bottom	None in project area. High in adjacent area.
Insects							
Bombus occidentalis	western bumble bee	None	None	-	Bull Creek Scotia Petrolia	nests underground or above ground in abandoned bird nests. food plants include Baccharis, Cirsium, Lupinus, Lotus, Grindella, Phacella	Moderate in project area. Moderate in adjacent area.
Mammals							
Aplodontia rufa humboldtiana	Humboldt mountain beaver	None	None	-	Scotia	Mountain beaver burrows are often located on gentle slopes in moist forests, sometimes near surface water.	None in project area. Low in adjacent area.
Erethizon dorsatum	North American porcupine	None	None	-	Scotia Petrolia Buckeye Mtn. Bull Creek Cooskie Creek Honeydew	broadleaf upland forest, cismontane woodland, lower and upper montane conifer forest	Moderate in project area. Moderate in adjacent area.
Arborimus pomo	Sonoma tree vole	None	None	SSC	Bull Creek Buckeye Mtn. Scotia Taylor Peak Capetown	Occurs in old-growth and other forests, mainly Douglas-fir, redwood, and montane hardwood- conifer habitats.	Low in project area. Moderate in adjacent area.
Pekania pennanti	fisher - West Coast DPS	None	Threatened	SSC	Taylor Peak Buckeye Mtn. Shubrick Peak	Occurs in intermediate to large-tree stages of coniferous forests and deciduous-riparian habitats with a high percent canopy closure (Schempf and White 1977).	Low in project area. Moderate in adjacent area.

Taxidea taxus	American badger	None	None	SSC	Shubrick Peak	Alkali marsh Alkali playa Alpine Alpine dwarf scrub Bog & fen Brackish marsh Broadleaved upland forest Chaparral Chenopod scrub Cismontane woodland Closed-cone coniferous forest Coastal bluff scrub Coastal dunes Coastal prairie Coastal scrub Desert dunes Desert wash Freshwater marsh Great Basin grassland Great Basin scrub Interior dunes Ione formation Joshua tree woodland Limestone Lower montane coniferous forest Marsh & swamp Meadow & seep Mojavean desert scrub Montane dwarf scrub North coast coniferous forest Oldgrowth Pavement plain Redwood Riparian forest Riparian scrub Riparian woodland Salt marsh Sonoran desert scrub Sonoran thorn woodland Ultramafic Upper montane coniferous forest Upper Sonoran scrub Valley & foothill grassland: Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Low in project area. Moderate in adjacent area.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	Honeydew Scotia	This species is found in all but subalpine and alpine habitats, and may be found at any season throughout its range.	Moderate in project area (flyover). Moderate in adjacent area.
Lasionycteris noctivagans	silver-haired bat	None	None	-	Scotia Bull Creek	coastal and montane forests from the Oregon border south along the coast to San Francisco Bay, and along the Sierra Nevada and Great Basin region to Inyo Co. It also occurs in southern California from Ventura and San Bernardino Cos. south to Mexico and on some of the Channel Islands.	Low in project area (flyover). Moderate in adjacent area.
Lasiurus blossevillii	western red bat	None	None	SSC	Bull Creek	forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands.	Moderate in project area (flyover). Moderate in adjacent area.
Lasiurus cinereus	hoary bat	None	None	-	Bull Creek	The hoary bat is the most widespread North American bat. May be found at any location in California, although distribution patchy in southeastern deserts.	Moderate in project area (flyover). Moderate in adjacent area.
Myotis evotis	long-eared myotis	None	None	-	Bull Creek	This species has been found in nearly all brush, woodland, and forest habitats, from sea level to at least 2700 m (9000 ft), but coniferous woodlands and forests seem to be preferred	Moderate in project area (flyover). Moderate in adjacent area.
Myotis lucifugus	little brown bat	None	None	-	Bull Creek	Fairly common in sagebrush, bitterbrush, alkali desert scrub, wet meadow, and montane chaparral. Least common in valley foothill woodlands, redwood, mixed chaparral, low sagebrush, alpine dwarf-shrub, coastal scrub, and grasslands.	Low in project area (flyover). Low in adjacent area.
Myotis thysanodes	fringed myotis	None	None	-	Bull Creek	pinyon-juniper, valley foothill conifer and hardwood conifer	Low in project area (flyover). Low in adjacent area.

Myotis volans	long-legged myotis	None	None	-	Bull Creek	Common in woodland and forest habitats above 1200 m (4000 ft). Also forages in chaparral, coastal scrub, Great Basin shrub habitats, and in early successional stages of woodlands and forests.	None.
Myotis yumanensis	Yuma myotis	None	None	-	Bull Creek Scotia	lower and upper montane conifer and riparian forest and woodland	Low in project area (flyover). Moderate in adjacent area.
Mollusk							
Helminthoglypta arrosa monticola	mountain shoulderband	None	None	-	Honeydew	Known only from the King Range in Humboldt County: Found in talus slopes.	None due to lack of talus habitat.
Anodonta californiensis	California floater	None	None	-	Scotia	freshwater lakes and slow moving streams and rivers	None in project area. Low in adjacent area.
Reptile							
Emys marmorata	western pond turtle	None	None	SSC	Petrolia	aquatic, flowing waters, standing waters, marsh, swamp, wetland	Low in project area. Moderate in ajacent area.

Definitions of CDFW statuses:

FP

Fully Protected: This classification was the State of California's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal endangered species acts.

SS

Species of Special Concern: It is the goal and responsibility of the Department of Fish and Wildlife to maintain viable populations of all native species. To this end, the Department has designated certain vertebrate species as "Species of Special Concern" because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating species as "Species of Special Concern" is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability.

WL

Watch List: The Department of Fish and Wildlife maintains a list consisting of taxa that were previously designated as "Species of Special Concern" but no longer merit that status, or which do not yet meet SSC criteria, but for which there is concern and a need for additional information to clarify status.

Appendix C

Table 2 – Special Status Plant Species – July 2019 – APN 104-291-005 & 104-321-001 – Buckeye Mtn. and surrounding 7.5 min quadrangles

Scientific Name	Common Name	California Rare Plant Rank	Global Rank	State Rank	CESA	7.5 USGS Quad Occurance	Bloom Period	Lifeform	Habitat	Micro Habitat	Elevation (m)	Potential of Occurrence
Usnea longissima	Methuselah's beard lichen	None	None	-	4.2	Honeydew Shubrick Peak Bull Creek Buckeye Mtn. Scotia Taylor Peak	NA	fruticose lichen (epiphytic)	Broadleafed upland forest; North Coast coniferous forest	On tree branches; usually on old growth hardwoods and conifers.	50 - 1460 meters	Low in project area. Moderate in adjacent area.
Erigeron biolettii	streamside daisy	None	None	-	3	Petrolia	Jun-Oct	perennial herb	Broadleafed upland forest; Cismontane woodland; North Coast coniferous forest	Rocky, mesic	30 - 1100 meters	Low in project area. Moderate in adjacent area.
Hemizonia congesta ssp. tracyi	Tracy's tarplant	None	None	-	4.3	Petrolia Scotia Capetown	May-Oct	annual herb	Coastal prairie; Lower montane coniferous forest; North Coast coniferous forest	openings, sometimes serpentinite.	120 - 1200 meters	None due to elevation range.
Hesperevax sparsiflora var. brevifolia	short-leaved evax	None	None	-	1B.2	Capetown Taylor Peak Petrolia	Mar-Jun	annual herb	Coastal Strand, Northern Coastal Scrub	dunes, coastal	0 - 215 meters	None.
Layia carnosa	beach layia	Endangered	Endangered	-	1B.1	Petrolia	Mar-Jul	annual herb	Coastal Strand, Northern Coastal Scrub (sandy)	dunes, coastal	0 - 60 meters	None.
Packera bolanderi var. bolanderi	seacoast ragwort	None	None	-	2B.2	Scotia Taylor Peak	May-Jul	perennial rhizomatous herb	Coastal scrub; North Coast coniferous forest	Sometimes roadsides.	30 - 650 meters	Moderate in project area. Moderate in adjacent area.
Erysimum concinnum	bluff wallflower	None	None	-	1B.2	Petrolia	Feb-Jul	annual / perennial herb	Coastal bluff scrub, coastal dunes, coastal prairie	dunes, coastal	0 - 185 meters	None.
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	None	None	-	1B.2	Petrolia Capetown	(Apr)Jun-Oct	perennial herb	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt, streamsides)	dunes, coastal	0 - 30 meters	None due to elevation range.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	-	4.3	Scotia	Apr-Jul	perennial herb	Chaparral; Cismontane woodland; Lower montane coniferous forest	gravelly streambanks.	30 - 825 meters	None in project area. Moderate in adjacent area.
Hosackia gracilis	harlequin lotus	None	None	-	4.2	Capetown Taylor Peak	Mar-Jul	perennial rhizomatous herb	Broadleafed upland forest; Coastal bluff scrub; Closed-cone coniferous forest; Cismontane woodland; Coastal prairie; Coastal scrub; North Coast coniferous forest; Valley and foothill grassland	Wetlands; Roadsides; Meadows and seeps; Marshes and swamps;	0 - 700 meters	Low in project area. Moderate in adjacent area.
Lathyrus glandulosus	sticky pea	None	None	-	4.3	Taylor Peak Scotia Buckeye Mtn. Bull Creek	Apr-Jun	perennial rhizomatous herb	Cismontane woodland	NA	300 - 800 meters	None due to elevation range.

Ribes roezlii var. amictum	hoary gooseberry	None	None	-	4.3	Bull Creek Scotia Taylor Peak	Mar-Apr	perennial deciduous shrub	Broadleafed upland forest; Cismontane woodland; Lower montane coniferous forest; Upper montane coniferous forest	NA	120 - 2300 meters	None due to elevation range.
Iris longipetala	coast iris	None	None	-	4.2	Cooskie Creek	Mar-May	perennial rhizomatous herb	Coastal prairie, Lower montane coniferous forest, Meadows and seeps.	Mesic sites, heavy soils	0 - 600 meters	Low in project area due to know occurances. Low in adjacent area.
Sisyrinchium hitchcockii	Hitchcock's blue-eyed grass	None	None	-	1B.1	Capetown	Jun	perennial rhizomatous herb	Cismontane woodland (openings), Valley and foothill grassland	Known in CA from only one occurrence near Cape Ridge.	NA	Low in project area. Moderate in adjacent area.
Erythronium oregonum	giant fawn lily	None	None	-	2B.2	Taylor Peak Scotia	Mar-Jun	perennial bulbiferous herb	Cismontane woodland	sometimes serpentinite, rocky, openings; Meadows and seeps	100 - 1150 meters	None due to elevation range.
Erythronium revolutum	coast fawn lily	None	None	-	2B.2	Scotia Buckeye Mtn. Bull Creek Taylor Peak	Mar-Jul	perennial bulbiferous herb	Broadleafed upland forest; North Coast coniferous forest	Mesic, streambanks; Bogs and fens	0 - 1600 meters	None in project area. Moderate in adjacent area
Lilium rubescens	redwood lily	None	None	-	4.2	Taylor Peak Bull Creek Scotia	Apr-Aug	perennial bulbiferous herb	Broadleafed upland forest; Chaparral; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest	Sometimes serpentinite, sometimes roadsides.	30 - 1910 meters	None in project area. Moderate in adjacent area.
Lycopodium clavatum	running-pine	None	None	-	4.1	Scotia	Jun-Aug	perennial rhizomatous herb	Lower montane coniferous forest (mesic); North Coast coniferous forest (mesic)	often edges, openings, and roadsides; Marshes and swamps	45 - 1225 meters	Low in project area. Low in adjacent area.
Sidalcea malachroides	maple-leaved checkerbloom	None	None	-	4.2	Scotia Petrolia Taylor Peak	Apr-Aug	perennial herb	Broadleafed upland forest; Coastal prairie; Coastal scrub; North Coast coniferous forest; Riparian woodland	Often in disturbed areas.	0 - 730 meters	Moderate in project area. Moderate in adjacent area.
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	-	1B.2	Taylor Peak Capetown Petrolia Scotia	May-Aug	perennial rhizomatous herb	Coastal bluff scrub; Coastal prairie; North Coast coniferous forest	often roadcuts.	15 - 880 meters	Moderate in project area. Moderate in adjacent area.
Pityopus californicus	California pinefoot	None	None	-	4.2	Scotia Bull Creek Taylor Peak	May-Aug	perennial herb (achlorophyllous)	Broadleafed upland forest; Lower montane coniferous forest; North Coast coniferous forest; Upper montane coniferous forest	mesic.	15 - 2225 meters	Low in project area. Moderate in adjacent area.
Montia howellii	Howell's montia	None	None	-	2B.2	Taylor Peak Capetown Bull Creek Buckeye Mtn. Scotia	Mar-May	annual herb	North Coast coniferous forest	Vernally mesic, sometimes roadsides; Meadows and seeps; Vernal pools	0 - 835 meters	Low in project area. Moderate in adjacent area.

Epilobium septentrionale	Humboldt County fuchsia	None	None	-	4.3	Petrolia Buckeye Mtn. Shubrick Peak	Jul-Sep	perennial herb	Broadleafed upland forest; North Coast coniferous forest	sandy or rocky.	45 - 1800 meters	Low in project area. Moderate in adjacent area.
Oenothera wolfii	Wolf's evening-primrose	None	None	-	1B.1	Capetown	May-Oct	perennial herb	Coastal bluff scrub, Coastal dunes, Coastal prairie, Lower montane coniferous forest	sandy, usually mesic.	3 - 800 meters	None.
Listera cordata	heart-leaved twayblade	None	None	-	4.2	Taylor Peak Bull Creek Scotia	Feb-Jul	perennial herb	Lower montane coniferous forest; North Coast coniferous forest	Bogs and fens	5 - 1370 meters	None in project area. Moderate in adjacent area.
Piperia candida	white-flowered rein orchid	None	None	-	1B.2	Scotia Buckeye Mtn. Bull Creek Honeydew	May-Sep	perennial herb	Broadleafed upland forest; Lower montane coniferous forest; North Coast coniferous forest	sometimes serpentinite	30 - 1310 meters	None in project area. Moderate in adjacent area.
Castilleja litoralis	Oregon coast paintbrush	None	None	-	2B.2	Petrolia Capetown	Jun-Jul	perennial herb (hemiparasitic)	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy	15 - 100 meters	None.
Calamagrostis foliosa	leafy reed grass	None	Rare	-	4.2	Petrolia Buckeye Mtn. Shubrick Peak Cooskie Creek Bull Creek	May-Sep	perennial herb	Coastal bluff scrub, North Coast coniferous forest	rocky	0 - 1220 meters	Moderate in project area. Low in adjacent area.
Pleuropogon refractus	nodding semaphore grass	None	None	-	4.2	Bull Creek Scotia Capetown Taylor Peak	Apr-Aug	perennial rhizomatous herb	Lower montane coniferous forest; Meadows and seeps; North Coast coniferous forest	mesic; riparian forest	0 - 1600 meters	Low in project area. Moderate in adjacent area.
Gilia capitata ssp. pacifica	Pacific gilia	None	None	-	1B.2	Taylor Peak Scotia Petrolia Bull Creek Buckeye Mtn. Shubrick Peak	Apr-Aug	annual herb	Coastal bluff scrub; Chaparral (openings); Coastal prairie; Valley and foothill grassland	NA	5 - 1665 meters	Moderate in project area. None in adjacent area.
Gilia millefoliata	dark-eyed gilia	None	None	-	1B.2	Petrolia	Apr - Jul	annual herb	Coastal Dunes	Sandy	0 - 30 meters	None due to elevation range.
Leptosiphon latisectus	broad-lobed leptosiphon	None	None	-	4.3	Honeydew	Apr - Jun	annual herb	Broadleafed upland forest, Cismontane woodland	NA	170 - 1500 meters	None due to elevation range.
Polemonium carneum	Oregon polemonium	None	None	-	2B.2	Taylor Peak Capetown	Apr-Sep	perennial herb	Coastal prairie, Coastal scrub, Lower montane coniferous forest	NA	0 - 1830 meters	Low in project area. None in adjacent area.
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	-	4.3	Taylor Peak	Feb-Jun(Jul)	perennial herb	North Coast coniferous forest, Riparian forest	Streambanks, sometimes seeps, sometimes roadsides.	10 - 455 meters	None in project area. Moderate in adjacent area.
Mitellastra caulescens	leafy-stemmed mitrewort	None	None	-	4.2	Scotia	Apr-Oct	perennial rhizomatous herb	Broadleafed upland forest; Lower montane coniferous forest; Meadows and seeps; North Coast coniferous forest	mesic, sometimes roadsides.	5 - 1700 meters	Low in project area. Moderate in adjacent area.
Tiarella trifoliata var. trifoliata	trifoliate laceflower	None	None	-	3.2	Scotia	Jun-Aug	perennial rhizomatous herb	Lower montane coniferous forest; North Coast coniferous forest	edges, moist shady banks, streambanks.	170 - 1500 meters	None due to elevation range.

Global Conservation Status Definition

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

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

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

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

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

G5 **Secure** – Common; widespread and abundant.

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

Infraspecific Taxon Conservation Status Ranks

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

Subnational (S) Conservation Status Ranks

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

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

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

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

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

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

Rank Qualifiers

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

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

Appendix D

Observation Report – For nearest Spotted Owl Activity Center

Data Version Date:
06/26/2019

Report Generation Date:
8/5/2019

Report #2 - Observations Reported
List of observations reported by site.

Meridian, Township, Range, Section (MTRS) searched:

H_02S_01W Sections(09,16,17,20,21,28,29);

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: HUM0566 Subspecies: NORTHERN											
POS	1991		2	UMUF	Y	Y		40.307864	-124.180282	H 02S 01W 09	Contributor
POS	1991-07-02		2	AMAF	Y	Y		40.302631	-124.181015	H 02S 01W 09	Contributor
POS	1992-05-02		2	UMUF	Y	Y		40.305414	-124.182005	H 02S 01W 09	Contributor
POS	1995-05-30	2201	1	UM				40.291280	-124.181841	H 02S 01W 16	Quarter-section centroid
POS	1995-05-30	2143	1	UM				40.298136	-124.181890	H 02S 01W 16	Quarter-section centroid
POS	1995-06-13	2024	1	UU				40.301937	-124.185498	H 02S 01W 09	Activity center
POS	1995-06-17	2145	1	UM				40.301937	-124.185498	H 02S 01W 09	Activity center
POS	1995-06-19	2216	1	UU				40.291280	-124.181841	H 02S 01W 16	Quarter-section centroid
POS	1995-07-06	2018	1	UU				40.298445	-124.191237	H 02S 01W 16	Quarter-section centroid
POS	1998-05-21	1903	1	UM				40.302000	-124.182800	H 02S 01W 09	Contributor
POS	1998-05-22	1347	2	AMUF	Y			40.301300	-124.184600	H 02S 01W 16	Contributor
POS	1998-05-27	1236	1	AM				40.297500	-124.171900	H 02S 01W 15	Contributor
NEG	1998-06-22	2140	0					40.294817	-124.186597	H 02S 01W 16	Section centroid
NEG	1999		0					40.305244	-124.181896	H 02S 01W 09	Quarter-section centroid
NEG	1999-06-04	2148	0					40.294817	-124.186597	H 02S 01W 16	Section centroid
POS	1999-07-15	2201	1	UM				40.301300	-124.189800	H 02S 01W 16	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	1999-07-16	0750	0					40.280685	-124.186279	H 02S 01W 21	Section centroid
POS	2001		1	UM				40.305244	-124.181896	H 02S 01W 09	Quarter-section centroid
NEG	2001-03-14	1320	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2001-03-20	2001	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
POS	2001-04-04	2345	1	UM				40.301300	-124.189800	H 02S 01W 16	Contributor
NEG	2001-04-05	1500	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2001-04-27	2313	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2001-05-09	2124	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2002-05-25	1838	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2002-06-18	2325	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2002-07-12	2129	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
POS	2003		1	UM				40.303837	-124.185496	H 02S 01W 09	Contributor
NEG	2003-03-24	1830	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2003-04-10	2305	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2003-06-14	2105	0					40.309052	-124.186552	H 02S 01W 09	Section centroid
NEG	2004-05-22	0600	0					40.305244	-124.181896	H 02S 01W 09	Quarter-section centroid
AC	2006		2	UMUF	Y			40.301937	-124.185498	H 02S 01W 09	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: HUM0901 Subspecies: NORTHERN											
POS	1998-05-21	2155	1	UU				40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	1998-05-22		2	UMUF	Y	Y	2	40.297707	-124.204226	H 02S 01W 17	Contributor
NEG	1998-06-09	2102	0					40.313114	-124.210066	H 02S 01W 08	Quarter-section centroid
NEG	1998-06-18	2200	0					40.298728	-124.209974	H 02S 01W 17	Quarter-section centroid
NEG	1998-06-22	2140	0					40.291530	-124.209951	H 02S 01W 17	Quarter-section centroid
NEG	1998-06-23	2052	0					40.309452	-124.205364	H 02S 01W 08	Section centroid
NEG	1998-08-27	2052	0					40.309452	-124.205364	H 02S 01W 08	Section centroid
NEG	1999		0					40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	1999-04-20	2353	1	UU				40.298728	-124.209974	H 02S 01W 17	Quarter-section centroid
NEG	1999-06-04	2148	0					40.295134	-124.209968	H 02S 01W 17	Half-section centroid
POS	1999-07-15	2136	1	UM				40.298728	-124.209974	H 02S 01W 17	Quarter-section centroid
POS	2000		2	UMUF	Y	Y	2	40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2001		2	UMUF	Y	Y	1	40.297739	-124.201167	H 02S 01W 17	Contributor
POS	2001-03-14	1925	1	UM				40.295092	-124.205285	H 02S 01W 17	Section centroid
POS	2001-03-20	2130	1	UF				40.313114	-124.210066	H 02S 01W 08	Quarter-section centroid
POS	2001-05-29	2225	1	UM				40.298900	-124.214400	H 02S 01W 17	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2002		1	UM				40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2003-03-11	1130	1	UM				40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
NEG	2003-05-15	0952	0					40.298662	-124.206808	H 02S 01W 17	Activity center
POS	2003-05-28	1015	2	UMUF	Y	Y		40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2003-06-11	0842	2	UMUF	Y		2	40.299934	-124.198817	H 02S 01W 17	Contributor
POS	2005		2	UMUF	Y	Y	1	40.298299	-124.204448	H 02S 01W 17	Contributor
POS	2005-05-16	1035	2	UMUF	Y			40.298109	-124.217411	H 02S 01W 18	Contributor
NEG	2005-05-16	0755	0					40.298662	-124.206808	H 02S 01W 17	Activity center
POS	2005-05-26	0700	2	UMUF	Y	Y		40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2005-06-09	1149	1	UM	Y	Y	1	40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2005-06-09	0659	1	UM	Y			40.298710	-124.219433	H 02S 01W 18	Quarter-section centroid
POS	2006		2	AMUF	Y	Y	1	40.298662	-124.206808	H 02S 01W 17	Contributor
NEG	2006-06-14	1640	0					40.298662	-124.206808	H 02S 01W 17	Activity center
POS	2006-06-15	0843	1	UU				40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2006-06-28	1630	2	UMUF	Y	Y	1	40.298728	-124.209974	H 02S 01W 17	Quarter-section centroid
POS	2006-08-03	0815	1	UM	Y	Y	1	40.298728	-124.209974	H 02S 01W 17	Quarter-section centroid
POS	2008		2	UMUF	Y			40.298707	-124.206808	H 02S 01W 17	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
AC	2009-07-08		2	UMUF	Y		1	40.298804	-124.203789	H 02S 01W 17	Contributor
POS	2010		1	UM				40.298804	-124.203789	H 02S 01W 17	Contributor
POS	2011		2	UMUF	Y			40.298807	-124.203788	H 02S 01W 17	Contributor
POS	2012		2	UMUF	Y			40.298804	-124.203789	H 02S 01W 17	Contributor
POS	2013-05-02	1730-1839	2	UMUF	Y			40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2014-05-22	2100-2200	2	UMUF	Y			40.298728	-124.209975	H 02S 01W 17	Quarter-section centroid
NEG	2014-06-12	1830-2045	0					40.298805	-124.203790	H 02S 01W 17	Activity center
POS	2014-07-22	1700-1755	2	UMUF	Y			40.298643	-124.200594	H 02S 01W 17	Quarter-section centroid
POS	2015-04-30	1730-1905	1	UM				40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2015-07-09	1940-2105	2	UMUF	Y			40.298728	-124.209974	H 02S 01W 17	Quarter-section centroid
NEG	2016-04-05	1200-1330	0					40.298805	-124.203790	H 02S 01W 17	Activity center
POS	2016-05-06	0705-0840	1	UU				40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2016-06-16	1900-2000	2	UMUF	Y			40.298646	-124.200595	H 02S 01W 17	Quarter-section centroid
POS	2017-06-01	1600-1715	1	UM				40.298643	-124.200594	H 02S 01W 17	Quarter-section centroid
POS	2017-07-13	1900-2020	2	UMUF	Y			40.298643	-124.200594	H 02S 01W 17	Quarter-section centroid
Masterowl: HUM0902 Subspecies: NORTHERN											
NEG	1998-05-21	2027	0					40.284246	-124.181695	H 02S 01W 21	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1998-05-29		2	UMUF	Y	Y	2	40.274350	-124.180287	H 02S 01W 21	Contributor
POS	1998-05-29	1600	2	UMAF	Y	Y		40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
NEG	1998-06-18	2200	0					40.284246	-124.181695	H 02S 01W 21	Quarter-section centroid
POS	1998-07-01	1445	1	AF			2	40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
NEG	1998-08-10	2044	0					40.284246	-124.181695	H 02S 01W 21	Quarter-section centroid
POS	1999		2	UMUF	Y			40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	1999-04-20	2158	1	UU				40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	1999-04-26	0541	1	UM				40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
NEG	1999-05-29	0011	0					40.280732	-124.167494	H 02S 01W 22	Section centroid
POS	1999-06-04	0008	2	UMUF	Y			40.284246	-124.181695	H 02S 01W 21	Quarter-section centroid
NEG	1999-06-05	0600	0					40.284246	-124.181695	H 02S 01W 21	Quarter-section centroid
NEG	1999-06-06	2258	0					40.280732	-124.167494	H 02S 01W 22	Section centroid
NEG	1999-06-23	0914	0					40.280685	-124.186279	H 02S 01W 21	Section centroid
NEG	1999-07-21	1006	0					40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	1999-07-30	2025	2	AMAF	Y			40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	2000		2	UMUF	Y			40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	2001		2	UMUF	Y	Y	2	40.276151	-124.180436	H 02S 01W 21	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2002		2	UMUF	Y	Y		40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
AC	2003		2	UMUF	Y	Y		40.274443	-124.180054	H 02S 01W 21	Contributor
POS	2003-05-28	0753	1	UU	Y	Y		40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	2005		1	UM				40.274862	-124.180414	H 02S 01W 21	Contributor
POS	2005-05-16	0945	1	UM				40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
NEG	2005-06-27	0718	0					40.274443	-124.180054	H 02S 01W 21	Activity center
NEG	2005-07-26	0800	0					40.274443	-124.180054	H 02S 01W 21	Activity center
POS	2006		1	UM				40.274853	-124.180437	H 02S 01W 21	Contributor
NEG	2006-06-14	1740	0					40.274443	-124.180054	H 02S 01W 21	Activity center
POS	2006-06-28	1628	1	UM				40.277050	-124.181510	H 02S 01W 21	Quarter-section centroid
NEG	2008		0					40.274898	-124.180436	H 02S 01W 21	Contributor
POS	2011		2	UMUF	Y			40.274868	-124.180416	H 02S 01W 21	Contributor
NEG	2012		0					40.274865	-124.180418	H 02S 01W 21	Contributor
POS	2013-06-17	1500-1900	1	UF	Y			40.277045	-124.181510	H 02S 01W 21	Quarter-section centroid
POS	2013-06-17	1500-1900	1	UM	Y			40.277045	-124.181510	H 02S 01W 21	Quarter-section centroid
NEG	2014-07-07	1657-1930	0					40.274866	-124.180418	H 02S 01W 21	Activity center
POS	2014-08-27	1755-1901	2	UMUF	Y			40.277045	-124.181510	H 02S 01W 21	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2015-07-08	1645-1819	0					40.274866	-124.180418	H 02S 01W 21	Activity center
NEG	2015-08-04	1630-1900	0					40.274866	-124.180418	H 02S 01W 21	Activity center
NEG	2016-07-19	1750-1945	0					40.274866	-124.180418	H 02S 01W 21	Activity center
POS	2016-08-23	1830-2010	1	UF				40.277058	-124.172102	H 02S 01W 22	Quarter-section centroid
NEG	2017-07-20	1700-1945	0					40.274866	-124.180418	H 02S 01W 21	Activity center
Masterowl: HUM0903 Subspecies: NORTHERN											
POS	1998-05-29	1340	1	AF	Y			40.277055	-124.172101	H 02S 01W 22	Quarter-section centroid
POS	1998-05-29	1340	1	UM	Y			40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
POS	1998-05-29		2	UMUF	Y			40.277826	-124.166233	H 02S 01W 22	Contributor
POS	1998-06-22	2030	2	UMUF	Y			40.277055	-124.172101	H 02S 01W 22	Quarter-section centroid
POS	1998-07-01	1037	2	AMAF	Y			40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
NEG	1998-08-26	0442	0					40.280732	-124.167494	H 02S 01W 22	Section centroid
POS	1999		2	UMUF	Y			40.277826	-124.166233	H 02S 01W 22	Contributor
NEG	1999-05-29	0011	0					40.280732	-124.167494	H 02S 01W 22	Section centroid
NEG	1999-06-04	2148	0					40.280643	-124.181608	H 02S 01W 21	Half-section centroid
NEG	1999-06-06	2258	0					40.280732	-124.167494	H 02S 01W 22	Section centroid
POS	1999-06-14	2108	1	UM				40.277055	-124.172101	H 02S 01W 22	Quarter-section centroid

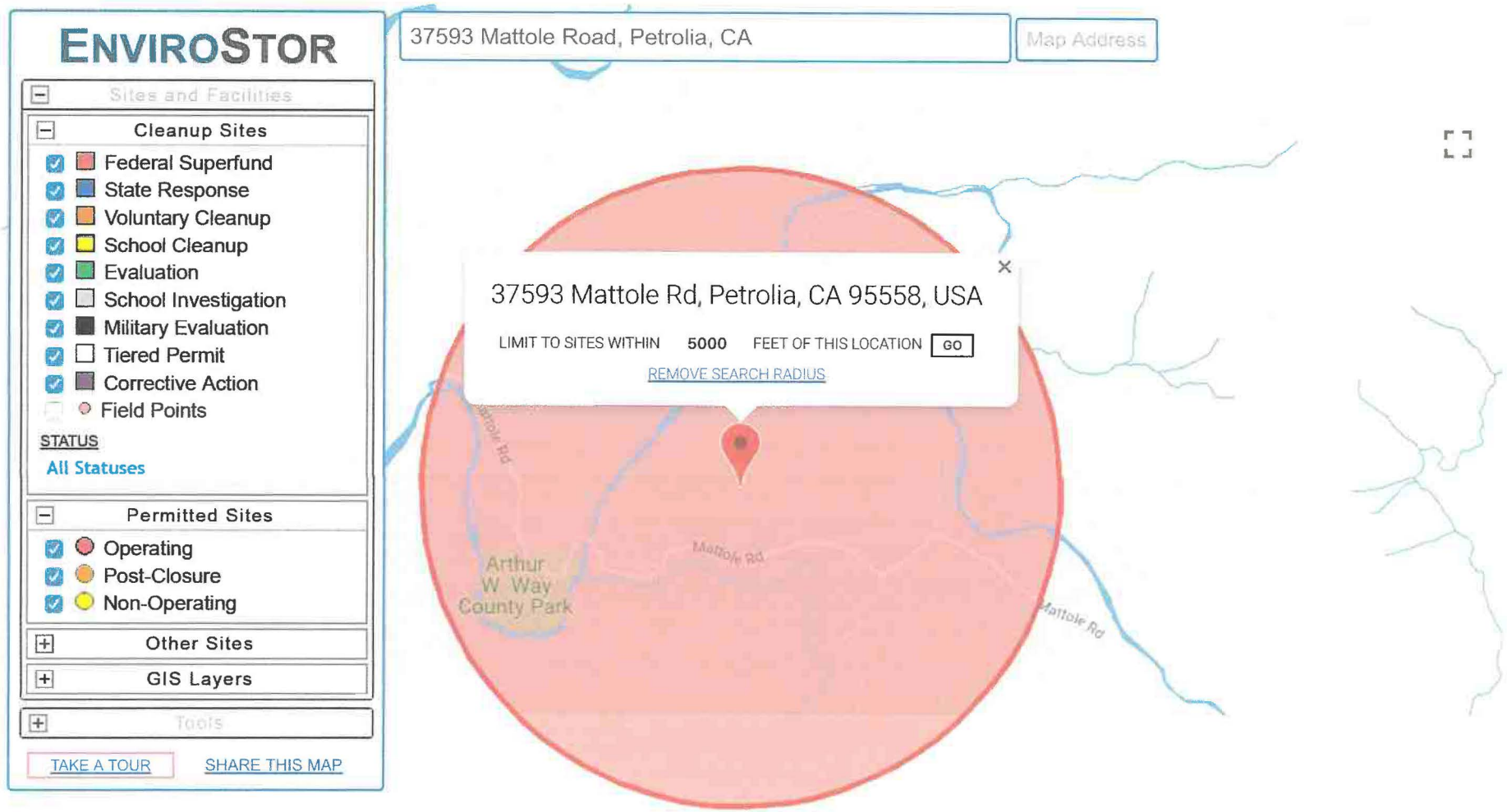
Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1999-06-15	0733	1	AM				40.277055	-124.172101	H 02S 01W 22	Quarter-section centroid
POS	1999-07-20	1853	2	AMAF	Y	N		40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
POS	2000		2	UMUF	Y	Y	2	40.277055	-124.172101	H 02S 01W 22	Quarter-section centroid
POS	2001		2	UMUF	Y	Y	1	40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
POS	2002		2	UMUF	Y	Y		40.280523	-124.166797	H 02S 01W 22	Contributor
POS	2003		2	UMUF	Y			40.280523	-124.166797	H 02S 01W 22	Contributor
POS	2003-05-15	1043	2	UMUF	Y			40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
POS	2005		1	UF				40.278631	-124.166788	H 02S 01W 22	Contributor
NEG	2005-05-26	0630	0					40.280170	-124.169661	H 02S 01W 22	Activity center
NEG	2005-06-27	0728	0					40.280170	-124.169661	H 02S 01W 22	Activity center
POS	2005-06-28	1945	1	UF				40.284278	-124.172308	H 02S 01W 22	Quarter-section centroid
NEG	2005-07-26	0745	0					40.280170	-124.169661	H 02S 01W 22	Activity center
POS	2006-06-14	1735	2	UMUF	Y			40.279809	-124.168796	H 02S 01W 22	Contributor
POS	2008-08-21		2	UMUF	Y		1	40.280170	-124.169661	H 02S 01W 22	Contributor
POS	2009		1	UM				40.280136	-124.169633	H 02S 01W 22	Contributor
POS	2010		2	UMUF	Y			40.278630	-124.166793	H 02S 01W 22	Contributor
POS	2011		2	UMUF	Y			40.278628	-124.166790	H 02S 01W 22	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2012		2	UMUF	Y			40.278629	-124.166793	H 02S 01W 22	Contributor
POS	2013-07-18	1805-2015	2	UMUF	Y			40.284281	-124.172307	H 02S 01W 22	Quarter-section centroid
POS	2014-05-22	1815-1935	1	UM				40.277058	-124.172102	H 02S 01W 22	Quarter-section centroid
POS	2014-07-07	2000-2100	1	UM				40.277058	-124.172102	H 02S 01W 22	Quarter-section centroid
POS	2014-07-22	1512-1800	1	UM				40.277187	-124.162679	H 02S 01W 22	Quarter-section centroid
NEG	2014-08-27	1939-1956	0					40.278630	-124.166793	H 02S 01W 22	Activity center
NEG	2015-05-14	1600-1800	0					40.278630	-124.166793	H 02S 01W 22	Activity center
POS	2015-07-09	1537-2015	1	UF				40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
POS	2015-08-04	1617-1741	1	UM				40.277186	-124.162681	H 02S 01W 22	Quarter-section centroid
POS	2015-08-25	1907-1934	1	UM				40.284281	-124.172307	H 02S 01W 22	Quarter-section centroid
AC	2016-05-26	1745-2010	2	UMUF	Y	Y		40.279244	-124.166632	H 02S 01W 22	Contributor
POS	2016-06-23	1830-1925	2	UMUF	Y		1	40.277058	-124.172102	H 02S 01W 22	Quarter-section centroid
POS	2016-08-11	1645-2015	2	UMUF	Y		1	40.284281	-124.172307	H 02S 01W 22	Quarter-section centroid
NEG	2017-06-01	1839-2025	0					40.279244	-124.166632	H 02S 01W 22	Activity center
POS	2017-07-20	0000-2050	1	UF				40.284281	-124.172307	H 02S 01W 22	Quarter-section centroid
Masterowl: HUM0916 Subspecies: NORTHERN											
POS	1998-05-21	2101	1	UM				40.297600	-124.169300	H 02S 01W 15	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1998-05-27		2	UMUF	Y			40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
NEG	1998-06-22	2140	0					40.291313	-124.172429	H 02S 01W 15	Quarter-section centroid
POS	1998-07-01	1040	2	AMUF	Y			40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
NEG	1999		0					40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
POS	1999-04-26	0222	1	UM				40.291313	-124.172429	H 02S 01W 15	Quarter-section centroid
POS	1999-05-31		1	UM				40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
NEG	1999-06-04	2148	0					40.294736	-124.172465	H 02S 01W 15	Half-section centroid
POS	1999-07-15	2218	1	UU				40.289900	-124.171400	H 02S 01W 15	Contributor
POS	1999-07-15	2212	1	UM				40.293400	-124.174600	H 02S 01W 15	Contributor
NEG	1999-07-16	0614	0					40.294874	-124.167726	H 02S 01W 15	Section centroid
POS	1999-07-20	2325	1	UU				40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
NEG	1999-07-21	1000	0					40.294874	-124.167726	H 02S 01W 15	Section centroid
POS	1999-07-28	2109	1	UU				40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
POS	1999-07-28	2103	1	UM				40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
POS	1999-07-28	2131	1	UU				40.292618	-124.171782	H 02S 01W 15	Contributor
NEG	1999-07-29	0705	0					40.294874	-124.167726	H 02S 01W 15	Section centroid
POS	2000		1	UM				40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2001		2	UMUF	Y			40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
POS	2001-03-14	1955	1	UM				40.293300	-124.175300	H 02S 01W 15	Contributor
NEG	2001-03-15	0841	0					40.294874	-124.167726	H 02S 01W 15	Section centroid
POS	2001-05-29	2120	2	UMUF				40.299800	-124.170300	H 02S 01W 15	Contributor
NEG	2001-05-30	0910	0					40.294874	-124.167726	H 02S 01W 15	Section centroid
POS	2001-06-04	1705	2	AMAF	Y	N	0	40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
POS	2002		2	UMUF	Y			40.298159	-124.172501	H 02S 01W 15	Quarter-section centroid
NEG	2003-03-27	0923	0					40.297846	-124.177602	H 02S 01W 16	Activity center
POS	2003-05-28	0752	2	UMUF	Y			40.296374	-124.176235	H 02S 01W 15	Contributor
NEG	2004-05-22	0600	0					40.305244	-124.181896	H 02S 01W 09	Quarter-section centroid
POS	2005		2	UMUF	Y			40.294656	-124.175934	H 02S 01W 15	Contributor
POS	2006-06-14	1745	2	UMUF	Y			40.297846	-124.177602	H 02S 01W 16	Contributor
POS	2008		1	UM				40.297891	-124.177602	H 02S 01W 16	Contributor
POS	2009		1	UU				40.297856	-124.177586	H 02S 01W 16	Contributor
POS	2010		1	UM				40.297856	-124.177586	H 02S 01W 16	Contributor
NEG	2011		0					40.297861	-124.177592	H 02S 01W 16	Contributor
NEG	2012		0					40.291309	-124.167871	H 02S 01W 15	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2012		1	UM				40.297856	-124.177586	H 02S 01W 16	Contributor
POS	2013-05-03	1610-1808	2	UMUF				40.298133	-124.181890	H 02S 01W 16	Quarter-section centroid
NEG	2014-05-22	1725-1930	0					40.298959	-124.181616	H 02S 01W 16	Activity center
POS	2014-07-22	1830-1930	1	UM				40.298133	-124.181890	H 02S 01W 16	Quarter-section centroid
AC	2014-07-31	1600-1830	1	UM				40.298959	-124.181616	H 02S 01W 16	Contributor
NEG	2015-07-09	1700-1935	0					40.298959	-124.181616	H 02S 01W 16	Activity center
POS	2015-08-04	1700-1825	1	UM				40.298136	-124.181890	H 02S 01W 16	Quarter-section centroid
NEG	2015-08-20	1555-1653	0					40.298959	-124.181616	H 02S 01W 16	Activity center
NEG	2016-06-02	1850-2040	0					40.298959	-124.181616	H 02S 01W 16	Activity center
POS	2016-06-29	2010-2230	2	UMUF	Y			40.298136	-124.181890	H 02S 01W 16	Quarter-section centroid
POS	2017-06-01	1900-2030	2	UMUF	Y			40.298133	-124.181890	H 02S 01W 16	Quarter-section centroid



SITES FOUND IN SEARCH RADIUS — 0 SITES LISTED — EXPORT THIS LIST TO EXCEL

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY