Renewable America LLC

Foster Clean Power A & B Project
Biological Resources Assessment

November 2022

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Renewable America LLC

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Abbreviations and Acronyms

C°	degrees Celsius
F°	degrees Fahrenheit
APN	Assessor's Parcel Number
BIOS	Biogeographical Information and Observation System
BMP	best management practices
BRA	Biological Resources Assessment
C	candidate species status
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CT	candidate threatened species status
CWA	Clean Water Act
D	delisted species status
DPS	Northern California distinct population segment/species status
E	endangered species status
EPA	U.S. Environmental Protection Agency
ESU	evolutionarily significant unit/species status
FESA	Federal Endangered Species Act
FP	fully protected species status
IPaC	Information for Planning and Conservation
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Planning
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SMAO	Streamside Management Area Ordinance
SSC	species of special concern
SWRCB	State Water Resources Control Board
T	threatened species status
U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VegCAMP	Vegetation Classification and Mapping Program
WDR	Waste Discharge Requirement
WL	watch list species status

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1 Introduction

1.1 Purpose

This Biological Resources Assessment (BRA) report has been prepared to evaluate biological resources associated with the proposed Foster Clean Power A & B Project, including special-status plants and wildlife, sensitive habitats, natural vegetation communities, and aquatic resources. The BRA describes the methodology of desktop research and field studies of the project site, addresses the potential for biological resources to occur in the project area, identifies potential adverse impacts the project may have on those resources, and recommends methods for avoiding and/or minimizing impacts. The BRA is intended to provide the necessary information required to complete an environmental document for the project in accordance with the California Environmental Quality Act (CEQA) and to obtain the necessary permits to construct the proposed project.

A separate wetland delineation report was prepared for the project to formally evaluate the study area for the presence of jurisdictional water features (TransTerra, 2022a).

1.2 Project Location

The project is located at the intersection of Foster Avenue and Janes Road within unincorporated Humboldt County (County) (refer to Figure 2-1). The City of Arcata is located immediately south of the project site on the southern side of Foster Avenue and to the east of the project site. Access to the site is provided by Foster Avenue/Jackson Ranch Road. The project is contained within three parcels (APNs 505-151-012-000, 506-231-019-000, and 506-231-022-000) of which approximately 30 acres would be developed for solar energy generation and storage. The project is located on the United States Geological Survey (USGS) Arcata North 7.5-minute Quadrangle, and within the Township 06 north, Range 01 east, and Sections 19, 20, 29, and 30 of the Humboldt Meridian.

1.3 Project Description

Renewable America LLC (RNA) proposes to construct and operate a two-phased community-scale solar and energy storage project referred to as: Foster Clean Power A (Phase I) and Foster Clean Power B (Phase II). Phase I would involve the construction of a 12-acre photovoltaic (PV) solar energy facility with associated inverters, fencing, and a 15-foot-wide access road that connects to Foster Avenue to an equipment pad. The majority of the access road would follow an existing 15-foot-wide farm road. The equipment pad would be approximately 50 feet by 100 feet in size. Phase I would also include an energy storage (battery) system. Phase II would

involve the construction of an additional 18-acre PV solar energy facility immediately north of the Phase I site and would utilize the same equipment pad area and adjoining access road (refer to Figure 2-2). Refer to Figure 1-2.

Rows of solar panel arrays oriented north to south would be installed within the two development areas on a single-axis tracking system that would rotate from east to west throughout the day (approximately 60 degrees in each direction). The proposed solar arrays would have a height of approximately 15 feet. Each solar array row would be spaced approximately 14 feet apart. The tracking system would be installed on posts driven directly into the ground to a depth of approximately 6 feet. The solar facility and associated electrical equipment would be encompassed by a chain-link perimeter fence with three strands of barbed wire installed on top. Two separate areas would be fenced for Phases I and II.

The project would be designed to conform to existing topography and constructed in a manner that would minimize ground disturbance. Grading and the creation of impervious surfaces would be limited to the approximately 50-foot by 100-foot equipment pad. The project would maintain the existing site drainage patterns and would not result in a substantial increase in stormwater flow. Stormwater would continue to flow across the site in line with existing drainage patterns.

The project would deliver power to Pacific Gas and Electric Company's (PG&E's) existing distribution network via a primary service interconnection located on Foster Avenue. The solar facility would be positioned within previously tilled areas used for row crop production. The project site and properties are surrounded by agricultural and rural residential land uses.

The proposed solar facility would operate 24 hours a day, 7 days a week, and year-round, with the exception of down time for scheduled maintenance. The facility would be unmanned and managed remotely with security surveillance. Regular staff presence would not be required. Staff would on-site periodically to inspect and maintain the project facilities and maintain vegetation. It is anticipated that approximately two staff members would visit the project site approximately four times per year for regularly scheduled inspections and maintenance. In case of damages or non-functional equipment requiring replacement or repair, an appropriate number of staff will be on site and necessary deliveries will be made to address the issues. The site is expected to have deliveries for equipment replacement once every 10 years with the exception of unexpected events.

Figure 1-1 Project Location

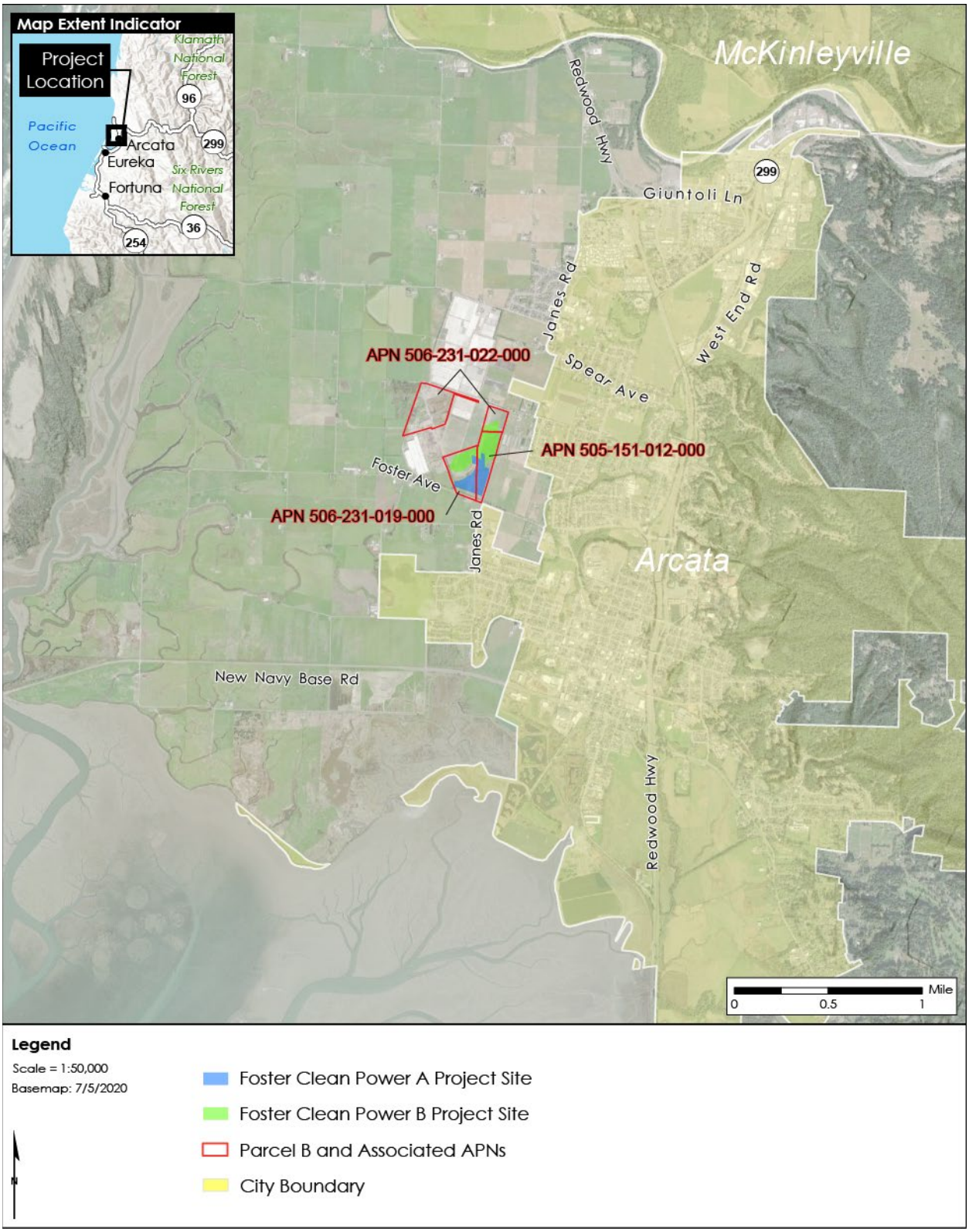
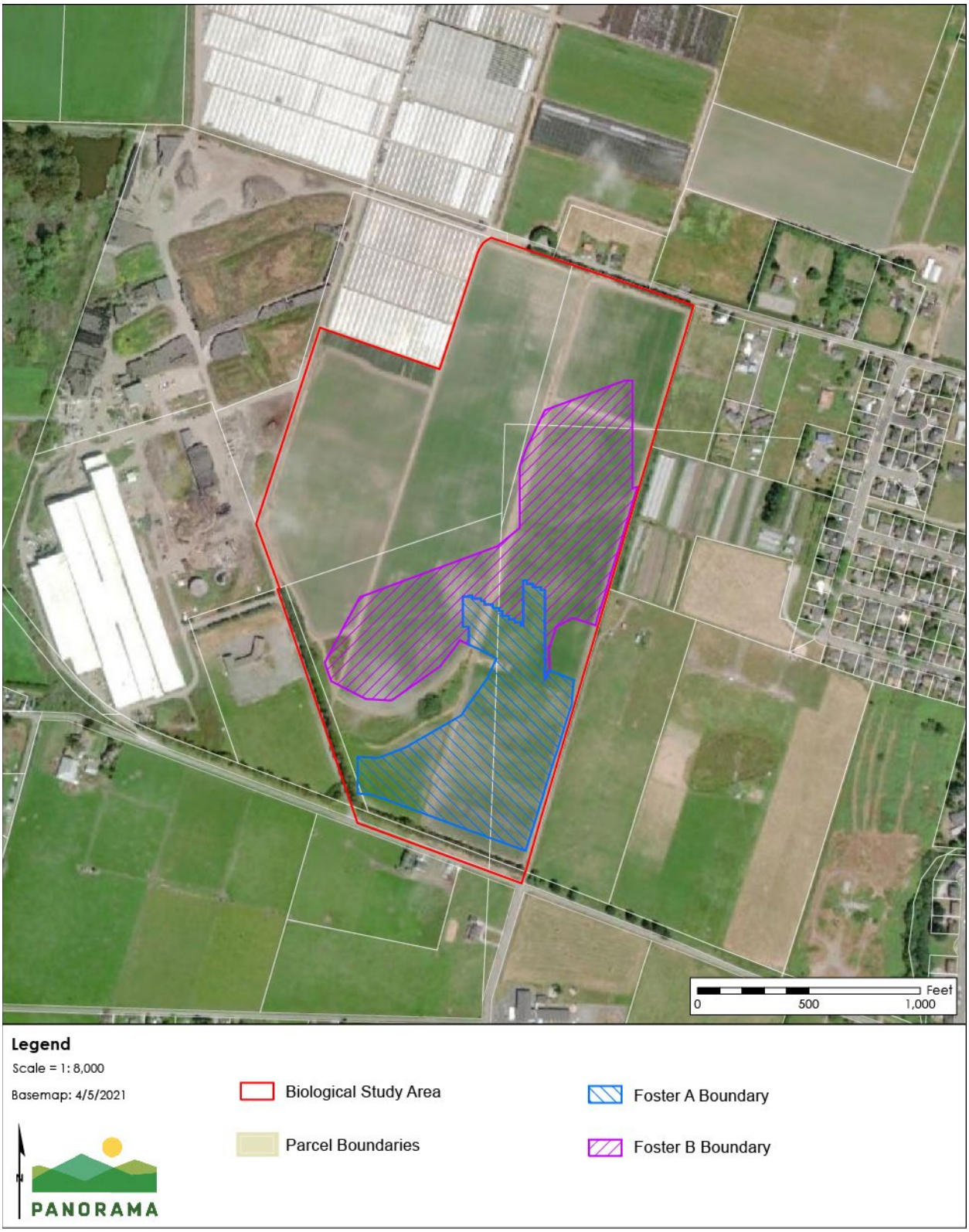


Figure 1-2 Proposed Project Footprint and Biological Study Area



2 Methodology

2.1 Overview

This BRA was prepared by TransTerra for the proposed Foster Clean Power A & B Project. A separate BRA as well as a wetland delineation report were prepared for the subject properties by SHN in 2020 for a proposed cannabis cultivation project, which was subsequently approved by the County but has not been constructed (SHN, 2020a; SHN, 2020b). Information from the SHN reports was reviewed and incorporated into this BRA, and recommendations were developed to address the specific conditions of the proposed Foster Clean Power A & B Project. Additional literature review and field studies were also conducted by TransTerra, as discussed in Sections 2.3 and 2.4 below.

2.2 Biological Study Area

The biological study area is approximately 79.5 acres and encompasses 3 properties[1] and intersects portions of 5 other properties[2], including the properties that contain the proposed project features and adjacent properties that are owned by the same landowner or within the County's public road right-of-way (refer to Figure 1-2). The study area primarily consists of an agricultural field that has been historically used for agricultural purposes and is currently used for agricultural production. Roughly half of the study area overlaps the prior BRA study area evaluated by SHN (SHN, 2020a).

According to the County's General Plan Land Use and Zoning Ordinance GIS data layers, the properties where project features are proposed (APNs 505-151-012-000, 506-231-019-000, and 506-231-022-000) have a land use designation of Agriculture Exclusive (AE) and are zoned primarily as Agriculture Exclusive (AE), with portions zoned as Manufactured Home – Qualified (MH-Q) and Agriculture General (AG). The project parcels are not within the Coastal Zone (Humboldt County, 2022).

Additional site conditions identified as a result of field investigations are described in Section 4.1.

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[1] Encompassed APNs 505-151-011-000, 505-151-012-000, and 506-231-019-000.

[2] Intersected APNs 506-131-011-000, 505-151-005-000, 506-231-012-000, 506-231-021-000, and 506-231-022-000.

2.3 Literature Review

TransTerra conducted a review of pertinent literature including information on habitat characteristics of the site and surrounding area, regionally occurring special-status species of plants and animals, aquatic resources, regulatory requirements, and past studies of the project site. The results and recommendations presented in this BRA rely on several sources, including the following:

- California Natural Diversity Database (CNDDB) query for the Arcata North and surrounding USGS 7.5-minute topographic quadrangles (Tyee City, Trinidad, Crannell, Panther Creek, Blue Lake, Korbel, Arcata South, and Eureka) (California Department of Fish and Wildlife [CDFW]) (CDFW, 2022a).
- Biogeographical Information and Observation System (BIOS) (CDFW, 2022b).
- Electronic Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society [CNPS]), (CNPS, 2022)) query for a list of all plant species reported for the Arcata North and 8 surrounding USGS 7.5-minute topographic quadrangles.
- USFWS's Critical Habitat Portal (USFWS, 2022)
- Biological Resources Assessment prepared for the Arcata Land Company, LLC by SHN Engineering and Consulting (SHN, 2020a).
- Wetland and Other Waters Delineation Report prepared for the Arcata Land Company, LLC by SHN Engineering and Consulting (SHN, 2020b).
- Low flying drone imagery provided by RNA (flown April 15 and June 10, 2021) (samples provided in Appendix C).

A list of potential target special-status species for the study area was compiled based on the results of the literature review. Regionally occurring special-status plant species are presented in Table A-1 and regionally occurring special-status animal species are presented in Table A-2 (refer to Appendix A). The regionally occurring species and habitats identified are consistent with those identified in the 2020 SHN BRA (SHN, 2020a).

2.4 Coordination with Permitting and Regulatory Agencies

RNA has conducted pre-application coordination with Humboldt County regarding the scope and methods of the BRA. No coordination with permitting agencies has occurred. Coordination with permitting agencies will be conducted as needed to address wildlife and permitting requirement identified during County review of the BRA and following CEQA review.

2.5 Field Investigations

Qualified biologists and botanists with TransTerra experienced in regional special-status species and their habitats conducted field investigations within the biological study area on April 7, July 27, and August 4, 2022. The results of the initial field investigation on April 7, 2022, were documented in a memorandum and incorporated into the information presented in this BRA

(TransTerra, 2022b). SHN conducted field investigations for the cannabis cultivation project BRA on May 2 and July 19, 2019 (SHN, 2020a).

The surveys were conducted during seasonally appropriate periods and followed methods from CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW, 2018). The study area was thoroughly investigated for the presence of regionally occurring special-status plants (Table A-1) and wildlife (Table A-2) including suitable habitat that may support the species, other sensitive habitats, and invasive species. The Jepson Manual (Baldwin, 2012) and Manual of California Vegetation (Sawyer, 2009) were consulted for plant species identification. The results of the field investigations are presented in Section 4.

3 Regulatory Setting

3.1 Overview

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of legislative acts. The following sections summarizes the federal, state, and local regulations for special-status species, jurisdictional waters of the United States (U.S.) and State of California, and other sensitive biological resources.

3.2 Federal Laws

3.2.1 Clean Water Act Sections 404 and 401

Under Section 404 (33 U.S. Code (USC) 1344) of the Clean Water Act (CWA), as amended, the U.S. Army Corps of Engineers (USACE) retains primary responsibility for permits to discharge dredged or fill material into waters of the U.S. All discharges of dredged or fill material into jurisdictional waters of the U.S. that result in permanent or temporary losses of waters of the U.S. are regulated by the USACE. A permit from the USACE must be obtained before placing fill or grading in wetlands or other waters of the U.S., unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

The USACE defines wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory, 1987). In other words, the USACE defines wetlands by the presence of all three wetland indicators: hydrophytic vegetation, hydric soils, and wetlands hydrology.

Waters of the U.S. are defined at 33 Code of Federal Regulations (CFR) Part 328. They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. Following recent court cases, the U.S. Environmental Protection Agency (EPA) and USACE published a memorandum entitled Clean Water Act Jurisdiction (USACE/EPA, 2008) to guide the determination of jurisdiction over waters of the U.S., especially for wetlands. The applicability of Section 404 permitting over discharges to wetlands is, therefore, a two-step process: 1) determining the areas that are wetlands, and 2) where a wetland is present, assessing the wetland's connection to traditional navigable waters and non-navigable tributaries to determine whether the wetland is jurisdictional under the CWA. A wetland is considered jurisdictional if it meets certain specified criteria.

The USACE is required to consult with the USFWS and/or National Marine Fisheries Service (NMFS) under Section 7 of the federal Endangered Species Act (FESA) if the action subject to CWA permitting could result in "take" of federally listed species or an adverse effect to designated critical habitat. The project is within the jurisdiction of the Sacramento District of the USACE.

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate, that the discharge will comply with the applicable effluent limitations and water quality standards (EPA, 2002). A certification obtained for the construction of any facility must also pertain to the subsequent operation of the facility. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCB). The project is within the jurisdiction of the North Coast RWQCB.

3.2.2 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1934, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with the USFWS and/or NMFS and with the head of the agency exercising administration over the wildlife resources of the state where construction will occur (in this case the CDFW), with a view to conservation of birds, fish, mammals, and all other classes of wild animals, and all types of aquatic and land vegetation upon which wildlife is dependent (USFWS, 1934).

If direct permanent impacts occur to waters of the U.S. from a proposed project, then a permit from USACE under CWA Section 404 is required for the construction of the proposed project. USACE is required to consult with USFWS and/or NMFS as appropriate regarding potential impacts to federally listed species under FESA. Such action may prompt consultation with CDFW, which would review the project pursuant to California Endangered Species Act (CESA) and issue a consistency letter with USFWS and/or NMFS, if required.

3.2.3 Federal Endangered Species Act

The U.S. Congress passed the FESA in 1973 to protect species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend and within which they live. The USFWS and the NMFS are the designated federal agencies responsible for administering the FESA.

The FESA prohibits the "take" of endangered or threatened wildlife species (USFWS, 1973). A "take" is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 U.S.C. 1531, 50 CFR 17.3). An activity can be defined as a "take" even if it is unintentional or accidental. Taking can result in civil or criminal penalties. Activities that could result in "take" of a federally listed species require an incidental "take" authorization resulting from FESA Section 7 consultation or FESA Section 10 consultation. Plants are legally protected under the FESA only if "take" occurs on federal land or from federal actions, such as issuing a wetland fill permit.

A federal endangered species is one that is considered in danger of becoming extinct throughout all, or a significant portion, of its range. A federal threatened species is one that is likely to become endangered in the foreseeable future. The USFWS also maintains a list of species proposed for listing as threatened or endangered. Proposed species are those for which a proposed rule to list as endangered or threatened has been published in the Federal Register. In addition to endangered, threatened, and proposed species, the USFWS maintains a list of candidate species. Candidate species are those for which the USFWS has on file sufficient information to support issuance of a proposed listing rule.

Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such a species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA or result in the destruction or adverse modification of critical habitat designated or proposed to be designated for such species (16 U.S.C. 1536[3], [4]). Project-related impacts to species on the FESA endangered or threatened list would be considered significant and would require mitigation.

3.2.4 Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in CFR Part 10, including feather or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21) (USFWS, 1918). The MBTA also prohibits disturbance and harassment of nesting migratory birds at any time during their breeding season. The USFWS is responsible for enforcing the MBTA (16 U.S.C. 703). The migratory bird nesting season is generally considered to be between March 1 and August 31 within the study region.

3.3 State Laws

3.3.1 Porter-Cologne Water Quality Control Act

The state and RWQCB also maintain independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Water Quality Control Act. Waters of the State are defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB protects all waters in its regulatory scope but has special responsibility for isolated wetlands and headwaters (State Water Resource Control Board, 1969). These water bodies might not be regulated by other programs, such as Section 404 of the CWA. Waters of the State are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require an USACE permit, or fall under other federal jurisdiction, and have the potential to impact waters of the State are required to comply with the terms of the Section 401 Water Quality Certification Program. If a proposed project does not require a federal license or permit but does involve activities that may result in a discharge of harmful substances to waters of the State, the RWQCBs have the option to regulate such activities under their state authority in the form of Waste Discharge Requirements (WDRs) or certification of WDRs.

3.3.2 California Endangered Species Act

The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. Under the CESA, the CDFW has the responsibility for maintaining a list of threatened and endangered species designated under State law (California Fish and Game Code [CFGC] 2070). Section 2080 of the CFGC prohibits "take" of any species that the commission determines to be an endangered or threatened species. "take" is defined in Section 86 of the CFGC as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

The state and federal lists of threatened and endangered species are generally similar; however, a species present on one list may be absent from the other. CESA regulations are also somewhat different from the FESA in that the State regulations included threatened, endangered, and candidate plants on non-federal lands within the definition of "take." CESA allows for "take" incidental to otherwise lawful development projects.

Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. Project-related impacts to species on the CESA endangered or threatened list (or, in addition, designated by the CDFW as a "Species of Special Concern," which is a level below threatened or endangered status) would be considered significant and would require mitigation (CDFW, 1984).

3.3.3 California Environmental Quality Act

CEQA Guidelines Sections 15125(c) and 15380(d) provide 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 (California Natural Resources Agency, 1970). CEQA provides the ability to protect a species from potential project impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

The CNPS maintains a list of plant species native to California whose populations that are significantly reduced from historical levels, occur in limited distribution, or are otherwise rare or threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California CNPS (CNPS, 2022). Taxa with a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, 2B, and 3 in the CNPS inventory consist of plants that meet the definitions of the CESA of the CFGC, are eligible for state listing, and meet the definition of Rare or Endangered under CEQA Guidelines Sections 15125(c) and 15380(d). Some taxa with a CRPR 4 may meet the definitions of the CESA of the CFGC. CRPR 4 populations may qualify for consideration under CEQA if they are peripheral or disjunct populations; represent the type locality of the species; or exhibit unusual morphology and/or occur on unusual substrates.

Additionally, CDFW maintains lists of special animals and plants. These lists include a species conservation ranking status from multiple sources, including FESA, CESA, federal departments with unique jurisdictions, CNPS, and other non-governmental organizations. Based on these sources, CDFW assigns a heritage rank to each species according to their degree of imperilment (as measured by rarity, trends, and threats). These ranks follow NatureServe's Heritage Methodology, in which all species are listed with a G (global) and S (state) rank. Species with state ranks of S1-S3 are also considered highly imperiled.

CEQA Guidelines checklist IV(b) calls for the consideration of riparian habitats and sensitive natural communities. Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies, or regulations, or by the CDFW (i.e., the CNDDB program and Vegetation Classification and Mapping Program [VegCAMP]) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (California Code of Regulations [CCR]: Title 14, Div. 6, Chap. 3, Appendix G).

Although sensitive natural communities do not (at present) have legal protection, CEQA calls for an assessment of whether any such resources would be affected and requires a finding of significance if there will be substantial losses. High quality occurrences of natural communities with heritage ranks of 3 or lower are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. Local planning documents (such as, general plans) often identify these resources as well. Avoidance, minimizations, or mitigation measures should be implemented if project-affected stands of rare vegetation types or natural communities are considered high-quality occurrences of the given community.

As a trustee agency under CEQA, CDFW reviews potential project impacts to biological resources, including wetlands. In accordance with the CEQA thresholds of significance for biological resources, areas that meet the state criteria of wetlands and could be impacted by a project must be analyzed. Pursuant to CFGC Section 2785, CDFW defines wet areas as "lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools."

3.3.4 California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation serving as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the CFGC. Any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a Lake or Streambed Alteration Agreement (LSAA).

The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life." This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation (14 CCR 1.72).

In addition, the term "stream" can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as "on, or pertaining to, the banks of a stream"; therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFW, 1994). Removal of riparian vegetation also requires a LSAA from the CDFW.

3.3.5 California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the CFGC it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrows [*Passer domesticus*] and European starlings [*Sturnus vulgaris*]). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the "Take" or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "Take" by the CDFW (CDFW, 1998).

3.3.6 Fully Protected Species and Species of Special Concern

The classification of "fully protected" was the CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced with possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these

lists have subsequently been listed under CESA and/or FESA. The CFGC sections (fish at Sec. 5515, amphibian and reptiles at Sec. 5050, birds at Sec. 3511, and mammals at Sec. 4700) dealing with "fully protected" species states that these species "…may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," (CDFW, 1998) although "take" may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFW to authorize "take" resulting from recovery activities for state-listed species.

Species of special concern (SSC) are broadly defined as animals not listed under the CESA, but that are nonetheless of concern to the CDFW because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFW, land managers, consulting biologists, and others, and is intended to focus attention on the species to help avert the need for costly listing under CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although the SSC designation provides no special legal status, they are given special consideration under CEQA during project review.

Table A-2 in Appendix A includes a list of regionally occurring federal- and state-listed animal species, as well as their designated CDFW status.

3.3.7 Native Plant Protection Act of 1973

The Native Plant Protection Act (NPPA) of 1973 (Sec.1900-1913 of the CFGC) includes provisions that prohibit the taking of endangered or rare native plants from the wild and a salvage requirement for landowners. The CDFW administers the NPPA and generally regards as "rare" many plant species included on Lists 1A, 1B, 2A, 2B, 3, and 4 of the CNPS Inventory of Rare and Endangered Vascular Plants of California (CNPS, 2022).

Table A-1 in Appendix A includes regionally occurring endangered or rare native plants that may occur in the project area as well as their CNPS rank.

3.3.8 Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) Act is an effort by the State of California, and numerous private and public partners that is broader in its orientation and objectives than the CESA and FESA (CDFW, 2003). The primary objective of the NCCP Act is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP Act seeks to anticipate and prevent the controversies and gridlock caused by species listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

No regionally occurring natural community or associated plan is listed by the state for the project area.

3.4 Local Statutes, Codes, and Policies

3.4.1 Humboldt County Streamside Management Area Ordinance

Riparian and wetland habitats receive protection under Humboldt County's Streamside Management Area Ordinance (SMAO); as defined in Title 3, Section 314-61.1 of the Humboldt County Code (Humboldt County, 2005). Development and work within Streamside Management Areas (SMAs) requires a special permit from the County, if those activities are not exempt.

The purpose of the SMAO is to provide oversight in the use and development of land located within wet areas such as rivers, creeks, springs, and other wetland types. This includes natural resource areas along both sides of streams containing the channel and adjacent land. In areas outside of urban development and expansion areas, SMAs are identified as a 100-foot setback from the stream transition line of perennial streams and 50-foot setback for streams with seasonal intermittent flow. In areas inside of urban development and expansion areas, SMAs are identified as a 50-foot setback from perennial streams and 25-foot setback for streams with seasonal intermittent flow. The stream transition line is defined in the Humboldt County General Plan as, "that line closest to a stream where riparian vegetation is permanently established," which is typically interpreted in riparian areas as the closest rooted tree to the water course (Humboldt County, 1988; Amended 1998).

4 Results

4.1 General Site Conditions

The study area primarily consists of a heavily disturbed agricultural field that has been historically used for agricultural purposes and most recently for quinoa production. Currently it is dominated by non-native grass and forb species. Site hydrology has been historically altered through drainage ditches and culverts installed around the perimeter. Soils are primarily silty clay loam, which have also been altered due to plowing and tilling. Roads border the agricultural fields. Refer to the field investigation photographs and drone imagery provided in Appendices B and C.

The study area is located in a broad alluvial plain within the Humboldt Bay Watershed that drains towards Liscom Slough and Humboldt Bay. According to the County's Web GIS map, the project site is not within a hazard zone identified by the County, including for coastal and dam inundation, tsunami, seismic safety and slope stability, earthquake, fire, or airport (Humboldt County, 2022). The project site is partially within the Federal Emergency Management Agency 100-year Flood Zone (A) (Humboldt County, 2022); however, the project parcels are also identified on the County's Letter of Map Amendment, which means the flood zone mapping has been amended via letter and the designated flood zone for the properties have been corrected to be "Flood Zone X (unshaded)[3]." (Humboldt County, 2022).

4.2 Special-Status Species

4.2.1 Overview

The potential for special-status species identified in Table A-1 (plants) and Table A-2 (animals) was evaluated within the study area based on the results of the field investigations conducted to detect the presence or absence of each species preferred habitats, the habitat conditions, and other signs that the species may occur. The evaluation was conducted using the following criteria:

[3] "An area of minimal flood hazard that is determined to be outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood."

- **None**. Species listed as having "none" are those species for which there is no suitable habitat present in the study area (that is, habitats in the study area are unsuitable for the species requirements [for example, elevation, hydrology, plant community, disturbance regime, etc.]).
- **Low**. Species listed as having a "low" potential to occur in the study area are those species for which there is no known record of occurrence in the vicinity, and there is marginal or very limited suitable habitat present within the study area.
- **Moderate**. Species listed as having a "moderate" potential to occur in the study area are those species for which there are known records of occurrence in the vicinity, and there is suitable habitat present in the study area.
- **High**. Species listed as having a "high" potential to occur in the study area are those species for which there are known records of occurrence in the vicinity (there are many records and/or records in close proximity), and there is highly suitable habitat present in the study area.

4.2.2 Special-Status Plant Species

A total of 72 special-status plant species were determined to be regionally occurring based on the results of the literature review. Of the special-status plant species reported in the region, 66 plant species were determined to have a low or no potential to occur in the study area, and the remaining 6 species were determined to have a moderate or high potential to occur (Table A-1). Species with a moderate potential for occurrence within the study area are described below:

Harlequin lotus *(Hosackia gracilis)* is a perennial herb in the Fabaceae family. It is neither State nor federally listed but has a CRPR of 4.2 and a heritage rank of G4/S3. Its elevation range is reported from 0 to 700 meters above sea level. Within its range state-wide, its blooming period is reported as March through July. This species is reported from wetlands, roadsides, and a variety of habitats from coastal scrub to coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Marsh pea *(Lathyrus palustris)* is a perennial herb in the Fabaceae family. It is neither State nor federally listed but has a CRPR of 2B.2 and a heritage rank of G5/S2. Its elevation range is reported from 2 to 140 meters above sea level. Within its range state-wide, its blooming period is reported as March through August. This species is reported from bogs, fens, lower montane coniferous forest, marsh, swamp, coastal prairie, and coastal scrub. Although suitable habitat may exist within the study area for this species, it was not detected.

Howell's montia *(Montia howellii)* is an annual herb in the Montiaceae family. It is neither State nor federally listed but has a CRPR of 2B.2 and a heritage rank of G3G4/S2. Its elevation range is reported from 0 to 835 meters above sea level. Within its range state-wide, its blooming period is reported as March through May. This species is reported from meadows and seeps, north coast coniferous forests, vernal pools, vernally mesic sites, and sometimes roadsides. Although

suitable habitat may exist within the study area for this species, it was not detected. A thorough search of this species was conducted during the April 7, 2022 site visit by TransTerra.

Maple-leaved checkerbloom *(Sidalcea malachroides)* is a perennial herb in the Malvaceae family. It is neither State nor federally listed but has a CRPR of 4.2 and a heritage rank of G3/S3. Its elevation range is reported from 0 to 730 meters above sea level. Within its range state-wide, its blooming period is reported as March through August. This species is reported from woodlands, clearings near the coast, and often in disturbed areas. Although suitable habitat may exist within the study area for this species, it was not detected.

Siskiyou checkerbloom *(Sidalcea malviflora* ssp. *patula)* is a perennial herb in the Malvaceae family. It is neither State nor federally listed but has a CRPR of 1B.2 and a heritage rank of G5T2/S2. Its elevation range is reported from 5 to 1,255 meters above sea level. Within its range state-wide, its blooming period is reported as May through August. This species is reported from coastal bluff scrub, coastal prairie, roadcuts and north coast coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Coast checkerbloom *(Sidalcea oregana* ssp. *eximia)* is a perennial herb in the Malvaceae family. It is neither State nor federally listed but has a CRPR of 1B.2 and a heritage rank of G5T1/S1. Its elevation range is reported from 5 to 1,805 meters above sea level. Within its range state-wide, its blooming period is reported as June through August. This species is reported from meadows, seeps, low montane conifer forests, and in gravelly soil. Although suitable habitat may exist within the study area for this species, it was not detected.

4.2.3 Special-Status Animal Species

Based on a review of special-status animal species, 66 special-status animal species have been reported with the potential to occur in the project region. Due to the minimal natural, undisturbed vegetation or water resources within the study area, many of the regionally occurring special-status species are not likely to utilize the available habitat. Of the 66 special-status animal species potentially occurring in the region, 51 animal species are considered to have a no or low potential to occur at the project site and 15 species have a moderate to high potential to occur (Table A-2). Species with a moderate or high potential for occurrence within the study area are described below. Field investigations particularly focused on determining presence or potential use of the study area by these species.

Amphibians

Northern red-legged frog (*Rana aurora*) is an amphibian in the Ranidae family. Reported habitats include Klamath and north coast flowing waters and riparian forests, usually near dense riparian cover. It is generally found near permanent water but is sometimes found far from water in damp woods and meadows during the non-breeding season (May to November). The species is not federally or state listed but is a CDFW Species of Concern. Suitable dispersal habitat for this species exists within and around the wetland identified in the study area and potential breeding habitat exists in the drainage along the western boundary of the study area,

although it was not detected. Recommendations to address the potential for impacts to northern red-legged frog are included in Section 5.

Birds

Cooper's hawk (*Accipiter cooperii*) occurs in woodlands, riparian forest, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks. This species builds stick platform nests lined with bark in crotches of riparian deciduous trees and second-growth conifers near streams. The species is not federally or state listed but is a is on the CDFW Watchlist. Foraging habitat for this species exists in the study area and adjacent to the study area, although it was not detected.

Sharp-shinned hawk (*Accipiter striatus*) can be found in ponderosa pine, black oak, riparian deciduous, mixed conifer, Jeffrey pine habitats, and prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests are usually within 275 feet of water. The species is not federally or state listed but is a is on the CDFW Watchlist. Foraging habitat for this species exists in the study area and adjacent to the study area, although the species was not detected.

Great egret (*Ardea alba*) is a colonial nester in large trees. Rookery sites are located near marshes, tide flats, irrigated pastures, and margins of rivers and lakes. This species is most often found foraging around water, including wet fields and grassy meadows near water. The species is not federally or state listed but is classified as Sensitive by CDFW. Potential foraging habitat exists for this species within the study area during the wet season, although the species was not detected.

Great blue heron (*Ardea herodias*) is a colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows. This species is most often found foraging near or in water, or in grassy fields near water. The species is not federally or state listed but is classified as Sensitive by CDFW. Potential foraging habitat exists for this species within the study area during the wet season, although the species was not detected.

Short-eared owl (*Asio flammeus*) lives in large, open areas with low vegetation including grasslands, savannah, marshes, and agricultural areas. They can be seen during the day and make their nests on the ground. The species is not federally or state listed but is a CDFW Species of Concern. Suitable foraging and potential nesting habitat exist for this species within the study area, although the species was not detected.

Vaux's swift (*Chaetura vauxi*) typically nests in tree cavities and forages in the air over streams and standing water that support invertebrates. The species is not federally or state listed but is a CDFW Species of Concern. Potential aerial foraging habitat exists within the study area for this species, although the species was not detected.

Northern harrier (*Circus cyaneus*) is most common in large undisturbed tracts of wetlands and grasslands with low, thick vegetation during the breeding season. In winter, they use a wider range of habitat types with low vegetation including sand dunes, deserts, pastures, and croplands. The species is not federally or state listed but is a CDFW Species of Concern. Winter foraging habitat exists for this species within the study area, although the species was not detected.

Snowy egret (*Egretta thula*) nests in colonies in isolated areas, often near water. They forage in marshes and estuaries, grassy ponds, pools, and wet fields. The species is not federally or state listed or ranked by CDFW. Potential foraging habitat exists for this species within the study area during the wet season, although the species was not detected.

White-tailed kite (*Elanus leucurus*) can be found in foothills, valleys, and river bottomlands and marshes. They typically use open grasslands for foraging and nest in densely-topped trees. The species is not federally or state listed but is a CDFW Full Protected species. Potential foraging habitat exists for this species in the study area and nesting habitat adjacent to the study area, although the species was not detected.

Merlin (*Falco columbarius*) nests near forest openings near water and forages typically for smaller birds in the air in open areas. The species is not federally or state listed but is a CDFW Watchlist species. Foraging habitat exists for this species within the study area, although the species was not detected.

American peregrine falcon (*Falco peregrinus anatum*) occupies wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, and human-made structures. Nest consists of a scrape or a depression or ledge in an open site. The species was delisted from the federal and state ESA but is a CDFW Full Protected species. Potential foraging habitat exists within the study area for this species, although the species was not detected.

Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*) live in grasslands, meadows, and cultivated fields, as well as coastal scrub and estuaries. The species is not federally or state listed but is a CDFW Species of Concern. Foraging and nesting habitat exists for this species within the study area, although the species was not detected.

Fish

None of the fish species listed on the CNDDB report are considered to have a moderate or high potential to occur within the project area due to the lack of any stream connectivity through the study area.

Insects

Western bumble bee (*Bombus occidentalis*) is an insect in the Apidae family. This species was once common and widespread but has declined precipitously from central California to southern British Columbia, perhaps from disease. The species is not federally or state listed but is a CDFW Sensitive species. There is suitable foraging and nesting habitat available for this species within the study area, although the species was not detected.

Obscure bumblebee (*Bombus calignosus*) lives in along coastal areas of the western states in underground burrows or above ground in abandoned bird nests. There is suitable foraging and nesting habitat available for this species within the study area, although the species was not detected.

Mammals

None of the mammal species listed on the CNDDB report are considered to have a moderate or high potential to occur within the project area due to the lack of suitable habitat available within the study area.

Mollusks

None of the mollusk species listed on the CNDDB report are considered to have a moderate or high potential to occur within the project area due to the lack of suitable habitat available within the study area.

Reptiles

The only reptile listed on the CNDDB report was Western Pond Turtle (*Emys marmorata*). The species is not considered to have a moderate or high potential to occur within the study area as no suitable habitat for this species exists within the study area.

4.3 Sensitive Habitats

4.3.1 Sensitive Natural Vegetation Communities

Sensitive natural vegetation communities are habitats that are generally defined by vegetation type and geographical location and are increasingly restricted in abundance and distribution. Recognition of natural communities is an ecosystem-based approach to maintaining biodiversity in California. Holland-type CNDDB natural communities are habitat for numerous special-status plant and animal species. CDFW no longer updates their tracking of Holland-type CNDDB natural communities and has since standardized alliance and association-level vegetation nomenclature for California to comply with the National Vegetation Classification System. High quality occurrences of natural communities with heritage ranks of 3 or lower are considered by CDFW to be significant resources and fall under the CEQA Guidelines for addressing impacts. No sensitive natural communities were found within the study area.

4.3.2 Aquatic Resources

The majority of study area was previously delineated for wetlands and other aquatic resources by SHN in 2020 for the approved cannabis cultivation project; however, portions of the study area where proposed solar development would occur were not included (SHN, 2020b). On July 27 and August 4, 2022, TransTerra conducted a delineation of wetlands and other aquatic resources with the remaining portions of the study area to obtain full coverage (TransTerra, 2022a).

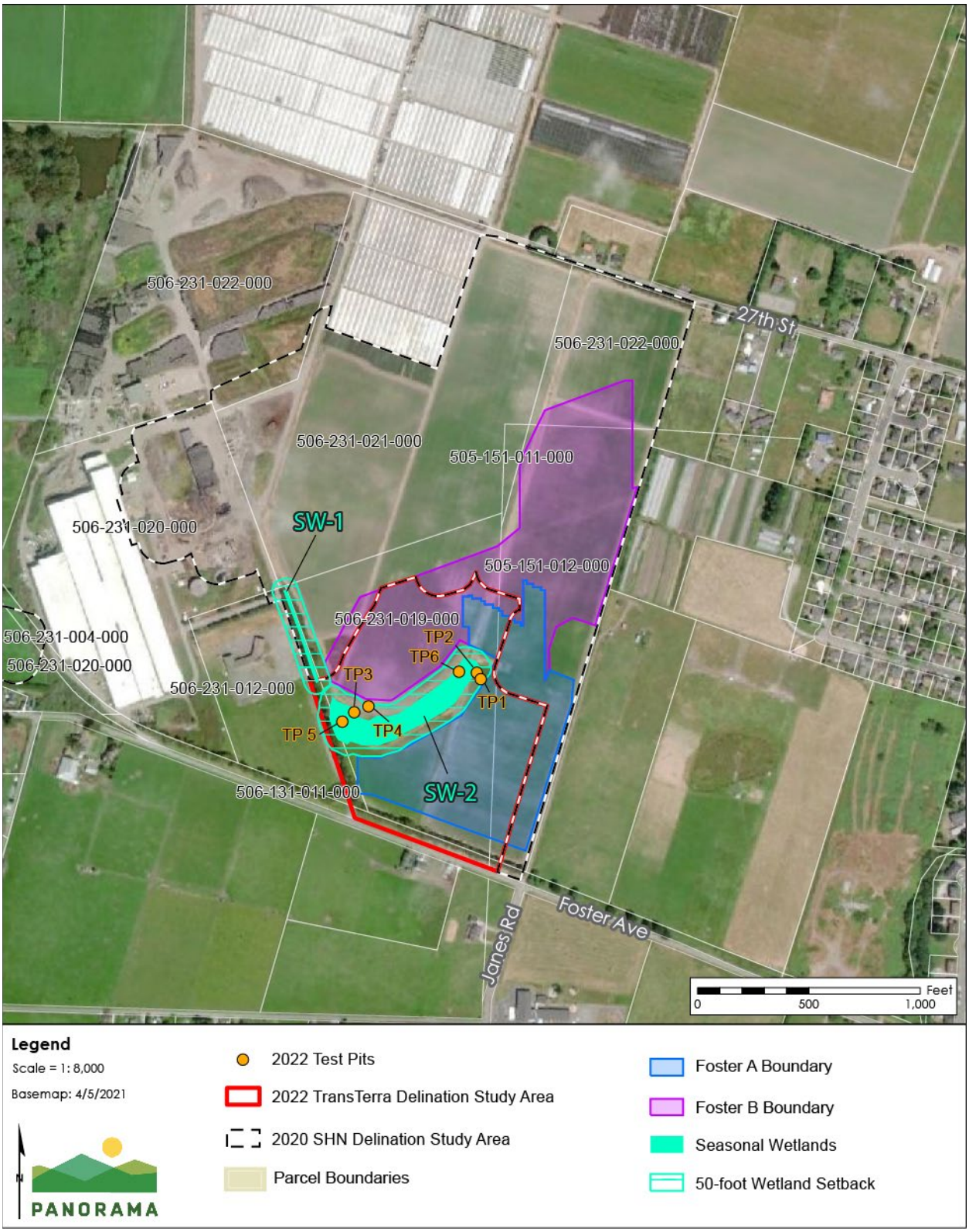
Within the Foster A & B study area, TransTerra identified and delineated the following seasonal wetland (SW) features (TransTerra, 2022a):

- **SW-1.** SW-1 is a seasonal Palustrine Emergent wetland that is 0.14 acre in size and located immediately west of APN 506-231-019-000 (within APN 506-231-012-000) along a roadside ditch. This same feature was also identified by SHN as their 2020 delineation as Wetland #1 (SHN, 2020b). The mapping and categorization of the feature by TransTerra and SHN are consistent.
- **SW-2.** SW-2 a seasonal Palustrine Emergent wetland that is 1.91 acres in size and is located primarily in APN 506-231-019-000 and extends into APN 505-151-012-000 (TransTerra, 2022a).

No other wetlands, aquatic resources, or riparian habitat was observed in the study area. The seasonal wetlands identified by SHN and TransTerra are identified Figure 4-1.

The project has been designed to avoid direct impacts to the wetlands. In addition, a 50-foot setback buffer has been implemented pursuant to the Humboldt County's SMAO (refer to Section 3.4.1). No project features would be installed within the 50-foot wetland setback (refer to Figure 4-1). Because direct impacts to the wetlands would be avoided, the need for, federal or state permits from USACE, RWQCB, and CDFW are not anticipated.

Figure 4-1 Seasonal Wetlands within the Study Area



4.3.3 Nesting Bird Habitat

There is limited nesting habitat for birds within the study area. Some species, such as western meadowlark (*Sturnella neglecta*), may nest in tall grasses. Multiple raptor pellets were observed under the tree line and along the access road on the northern boundary of the study area. These are likely the result of raptors foraging and roosting in the trees along that area. The planted tree line along the southern property boundary consisting of Eucalyptus (*Eucalyptus polyanthemos*) and Western red cedar (*Thuja plicata*) may provide nesting habitat. A large group of Canada geese (*Branta canadensis*) were observed foraging throughout the study area. Recommendations to address the potential for impacts to nesting birds are included in Section 5.

4.3.4 Wildlife Movement Corridors

Watercourses and their associated riparian zones are likely the primary wildlife movement corridors due to their complex structure, providing cover and hiding places from predators, and the extensive connectivity to other habitats the riparian zones typically provide. Additionally, wildlife may use existing roads and trails that provide corridors between patches of vegetation. There are no significant wildlife movement corridors within the parcel, although some animals, especially nocturnal mammals may use the existing and proposed roadways as movement corridors.

4.3.5 Designated Critical Habitat

The USFWS's Critical Habitat Portal was reviewed for habitat within or adjacent to the study area that may be designated as critical for species listed under the FESA. The closest designated critical habitat is for the Tidewater Goby (*Eucyclogobius newberryi*), which is located approximately 1 mile west of the study area at Mad River Slough.

4.4 Invasive Species

Non-native species are often introduced to an area, whether intentionally or unintentionally, by human activities and can have a detrimental effect on native species. The non-native species may be considered invasive if they have no natural predators or other controls in the environment that prevent them from spreading freely and out-competing native species, particularly sensitive species with particular habitat requirements that may change drastically due to the spread of the invasive species. Project activities within an area have the potential to introduce or exacerbate existing invasive species issues.

Invasive species were documented within the study area during field investigations and recorded in Table A-5. The study area undergoes frequent disturbance related to the ongoing agricultural activities. Due to these activities and the existing establishment of invasive species populations, invasive species are expected to remain prevalent.

5 Conclusions and Recommendations

This BRA outlines information related to biological resources that have the potential to occur within the study area. No special-status plants or animals were observed during site visits. Several special-status species have the potential to occur in the study area based on the available habitat. Further, the surrounding landscape may provide suitable habitat for animals that are able to move outside of the project area.

The following protection measures are recommended as mitigation to avoid and/or minimize impacts on biological resources:

- **Measure BR-1: Preconstruction Nesting Bird Surveys.** Construction-related vegetation removal should occur between September and February, which is outside the typical nesting bird season (February through September). If project-related vegetation removal must occur during the breeding season, a preconstruction nesting bird survey shall be conducted by a qualified biologist no more than two weeks prior to project activities. If active nests are found, a suitable no-disturbance buffer zone shall be established by a qualified biologist and determined based on species, nest location, line of sight from the project area, type of planned construction activity, and potential for nest disturbance. Within the buffer zone, no construction shall take place until the chicks have fledged or the biologist determines that the nest is no longer active. In the event that any active nests are discovered, CDFW will be consulted and provided an opportunity to comment on the proposed avoidance buffer distances and protection measures proposed by the qualified biologist.
- **Measure BR-2: Preconstruction Northern Red-Legged Frog Clearance Surveys.** Project construction should occur between May and November, which is outside the breeding season for northern red-legged frog. If construction activities must occur during the breeding season (November to May), preconstruction surveys shall be conducted by a qualified biologist no more than two weeks prior to project activities. If northern red-legged frogs are detected during the breeding season, CDFW will be consulted to determine either a suitable buffer distance or other protective measures.
- **Measure BR-3: Protection of Drainage Ditches.** The project area does contain potential "waters of the United States", including wetlands protected under the CWA and potential "waters of the state" under the jurisdiction of the RWQCB and CDFW; however, the project will avoid such waters and a 50-foot setback will be implemented in accordance with the County's Streamside Management Area Ordinance to ensure waters would not be indirectly impacted by any site disturbance related to development of the project.

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Appendix A Species Lists

APPENDIX A

Table A-1 Regionally-Occurring Special-Status Plant Species

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CNPS Rank	Habitat Characteristics	Habitat Assessment
Abronia umbellata var. breviflora	pink sand-verbena	None	None	1B.1	Coastal dunes and coastal strand.	Habitat not observed.
Angelica lucida	sea-watch	None	None	4.2	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps	Habitat not observed.
Astragalus pycnostachyus var. pycnostachyus	coastal marsh milk-vetch	None	None	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest	Habitat not observed.
Astragalus rattanii var. rattanii	Rattan's milk-vetch	None	None	4.3	Coastal dunes,marshes and swamps, coastal scrub.	Habitat present (marginal and low probability)
Cardamine angulata	seaside bittercress	None	None	2B.1	North coast coniferous forest, lower montane coniferous forest.	Habitat not observed.
Carex arcta	northern clustered sedge	None	None	2B.2	Bogs and fens, north coast coniferous forest.	Habitat not observed.
Carex lenticularis var. limnophila	lagoon sedge	None	None	2B.2	Bogs and fens, marshes and swamps, north noast coniferous forest.	Habitat not observed.
Carex leptalea	bristle-stalked sedge	None	None	2B.2	Bogs and fens, meadows and seeps, marshes and swamps.	Habitat present.
Carex lyngbyei	Lyngbye's sedge	None	None	2B.2	Marshes and swamps (brackish or freshwater).	Habitat present.
Carex praticola	northern meadow sedge	None	None	2B.2	Meadows and seeps.	Habitat present.
Carex viridula ssp. viridula	green yellow sedge	None	None	2B.3	Bogs and fens, marshes and swamps (freshwater), north coast coniferous forest.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CNPS Rank	Habitat Characteristics	Habitat Assessment
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	None	None	1B.2	Marshes and swamps.	Habitat not observed.
Castilleja litoralis	Oregon coast paintbrush	None	None	2B.2	Coastal bluff scrub, coastal dunes, coastal scrub.	Habitat not observed.
Castilleja mendocinensis	Mendocino Coast paintbrush	None	None	1B.2	Coastal bluff scrub, coastal scrub, coastal prairie, closed-cone coniferous forest, coastal dunes.	Habitat not observed.
Chloropyron maritimum ssp. palustre	Point Reyes salty bird's-beak	None	None	1B.2	Coastal salt marsh.	Habitat not observed.
Chrysosplenium glechomifolium	Pacific golden saxifrage	None	None	4.3	North Coast coniferous forest, Riparian forest	Habitat present (marginal and low probability)
Collinsia corymbosa	round-headed Chinese-houses	None	None	1B.2	Coastal dunes.	Habitat not observed.
Coptis laciniata	Oregon goldthread	None	None	4.2	North coast coniferous forest, meadows and seeps.	Habitat present (marginal and low probability)
Discelium nudum	naked flag moss	None	None	2B.2	Coastal bluff scrub.	Habitat not observed.
Empetrum nigrum	black crowberry	None	None	2B.2	Coastal bluff scrub, coastal prairie.	Habitat not observed.
Erysimum menziesii	Menzies' wallflower	Endangered	Endangered	1B.1	Coastal dunes.	Habitat not observed.
Erythronium oregonum	giant fawn lily	None	None	2B.2	Cismontane woodland, meadows and seeps.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CNPS Rank	Habitat Characteristics	Habitat Assessment
Erythronium revolutum	coast fawn lily	None	None	2B.2	Bogs and fens, broadleafed upland forest, north coast coniferous forest.	Habitat present (marginal and low probability)
Fissidens pauperculus	minute pocket moss	None	None	1B.2	North coast coniferous forest.	Habitat present (marginal and low probability)
Gilia capitata ssp. pacifica	Pacific gilia	None	None	1B.2	Coastal bluff scrub, chaparral, coastal prairie, valley and foothill grassland.	Habitat not observed.
Gilia millefoliata	dark-eyed gilia	None	None	1B.2	Coastal dunes.	Habitat not observed.
Hesperevax sparsiflora var. brevifolia	short-leaved evax	None	None	1B.2	Coastal bluff scrub, coastal dunes, coastal prairie.	Habitat not observed.
Hosackia gracilis	Harlequin lotus	None	None	4.2	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.	Habitat present
Iliamna latibracteata	California globe mallow	None	None	1B.2	North coast coniferous forest, chaparral, lower montane coniferous forest, riparian scrub (streambanks).	Habitat present (marginal and low probability)
Juncus nevadensis var. inventus	Sierra rush	None	None	2B.2	Bogs and fens.	Habitat present (marginal and low probability)
Lasthenia californica ssp. macrantha	perennial goldfields	None	None	1B.2	Coastal bluff scrub, coastal dunes, coastal scrub.	Habitat present (marginal and low probability)
Lathyrus glandulosus	sticky pea	None	None	4.3	Cismontane woodland.	Habitat present (marginal and low probability)

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CNPS Rank	Habitat Characteristics	Habitat Assessment
Lathyrus japonicus	seaside pea	None	None	2B.1	Coastal dunes.	Habitat not observed.
Lathyrus palustris	marsh pea	None	None	2B.2	Coastal dunes, coastal scrub.	Habitat present
Layia carnosa	beach layia	Endangered	Endangered	1B.1	Coastal scrub, freshwater marsh, bogs and fens, coastal bluff scrub, coastal prairie, north coast coniferous forest, marshes and swamps.	Habitat present (marginal and low probability)
Lilium occidentale	western lily	Endangered	Endangered	1B.1	Coastal scrub, freshwater marsh, bogs and fens, coastal bluff scrub, coastal prairie, north coast coniferous forest, marshes and swamps.	Habitat not observed.
Listera cordata	heart-leaved twayblade	None	None	4.2	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest.	Habitat not observed.
Lycopodiella inundata	inundated bog-clubmoss	None	None	2B.2	Bogs and fens, lower montane coniferous forest, marshes and swamps.	Habitat not observed.
Lycopodium clavatum	running-pine	None	None	4.1	Lower montane coniferous forest, north coast coniferous forest, marshes and swamps.	Habitat present (marginal and low probability)
Mitellastra caulescens	leafy-stemmed mitrewort	None	None	4.2	Broadleafed upland forest, lower montane coniferous forest, meadows and seeps, north coast coniferous forest.	Habitat present (marginal and low probability).
Monotropa uniflora	ghost-pipe	None	None	2B.2	Broadleafed upland forest, north coast coniferous forest.	Habitat not observed.
Montia howellii	Howell's montia	None	None	2B.2	Meadows and seeps, north coast coniferous forest, vernal pools.	Habitat present.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CNPS Rank	Habitat Characteristics	Habitat Assessment
Northern Coastal Salt Marsh	Northern Coastal Salt Marsh	None	None	--	n/a	Habitat not observed.
Northern Foredune Grassland	Northern Foredune Grassland	None	None	--	n/a	Habitat not observed.
Oenothera wolfii	Wolf's evening-primrose	None	None	1B.1	Coastal bluff scrub, coastal dunes, coastal prairie, lower montane coniferous forest.	Habitat not observed.
Packera bolanderi var. bolanderi	seacoast ragwort	None	None	2B.2	Coastal scrub, north coast coniferous forest.	Habitat present (marginal and low probability).
Piperia candida	white-flowered rein orchid	None	None	1B.2	North Coast coniferous forest, lower montane coniferous forest, broadleafed upland forest.	Habitat not observed.
Pityopus californicus	California pinefoot	None	None	4.2	Broadleafed upland forest, Lower montane coniferous forest, North Coast coniferous forest, Upper montane coniferous forest.	Habitat not observed.
Pleuropogon refractus	nodding semaphore grass	None	None	4.2	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest.	Habitat present (marginal and low probability)
Polemonium carneum	Oregon polemonium	None	None	2B.2	Coastal prairie, coastal scrub, lower montane coniferous forest.	Habitat present (marginal and low probability).
Ribes laxiflorum	trailing black currant	None	None	4.3	North Coast coniferous forest.	Habitat not observed.
Romanzoffia tracyi	Tracy's romanzoffia	None	None	2B.3	Coastal bluff scrub, coastal scrub.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CNPS Rank	Habitat Characteristics	Habitat Assessment
Sidalcea malachroides	maple-leaved checkerbloom	None	None	4.2	Broadleafed upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian forest.	Habitat present.
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	None	None	1B.2	Coastal bluff scrub, coastal prairie, north coast coniferous forest.	Habitat present.
Sidalcea oregana ssp. eximia	coast checkerbloom	None	None	1B.2	Meadows and seeps, north coast coniferous forest, lower montane coniferous forest.	Habitat not observed.
Silene scouleri ssp. scouleri	Scouler's catchfly	None	None	2B.2	Coastal bluff scrub, coastal prairie, valley and foothill grassland.	Habitat not observed.
Sitka Spruce Forest	Sitka Spruce Forest	None	None	--	n/a	Habitat not observed.
Spergularia canadensis var. occidentalis	western sand-spurrey	None	None	2B.1	Marshes and swamps (coastal salt marshes).	Habitat not observed.
Sphagnum Bog	Sphagnum Bog	None	None	--	n/a	Habitat not observed.
Sulcaria spiralifera	twisted horsehair lichen	None	None	1B.2	North Coast coniferous forest (immediate coast), coastal dunes.	Habitat not observed.
Trichodon cylindricus	cylindrical trichodon	None	None	2B.2	Broadleafed upland forest, upper montane coniferous forest, meadows and seeps.	Habitat present (marginal and low probability)
Usnea longissima	Methuselah's beard lichen	None	None	4.2	North coast coniferous forest, broadleafed upland forest.	Habitat not observed.
Viola palustris	alpine marsh violet	None	None	2B.2	Coastal scrub, bogs and fens.	Habitat present (marginal and low probability)

Source: (CDFW, 2022a; CNPS, 2022)

Table A-2 Regionally-Occurring Special-status Animal Species

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CDFW Status	Habitat Characteristics	Habitat Assessment
Birds						
Accipiter cooperii	Cooper's hawk	None	None	--	Woodland, chiefly of open, interrupted or marginal type.	Habitat present.
Ardea alba	great egret	None	None	--	Colonial nester in large trees.	Habitat present.
Ardea herodias	great blue heron	None	None	--	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Habitat present.
Cerorhinca monocerata	rhinoceros auklet	None	None	--	Off-shore islands and rocks along the California coast.	Habitat not observed.
Charadrius montanus	mountain plover	None	None	SCC	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms.	Habitat not observed.
Charadrius nivosus nivosus	western snowy plover	Threatened	None	SCC	Sandy beaches, salt pond levees and shores of large alkali lakes.	Habitat not observed.
Circus hudsonius	northern harrier	None	None	SCC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas.	Habitat present.
Coturnicops noveboracensis	yellow rail	None	None	SCC	Summer resident in eastern Sierra Nevada in Mono County.	Habitat not observed.
Egretta thula	snowy egret	None	None	--	Colonial nester, with nest sites situated in protected beds of dense tules.	Habitat present.
Elanus leucurus	white-tailed kite	None	None	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Habitat present.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CDFW Status	Habitat Characteristics	Habitat Assessment
Fratercula cirrhata	tufted puffin	None	None	SCC	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Habitat not observed
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	FP	Open-ocean bird; nests along the coast on islands, islets, or (rarely) mainland cliffs.	Habitat present (marginal and low probability)
Hydrobates furcatus	fork-tailed storm-petrel	None	None	SCC	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Habitat not observed
Nannopterum auritum	double-crested cormorant	None	None	WL	Colonial nester on small, offshore islets. Forages over the open ocean, usually well off-shore.	Habitat not observed.
Nycticorax nycticorax	black-crowned night heron	None	None	--	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state.	Habitat present (marginal and low probability)
Pandion haliaetus	osprey	None	None	WL	Colonial nester, usually in trees, occasionally in tule patches.	Habitat present.
Rallus obsoletus obsoletus	California Ridgway's rail	Endangered	Endangered	FP	Ocean shore, bays, freshwater lakes, and larger streams.	Habitat not observed.
Riparia riparia	bank swallow	None	Threatened	--	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay.	Habitat not observed.
Mammals						
Aplodontia rufa humboldtiana	Humboldt mountain beaver	None	None	--	Coast Range in southwestern Del Norte County and northwestern Humboldt County.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CDFW Status	Habitat Characteristics	Habitat Assessment
Arborimus albipes	white-footed vole	None	None	SCC	Mature coastal forests in Humboldt and Del Norte counties. Prefers areas near small, clear streams with dense alder and shrubs.	Habitat not observed.
Arborimus pomo	Sonoma tree vole	None	None	SCC	North coast fog belt from Oregon border to Somona County. In Douglas-fir, redwood and montane hardwood-conifer forests.	Habitat not observed.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SCC	Throughout California in a wide variety of habitats. Most common in mesic sites.	Habitat not observed.
Erethizon dorsatum	North American porcupine	None	None	--	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Habitat not observed.
Eumetopias jubatus	Steller sea lion	Delisted	None	--	Breeds on Ano Nuevo, San Miguel and Farallon islands, Point St. George, and Sugarloaf. Hauls-out on islands and rocks.	Habitat not observed.
Myotis evotis	long-eared myotis	None	None	--	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests.	Habitat not observed.
Pekania pennanti	Fisher	None	None	SCC	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CDFW Status	Habitat Characteristics	Habitat Assessment
Amphibians						
Emys marmorata	western pond turtle	None	None	SCC	Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats.	Habitat not observed.
Ascaphus truei	Pacific tailed frog	None	None	SCC	Old-growth associated species with optimum conditions in the mixed conifer/hardwood ancient forest ecosystem.	Habitat not observed.
Plethodon elongatus	Del Norte salamander	None	None	WL	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover.	Habitat not observed
Rana aurora	northern red-legged frog	None	None	SCC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	Habitat present.
Rana boylii	foothill yellow-legged frog	None	Endangered	SCC	Coastal redwood, Douglas-fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old growth forest.	Habitat not observed.
Rhyacotriton variegatus	southern torrent salamander	None	None	SCC	Occurs in montane hardwood-conifer, redwood, Douglas-fir and ponderosa pine habitats.	Habitat not observed.
Insects						
Bombus caliginosus	obscure bumble bee	None	None	--	Coastal areas from Santa Barbara County to north to Washington state.	Habitat present.
Bombus crotchii	Crotch bumble bee	None	None	--	Coastal California east to the Sierra-Cascade crest and south into Mexico.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CDFW Status	Habitat Characteristics	Habitat Assessment
Bombus occidentalis	western bumble bee	None	None	--	Once common and widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Habitat present.
Cicindela hirticollis gravida	sandy beach tiger beetle	None	None	--	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico.	Habitat not observed.
Scaphinotus behrensi	Behrens' snail-eating beetle	None	None	--	Found in extreme NW CA along the coast.	Habitat not observed.
Fish						
Acipenser medirostris	green sturgeon	None	None	SCC	Spawning site fidelity. Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles.	Habitat not observed.
Entosphenus tridentatus	Pacific lamprey	None	None	SCC	Found in Pacific Coast streams north of San Luis Obispo County, however regular runs in Santa Clara River. Size of runs is declining.	Habitat not observed.
Eucyclogobius newberryi	tidewater goby	Endangered	None	--	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River.	Habitat not observed.
Lampetra richardsoni	western brook lamprey	None	None	SCC	Habitat not listed in CNDDB. Associated with rivers.	Habitat not observed.

Scientific Name	Common Name	Federal ESA Status	California ESA Status	CDFW Status	Habitat Characteristics	Habitat Assessment
Oncorhynchus clarkii clarkii	coast cutthroat trout	None	None	SCC	Small coastal streams from the Eel River to the Oregon border.	Habitat not observed.
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	Threatened	Threatened	--	Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt County, California.	Habitat not observed.
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	Threatened	None	--	Coastal basins from Redwood Creek south to the Gualala River, inclusive.	Habitat not observed.
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	Candidate Endangered	SCC	No. Calif coastal streams south to Middle Fork Eel River. Within range of Klamath Mtns province DPS and No. Calif DPS.	Habitat not observed.
Spirinchus thaleichthys	longfin smelt	Candidate	Threatened	--	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column.	Habitat not observed.
Thaleichthys pacificus	eulachon	Threatened	None	--	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries.	Habitat not observed.
Mollusks						
Anodonta californiensis	California floater	None	None	--	Freshwater lakes and slow-moving streams and rivers. Taxonomy under review by specialists.	Habitat not observed.
Margaritifera falcata	western pearlshell	None	None	--	Aquatic.	Habitat not observed.

Source: (CNDDB 2022)

Table A-3 Plant Species Observed During Field Investigations

Scientific Name	Common Name	Origin	WMVC Wetland Indicator 2018	Special-Status?
Herb Layer				
Agrostis stolonifera	Creeping bent	Invasive	FAC	No
Alopecurus pratensis	Meadow foxtail	Introduced	FAC	No
Anthoxanthum odoratum	Sweet vernal grass	Invasive	FACU	No
Arrhenatherum elatius	Tall oat grass	Introduced	UPL	No
Avena barbata	Slender wild oat	Invasive	UPL	No
Avena sativa	Cultivated oat	Introduced	UPL	No
Brassica nigra	Black mustard	Invasive	NL	No
Brassica rapa	Field mustard	Invasive	FACU	No
Briza minor	Small quaking grass	Introduced	FACU	No
Bromus carinatus var. carinatus	California brome	Native	UPL	No
Cirsium vulgare	Bull thistle	Invasive	FACU	No
Conium maculatum	Poison hemlock	Invasive	FAC	No
Convolvulus arvensis	Field bindweed	Introduced	UPL	No
Cortaderia selloana	Pampas grass	Invasive	FACU	No
Crepis capillaris	Smooth hawksbeard	Introduced	FACU	No
Cyperus eragrostis	Tall flat-sedge	Native	FACW	No
Dactylis glomerata	Orchard grass	Invasive	FACU	No
Daucus carota	Queen Anne's lace	Introduced	FACU	No
Dipsacus fullonum	Wild teasel	Invasive	FAC	No

Scientific Name	Common Name	Origin	WMVC Wetland Indicator 2018	Special-Status?
Epilobium ciliatum subsp. *watsonii*	Watson's willowherb	Native	FACW	No
Equisetum arvense	Common horsetail	Native	FAC	No
Festuca perennis	Italian rye grass	Invasive	UPL	No
Galium aparine	Goose grass	Native	FACU	No
Geranium dissectum	Cut-leaved geranium	Invasive	UPL	No
Hedera helix	English ivy	Invasive	FACU	No
Helminthotheca echioides	Bristly ox-tongue	Invasive	FAC	No
Holcus lanatus	Common velvet grass	Invasive	FAC	No
Hypochaeris radicata	Rough cat's-ear	Invasive	FACU	No
Juncus effusus subsp. *pacificus*	Pacific rush	Native	FACW	No
Leontodon saxatilis	Hairy hawkbit	Introduced	FACU	No
Lotus corniculatus	Bird's-foot treefoil	Introduced	FAC	No
Lupinus rivularis	Riverbank lupine	Native	FAC	No
Lysimachia arvensis	Scarlet pimpernel	Introduced	UPL	No
Lythrum hyssopifolia	Hyssop loosestrife	Invasive	UPL	No
Malva parviflora	Cheeseweed	Introduced	NOL	No
Medicago polymorpha	California burclover	Invasive	FACU	No
Parentucellia viscosa	Yellow parentucellia	Invasive	FAC	No
Plantago lanceolata	English plantain	Invasive	FACU	No
Plantago major	Common plantain	Introduced	FAC	No

Scientific Name	Common Name	Origin	WMVC Wetland Indicator 2018	Special-Status?
Pseudognaphalium luteoalbum	Weedy cudweed	Introduced	FACW	No
Ranunculus repens	Creeping buttercup	Invasive	FACW	No
Raphanus raphanistrum	Jointed sharlock	Introduced	NOL	No
Raphanus sativus	Wild radish	Invasive	UPL	No
Rorippa curvisiliqua	Western yellow cress	Native	OBL	No
Rumex acetosella	Sheep sorrel	Invasive	FACU	No
Rumex crispus	Curly dock	Invasive	FAC	No
Senecio vulgaris	Common groundsel	Introduced	FACU	No
Sonchus oleraceus	Common sow thistle	Introduced	UPL	No
Spergularia rubra	Red sand-spurry	Introduced	FAC	No
Symphyotrichum chilense.	Pacific aster	Native	FAC	No
Taraxacum officinale	Common dandelion	Introduced	FACU	No
Trifolium fragiferum	Strawberry clover	Introduced	FACU	No
Trifolium pratense	Red clover	Introduced	FACU	No
Trifolium repens	White clover	Introduced	FAC	No
Typha latifolia.	Broadleaf cattail	Native	OBL	No
Veronica persica	Persian speedwell	Introduced	UPL	No
Vicia sativa subsp. *sativa*	Spring vetch	Introduced	UPL	No
Vicia tetrasperma	Sparrow vetch	Introduced	UPL	No
Shrub Layer				

Scientific Name	Common Name	Origin	WMVC Wetland Indicator 2018	Special-Status?
Baccharis pilularis	Coyote brush	Native	UPL	No
Cotoneaster franchetii	Franchet's cotoneaster	Invasive	UPL	No
Rosa nutkana	Nootka Rose	Native	FAC	No
Rubus armeniacus	Himalayan blackberry	Invasive	FACU	No
Rubus ursinus	California blackberry	Native	FACU	No
Tree Layer				
Eucalyptus pulverulenta	Money tree	Introduced	NOL	No
Pittosporum tenuifolium	Short leaf box	Invasive	NOL	No
Salix hookeriana	Coastal willow	Native	FACW	No
Salix lasiolepis	Arroyo willow	Native	FACW	No
Thuja plicata	Western red cedar	Native	FAC	No

Table A-4 Animal Species Observed During Field Investigations

Scientific Name	Common Name	Special-Status?
Birds		
Branta canadensis	Canada goose	No; Protected by MBTA
Corvus corax	Common raven	No; Protected by MBTA
Hirundo rustica	Barn swallow	No; Protected by MBTA
Melospiza melodia	Song sparrow	No; Protected by MBTA
Numenius phaeopus	Whimbrel	No; Protected by MBTA

Scientific Name	Common Name	Special-Status?
Mammals		
Thomomys bottae	Botta's pocket gopher	No
Amphibians		
Pseudacris regilla	Northern Pacific treefrog	No

Table A-5 Invasive Species Observed During Field Investigations

Scientific Name	Common Name	Cal-IPC Rating
Herb Layer		
Agrostis stolonifera	Creeping bent	Limited
Anthoxanthum odoratum	Sweet vernal grass	Moderate
Avena barbata	Slender wild oat	Moderate
Brassica nigra	Black mustard	Moderate
Brassica rapa	Field mustard	Limited
Cirsium vulgare	Bull thistle	Moderate
Conium maculatum	Poison hemlock	Moderate
Cortaderia selloana	Pampas grass	High
Dactylis glomerata	Orchard grass	Limited
Dipsacus fullonum	Wild teasel	Moderate
Festuca perennis	Italian rye grass	Moderate
Geranium dissectum	Cut-leaved geranium	Moderate
Hedera helix	English ivy	High

Scientific Name	Common Name	Cal-IPC Rating
Helminthotheca echioides	Bristly ox-tongue	Limited
Holcus lanatus	Common velvet grass	Moderate
Hypochaeris radicata	Rough cat's-ear	Moderate
Lythrum hyssopifolia	Hyssop loosestrife	Moderate
Medicago polymorpha	California burclover	Limited
Parentucellia viscosa	Yellow parentucellia	Limited
Plantago lanceolata	English plantain	Limited
Ranunculus repens	Creeping buttercup	Limited
Raphanus sativus	Wild radish	Limited
Rumex acetosella	Sheep sorrel	Moderate
Rumex crispus	Curly dock	Limited
Shrub Layer		
Cotoneaster franchetii	Franchet's cotoneaster	Moderate
Rubus armeniacus	Himalayan blackberry	High
Tree Layer		
Pittosporum tenuifolium	Short leaf box	High

Appendix B Field Investigation Photographs

APPENDIX B

Photo 1. July 27, 2022. Northeast edge of wetland.

Photo 2. July 27, 2022. Raptor pellet.

Photo 3. July 27, 2022. Typical pasture habitat.

Photo 4. July 27, 2022. Grazing by Canada geese.

Photo 5. July 27, 2022. View from southeast corner of project area.

Appendix C Low Flying Drone Imagery

APPENDIX C

Drone Image 1 – North (April 15, 2021)

Drone Image 2 – East (April 15, 2021)

Drone Image 3 – South (April 15, 2021)

Drone Image 4 – Southwest (April 15, 2021)

Drone Image 5 – Southwest-West (June 10, 2021)

Drone Image 6 – East (June 10, 2021)

Drone Image 7 – Southwest (June 10, 2021)