Biological Assessment
for
North Wind Management, LLC

Prepared for:
North Wind Management, LLC

07/13/2021

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1.0 SUMMARY AND RECOMMENDATIONS

This project found minimal risks to biological resources as a result of the proposed project. The Project Area meets all applicable setbacks and no tree removal is proposed. The proposed project will be located in the footprint of an existing, established industrial area that has 60+ years of human activity. A table of recommendations has been included below. These recommendations will protect and/or improve biological resources within the Project Parcel.

Activity	Mitigation Type	Method	Season
3.1-18	Supplemental nursery lighting	Prevent any light from escaping lit structures during hours of darkness	Cover lit structures 30 minutes before sunset and 30 minutes after sunrise or once lights are powered down	Life of project
3.4-3a	Ground Disturbance/ Construction	Prevent impacts Plant Species of Special Concern	Perform Floristic Survey	Per CDFW Protocol
3.4-3b	Commercial cannabis cultivation	Invasive Plant Species	Educate and remain vigilant for encroachment of invasive species	Life of project

2.0 INTRODUCTION

2.1 Purpose and Need

This Biological Site Evaluation has been prepared for North Wind Management, LLC. The following report is being submitted to fulfill Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO for the Coastal Zone) 2.0 requirement 55.4.12.1.10 Mitigation Measure #3.4-1a Biological Reconnaissance Surveys. This report contains descriptions of existing site conditions with additional analysis on their relationship to animal species of special concern, plant species of special concern, sensitive natural communities, and potential environmental impacts prepared by a qualified biologist.

2.2 Project Description

The project proposes to permit and develop commercial cannabis cultivation on APN 401-112-030-000. This parcel is zoned Heavy Industrial. Past uses on the property have consisted of industrial wood products. Existing developments on the property include: 15,593 sq. ft. office space, 6,077 sq. ft. storage facility, and historic mill infrastructure.

North Wind Management, LLC's proposed commercial cannabis activities are in accordance with the County of Humboldt's Commercial Cannabis Land Use Ordinance (CCLUO). The project proposes new construction, a majority of which will occur on existing paved asphalt. The project does propose paving a small vegetated area of non-native ruderal vegetation. Proposed construction includes: 43,560 sq. ft of indoor cultivation, 4,300 sq. ft. ancillary nursery space, (2) 480 sq. ft modular structures for volatile and non-volatile manufacturing, (29) 160 sq. ft. climate-controlled storage and drying shipping containers, and one security building. The project proposes distribution will utilize existing office building. The project proposes the processing area will utilize existing storage facility.

2.3 Biological Assessment Area

The Biological Assessment Area (BAA) is defined as the area where potential impacts may occur to sensitive/protected species and/or sensitive biological communities. The Project Area is defined as the

area where direct impacts have the potential to occur. Disturbance impacts associated with this project have the potential to indirectly impact sensitive species outside of the Project Area. Thus, the BAA reflects the largest disturbance buffer for potential protected species in this area, 0.25 miles for nesting raptors. The BAA encompasses the Project Parcel and peripheral private properties. The assessment area overlaps with Sections 16, 17, 20 T5N, R1W, in the Eureka 7.5' USGS quad. Current land uses within the BAA are industrial, commercial, and public lands.

2.4 Statement of Qualifications

This report has been prepared by Wildlife Biologist Jack Henry and Associate Wildlife Biologist Nicole Bogle. Jack and Nicole both possess a Bachelor of Science from Humboldt State University in Wildlife Conservation and Management. Jack Henry has nine years of experience performing assessments for threatened and endangered species as well as their associated habitat, largely focused on avian species. Jack has been conducting watershed assessments as well as drafting and implementing associated permits for mitigation/remediation for six years. Jack has also completed basic and advanced training courses from Wetland Training Institute with four years of experience in wetland delineations. Nicole Bogle has seven years of experience performing wildlife management in California with five of those years focused on northern spotted owls in Humboldt County.

3.0 REGULATORY BACKGROUND

3.1 Cannabis Cultivation

Commercial cannabis was recognized as an agricultural crop under the Medical Cannabis Regulation and Safety Act and further legalized for recreational uses under Proposition 64. The California Department of Food and Agriculture (CDFA) implements the CalCannabis program which regulates commercial cannabis licensing from a state level. Humboldt County also regulates commercial cultivation licensing from a local level through the Commercial Cannabis Land Use Ordinance (CCLUO). A cultivator must have both a state (CDFA) and county (CCLUO) license to operate commercial cannabis cultivation in the state. Section 55.4.12.1.10 of the CCLUO includes exemptions from biological resource assessments for projects proposed within the existing footprint of development and/or lands zoned for commercial or industrial use. As a result this assessment focuses on regulatory framework established to protect coastal resources within the California Coastal Act.

3.2 California Coastal Commission – California Coastal Act

Section 30600(a) of the California Coastal Act (CCA) requires any person proposing development in the coastal zone shall obtain a Coastal Development Permit (CDP) from the California Coastal Commission (CCC). Development is defined under CCA Section 30106 to include "construction, reconstruction, demolition, or alteration of the size of any structure..." Humboldt County does have a certified Local Coastal Plan (LCP) which allows the county to act as lead agency in issuing CDPs. The CCC has retained sole jurisdiction over a portion the coastal zone in Humboldt County. The CDP framework is, by statute, equivalent to environmental review associated with CEQA.

This report focuses solely on ecological resources as protected in Chapter 3 and 4 of the CCA. Chapter 3 specifies protections of marine resources, biological productivity, water quality, and wetlands. Chapter 4 is directed at terrestrial ecological resources such as agricultural land and timberland management.

3.3 Waters of the United States and Waters of the State

Watercourses, waterbodies, and critical hydrologic features have been recognized by federal, state, and local regulatory agencies/bodies as ecologically important biological communities. Under Section 404 of the Clean Water Act (CWA) the U.S. Army Corps of Engineers (USACE) regulate "Waters of the United

States" as defined in the Code of Federal Regulations as waters susceptible to use in commerce, including interstate waters and wetlands, all other waters (intrastate waterbodies, including wetlands), and their tributaries (33 CFR 328.3). Areas that are inundated at a sufficient depth and for a sufficient duration to exclude growth of hydrophytic vegetation are subject to Section 404 jurisdiction as "other waters" and are often characterized by an ordinary high-water mark, and herein referred to as non-wetland waters. Non-wetland waters, for example, generally include lakes, rivers, and streams.

Although very similar, the term "Waters of the State" is defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The State Water Resources Control Board (SWRCB) protects all waters in its regulatory scope and has special responsibility for wetlands, riparian areas, and headwaters. These waterbodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. SWRCB jurisdiction includes wetlands and waters that may not be regulated by the Corps under Section 404. Waters of the state are further protected from cannabis cultivation impacts through the Order WQ 2019-0001-DWQ General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities. Streams, lakes, and riparian habitat are also subject to jurisdiction by CDFW under Sections 1600-1616 of CDFGC and Humboldt County per §BR-P5 of the Humboldt County General Plan.

3.4 Wetlands

Section 404 of the CWA protects wetlands federally. In 1989 George H.W. Bush implemented the national "No-net Loss of Wetlands" policy which either avoids the filling of wetlands or mitigates the destruction and/or degradation of wetlands. U.S. Army Corps of Engineers defines wetlands as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." There is no single accepted definition of wetlands at the state level although CDFW exerts jurisdiction over them through their importance as wildlife habitat. Wetlands are locally protected through setbacks built within the most recent version of the Humboldt County General Plan (2017) and Order WQ 2019-0001-DWQ.

3.5 Environmentally Sensitive Habitat Areas (ESHA)

The CCA provides protections for Environmentally Sensitive Habitat Areas (ESHA) as defined in Section 30107.5. This term refers to any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. Identified ESHAs in the Humboldt Bay LCP include but are not limited to:

- Wetlands and estuaries including Humboldt Bay
- Vegetated dunes along the North Spit to the Mad River and along South Spit
- Rivers, creeks, gulches, sloughs, and associated riparian habitats
- Critical habitats for rare and endangered species

Sensitive Natural Communities have been defined by CDFW and the California Native Plant Society (CNPS) as vegetation types with a state rank of S1-S3 per standards set forth in the NatureServe Heritage Methodology. This system uses the best and most recent scientific information to assess rarity per a community's range, distribution, and the proportion of occurrences that are of good ecological integrity. Threats and trends are also considered in the overall ranking of a community's rarity. The use of marsh and/or wetlands in the names of vegetation alliances does not imply or assert regulatory jurisdiction.

Although there are no specific protocols for avoiding and/or mitigating impacts to these communities they are afforded consideration during environmental review per CEQA Guidelines checklist IVb. This list will be used to further identify potential ESHAs within the BAA.

Sensitive species and communities are ranked per standards set forth in the NatureServe Heritage Methodology. All species are given two ranks that consist of a letter and a number. The letter represents whether the rank is a global rank (G) or a state rank (S). The number corresponds to the subject's rarity.

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

2 **Imperiled**. At risk because of rarity due to the very restricted range, very few populations, (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province

3 **Vulnerable**. At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent widespread declines, or other factors

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

5 **Secure** – Common; widespread and abundant

Subspecies receive a T-rank attached to the G-rank and an additional S-rank for state ranking. With subspecies, the initial rank reflects the entire species' risk while the second rank represents just the subspecies' status.

3.6 Special Status Species

Sensitive and protected species include those plants and wildlife species that have been formally listed or are candidates for either listings under the federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford legal protection to both listed species and species that are candidates for listing. Additionally, CEQA affords special consideration to species ranked as sensitive (S1-2 are considered sensitive), as a CDFW Species of Special Concern, or CDFW Fully Protected. In addition to regulations for special-status species, most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act (MBTA) of 1918. Under this legislation, destroying active nests, eggs, and young is illegal.

Wildlife species are ranked using the same system NatureServe Heritage methodology.
Plant species have an additional ranking system designed by the CNPS. The following alphanumeric codes are the CNPS List, California Rare Plant Ranks (CRPR):

1A – Presumed extirpated in California and either rare or extinct elsewhere
1B – Rare or Endangered in California and elsewhere
2A – Presumed extirpated in California, but more common elsewhere
2B – Rare or endangered in California, but more common elsewhere
3 – Plants for which more information is needed – Review List
4 – Plants of limited distribution – Watch List

The CRPR use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. Most CRPRs read as 1B.1, 1B.2, 1B.3, etc. Note that some Rank 3 plants do not have a threat code extension due to difficulty in ascertaining threats. Rank 1A and 2A plants also do not have threat code extensions since there are no known extant populations in California. Threat Code extensions and their meanings are as follows:

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

3.7 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) was enacted in 1972 in response to the population decline of certain species and populations of marine mammals due to human activities. The MMPA is an ecosystem approach to species management and prohibits the take, harassment, feed, capture or kill of all marine mammals.

4.0 METHODS

4.1 Field Observations

All field data was collected by wildlife biologists Jack Henry and Nicole Bogle using direct observations, measurements, and ocular estimations during site reviews conducted on March 23, 2021. A 200' Lufkin FE200 HI-VIZ measuring tape and Forestry Pro (Nikon Laser Range Finder) was used for recording distances to the nearest tenth of a foot. Slope percent was measured using a Suunto PM-5/360 PC Clinometer to the nearest degree. The reach of the field observations covered terrestrial and aquatic habitat present within the Project Parcel.

4.2 Review of Scientific Literature

Scientific literature and data have been sourced from multiple locations. The majority of reference material has been sourced from online journal archives and databases. If hardcopies or pdfs could not be acquired the web URL and date of reference is present within the bibliography. Some species data is sourced from agency factsheets such as the U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), and U.S. Fish and Wildlife Service (USFWS). A large portion of data was sourced for this report from a biological assessment prepared by Stillwater Sciences (2016) for Sierra Pacific Industries. It was found this report was did not adequately assess proposed actions on existing resources and thus a new report was drafted.

4.3 Agency Consultation

No state or federal agency was contacted for this report.

4.4 Assessment of ESHAs

Prior to performing the site visit, the Natural Resources Conservation Service Web Soil Survey (WSS) was reviewed to determine if any unique soil types that could support sensitive plant communities and/or aquatic features were present within the BAA. Satellite imagery from the National Agriculture Imagery Project (NAIP), USGS topographic maps, Humboldt County Biological Resources Map, and the National Wetlands Inventory were used to scope for the potential presence of sensitive communities.

Plant communities are classified using both the California Wildlife Habitat Relationship System published by CDFW and A Manual of California Vegetation Second Edition (Sawyer et al 2009). Field data collected during the site visit was compared to existing literature and published data in order to classify and identify sensitive biological communities per federal, state, and local jurisdictions.

4.5 Special Status Species

The scoping procedure to generate the plants and animals listed in this report are generated through a combination of database queries, literature reference, and professional experience. First, databases are

queried for any documented species observations within the nine 7.5' USGS quadrangles around the Project Area. Databases queried for this report include:

- The California Natural Diversity Database (CNDDB).
- The CNPS Inventory of Rare and Endangered Plants of California
- The USFWS Environmental Online Conservation System (ECOS)
- Ebird.org
- iNaturalist.org

Habitat characteristics of the BAA may be used to determine additional species to be addressed in this report that may not be documented within the databases. These species and their current statuses are sourced from these lists:

- USFWS listed of endangered, threatened, candidate species, and proposed threatened and endangered fish, wildlife, and plant species (2021)
- NMFS list of endangered, threatened, candidate, and proposed threatened or endangered fish and wildlife species (2021)
- CDFW Special Animals List (April 2021)
- CDFW Special Vascular Plants, Bryophytes, and Lichens List (April 2021)
- CDFW State and Federally Listed Endangered, Threatened, and Rare Plants of California (April 2021)

Each species status within the BAA is evaluated and summarized. A conclusion is made for each species per the following criteria:

- No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

- Unlikely Potential. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

- Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

- High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

- Present. Species is observed on the site or has been recorded (i.e., CNDDB, other reports) on the site recently.

The Interactive Distribution Map v2.02 available through Calflora was utilized as a litmus test to check for potential occurrences within the BAA. This data was matched with the Jepson eflora interactive GIS which utilizes specimen records from the Consortium of California Herbaria (CCH). These two GIS databases coupled with personal experience and knowledge was used to generate the Sensitive Plant Species list. Web URLs for these resources are included below:

http://www.calflora.org/entry/dgrid.html?crn=931 (the final three digits represent the species search)

&
http://ucjeps.berkeley.edu/eflora/ (CCH specimen record GIS data can be found in the bottom right-hand corner of each web page for individual species)

5.0 COASTAL RESOURCE EVALUATION

5.1 Terrestrial Habitat

The climate can be characterized by high-intensity rainfall over winter and cool summers. Annual mean rainfall is approximately 39 inches (streamstats.usgs.gov). Elevations within the BAA range from 0' to 35' above mean sea level. Slopes in the BAA vary from gradual to moderate and drain towards Humboldt Bay and the Pacific Ocean.

Terrestrial habitats present within the BAA consist of a mixture of Barren, Urban, Coastal Scrub, and Marine. The most prominent habitat within the BAA is barren, covering approximately 70% of the terrestrial area in the BAA. Marine habitat within the BAA makes up a small strip of fore-dune along the NW boundary of the BAA. A map of terrestrial habitats can be found in Appendix 4.

5.1.1 Barren and Urban

Approximately 70% of the Project Parcel is paved with asphalt and does not display any vegetation community. This paved area appears similar to natural Barren habitat but does not provide equivalent habitat potential. Natural Barren habitat can be important non-vegetated habitat for wildlife when juxtaposed with natural vegetation or occurs on special features (i.e. cliffs). Barren habitat within the BAA consists entirely of paved anthropogenic surfaces and does not provide any potential habitat for wildlife. There are small islands within Barren habitat that displays ornamental vegetation or margins of paved surfaces that contain ruderal herbaceous communities. These areas are considered Urban habitat and include two areas containing vegetation that are considered Non-ESHA. The Project Area contains one location approximately 9,600 sq. ft. of historically impacted developed dune habitat. This area is dominated by non-native annual grass species, mostly *Anothxanthum odoratum*. This small vegetated area is isolated from other natural areas as it is surrounded by paved surfaces. This developed dune area offers no wildlife habitat value and minimal plant habitat value given its isolation. As a result of the lack of habitat value and fragmentation of this site this area has a low potential of offering quality habitat if restored. There is a second vegetated area located between the project area and existing paved road that accesses the neighboring industrial complex. This area contains a small community of wax myrtle within a ornamental greenbelt. The northern portion of this area is dominated by multiple ornamental shrubs with the wax myrtle becoming established within. The southern portion is dominated by nonnative ruderal herbaceous plants and also shows signs of yellow bush lupine encroachment. Both locations lack value from potential restoration and are not considered to qualify as ESHA. The Project Area does not contain any natural vegetation communities.

5.1.2 Coastal Scrub

The second most prominent terrestrial habitat type within the BAA is Coastal Scrub habitat (CSC). CSC within the BAA consists of a mosaic of vegetated dune shrublands interspersed with small openings dominated by nonnative annual grasses. The three most commonly encountered vegetation alliances within the CSC consist of *Morella californica* Natural Shrubland Alliance (wax myrtle), *Anthoxanthum odoratum – Holcus lanatus* Semi-natural Herbaceous Alliance (sweet vernal grass – Yorkshire fog), and *Briza maxima* Semi-natural Herbaceous Alliance (greater quaking grass). The wax myrtle shrubland alliance is focused along the margins of New Navy Base Rd. Herbaceous ground cover varies from none in areas with high canopy closure to dispersed cover of ruderal herbaceous species where canopy allows

light penetration. *Morella californica* Natural Herbaceous Alliance has been identified by CDFW and CNPS as sensitive, thus qualifying as an ESHA. The additional semi-natural herbaceous alliances represent degraded dune habitat and have the potential to be restored. This restoration potential qualifies these natural communities as ESHA as well.

5.2 Waters and Wetlands

The BAA does not overlap with any documented Waters of the U.S. The BAA does contain mapped NWI (National Wetland Inventory) potential wetlands (Appendix 3). This database was mapped using satellite imagery and no wetland delineations are known to have occurred on site.

5.2.1 Waters of the State

Humboldt Bay is located outside the eastern portion of the BAA. Humboldt Bay is the largest estuarine habitat north of the San Francisco Bay and ecologically provides high habitat value for fish species, amphibian species, and bird species with aquatic life histories (Humboldt County 2014, Dyett and Bhatia 2002). There are no Waters of the State known to occur within the BAA.

5.2.2 Wetlands

The BAA contains potential mapped wetland features from the NWI database. These features consist of Freshwater Emergent Wetlands and Freshwater Forested Shrublands mapped from desk review of arial imagery. The closest mapped potential wetland feature is over 250' from Project Area. No potential wetland indicators were observed within 200' of the Project Area. A wetland delineation is not necessary to protect the potential features that occur in the western portion of the Project Parcel. Additional discussion on wetland protections can be found in Section 6.2.

5.3 Sensitive and Protected Species

This report identifies 13 special status birds, one special status mammals, one special status amphibian, and two special status invertebrates to have potential habitat present within the BAA. The Project Area does not contain any potential habitat for these species.

5.3.1 Special Status Birds

- **American Peregrine Falcon** (*Falco peregrinus anatum*)

  Status: CESA de-listed (November 4, 2009), ESA de-listed (August 25, 1999), G4T4, S3S4, CDFW Fully Protected and CDF Sensitive Species

  Key Habitat: Peregrine falcons breed near wetlands, lakes, riparian areas, or other water, mostly on high cliffs, ledges and rock outcroppings in woodland, forest, and coastal habitats (Polite and Pratt 1990). There has been recent documentation of peregrine falcon nests in old growth redwood snags (Buchanan et al. 2014).

  Status within BAA: The CNDDB does not document any peregrine falcon observations within the BAA. This species has been included given the potential foraging habitat present within the BAA and presence of tall man-made structures, suitable for perching and/ or hunting at the former Samoa pulp mill. The nearest known Peregrine falcon nest is approximately 2 miles east of proposed Project Area. Peregrine Falcons have a high potential of being observed within the BAA. This species has a moderate potential to be nesting in the BAA.

- **Bald Eagle** (*Haliaeetus leucocephalus leucocephalus)*

Status: Federally protected under Bald and Golden Eagle Act, De-listed from ESA in 2007, CESA Endangered, G5, S3, BLM Sensitive Species, CDF Sensitive Species, USFS Sensitive Species, CDFW Fully Protected, USFWS Birds of Conservation Concern

Key Habitat: Bald eagles are rare to uncommon residents and locally rare breeders in Humboldt County (Harris 2005). Bald Eagles require large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. Nesting/roosting habitat consists of tall trees with either broken tops or stout branches denude of vegetation. Bald Eagles nest most frequently in stands with less than 40% canopy cover (Polite C and Pratt J. 1990).

Status within BAA: The CNDDB does not document any bald eagle observations within the BAA. Nearby Humboldt Bay offers excellent foraging for bald eagles, the BAA lacks sufficient snags or nesting platforms. The potential to observe bald eagles within the BAA is moderate. The potential for bald eagles to be nesting within the BAA is unlikely.

- **Bank Swallow** (*Riparia riparia*)

  Status: CESA Threatened, G5, S2

  Key Habitat: Bank swallows nest colonially along cliffs made of friable soils, sand, or loose rock (Hunter et al 2005). Breeding habitat always consists of vertical bluffs at least 1 m in height (Garrison 1998). Only five breeding records are known in Humboldt County from a study by Talmadge (1947). These records represent a stark contrast from the known distribution in California (Hunter et al 2005). Bank swallows are known to concentrate foraging above wetlands, riparian areas, and open meadows but have been observed above closed forest canopies on occasion (Garrison 1998). This species is known to colonize new sites when habitat is available (Hunter et al 2005).

  Status within BAA: Of the five known breeding records in Humboldt County, none of them occur within the BAA. No friable bluff features are present within the BAA. There is no potential for bank swallow to be nesting within the BAA.

- **Burrowing Owl** (*Athene cunicularia*)

  Status: S3, CDFW SSC (Species of Special Concern)

  Key Habitat: Mainly grasslands, but can inhabit landscapes heavily influenced by human activity (Haug et al., 1993). The main habitat requirement of the burrowing owl is the availability of burrows and short vegetation (Shuford et al. 2008)

  Status within BAA: According to eBird, there are multiple observations of burrowing owl on the Samoa Peninsula, all of which occur outside the BAA. Limited data is available on the breeding status of this population. The potential for burrowing owls to be observed within the BAA is moderate. The potential for burrowing owl to be nesting within the BAA is unlikely.

- **Brant** (*Branta bernicla*)

  Status: S2, CDFW SSC (Species of Special Concern)

  Key Habitat: Brant utilize the California coastal region for winter staging, primarily in the spring and fall, and concentrate in areas with quality eel grass beds, such as Humboldt Bay, Bodega Bay, Pt. Reyes, Morro Bay and San Diego Bay (Shuford et. al. 2006)

Status within BAA: Humboldt Bay supports a large number of non-breeding Brant in the spring, winter and fall with a few individuals staying into the summer months (Shuford et. al. 2006) There is no potential for this species to be observed within the BAA.

- **California Ridgway's Rail** (*Rallus obsoletus obsoletus*)

  Status: ESA Endangered, CESA Endangered, G5T1, S1, CDFW Species of Special Concern, North American Birds of Conservation Initiative Red Watch List

  Key Habitat: As of 2014 the Clapper Rail (*Rallus longirostris*) was split into three different subspecies including the California Ridgway's rail (*Rallus obsoletus obsoletus*). Rails are secretive wading birds that prefer undisturbed salt marshes. Rails prefer emergent wetland vegetation usually containing pickleweed (*Salicornia spp.*) and cordgrass *(Spartina spp.*) (Harvey 1990). Liu et al (2012) found this species densities increased in marshes with low area to perimeter ratios; rails do not prefer linear stretches of marsh.

  Status within BAA: There are no documented observations of this species within the CNDDB. Only two California Ridgway's rail observations exist in Humboldt County, both from 1932 (CNDDB). It is unlikely for this species to be nesting within the BAA.

- **Caspian Tern** *(Hydroprogne caspia)*

  Status: USFWS-BCC-Birds of Conservation Concern

  Key Habitat: Nests on sandy or gravelly beaches in small colonies along the coast and inland. Freshwater lakes and marshes, brackish or salt waters of estuaries and bays (Wires et. al. 2000)

  Status within BAA: There are documented observations of Caspian Tern within the BAA. This species is present within the BAA as wintering and migration populations only; this species does not breed in Humboldt County (Collis et. al. 2012). There is no potential for this species to be nesting within the BAA.

- **Long-billed Curlew** (*Numenius americanus*)

  Status: S2, USFWS BCC

  Key Habitat: Dry grasslands and shrub savannahs are the traditional breeding habitats of Long-billed Curlews. They also nest in grain fields and pastures. During migration and winter, they can be found on coastal mudflats and marshes, and less commonly in fields and grasslands (Saalfeld et. al. 2010).

  Status within BAA: There are documented observations of long-billed curlews in the CNDDB database and eBird within the BAA. This species is present within the BAA (wintering and migration) but does not breed in Humboldt County (Leeman and Colwell 2005). There is no potential for this species to be found nesting within the BAA.

- **Marbled Murrelet** (*Brachyramhpus marmoratus*)

  Status: ESA Threatened, CESA Endangered, G3G4, S1, CDF Sensitive Species, IUCN Endangered, North American Bird Conservation Initiative Red Watch List

  Key Habitat: Marbled Murrelet occurs year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal, Santa Barbara Co. (Sowls et al. 1980, cited in Sanders 1990). Roosts/Nests up to 50 miles inland within stands of mature redwood or dense mature conifer forests (USFWS 1997). Murrelets choose timber stand of varying sizes but almost always select

stands dominated by coastal redwood. There is only one record of a marbled murrelet nesting in a non-redwood site (Hunter et al 2005).

Status within BAA: The CNDDB does not display any documented observations of marbled murrelet within the BAA. There is no potential for marbled murrelet habitat within the BAA. There is no potential for marbled murrelets to be nesting within the BAA.

- **Mountain Plover** (*Charadrius montanus*)

  Status: G3, S2S3, CDFW Species of Special Concern, BLM Sensitive Species, IUCN Near Threatened, North American Birds Conservation Initiative Red Watch List, USFWS Bird of Conservation Concern

  Key Habitat: This species does not nest in the state of California (Harvey 1990, Hunting and Edson 2008). Conservation concern for this species is focused on wintering habitat in California. Mountain plover wintering habitat is focused along the Central and San Joaquin Valley, usually consisting of open plains with low vegetation (Harvey 1990). Observations of mountain plovers have occurred in Humboldt County although the general area is not considered part of their wintering range, possibly associated with the loss of tidal marshlands to agriculture. Graul and Webster (1976) found strong associations with mountain plovers and short-grass prairie habitats.

  Status within BAA: Only two individual occurrences in Humboldt County were recorded in CNDDB. Shuford et al. (2008) described Humboldt County has having a single "Recent Extralimital Record." The nearest observation of a mountain plover was an apparent single individual on the South Spit in 2009 and 2010. No wintering populations of mountain plover have been observed in Humboldt County. The potential for this species to be present in the BAA is unlikely.

- **Northern Harrier** (*Circus hudsonius*)

  Status: G5, S3, CDFW Species of Special Concern Priority 3, IUCN Least Concern

  Key Habitat: Northern harriers are considered an uncommon breeder in Humboldt County (Hunter et al 2005). Northern harriers prefer uninterrupted spans of marshland, grassland or lightly grazed pasturelands with minor tree components (Davis and Niemela 2008, Hunter et al 2005, Massey et al 2008). This species are ground nesters, preferring dense undisturbed herbaceous or shrub vegetation for nest locations. Vegetation composition and height selected by harriers varies by region (Davis and Neimela 2008), (Herkert et. al. 1999) found northern harriers would not initiate nesting attempts in pasturelands that had management entries within the last 12 months.

  Status within BAA: Multiple eBird records show northern harriers are present within the BAA. Coastal scrub and grassland habitats present within the BAA provide high quality habitat for this species. Northern harriers are present within the BAA.

- **Northern Spotted Owl** (*Strix occidentalis caurina*)

  Status: ESA and CESA Threatened, G3G4, S1, CDF Sensitive Species, IUCN Endangered, North American Birds of Conservation Initiative Red Watch List

  Key Habitat: Humboldt County supports a substantial number of breeding pairs of Northern Spotted Owl (Hunter et al. 2005). Northern spotted owls reside in dense, old-growth, multi-layered mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2300m (0 – 7,600'). They typically nest in tree or snag cavities, or in broken tops of large trees (Polite C.

1990). In northwestern California, northern spotted owls also occur in second growth redwood-tanoak stands that retain suitable trees for nests and support high densities of their preferred prey, dusky-footed woodrats (Hunter et al. 2005).

Status within BAA: The BAA does not contain any potential northern spotted owl habitat. There are no known records of spotted owl occurring within the BAA. There is no potential for northern spotted owl to be present within the BAA.

- **Short-Eared Owl** (*Otis flammeus*)

  Status: G5, S3, CDFW SSC (Species of Special Concern)

  Key Habitat: Short-eared owls have been observed in treeless to partially treed habitats, marshes, grasslands, meadows, prairie, undisturbed pastures, and undeveloped industrial sites (Hunter et al 2005). Short-eared owls nesting habitat is reliant on the availability of undisturbed, tall grass.

  Status within BAA: There are no records of Short-eared owls within the BAA. There is one documented occurrence in Fairhaven Ca, ~ 1.5 miles south of the BAA in 1999 (eBird.org). There is a high potential for this species to be foraging or nesting within the BAA.

- **Western Snowy Plover** (*Charadrius nivosus nivosus*)

  Status: ESA Threatened, G3T3, S2S3, CDFW Species of Special Concern, North American Birds of Conservation Initiative Red Watch List, USFWS Bird of Conservation Concem

  Key Habitat: Western snowy plovers breed along coastal beaches and dune habitats of California (USFWS 2010). They prefer natural vegetation communities with unstable substrates for nesting in. This includes beaches, dunes, and river bars (Harris et al 2005, USFWS 2010, Tuttle et al 1997). Although ocean-fronted sandy features are most often selected by breeding pairs, reproductive success is greater along river bars (Herman and Colwell 2015).

  Status within BAA: Breeding populations of Snowy Plovers are present along the South Spit of Humboldt Bay (Feucht et al 2018, CNDDB). There is open, coastal dune habitat suited for snowy plovers present within the western portion of the BAA. There is a moderate potential for snowy plovers to be nesting within the BAA, however, there is no potential habitat within the Project Area.

- **White-tailed Kite** (*Elanus leucrus*)

  Status: G5, S3S4, CDFW Fully Protected, BLM Sensitive, IUCN Least Concern

  Key Habitat: White-tailed kite presence is strongly correlated with foraging habitat. They prefer tall grasslands 1'-4' in height often with a layer of thatch at the base characteristic of undisturbed grasslands. They are often found in coastal lowlands and are rarely found inland (Harris et al 2005).

  Status within BAA: There are three eBird observation records of white-tailed kites in the BAA. No potential nesting habitat for this species occurs within the Project Area. This species is present within the BAA.

- **Western Yellow-billed Cuckoo** (*Coccyzus americanus*)

  Status: ESA Threatened, CESA Endangered, G5T2T3, S1, BLM Sensitive Species, USFS Sensitive Species, North American Birds of Conservation Initiative Red Watch List, USFWS Bird of Conservation Concern

  Key Habitat: Yellow-billed Cuckoos nest in dense riparian tree habitats with high insect densities. This species prefers slow moving rivers with willows (*Salix spp.*) and black cottonwoods (*Populus trichocarpa*) being strong components of the riparian corridor (CNDDB, Gaines 1990). It has been documented using orchards in close proximity to riparian corridors (Gaines 1990).

  Status within BAA: There are no documented observations of yellow-billed cuckoo present within the BAA. Historic observations of single birds have occurred throughout Humboldt County (Hunter et al 2005). Two probable breeding pairs have been observed near Cock Robin Island in 2010 and 2013 (CNDDB). Coastal scrub and dune habitats present within the BAA do not offer habitat given the lack of perennial surface waters. There is an unlikely potential for western yellow-billed cuckoos to be present in the BAA.

- **Yellow Rail** (*Coturnicops noveboracensis*)

  Status: G4, S1S2, CDFW Species of Special Concern, IUCN Least Concern, North American Birds of Conservation Initiative Red Watch List, USFWS Bird of Conservation Concern

  Key Habitat: Yellow rails are secretive birds that lay eggs in cryptic ground nests in wet marshlands. Bookhout and Stenzel (1987) found this species prefers to nest in marshlands dominated by sedges (*Carex spp.*) with shallow (<30 cm) surface water. This species had not been documented breeding on the west coast until the discovery of a disjunct breeding population in southern Oregon detailed in Stern et al (1993). There is very little data on their wintering habitat requirements.

  Status within the BAA: The CNDDB contains observations of yellow rail within the BAA. The observation within the BAA consists of an individual bird flushed off of a pond by a hunting dog in 1987 (CNDDB). There are four documented observations of this species in Humboldt County, none of which conclude breeding status. There is no potential marshland habitat within the Project Area. Yellow rails are present within the BAA.

- **Vaux's Swift** (*Chaetura vauxi*)

  Status: G5, S2S3, CSSC Priority 2 (breeding), IUCN Least Concern

  Key Habitat: Northern California summer resident. Swifts nest in large hollow trees and snags. They prefer redwoods and Douglas-firs, especially tall and burned-out stubs. Also nests in other large conifers and occasionally in chimneys (Granholm 1990). Vaux's swifts were consistently more abundant in old-growth stands and were strongly correlated with densities of live trees >40" DBH & densities of snags >20" DBH (Lundquist and Mariani 1991).

  Status within BAA: There are no documented observations of Vaux's swift within the BAA. The BAA does not contain conifer timberlands nor does the BAA contain trees with large enough diameters at adequate densities to qualify as potential nesting habitat for Vaux's swift. It is unknown if vacant structures within the BAA provide potential habitat for this species. The potential for Vaux's swift to be nesting in the Project Area is unlikely.

5.3.2 Special Status Mammals

- **American Badger** (*Taxidea taxus*)

  Status: G5, S3, CDFW Species of Special Concern, IUCN: Least Concern

  Key Habitat: Badgers are generalist species often found in drier open stages of most shrub, forest, and herbaceous habitats with sandy soils (Ahlborn 1990). They have historically been found throughout the state except for the northern north coast (Grinnell et al 1937 in Ahlborn 1990). Apps et al (2002) found positive habitat correlations with specific soil parent materials, sandy-loam soil textures, canopy openness, agricultural habitats, and linear disturbances (roads). Badger habitat selection negatively correlated with canopy cover, wet vegetation, and terrain ruggedness (Apps et al. 2002).

  Status within BAA: There are no documented observations of American badger within the BAA. Terrestrial habitat characteristics present in the BAA do meet badger preferences detailed in the Apps et al (2002) study. No badger burrows were observed within the Project Parcel. American badger presence within the BAA is unlikely, badgers have been historically rare on the north coast (Grinnell et al 1937 in Ahlborn 1990).

- **Fringed Myotis** (*Myotis thysanodes*)

  Status: G4, S3, BLM: Sensitive Species, IUCN: Least Concern, USFS: Sensitive, Western bat Working Group (WBWG): High Priority

  Key Habitat: Fringed myotis are a gleaning bat that usually roost in caves, rock crevices, or anthropogenic structures. Unlike other parts of their range, these bats are known to be an active tree-roosting species in Humboldt County. Weller and Zabel (2001) found that in Pilot Creek (Humboldt County) fringed myotis used snag structures at least 11" DBH as day roosts (not maternal) and displayed low site fidelity which is common in tree-roosting species. They found the greatest predictor of fringed myotis day-use roost was snag density given the low site fidelity and roost size variability (Weller and Zabel 2001). Lacki and Baker (2007) found maternal roosts were always located in rock crevices in the state of Washington with Hayes (2011) concluding similar results in Colorado.

  Status within BAA: There are no known documented observations of fringed myotis in the BAA (CNDDB). The BAA does not contain any *natural* structures that are capable of providing maternal roost sites for fringed myotis, however, the Project Parcel and BAA do contain large, unoccupied or abandoned structures capable of providing roost sites for this species. Bat surveys conducted in Jan 2021 by Greg Tatarian for Nordic Aquafarms on the adjacent parcel (APN 401-112-210-000) found no evidence of fringed myotis in any of the buildings. There is potential for fringed myotis to occur within the defunct buildings located on the Project Parcel, however, these buildings will not be utilized for cannabis cultivation or cultivation related activities. There is a moderate potential for fringed myotis bat to be found within the BAA.

- **Humboldt Marten** (*Martes caurina humboldtensis*)

  Status: State Candidate for Threatened, G5T1, S1, CSSC, USFS: Sensitive Species

  Key Habitat: Humboldt marten were once thought to be extinct but are now known from three remnant populations in the Pacific Northwest. One population is known from California in the northeastern portion of Humboldt County. Additional survey efforts occurred in 2009 in Mendocino but failed to detect any martens, further strengthening evidence that the Klamath

population is the last (Slauson et al. 2009). Slauson et al. (2002) found that Humboldt Martens selected forest stands located in the most mesic aspects with dense shrub cover in close proximity to large diameter mature conifer species.

Status within BAA: There have been no documented observations of Humboldt marten within the BAA. The BAA does not contain any potential Humboldt marten habitat. There is no potential for Humboldt marten to be found within the BAA.

- **Long-eared Myotis** (*Myotis evotis*)

  Status: G5, S3, BLM Sensitive Species, IUCN Least Concern

  Key Habitat: Long-eared myotis are relatively widespread across California. They are known to roost individually or in small groups of less than 10 individuals (Harris 1990, Kunz and Lumsden 2003). Kunz and Lumsden (2003) described them as tree-roosting bats as well as previous written descriptions in literature (Rancourt et al 2005). Rancourt et al (2005) found in their study that rock crevices were chosen as maternity roosts more often than stump or snag structures. This species also has a low roost fidelity meaning they often move roost locations with an acute area, <400m (Kunz and Lumsden 2003). It is hypothesized this species would select rock crevices over snag/stump structures because of their potential benefits to reproductive fitness (Rancourt et al 2005). Kalcounis-Rüppel et al (2005) found that tree dwelling bats relative to random trees select trees that are larger diameter, taller, closer to open surface water, and are located in more open canopies.

  Status within BAA: There are no known documented observations of long-eared myotis in the BAA (CNDDB). The BAA does not contain any *natural* structures that are capable of providing maternal roost sites for long-eared myotis, however, the Project Parcel and BAA do contain large, unoccupied or abandoned structures capable of providing roost sites for this species. Bat surveys conducted in Jan 2021 by Greg Tatarian for Nordic Aquafarms on the adjacent parcel (APN 401-112-210-000) found no evidence of long-eared myotis bat in any of the buildings. There is potential for long-eared myotis to occur within the defunct buildings located on the Project Parcel, however, these buildings will not be utilized for cannabis cultivation or cultivation related activities. There is a moderate potential for long-eared myotis to be found within the BAA.

- **North American Porcupine** (*Erethizon dorsatum*)

  Status: G5, S3, IUCN Least Concern

  Key Habitat: Most common in montane conifer, Douglas-fir, alpine dwarf-shrub, and wet meadow habitats. Porcupines are less common in hardwood, hardwood-conifer, montane and valley-foothill riparian, aspen, pinyon-juniper, low sage, sagebrush, and bitterbrush. Dens in caves, crevices in rocks, cliffs, hollow logs, snags, burrows of other animals; will use dense foliage in trees if other sites are unavailable. In spring and summer, feeds on aquatic and terrestrial herbs, shrubs, fruits, leaves, and buds. Winter diet consists of twigs, bark, and cambium of trees, particularly conifers, and evergreen leaves (Johnson and Harris 1990).

  Status within BAA: There are no documented observations of porcupines within the BAA. The BAA contains marginal potential coastal scrub habitat consisting of wax myrtle and ornamental shrub as well as some fragmented tree habitat, including Monterey cypress and beach pine. Porcupine presence within the BAA is unlikely.

- **Pallid Bat** (*Antrozous pallidus*)

  Status: G5, S3, CDFW Species of Special Concern, Working Bat Group High Priority, BLM and USFS Sensitive Species, IUCN Least Concern

  Key Habitat: Pallid bats are found in semi-arid and arid climates across western North America. They have been found in deserts, shrub-steppe, grasslands, canyon lands, ponderosa woodlands, mixed conifer forest, oak woodland, and riparian forest (Hayes and Wiles 2013). Pierson and Rainey (2007) conclude that in northern California this species has a strong association with oak woodlands/savannah where it forages and roosts. It is also often found under bridge structures in northern California (Pierson and Rainey 2007). This species roosts in moderate size groups ranging from 20 – 200 individuals and often with other bat species (Vaughan and O'Shea 1976).

  Status within BAA: There are no known documented observations of Pallid bat in the BAA. The BAA does not contain any *natural* structures that are capable of providing maternal roost sites for Pallid bat, however, the Project Parcel and BAA do contain large, unoccupied or abandoned structures capable of providing roost sites for this species. Bat surveys conducted in Jan 2021 by Greg Tatarian for Nordic Aquafarms on the adjacent parcel (APN 401-112-210-000) found no evidence of Pallid bat in any of the buildings. There is potential for Pallid bat to occur within the defunct buildings located on the Project Parcel, however, these buildings will not be utilized for cannabis cultivation or cultivation related activities. There is a moderate potential for Pallid bat to be found within the BAA.

- **Townsend's Big-Eared Bat** (*Corynorhinus townsendii*)

  Status: G3G4, S2, CDFW Species of Special Concern Priority 2, BLM Sensitive Species, USFS: Sensitive Species, IUCN Least Concern, Western Bat Working Group: High Priority

  Key Habitat: Townsend's big-eared bat is unequivocally associated with areas containing caves and cave-analogs for roosting habitat. Beyond the constraint for cavernous roosts, habitat associations become less well defined. Generally, Townsend's big-eared bats are found in the dry uplands throughout the West, but they also occur in mesic coniferous and deciduous forest habitats along the Pacific coast (Kunz and Martin 1982). Townsend's big-eared bat requires spacious cavern-like structures for roosting (Pierson 1998) during all stages of its life cycle. Typically, they use caves and mines, but Townsend's big-eared bat have been noted roosting in large hollows of redwood trees, in attics and abandoned buildings (Dalquest 1947), and under bridges (Fellers and Pierson 2002). In coastal California, five of six known maternity colonies were in old buildings; the sixth was in a cave-like feature of a bridge (Fellers and Pierson 2002).

  Throughout its western range, Townsend's big-eared bat roosts in a variety of vegetative communities, and at a range of elevations and there appears to be little or no association between local surface vegetative characteristics and selection of particular roosts in either eastern or western populations (Wethington et al. 1997, Sherwin et al. 2000). This suggests that the bats select roosts based on internal characteristics of the structure rather than the surrounding vegetative community. The Critical period for maternity roosts is May 15 - August 15 (Gruver and Keinath 2006).

  Status within BAA: The There are no known documented observations of Townsend's big-eared bat in the BAA. The BAA does not contain any *natural* structures that are capable of providing maternal roost sites for Townsend's big-eared bat, however, the Project Parcel and BAA do contain large, unoccupied or abandoned structures capable of providing roost sites for this species.

Bat surveys conducted in Jan 2021 by Greg Tatarian for Nordic Aquafarms on the adjacent parcel (APN 401-112-210-000) found no evidence of Townsend's big-eared bat in any of the buildings. There is potential for Townsend's big-eared bat to occur within the defunct buildings located on the Project Parcel, however, these buildings will not be utilized for cannabis cultivation or cultivation related activities. There is a moderate potential for Townsend's big-eared bat to be found within the BAA.

- **Sonoma Tree Vole** (*Arborimus pomo*)

  Status: G3, S3, CDFW Species of Special Concern, IUCN Near Threatened

  Key Habitat: These small arboreal mammals are mainly associated with mature conifer forests. They construct nests of conifer needles often located in trees but seldom found at the base (Brylski and Harris 1990). Chinnici et al. (2011) found that nests were more prominent in mature stands with higher densities of Douglas-fir.

  Status within BAA: There are no documented observations of Sonoma tree vole in the BAA. There are no trees or forest stands that display late-seral or mature characteristics within or near the BAA. There is no potential for Sonoma tree vole to be found within the BAA.

- **White-footed vole** (*Arborimus albipes*)

  Status: G3G4, S2, CSSC Priority 2, IUCN Least Concern

  Key Habitat: The range of the white-footed vole species in California is not well understood as indicated by Ingles (1965). Maser and Brodie (1966) suggested that the species occupies a coastal strip of unknown width. White-footed voles are a terrestrial species related to mature forests with large trees, 20-100% crown closure, and riparian habitats. The leaves of red alder make up a large portion of the diet of this species. This vole tends to nest on the ground, under logs, stumps, or rocks (Zeiner et al. 1990). Alteration or degradation of riparian habitats as has occurred in past logging practices may have been detrimental to this species, but data to determine population status is lacking (Williams 1986).

  Status within BAA: There are no known observations of white-footed vole in the BAA. There is no forested habitat within the BAA. There is no potential for white-footed vole to be found in the BAA.

5.3.3. Special Status Amphibians & Reptiles

- **Coastal Tailed Frog** (*Ascaphus truei*)

  Status: G4, S3S4, CDFW Species of Special Concern Priority 2 and IUCN Least Concern

  Key Habitat: Coastal tailed frog is regarded to be an uncommon inhabitant of Humboldt County but has been shown to be quite common in the correct habitat characteristics. Coastal tailed frogs occur in permanent streams and are highly dependent on water temperature (Morey 1990). Welsh and Hodgson (2011) found that canopy cover is the best predictor of this species' presence. Pacific tailed frogs were never observed within streams with less than 83% canopy cover (Welsh and Hodgson 2011). Aside from cold water temperature tailed frogs select habitat with coarse substrate (cobbles and boulders) and steep gradients (Thomson et al. 2016).

Status within BAA: The CNDDB shows no documented occurrences of coastal tailed frog within the BAA. There are no watercourses within the BAA. The BAA does not contain any potential tailed frog habitat. There is no potential for this species to be found in the BAA.

- **Foothill Yellow-legged Frog** (*Rana boylii*)

  Status: Candidate for CESA Threatened, G3, S3, CDFW Species of Special Concern Priority 1, USFS Sensitive Species, BLM Sensitive Species, IUCN Near Threatened

  Key Habitat: Foothill yellow-legged frog's habitat selection as many frogs, depends on their life stage. This species is primarily found in and around streams with shallow, flowing water with some cobble-sized substrate (Hayes and Jennings 1988). Egg masses require low flowing stream locations with some form of anchor and protection such as behind or under a rock (Thomson et al. 2016). Not much is known about foothill yellow-legged frog terrestrial habitat selection. Bourque (2008) found adult foothill yellow-legged frog an average distance from water of 3 m but also found select individuals up to 40 m from any surface water. This studied evaluated an inland population in Tehama County and coastal populations in more mesic timberlands may disperse farther distances more regularly.

  Status within BAA: There are no documented observations of foothill yellow-legged frogs in the BAA. There is no potential habitat due to the lack of freshwater watercourses in the BAA. There is no potential for foothill yellow-legged frog to be found within the BAA.

- **Northern Red-Legged Frog** (*Rana aurora aurora*)

  Status: CDFW Species of Special Concern Priority 2, USFS Sensitive Species, IUCN Least Concern

  Key Habitat: Northern red-legged frog is relatively terrestrial for a ranid frog (Thomson et al. 2016). Adult individuals are common in terrestrial habitats especially over winter or wet periods but they commonly prefer shorelines or stream banks with vegetative cover. Individuals have been observed up to 80 m away from surface water in rainy conditions (Haggard 2000). Reproductive sites require persistent water at least 6" deep with emergent vegetation required to anchor egg masses (Morey and Basey 1990). Jennings et al. (1993) found that intermittent streams chosen by northern red-legged frog for breeding retained surface water year-round.

  Status within BAA: There is one documented observation of this species within the BAA on the northern boundary (off Project Parcel) on iNaturalist. Potential habitat is present in the form of small puddles with potential emergent vegetation. Northern red-legged frogs are present within the BAA.

- **Southern Torrent Salamander** (*Rhyacotriton variegatus*)

  Status: G3G4, S2S3, CDFW Species of Special Concern Priority 1, USFS Sensitive Species, IUCN Least Concern

  Key Habitat: Southern torrent salamander prefers habitat characteristics that correlate with late-seral forests. Coastal coniferous forests that may not be mature enough may be productive enough to create these conditions which include clear, cold waters with loose, coarse substrates that lack overall sediments loads (Welsh and Lind 1996). Interstitial spacing between gravels and cobbles is very important for low flow periods within intermittent low-order streams occupied by southern torrent salamander. This may be why southern torrent salamanders also prefer high gradient

streams capable of flushing out sediment loads and maintaining coarse substrates. Torrent salamander presence is also highly associated with canopy cover due to its strong correlation with temperature control and hydrologic period (Thomson et al 2016).

Status within BAA: There are no documented observations of southern torrent salamander within the BAA. The BAA does not contain any potential torrent salamander habitat. There is no potential for this species to be found in the BAA.

- **Northwestern Pond Turtle** (*Emys marmorata marmorata*)

  Status: G3G4, S3, CDFW Species of Special Concern Priority 1, BLM Sensitive Species, USFS Sensitive Species, IUCN Vulnerable

  Key Habitat: Northwestern pond turtles are aquatic habitat generalist and can be found in a variety of waterbodies including rivers, streams, lakes, ponds, and marshes. The Northwestern pond turtle has even been observed using ephemeral water features such as vernal pools or settling ponds. These turtles require upland habitat with adequate soil conditions for excavating nests that also lack disturbance. Studies have shown females prefer nesting sites within 100m of a waterbody. Northwestern pond turtles prefer quiet and undisturbed water features with adequate basking substrate such as emergent woody debris or relatively unshaded shorelines (Thomson et al. 2016). They can persist in unfavorable conditions for some period of time (Spinks et al. 2003).

  Status within BAA: There are no documented observations of Northwestern pond turtle within the BAA. The BAA does not contain any potential Northwestern pond turtle habitat. There is no potential for this species to be found in the BAA.

5.3.4 Special Status Invertebrates

- **Behrens' Snail Eating Beetle** (*Scaphinotus behrensi*)

  Status: G2G4, S2S4

  Key Habitat: Limited data exists on Behrens' snail eating beetle. The limited documented occurrences in CNDDB listed habitat type as "coniferous forest." The genus *Scaphinotus* is flightless and limited to moist environments (iNaturalist).

  Status within BAA: Due to the limited recorded occurrences and the lack of data on the Behrens' snail eating beetle, the potential for occurrence within the BAA is limited. Both collections within Humboldt County are from redwood dominated forests.

- **California Floater** (*Anodonta californiensis*)

  Status: G3Q, S2?

  Key Habitat: The California Floater occurs in (freshwater) lakes, slow rivers, and some reservoirs with mud or sand substrates and are typically found at low elevations. Once widespread in California, their distribution is now greatly reduced (Nedeau et al. 2009).

  Status within the BAA: The California floater requires fish bearing watercourses and reservoirs. The BAA lacks watercourses to support this species. There is no potential for this species to occur within the BAA.

- **Crotch Bumble Bee** (*Bombus crotchii*)

  Status: Candidate for CESA Endangered, S1S2, IUCN: Vulnerable

Key Habitat: Crotch's bumblebee inhabits grasslands and shrublands and requires a hotter and drier environment than other bumblebee species. This bumblebee species prefers certain plant generas and species such as: Asclepias, *Chaenactis douglasii*, Lupinus, Medicago, Phacelia, *Salvia officinalis*, Clarkias, Papaver, and Eriogonum.

Status within BAA: The BAA does not overlap with and documented observations of Crotch bumble bee. There is only one documented observation of this species from a 1976 museum collection at Mad River Beach. Due to this species penchant for arid, warm climates, the potential for Crotch bumble bee to be present in the BAA is unlikely.

- **Obscure Bumble Bee** (*Bombus caliginosus*)

  Status: G4? S1S2, IUCN: Vulnerable

  Key Habitat: Obscure bumble bees are known to occur within coastal areas ranging from Santa Barbara, California up to Washington state. They are known to forage on these genera: *Baccharis*, *Cirsium*, *Lupinus*, *Lotus*, *Grindelia*, and *Phacelia* (CNDDB).

  Status within BAA: The BAA does not overlap with any documented observations of obscure bumble bee. All habitats within the BAA provide varying quality of potential habitat for this species. There is a high potential for encountering obscure bumble bee within the BAA.

- **Sandy Beach Tiger Beetle** (*Cicindela hirticollis gravida*)

  Status: S1S2

  Key Habitat: (Limited habitat data) General Habitat: "Coastal zones from San Francisco Bay south to northern Mexico. Micro habitat: Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action."

  Status within BAA: The single occurrence on CDFW RareFind is a historical record. There is potential shoreline beach habitat in the BAA. The exact location is not given and it is presumed extirpated. Given the lack of recorded occurrences, the potential for the Sandy Beach Tiger Beetle to occur in the BAA is unlikely.

- **Western Bumble Bee** (*Bombus occidentalis*)

  Status: Candidate for CESA Endangered, S1, USFS: Sensitive, XERCES: Imperiled

  Key Habitat: This species was once known to be widespread throughout the western United States from central California up to British Columbia (Evans et al 2008). This species was one of the most common bumble bees on the west coast prior to the mid 1990's (Rao and Stephen 2007). This species relies on year-round flower availability for pollen production. Fragmented or isolated patches of habitat are not sufficient enough to support bumble bee populations (Hatfield and LeBuhn 2007).

  Status within BAA: The BAA does not overlap with any documented observation of obscure bumble bee. All habitats within the BAA provide varying quality of potential habitat for this species. There is a high potential for encountering western bumble bee within the BAA.

- **Western Pearlshell** (*Margaritifera falcata*)

  Status: Candidate for CESA Endangered, S1, USFS: Sensitive, XERCES: Imperiled

Key Habitat: Small, clear, stable streams, aggregates in boulder substrates that have low potential for aggradation. Western Pearlshell are reliant on fish host species including: Cutthroat, chinook, coho, steelhead, brown trout and brook trout (Nedeau et al. 2009)

Status within the BAA: The Western pearlshell requires cool, clean perennial watercourses with host fish species present (Nedeau et al. 2009). The BAA lacks fish bearing and freshwater watercourses. There is no potential for Western pearlshell to be found within the BAA.

5.3.5 Special Status Fish Species

There is no potential for any fish species of special concern to be found within the BAA. The BAA does not encompass any waters that are capable of supporting fish species. There is no potential for any impacts to fish species due to observed setbacks from Waters of the United States and Waters of the State.

5.3.6 Plant Species of Special Concern

Scientific Name	Common Name	ESA	CESA	SR	CNPR	Bloom Period	Habitat	Elev (ft)	Potential to Occur in Project Area
Abronia umbellata var. breviflora	Pink sand-verbena	None	None	S2	1B.1	Jun-Oct	Coastal Dunes	0-115	**Unlikely Potential,** Project Area provides marginal degraded coastal dune habitat for this species.
Angelica lucida	Sea-watch	None	None	S3	4.2	May-Sept.	Coastal bluff scrub, coastal dunes, coastal scrub, marshes and swamps (coastal salt)	0-15	**Unlikely Potential,** Project Area provides marginal degraded dune habitat for this species.
Astragalus pycnostachyus var. pycnostachyus	Coastal milk-vetch	None	None	S2	1B.2	(Apr) Jun-Oct	Coastal dunes, marshes, and swamps, coastal scrub; mesic sites in dunes or along streams or coastal salt marshes, wetland coastal marshes, seeps, adjacent sand; Occurs in wetlands	0-100	**Unlikely Potential,** Project Area provides marginal degraded coastal dune habitat for this species.
Bryoria spiralifera	Twisted Horsehair Lichen	None	None	1B.1	S1S2	N/A	North coast conifers, Pacific coast dunes, largest known extant population is on Samoa peninsula, Humboldt Co	0-295	**High Potential,** scattered individual *Pinus contorta var. contorta* within Project Area along eastern Project Parcel boundary provide potential habitat for this species
Bryoria pseudo-capillaris	False grey horsehair lichen	None	None	3.2	S2	N/A	North coast conifers, less common than *B. spiralifera*. Can be located within conjunction with *B. spiralifera*	0-295	**High Potential,** scattered individual *Pinus contorta var. contorta* within Project Area along eastern Project Parcel boundary provides potential habitat for this species
Cardamine angulata	Seaside bittercress	None	None	2B.1	S3	(Jan)Mar-Jul	North coast coniferous forest, lower montane coniferous forest; wet areas, streambanks, Shady thickets, streambanks, forest,	50-3000	**No Potential,** Project Area lacks forested and riparian habitat features required for this species to occur

							redwood forest, mixed evergreen forest, wetland-riparian		
Carex arcta	Northern clustered sedge	None	None	S1	2B.2	Jun-Sep	Bogs and fens, North Coast coniferous forest (mesic)	195-4595	**No Potential**, Project Area lacks bog, fen and forested habitat features required for this species to occur
Carex leptalea	Bristle-stalked sedge	None	None	S1	2B.2	Mar-Jul	Bogs and fens, meadows and seeps (mesic), Marshes and swamps	0 - 2295	**Unlikely Potential**, Project Area lacks bog and fen habitat features required for this species to occur
Carex lyngbyei	Lyngbye's Sedge	None	None	S3	2B.2	Apr.-Aug	Marshes and swamps; brackish or freshwater Brackish areas, coastal, salt-marsh	0 - 35	**Unlikely Potential**, Project Area lacks marsh, swamp or brackish habitat required for this species to occur
Carex praticola	Northern Meadow Sedge	None	None	S2	2B.2	May-Jul	Meadow & seep, Wetland, moist to wet meadows, riparian edges, open forest, coastal prairie, North Coastal Coniferous Forest, meadows	0-10,500	**Unlikely Potential**, Project Area lacks meadow, seep, riparian habitat features required for this species to occur
Castilleja ambigua var. humboldtiensis	Humboldt Bays owl's clover	None	None	S2	1B.2	Apr-Aug	Marshes and swamps (coastal salt)	0-10	**No Potential**, Project Area lacks marsh and swamp habitat for this species
Castilleja litoralis	Oregon paintbrush	None	None	S3	2B.2	Jun	Coastal bluff scrub, Coastal dunes, Coastal scrub	50 - 330	**Unlikely Potential**, not within species elevation range. Project Area contains marginal, degraded dune habitat; However, Project Area is not within species elevation range
Chloropyron maritimum ssp. palustre	Point Reyes birds-beak	None	None	S2	1B.2	Jun-Oct	Marshes and swamps (coastal salt)	0-35	**Unlikely Potential**, Project Area lacks marsh and swamp habitat features required for this species to occur
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	S3	4.3	Feb-Jun (Jul)	Streambanks, sometimes seeps, sometimes roadsides, North coast coniferous forest, riparian forest	35-720	**No Potential,** Project Area lacks forested habitat features required for this species to occur
Collinsia corymbosa	Round-headed Chinese-houses	None	None	S1	1B.2	Apr-Jun	Coastal dunes, Coastal sand dunes, coastal	0-65	**Unlikely Potential**, Project Area contains marginal degraded dune habitat for this species
Erysimum menziesii	Menzies wallflower	E	E	S1	1B.1	Mar-Sep	Coastal dunes, localized on dunes and coastal strand, coastal dunes, headlands, cliffs	0-115	**Unlikely potential**, Project Area contains marginal degraded dune habitat
Erythronium revolutum	coast fawn lily	None	None	S2	2B.2	Mar-Jul (Aug)	Bogs and fens, broadleaved upland forest, North Coast	0-5250	**No Potential,** Project Area lacks bog, fen and forested habitat

							coniferous forest – mesic, streambanks		
Fissidens pauperculus	Minute pocket moss	None	None	S2	1B.2	N/A	North Coast coniferous forest (damp soil)	30-3360	**No Potential,** Project Area lacks forested habitat
Gilia capitata ssp. pacifica	Pacific gilia	None	None	S2	1B.2	Apr-Aug	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland	15 - 5465	**Unlikely Potential,** Project Area lacks coastal bluff scrub, coastal prairie or valley, or foothill grassland habitat
Gilia millefoliata	Dark-eyed Gilia	None	None	S2	1B.2	Apr-Jul	Coastal dunes	5-100	**Moderate Potential,** degraded dune habitat within Project Area offers marginal habitat for this species and it has been observed within the Project Parcel.
Glehnia littoralis ssp. leiocarpa	American Glehnia	None	None	S2 S3	4.2	May-Aug	Coastal dunes	0-65	**Unlikely Potential,** Degraded dune habitat within Project Area offers marginal habitat for this species
Hesperevax sparsiflora var. brevifolia	Short-leaved evax	None	None	S2	1B.2	Mar-Jun	Coastal bluff scrub (sandy) Coastal dunes, Coastal prairie	0-750	**Unlikely Potential,** Degraded dune habitat within Project Area offers marginal habitat for this species
Lasthenia californica ssp. macrantha	Perennial goldfields	None	None	S2	1B.2	Jan-Nov	Coastal bluff scrub, coastal dunes, coastal scrub, grassland, dunes along immediate coast Northern coastal scrub	15-1725	**Unlikely Potential,** Degraded dune habitat within Project Area offers marginal habitat for this species
Lathyrus japonicus	Seaside Pea	None	None	S2	2B.2	May-Aug	Coastal dunes, coastal beaches and dunes, coastal strand	5-100	**Unlikely Potential,** Degraded dune habitat within Project Area offers marginal habitat for this species
Lathyrus palustris	Marsh Pea	None	None	S2	2B.2	Mar-Aug	Bogs & fens, lower montane coniferous forest, marshes and swamps, north coast coniferous forest, coastal prairie, coastal scrub; moist coastal areas, moist or wet coastal areas freshwater-marsh, bogs & fens	5-330	**Unlikely Potential,** Degraded dune habitat within Project Area offers marginal habitat for this species
Layia carnosa	Beach layia	None	None	S2	1B.1	Mar-Jul	Coastal dunes, Coastal shrub (sandy)	0-195	**Moderate Potential,** degraded dune habitat within Project Area offers marginal habitat for this species and it has been observed within the Project Parcel.
Lilium kelloggii	Kellogg's Lily	None	None	S3	4.3	May-Aug	Openings, roadsides, lower montane coniferous forest,	10 - 4265	**No Potential,** Project Area lacks coniferous forest habitat features required for

							North Coast coniferous forest		this species to occur
Lilium occidentale	Western lily	E	E	S1	1B.1	Jun-Jul	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)	5-605	**Unlikely Potential,** Project Area lacks bogs, fens, coastal scrub within Project Parcel may provide marginal potential habitat
Lycopodium clavatum	Running-pine	None	None	S3	4.1	N/A	Lower montane coniferous forest, north coast coniferous forest, marshes and swamps; Forest understory, edges, openings, roadsides; mesic sites with partial shade and light, moist ground, swamps, on trees, freshwater-marsh	140-4020	**No Potential,** Project Parcel lacks marshes, swamps and forested habitat features required for this species to occur
Monotropa uniflora	Ghost Pipe	None	None	S2	2B.2	Jun-Aug (Sep)	Broadleafed upland forest, north coast coniferous forest, low mixed or conifer forest	35-1805	**No Potential,** Project Parcel lacks forested habitat features required for this species to occur
Montia howellii	Howell's montia	None	None	S2	2B.2	(Jan-Feb) Mar-May	Meadows and seeps, vernal pools, North Coast coniferous forest – vernally mesic, sometimes roadsides	0-2740	**Unlikely Potential,** Project Area lacks meadows and forested habitat features required for this species to occur
Oenothera wolfii	Wolf's Evening Primrose	None	None	S1	1B.1	May-Oct.	Sandy substrates on coastal bluffs, coastal dunes, prairie, lower montane coniferous forest, coastal sand, including dunes, bluffs, roadsides, generally moist places, perhaps also inland, dunes, coastal strand, coastal prairie, yellow pine forest, northern coastal scrub	10-2625	**Unlikely Potential,** Project Area consists of degraded dune habitat which offers marginal habitat for this species
Puccinellia pumila	Dwarf Alkali Grass	None	None	SH	1B.1	Jul	Marshes and Bogs – Salt	5-35	**No Potential,** Project Area lacks marsh and bog habitat required for this species to occur
Ribes laxiflorum	Trailing Black Currant	None	None	S3	4.3	Mar-Jul (Aug)	Sometimes found along roadsides, North Coast coniferous forest	15-4575	**No Potential,** Project Area lacks forested habitat required for this species to occur
Sidalcea malachroides	Maple-leaf Checkerbloom	None	None	S3	4.2	(Mar) Apr-Aug	Broadleafed upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian forest;	0-2400	**Moderate Potential,** Project Area provides disturbed habitat in vegetated margins for this species

							woodlands and clearings near coast, often in disturbed areas, woodland clearings near coast, disturbed		
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	S2	1B.2	May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest, often found in road-cuts	50-4035	**Moderate Potential,** Project Area provides disturbed habitat in vegetated margins for this species
Sidalcea oregana ssp. eximia	Coast checker-bloom	None	None	S1	1B.2	Jun-Aug	Lower montane coniferous forest, Meadows and seeps, North coast coniferous forest	15-4395	**No Potential,** Project Parcel lacks key habitat requirements for this species to occur
Silene scouleri ssp. scouleri	Scouler's catchfly	None	None	S2 S3	2B.2	(Mar-May) Jun-Aug (Sep)	Coastal bluff scrub, coastal prairie, valley and foothill grassland	0-1970	**Unlikely Potential,** vegetated dunes within coastal scrub can occasionally display characteristics similar to coastal bluff scrub, however, degraded dune habitat within Project Area does not display coastal bluff scrub characteristics
Spergularia canadensis var. occidentalis	Western sand-spurry	None	None	S1	1B.2	Jun-Aug	Marshes and swamps (Coastal salt)	0-10	**No Potential,** Project Area does not contain salt water marsh habitat
Trichodon cylindricus	Cylindrical trichodon	None	None	S2	2B.2	N/A	Sandy, exposed soil, road banks. Broad-leafed upland forest, meadows and seeps, upper montane coniferous forest	165 - 6570	**No Potential,** Project Area is not within species elevation range
Viola palustris	Alpine Marsh Violet	None	None	S1 S2	2B.2	Mar-Aug	Marshes and swamps, coastal salt marshes, salt marshes, coastal salt marsh, wetland-riparian	0-450	**No Potential,** No potential habitat within the Project Area

6.0 POTENTIAL IMPACT ASSESSMENT

6.1 Environmentally Sensitive Habitat Areas

The project poses no direct risk to ESHAs because none occur within the Project Area. The Project Area consists of barren habitat that is mostly devoid of vegetation except for the margins between pavement and one small area. The Project Area does not contain any watercourses or riparian vegetation. The Project Parcel does contain Degraded Dune Mixed Species Assemblage ESHA and Wax Myrtle Shrubland Alliance ESHA, however theses ESHAs are over 200' from the edge of the Project Area. All proposed construction will occur within the existing footprint of pre-existing pavement. No new ground disturbance will occur within proximity of the identified ESHAs. Per the "stringline" method described in the LCP, the project will not occur within the setback of any ESHA. The project as proposed will not significantly impact existing ESHAs present within the BAA.

6.2 Waters and Wetlands

The proposed project will not significantly impact Waters of the State. The BAA does not contain any Waters of the State. The cultivation operation will store fertilizers in contained structures that prevent risks of spillage.

The nearest potential wetland, as mapped per NWI is ~ 250' from nearest edge of the Project Area. Wetlands mapped per NWI are based on satellite imagery and no wetland delineations have occurred within Project Parcel. Both the Humboldt Bay LCP and Order WQ 2019-0001-DWQ define setback protections for wetland features. The Project Parcel occurs in an urban area and thus the wetland setback per the LCP is 100' unless an average setback of existing development immediately adjacent can be determined using the "stringline method". This setback distance is congruent with Order WQ 2019-0001-DWQ. The project as proposed meets all applicable setbacks from surface waters/wetlands and will not significantly impact these features.

6.3 Special Status Plants

The potential for Plant Species of Special Concern to occur within the Project Area is focused in the small vegetated area proposed to be paved. A floristic survey is in process to evaluate if any of these special status plant species occur within the Project Area. Once completed, a floristic survey report will be submitted to Humboldt County Planning Dept. and CDFW. If any special status plant species are documented, CDFW will be consulted for appropriate protection measures.

6.4 Special Status Birds and MBTA

The Project Parcel does provide marginal nesting habitat for bird species protected under the migratory bird treaty act but does not provide any potential habitat for any special status bird species. Marginal habitat consists of Coastal Scrub habitat, vegetated margins in Barren habitat, and abandoned buildings present within the Project Area. Proposed construction activities are incapable of direct take as they will not remove any potential nesting habitat for MBTA species. Given the low intensity of construction proposed with high baseline disturbance levels, there is no potential for construction activities to disturb potential MBTA species within the BAA. The project as proposed does not risk impacting special status bird species.

Two active osprey nests were identified within the BAA. These nests are mapped in Appendix 3. During both site visits individuals were observed nesting. Research supports that this raptor species, when acclimated to anthropogenic activity, is very tolerant of human disturbances (Poole 1981). This site is frequented by heavy equipment use, vehicles, loud noises and human activity as observed during site visit. Osprey nesting within the BAA are likely habituated to loud noises and human disturbance. Ospreys habituated to anthropogenic disturbances have been found to have similar reproductive success to osprey not exposed to anthropogenic disturbance (Poole 1981). There is no potential for this project to impact osprey nesting within the BAA.

6.5 Special Status Mammals

The Project Parcel contains potential habitat along the peripheries for terrestrial mammals and potential habitat for bats amongst abandoned structures within the Project Area. No modifications are proposed for the abandoned structures that provide potential roosting habitat. Similar to birds and terrestrial mammals, any bat species that occur within the BAA are accustomed to the high baseline disturbance levels. The project as proposed will not impact special status mammals potentially present within the BAA.

6.6 Special Status Marine Mammals

The proposed project has no potential of impacting special status marine mammals as all development will occur on existing developed surfaces and has no potential of impacting marine environments.

6.7 Special Status Reptiles & Amphibians

No amphibian or reptile habitat is present within the Project Area. The proposed project will have no impacts on Special Status Reptiles and Amphibians.

6.8 Special Status Invertebrates

There is no potential for this project to impact special status invertebrates as no potential habitat will be removed and the project will not significantly increase disturbance levels within the BAA.

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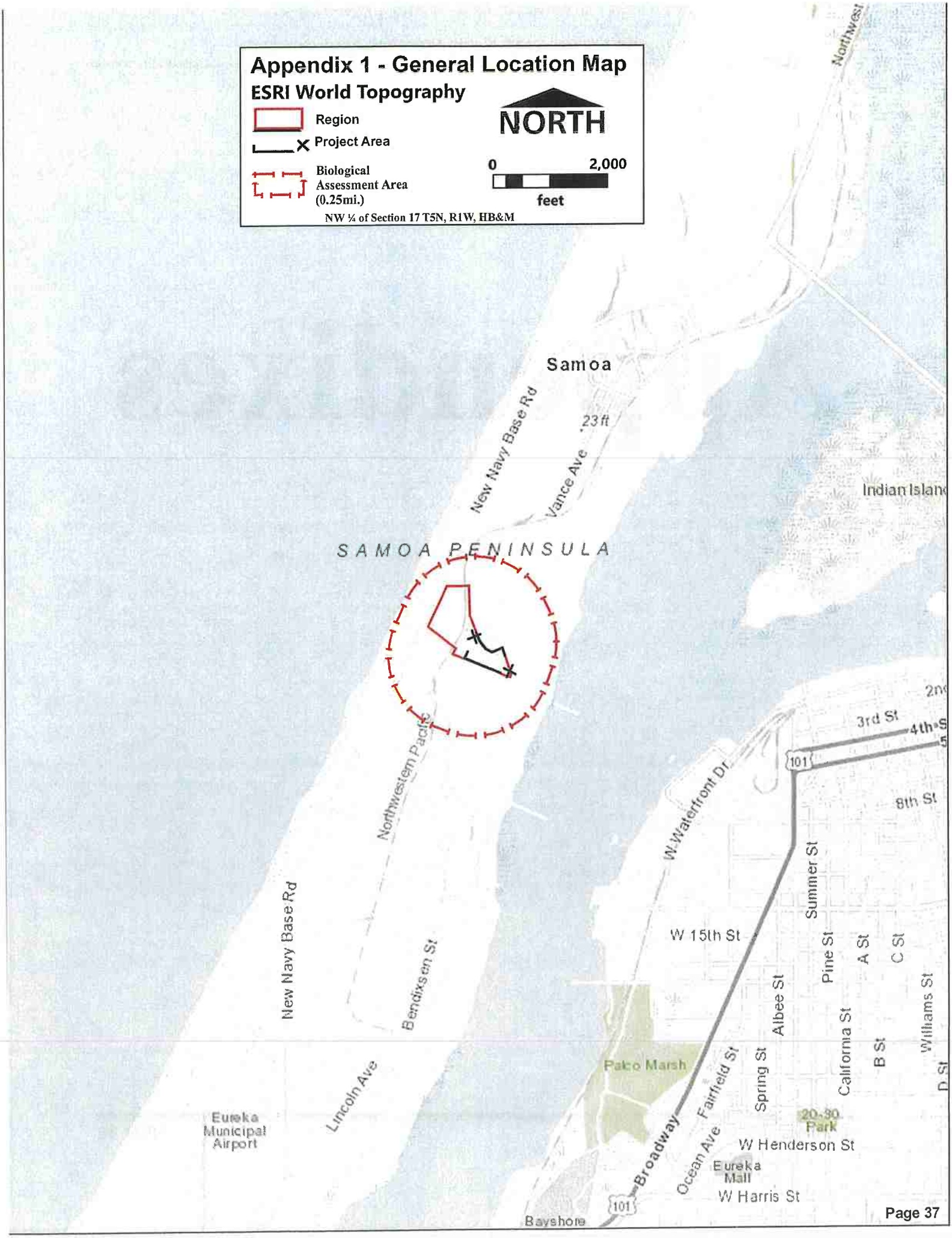
Appendixes


Appendix 1 - General Location Map
ESRI World Topography
Region
Project Area
Biological Assessment Area (0.25mi.)
NW ¼ of Section 17 T5N, R1W, HB&M
NORTH
0
2,000
feet
Samoa
New Navy Base Rd
23 ft
Vance Ave
SAMOA PENINSULA
Northwestern Pacific
Bendixsen St
New Navy Base Rd
Lincoln Ave
Eureka Municipal Airport
W Waterfront Dr
3rd St
4th St
101
8th St
Summer St
W 15th St
Pine St
A St
C St
Albee St
Williams St
California St
B St
Spring St
Fairfield St
Palco Marsh
20-30 Park
Broadway
Ocean Ave
W Henderson St
Eureka Mall
W Harris St
Bayshore
Indian Island
Northwest

Appendix 2 – Photograph 1

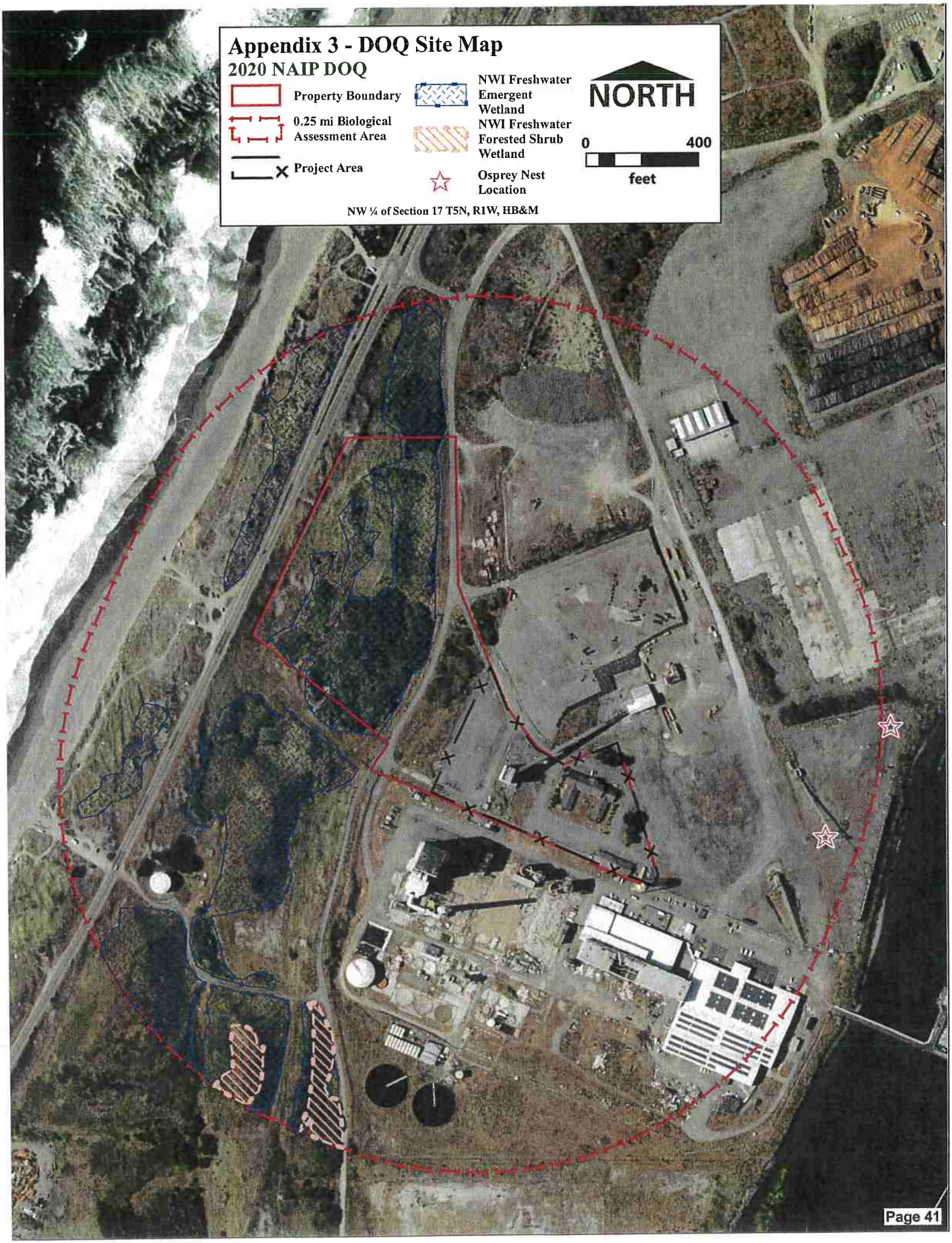
Photo 1 – Aerial Photograph of Project Area taken from the southeastern property boundary, eye altitude- 640ft. Image: Google Earth Pro. Image date: 4/30/2019

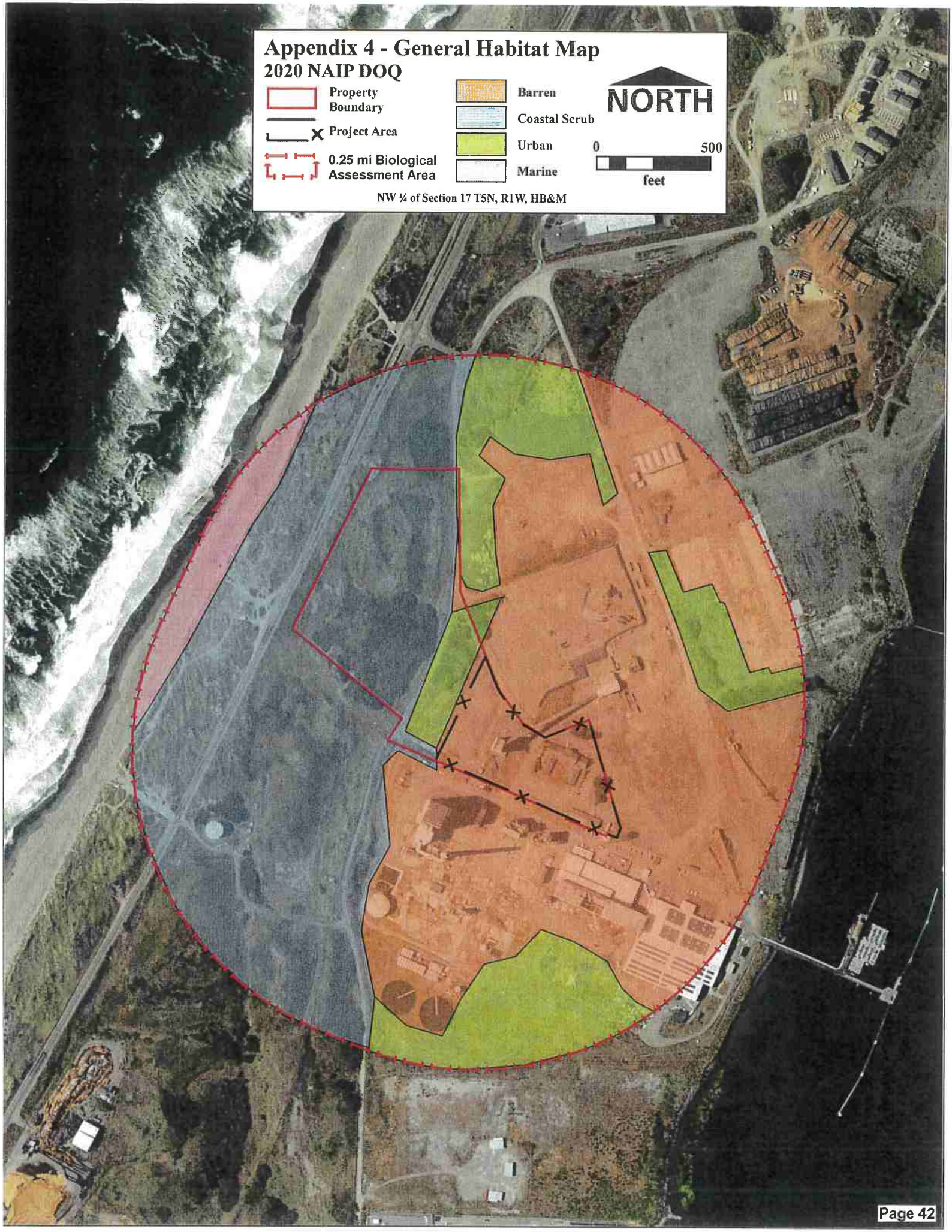
Appendix 2 – Photograph 2

Photo 2 – Photo taken from northern property line facing south towards Project Parcel and Project Area, eye altitude 640ft. Photo: Google Earth Pro Image Date: 4/30/2019

Appendix 2 – Photograph 3

Photo 3 - Aerial view of Project Parcel. Eye altitude - 2320ft. Image: Google Earth Pro. Image date: April 30, 2019


Appendix 3 - DOQ Site Map
2020 NAIP DOQ
Property Boundary
0.25 mi Biological Assessment Area
Project Area
NWI Freshwater Emergent Wetland
NWI Freshwater Forested Shrub Wetland
Osprey Nest Location
NORTH
0
400
feet
NW ¼ of Section 17 T5N, R1W, HB&M


Appendix 4 - General Habitat Map
2020 NAIP DOQ
Property Boundary
Project Area
0.25 mi Biological Assessment Area
Barren
Coastal Scrub
Urban
Marine
NORTH
0
500
feet
NW ¼ of Section 17 T5N, R1W, HB&M


Appendix 5 - ESHA Map
2020 NAIP DOQ
Property Boundary
Project Area
Degraded Dune ESHA - Mixed Species Assemblage
Wax Myrtle Shrubland Alliance ESHA
Degraded Dune Non-ESHA
Developed Dune Non-ESHA
NW ¼ of Section 17 T5N, R1W, HB&M
NORTH
0
250
feet

Soil Map—Humboldt County, Central Part, California
(Appendix 4 - Web Soil Survey)

Map Scale: 1:3,390 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Humboldt County, Central Part, California
Survey Area Data: Version 6, Jun 1, 2020

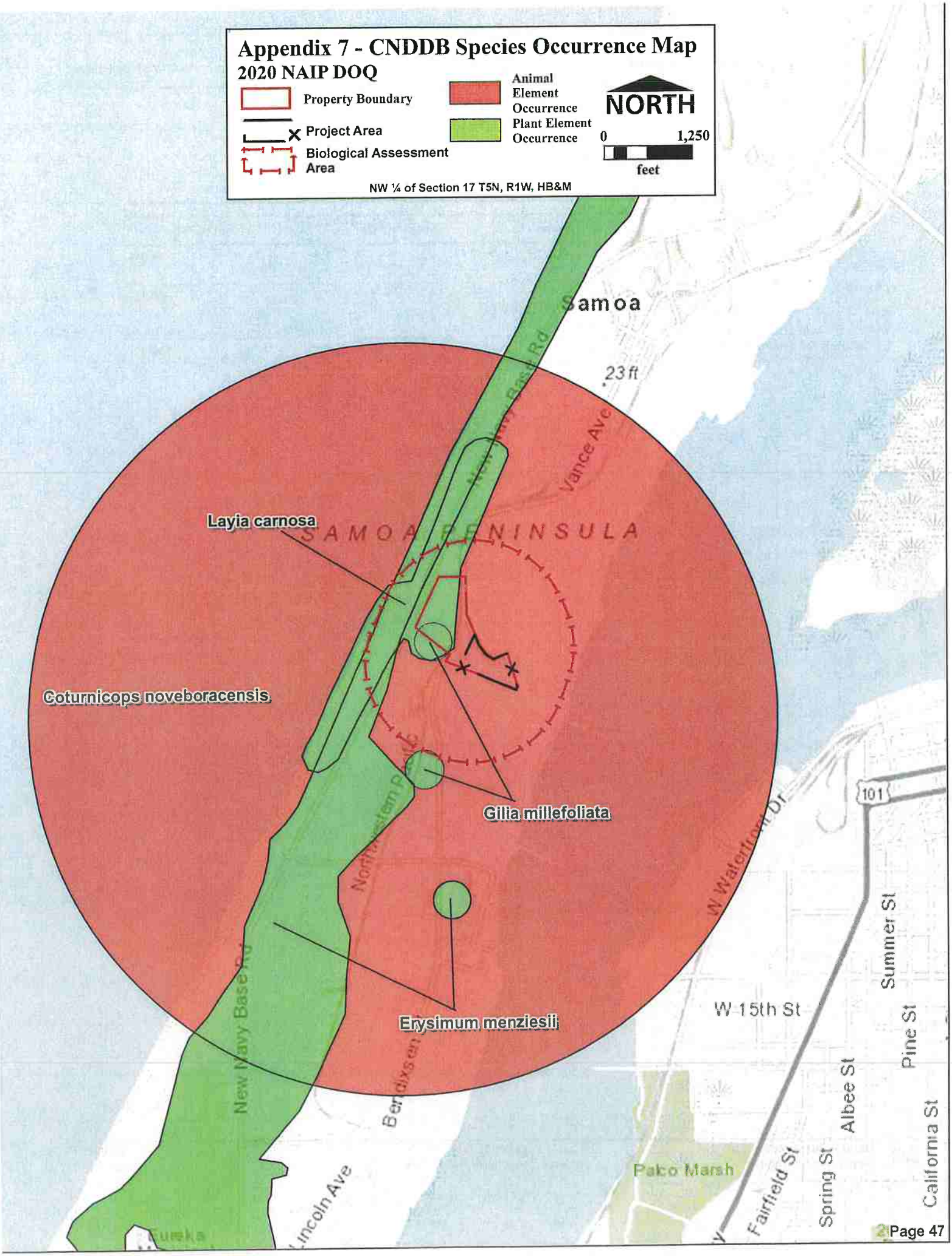
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 8, 2019—Jun 21, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
155	Samoa-Clambeach complex, 0 to 50 percent slopes	2.8	13.8%
1014	Urban land-Anthraltic Xerorthents association, 0 to 2 percent slopes	17.8	86.2%
Totals for Area of Interest		**20.7**	**100.0%**


Appendix 7 - CNDDB Species Occurrence Map
2020 NAIP DOQ
Property Boundary
Project Area
Biological Assessment Area
Animal Element Occurrence
Plant Element Occurrence
NORTH
0
1,250
feet
NW ¼ of Section 17 T5N, R1W, HB&M
Samoa
23 ft
Vance Ave
Layia carnosa
SAMOA PENINSULA
Coturnicops noveboracensis
Gilia millefoliata
Erysimum menziesii
New Navy Base Rd
W Waterfront Dr
101
W 15th St
Summer St
Pine St
Albee St
California St
Spring St
Fairfield St
Palco Marsh
Lincoln Ave
Eureka

Appendix 8 – CNDDB Element Occurrence Reports