# BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT

## for Federal and State-Listed Wildlife and Plant Species and Environmentally Sensitive Habitat Areas

**Assessor Parcel Number (APN):**

**111 – 121 – 037**

**Shelter Cove, Humboldt County, California**

***Prepared For:***

**Thomas Bond & Assoc.**

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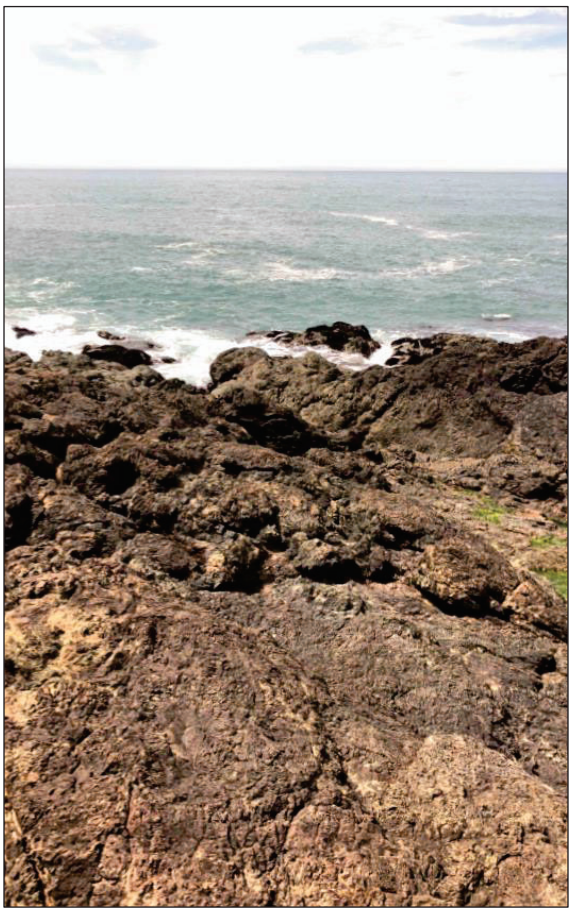
***Date Prepared:***

June 6th, 2023



**Certification:** I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X _____.

Mason London, MSc Biology
Naiad Biological Consulting Principal Biologist

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# Section 1 Summary of Findings and Conclusions

A Biological Reconnaissance and Project Feasibility Assessment was conducted by request from Thomas Bond & Assoc. to evaluate potential impacts of project activities and development within the designated Study Area located at 495 Sea Ct. Shelter Cove, California, Humboldt County.

Protocol-level botanical surveys have been initiated to assess the presence of listed and special-status plant species, with follow-up surveys planned during the later bloom season to complete the inventory. The initial reconnaissance survey found no special-status plant, animal, or communities within the Study Area. Considering the habitat quality and lack of suitable conditions, the presence of special-status animal species was determined to be limited, with no potential within the Area Assessed for Project Feasibility. Therefore, there are no expected direct impacts on special-status animal species from the proposed project. The report addresses mitigations for indirect and other environmental impacts.

By implementing the recommended measures and mitigations, the disturbance to biological resources associated with the project can be mitigated, resulting in a neutral impact on the environment and ecological systems.

# Section 2 Introduction, Background, and Project Understanding

## 2.1 Purpose and Need

This Biological Resource Assessment Report has been prepared in response to a request from The County of Humboldt Planning and Building Department to conduct a Biological Assessment of the subject parcel, referred to throughout this report at the Study Area. The primary objective of this report is to provide an overview of the findings from a reconnaissance survey that aimed to assess the potential presence of biological resources and sensitive habitats within the Study Area. The report serves to investigate the potential impacts of the proposed project within the designated parcel.

The biological reconnaissance survey conducted for this project is treated as a comprehensive biological assessment. In accordance with the definition provided by the United States Fish and Wildlife Service (USFWS), a biological assessment is a detailed report prepared by a qualified biologist to evaluate the potential impacts of a proposed action on listed species, designated critical habitat, and species proposed for listing. This assessment is specifically required under Section 7 of the Federal Endangered Species Act (FESA) when project activities have the potential to result in a determination of "may affect." The assessment aims to provide thorough information and analysis to determine the potential adverse effects on the mentioned species and habitats. (USFWS: Endangered Species Glossary, 2020).

The assessment aspect of this report presents on the field survey and findings of the biological resources and habitat quality within the Study Area, and subsequently the proposed project site, referred to throughout this Report as the project site and/or project area. This report therefore addresses the status and possible utilization of the project site by special-status plant and animal species found within the region, and assesses the potential environmental impacts to these resources in association to the proposed project actions within the defined project site location(s). Special-status species, both plant and animal, include all state or federal rare, threatened, and/or endangered species and all species listed in the California Natural Diversity Database (CNDDB) list of *Special-Status Plants, Animals and Natural Communities*.

The locations and presence of aquatic resources, and other sensitive habitats, within the proximity of the project site was identified and mapped to establish setbacks as a measure to assess the environmental impacts of the proposed actions within the Study Area.

This document has been prepared in accordance with legal requirements set forth under Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code § 1536) subsection (c), as well as all other acts and programs outlined in *Section 6 Regulatory Guidelines*. The FESA subsection (c) states that "…based on the best scientific and commercial data available, that such species [which are listed or proposed to be listed] may be present, such agency shall conduct a biological assessment for the purpose of identifying any endangered species or threatened species which [are] likely to be affected by such action. Such assessments shall be completed … before any contract for construction is entered into and before construction is begun with respect to such action."[1]

Since ground disturbance was predetermined to occur as a result of proposed project activities, protocol-level botanical surveys were recommended at the time of the initial site visit, and will be conducted in

[1] **Section 7 of the Federal Endangered Species Act (FESA) (16 U.S. Code § 1536) subsection (c):** https://www.fws.gov/endangered/laws-policies/section-7.html

conjunction with this biological assessment to inventory and assess this projects potential to impact listed and special-status plant species, and sensitive natural communities, that may occur within and surrounding the project site.

This report summarizes the results of a reconnaissance level biological resource survey which assessed the Study Area for: (1) the potential to support special-status species; and (2) the potential presence of sensitive biological communities such as wetlands, riparian habitats and other sensitive biological resources protected by local, state, and federal laws and regulations.

This report considers the potentially occurring species and communities that could be affected by the proposed project activities, and associated infrastructure development, within the Study Area, based on available spatial data, habitat requirements, and observations made during a site visit. The project location was targeted within the parcel and evaluated for potential habitat value to protect endangered, threatened, rare, and sensitive species by traversing the Study Area on foot to observe special-status species as well as overall habitat quality and habitat modification.

## 2.2 Biologist's Qualifications

The biological assessment for this report was conducted by Mason London. Mason is the principal biologist at Naiad Biological Consulting. Mason holds an MSc in Biology with a concentration in aquatic ecology from Humboldt State University (HSU). Mason has worked professionally as a wildlife biologist for The Nature Conservancy, a botanist for the Medford, OR district Bureau of Land Management, and an Aquatic Research Scientist for the HSU River Institute. Mason has also conducted protocol level surveys for California red-legged frogs, foothill yellow-legged frogs, western pond turtles, nesting birds, and has performed botanical surveys in a variety of upland and aquatic habitats. Mason has done pre-construction and compliance monitoring surveys on projects throughout California, varying in a wide range of scopes and focused on amphibians/reptiles, birds (nesting), and mammals. Collectively Mason has over 13 years of experience working professionally as a wildlife biologist, botanist, aquatic ecological research scientist, and has instructed several ecological courses at the university level.

The botanical survey described in this report is being conducted by Sarah Mason. Sarah holds a BS in Botany from Humboldt State University and is currently working towards receiving her MSc in Biology with a concentration in bumblebee ecology. Sarah has worked as an assistant botanist and biologist with Caltrans, as a Botanical Technician for the Klamath and Bitterroot National Forests and currently as a botanist with the Humboldt Redwoods State Parks. Sarah has experience in rare plant identification, protection and monitoring of rare plants, invasive species removal, and teaching plant taxonomy at the university level.

## 2.3 Project Description

The proposed project investigated for impacts to biological resources described in this report includes the development of a two-story single-family residence, with a building footprint of 1,045 sq ft, 18% of the total lot coverage. This structure is to occur entirely within the Area Assessed for Project Feasibility.[2]

## 2.4 Study Area Description and Geographic Setting

The parcel assessed for the feasibility of the proposed project, referred to as the Study Area, located at 495 Sea Ct. Shelter Cove, CA 95589 with the Assessor Parcel Number (APN): 111-121-037 (Map 1 & Map 2).

Shelter Cove, CA, located 15.50 air miles west to southwest of Garberville, CA, is situated in a geographically significant setting characterized by a juxtaposition of coastal and mountainous features. Located along the rugged Northern California coastline, this area exhibits distinct geological formations, including dramatic cliffs, sandy beaches, and coastal mountains. The region is influenced by its proximity to the Pacific Ocean, with coastal winds and oceanic influences shaping the local climate and ecosystem dynamics. The interplay between land and sea creates diverse habitat types, such as coastal forests, marine ecosystems, and inland valleys.

APN: 111-121-037 is 0.14 acres (per Humboldt WebGIS) with a high elevation of approximately 25 feet (approx. 7.5 meters) and a low elevation of approximately 45 feet (approx. 13.5 meters) (Google Earth Pro, 2023).

The Pacific Ocean defines the southwest boundary of this parcel, with the approximate center location of the Study Area is 40°01'46.8"N 124°04'42.7"W. The Study Area occurs within the Shelter Cove 7.5-minute United States Geological Survey (USGS) quadrangle (Quad code: 4012411) (CDFW Region: 1).

[2] The verbiage used in the Project Description was based on project scope understanding provided from the client. The assessment described in this report was conducted based on the project description understanding presented in Section 2.3

# Section 3 Methods

## 3.1 Pre-Site Visit Data Compilation and Preparation

A list of special-status plant and animal species considered to have potential presence within the Study Area was downloaded from the California Department of Fish and Wildlife's California Natural Diversity Database Biogeographic Information and Observation System (CNDDB BIOS) (CDFW, 2020), the United State Fish and Wildlife Service Information for Planning and Conservation (IPaC, USFWS 2020) and Calflora Project (Calflora, 2020) for the USGS Shelter Cove 6-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 project activities.

Aside from the creation of a target list of special-status species, the Regional Dominate Alliances for the Study Area was downloaded, mapped, and assessed from The U.S. Forest Services' Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) (Map 5). The CALVEG system was developed to classify California's existing vegetation communities for use in statewide resource planning considerations. This was originally accomplished with the use of color infrared satellite imagery and field verification of types by current soil-vegetation mapping efforts as well as professional guidance through a network of contacts throughout the state. It is a hierarchical classification originally based on "formation" categories: forest, woodland, chaparral, shrubs and herbaceous in addition to non-vegetated units. They were originally identified by distinctions calculated among canopy reflectance values used in the LANDSAT satellite. Since then, the classification has been expanded from an initial 129 types occurring throughout the eight regions of the state to the current 213 occurring in nine regions, and image resolution has been enhanced.

Precipitation data was gathered from the PRISM Climate Group[3] online 4km data sets. PRISM Climate Group obtains precipitation data from a variety of sources, including government agencies, meteorological organizations, and academic institutions. They also utilize remote sensing technologies, such as satellite imagery and radar, to gather precipitation data. The data is then analyzed and processed using statistical methods to create accurate and reliable precipitation estimates for the areas of interest.

The special-status species query in the 7.5-minute USGS Shelter Cove quadrangle, and the five (5) adjacent quadrangles (generally this search renders eight (8) adjacent quadrangles, but the Shelter Cove quadrangle boarders the Pacific Ocean and therefore there are no quadrangles to the, south, west and southwest), generated thirty two (32) animals (5 amphibians, 7 birds, 1 crustacean, 6 fishes, 2 insects, 9 mammals, 1 mollusks, 1 reptile) (Table 1), twenty five (25) special-status plant (1 lichen, 24 vascular) (Table 2) and one (1) mapped special-status habitat communities (Upland Douglas Fir Forest).

For special-status plant species, prior to the site visit and field survey, the list of potentially occurring species was assessed based on evaluation, habitat, and mico-habitat requirements. Suitable habitat for some of the species in the generated list were therefore determined to not exist within the project site or surrounding area (Table 2).

[3] https://prism.oregonstate.edu/explorer/

## 3.2 Biological Resource and Habitat Investigation

A biological resource and habitat investigation was conducted within the Study Area between 12:00 and 13:30 on April 21st, 2023 by Naiad Biological Consulting's Principal Biologist, Mason London (Map 3). Mason London was accompanied during this initial reconnaissance survey by botanical consultant Sarah Mason.

The primary objective of the site investigation and field survey was to identify suitable habitat for special-status species and evaluate the potential impact of the proposed project activities, with a specific focus on the designated project area within the Study Area. The assessment considered the likelihood of the project and related activities to result in take or incidental take of the identified special-status species (as outlined in Tables 1 and 2). Take, as defined by the Federal Endangered Species Act (FESA), encompasses actions that may harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect wildlife, or engage in any such conduct (16 U.S.C., §1532 (19)[4]). The investigation and assessment of the Study Area habitat was conducted within this framework.

During the field survey, a meandering transect approach was employed to thoroughly assess suitable habitats for potential species. The survey path was accurately recorded using Avanza Maps™ (Map 3).

The survey covered all major habitats within the Study Area and evaluated their current quality in relation to species acquisition. It is important to note that this assessment does not constitute an official protocol-level survey, which may be required for project approval by local, state, and/or federal agencies. Additional wildlife surveys may be necessary depending on the specific project location and timing.

Observations and recordings included dominant species in surrounding habitats, the presence of sensitive habitats like riparian areas and potential wetland features, and project site setbacks from watercourses and other aquatic habitats. Distance and slope measurements, as well as setbacks, were determined using a TruPulse 200X laser rangefinder in the field. GIS software was used to generate true buffers and setbacks for all associated maps in this report.

### 3.2.1 Floristic Survey

In preparation for the anticipated ground disturbance associated with the proposed project, protocol-level botanical surveys have been initiated for the upcoming 2023 blooming season. These surveys are being conducted by contracted botanist Sarah Mason and aim to inventory species and assess the potential impacts on listed and special-status plant species within the project area.

The botanical field survey follows the protocols recommended by the California Department of Fish and Wildlife (CDFW) and aligns with the guidelines established by the California Native Plant Society (CNPS) in their document "Protocols for Surveying and Evaluating Impacts to Specie Status Native Plant Populations and Sensitive Natural Communities[5]" (CDFW, 2018). As per the protocol, plants are identified on-site, and a comprehensive census of species is recorded. Specimens that cannot be readily identified in the field are collected and later identified using resources such as "The Jepson Manual of the California Flora" and other field guides.

[4] **California Endangered Species Act to the Federal Endangered Species Act Definitions:** https://wildlife.ca.gov/Conservation/CESA/FESA

[5] **Specie Status Native Plant Populations and Sensitive Natural Communities**: file:///C:/Users/Masonslondon/Downloads/2018%20Protocols%2013%20rev1.pdf

The survey will be conducted within the area determined to be potentially affected by direct disturbance from the proposed project within the Study Area. Its primary objective is to document all plant species occurring within the surveyed habitats. The survey follows a floristic approach, meaning that all encountered plant taxa during the botanical field survey of the Study Area are identified to the taxonomic level necessary to determine their rarity and listing status.

The initial field visit was planned to coincide with the blooming period of the listed species assumed to have a potential presence within the Study Area, specifically within the boundaries of the project site and its surrounding area.

### 3.2.2 Environmentally Sensitive Habitat Area

Environmentally Sensitive Habitat Areas (ESHA) is a term used in the California Coastal Act Section 30107.5[6] to describe areas in the coastal zone that are of critical significance to the maintenance of the biological diversity and integrity of coastal resources. These areas may include wetlands, estuaries, lagoons, riparian areas, forests, and other unique or sensitive habitats that provide important ecological functions or support rare, endangered, or threatened species. ESHA is given special protection under the Coastal Act and development within these areas may be subject to additional regulations and restrictions to minimize impacts on the environment.

All aspects of the biological resource and habitat investigation described in this report assisted in the determination of the presence of ESHA within the Study Area.

#### 3.2.2.1 Wetlands, Soils and Streamside Management Area Determination

Prior to the site visit, the Study Area was assessed for the presence of wetlands utilizing several digital databases and resources including the USFWS National Wetland Inventory (NWI), NRCS Web Soil Survey, USGS topographic maps, and inundation or saturation visible on aerial imagery (Map 4). Data regarding the Study Area's soil type was obtained from the Natural Resource Conservation (NRCS) Service Web Soil Survey (Map 4; Appendix E).

Observed field conditions were utilized to determine the potential presence of wetland features, aiding in the determination of potential presence of wetland and/or other aquatic resource habitats. The US Army Corps of Engineers (USACE) and California North Coast Regional Water Quality Board regulates wetlands and other waters under section 404 of the Clean Water Act (CWA). The USACE defines "wetlands" as those areas that exhibit hydric soils, hydrophytic vegetation, and wetland hydrology. No soil test pits were dug for evaluating the presence of hydric soil since other wetland indicators such as hydrophytic vegetation and wetland hydrology were able to be visibly detected during the time of the site visit. The "err on the side of caution" approach to determining potential wetland habitats was implemented when visually assessing the site and determining potential presence, encroachment, or impact to setbacks. Field observations of identifiable plant communities were used to assist interpretation of aerial imagery in defining potential wetland areas and their boundaries. If potential wetland features were determined to be present, based on field observations of vegetation and hydrology, it would be recommended that test pits be dug to ascertain hydric soil presence and therefore confirm or deny the determinations of wetland features existing within the Study Area.

[6] **California Coastal Act Section 30107.5**: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=30107.5

Watercourses and their associated classes are determined based on the Forest Practice Rules Water Course and Lake Protection Zone definitions, by use of visual observation when conducing the reconnaissance survey.

### 3.2.3 Occurrence of Special-Status Species

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.

# Section 4 Results and Discussion

## 4.1 Study Area's Regional Alliances

The Regional Dominate Alliance within the Study Area, according to the CALVEG database, consist entirely of *Annual Grasses and Forbs Alliance* (Map 4). Other Regional Dominate Alliances surrounding the Study Area consist of *Urban/Developed*, *Urban-Related Bare Soil* and *California Bay Alliance* (Map 4). The Alliance definitions below are from CALVEG and do not represent actual observations made, or necessarily species identified during the site visit investigation.

### 4.1.1 Annual Grasses and Forbs Alliance

Small areas of dry grasslands are found scattered at moderately low elevations in the western Klamath Mountains, especially on privately owned lands and in the western Trinity Alps area. In the Ranges and Coast Sections, these areas become more extensive on private lands scattered throughout the area and intermix with agriculturally managed sites. Species include introduced and native annual grasses such as Brome (*Bromus spp*.), Bluegrass (*Poa spp*.), Wildoats (*Avena spp*.), Fescue (*Vulpia spp*.), Dogtail (*Cynosurus spp*.), Barley (*Hordeum murinum*), Needlegrass (*Nassella spp*.), Oatgrass (*Danthonia spp*.), and a variety of forbs such as Checker Mallow (*Sidalcea spp*.), Brodiaea (*Brodiaea spp*.), Wild Hyacinth (*Dichelostemma spp*.), Yampah (*Perideridia spp*.) and Mariposa Lily (*Calochortus spp*.). Oregon White Oak (*Quercus garryana*) stands are often found adjacent to some upland annual grasslands.

### 4.1.2 Urban/Developed

This category applies to landscapes that are dominated by urban structures, residential units, or other developed land use elements such as highways, city parks, cemeteries, and the like. In those cases, in which the managed landscapes may have a considerable vegetation component, other land use categories may be more appropriate, such as Ornamental Conifer and hardwood mixtures within city parks).

### 4.1.3 Urban-Related Bare Soil

Urban development in California occurs in phases. When land is cleared prior to being paved, this type represents the occurrence of non-vegetated barren ground that is caused by urbanization. This land-use type also represents other mechanically-caused barren ground, such as open quarries or mined areas, barren ground along highways and other areas cleared of vegetation prior to construction. This type often occurs adjacent to managed landscapes in already established urban centers or other paved areas.

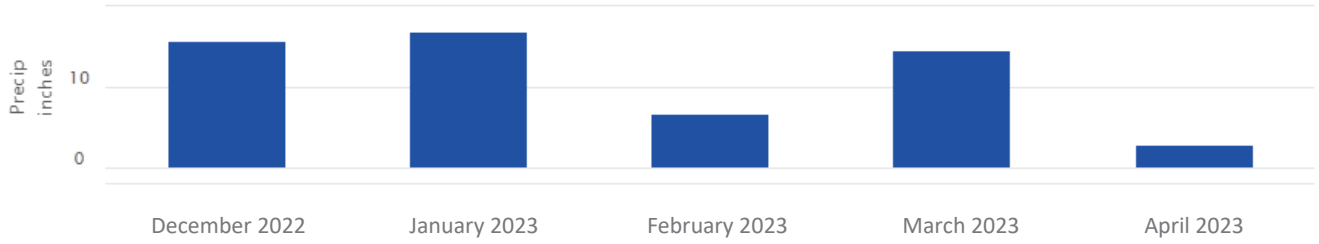
### 4.1.4 California Bay Alliance

This woodland type is almost completely composed of California Bay (*Umbellularia californica*). It occurs in scattered small stands, generally away from the immediate coast on exposed slopes and ridges from the Oregon border southward below about 3000 feet (915m) in eleven subsections in the Coast and three subsections of the Ranges Sections. California Bay also is adapted to sea winds of coastal environments, especially towards the south. For example, this type has been mapped extensively in the Marin Hills and Valley Subsection (Coast), where it associates with trees and shrubs such as Redwood (*Sequoia sempervirens*), Douglas-fir (*Pseudotsuga menziesii*), Tanoak (*Lithocarpus densiflorus*) and Coyote Bush (*Baccharis pilularis*) near the coast. Other hardwoods such as Canyon and Coast Live Oaks (*Quercus chrysolepis, Q. agrifolia*) may be found in these stands further inland. Tree Chinquapin (*Chrysolepis*

*chrysophylla*), Berries (*Rubus spp.*), and species of Ceanothus may also occur as minor associates of this type.

## 4.2 Observed Study Area Habitat, Existing Site Conditions and Project Location Feasibility

During the April 21st, 2023 site visit and field survey, the weather was clear with a temperature of 71° F and a windspeed of 1-2 mph when the survey began. Precipitation values for the months leading up to the site visit were higher than had been in recent years:




There was a projected total of 15.87 inches of rain at the Study Area for the entire month of December 2022, 16.93 inches in January 2023, 6.72 inches in February 2023, 14.63 inches in March 2023, and 2.92 inches in April 2023 leading up to the site visit (PRISM Climate Group, 2023). Precipitation values displayed for December, January and March are above average for this region.

### 4.2.1 Study Area and Area Assessed for Project Feasibility Habitat

The Study Area is characterized by its location along the rugged coastline overlooking the Pacific Ocean (Photo 1). The Study Area consists of steep slopes that rise above the shoreline to the western boundary and has a habitat influenced by the maritime environment, with constant exposure to salt spray, strong winds, and varying degrees of wave action (Photo 2). The coastal bluff is composed of a combination of soil, rocks, and vegetation that has adapted to the challenging conditions (Photo 3). These habitats were assessed based on habitat quality parameters in relationship to previous habitat modification. These habitats were also assessed based on the potential to harbor special-status species.

Portions of the Study Area have preexisting habitat alteration rendering the site low habitat quality. Brush clearing and vegetation removal appears to have occurred historically at this location, resulting in a vegetation dominance of many non-native and invasive species (Photo 3 – 6). The Area Assessed for Project Feasibility occurs to the east of the steep sloped cliffs and is dominated by ice plant (*Carprobrotus edulis*), Pride of madeira (*Echium canadensis*), poison oak (*Toxicodendron diversilobum*), trailing African daisy (*Osteospermum fruticosum*), pricky sow thistle (*Sonchus apser*), velvet grass (*Holcus lanatus*), and others. Many of the species, including most of the grass species observed were unidentifiable due to the seasonal timing of the site visit (Photo 3 – 6). One large Monterey cypress (*Hesperocyparis macrocarous*) occurs in the southern edge of the Study Area. A complete list of plant species observed during the April 21st, 2023 site visit can be found in Table 3.

The abundance of nonnative and invasive species, as well as the preexisting clearing and residences occurring adjacent to the parcel, renders the Area Assessed for Project Feasibility disturbed and considered a manipulated landscape. Regardless of the current site condition within within the Area Assessed for Project Feasibility, listed and special-status species, both plant and animal, may still utilize

the disturbed habitat. Mitigation for potential disturbance associated with the proposed project and its construction activities is further discussed in Section 5 Conclusion.

## 4.3 Watercourses, Aquatic Habitats, and Streamside Management Areas

No watercourses were observed during the survey of the Study Area, nor were located remotely with the use of LiDAR imagery.

Best Management Practices (BMPs) and other mitigation measures should be considered in the construction plan to avoid offsite impacts to nearby watercourses and river systems and adhere to standards associated with construction.

### 4.3.1 Wetland Habitats

A protocol-level delineation did not occur in conjunction with the biological reconnaissance survey conducted and described in this Report. However, with the use of visual observations of the project area, its surrounding habitat, mapped wetland occurrences from the NWI, current hydrology, and vegetation communities, a conservative approach was followed when assessing whether or not the extent in which potential wetland features occur. Federal regulations define wetlands as "[t]hose 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*" (33CFR328.3(b)[7]). This definition expresses that, under normal conditions, three parameters must be met to classify a site as a jurisdictional wetland, which includes hydrophytic vegetation, hydric soils, and wetland hydrology.

Based on remote data analysis and onsite investigation, it appears that no three parameter wetlands occur within any proximity of impact to the project area (Map 3). A protocol-level wetland determination may be required within the proximity of the project site for project approval by local agencies, but is not recommended based on field and satellite imagery observations.

### 4.3.2 Study Area Soils

The general soil type, presented as Soil Map Units on Map 4, were obtained from the Web Soil Survey and presented in further detail in Appendix E.

The entire Study Area, including the Area Assessed for Project Feasibility, occurs within the Map Unit 202: Conklin-Urban land-Parkland complex, 2-15% slopes (Map 4). The landform associated with this soil is fluviomarine terraces with elevations from 20 to 130 feet, and a mean annual precipitation between 59 and 62 inches. The typical soil profile of this soil type from top to 80 inches gravelly loam on the surface followed by gravelly clay loam below. Full soil type descriptions can be found in Appendix E.

## 4.4 Special-Status Plant Species and Communities

### 4.4.1 Definitions

Special-status plants include taxa that are listed under the Endangered Species Act (ESA) and/or the California Endangered Species Act (CESA) in addition to plants which meet the definition of rare or endangered under the California Environmental Quality Act (CEQA). CDFW recommends that plants on California Rare Plant Ranks (CRPR) Lists 1A (presumed extinct or extirpated), 1B (rare, threatened, or

[7] **Definition of Waters of the United States:** https://www.nap.usace.army.mil/Portals/39/docs/regulatory/regs/33cfr328.pdf

endangered in California and elsewhere), 2A (presumed extirpated) and 2B (rare, threatened, or endangered in California but more common elsewhere), or other species that warrant consideration based on local or biological significance, be addressed during California Environmental Quality Act (CEQA) review of proposed projects. Plants of rank 3 and 4, which are under review and watch lists respectively, are addressed by Naiad Biological Consulting, and may warrant consideration under CEQA if potential or cumulative impacts to the plant exist.

CDFW's natural community rarity rankings follow NatureServes's 2012 NatureServe Conservation Status Assessment: Methodology for Assigning Ranks, in which all alliances are listed with a global (G) and (S) rank. NCSC are those natural communities that are ranked S1 to S3 (CDFW, 2020), where 1 is critically imperiled, 2 is imperiled, and 3 is vulnerable. However, they may not warrant protection under CEQA unless they are considered high quality. Human disturbance, invasive species, logging, and grazing are common factors considered when judging whether the stand is high quality and warrants protection.

### 4.4.2 Floristic Survey

All habitats encountered during the reconnaissance survey were assessed to determine the potential to harbor certain species. All species derived from the CNDDB list were assessed for potential occurrence within the Study Area (Table 2). Sarah Mason is in the process of conducting full protocol level botanical surveys for the Study Area at the seasonally appropriate times, therefore further investigation to the presence of these species occurring at the site will occur.

No special-status plant species were observed within the Study Area during the biological assessment and reconnaissance survey. According to the CNDDB, there are recorded occurrences of two (2) species with buffers that encompass the Study Area. These species are perennial goldfields (*Lasthenia californica ssp. macrantha*) and farewell to spring (*Clarkia amoena ssp. whitneyi*) (Map 6; Occurrence Report 1 & 2).

Perennial goldfields have a CNPS rank of 1B.2 and is a native California wildflower that belongs to the Asteraceae family. It is a perennial plant with compact clusters of elongated, narrow leaves in a basal rosette arrangement. The plant reaches a height of 1 to 2 feet (30 to 60 centimeters) and produces small, bright yellow flowers with ray petals surrounding a central disk. Perennial goldfields bloom from late winter to spring and prefer well-drained soils in grasslands, meadows, open slopes, and coastal scrub habitats. They play a vital role as a nectar source for pollinators and contribute to the biodiversity and visual appeal of the landscape. Conservation efforts are necessary to protect this species and its native habitats.

Farewell to spring have a CNPS rank of 1B1 and is a native annual wildflower in the Onagraceae family. It grows 1-3 feet (30-90 cm) tall with slender, branching stems and lance-shaped leaves. The flowers are pink with four petals, forming cup-like clusters at the stem ends. Blooming from late spring to early summer, it adds vibrant color to meadows, woodlands, and slopes. Farewell to spring prefers well-drained soils and thrives in full or partial sun. It serves as a vital food source for pollinators. Conservation efforts are crucial to safeguard this species and its habitats, contributing to overall biodiversity and ecological balance.

Based on the initial survey, no special-status species were observed. However, it is important to note that there may be other species present within the Study Area that were not in bloom during this site visit (Table 2) and therefore, to ensure compliance with survey protocols, a follow-up late-season survey will be conducted.

In the event that the protocol-level botanical survey confirms the absence of special-status species within the Area Assessed for Project Feasibility, and the recommendations outlined in Section 5.1.3 regarding site development and utilization are implemented, along with adherence to Best Management Practices (BMP) during project construction, it is anticipated that no significant impacts will occur to the surrounding vegetative community or special-status plant species associated with this project.

## 4.5 Special-Status Animal Species

A comprehensive survey was conducted to assess the presence and utilization of special-status animal species in all habitats within the Study Area. The species listed in the CNDDB were specifically evaluated for their potential occurrence within the Study Area, including both the project area and the surrounding habitats, as disturbances can impact these species directly or indirectly (Table 1). It is important to recognize that any disturbance to the habitats utilized by special-status animal species may lead to take, or incidental take, of these species.

No special-status animal species were observed during the reconnaissance site survey. According to the CNDDB, there is a recorded occurrences of one (1) species, obscure bumble bee (*Bombus caliginosus*) , with an exact location unknown and a non-specific buffer that covers the vicinity of Shelter Cove and therefore encompasses the Study Area (Map 6;Occurrence Report 3).

The obscure bumble bee (*Bombus caliginosus*) can be found in various habitats throughout California, including meadows, grasslands, shrublands, and open woodlands. It is particularly drawn to areas with a rich diversity of flowering plants, which provide an abundant source of nectar and pollen. This bumble bee species is known for its unique nesting behavior as it does not build its own nests but instead relies on usurping the nests of other bumble bee species. The obscure bumble bee prefers nesting in underground cavities, such as abandoned rodent burrows or tussocks. Protecting and preserving these habitat types and ensuring a healthy population of flowering plants is crucial for the conservation of the obscure bumble bee and its important role as a pollinator in the ecosystem.

Considering the limited availability of diverse and plentiful wildflowers in the Study Area, it is improbable that the obscure bumble bee would extensively rely on the project area for foraging. The project's impact on the bee's foraging resources is expected to be minimal. However, it is worth noting that landscaping of native forbs, associated with the project, could enhance the availability of foraging materials and therefore this project has the potential to improve habitat for the species. Additionally, due to the relatively small size of the proposed project, the potential disruption to suitable nesting habitats is unlikely to be significant. The Study Area still retains portions where nesting can take place undisturbed by project activities.

The only other special-status species that have a moderate potential to be found utilizing the Study Area are Steller's sea lion (*Eumetopias jubatus*), Southern sea otter (*Enhydra lutris nereis*), and California brown pelican (*Pelecanus occidentalis californicus*) (Table 1).

Steller's sea lions inhabit coastal areas and rocky shorelines in the northern Pacific Ocean. They primarily breed and give birth on remote islands or rocky coastal regions. They rely on a diet consisting mainly of fish, including salmon and herring. Steller's sea lions are known for their large size and can be found hauled out on land or swimming in nearshore waters.

Southern sea otters are marine mammals found along the California coast. They prefer nearshore environments, including kelp forests, rocky shores, and estuaries. Southern sea otters are excellent swimmers and spend much of their time foraging for food, such as sea urchins, crabs, and other invertebrates. They often wrap themselves in kelp to anchor themselves while resting or sleeping.

The California brown pelican is a coastal bird species commonly found along the Pacific coast of North America. These pelicans are known for their distinctive large beaks and their ability to plunge-dive from the air into the ocean to catch fish. They inhabit a range of coastal habitats, including beaches, rocky shores, and estuaries. California brown pelicans rely on a diet primarily composed of small fish, such as anchovies and sardines, which they catch using their impressive diving skills.

The potential habitat for these three species within the Study Area is primarily limited to the rocky shore located at the far western boundary of the parcel. As the proposed project will be constructed a significant distance away from the bluff, it is unlikely to directly impact this specific habitat or affect the presence of these species. Any potential impacts on these species would be indirect, resulting from the utilization of the proposed residence within the Study Area. However, considering the existing level of development surrounding the project area, the proposed project is not expected to contribute significantly to the existing indirect disturbances already present in the area.

All mitigation recommendations presented in Section 5.1.3 are presented to mitigate impact to the species that could potentially occur within the Area Assessed for Project Feasibility and may experience direct or indirect impacts from the proposed project.

Impact to both the terrestrial and aquatic species listed in Table 1 can be mitigated if recommendations presented in Section 5.1.3 are followed.

### 4.5.2 Other Special-Status Animal Species

The nearest known **northern spotted owl (*Strix occidentalis caurina*)** Activity Centers (AC), according to the most up to date CNDDB Spotted Owl Viewer, are approximately 2.60 air miles (HUM0889) east to north east of the Study Area (Map 7; Occurrence Report 4).

Northern spotted owl resides 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). Roost selection for northern spotted owl is "… related closely to thermoregulatory needs [since they are] intolerant of high temperatures." Because of this, northern spotted owl "[r]oost in dense overhead canopy on north-facing slopes in the summer," (Zeiner, D.C. et al, 1988-1990. The Study Area does not exhibit this species' preferable forest type, due to the lack of suitable habitat. The Study Area is small, flat, and open, with no suitable habitat or vegetation for nesting or roosting.

Even though this project will not "...remove or modify spotted owl nesting, roosting or foraging habitat…", according to the *USFWS Northern Spotted Owl Survey protocol: Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls*, the "… protocol should also be applied to activities that disrupt essential breeding activities and to activities that may injure or otherwise harm spotted owl other than through habitat modification (e.g., noise disturbance, smoke from prescribed fire)," (USFWS, 2012). 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 m) to an active nest (USFWS 2006).

Due to the proximity the project area occurs to residential buildings, and the location of county roads, there are no anticipated direct or indirect disturbances to this species associated with this project that do not already exist from these surrounding features. Therefore, no project mitigations are recommended regarding this species.

## 4.6 Special Status Habitat Communities

The special-status habitat community identified in the CNDDB BIOS search in the 7.5-minute USGS Shelter Cove quadrangle, and the 5 adjacent quadrangles, is Upland Douglas Fir Forest.

There are no Douglas fir trees or forested habitats of any kind within the Study Area, and therefore no Upland Douglas Fir Forest habitat exists within the Area Assessed for Project Feasibility (Photos 1 – 6).

None of these special-status habitat communities will be impacted in any way by the proposed project.

# Section 5 Conclusion

## 5.1 Potential Impacts and Recommended Mitigation

### 5.1.1 Potential Direct Impacts

Direct impacts refer to the effects that may occur to the environment due to the direct interaction with the proposed action. The Biological Reconnaissance and Project Feasibility Assessment conducted in the Study Area concluded that the proposed project will result in direct environmental impacts through the earthwork involved in constructing the proposed structure and associated roadway in the Area Assessed for Project Feasibility. However, by implementing Best Management Practices (BMPs) and adhering to other mitigation measures outlined in the construction plan, the project can minimize its impact on the environment and prevent excessive harm to offsite habitats.

If the recommendations in Section 5.1.3 are followed, it is possible to mitigate or avoid direct impacts on all special-status species that could currently utilize or are likely to utilize the habitat in the Study Area. These recommendations aim to ensure that the construction activities associated with the project minimize the effects of direct environmental impacts.

During the reconnaissance survey and site visit conducted for this Biological Reconnaissance and Project Feasibility Assessment, it was observed that the habitats in the Study Area have been significantly altered due to historic habitat modification and abundance of nonnative and invasive plant species. As a result, the habitat quality for most of the special-status species in the area is poor. The proposed actions for this project can improve the surrounding habitat quality by removing invasive species and replanting native vegetation to create a more natural community composition. These improvements are likely to facilitate the presence, and create habitat refuge, for special-status animal species in the Study Area in the future.

Regarding the direct impacts on special-status plant species in the Study Area, a protocol-level botanical survey will be conducted prior to any ground disturbance activities related to the project. No sensitive, listed, or special-status vegetation will be removed within or around the Study Area, thus mitigating the effects of the project on listed plant species and avoiding significant adverse effects on special-status plants.

One common impact associated with this project is noise pollution generated by heavy machinery during the construction process, which can affect species' choice of habitat. If noise pollution occurs within a certain proximity to a species' habitat, it can cause displacement. Due to the Study Area's location in a setting near other residences and county roads, it is reasonable to assume that some degree of noise pollution already exists. However, the construction activities are expected to result in increased disturbance levels. Therefore, it is important to follow the mitigation measures outlined in Section 5.1.3 to minimize the impact of noise pollution.

### 5.1.2 Potential Indirect Impacts

Indirect impacts are effects that are caused by an action but occur later or are more distant in location, yet still reasonably foreseeable. In the case of this project, potential outcomes such as sediment and fuel runoff, which could impact the environment, particularly the rocky shoreline coastal environments nearby, need to be considered. By effectively implementing BMPs, it is possible to prevent indirect impacts,

ensuring that this project does not cause significant harm to the environment, surrounding habitat, or wildlife.

### 5.1.3 Recommendations

The following recommendations should be followed and/or taken into consideration through the development of the proposed projects and operations:

- During the development and construction of this project, BMPs should be used to prevent sediment, fuels, or contaminates from entering the surrounding terrestrial and aquatic environments/habitats. Complete lists of BMPs for project specific actions can be found at California State Water Resources Control Board BMP Databases[8]. The implementation of BMPs will be dependent on the project construction methods.
- To mitigate the negative impacts of nonnative and invasive species, it is recommended to prioritize their removal within the project site. These species pose a significant threat to native flora and fauna, disrupting the ecosystem's natural balance. Through targeted eradication methods and ongoing monitoring, the project can effectively reduce their spread. To enhance habitat, it is highly recommended to replace the removed species with a diverse selection of native plants. Native plants provide essential resources for local wildlife and contribute to overall biodiversity. Implementation of this mitigation measure, along with continued monitoring and maintenance, will restore and enhance the project site's habitat, promoting ecological integrity and long-term sustainability. Involving professionals and engaging the community will further support successful restoration efforts. See Table 3 for list of nonnative and invasive species.
- The protocol-level botanical survey, which has been initiated in conjunction with this biological assessment, should be completed within, and around, the locations defined as being feasible for project activities to occur within this Report. The survey should follow procedures recommended by CDFW, and are in accordance with the guidelines established by CNPS, from the document *Protocols for Surveying and Evaluating Impacts to Specie Status Native Plant Populations and Sensitive Natural Communities* (CDFW, 2018).
- If additional activities are proposed that may result in take of a listed species, agency personnel from CDFW and USFWS can further analyze the potential impacts and provide technical assistance for any listed species. If required, guidelines for these reconnaissance surveys should be followed in accordance to the, CDFW Survey and Monitoring Protocols and Guidelines, which can be located here: https://www.wildlife.ca.gov/conservation/survey-protocols

## 5.2 Statement of Limitation

The data and findings presented in this Report are valid to the extent that they represent habitat analysis and/or actual sightings of the wildlife and special-status species described. These findings outlined in this Report are based on one (1) Biological Assessment site visit and may not be seasonally appropriate for all conclusive results.

Deficiencies in these findings may result from the following:

[8] **State Water Resources Control BMP Database:** https://www.waterboards.ca.gov/water_issues/programs/stormwater/bmp_database.shtml

- The assessment of habitat utilization within the Study Area, by special-status animal species, was based upon the observations made during a single site visit and further studies and surveys may be required for project approval by local, state or federal agencies as well.
- A floristic survey described in this Report does not represent a completed protocol-level survey. Further botanical surveys, at the seasonally appropriate times, following the CDFW floristic survey protocol, are required before the survey can be considered complete.
- The parcel boundaries displayed in the maps created for this Report do not represent a boundary survey. Parcel and property lines shown within these maps are approximated and were acquired from Humboldt County Web GIS, and any errors within these boundaries are a result of errors in Humboldt County's GIS database.
- This Report is not intended to be a complete biological survey report for all species generated from the CNDDB, but rather an initial reconnaissance and feasibility assessment based on present biological conditions.
- It has been assumed that prior to implementation of this project, protocol-level surveys (pre-construction) will be conducted to verify field and data-based observations documented in this Report, if recommendations established in this Report are not followed.
- Any biological resource buffers and setbacks defined in this Report only represent buffers to biological resources and do not include cultural resources (e.g. historical landmarks and/or cemeteries). Additional buffers and setbacks may be required for cultural resources which may alter the size of the potential cultivation areas defined in this Report.

The opinions, conclusions, and recommendations in this Report are based on assumptions made by Naiad Biological Consulting when undertaking services and preparing the Report. As a result of this Report being an initial biological reconnaissance and scoping assessment, and not a protocol-level survey, Naiad Biological Consulting expressly disclaims responsibility for any error in, or omission from, this Report arising from or in connection with any of the assumptions being incorrect.

# Section 6 Regulatory Framework

## 6.1 Regulatory Framework Guidelines

The following regulatory framework is provided as justification for the rules and recommendations presented within this document. Further information may be appropriate for explanation of recommendations or actions expressed in this document and can be presented to the client upon request.

### 6.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered species under the federal Endangered Species Act (FESA). The USFWS also maintains a list of 'proposed' species and candidate species that are not legally protected under the FESA, but are often included in their review of a project as they may become listed in the near future. The FESA protects listed animal species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. Take can also include habitat modification or degradation that results in death or injury to a listed species. An activity can be defined as a "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands. Pursuant to the requirements of the FESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species (plants and animals) may be present in the project area and determine whether the proposed project may affect such species. Any activities that could result in the take of a federally-listed species will require formal consultation with the USFWS.

### 6.1.2 California Endangered Species Act

The California Endangered Species Act (CESA) protects any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, the California Department of Fish and Wildlife (CDFW) has jurisdiction over state-listed species (California Fish and Wildlife Code 2070). Take of state-listed species requires a permit from CDFW, which is granted only under strictly limited circumstances. Additionally, the CDFW maintains lists of "species of special concern" that are defined as animal species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats. Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed or proposed endangered or threatened species may be present in the project area and determine whether the proposed project may result in a significant impact on such species.

### 6.1.3 California Environmental Quality Act

Section 15380(b) of the California Environmental Quality Act (CEQA) Guidelines provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definitions in FESA and CESA and the section of the California Fish and Wildlife Code dealing with rare or endangered plants or animals. This section was included in the guidelines primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from a project's potential impacts, if it finds that the species meets the criteria of a threatened or endangered species.

### 6.1.4 Clean Water Act

Under Section 404 of the federal Clean Water Act, the U.S. Army Corps of Engineers (Corps) is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 CFR Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed "isolated wetlands" and, depending on the circumstances, may also be subject to Corps jurisdiction. In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Minor amounts of fill are sometimes covered by Nationwide Permits, which were established to streamline the permit process for projects with "minimal" impacts on wetlands or other waters of the U.S. An Individual Permit is required for projects that result in more than a minimal impact on jurisdictional areas. The Individual Permit process requires evidence that fill of jurisdictional areas has been minimized to the extent "practicable" and provides an opportunity for public review of the project.

### 6.1.5 California Water Quality Regulatory Programs

Pursuant to Section 401 of the federal Clean Water Act and the state's Porter-Cologne Act, projects that are regulated by the Corps must obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB sometimes asserts jurisdiction over wetlands that the Corps does not (e.g. certain isolated wetlands) and may impose mitigation requirements even if the Corps does not. The CDFW also exerts jurisdiction over the bed and banks of watercourses and water bodies according to provisions of Section 1601to1603 of the Fish and Wildlife Code. The Fish and Wildlife Code requires a Stream Alteration Agreement for the fill or removal of material within the bed and banks of a watercourse or water body.

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# Appendix A

## PHOTO DOCUMENTATION

**BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT**

**Thomas Bond & Assoc.**
**5432 Cummings Rd.**
**Eureka, CA 95503**

**Shelter Cove, Humboldt County, California**
**Assessor Parcel Number (APN):**
**111 – 121 – 037**

**June 2023**

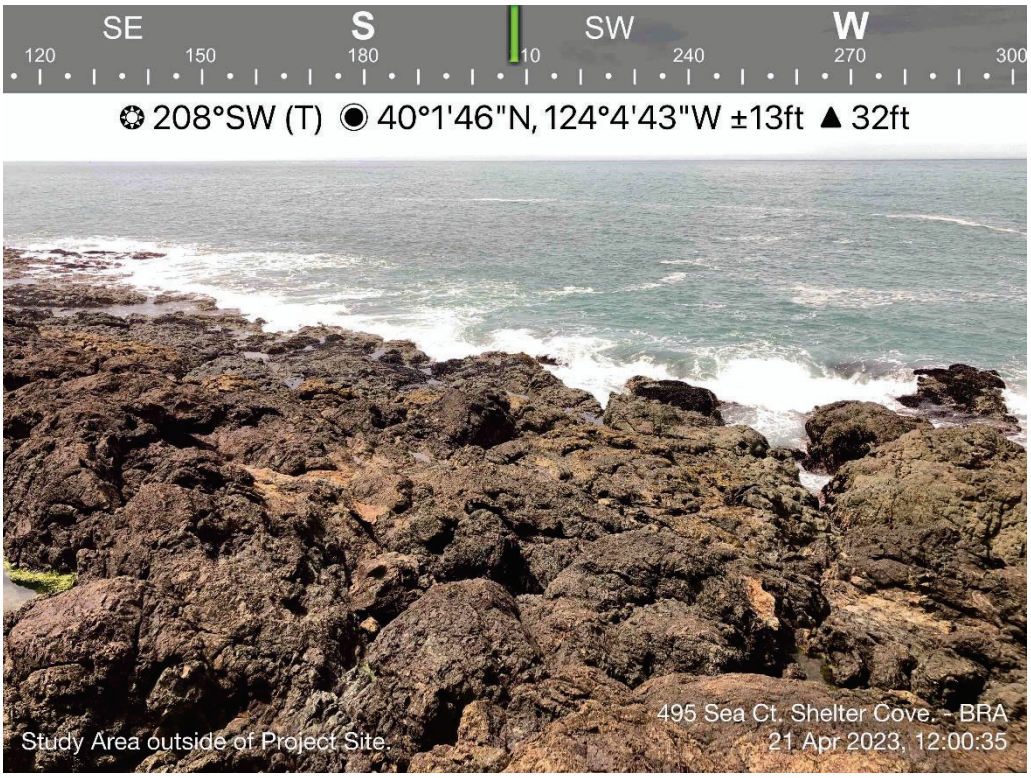



Photo 1. The rugged coastline west of the Study Area towards the Pacific Ocean.


Photo 2. The rocky slopes that rise above the shoreline comprising the western boundary of the Study Area.


Photo 3. The coastal bluff habitat that is composed of a combination of soil, rocks, and vegetation.


Photo 4. The Area Assessed for Project Feasibility.

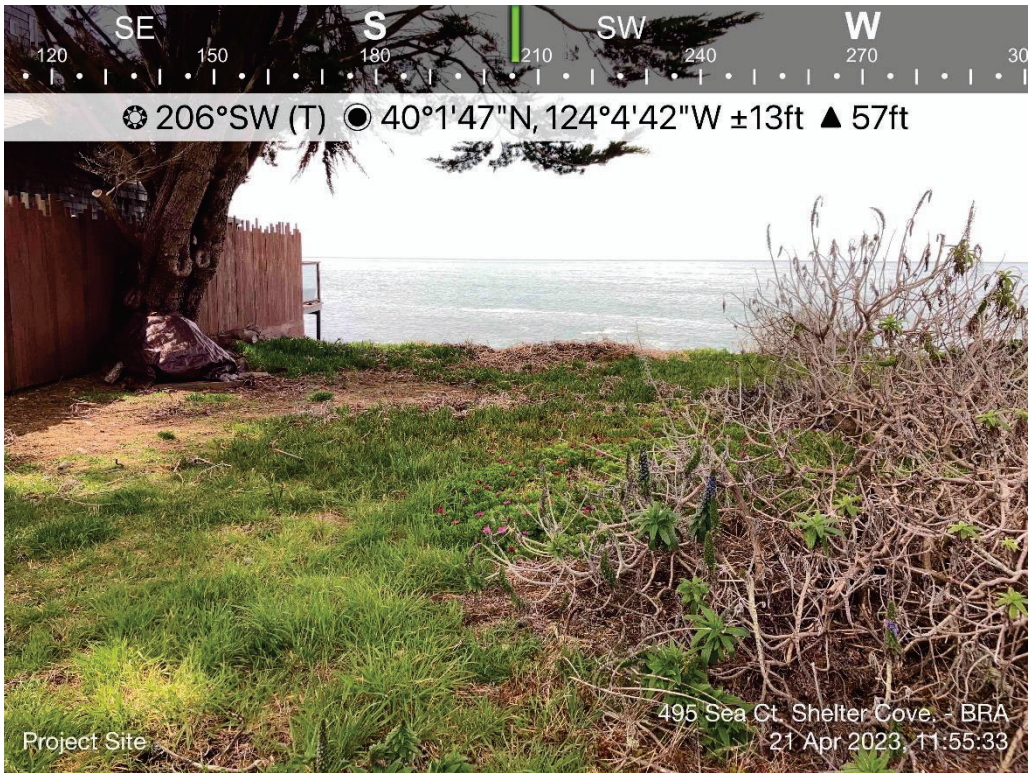



Photo 5. The Area Assessed for Project Feasibility.

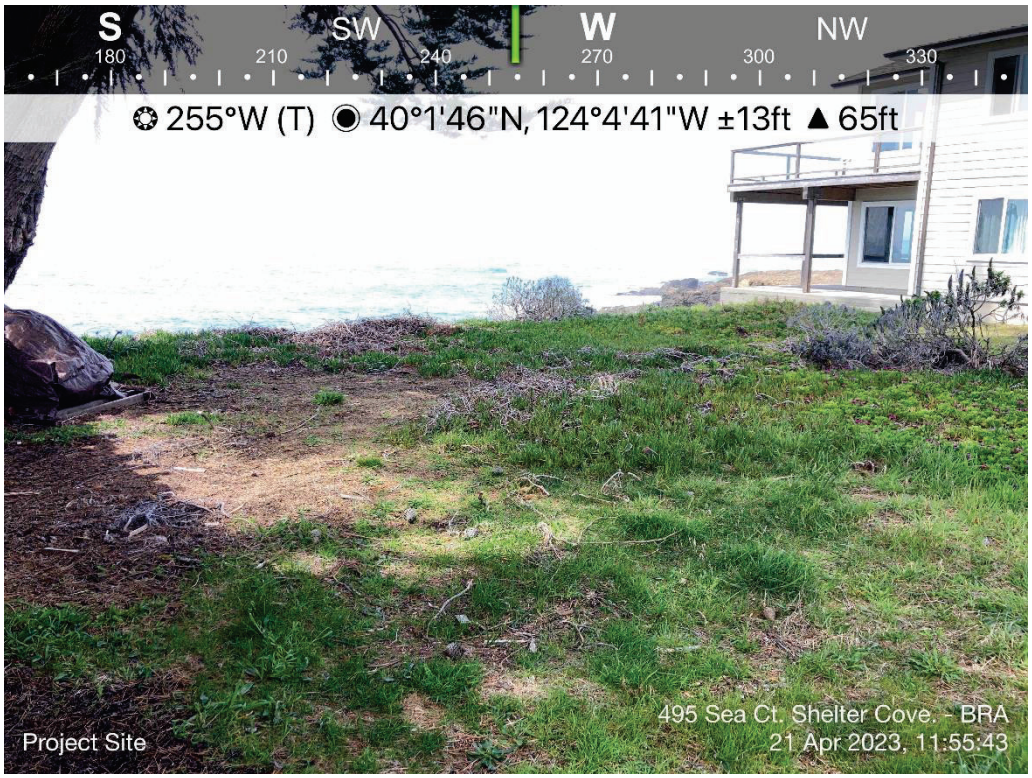



Photo 6. The Area Assessed for Project Feasibility.

# Appendix B

## TABLES

**BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT**

**Thomas Bond & Assoc.**
**5432 Cummings Rd.**
**Eureka, CA 95503**

**Shelter Cove, Humboldt County, California**
**Assessor Parcel Number (APN):**
**111 – 121 – 037**

**June 2023**

**Table 1 – Special-Status Animal Species – April 2023 – APN 111-121-037 – Shelter Cove and surrounding 7.5 min quadrangles**

| Scientific Name | Common Name | Federal Status | State Status | CDFW Status | Habitat | Potential of Occurrence |
|---|---|---|---|---|---|---|
| **Amphibians** | | | | | | |
| *Ascaphus truei* | Coastal tailed frog | None | None | SSC | Cold, clear streams with rocky substrates in forested areas | None due to no freshwater habitat |
| *Rana aurora* | Red-legged frog | None | None | SSC | Wetlands, meadows, ponds, lakes, and slow-moving streams in forested areas | None due to no freshwater habitat |
| *Rana boylii pop. 1* | Foothill yellow-legged frog | None | None | SSC | Fast-flowing rivers and streams, often found near rocky areas with deep pools | None due to no freshwater habitat |
| *Rhyacotriton variegatus* | Southern torrent salamander | None | None | SSC | Cold, fast-flowing streams and rivers with rocky substrates | None due to no freshwater habitat |
| *Taricha rivularis* | California newt | None | None | SSC | Woodlands, forests, near water bodies such as ponds, streams, and lakes | None due to no freshwater habitat |
| **Birds** | | | | | | |
| *Accipiter cooperii* | Cooper's hawk | None | None | WL | Forests, woodlands, open areas, and edges of meadows | Low/None due to no rnesting/oosting habitat and the size of parcel and proximity to developed lots. |
| *Progne subis* | Purple martin | None | None | SSC | Open habitats including grasslands, meadows, fields, and near freshwater bodies | Low/None due to no nesting/roosting habitat, size of parcel and proximity to developed lots, and no nearby freshwater bodies |
| *Pandion haliaetus* | Osprey | None | None | WL | Coastal areas, estuaries, lakes, and rivers | Low due to no nesting/roosting habitat. Could likely utilized the ocean west of the Study Area for hunting, but proposed project is not anticipated to impact this species. |
| *Pelecanus occidentalis californicus* | California brown pelican | Delisted | Delisted | FP | Coastal areas, rocky islands, cliffs, and nearshore waters of the ocean | Moderate within Study Area west of proposed project area. None/Low |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | within Area Assessed for Project Feasibility. Not anticipated to be impacted by proposed project. |
| *Asio otus* | Long-eared owl | None | None | SSC | Woodlands, forests, marshes, and open areas with trees | None due to no forested/woodland habitat, no roosting/nesting habitat, and no freshwater habitat |
| *Strix occidentalis caurina* | Northern spotted owl | Threatened | Threatened | - | Old-growth forests, mixed coniferous forests, and densely wooded areas | None due to no forested/woodland habitat, no roosting/nesting habitat |
| *Contopus cooperi* | Olive-sided flycatcher | None | None | SSC | Forests, woodlands, and open areas near water bodies | None due to no forested/woodland habitat, no nesting habitat |
| **Crustaceans** | | | | | | |
| *Pacifastacus leniusculus klamathensis* | Klamath River crayfish | None | None | - | Rivers, streams, and lakes with clean and well-oxygenated water | None due to no freshwater habitat |
| **Fishes** | | | | | | |
| *Entosphenus tridentatus* | Pacific lamprey | None | None | SSC | Rivers, streams, and estuaries during spawning migrations | None due to no freshwater habitat |
| *Oncorhynchus kisutch pop. 2* | coho salmon - southern Oregon / northern California ESU | Threatened | Threatened | - | Rivers, streams, and estuaries during spawning migrations | None due to no freshwater habitat |
| *Oncorhynchus kisutch pop. 4* | coho salmon - central California coast ESU | Endangered | Endangered | - | Rivers, streams, and estuaries during spawning migrations | None due to no freshwater habitat |
| *Oncorhynchus mykiss irideus pop. 48* | steelhead - northern California DPS summer-run | Threatened | Endangered | - | Rivers, streams, lakes, and estuaries with cold, clean, and well-oxygenated water | None due to no freshwater habitat |
| *Oncorhynchus mykiss irideus pop. 49* | steelhead - northern California DPS winter-run | Threatened | None | - | Rivers, streams, lakes, and estuaries with cold, clean, and well-oxygenated water | None due to no freshwater habitat |
| *Oncorhynchus tshawytscha pop. 17* | Chinook salmon - California coastal ESU | Threatened | None | - | Rivers, streams, and estuaries during spawning migrations | None due to no freshwater habitat |
| **Insects** | | | | | | |
| *Bombus caliginosus* | Obscure bumble bee | None | None | - | Coastal scrub, grasslands, meadows, and open areas with flowering plants | Low due to size of the parcel and current vegetative species composition and its proximity to developed residences |

| | | | | | | |
|---|---|---|---|---|---|---|
| *Bombus occidentalis* | Western bumble bee | None | Candidate Endangered | - | Meadows, grasslands, shrublands, and open areas with diverse flowering plants | Low due to size of the parcel and current vegetative species composition and its proximity to developed residences |
| **Mammals** | | | | | | |
| *Arborimus pomo* | Sonoma tree vole | None | None | SSC | Forests, woodlands, and dense vegetation in Sonoma County, California | None due to no forested/woodland habitat |
| *Erethizon dorsatum* | North American porcupine | None | None | - | Forests, woodlands, and areas with trees | None due to no forested/woodland habitat |
| *Enhydra lutris nereis* | Southern sea otter | Threatened | None | FP | Coastal waters, kelp forests, rocky shorelines, and estuaries | Moderate within Study Area west of proposed project area. None/Low within Area Assessed for Project Feasibility. Not anticipated to be impacted by proposed project. |
| *Pekania pennanti* | Fisher | None | None | SSC | Forests, woodlands, and areas with dense vegetation and tree cover | None due to no forested/woodland habitat |
| *Taxidea taxus* | American badger | None | None | SSC | Grasslands, meadows, open areas, and agricultural fields | Low/None due to size of lot and proximity to developed residences habitat |
| *Eumetopias jubatus* | Steller's sea lion | Delisted | None | - | Coastal rocky areas, islands, and nearshore waters of the ocean | Moderate within Study Area west of proposed project area. None/Low within Area Assessed for Project Feasibility. Not anticipated to be impacted by proposed project. |
| *Corynorhinus townsendii* | Townsend's big-eared bat | None | None | SSC | Forests, woodlands, caves, and rocky areas with suitable roosting sites | None due to no forested/woodland and no roosting habitat |
| *Myotis evotis* | Long-eared myotis | None | None | - | Forests, woodlands, caves, and areas near water bodies | None due to no forested/woodland and no roosting habitat |
| *Myotis thysanodes* | Fringed myotis | None | None | - | Forests, woodlands, caves, and areas near water bodies | None due to no forested/woodland and no roosting habitat |
| **Mollusks** | | | | | | |
| *Helminthoglypta arrosa monticola* | Monticola arrosa land snail | None | None | - | Forests, woodlands, and areas with suitable vegetation and moisture | None due to no forested/woodland and no freshwater moist habitat |

| **Reptiles** | | | | | | |
|---|---|---|---|---|---|---|
| *Emys marmorata* | Western pond turtle | None | None | SSC | Freshwater habitats including ponds, lakes, marshes, and slow-moving streams | None due to no freshwater habitat |

### 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.

### Definitions of Federal Statuses (Federal Endangered Species Act):

**Endangered species**:

As defined in the U.S. Government Code and California Fish and Game Code (16 U.S. Government Code 1532[6] and California Fish and Game Code Section 2062), a native species, subspecies, variety of organism, or distinct population segment that is in serious danger of becoming extinct throughout all or a significant portion of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

**Threatened species:**

Native species, subspecies, variety, or distinct population segment of an organism that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future throughout all of a significant portion of its range.

**Candidate Species:**

Not defined or addressed in statute or regulations. Candidate species are those which USFWS has sufficient information on their biological status and threats to propose listing, but for which the development of a proposed listing regulation is precluded by other higher priority listing activities. Candidates receive no protection under the ESA.

## Definitions of State Statuses (California Endangered Species Act):

**Endangered species**:

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease. Fish & G. Code, §2062

**Threatened species:**

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Fish & G. Code, §2067

**Candidate Species:**

A native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the Department for listing. Candidates are given full CESA protection. Fish & G. Code, §2068

**Table 2 – Special-Status Plant Species – April 2023 – APN 111-121-037 – Shelter Cove and surrounding 7.5 min quadrangles**

| Scientific Name | Common Name | CRPR | Blooming Period | Habitat | Microhabitat | Elevation (meters) | Potential of Occurrence |
|---|---|---|---|---|---|---|---|
| *Antennaria suffrutescens* | evergreen everlasting | 4.3 | Jan-Jul | Lower montane coniferous forest (serpentinite) | | 500-1600 | Unlikely |
| *Calamagrostis foliosa* | leafy reed grass | 4.2 | May-Sep | Coastal bluff scrub, North Coast coniferous forest | Rocky | 0-1220 | Likely |
| *Castilleja litoralis* | Oregon coast paintbrush | 2B.2 | Jun | Coastal bluff scrub, Coastal dunes, Coastal scrub | Sandy | 15-100 | Likely |
| *Castilleja mendocinensis* | Mendocino Coast paintbrush | 1B.2 | Apr-Aug | Closed-cone coniferous forest, Coastal bluff scrub, Coastal dunes, Coastal prairie, Coastal scrub | | 0-160 | Somewhat likely |
| *Ceanothus gloriosus var. exaltatus* | glory brush | 4.3 | Mar-Jun(Aug) | Chaparral | | 30-610 | Unlikely |
| *Clarkia amoena ssp. whitneyi* | Whitney's farewell-to-spring | 1B.1 | Jun-Aug | Coastal bluff scrub, Coastal scrub | | 10-100 | Likely |
| *Coptis laciniata* | Oregon goldthread | 4.2 | (Feb)Mar-May(Sep-Nov) | Meadows and seeps, North Coast coniferous forest (streambanks) | Mesic | 0-1000 | Unlikely |
| *Epilobium septentrionale* | Humboldt County fuchsia | 4.3 | Jul-Sep | Broadleafed upland forest, North Coast coniferous forest | Rocky (sometimes), Sandy (sometimes) | 45-1800 | Unlikely |
| *Erythronium oregonum* | giant fawn lily | 2B.2 | Mar-Jun(Jul) | Cismontane woodland, Meadows and seeps | Openings, Rocky, Serpentinite (sometimes) | 100-1150 | Unlikely |
| *Erythronium revolutum* | coast fawn lily | 2B.2 | Mar-Jul(Aug) | Bogs and fens, Broadleafed upland forest, North Coast coniferous forest | Mesic, Streambanks | 0-1600 | Unlikely |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Gilia capitata ssp. pacifica* | Pacific gilia | 1B.2 | Apr-Aug | Chaparral (openings), Coastal bluff scrub, Coastal prairie, Valley and foothill grassland | | 5-1665 | Likely |
| *Hemizonia congesta ssp. tracyi* | Tracy's tarplant | 4.3 | (Mar-Apr)May-Oct | Coastal prairie, Lower montane coniferous forest, North Coast coniferous forest | Openings, Serpentinite (sometimes) | 120-1200 | Somewhat likely |
| *Hosackia gracilis* | harlequin lotus | 4.2 | Mar-Jul | Broadleafed upland forest, Cismontane woodland, Closed-cone coniferous forest, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps, Meadows and seeps, North Coast coniferous forest, Valley and foothill grassland | Roadsides, Wetlands | 0-700 | Somewhat likely |
| *Lasthenia californica ssp. macrantha* | perennial goldfields | 1B.2 | Jan-Nov | Coastal bluff scrub, Coastal dunes, Coastal scrub | | 5-520 | Likely |
| *Lathyrus palustris* | marsh pea | 2B.2 | Mar-Aug | Bogs and fens, Coastal prairie, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, North Coast coniferous forest | Mesic | 1-100 | Likely |
| *Leptosiphon latisectus* | broad-lobed leptosiphon | 4.3 | Apr-Jun | Broadleafed upland forest, Cismontane woodland | | 170-1500 | Unlikely |
| *Lilium rubescens* | redwood lily | 4.2 | (Mar)Apr-Aug(Sep) | Broadleafed upland forest, Chaparral, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest | Roadsides (sometimes), Serpentinite (sometimes) | 30-1910 | Unlikely |
| *Listera cordata* | heart-leaved twayblade | 4.2 | Feb-Jul | Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest | | 5-1370 | Unlikely |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| *Mitellastra caulescens* | leafy-stemmed mitrewort | 4.2 | (Mar)Apr-Oct | Broadleafed upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest | Mesic, Roadsides (sometimes) | 5-1700 | Unlikely |
| *Montia howellii* | Howell's montia | 2B.2 | (Feb)Mar-May | Meadows and seeps, North Coast coniferous forest, Vernal pools | Roadsides (sometimes), Vernally Mesic | 0-835 | Somewhat likely |
| *Piperia candida* | white-flowered rein orchid | 1B.2 | (Mar-Apr)May-Sep | Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest | Serpentinite (sometimes) | 30-1310 | Unlikely |
| *Sidalcea malachroides* | maple-leaved checkerbloom | 4.2 | (Mar)Apr-Aug | Broadleafed upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland | Disturbed areas (often) | 0-730 | Somewhat likely |
| *Sidalcea malviflora ssp. patula* | Siskiyou checkerbloom | 1B.2 | (Mar)May-Aug | Coastal bluff scrub, Coastal prairie, North Coast coniferous forest | Roadsides (often), often roadcuts | 15-1230 | Somewhat likely |
| *Tiarella trifoliata var. trifoliata* | trifoliate laceflower | 3.2 | (May)Jun-Aug | Lower montane coniferous forest, North Coast coniferous forest | Edges, Streambanks; moist shady banks | 170-1500 | Unlikely |
| *Usnea longissima* | Methuselah's beard lichen | 4.2 | | Broadleafed upland forest, North Coast coniferous forest | On tree branches; usually on old growth hardwoods and conifers | 50-1460 | Unlikely |

**California Rare Plant Ranks (CRPR):**

**1A:** Plants with a California Rare Plant Rank of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years.

**1B:** Plants with a California Rare Plant Rank of 1B are rare throughout their range with the majority of them endemic to California.

**2A:** Plants with a California Rare Plant Rank of 2A are presumed extirpated because they have not been observed or documented in California for many years.

**2B:** Except for being common beyond the boundaries of California, plants with a California Rare Plant Rank of 2B would have been ranked 1B.

**3:** Plants with a California Rare Plant Rank of 3 are united by one common theme – we lack the necessary information to assign them to one of the other ranks or to reject them.

**4:** Plants with a California Rare Plant Rank of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly.

**Threat Ranks**

Ranks at each level also include a threat rank (e.g., CRPR 4.3) and are determined as follows:

- **0.1**-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- **0.2**-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- **0.3**-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

**Table 3. Botanical Species Observed Within Study Area APN: 111-121-037 on April 21st, 2023**

| Botanical Name | Common Name | Origin |
|---|---|---|
| **Trees** | | |
| *Hesperocyparis macrocarous* | Monterey cypress | Native |
| **Shrubs** | | |
| *Rubus ursinus* | California blackberry | Native |
| *Echium canadensis* | Pride of madeira | Cal-IPC: Limited |
| *Toxicodendron diversilobum* | poison oak | Native |
| **Grasses & Graminoids** | | |
| *Holcus lanatus* | velvet grass | Native |
| **Forbs** | | |
| *Eschscholzia californica* | California poppy | Native |
| *Carprobrotus edulis* | iceplant | Cal-IPC: High |
| *Hypochaeris radicata* | rough cat's ear | Cal-IPC: Moderate |
| *Plantago lanceolata* | English plantain | Non-native |
| *Trifolium* sp. | clover | Native/non-native |
| *Cirsium vulgare* | bull thistle | Cal-IPC: moderate |
| *Geranium dissectum* | cutleaf geranium | Cal-IPC: Limited |
| *Narcissus pseudonarcissus* | daffodil | Non-native |
| *Geranium molle* | geranium | Non-native |
| *Lysimachia arvensis* | scarlet pimpernel | Non-native |
| *Sonchus apser* | pricky sowthistle | Non-native |
| *Osteospermum fruticosum* | trailing African daisy | Non-native |

# Appendix C

## MAPS

**BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT**

**Thomas Bond & Assoc.**
**5432 Cummings Rd.**
**Eureka, CA 95503**

**Shelter Cove, Humboldt County, California**
**Assessor Parcel Number (APN):**
**111 – 121 – 037**

**June 2023**


**495 Sea Ct,**
**Shelter Cove, CA 95589**

**APN: 111 121 037**

## Map 1: Site Location Map

Scale: 1:24,000 Study Area

0 1,000 2,000 4,000 Feet

Source: Shelter Cove 7.5-Minute USGS Quadrangle

Naiad Biological Consulting


## Map 2: Area Assessed for Project Feasibility

Scale: 1:567

0 25 50 100 Feet

Source: Shelter Cove 7.5-Minute USGS Quadrangle

Study Area

Area Assessed for Project Feasibility

Naiad Biological Consulting


## Map 3: Biological Survey Path

Scale: 1:567

0 25 50 100 Feet

Source: Shelter Cove 7.5-Minute USGS Quadrangle

- Study Area
- Area Assessed for Project Feasibility
- Biological Survey Path (4/21/23)

Naiad Biological Consulting


## Map 4: Web Soil Survey and NWI

Scale: 1:680

0 30 60 120 Feet

Source: Shelter Cove 7.5-Minute USGS Quadrangle

Area Assessed for Project Feasibility

**NRCS Web Soil Survey**

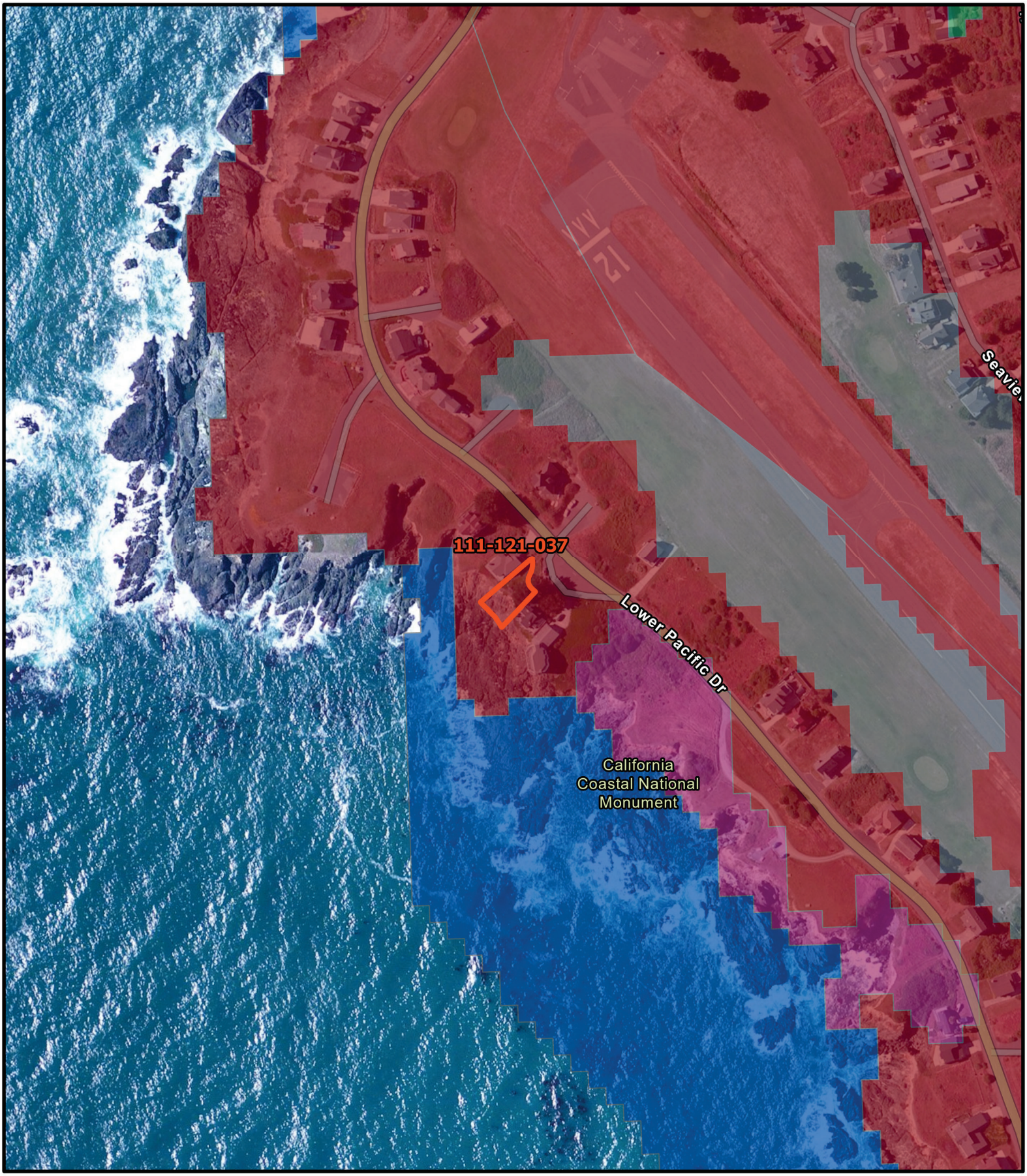
Soil Map Units Within Study Area

**USFS National Wetlands Inventory**

Estuarine and Marine Wetland

Estuarine and Marine Deepwater

Naiad Biological Consulting




## Map 5: CalVeg Regional Dominant Alliances

Scale: 1:2,894

0 137.5 275 550 Feet

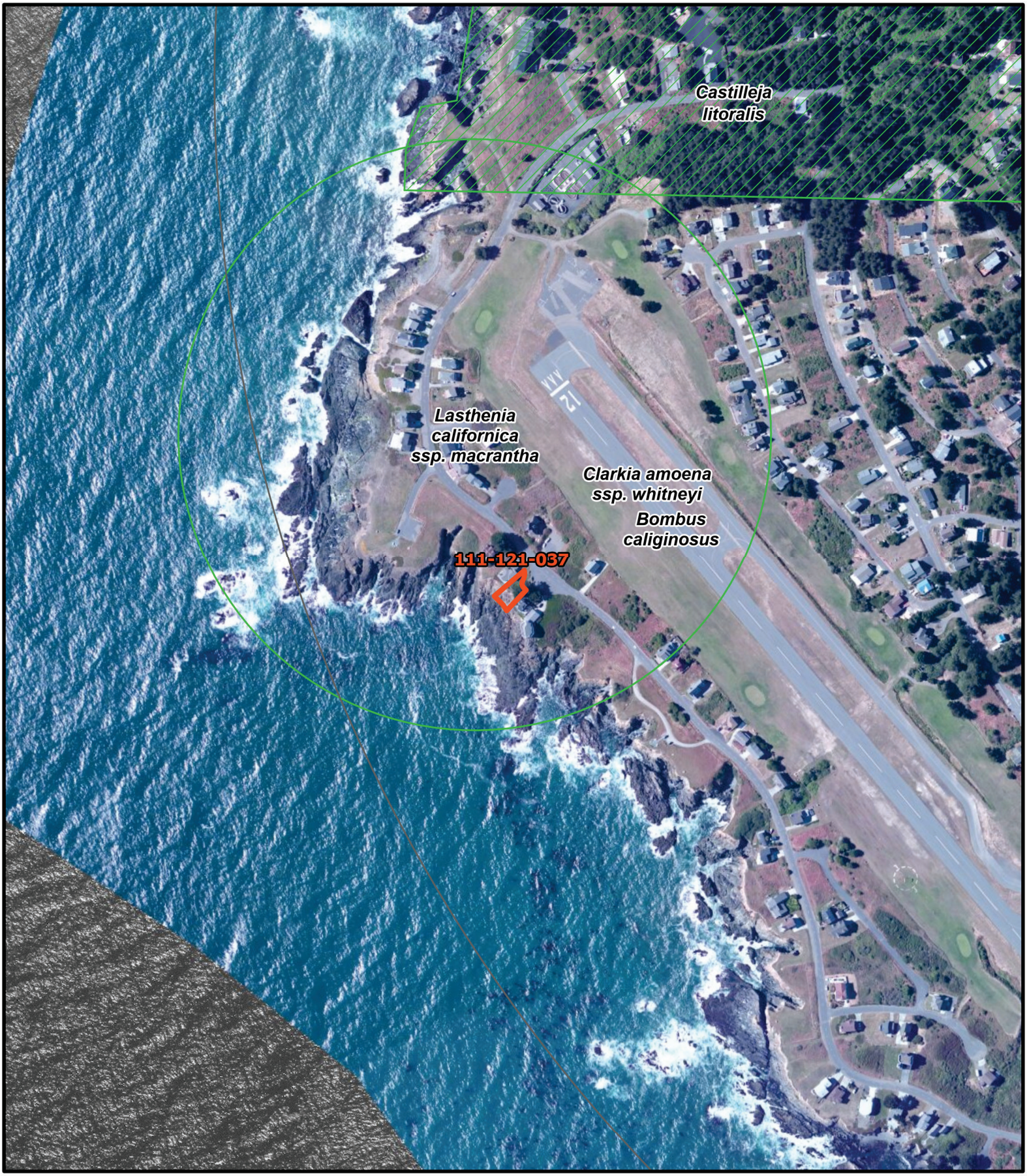
Source: Shelter Cove 7.5-Minute USGS Quadrangle

Study Area

**Regional Dominant Alliances**

- Annual Grasses and Forbs
- Urban-related Bare Soil
- California Bay
- Urban/Developed (General)
- Ocean

Naiad Biological Consulting




## Map 6: CNDDB Special Status Species

Scale: 1:5,000

0 240 480 960 Feet

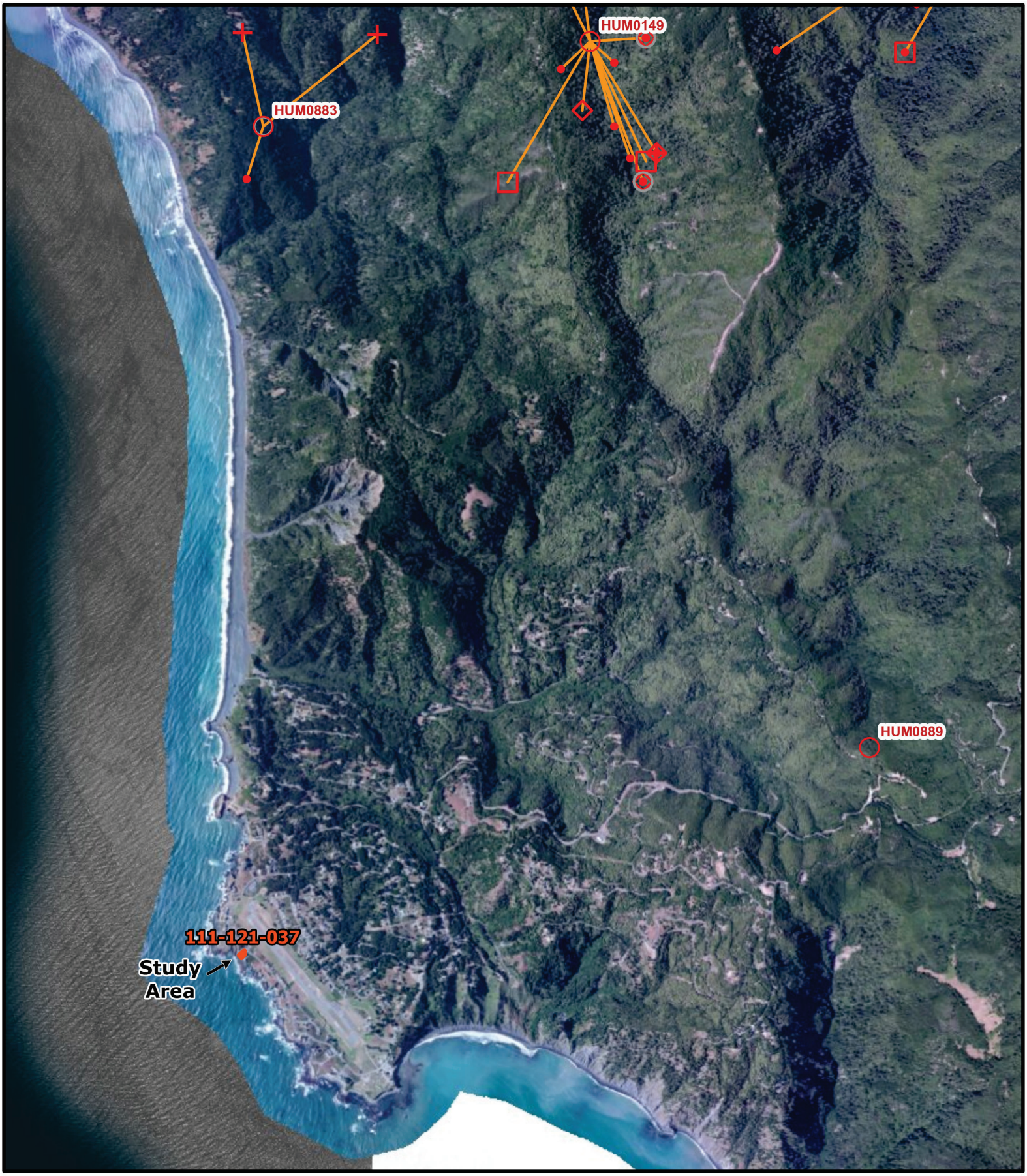
Source: Shelter Cove 7.5-Minute USGS Quadrangle

Study Area

**CNDDB Symbology**

- Plant (non-specific)
- Plant (circular)
- Multiple (circular)

Naiad Biological Consulting




## Map 7: Spotted Owl Observations

Scale: 1:30,959

0 1,250 2,500 5,000 Feet

Source: Shelter Cove 7.5-Minute USGS Quadrangle

Study Area

Spotted Owl Spider Diagram

**Spotted Owl Observations**

- Nest
- Young
- Pair
- Other Positive Observation
- Negative Observation
- Activity Center

Naiad Biological Consulting

# Appendix D

## SPECIAL-STATUS SPECIES OCCURRENCE REPORTS

**BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT**

**Thomas Bond & Assoc.**
**5432 Cummings Rd.**
**Eureka, CA 95503**

**Shelter Cove, Humboldt County, California**
**Assessor Parcel Number (APN):**
**111 – 121 – 037**

**June 2023**

# Occurrence Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Species IS (Clarkia amoena ssp. whitneyi)

| | | | |
|---|---|---|---|
| **Map Index Number:** | 56001 | **EO Index:** | 56017 |
| **Key Quad:** | Shelter Cove (4012411) | **Element Code:** | PDONA05025 |
| **Occurrence Number:** | 7 | **Occurrence Last Updated:** | 2020-11-23 |

**Scientific Name:** *Clarkia amoena ssp. whitneyi*

**Common Name:** Whitney's farewell-to-spring

**Listing Status:** **Federal:** None
**State:** None

**Rare Plant Rank:** 1B.1

**Other Lists:** SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_UCBG-UC Botanical Garden at Berkeley

**CNDDB Element Ranks:** **Global:** G5T1
**State:** S1

**General Habitat:**

COASTAL BLUFF SCRUB, COASTAL SCRUB.

**Micro Habitat:**

5-125 M.

| | | | |
|---|---|---|---|
| **Last Date Observed:** | 1939-07-14 | **Occurrence Type:** | Natural/Native occurrence |
| **Last Survey Date:** | 2016-XX-XX | **Occurrence Rank:** | None |
| **Owner/Manager:** | UNKNOWN | **Trend:** | Unknown |
| **Presence:** | Possibly Extirpated | | |

**Location:**

SHELTER COVE AND 1 MILE EAST OF SHELTER COVE.

**Detailed Location:**

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB, IN THE VICINITY OF SHELTER COVE. LEWIS (1955) NOTES THAT "CAPSULES RATHER SLENDER" ON 1939 HITCHCOCK COLLECTION; POSSIBLY DEPAUPERATE FORM.

**Ecological:**

ROAD BANK.

**Threats:**

AGRICULTURE.

**General:**

TYPE LOCALITY. BASED ON 1866 BOLANDER COLLECTION FROM SHELTER COVE AND 1939 HITCHCOCK COLLECTION FROM "ROAD BANK, 1 MI E OF SHELTER COVE." 80 ACRE AREA AT SHELTER COVE USED FOR AG FOR 60 YEARS; MAY BE EXTINCT. NOT SEEN IN 2015 & 2016.

| | | | | | |
|---|---|---|---|---|---|
| **PLSS:** | T05S, R01E, Sec. 10 (H) | **Accuracy:** | 1 mile | **Area (acres):** | 0 |
| **UTM:** | Zone-10 N4432116 E409271 | **Latitude/Longitude:** | 40.03439 / -124.06341 | **Elevation (feet):** | 380 |

| **County Summary:** | **Quad Summary:** |
|---|---|
| Humboldt | Shelter Cove (4012411) |

**Sources:**

| | |
|---|---|
| BOL66S0015 | BOLANDER, H. - BOLANDER #6534 UC #20317 & #20318 1866-XX-XX |
| HIT39S0012 | HITCHCOCK, C. & J. MARTIN - HITCHCOCK #5432 RSA #0059979 1939-07-14 |
| JEP36B0001 | JEPSON, W. - A FLORA OF CALIFORNIA - VOLUME 2 1936-XX-XX |
| LAY18U0001 | LAYMON, S. - EMAIL REGARDING NEGATIVE SIGHTINGS OF CLARKIA AMOENA SSP. WHITNEYI 2018-07-10 |
| LEW55A0001 | LEWIS, M. & H. LEWIS - THE GENUS CLARKIA. UNIVERSITY OF CALIFORNIA PUBLICATIONS IN BOTANY, VOLUME 20, NO. 4. 1955-XX-XX |
| TRANDS0006 | TRACY - TRACY #4998 HERBARIUM UNKNOWN (CITED IN LEW55A0001) XXXX-XX-XX |

# Occurrence Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Species IS (Lasthenia californica ssp. macrantha)

| | | | |
|---|---|---|---|
| **Map Index Number:** | A1511 | **EO Index:** | 103094 |
| **Key Quad:** | Shelter Cove (4012411) | **Element Code:** | PDAST5L0C5 |
| **Occurrence Number:** | 59 | **Occurrence Last Updated:** | 2016-08-16 |

**Scientific Name:** *Lasthenia californica ssp. macrantha*

**Common Name:** perennial goldfields

**Listing Status:** **Federal:** None
**State:** None

**Rare Plant Rank:** 1B.2

**Other Lists:** BLM_S-Sensitive
SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden

**CNDDB Element Ranks:** **Global:** G3T2
**State:** S2

**General Habitat:**

COASTAL BLUFF SCRUB, COASTAL DUNES, COASTAL SCRUB.

**Micro Habitat:**

5-185 M.

| | | | |
|---|---|---|---|
| **Last Date Observed:** | 1981-05-24 | **Occurrence Type:** | Natural/Native occurrence |
| **Last Survey Date:** | 1981-05-24 | **Occurrence Rank:** | Unknown |
| **Owner/Manager:** | UNKNOWN | **Trend:** | Unknown |
| **Presence:** | Presumed Extant | | |

**Location:**

ABALONE POINT.

**Detailed Location:**

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB AROUND ABALONE POINT ("EAST" BENCHMARK ON TOPO MAP) WITHIN GIVEN TRS: T05S R01E SECTION 16.

**Ecological:**

COASTAL MARINE TERRACE AND COASTAL BLUFF.

**Threats:**

**General:**

SITE IS BASED ON A 1981 CLARK COLLECTION.

| | | | | | |
|---|---|---|---|---|---|
| **PLSS:** | T05S, R01E, Sec. 16, NW (H) | **Accuracy:** | 1/5 mile | **Area (acres):** | 70 |
| **UTM:** | Zone-10 N4431759 E407935 | **Latitude/Longitude:** | 40.03103 / -124.07903 | **Elevation (feet):** | 50 |

| **County Summary:** | **Quad Summary:** |
|---|---|
| Humboldt | Shelter Cove (4012411) |

**Sources:**

CLA81S0002 CLARK, K. - CLARK #1394 HSC #79382 1981-05-24

# Occurrence Report

## California Department of Fish and Wildlife

## California Natural Diversity Database

**Query Criteria:** Species IS (Bombus caliginosus)

| | | | |
|---|---|---|---|
| **Map Index Number:** | 56001 | **EO Index:** | 97366 |
| **Key Quad:** | Shelter Cove (4012411) | **Element Code:** | IIHYM24380 |
| **Occurrence Number:** | 42 | **Occurrence Last Updated:** | 2015-06-09 |

**Scientific Name:** *Bombus caliginosus*

**Common Name:** obscure bumble bee

**Listing Status:** **Federal:** None

**State:** None

**Rare Plant Rank:**

**Other Lists:** IUCN_VU-Vulnerable

**CNDDB Element Ranks:** **Global:** G2G3

**State:** S1S2

**General Habitat:**

COASTAL AREAS FROM SANTA BARBARA COUNTY NORTH TO WASHINGTON STATE.

**Micro Habitat:**

FOOD PLANT GENERA INCLUDE BACCHARIS, CIRSIUM, LUPINUS, LOTUS, GRINDELIA AND PHACELIA.

| | | | |
|---|---|---|---|
| **Last Date Observed:** | 1976-05-22 | **Occurrence Type:** | Natural/Native occurrence |
| **Last Survey Date:** | 1976-05-22 | **Occurrence Rank:** | Unknown |
| **Owner/Manager:** | BLM | **Trend:** | Unknown |
| **Presence:** | Presumed Extant | | |

**Location:**

SHELTER COVE.

**Detailed Location:**

EXACT LOCATION UNKNOWN. MAPPED BY CNDDB NON-SPECIFICALLY TO THE VICINITY OF THE TOWN OF SHELTER COVE.

**Ecological:**

**Threats:**

**General:**

1 COLLECTED 20 MAY 1976 (EMEC #552851).

| | | | | | |
|---|---|---|---|---|---|
| **PLSS:** | T05S, R01E, Sec. 10 (H) | **Accuracy:** | 1 mile | **Area (acres):** | 0 |
| **UTM:** | Zone-10 N4432116 E409271 | **Latitude/Longitude:** | 40.03439 / -124.06341 | **Elevation (feet):** | 125 |

| **County Summary:** | **Quad Summary:** |
|---|---|
| Humboldt | Shelter Cove (4012411) |

**Sources:**

COV76S0002 COVILLE, R. & J. HAFERNIK - EMEC #552851 COLLECTED FROM SHELTER COVE 1976-05-20

Data Version Date:
04/27/2023

Report Generation Date:
6/2/2023

# Report #2 - Observations Reported

**List of observations reported by site.**

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

H_05S_01E Sections(11);

| *Type* | *Date* | *Time* | *#Adults* | *Age/Sex* | *Pair* | *Nest* | *#Young* | *Latitude DD NAD83* | *Longitude DD NAD83* | *MTRS* | *Coordinate Source* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Masterowl: HUM0889 Subspecies: NORTHERN | | | | | | | | | | | |
| AC | 1997-07-10 | 0645 | 1 | UU | | | | 40.041700 | -124.032666 | H 05S 01E 11 | Contributor |

# Appendix E

## WEB SOIL SURVEY REPORTS

**BIOLOGICAL RECONNAISSANCE AND PROJECT FEASIBILITY ASSESSMENT REPORT**

**Thomas Bond & Assoc.**
**5432 Cummings Rd.**
**Eureka, CA 95503**

**Shelter Cove, Humboldt County, California**
**Assessor Parcel Number (APN):**
**111 – 121 – 037**

**June 2023**

# Humboldt County, South Part, California

## 202—Conklin-Urban land-Parkland complex, 2 to 15 percent slopes

### Map Unit Setting

*National map unit symbol:* 2mhfy
*Elevation:* 20 to 130 feet
*Mean annual precipitation:* 59 to 62 inches
*Mean annual air temperature:* 54 to 56 degrees F
*Frost-free period:* 275 to 330 days
*Farmland classification:* Prime farmland if irrigated

### Map Unit Composition

*Conklin, cool, and similar soils:* 60 percent
*Urban land:* 25 percent
*Parkland, cool, and similar soils:* 15 percent
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Conklin, Cool

#### Setting

*Landform:* Fluviomarine terraces
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Tread
*Down-slope shape:* Convex, linear
*Across-slope shape:* Linear, convex
*Parent material:* Fluviomarine deposits derived from sedimentary rock

#### Typical profile

*A1 - 0 to 11 inches:* gravelly loam
*A2 - 11 to 24 inches:* gravelly loam
*A3 - 24 to 51 inches:* gravelly clay loam
*AB - 51 to 79 inches:* gravelly clay loam

#### Properties and qualities

*Slope:* 2 to 9 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Well drained
*Runoff class:* Low
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 2.00 in/hr)
*Depth to water table:* More than 80 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* Moderate (about 9.0 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* C
*Ecological site:* R004BI200CA - Riparian
*Hydric soil rating:* No

## Description of Urban Land

**Setting**

*Landform:* Fluviomarine terraces

**Interpretive groups**

*Land capability classification (irrigated):* None specified
*Land capability classification (nonirrigated):* 8
*Hydric soil rating:* No

## Description of Parkland, Cool

**Setting**

*Landform:* Fluviomarine terraces
*Landform position (two-dimensional):* Backslope
*Landform position (three-dimensional):* Tread
*Down-slope shape:* Concave, linear
*Across-slope shape:* Linear, concave
*Parent material:* Fluviomarine deposits derived from sedimentary rock

**Typical profile**

*A1 - 0 to 9 inches:* loam
*A2 - 9 to 24 inches:* loam
*AB - 24 to 37 inches:* silty clay loam
*Bt - 37 to 59 inches:* clay loam
*C - 59 to 79 inches:* gravelly clay loam

**Properties and qualities**

*Slope:* 2 to 9 percent
*Depth to restrictive feature:* More than 80 inches
*Drainage class:* Moderately well drained
*Runoff class:* High
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
*Depth to water table:* About 20 to 39 inches
*Frequency of flooding:* None
*Frequency of ponding:* None
*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
*Available water supply, 0 to 60 inches:* High (about 11.1 inches)

**Interpretive groups**

*Land capability classification (irrigated):* 2e
*Land capability classification (nonirrigated):* 2e
*Hydrologic Soil Group:* C
*Ecological site:* R004BI202CA - Loamy Uplands

*Hydric soil rating:* No

## Data Source Information

Soil Survey Area: Humboldt County, South Part, California
Survey Area Data: Version 12, Sep 2, 2022