Natural Resources Assessment

Lost Coast Organics, LLC
Assessor's Parcel Number 204-381-008
Hydesville, California

Prepared for:
Jack Wheeler

August 2019
018234

15180

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1062 G Street, Ste. I, Arcata, CA 95521-5800

Reference: 018234

August 28, 2019

Lost Coast Organics, LLC
2494 Fisher Rd.
Hydesville, CA 95547

Subject: Natural Resources Assessment

Dear Jack:

Enclosed is the Natural Resources Assessment for your project site at Assessor's parcel number 204-381-008, near Hydesville, California. This report addresses potential impacts to special-status species, and sensitive vegetation communities that may occur within or adjacent to your project area. Recommendations to minimize impacts on special-status species or habitats are included in this report.

Feel free to contact me at 707-822-5785 with any questions or concerns.

Respectfully submitted,

SHN

Gretchen O'Brien
Senior Wildlife Biologist

GAO:ceg

Enclosure: Natural Resources Assessment

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QA/QC:GAO

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Abbreviations and Acronyms

C°	degrees Celsius
ft	feet
km	kilometer
ppt	parts per thousand
AE	Agricultural Exclusive
APN	Assessor's Parcel Number
BIOS	Biogeographical Information and Observation System
C	candidate species status
CCH	Consortium of California Herbaria
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
CNRA	California Natural Resources Agency
CRPR	California Rare Plant Rank
CT	candidate threatened species status
CWA	Clean Water Act
D	delisted species status
DPS	distinct population segment/species status
E	endangered species status
EPA	United States Environmental Protection Agency
ESU	evolutionarily significant unit/species status
FESA	Federal Endangered Species Act
FP	fully protected species status
G1/S1	critically imperiled species heritage rank
G2/S2	imperiled species heritage rank
G3/S3	vulnerable species heritage rank
G4/S4	apparently secure species heritage rank
G5/S5	secure species heritage rank
GPS	global positioning system
IPaC	Information for Planning and Conservation
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Planning
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRA	Natural Resources Assessment
PT	proposed threatened species status
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SMA	Streamside Management Area
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
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

1.0 Introduction

SHN has conducted preliminary site investigations including literature reviews and database query for an assessment of biological resources potentially present in relation to the Lost Coast Organics, LLC property near Hydesville, California (See Appendix 1). This Natural Resources Assessment (NRA) will serve as a tool to identify potential sensitive natural resources that may occur onsite and assist with project planning to minimize impacts.

1.1 Project Location

The project is located in Hydesville, California, on the United States Geological Survey (USGS) Hydesville 7.5-minute Quadrangles, Township 2 North, Range 1 East, Section 16, Humboldt Meridian (Figure 1). The parcel is approximately 22.5 acres (Assessor's parcel number [APN] 204-381-008) with a central location latitude and longitude of 40.55320° and -124.067400°, respectively. For the purpose of this NRA, the entire property will be considered the Study Area (See Appendix 1).

2.0 Project Description

The project will include minor grading, building greenhouse structures, installing water tanks, and creating dirt road access within the Study Area. (See Site Plan prepared by Ontiveros & Associates Inc. in Appendix 1). The property is zoned Agriculture Exclusive (AE) by the Humboldt County Zoning Regulations.

2.1 Site Description

The project area consists of three separate fenced areas: the residence and associated structures that will be used for plant nursery and processing (residential portion); an agricultural field that is currently and will continue to be used for non-cannabis agricultural uses (southern field); and a field that has historically been used for agricultural purposes (northern field) where the proposed greenhouses will be constructed. The unnamed drainage that runs through the residential portion of the property is a channelized, concrete structure on the bottom and sides, with culverts at either end of the property boundary and under a small bridge crossing (Appendix 2, Photos 1-3).

3.0 Methodology

3.1 Literature Review

This Natural Resources Assessment includes a review of pertinent literature on habitat characteristics of the site, and a review of information related to special-status species of plants and animals that could potentially use the described habitats. Prior to the field investigation, a review of plant species reported to be within the project area was performed by querying the "Consortium of California Herbaria" (Consortium of California Herbaria, 2019) database records and "Calflora" (Calflora, 2019) observations.

The findings for this report are a result of several sources, including:

- California Natural Diversity Database (CNDDB) query for the Hydesville and surrounding USGS 7.5-minute topographic quadrangles (McWhinney Creek, Fields Landing, Fortuna, Tayloe Peak, Scotia, Redcrest, Owl Creek, and Iaqua Buttes; USGS, 2007; California Department of Fish and Wildlife [CDFW], 2019a)
- Biogeographical Information and Observation System (BIOS; CDFW, 2019b)

- Electronic Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society [CNPS], 2018) query for a list of all plant species reported for the Hydesville and surrounding USGS 7.5-minute topographic quadrangles (CDFW, 2019c)
- Special Animals of California List (CDFW, 2019d)
- United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) was queried for threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of the proposed project and/or may be affected by the proposed project (USFWS, 2019a).

From the database queries, a list of potential target special-status species for the study area was compiled. Tables 1 and 2 in Appendix 3 include species reported by the CNDDB and USFWS, and species listed in the CNPS inventory of rare plants.

Additionally, USFWS's Critical Habitat Portal was queried for habitat designated as critical for species listed under the Federal Endangered Species Act (FESA).

3.2 Coordination with Permitting and Regulatory Agencies

SHN staff will subsequently coordinate with CDFW staff on wildlife concerns as needed.

3.3 Field Observations and Studies

An initial site visit was conducted on November 8, 2018 to assess the available habitat for the potential special-status species that were reported in the vicinity. Seasonally-appropriate surveys for the best probability of detecting special-status species that have the potential to occur on the site were conducted on May 24 and July 10, 2019. Focused early- and late-season botanical surveys were conducted pursuant to the CDFW *Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities* (CDFW, 2018a), with an attempt to identify all species present within the project-related study areas, including possible species of special concern. In addition to surveying for target species, a list of all botanical and animal species encountered was compiled (Tables 3 and 4 in Appendix 2). Plants were identified to the lowest taxonomic level possible to distinguish special-status species from others. Nomenclature for special-status animals conforms to CDFW guidelines (CDFW, 2019d). Plant community names conform to *A Manual of California Vegetation, Second Edition* (Sawyer et al.; 2009) and the VegCAMP (Vegetation Classification and Mapping Program) Natural Communities List (CDFW; 2018b). Botanical nomenclature of species in this assessment follows the *Jepson Manual* (Baldwin et al., 2012) and subsequent online revisions (CCH 2019).

4.0 Regulatory Setting

Regulatory authority over biological resources is shared by federal, State, and local authorities under a variety of legislative acts. The following section summarizes the federal, State, and local regulations for special-status species, jurisdiction waters of the U.S. and State of California, and other sensitive biological resources. This section provides a listing and overview of these federal and State laws.

4.1 Federal Laws

4.1.1 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 United States Army Corps of Engineers (USACE) retains primary responsibility for permits to discharge dredged or fill

material into waters of the U.S (United States Environmental Protection Agency [EPA], 1948). 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 (EPA, 2018). They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. Following recent court cases, the 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 FESA if the action subject to CWA permitting could result in "Take" of federally listed species or an adverse effect to designated critical habitat (USFWS, 1973). 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, 1977). 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 (RWQCBs). The project is within the jurisdiction of the North Coast RWQCB.

4.1.2 Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1994, 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 (EPA, 1948). 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.

4.1.3 Federal Endangered Species Act

The United States 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. 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; USFWS, 1973). 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 Study 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]; USFWS, 1973). Project-related impacts to species on the FESA endangered or threatened list would be considered significant and would require mitigation.

4.1.4 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; USFWS, 1918). The migratory bird nesting season is generally considered to be between March 15 and August 1 within the study region.

4.2 State Laws

4.2.1 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" (SWRCB, 1969). The SWRCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. 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 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.

4.2.2 California Endangered Species Act

The State of California enacted the 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" (CDFW, 1984).

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.

4.2.3 California Environmental Quality Act

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 [CNRA], 1970). Thus, 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,

2018). 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]; CDFW, 2019e) 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; CDFW, 1970).

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" (CDFW, 1998).

4.2.4 California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the CFGC (CDFW, 1994). 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 Streambed Alteration Agreement (SAA).

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; CNRA, 1970).

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 an SAA from the CDFW.

4.2.5 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).

4.2.6 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 2 in Appendix 3 includes potentially occurring federal- and State-listed species and SSC animals that may occur in the project area.

4.2.7 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, 2018).

Table 1 in Appendix 3 includes potentially-occurring endangered or rare native plants that may occur in the Study Area (including CNPS lists).

4.2.8 Natural Community Conservation Planning Act

The Natural Community Conservation Planning (NCCP) Act of 1991 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 (refer to discussions above). 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 (CDFW, 1991).

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

4.3 Other Statutes, Codes, and Policies Affording Limited Species Protection—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 (County of Humboldt, 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. For areas along streams, whether or not specifically mapped as SMA and Wetland Combining Zones, the outer boundaries of the SMAs are defined as a 100-foot setback from the top of bank or edge of riparian drip-line, whichever is greater, on either side of perennial streams and 50-foot setback for streams with seasonal intermittent flow.

SMAs do not include watercourses consisting entirely of a man-made drainage ditch, or other man-made drainage device, construction, or system.

Routine maintenance activities are permitted under the SMAO, if trees that are more than 12 inches in diameter are not cut, and that no more than 6,000 cumulative square feet of woody vegetation is removed. Additionally, activities are not considered routine maintenance if they could result in a significant environmental impact. Significance with regard to environmental impact can be difficult to qualify on a case-by-case level. However, the California Department of Fish and Wildlife generally considers the removal of riparian woody vegetation greater than 4 inches in diameter as an activity that requires compensatory mitigation. Mitigation measures for projects within SMAs can include retaining snags and trees that support nesting birds, replanting of disturbed areas equal to the development area, and other potential site-specific habitat improvements.

4.3.1 County of Humboldt Commercial Cannabis Cultivation Land Use Ordinance (non-coastal zone)

On May 8, 2018, the Humboldt County Board of Supervisors adopted Ordinance Number 2599, amending provisions of Title III of the Humboldt County code relating to the commercial cultivation, processing, manufacturing, distribution, testing, and sale of cannabis for medicinal or adult use for the areas outside the coastal zone. The ordinance established land use regulations concerning commercial cultivation, processing, manufacturing, and distribution of cannabis for medical use within the County of Humboldt in order to limit and control such cannabis activities in coordination with the State of California (County of Humboldt, 2018).

Section 55.4.12.1.10 establishes performance standards for biological resource protection for all cannabis cultivation and processing operations. Section 55.4.12.6 specifies performance standards for project-related noise produced by a generator used for commercial cannabis cultivation. The noise effects on wildlife are focused on avoiding impacts to marbled murrelet and northern spotted owl. Project-related noise impacts are assumed to be less than significant if noise levels are 50 decibels or less at 100 feet distance or the edge of the nearest habitat, whichever is closer.

5.0 Special-status Biological Resources

An evaluation was conducted for the potential presence or absence of habitat for special-status plant and animal species. CNDDB RareFind (CDFW, 2019a), BIOS (CDFW, 2019b), and CNPS (CNPS, 2018) searches were completed for the Hydesville 7.5-minute USGS quadrangle and all adjacent quadrangles. The aforementioned databases were queried for historical and existing occurrences of State- and federally-listed threatened, endangered, and candidate plant and animal species, species proposed for listing, and all special-status plants listed by the CNPS. In addition, a list of all federally-listed species that are known to occur or may occur in the vicinity was obtained from the USFWS' Information for Planning and Conservation database (USFWS, 2019).

Table 1 in Appendix 3 includes all plant species reported from the queries, their preferred habitat, and whether there is suitable habitat present within the study area for the species. Table 2 includes all animal species reported from the queries, their preferred habitat, and whether there is suitable habitat present within the study area for the species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed under desktop review and during the initial site visit.

Each species was evaluated for its potential to occur in the study area according to the following criteria:

- **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.

In addition to surveying for target species, a list of all botanical and animal species encountered was compiled. Plants were identified to the lowest taxonomic level possible to distinguish special-status species from others. A list of observed botanical species is attached as Appendix 3, Table 3. Botanical nomenclature follows *The Jepson Manual, Vascular Plants of California* (Baldwin et al., 2012), and subsequent online revisions. A list of observed animal species is attached as Appendix 3, Table 4.

5.1 Special-status Plant Species

Based on a review for special-status plant species, 55 special-status plant species have been reported from the region consisting of the site's quadrangle and their surrounding quadrangles. Of the special-status plant species reported in the region, 45 plant species are considered to have a low or no potential to occur at the project site and 10 species have a moderate or high potential (Table 1 in Appendix 3). Surveys were conducted on May 24, 2019 and July 10, 2019. Species with a moderate or high potential for occurrence within the study area are described below:

Chrysosplenium glechomifolium is a perennial herb in the Saxifragaceae family. Within its range state-wide, its blooming period is reported as February through June. This species is reported from north coast coniferous forests, riparian forests, streambanks, and sometimes roadsides. Although suitable habitat may exist within the study area for this species, it was not detected.

Coptis laciniata is a perennial herb in the Ranunculaceae family. Its elevation range is reported from 0 to 1,000 meters above sea level. Within its range state-wide, its blooming period is reported as March through May. This species is reported from north coast coniferous forests, meadows, and seeps occurring in mesic sites. Although suitable habitat may exist within the study area for this species, it was not detected.

Erythronium revolutum is a perennial herb in the Liliaceae family. Its elevation range is reported from 0 to 1,600 meters above sea level. Within its range state-wide, its blooming period is reported as March through July. This species is reported from bogs, fens, broadleaved upland forests, and north coast coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Hosackia gracilis is a perennial herb in the Fabaceae family. 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.

Mitellastra caulescens is a perennial herb in the Saxifragaceae family. Its elevation range is reported from 5 to 1,700 meters above sea level. Within its range state-wide, its blooming period is reported as March through October. This species is reported from broadleaved upland forests, lower montane coniferous forests, meadows, and north coast coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Status: Federal None, State Candidate Threatened, Species of Special Concern, Global rank Vulnerable, State rank Vulnerable.
Suitable habitat exists for this species within the drainage that runs through the western portion of the study area. One adult was observed in the upper portion of this drainage during a site visit (Figure 2).

5.2.2 Birds

The 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 flood-plains; also, live oaks. This species builds stick platform nests lined with bark in crotches of riparian deciduous trees and second-growth conifers near streams.
Status: Federal None, State None, Watchlist, Global rank Secure, State rank Apparently Secure.
Foraging habitat for this species exists in and adjacent to the study area.

The sharp-shinned hawk (*Accipiter striatus*) can be found in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats and prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests are usually within 275 feet of water.
Status: Federal None, State None, Watchlist, Global rank Secure, State rank Apparently Secure.
Foraging habitat for this species exists in and adjacent to the study area.

The 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.
Status: Federal None, State None, Sensitive, Global rank Secure, State rank Apparently Secure.
Potential foraging habitat exists for this species within the study area during the wet season.

The 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, and wet meadows. This species is most often found foraging near or in water, or in grassy fields near water.
Status: Federal None, State None, Sensitive, Global rank Secure, State rank Apparently Secure.
Potential foraging habitat exists for this species within the study area during the wet season.

The 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.
Status: Federal Delisted, State Delisted, Fully Protected, Global rank Apparently Secure, State rank Vulnerable/Apparently Secure.
Suitable foraging habitat for this species exists within the study area.

The osprey (*Pandion haliaetus*) occupies areas adjacent to rivers, lakes, and the coast where large numbers of fish are present. It may be most common around major coastal estuaries and salt marshes.
Status: Federal None, State None, Sensitive, Global rank Secure, State rank Apparently Secure.
Suitable habitat does not exist immediately within the study area, but suitable nesting habitat may be available in the surrounding forested landscape and may occupy the adjacent areas along Yager Creek to the east.

The yellow warbler (*Setophaga petechia*) spends the breeding season in thickets and other disturbed or regrowing habitats, particularly along streams and wetlands. Yellow Warblers build their nests in the vertical fork of a bush or small tree such as willow, hawthorn, raspberry, white cedar, dogwood, and honeysuckle.

Status: Federal None, State None, Species of Special Concern, Global rank Secure, State rank Vulnerable/Apparently Secure.
Suitable habitat for this species does not exist within the study area.

5.2.3 Fish

There are no special-status fish species with a moderate or high potential of occurrence within the study area.

5.2.4 Insects

There are no special-status insect species with a moderate or high potential of occurrence within the study area.

5.2.5 Mammals

The North American Porcupine (*Erethizon dorsatum*) occurs in upland forests and coniferous woodlands, spending much of their time in trees. It makes it's den in hollow trees or rocky areas. They have also adapted to harsh environments such as shrublands, tundra, and deserts. Some porcupines love wood and eat a lot of bark and stems. They also eat nuts, tubers, seeds, grass, leaves, fruit, and buds. Porcupines are also known to eat bugs and small lizards.
Status: Federal None, State None, Global rank Secure, State rank Vulnerable.
Suitable habitat for this species does not exist within the study area.

The Humboldt Marten (*Martes caurina humboldtensis*) is typically associated with closed-canopy, late-successional, mesic coniferous forests with complex physical structures near the ground. This species chooses a home range within the largest available patch sizes of late-successional stands or serpentine habitat. This species makes its den in lower branches of living trees, tree boles in various stages of decay, coarse woody debris, shrubs, and rockfields.
Status: Federal None, State Candidate Endangered, Species of Special Concern, subspecies Global rank Critically Imperiled, State rank Critically Imperiled.
CNDDB reports this species within approximately 1 mile of the project area. Suitable habitat exists for this species in adjacent timberlands, though not within the study area or immediate surroundings.

The silver-haired bat (*Lasionycteris noctivagans*) can be found throughout most of the United States except southern California, in temperate, northern hardwoods with ponds or streams nearby. Habitat includes willow, maple, and ash trees due to the deeply-fissured bark. Hollow snags and bird nests also provide daytime roosting areas. If project-related brush clearing or structural work on buildings with bat-roosting habitat must occur during the bat reproductive season, bat surveys will be performed in locations by a qualified biologist to ensure that colonies are not destroyed.
Status: Federal None, State None, Global rank Secure, State rank Vulnerable.
Foraging and roosting habitat exist for this species in the study area.

The Hoary Bat (*Lasiurus cinereus*) can be found from Northern Canada all the way to Guatemala, and also in South America and Hawaii in woodlands and forests with medium to large-size trees and dense foliage. If project-related brush clearing or structural work on buildings with bat-roosting habitat must occur during the bat reproductive season, bat surveys will be performed in locations by a qualified biologist to ensure that colonies are not destroyed.
Status: Federal None, State None, Global rank Secure, State rank Apparently Secure.
Foraging and roosting habitat exist for this species in the study area.

Townsend's big-eared bat (*Corynorhinus townsendii*) feeds on small moths, beetles, and soft-bodied insects. It roosts in caves, mines, tunnels, buildings, or other human-made structures.

Status: Federal None, State None, Species of Special Concern, Global rank Vulnerable/Apparently Secure, State rank Imperiled.
Potential foraging habitat exists for this species in the study area.

The Yuma Myotis (*Myotis yumanensis*) occupies a wide variety of habitats ranging from sea level to 3,300 meters including open forests and woodlands with sources of water. This species roosts in buildings, mines, caves, or crevices.
Status: Federal None, State None, Sensitive, Global rank Secure, State rank Apparently Secure.
Potential foraging and roosting habitat exist for this species in the study area.

5.2.6 Mollusks

There are no special-status mollusk species with a moderate or high potential of occurrence within the study area.

5.2.7 Reptiles

The Western Pond Turtle (*Emys marmorata*) is a fully aquatic turtle found in flowing and standing waters including ponds, marshes, swamps, and wetlands. They usually are found on the bottom of streams, rivers, and lakes that include at least some sand, silt, or clay.
Status: Federal None, State None, Species of Special Concern, Global rank Vulnerable/Apparently Secure, State rank Vulnerable.
CNDDB reports an occurrence of this species along Yager Creek, approximately 0.2 miles to the east of the project area. Very minimal suitable habitat for this species exists within the Study Area.

5.3 Special-status Natural Communities and Habitats

Sensitive natural 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.

Sensitive natural communities observed on site include small-fruited bulrush marsh (*Scirpus microcarpus* Herbaceous Alliance [G4/S2]). The natural community is located on the western portion of the agricultural field near a drainage feature (Figure 2; Appendix 2, Photo 5). The community is confined to a linear section and is isolated. It meets the membership rule of more than 30% relative cover in the herbaceous layer and less than 15% absolute cover of shrub cover.

The proposed development is not expected to impact this natural community.

5.3.4 Nesting Bird Habitat

All locations with a shrub or tree canopy layer within the study area may provide suitable nesting habitat for a diverse assemblage of migratory birds. Additionally, some species, such as western meadowlark (*Sturnella*

neglecta), may nest in tall grasses. The vegetated, unmanaged portions of the study area provide the best habitat for nesting birds. Protection measures for nesting birds are included in Section 7.0 Recommendations.

5.3.5 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. Movement corridors within the study area are low quality due to the exposed and actively managed landscape. Section 7.0 Recommendations include measures to avoid movement restrictions.

5.3.6 Designated Critical Habitat

USFWS's Critical Habitat Portal (USFWS, 2019b) query for habitat designated as critical for species listed under the FESA reported that the closest designated critical habitats are for the chinook salmon – California coastal evolutionary significant unit (ESU; *Oncorhynchus tshawytscha* pop. 17) 0.15 miles to the southeast in Yager Creek and the marbled murrelet (*Brachyramphus marmoratus*) 1.15 miles to the north of the study area. The proposed project will not impact these habitats.

6.0 Invasive Species Management

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 invaders do not have natural predators or controls in an introduced environment so they are able to spread freely and out-compete native species, particularly sensitive species with particular habitat requirements that may change drastically due to the spread of the invasive species.

6.1 Existing Setting

The Study Area consists of a terrace-developed portion with paved, graveled, and compacted surfaces and agricultural field. There is a concrete drainage near the existing residential structure on the eastern portion of the Study Area. The Study Area consists of manipulated vegetation for past agricultural land use and ornamental use.

There were no invasive animal species observed within the Study Area during site visits. There are no existing or proposed ponds on the site, so American bullfrog (*Lithobates catesbeianus*) is not expected to be a concern.

Four invasive species are targeted for removal in the Study Area based on site conditions, habitat, and potential for infestation at the site (California Invasive Plant Council, 2017). Invasive plant populations were found on the north side of the Study Area, near an existing structure, and along the a fenceline in the center of the study area (Figure 2). Targeted species include common teasel *(Dipsacus follonum* [Cal-IPC: Moderate]), bull thistle (*Cirsium vulgare* [Cal-IPC: Moderate]), Himalayan blackberry (*Rubus armeniacus* [Cal-IPC: Moderate]), and poison hemlock (*Conium maculatum* [Cal-IPC: Moderate]). Non-target species considered to be invasive were observed in the agricultural grassland area including pennyroyal (*Mentha pulegium* [Cal-IPC: Moderate]), creeping bentgrass (*Agrostis stolonifera* [Cal-IPC: Limited]), Italian rye grass (*Festuca perennis* [Cal-IPC: Moderate]), sweet vernal grass (*Anthoxanthum odoratum* [Cal-IPC: Moderate]), and field bindweed (*Convolvulus arvensis* [Cal-IPC: None]). It is not considered feasible to utilize control methods for these species due to the presence of populations on adjacent landscapes and the disturbed agricultural setting.

6.2 Priority Species

Recommended eradication approaches are primarily mechanical methods outlined below and are species-specific. Control methods are based on *Weed Control in Natural Areas in the Western United States* (DiTomaso et al., 2013).

Priority species and priority locations can be located on Figure 2.

Infestation-size thresholds are determined to inform management activities and are as follows:

- Early Detection Infestation: classified as a discrete population under 0.1 acres.
- Small Infestation: classified as a discrete population over 0.1 acres and under 1 acre.
- Medium Infestation: classified as a discrete population over 1 acre and under 2.47 acres.
- Large Infestation: classified as a discrete population over 2.47 acres.

If populations are determined to consist of medium or large infestations, active restoration following management is recommended.

Invasive species removal will be unique for each species targeted in the invasive species management plan. This section will estimate the timing of each management action in order to develop a schedule for the year. It is difficult to make hard and fast estimates as to flowering and fruiting dates due to the changes in growing conditions year to year.

6.2.1 Common teasel (*Dipsacus follonum*)

Habitat for this species includes open, sunny sites, relatively moist locations along ditches, roads, waterways, and riparian zones. They are also found in pastures, abandoned fields, and forests. This species is native to Europe and is spreading throughout California and Oregon. This species is an aggressive competitor and forms dense stands. Seeds are viable for at least two years. It has a California Invasive Plant Council Inventory (Cal-IPC) rating of moderate invasiveness.

Non-chemical control includes mechanical, cultural, and biological. Mechanical methods such as pulling, cutting, and disking. Annual treatments are needed for 4 to 6 years until the seed bank has become depleted. Small populations can be controlled with digging and hand-pulling if the root is severed below the soil surface. Removal efforts should occur before flowering.

Populations on site were observed to be an early detection infestation.

It is recommended to utilize mechanical control methods. Specifically, hand-pulling before seed set.

6.2.2 Bull thistle (*Cirsium vulgare*)

Habitat for this species includes disturbed areas such as rangeland, pastures, forest clearcuts, roadsides and waste areas. They are also found in dry meadows and riparian areas. The species is native to Europe. It is considered problematic as it can outcompete native plants once established. It has a Cal-IPC rating of moderate invasiveness.

Non-chemical control includes mechanical, cultural, and biological. Mechanical methods including tillage, hoeing, and hand-pulling are effective before flowering, and measures must sever the root below the soil surface. Mechanical treatments, including mowing, should be done immediately before flowering with repeated treatments. Reports of biological control such as the bull thistle gall fly (*Urophora stylata*), thistle head weevil (*Rhinocyllus conicus*), and a weevil (*Trichosirocalus horridus*) have varied results and can impact native thistle plants. Cultural control methods do not show effective control once the plant is established. Changing grazing management can limit the spread of the population. Introducing a fire regime will create favorable establishment conditions for bull thistle and may encourage a seedbank flush. This method can be used as an opportunity for seedling control in dense populations. This species is more readily controlled through hand-pulling and weed-whacking. It is best if control of this species occurs shortly before the plant flowers. If cutting occurs too early, it will promote new growth. If cut directly before flowering, it is highly unlikely to re-sprout. Cut stalks left on the ground have been known to produce viable seed, so it is best if plant material is removed from the site and properly disposed of or severely masticated on site to quickly dry out the plant material.

Populations on site were observed to be an early detection infestation.

It is recommended to utilize mechanical control methods for this species. Specifically, hand-pulling well in advance of seed set. Typically June for removal, but is highly variable and must be closely watched to achieve appropriate timing.

6.2.3 Himalayan blackberry (*Rubus armeniacus*)

Habitat for this species includes disturbed, open, and moist sites. It can occur in ditch banks, fencerows, roadsides, open fields, and riparian areas. This species is a cultivar introduced from Eurasia. It is a highly competitive plant that will displace native species and can prevent access to water sources for wildlife in riparian settings. Himalayan blackberry is an aggressive invader of riparian and other wet, disturbed areas. Recurring floods and disturbance within riparian habitat can lead to permanent dominance by Himalayan blackberry, to the exclusion of all other species. Seed dispersal is mostly through birds and can reproduce by root sprouts and stem-tip rooting. The seedbank will usually persist up to three years. It has a Cal-IPC rating of moderate invasiveness.

Non-chemical control methods include mechanical, cultural, and biological. Biological control including the blackberry leaf rust fungus (*Phragmidium violaceum*) has not been shown to be effective. Burning is effective when additional methods are used to control root sprouts after the burn. Goats are effective in the control of new populations, however it is not recommended in riparian areas. Hand-pulling is effective for small populations. A mix of mowing and hand-pulling can be utilized at the site to minimize spread and eventually eradicate this species from within the monitoring area. Plants that are already established are best controlled by cutting canes near the ground level immediately prior to flowering, as root systems will have exhausted their reserve food supply, which will diminish regrowth. Many follow-up visits will be needed to cut regrowth as it continues to resprout. Additional control and removal can be achieved by digging out root systems after canes have been cut. This will stimulate roots that are not pulled to resprout, which will require follow-up visits to remove with additional hand-pulling and digging. The Himalayan blackberry onsite will require both cutting, hand-pulling, and digging to remove from the site; however, it is imperative that regular follow-up visits be made if control of this species is to be effective. Populations onsite were observed to be an early detection infestation.

It is recommended to utilize mechanical control methods for this species, year-round removal of the plant upon observation, and targeted removal when plants begin to flower, before fruiting. Typically, May for removal but is highly variable and must be closely watched to achieve appropriate timing.

6.2.4 Poison hemlock (*Conium maculatum*)

Habitat for this species includes stream banks, roadsides, wastelands, woodlands, meadows and pastures. This species is native to Europe. It is considered problematic because of its toxicity to humans and animals. Seed dispersal is prolonged and occurs from late summer through winter. The seedbank will persist up to three years under field conditions. It has a Cal-IPC rating of moderate invasiveness.

Non-chemical control methods only include mechanical. Due to the toxicity, it is not recommended to graze or burn. There are no known biological control methods. Mechanical methods include hand removal. The entire taproot must be removed, and soil disturbance related to removal will encourage further germination of seeds. Both hand-pulling and weed-whacking is effective at controlling this species. It is recommended that hand-pulling be employed due to the current small size of the infestation. Gloves must be worn during hand-pulling. It is best to pull plants prior to flowering; both rosettes and stalks should be pulled. It is not important that the entire root system be pulled. If weed-whacking or mowing is used, it is best to mow twice, once in spring, and again in late summer to destroy regrowth.

Populations on site were observed to be an early detection infestation.

It is recommended to utilize mechanical control methods for this species. Specifically hand pull and/or mow twice a year. Typically, March through April and August through September for removal, but is highly variable and must be closely watched to achieve appropriate timing.

6.3 Best Management Practices

- Do not purchase, sell, or propagate invasive plant species and cultivars.
- Clean propagation materials used in cultivation of any plant.
- Prior to moving tools and equipment onto and off of an activity area; scrape, brush, or wash soil and debris from exterior surfaces, to the extent practical to minimize the risk of transporting propagules. Do not clean equipment, vehicles, or trailers in or near any wetland or waterway.
- Wear clothing and footwear that discourage the transport of seed such as, low-tread footwear that does not hold soil, seeds, or invertebrates, ankle gaiters, disposable shoe covers, or dedicated infested-area footwear. When moving in, out, or through an infested area, clean any clothing or footwear of seeds, soil, or invertebrates.
- Pesticide or herbicide treatment should only be used after consideration of non-chemical methods.

Additional recommendations to manage and avoid spreading non-native invasive species is included in Section 7.0 Recommendations.

6.4 Monitoring and Reporting

6.4.1 Performance Standards

Success of the invasive species management plan is defined as eradication of target species, as well as overall habitat improvement compared to past land use in the study area. The success of the invasive species management plan may be achieved with a combination of success criteria that includes:

- 90 percent reduction of Himalayan blackberry and bull thistle populations.

- 95 percent reduction of common teasel and poison hemlock.
- Invasive species are removed and reduced within the study area and are prevented from becoming established within any new construction areas.

An annual monitoring site visit should be conducted for invasive species management by a qualified biologist until it can be demonstrated that the targeted species and seed banks are no longer present onsite.

As part of the monitoring program, both quantitative and qualitative (visual assessment) sampling will be performed by a qualified ecologist/biologist. This assessment will be used to make maintenance recommendations in annual reports, which will evaluate the success of the invasive species management plan. It will also aid in monitoring in the future as vegetation grows and site conditions change. Vegetation monitoring shall be conducted for a minimum of three years or a total of five years if success criteria are not met within the first three years of monitoring.

6.4.2 Quantitative Sampling

Quantitative comparative vegetation data will be collected annually in the late spring/early summer, although some flexibility in the monitoring schedule is acceptable to account for seasonal variation in weather conditions. The monitoring will make use of direct count methods and size of infestation.

Results will determine if plant cover meet the prescribed success criteria as described in Section 6.4.1 Performance Standards. Monitoring results will be compiled into annual reports and submitted following each year of monitoring. Monitoring reports, including an evaluation of success, are due annually by December 31 and will be submitted to applicable permitting agencies.

Absolute percent cover of native and non-native plant species will be collected from randomly placed quadrats within the priority areas from which cover and invasive reduction percentages will be calculated and used for statistical comparison. Quadrat methods will be used to estimate absolute vegetative cover, non-native invasive vegetation cover, and non-native vegetation cover. Monitoring will be used to determine whether priority areas are meeting set success criteria for vegetative cover. Within any site, methods should remain consistent throughout the monitoring period.

6.4.2.1 Vegetation Monitoring Methodology

Absolute percent cover of native and non-native plant species will be collected from randomly placed quadrats within each priority area. Sampling will occur within these areas established in year one, and the same areas will be returned to for each year of monitoring. The establishment of permanent monitoring polygons within similar habitat types allows for a direct qualitative comparison from year to year for tracking trends in vegetation changes and developing remedial recommendations if necessary.

Within each monitoring macroplot area, a simple random coordinate method will be utilized to sample mitigation areas. Baselines, X- and Y-axes, will be oriented within the priority area with the X-axis running the longitudinal length of the area and the Y-axis running latitudinally. These transects will provide the base from which random monitoring plots will be generated by using random number generator software. For each sampling plot, a random value will be chosen for the X-axis and a random number will be generated for the Y-axis. The point at which these intersect specifies the location of the sampling quadrat. Coordinates that fall out of the macroplot area will be rejected.

Each macroplot will have a permanent monument placed using wood or metal stakes for ease of reestablishing the location of the macroplot and X- and Y-axes in future monitoring efforts. Each monument

should be labeled and located using a sub-meter global positioning system (GPS), and photos taken at each monument at the conclusion of monitoring to aid in finding the monument in future monitoring efforts.

6.4.3 Qualitative Visual Assessment

During each monitoring event, visual observations of habitat conditions will be noted. The qualitative visual assessment will be the primary tool by which habitat development is evaluated and the need for any remedial measures is identified, and will determine if data from sampling transects is an accurate representation of site conditions. Qualitative visual assessment will help evaluate the overall functioning of the site as a whole, and will help to identify localized or low-level trends, such as new invasive species encroachment, localized changes in species abundance, and other changes that might be overlooked if only transect monitoring is used.

Particular attention will be paid to the following:

- native species recruitment and habitat development in the priority areas,
- introduction and infestation of exotic species; species encroachment and spread will be recorded,
- evidence of continued herbivory or human encroachment into the priority areas.

6.5 Photo Documentation

In addition to the general qualitative assessment and transect sampling, several permanent stations for photo documentation will be established in the mitigation areas. Photos will be taken prior to implementation of the proposed project and will be included as part of each annual monitoring report. Photo stations will be established during the first site visit and the locations will be recorded to be used in each successive monitoring report. Photos will include direction of view, and a reference to the photo monitoring location.

6.6 Annual Reports

Vegetation monitoring shall be conducted at the mitigation sites for a minimum of three years or a total of five years if success criteria are not met within the first three years of monitoring. The first annual monitoring event will occur 1 year following invasive removal. Recommendations for any corrective action necessary to ensure the continued success of the plan will be included in the report, as well as results from the quantitative and qualitative monitoring.

7.0 Conclusion & Discussion

This Natural Resources Assessment outlines information related to biological resources in the project area. One special-status animal species was observed during the site visit on May 24, 2019. A single adult Foothill yellow-legged frog (*Rana boylii*) was observed within the constructed drainage channel (Figure 2). This drainage does not provide adequate egg deposit and development habitat and this individual frog had likely dispersed from breeding habitat along the Van Duzen River, 1.7 miles to the south to where this unnamed tributary drains. Project activities are not likely to affect this species or its habitat since this drainage will not be used for a water source or any other project purpose, and cultivation will be approximately 500 feet away. Unidentified fish fry were observed near the culvert at the southern end of the drainage that runs through the study area. This concrete drainage does not provide adequate spawning habitat for any special-status fish species.

No special-status plants were observed during the seasonally-appropriate site visits.

- Keep noise levels from generators or other equipment down to 50 decibels or less at 100 feet distance from the noise source, or the edge of the nearest critical habitat for sensitive wildlife species, whichever is closer.

- Any external lighting should comply with the International Dark Sky Association standards for lighting zones zero (0) and one (1), and be designed to regulate light spillage onto neighboring properties or sensitive habitat areas resulting from back-light, up-light, or glare.

- Refrain from the improper storage or use of any fuels, fertilizer, pesticides, fungicide, rodenticide, or herbicide. Any uses of pesticide products shall be in compliance with State pesticide laws and regulations enforced by the County Agricultural Commissioner's Office and the California Department of Pesticide Regulation.

10.0 References

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds). (2012). *The Jepson Manual: Vascular Plants of California, Second Edition*. Berkeley, CA: University of California Press, Berkeley.

Calflora. (2019).*Calflora database.* Berkeley, CA: Calflora. Accessed May 2019 at: http://calflora.org/.

Consortium of California Herbaria. (2019). *Consortium of California Herbaria database*. Berkeley, CA:CCH. Accessed May 2019 at: http://ucjeps.berkeley.edu/consortium/.

California Department of Fish and Wildlife. (1984). *California Endangered Species Act*. CFGC Sections 2070, 2080. Sacramento, CA:CDFW.

---. (1991). Natural Community Conservation Planning Act. *Fish and Game Code Section 2800.* Sacramento, CA:CDFW.

---. (1994) *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1616, California Fish and Game Code*. Sacramento, CA:CDFW.

---. (1998). *Fish and Game Code*. Sacramento, CA:CDFW.

---. (2019a). *California Natural Diversity Database (CNDDB).* Accessed May 2019 at: http://www.dfg.ca.gov/biogeodata/cnddb/. Sacramento, CA:CDFW.

---. (2019b). *Biogeographic Information and Observation System (BIOS), Version 5.1.* Sacramento, CA:CDFW. Accessed May 2019 at: http://bios.dfg.ca.gov/.

---. (2019c). *Special Vascular Plants, Bryophytes, and Lichens List.* Sacramento, CA:CDFW.

---. (2019d). *Special Animals List*. Sacramento, CA:CDFW.

---. (2019e). Vegetation Classification and Mapping Program (VegCAMP), *Natural Communities List.* Sacramento, CA:CDFW. Accessed May 2019 at: http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp.

California Invasive Plant Council. (2017). California Invasive Plant Inventory Database. Berkeley, California. Accessed May 2019 at: http://www.cal-ipc.org/paf/.

California Native Plant Society. (2018*). CNPS Rare Plant Program, Inventory of Rare and Endangered Plants (online edition, v8-02).* Sacramento, CA:CNPS. Accessed May 2019 at: http://www.rareplants.cnps.org.

California Natural Resources Agency. (1970). *California Environmental Quality Act.* CCR: Title 14, Div. 6, Chap. 3, Appendix G; Sections 15125 (c) and 15380(d).

County of Humboldt. (2005). *Streamside Management Area Ordinance*. Title 3, Section 314-61.1 of the Humboldt County Code. Eureka, CA.

---. (2018). Commercial Cannabis Cultivation Land Use Ordinance. Title 3, Section 55.4.12.1-6 of the Humboldt County Code. Eureka, CA.

DiTomaso, J.M., G.B. Kyser et al. (2013). *Weed Control in Natural Areas in the Western United States*. Davis, CA: UC Weed Research and Information Center, Davis.

Environmental Laboratory. (1987). *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1 (online edition). U.S. Army Engineer Waterways Experiment Station, Vicksberg, US:USACE Accessed August 2018 at: www.nrcs.usda.gov/internet/FSE_DOCUMENTS/16/nrcs143_020653.pdf.

Environmental Protection Agency. (1948). *Section 404 of the Clean Water Act, 33 USC § 13474.* Washington, D.C.

---. (1977). *Section 401 of the Clean Water Act, 33 USC § 1341*. Washington, D.C.

---. (2002). *Clean Water Act of 1972, 33 U.S.C. § 1251 et seq*. Washington, D.C.

---. (2018 as amended). *Definition of Waters of the United States. 33 CFR Part 328*. Washington, D.C.

Sawyer, J.O., T. Keeler-Wolf, and J Evans. (2009). *A Manual of California Vegetation, Second Edition*. Sacramento, CA:CNPS Press.

State Water Resource Control Board. (1969.) *Porter-Cologne Water Quality Control Act*. CWC Section 7. Sacramento, CA.

U.S. Army Corps of Engineers/Environmental Protection Agency. (2008). *Clean Water Act Jurisdiction*. Washington, D.C.:USACE/EPA.

U.S. Department of Agriculture, Natural Resources Conservation Service. (2016). *Web Soil Survey*. Accessed on May 2019 at: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx.

U.S. Fish and Wildlife Service. (1918). *Migratory Bird Treaty Act*. 50 CFR 21, 16 USC 703. Washington, D.C.

---. (1934). *The Fish and Wildlife Coordination Act (16 USC Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995)*. Washington, D.C.

---. (1973). *Endangered Species Act. 16 USC 1532, 16 U.S.C. 1536, 50 CFR 17.3, Section 7.* Washington, D.C.

---. (2019a). *Information, Planning and Conservation System (IPAC), Trust Resources List.* Washington D.C.:USFWS. Accessed May 2019 at: https://map.dfg.ca.gov/bios/?tool=cnddbQuick.

---. (2019b). *Critical Habitat Portal.* Washington D.C.:USFWS. Accessed May 2019 at: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77.

USGS. (2007). *Preliminary Integrated Geologic Map Databases for the United States: Western States.* Washington D.C.:USGS. Accessed November 2018 at: http://mrdata.usgs.gov/geology/state/state.php?state=CA.

Site Plan 1

OWNER/APPLICANT:
Jara Wheeler
Lost Coast Organics, LCC
2494 Fisher Rd
Hydesville, CA 95547

ENGINEER:
Ontiveros & Associates, Inc
404 North Fortuna Boulevard
Fortuna, CA 95540
(707) 725-7410
Contact: Ken Johnston

SITE INFORMATION:
2494 Fisher Rd
Hydesville, CA 95547

APN: 204-381-008

Parcel #1: 20
± 22.52 acres

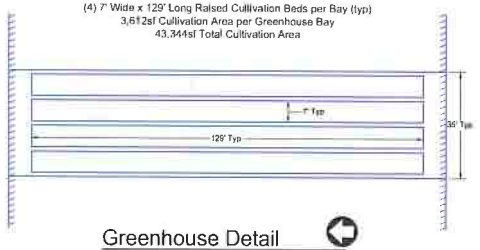
Water: Onsite Well
Sewer: Onsite Septic

Building Setbacks:
Front : 20'
Rear : 30'
Interior Side : 30'
Exterior Side : 20'

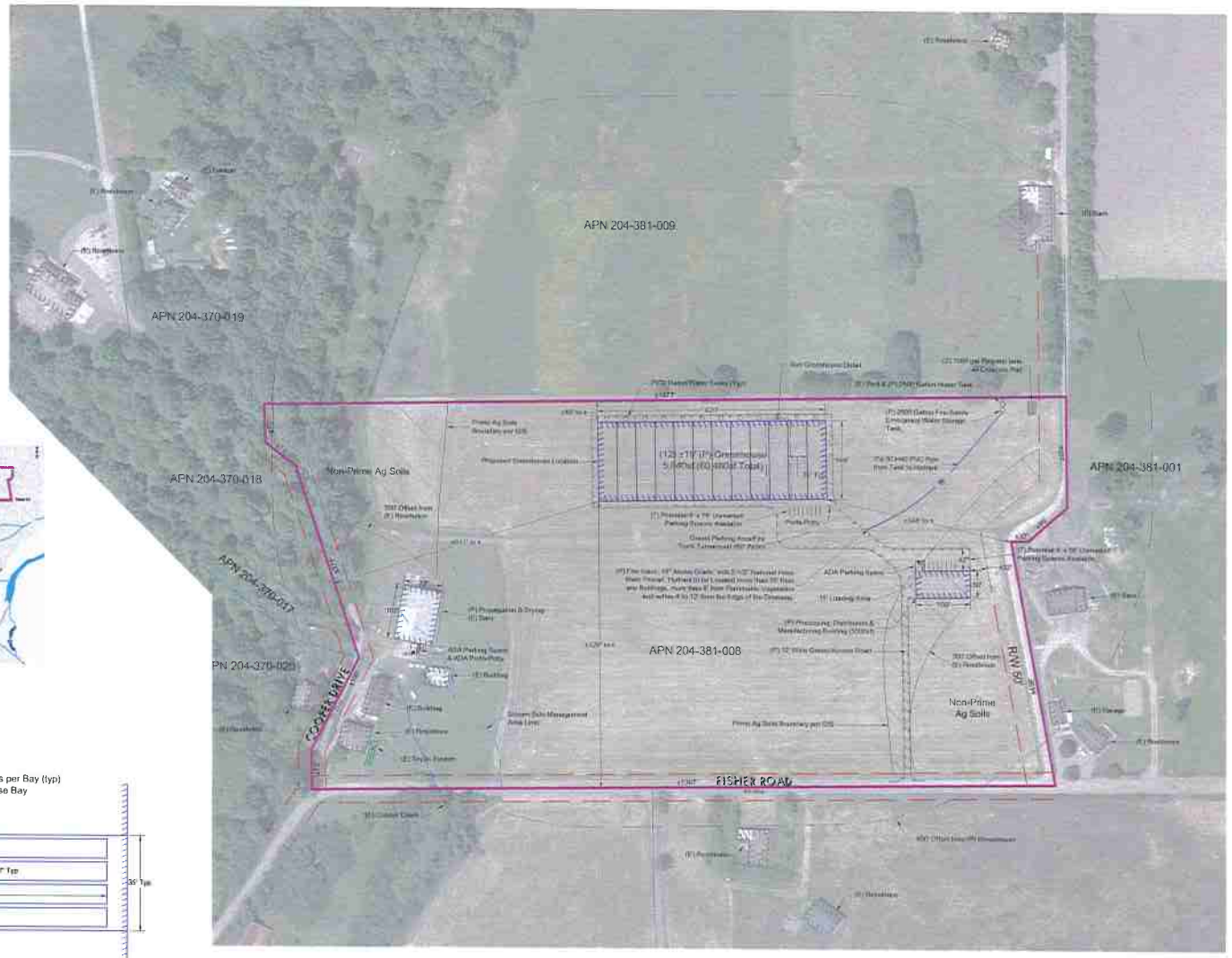
PROJECT DESCRIPTION:
The purpose of this application is to permit cannabis Cultivation

- Easements/Right of Way as shown.
- No Trees are to be Removed as part of this project.
- Minor Grading is proposed as part of this project.
- No Known historical buildings or knows archaeological or paleontological resources.
- No Schools, School Bus Stops, Residences, Places of Worship, Public Parks, or Known Tribal Cultural Recourses within 600 Feet of Proposed Cultivation Area.
- Information shown hereon is derived from Humboldt County GIS: Humboldt County APN maps, aerial photo, and owner supplied information.
- Calculated property lines and Right of Way are shown.
- Proposed Cultivation Area 60,480 Square Feet Greenhouses in Prime Agricultural Soil Area Per Humboldt County GIS
- (E) Buildings Constructed Prior to 1972

VICINITY MAP
NTS



Greenhouse Detail
1" = 20'



SITE PLAN
1" = 100'

O&A
ONTIVEROS & ASSOCIATES
CONSULTING ENGINEERS AND SURVEYORS

LOST COAST ORGANICS, LCC

LOST COAST ORGANICS, LCC
PROPOSED CANNABIS CULTIVATION

2494 Fisher Rd
Hydesville, CA 95547

APN 204-381-008

SITE PLAN

MARK	DESCRIPTION	DATE
1	Client Revisions	5/15/19

PLOT INFORMATION

SUBMITTAL STATUS
PERMIT SUBMITTAL

PROJECT NO: 18-024
DATE: 12/06/2018
DRAWN BY: BAD
CHKD BY: BKO

C1

SHEET 1 OF 1

Site Photographs

2

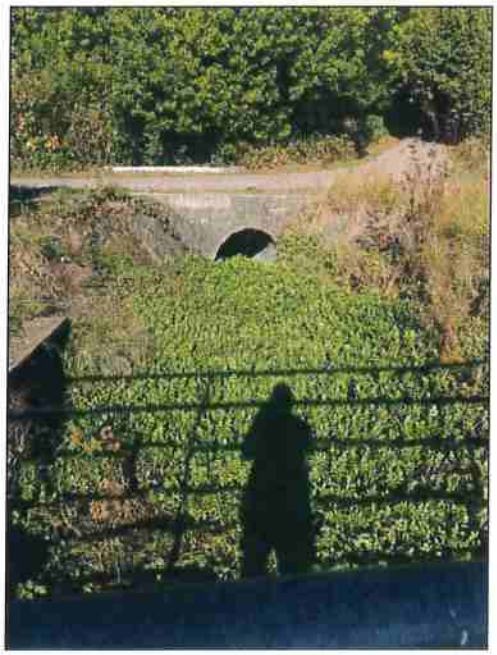


Photo 1. Vegetated and channelized drainage

Photo 2. Concrete drainage near house

Photo 3. Channelized drainage below bridge

Photo 4. Drainage in northern field

Photo 5. Small-flowered bulrush in study area

Photo 6. Typical vegetation in study area

Species List

3

Table 1 Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles												
Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Abronia umbellata var. breviflora	pink sand-verbena	Nyctaginaceae	None	None		G4G5T2	S2	1B.1	Jun-Oct	Coastal dunes	0-10 m	None
Angelica lucida	sea-watch	Apiaceae	None	None		G5	S3	4.2	May-Sep	Coastal bluff scrub, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt)	0-150 m	None
Astragalus agnicidus	Humboldt County milk-vetch	Fabaceae	CE	None		G2	S2	1B.1	Apr-Sep	Broadleaved upland forest, North Coast coniferous forest	openings, disturbed areas, sometimes roadsides	Low
Astragalus rattanii var. rattanii	Rattan's milk-vetch	Fabaceae	None	None		-		4.3	Apr-Jul	Chaparral, woodlands, lower montane coniferous forest	Gravelly streambank, 30-825 m.	Low
Cardamine angulata	seaside bittercress	Brassicaceae	None	None		G4G5	S3	2B.1		North coast coniferous forest, lower montane coniferous forest.	Wet areas, streambanks 5-515 m.	Low
Carex arcta	northern clustered sedge	Cyperaceae	None	None		G5	S1	2B.2	Jun-Sep	Bogs and fens, North Coast coniferous forest (mesic)	Mesic sites. 60-1,405 m.	Low
Carex leptalea	bristle-stalked sedge	Cyperaceae	None	None		G5	S1	2B.2	Mar-Jul	Bogs and fens, Meadows and seeps (mesic), Marshes and swamps	Mostly known from bogs and wet meadows. 3-1395 m.	Low
Castilleja ambigua var. ambigua	johnny-nip	Orobanchaceae	None	None		G4T5	S4	4.2	Mar-Aug	Coastal bluff scrub, prairie, Coastal, Marshes,	0-435 m	Low

Table 1 Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles												
Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
										swamps, Valley and foothill grassland, Vernal pools margins		
Castilleja ambigua var. humboldtiensis	Humboldt Bay owl's-clover	Orobanchaceae	None	None	S	G4T2	S2	1B.2	Apr-Aug	Marshes and swamps (coastal salt)	In coastal saltmarsh with *Spartina, Distichlis, Salicornia, Jaumea.* 0-20 m.	None
Castilleja litoralis	Oregon coast paintbrush	Orobanchaceae	None	None		G3	S3	2B.2	Jun-Jul	Coastal bluff scrub, Coastal dunes, Coastal scrub	Sandy sites. 5-255 m.	Low
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	None	None	S	G4?T2	S2	1B.2	Jun-Oct	Marshes and swamps (coastal salt)	Usually in coastal salt marsh with *Salicornia, Distichlis, Jaumea, Spartina,* etc. 0-115 m.	None
Chrysospleniu m glechomifolium	Pacific golden saxifrage	Saxifragaceae	None	None		G5	S3	4.3	Feb-Jun (Jul)	North Coast coniferous forest, Riparian forest	Streambank, sometimes seeps, sometimes roadsides	Moderate
Clarkia amoena ssp. whitneyi	Whitney's farewell-to-spring	Onagraceae	None	None		G5T1	S1	1B.1	Jun-Aug	Coastal bluff scrub, Coastal scrub	5-125 m.	Low
Collomia tracyi	Tracy's collomia	Polemoniaceae	None	None		G4	S4	4.3	Jun-Jul	Broadleaved upland forest, Lower montane coniferous forest	rocky, sometimes serpentinite	Low

Table 1 Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles												
Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Coptis laciniata	Oregon goldthread	Ranunculaceae	None	None		G4?	S3?	4.2	(Feb) Mar-May (Sep-Nov)	Meadows and seeps, North Coast coniferous forest (streambanks)	Mesic sites such as moist streambank. 0-1,000 m.	Moderate
Downingia willamettensis	Cascade downingia	Campanulaceae	None	None		G4	S2	2B.2	Jun-Jul (Sep)	Cismontane woodland lake margins, Valley and foothill grassland lake margins, Vernal pools	15-1,110 m	Low
Epilobium oreganum	Oregon fireweed	Onagraceae	None	None		G2	S2	1B.2	Jun-Sep	Bogs and fens, Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest	mesic	Low
Epilobium septentrionale	Humboldt County fuchsia	Onagraceae	None	None		G4	S4	4.3	Jul-Sep	Broadleaved upland forest, North Coast coniferous forest	sandy or rocky	Low
Erysimum menziesii	Menzies wallflower	Brassicaceae	CE	FE		G1	S1	1B.1	Mar-Sep	Coastal dunes	0-35 m	None
Erythronium oregonum	giant fawn lily	Liliaceae	None	None		G4G5	S2	2B.2	Mar-Jun (Jul)	Cismontane woodland, Meadows and seeps	Openings. Sometimes on serpentine; rocky sites. 300-1,435 m	Low
Erythronium revolutum	coast fawn lily	Liliaceae	None	None		G4G5	S3	2B.2	Mar-Jul (Aug)	Bogs, fens, Broadleaved upland & N.Coast coniferous forest	Mesic sites; streambank. 60-1,405 m.	Moderate

Table 1 Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles												
Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Fissidens pauperculus	minute pocket moss	Fissidentaceae	None	None	S	G3?	S2	1B.2	n/a	North coast coniferous forest.	Moss growing on damp soil along the coast. In dry streambeds and stream banks. 10-1,024 m.	Low
Fritillaria purdyi	Purdy's fritillary	Liliaceae	None	None		G4	S4	4.3	Mar-Jun	Chapparal, woodland, lower montane coniferous forest	175-2,255 m	Low
Gilia capitata ssp. pacifica	Pacific gilia	Polemoniaceae	None	None		G5T3	S2	1B.2	Apr-Aug	Coastal bluff scrub, Chaparral (openings), Coastal prairie, Valley and foothill grassland	5-1,345 m.	Low
Gilia millefoliata	dark-eyed gilia	Polemoniaceae	None	None	S	G2	S2	1B.2	Apr-Jul	Coastal dunes	1-60 m.	None
Glehnia littoralis ssp. leiocarpa	American glehnia	Apiaceae	None	None		G5T4	S3	4.2	May-Aug	Coastal dunes	0-20 m	None
Hemizonia congesta ssp. tracyi	Tracy's tarplant	Asteraceae	None	None		G5T4	S4	4.3	May-Oct	Coastal prairie, lower montane coniferous forest	120-1,200 m	Low
Hesperevax sparsiflora var. brevifolia	short-leaved evax	Asteraceae	None	None	S	G4T3	S2	1B.2	Mar-Jun	Coastal bluff scrub (sandy), dunes, & prairie	Sandy bluffs and flats. 0-640 m.	Low
Hesperolinon adenophyllum	glandular western flax	Linaceae	None	None		G2G3	S2S3	1B.2	May-Aug	Chaparral, Cismontane woodland, Valley and foothill grassland	usually serpentinite	Low

Table 1
Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Hosackia gracilis	harlequin lotus	Fabaceae	None	None		G3G4	S3	4.2	Mar-Jul	Wetlands, roadsides, variety of habitats from coastal scrub to coniferous forest	0-700 m	Moderate
Lathyrus glandulosus	sticky pea	Fabaceae	None	None		G3	S3	4.3	Apr-Jun	Cismontane woodland	300-800 m	Low
Layia carnosa	beach layia	Asteraceae	CE	FE		G2	S2	1B.1	Mar-Jul	Coastal dunes, Coastal scrub (sandy)	On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-30 m.	None
Lilium kelloggii	Kellogg's lily	Liliaceae	None	None		G3	S3	4.3	May-Aug	Lower montane coniferous forest, North Coast coniferous forest	Openings, roadsides	Low
Lilium occidentale	western lily	Liliaceae	CE	FE		G1	S1	1B.1	Jun-Jul	Bogs and fens, Coastal bluff scrub, Coastal prairie, Coastal scrub, Marshes and swamps (freshwater), North Coast coniferous forest (openings)	Well-drained, old beach washes overlain with wind-blown alluvium and organic topsoil; usually near margins of Sitka spruce. 3-110 m.	Low
Lilium rubescens	redwood lily	Liliaceae	None	None		G3	S3	4.2	Apr-Aug	Broadleaved upland forest, Chaparral, Lower	Sometimes serpentinite, sometimes	Low

Table 1 Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles												
Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
									(Sep)	montane &, North Coast, & Upper montane coniferous forest	roadsides	
Listera cordata	heart-leaved twayblade	Orchidaceae	None	None		G5	S4	4.2	Feb-Jul	Bogs and fens, Lower montane coniferous forest, North Coast coniferous forest	5-1,370 m	Low
Lycopodium clavatum	running-pine	Lycopodiaceae	None	None		G5	S3	4.1	Jun-Aug (Sep)	Lower montane coniferous forest (mesic), Marshes and swamps, North Coast coniferous forest (mesic)	Forest understory, edges, openings, roadsides; mesic sites with partial shade and light. 45-1,225 m.	Low
Lycopus uniflorus	northern bugleweed	Lamiaceae	None	None		G5	S4	4.3	Jul-Sept	Bogs and fens, marshes, swamps	5-2,000 m	Low
Mitellastra caulescens	leafy-stemmed mitrewort	Saxifragaceae	None	None		G5	S4	4.2	(Mar) Apr-Oct	Broadleaved upland forest, Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest	mesic, sometimes roadsides, 5-1,700 m.	Moderate
Montia howellii	Howell's montia	Montiaceae	None	None		G3G4	S2	2B.2	(Jan-Feb) Mar-May	Meadows and seeps, North Coast coniferous forest, Vernal pools	Vernally wet sites; often on compacted soil. 10-1,215 m.	Moderate

Table 1
Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Noccaea fendleri ssp. californica	Kneeland Prairie pennycress	Brassicaceae	None	FE		G5?T1	S1	1B.1	May-Jun	Coastal prairie (serpentinite)	Serpentine rock outcrops. 760-820 m.	None
Packera bolanderi var. bolanderi	seacoast ragwort	Asteraceae	None	None		G4T4	S2S3	2B.2	(Jan-Apr) May-Jul (Aug)	Coastal scrub, North Coast coniferous forest	Sometimes along roadsides. 30-915 m.	Moderate
Piperia candida	white-flowered rein orchid	Orchidaceae	None	None	S	G3	S3	1B.2		North Coast coniferous forest, lower montane coniferous forest, broadleaved upland forest.	Sometimes serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 20-1,615 m.	Low
Piperia candida	white-flowered rein orchid	Orchidaceae	None	None		G3	S3	1B.2	(Mar) May-Sep	Broadleaved upland forest, Lower montane & North Coast coniferous forest	sometimes serpentinite	Low
Pityopus californicus	California pinefoot	Ericaceae	None	None		G4G5	S4	4.2	(Mar-Apr) May-Aug	Broadleaved upland forest, Lower montane, North Coast, & Upper montane coniferous forest	mesic	Low
Pleuropogon refractus	nodding semaphore grass	Poaceae	None	None		G4	S4	4.2	(Mar) Apr-Aug	Lower montane coniferous forest, Meadows and seeps, North Coast coniferous forest, Riparian forest	Mesic	Low

Table 1 Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles												
Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Polemonium carneum	Oregon polemonium	Polemoniaceae	None	None		G3G4	S2	2B.2	Apr-Sep	Coastal prairie, Coastal scrub, Lower montane coniferous forest	0-1,830 m.	Low
Ribes laxiflorum	trailing black currant	Grossulariaceae	None	None		G5?	S3	4.3	Mar-Jul (Aug)	North Coast coniferous forest	sometimes roadside	Low
Ribes roezlii var. amictum	hoary gooseberry	Grossulariaceae	None	None		G5T4	S4	4.3	Mar-Apr	Broadleaved upland forest, Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest	120-2,300 m	Low
Sidalcea malachroides	maple-leaved checkerbloom	Malvaceae	None	None		G3	S3	4.2	(Mar) Apr-Aug	Broadleaved upland forest, Coastal prairie, Coastal scrub, North Coast coniferous forest, Riparian woodland	Woodlands and clearings near coast; often in disturbed areas. 4-765 m.	High
Sidalcea malviflora ssp. patula	Siskiyou checkerbloom	Malvaceae	None	None	S	G5T2	S2	1B.2	(Apr) May-Aug	Coastal bluff scrub, Coastal prairie, North Coast coniferous forest	Open coastal forest; roadcuts. 5-1,255 m.	Moderate
Sidalcea oregana ssp. eximia	coast checkerbloom	Malvaceae	None	None	S	G5T1	S1	1B.2	Jun-Aug	Lower montane & North Coast coniferous forest Meadows, seeps	Near meadows, in gravelly soil. 5-1,805 m.	Moderate
Spergularia canadensis var. occidentalis	western sand-spurrey	Caryophyllaceae	None	None		G5T4	S1	2B.1	Jun-Aug	Marshes and swamps (coastal salt)	0-3 m.	Low

Table 1
Regionally-Occurring Special-Status Plant Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	Other Status	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Tiarella trifoliata var. trifoliata	trifoliate laceflower	Saxifragaceae	None	None		G5T5	S2S3	3.2	(May) Jun-Aug	Lower montane coniferous forest, North Coast coniferous forest	edges, moist shady banks, streambanks	Low
Usnea longissima	Methusela h's beard lichen	Parmeliaceae	None	None	S	G4	S4	4.2		Broadleaved upland forest, North Coast coniferous forest	Grows in the "redwood zone" on tree branches; usually on old growth hardwoods and conifers, 45-1,465 m in California.	Low

Species indicator status as assigned by Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), and California Department of Fish and Wildlife (CDFW):

C: candidate
CT: candidate threatened
D: delisted
DPS: distinct population segment
E: endangered
ESU: evolutionarily significant unit
FP: fully protected
PT: proposed threatened
SSC: species of special concern
T: threatened
WL: watch list

Species Heritage rank as assigned by California Department of Fish and Wildlife (CDFW):

G1/S1: critically imperiled
G2/S2: imperiled
G3/S3: vulnerable
G4/S4: apparently secure
G5/S5: secure

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global/State Ranks	Habitat	Potential of Occurrence
Amphibians							
Ascaphus truei	Pacific tailed frog	None	None	SSC	G4/S3S4	Occurs in montane hardwood-conifer, redwood, Douglas fir & ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 degrees C.	None
Plethodon elongatus	Del Norte salamander	None	None	WL	G4/S3	Old-growth associated species with optimum conditions in the mixed conifer/hardwood ancient forest ecosystem. Cool, moist, stable microclimate, a deep litter layer, closed multi-storied canopy, dominated by large, old trees.	None
Rana aurora	northern red-legged frog	None	None	SSC	G4/S3	Humid forests, woodlands, grasslands, and streamsides in northwestern California, usually near dense riparian cover. Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.	Moderate
Rana boylii	foothill yellow-legged frog	None	CT	SSC	G3/S3	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Moderate/ **Present**
Rhyacotriton variegatus	southern torrent salamander	None	None	SSC	G3G4/S2S3	Coastal redwood, Douglas fir, mixed conifer, montane riparian, and montane hardwood-conifer habitats. Old-growth forest. Cold, well-shaded, permanent streams and seepages, or within splash zone or on moss-covered rocks within trickling water.	None

Table 2 Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Other Status**	**Global/State Ranks**	**Habitat**	**Potential of Occurrence**
				Birds			
Accipiter cooperii	Cooper's hawk	None	None	WL	G5/S4	Woodland, riparian forest, chiefly of open, interrupted or marginal type.Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	High
Accipiter gentilis	northern goshawk	None	None	SSC	G5/S3	Nest in predominantly interior mountain mature and old-growth forest stands with dense canopy cover and open understories. Forages in mature and forests as well as meadow edges and open brush.	Low
Accipiter striatus	sharp-shinned hawk	None	None	WL	G5/S4	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water.	Moderate
Agelaius tricolor	tricolored blackbird	None	CE	SSC	G2G3/S1S2	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	None
Ammodramus savannarum	grasshopper sparrow	None	None	SSC	G5/S3	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	Low
Aquila chrysaetos	golden eagle	None	None	FP ; WL	G5/S3	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Low

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global/State Ranks	Habitat	Potential of Occurrence
Ardea alba	great egret	None	None	S	G5/S4	Colonial nester in large trees. Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	Moderate
Ardea herodias	great blue heron	None	None	S	G5/S4	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.	Moderate
Brachyramphus marmoratus	marbled murrelet	T	E	S	G3G4/S1	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.	None
Charadrius alexandrinus nivosus	western snowy plover	Threatened	None	SSC	G3T3/S2S3	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	None
Charadrius montanus	mountain plover	None	None	SSC	G3/S2S3	Short grasslands, freshly plowed fields, newly sprouting grain fields, & sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.	None
Egretta thula	snowy egret	None	None		G5/S4	Colonial nester, with nest sites situated in protected beds of dense tules. Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	Low
Empidonax traillii	willow flycatcher	None	E	S, BCC	G5/S1S2	Occupy areas with willows or other shrubs near standing or running water. Females pick a spot within low shrubs and bushes, often near the outer edge for nest placement.	Low

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Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global/State Ranks	Habitat	Potential of Occurrence
Falco peregrinus anatum	American peregrine falcon	D	D	FP	G4T4/S3S4	Found near 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.	Moderate
Haliaeetus leucocephalus	bald eagle	D	E	FP	G5/S3	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	Low
Nycticorax nycticorax	black-crowned night heron	None	None	None	G5/S4	Colonial nester, usually in trees, occasionally in tule patches. Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	Low
Pandion haliaetus	osprey	None	None	S	G5/S4	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Moderate
Pelecanus occidentalis californicus	California brown pelican	D	D	FP	G4T3T4/S3	Year-round in estuaries and coastal marine habitats along both the east and west coasts. On the West Coast they breed on dry, rocky offshore islands	None
Phalacrocorax auritus	double-crested cormorant	None	None	WL	G5/S4	In addition to fishing waters, cormorants need perching areas for the considerable amount of time they spend resting each day. They tend to form breeding colonies in clusters of trees in or near water.	None
Poecile atricapillus	black-capped chickadee	None	None	WL	G5/S3	Chickadees are found in deciduous and mixed forests, open woods, parks, willow thickets, cottonwood groves, and disturbed areas. They use nest boxes, small natural cavities, or abandoned Downy Woodpecker cavities; often excavate their own cavities.	Low

Table 2 Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Other Status**	**Global/State Ranks**	**Habitat**	**Potential of Occurrence**
Riparia riparia	bank swallow	None	T	S	G5/S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	Low
Setophaga petechia	yellow warbler	None	None	SSC	G5/S3S4	Yellow Warblers spend the breeding season in thickets and other disturbed or regrowing habitats, particularly along streams and wetlands. Yellow Warblers build their nests in the vertical fork of a bush or small tree such as willow, hawthorn, raspberry, white cedar, dogwood, and honeysuckle.	Moderate
Strix occidentalis caurina	northern spotted owl	T	T	SSC	G3T3/S2S3	Generally inhabit older forested areas that contain multi-layered, multi-species, closed canopy structure but may occur in younger forest with large snags, tree cavities, and large woody debris. Requires open space within and below the upper canopy.	Low
Fish							
Acipenser medirostris	green sturgeon	T	None	VU	G3/S1S2	These are the most marine species of sturgeon. Abundance increases northward of Point Conception. Spawns in the Sacramento, Klamath, & Trinity Rivers. Spawns at temps between 8-14 C. Preferred spawning substrate is large cobble, but can range from clean sand to bedrock.	None
Entosphenus tridentatus	Pacific lamprey	None	None	SSC	G4/S4	Found in Pacific Coast streams north of San Luis Obispo County, however regular runs in Santa Clara River. Size of runs is declining. Swift-current gravel-bottomed areas for spawning with water temps between 12-18 C. Ammocoetes need soft sand or mud.	None

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global/State Ranks	Habitat	Potential of Occurrence
Eucyclogobius newberryi	tidewater goby	E	None	SSC	G3/S3	Brackish water habitats along the CA coast from Agua Hedionda Lagoon, San Diego Co, to the mouth of the Smith Rvr. Found in shallow lagoons and lower stream reaches, need fairly still but not stagnant water and high oxygen levels.	None
Oncorhynchus clarkii clarkii	coast cutthroat trout	None	None	SSC	G4T4/S3	Small coastal streams from Eel River to OR border. Small, low gradient coastal streams and estuaries. Needs shaded streams with water temperatures <18C, and small gravel for spawning.	Low
Oncorhynchus kisutch pop. 2	coho salmon - southern Oregon / northern California ESU	T	T	None	G4T2Q/S2?	Federal listing refers to populations between Cape Blanco, Oregon and Punta Gorda, Humboldt Co., CA. State listing refers to populations between the Or. border and Punta Gorda, CA.	Low
Oncorhynchus kisutch pop. 4	coho salmon - central California coast ESU	E	E	None	G4/S2?	Aquatic, central CA flowing waters. Rivers and streams below human-made structures. Often spawn in areas of transition between pools and riffles.	Low
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	None	None	SSC	G5T3Q/S2	Aquatic, flowing waters in No. CAand So, Oregon from the coast to mid-state inland. Klamath River and Rogue River watersheds. Mature in deep pools and spawn upstream.	None
Oncorhynchus mykiss irideus pop. 16	steelhead - northern California DPS	T	None	None	G5T2T3Q/S2S3	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.	Low
Oncorhynchus mykiss irideus pop. 36	summer-run steelhead trout	None	None	SSC	G5T4Q/S2	Northern California coastal streams south to Middle Fork Eel River. Within range of Klamath Mtns province DPS & No. Calif DPS. Cool, swift, shallow water & clean loose gravel for spawning, & suitably large pools in which to spend the summer.	Low

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global/State Ranks	Habitat	Potential of Occurrence
Oncorhynchus tshawytscha pop. 17	chinook salmon - California coastal ESU	T	None	None	G5/S1	Federal listing refers to wild spawned, coastal, spring & fall runs between Redwood Cr, Humboldt Co & Russian River, Sonoma Co.	Low
Spirinchus thaleichthys	longfin smelt	C	T	SSC	G5/S1	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.	None
Thaleichthys pacificus	eulachon	T	None	None	G5/S3	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.	None
				Insects			
Bombus caliginosus	obscure bumble bee	None	None	VU	G4?/S1S2	Coastal areas from Santa Barbara county to north to Washington state. Food plant genera include *Baccharis, Cirsium, Lupinus, Lotus, Grindelia* and *Phacelia.*	Low
Bombus occidentalis	western bumble bee	None	None	S	G2G3/S1	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Low
				Mammals			
Antrozous pallidus	pallid bat	None	None	SSC	G5/S3	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	None

Table 2 Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Other Status**	**Global/State Ranks**	**Habitat**	**Potential of Occurrence**
Aplodontia rufa humboldtiana	Humboldt mountain beaver	None	None	None	G5TNR/SNR	Coast Range in southwestern Del Norte County and northwestern Humboldt County. Variety of coastal habitats, including coastal scrub, riparian forests, typically with open canopy and thickly vegetated understory.	Low
Arborimus pomo	Sonoma tree vole	None	None	SSC	G3/S3	North coast fog belt from Oregon border to Somona County. In Douglas fir, redwood & montane hardwood-conifer forests. Feeds almost exclusively on Douglas fir needles. Will occasionally take needles of grand fir, hemlock or spruce.	Low
Corynorhinus townsendii	Townsend's big-eared bat	None	None	SSC	G3G4/S2	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	Moderate
Erethizon dorsatum	North American porcupine	None	None	None	G5/S3	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges. Wide variety of coniferous and mixed woodland habitat.	Moderate
Lasionycteris noctivagans	silver-haired bat	None	None	None	G5/S3S4	Temperate, northern hardwoods with ponds or streams nearby. Willow, maple and ash trees (most likely due to the deeply fissured bark). Hollow snags and bird nests also provide daytime roosting areas.	High
Lasiurus cinereus	hoary bat	None	None	None	G5/S4	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	High

Table 2 Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS Hydesville and surrounding USGS 7.5' Quadrangles							
Scientific Name	**Common Name**	**Federal Status**	**State Status**	**Other Status**	**Global/State Ranks**	**Habitat**	**Potential of Occurrence**
Martes caurina humboldtensis	Humboldt marten	None	CE	SSC	G5T1/S1	Occurs only in the coastal redwood zone from the Oregon border south to Sonoma County. Associated with late-successional coniferous forests, prefer forests with low, overhead cover.	Moderate
Myotis volans	long-legged myotis	None	None	None	G5/S3	Most common in woodland and forest habitats above 4,000 ft. Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	Low
Myotis yumanensis	Yuma myotis	None	None	S	G5/S4	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	Moderate
Pekania pennanti	fisher - West Coast DPS	None	T	SSC	G5T2T3Q/S2S3	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.	Low
Mollusks							
Gonidea angulata	western ridged mussel	None	None	None	G4G5/S1S2	Occurring on the bottom of streams, rivers and lakes. Substrates that vary from gravel to firm mud, and include at least some sand, silt or clay.	Low
Margaritifera falcata	western pearlshell	None	None	None	G4G5/S1S2	Aquatic. Prefers lower velocity waters.	Low
Anodonta californiensis	California floater	None	None	G3Q	S2?	Freshwater lakes and slow-moving streams and rivers. Taxonomy under review by specialists. Generally in shallow water.	Low

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & CNPS
Hydesville and surrounding USGS 7.5' Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global/State Ranks	Habitat	Potential of Occurrence
			Reptiles				
Emys marmorata	western pond turtle	None	None	SSC	G3G4/S3	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Moderate

Species indicator status as assigned by Federal Endangered Species Act (FESA),
California Endangered Species Act (CESA), and California Department of Fish and Wildlife (CDFW):

- C: candidate
- CT: candidate threatened
- D: delisted
- DPS: distinct population segment
- E: endangered
- ESU: evolutionarily significant unit
- FP: fully protected
- PT: proposed threatened
- SSC: species of special concern
- T: threatened
- WL: watch list

Species Heritage rank as assigned by California Department of
Fish and Wildlife (CDFW):

- G1/S1: critically imperiled
- G2/S2: imperiled
- G3/S3: vulnerable
- G4/S4: apparently secure
- G5/S5: secure

Table 3 Botanical Species Observed 5/24/2019, 7/10/2019 Wheeler, Hydesville, CA			
Scientific Name	**Common Name**	**Family**	**Native?**
Trees			
Thuja plicata	western red cedar	Cupressaceae	Y[1]
Shrubs			
Cotoneaster franchettii	Franchett's cotoneaster	Rosaceae	N[2]
Rosa spp.	cultivated rose	Rosaceae	N
Rubus armeniacus	Himalayan berry	Rosaceae	N
Sedges and Rushes			
Cyperus eragrostis	tall flat sedge	Cyperaceae	Y
Eleocharis macrostachya	common spikerush	Cyperaceae	Y
Juncus bufonius	toad rush	Juncaceae	Y
Juncus effusus ssp. *pacificus*	common rush	Juncaceae	Y
Grasses			
Agrostis stolonifera	creeping bentgrass	Poaceae	N
Aira caryophyllea	silver hairgrass	Poaceae	N
Alopecurus pratensis	meadow foxtail	Poaceae	N
Anthoxanthum odoratum	sweet vernal grass	Poaceae	N
Avena barbata	wild oat	Poaceae	N
Briza maxima	large quaking grass	Poaceae	N
Briza minor	small quaking grass	Poaceae	N
Bromus carinatus var. *carinatus*	California brome	Poaceae	Y
Bromus diandrus	rip-gut brome	Poaceae	N
Bromus hordeacus	soft chess	Poaceae	N
Danthonia californica	California oat grass	Poaceae	Y
Dactylis glomeratum	orchard grass	Poaceae	N
Festuca arundinacea	tall fescue	Poaceae	Y
Festuca bromoides	brome fescue	Poaceae	N
Festuca microstachys	small fescue	Poaceae	Y
Festuca Perennis	perennial rye grass	Poaceae	N
Holcus lanatus	velvet grass	Poaceae	N
Phyllostachys aurea	golden bamboo	Poaceae	N
Poa pratensis	Kentucky bluegrass	Poaceae	N
Herbs			
Allium triquetrum	three cornered leek	Alliaceae	N
Anthriscus caucalis	bur chevril	Apiaceae	N
Bellis perenne	English daisy	Asteraceae	N
Brassica rapa	common mustard	Brassicaceae	N
Capsella bursa-pastoris	shapard's purse	Brassicaceae	N
Callitriche heterophylla var. heterophylla	varied leaved water starwort	Plantaginaceae	Y
Cerastium glomeratum	mouse-ear chickweed	Caryophyllaceae	N
Conium maculatum	poison hemlock	Apiaceae	N
Daucus carota	queen anne's lace	Apiaceae	N
Dipsacus fullonum	Fuller's teasel	Dipsacaceae	N
Epilobium ciliatum	fringed willow herb	Onagraceae	N
Erodium circutarium	heron's bill	Geraniaceae	N
Erodium moschatum	whitestem filaree	Geraniaceae	N
Euphorbia peplans	petty spurge	Euphorbiaceae	N
Galium aparine	cleaver plant	Rubiaceae	Y
Geranium dissectum	cutleaf geranium	Geraniaceae	N
Geranium robertianum	Robert's geranium	Geraniaceae	N
Helminthotheca echioides	bristly ox-tongue	Asteraceae	N
Hypochaeris radicata	hairy cat's-ear	Asteraceae	N

Table 3 Botanical Species Observed 5/24/2019, 7/10/2019 Wheeler, Hydesville, CA			
Scientific Name	**Common Name**	**Family**	**Native?**
Lathyrus latifolius	sweet pea	Fabaceae	N
Leontodon saxatilis	hawkbit	Asteraceae	N
Leucanthemum vulgare	oxeye daisy	Asteraceae	N
Linum bienne	flax	Linaceae	N
Lotus corniculatus	birds-foot trifoil	Fabaceae	N
Lysimachia arvensis	scarlet pimpernel	Myrsinaceae	N
Malva parviflora	cheeseweed mallow	Malvaceae	N
Matricaria discoidea	pineapple weed	Asteraceae	Y
Medicago polymorpha	bur clover	Fabaceae	N
Medicago sativa	alfalfa	Fabaceae	N
Mentha pulegium	pennyroyal	Lamiaceae	N
Nasturtium officinale	watercress	Brassicaceae	Y
Parentucellia viscosa	yellow glandweed	Orobanchaceae	N
Plantago lanceolata	English plantain	Plantaginaceae	N
Polygonum aviculare	prostrate knotweed	Polygonaceae	N
Polystichum munitum	western sword fern	Dryopteridaceae	Y
Potentilla anserine ssp. pacifica	silverweed	Rosaceae	Y
Pteridium aquilinum var. pubescens	western bracken fern	Dennstaedtiaceae	Y
Ranunculus repens	creeping buttercup	Ranunculaceae	N
Raphanus sativa	wild radish	Onagraceae	N
Rumex acetosella	sheep sorrel	Polygonaceae	N
Rumex crispus	curly dock	Polygonaceae	N
Sonchus olereacus	sow thistle	Asteraceae	N
Stachys ajugoides	bugle hedge-nettle	Lamiaceae	Y
Stachys chamissonis	hedge nettle	Lamiaceae	Y
Stellaria media	chickweed	Caryophyllaceae	N
Taraxacum officinale	dandelion	Asteraceae	N
Trifolium alexandrinum	berseem clover	Fabaceae	N
Trifolium fragiferum	strawberry clover	Fabaceae	N
Trifolium repens	white clover	Fabaceae	N
Trifolium subterraneum	subterranean clover	Fabaceae	N
Veronica americana	American brooklime	Plantaginaceae	Y
Veronica persica	bird's eye speedwell	Plantaginaceae	N
Vicia hirsuta	tiny vetch	Fabaceae	N
Vicia sativa ssp. *sativa*	spring vetch	Fabaceae	N
Vines			
Convolvulus arvensis	field bindweed	Convolvulaceae	N
82 Species			**23% Native**

1. Y: Yes
2. N: No

Table 4 Animals Observed 11/8/18 & 5/24/19 Lost Coast Organics, Hydesville, CA				
Scientific Name	**Common Name**	**Family**	**Nesting Habit**	**Listed?[1]**
Amphibians				
Rana boylii	Foothill yellow-legged frog	Ranidae	Males and females pair up in streams where the female lays her eggs as the male fertilizes them externally. The eggs hatch into tadpoles which feed in the water and eventually grow four legs, lose their tails and emerge onto land where they disperse into the surrounding territory.	CT
Pseudacris regilla	Northern Pacific Treefrog	Hylidae	Egg clusters are attached to sticks, stems, or grass in quiet shallow water. Tadpoles metamorphose in about 2 to 2.5 months, generally from June to late August.	NL
Birds				
Corvus corax	Common raven	Corvidae	Bulky stick nest in trees, on cliffs, and structures such as power towers and bridges.	NL
Hirundo rustica	Barn swalllow	Hirundinidae	Cup nest of mud on eaves, rafters, and cross beams of barns, sheds and stables, as well as the undersides of bridges, wharfs, and culverts	NL
Petrochelidon pyrrhonota	Cliff swallow	Hirundinidae	Mud nest with others in a colony on cliffsides, bridges, and building eaves.	NL
Buteo lineatus	Red-shouldered hawk	Accipitridae	Stick nest usually in deciduous trees in the crotch along the main trunk toward the top.	NL
Cardellina pusilla	Wilson's warbler	Parulidae	Cup nest either on the ground or in low shrubs	NL
Falco peregrinus	American peregrine falcon	Falconidae	Cliff ledges or buildings, towers, and bridges. No vegetation is used, just a "scrape" of the substrate to make a depression.	D, FP
Cathartes aura	Turkey vulture	Cathartidae	Scrape or arrangement of vegetation scraps on rock crevices or ledges, fallen trees, or abandoned buildings.	NL
Spinus tristis	American goldfinch	Fringillidae	Cup nest often high in a shrub on a vertical branch, often visible from below but shaded above.	NL
Sayornis nigricans	Black phoebe	Tyrannidae	Cup nest in variety of substrate such as on rock faces, tree hollows, building eaves, and abondoned wells.	NL

Table 4 Animals Observed 11/8/18 & 5/24/19 Lost Coast Organics, Hydesville, CA				
Scientific Name	**Common Name**	**Family**	**Nesting Habit**	**Listed?[1]**
Melospiza melodia	Song sparrow	Passerellidae	Nest sites are usually hidden in grasses or weeds, sometimes placed on the ground and occasionally as high as 15 feet; often near water.	NL
Mammals				
Thomomys bottae	Botta's Pocket Gopher	Geomyidae	(signs found - mounds & excavated tunnel entrances)	NL

1. Species indicator status as assigned by Federal Endangered Species Act (FESA), California Endangered Species Act (CESA), and California Department of Fish and Wildlife (CDFW):
   CT = Candidate Threatened
   D = Delisted
   FP = Fully Protected
   NL = Not Listed

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