CONFIDENTIAL

Biological Resources Assessment

Assessor's Parcel Number 218-151-005
New Harris, California

Prepared for:
William Finley

CONFIDENTIAL

SHN

October 2019
018244

Reference: 018244

October 25, 2019

William Finley
69 Nobhill Rd.
Whitethorn, CA 95589

Subject: Biological Resources Assessment

Dear Mr. Finley:

Enclosed is the Biological Resources Assessment for your project site at Assessor's parcel number 218-151-005, near the unincorporated community of New Harris, Humboldt County, CA. This document is intended to serve as a tool for project-related activities and management.

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: Biological Resources Assessment

Reference: 018244

Biological Resources Assessment

Assessor's Parcel Number 218-151-005
New Harris, California

Prepared for:
William Finley

Prepared by:

1062 G St., Suite I
Arcata, CA 95521-5800
707-822-5785

October 2019

QA/QC:GAO

Table of Contents

Appendix

List of Illustrations

Figures **Follows Page**

Abbreviations and Acronyms

C°	degrees Celsius
F°	degrees Fahrenheit
km	kilometer
APN	Assessor's Parcel Number
BIOS	Biogeographical Information and Observation System
BRA	Biological Resources Assessment
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
CMMLUO	Commercial Medical Marijuana Land Use Ordinance
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CT	candidate threatened species status
CWA	Clean Water Act
D	delisted species status
DPS	Northern California distinct population segment/species status
E	endangered species status
EPA	U.S. Environmental Protection Agency
ESU	evolutionarily significant unit/species status
FESA	Federal Endangered Species Act
FP	fully protected species status
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
IPaC	Information for Planning and Conservation
LSA	Lake and Streambed Alteration
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
PT	proposed threatened species status
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SMA	Streamside Management Area
SMAO	Streamside Management Area Ordinance
SMAWO	Streamside Management Area and Wetlands 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 site investigations including literature reviews, database query, and two site visits for an assessment to determine biological resources present, or have the potential to be present, in relation to a project location near New Harris, California (Figure 1). This Biological Resources Assessment (BRA) will serve as a tool to identify the locations of sensitive biological resources that may occur onsite and help with appropriately implementing project plans to protect these resources.

1.1 Project Location

The project is located on the United States Geological Survey (USGS) Jewett Rock 7.5-minute Quadrangle, Township 5 South, Range 5 East, Section 13, Humboldt Meridian (Figure 1). The parcel is 37.29 acres (Assessor's parcel number [APN] 218-151-005) with a central location latitude and longitude of 40.030706° and -123.567240°, respectively. The Study Area includes six polygons that contain project-related components (Figure 2).

2.0 Project Description

The project includes existing agricultural production and processing within the Study Area (See Appendix 1, Site Plan). Further development plans are minimal and include a culvert replacement as part of the California Department of Fish & Wildlife (CDFW) Lake and Streambed Alteration (LSA) Agreement for the project. Water for agricultural production is sourced from two wells, a Class II stream (Appendix 2, Photo 1) and an off-channel pond (Appendix 2, Photo 2). The property is zoned Forestry Recreation (FR-B-5) by the Humboldt County Zoning Regulations.

2.1 Site Description

The project area consists of several greenhouses, outdoor cultivation, water diversions, storage tanks, residences, and associated buildings. A majority of the property is forested, with some grassland openings and riparian vegetation along several drainages. A Class I creek, Chamise Creek, runs east-west through the center of the property (Appendix 2, Photo 3). One Class II stream and four Class III streams run through the property and drain into Chamise Creek. See the Site Plan for more details (Appendix 1).

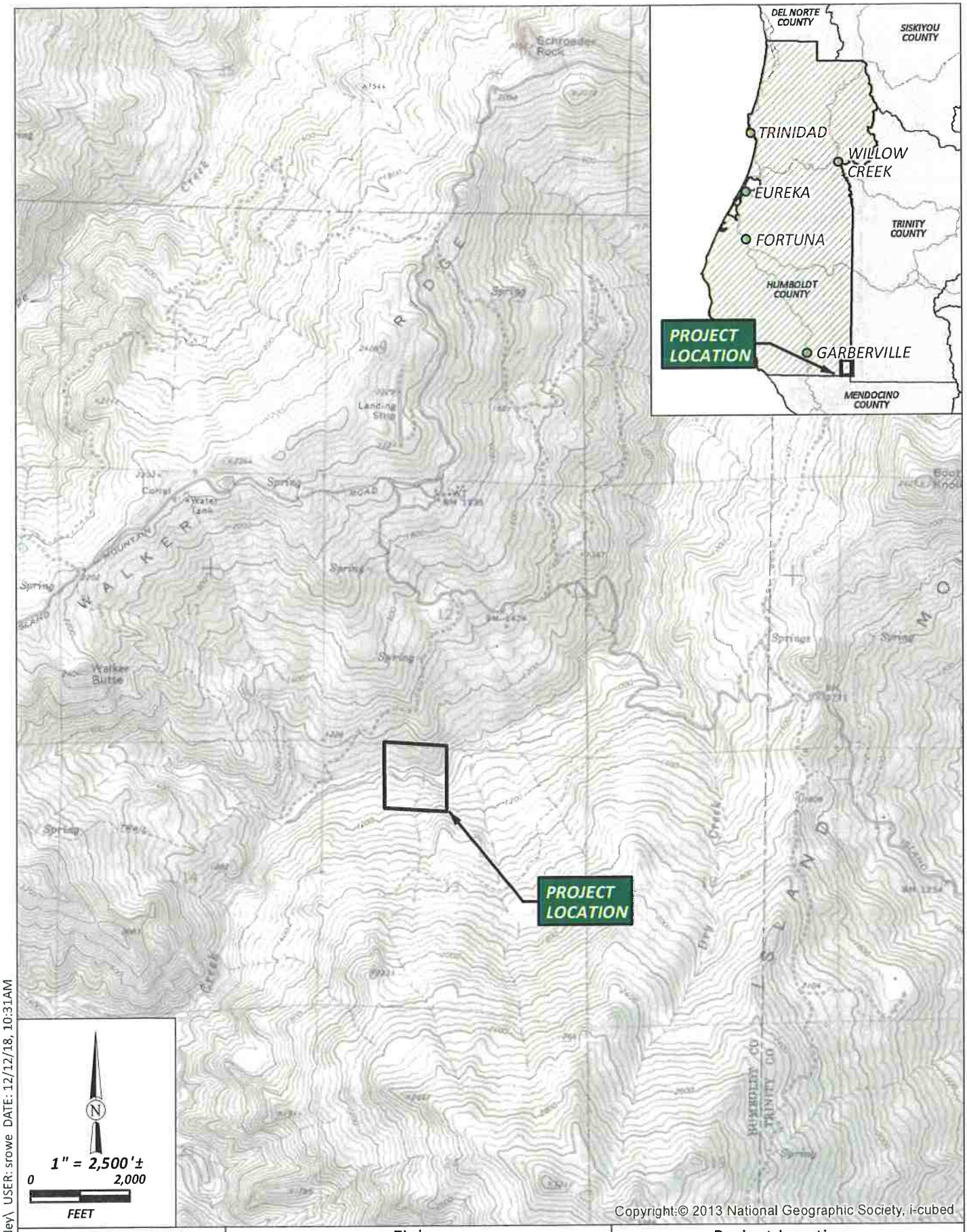
3.0 Methodology

3.1 Literature Review

This BRA 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.

The findings for this report are a result of several sources, including a review of existing literature regarding sensitive resources that have the potential to occur within the site. Resources for this determination included:

- California Natural Diversity Database (CNDDB) query for the Jewett Rock and surrounding USGS 7.5-minute topographic quadrangles (Harris, Fort Seward, Alderpoint, Zenia, Lake Mountain, Noble Butte, Bell Springs, and Updegraff Ridge) (CDFW, 2019a)
- Biogeographical Information and Observation System (BIOS; CDFW, 2019b)



E:\GIS DATA\Finley\ USER: srowe DATE: 12/12/18, 10:31AM

Consulting Engineers & Geologists, Inc.

Finley
Harris, California

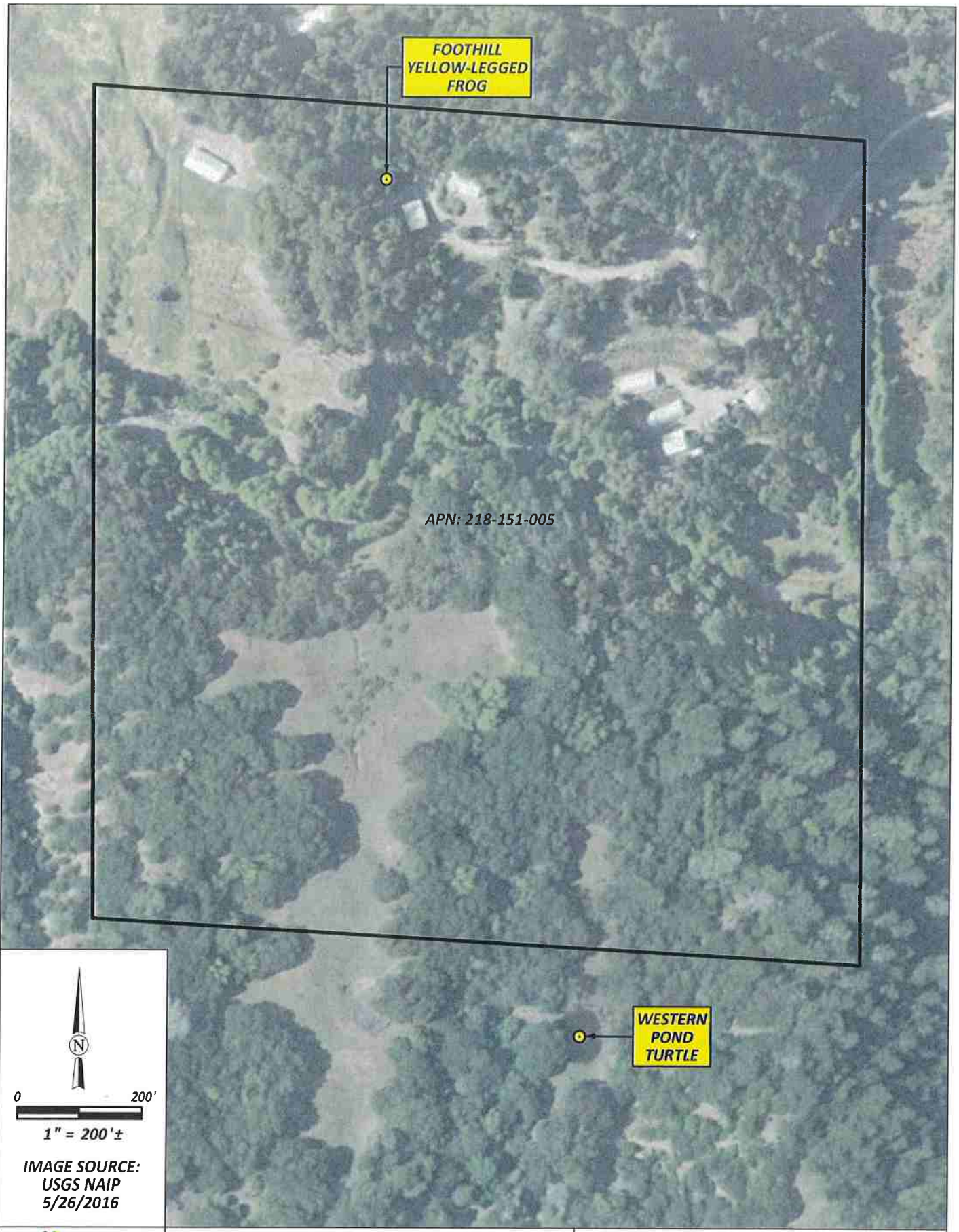
Project Location

SHN 018244

December 2018

BRA_Fig1_ProjectLocation

Figure 1



\\Arcata\Projects\GIS-Files\Eureka\2018\018244-FinleyBA\PROJ_MXD\ USER: jsousa DATE: 8/22/19, 2:56PM

SHN	Bill Finley Biological Resources Assessment New Harris, California	Special Status Species SHN 018244
	August 2019	BIO_Fig2_SpecialStatusSpecies	Figure 2

- Electronic Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society [CNPS], 2019; CDFW, 2019c) query for a list of all plant species reported for the Jewett Rock and surrounding USGS 7.5-minute topographic quadrangles
- 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.

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

Site visits were conducted on May 21 and July 2, 2019 to assess habitat availability, potential of occurrence, and document presence of special-status biological resources. All project-related areas were investigated by a Senior Wildlife Biologist and a Staff Botanist.

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

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

Waters of the U.S. are defined at 33 Code of Federal Regulations (CFR) Part 328. They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain wetlands. Following recent court cases, the U.S. Environmental Protection Agency (EPA) and USACE

published a memorandum entitled Clean Water Act Jurisdiction (USACE/EPA, 2008) to guide the determination of jurisdiction over waters of the U.S., especially for wetlands. The applicability of Section 404 permitting over discharges to wetlands is, therefore, a two-step process: 1) determining the areas that are wetlands, and 2) where a wetland is present, assessing the wetland's connection to traditional navigable waters and non-navigable tributaries to determine whether the wetland is jurisdictional under the CWA. A wetland is considered jurisdictional if it meets certain specified criteria.

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

Section 401 of the CWA (33 USC 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. 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 it's 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 USC 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.

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

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 USC 1531, 50 CFR 17.3). An activity can be defined as a "Take" even if it is unintentional or accidental. Taking can result in civil or criminal penalties. Activities that could result in "Take" of a federally listed species require an incidental "Take" authorization resulting from FESA Section 7 consultation or FESA Section 10 consultation. Plants are legally protected under the FESA only if "Take" occurs on federal land or from federal actions, such as issuing a wetland fill permit.

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

Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such a species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA or result in the destruction or adverse modification of critical habitat designated or proposed to be designated for such species (16 USC 1536[3], [4]). 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). The MBTA also prohibits disturbance and harassment of nesting migratory birds at any time during their breeding season. The USFWS is responsible for enforcing the MBTA (16 U.S.C. 703). The migratory bird nesting season is generally considered to be between March 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." 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."

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. 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, 2019). 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).

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."

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. 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 will 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).

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.

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 Section 5515, amphibian and reptiles at Section 5050, birds at Section 3511, and mammals at Section 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 (Section 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 project 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.

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 and Wetlands Ordinance

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

The purpose of the SMAWO 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 SMAWO 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 Humboldt County Commercial Medical Marijuana Land Use Ordinance (CMMLUO)

On September 13, 2016, the Humboldt County Board of Supervisors adopted Ordinance Number 2559, 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.

Section 55.4.11 establishes performance standards for biological resource protection for all cannabis cultivation and processing operations. Section 55.4.11(o) 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 the marbled murrelet (*Brachyramphus marmoratus*) and northern spotted owl (*Strix occidentalis caurina*). 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.

Section 55.4.11(v) and (w) specifies performance standards for mixed-light cultivation.

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, 2019) searches were completed for the Jewett Rock 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, 2019a).

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 on site.

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.

5.1 Special-status Plant Species

Based on a review for special-status plant species, 38 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, 26 plant species are considered to have a no or low potential to occur at the project site and 12 species have a moderate or high potential (Table 1 in Appendix 3). Species with a moderate potential for occurrence within the study area are described below:

Astragalus rattanii var. *rattanii* is a perennial herb in the Fabaceae family. Within its range State-wide, its blooming period is reported as April through July. This species is reported from chaparral, cismontane woodland, and lower montane coniferous forests. It often occurs on gravelly streambanks. Although suitable habitat may exist within the study area for this species, it was not detected.

Cypripedium montanum is a perennial herb in the Orchidaceae family. Within its range State-wide, its blooming period is reported as March through August. This species is reported from broadleaved upland forests, cismontane woodland, lower montane coniferous forests, and north coast coniferous forests. The elevation range is reported from 185 to 2,225 meters above sea level. Although suitable habitat may exist within the study area for this species, it was not detected.

Erythronium oregonum is a perennial herb in the Liliaceae family. Within its range State-wide, its blooming period is reported as March through July. This species is reported from cismontane woodland, meadows, and seeps. 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.

Hemizonia congesta ssp. *tracyi* is a perennial herb in the Asteraceae family. Within its range State-wide, its blooming period is reported as May through October. This species is reported from coastal prairie, lower montane coniferous forests, and north coast coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Leptosiphon rattanii is a perennial herb in the Polemoniaceae family. Its elevation range is reported from 1,700 to 2,000 meters above sea level. Within its range State-wide, its blooming period is reported as March through July. This species is reported from cismontane woodland and lower montane coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Listera cordata is a perennial herb in the Orchidaceae family. Its elevation range is reported from 5 to 1,370 meters above sea level. Within its range State-wide, its blooming period is reported as February through July. This species is reported from bogs, fens, lower montane coniferous forests, and north coast coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Montia howellii is an annual herb in the Montiaceae family. Within its range State-wide, its blooming period is reported as February through May. This species is reported from meadows, seeps, north coast coniferous forests, and vernal pools. Although suitable habitat may exist within the study area for this species, it was not detected.

Piperia candida is a perennial herb in the Orchidaceae family. Within its range State-wide, its blooming period is reported as March through September. This species is reported from broadleaved upland forests, lower montane coniferous forests, and north coast coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Sanicula tracyi is a perennial herb in the Apiaceae family. Within its range State-wide, its blooming period is reported as April through July. This species is reported from cismontane woodland, lower montane coniferous forests, and upper montane coniferous forests. Although suitable habitat may exist within the study area for this species, it was not detected.

Tracyina rostrata is a perennial herb in the Asteraceae family. Within its range State-wide, its blooming period is reported as May through June. This species is reported from chaparral, cismontane woodland, valley grasslands, and foothill grasslands. Although suitable habitat may exist within the study area for this species, it was not detected.

Viburnum ellipticum is a perennial deciduous shrub in the Adoxaceae family. Within its range State-wide, its blooming period is reported as May through June. This species is reported from Chaparral, cismontane woodland, and lower montane coniferous forest. Although suitable habitat may exist within the study area for this species, it was not detected.

5.2 Special-status Animal Species

Based on a review of special-status animal species, 21 special-status animal species have been reported with the potential to occur in the project region. Of the special-status animal species potentially occurring in the region, 9 animal species are considered to have a no or low potential to occur at the project site and 12 species have a moderate to high potential (Table 2 in Appendix 3). Species with a moderate or high potential for occurrence within the study area are described below.

5.2.1 Amphibians

The Foothill yellow-legged frog (*Rana boylii*) frequents rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. They are sometimes found in isolated pools; vegetated backwaters; and deep, shaded, spring-fed pools.
Status: Federal None, State None, Species of Special Concern, Global rank Vulnerable, State rank Vulnerable.
Dispersal habitat does exist for this species in the study area and it was observed on a site visit (Appendix 2, Photo 5). A single adult was observed on the May 21 site visit within the Class II drainage near the planned culvert replacement location (Figure 2). If culvert replacement and other project-related activities occur within this drainage during the dry season, it is not likely to affect this species.

The Pacific tailed frog (*Ascaphus truei*) occurs in montane hardwood and conifer forest habitats, restricted to perennial montane streams. This species is primarily nocturnal.
Status: Federal None, State None, Species of Special Concern, Global rank Apparently Secure, State rank Vulnerable/Apparently Secure.
Potential habitat exists for this species within the vicinity of the study area.

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 Northern Goshawk (*Accipiter gentils*) occupies coniferous forests, uses old nests and often near water, usually on north slopes.
Status: Federal None, State None, Species of Special Concern, Global rank Secure, State Rank Vulnerable.
Suitable habitat exists for this species within the vicinity of the study area.

The Golden Eagle (*Aquila chrysaetos*) forages along rolling foothills, desert, and mountain areas. Nests are built on a cliff face with outcroppings or large mature trees.

Status: Federal None, State None, Sensitive, Global rank Secure, State Rank Vulnerable.
Suitable habitat exists for this species within the vicinity of the study area.

The Bald Eagle (Haliaeetus leucocephalus) inhabits forested areas adjacent to large bodies of water. Wintering birds can be found in open uplands with open water. Large stick nests are built near the top of a tree.
Status: Federal Delisted, State Endangered, Sensitive/Fully Protected, Global Rank Secure, State Rank Vulnerable.
Suitable habitat exists for this species within the vicinity of the study area.

5.2.3 Fish

The Steelhead – northern California distinct population segment (DPS, *Oncorhynchus mykiss irideus* pop 16) occupy flowing waters in coastal basins from Redwood Creek south to the Gualala River.
Status: Federal Threatenend, State None, Global Rank Imperiled/Vulnerable, State Rank Imperiled/Vulnerable.
Suitable habitat exists for this species within Chamise Creek which runs through the property. This Creek is Designated Critical Habitat (USFWS, 2019b) for this species. No project-related components or activities occur within this creek. The nearest project components (buildings) are approximately 130 feet away from the edge of this habitat. Project activities are not likely to affect this species or its habitat.

The summer-run steelhead trout (*Oncorhynchus mykiss irideus* pop 36) can be found in northern California coastal streams in cool, shallow, swift moving water.
Status: Federal None, State None, Species of Special Concern, Global Rank Apparently Secure, State Rank Imperiled.
Suitable habitat exists for this species within Chamise Creek which runs through the property.

5.2.4 Insects

There are no special-status insects listed with a moderate or high potential to occur 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 exists within the vicinity of the study area.

The fisher (*Pekania pennanti*) West Coast DPS uses mature conifer forests and deciduous riparian areas with heavy canopy closure. They make their dens in cavities, snags, logs, and rocky areas.
Status: Federal None, State Threatened, Species of Special Concern, Global rank (subspecies) Imperiled/Vulnerable, State rank Imperiled/Vulnerable.
Potential habitat exists for this species within the vicinity of the study area.

5.2.6 Mollusks

The Western pearlshell (*Margaritifera falcata*) is aquatic and prefers lower velocity waters.
Status: Federal None, State None, Global rank Apparently Secure/Secure, State rank Critically Imperiled/Imperiled.

Potential habitat for this species exists within the vicinity of 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.
Suitable habitat for this species exists within the study area and was observed in the off-channel pond on the July 2 site visit. If some water remains in the pond year-round, project-related activities are not likely to affect this species.

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.

The special-status natural communities present at or adjacent to the site include Oregon white oak woodland (*Quercus garryana* Woodland Alliance [G4S3]), California oat grass prairie (*Danthonia californica* Herbaceous Alliance [G4 S3]), and red alder riparian forest (Alnus rubra Deciduous Woodland Alliance [G3/S2.2]).

The Oregon white oak woodland occurs on the edges of the existing developed area and the surrounding landscape. The California oat grass prairie occurs in an isolated patch alongside invasive non-native grasses and cultivation (Figure 2 and Appendix 2, Photo 6) and alongside the pond in the southern section of the study area. The red alder riparian forest designation is based on the Holland-type red alder series where soils are seasonally flooded, seasonally saturated, or permanently saturated. This series occurs on stream and river back-waters, banks, bottoms, floodplains, mouths, or terraces. The red alder riparian forest was observed outside of the study area on Chamise Creek. These communities are not expected to be impacted by proposed activities.

5.4 Designated Critical Habitat

USFWS's Critical Habitat Portal (USFWS 2019b) query for habitat designated as critical for species listed under FESA reported that the closest designated critical habitat is for the Steelhead (*Oncorhynchos mykiss irideus*) in Chamise Creek, which runs through the property, approximately 130 feet away from the nearest project-related component (building). The water in this creek is not being used for project activities and there are no proposed project activities that would impact this habitat. See Section 7.0 Recommendations for preserving this habitat.

The next closest Designated Critical Habitats are for the marbled murrelet (*Branchyramphus marmoratus*) and Northern Spotted Owl (*Strix accidentalis caurina*), 1.3 miles to the west of the study area. Project-related activities will not impact this habitat.

5.5 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. The primary wildlife movement corridors within the vicinity of the study area are Chamise Creek, its tributaries, and the associated riparian vegetation. The rural road systems may also provide movement corridors, especially for nocturnal mammals. See Section 7.0 Recommendations to avoid movement restrictions.

5.6 Wetland and Riparian Habitats

Riparian areas typically provide habitat for a mosaic of wildlife species and are considered sensitive habitat under the Humboldt County Streamside Management Area Ordinance (SMAO). The off-channel pond in the southern portion of the study area (Appendix 2, Photo 4) and the Class I, II, and III streams are the identified riparian areas throughout the property. A formal wetland delineation was not conducted and there are no proposed project activities that may impact wetlands. See Section 7.0 Recommendations for preservation of waterways.

5.7 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. See Section 7.0 Recommendations for protection measures for nesting birds.

5.8 Invasive Species

Non-native species are often introduced to an area, whether intentionally or unintentionally, by human activities and can have a detrimental effect on native species. The non-native 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.

The off-channel pond was searched for the potential of American bullfrog (*Lithobates catesbeianus*) presence. There were several Pacific treefrog (*Pseudacris regilla*) tadpoles and adult rough-skinned newts (*Taricha granulosa*) in the pond. No bullfrog tadpoles or adults were observed.

Invasive plant species on site include Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*), bull thistle (*Cirsium vulgare*), invasive non-native grasses, teasel (*Dipsacus fullonum*), and Himalayan blackberry (*Rubus armeniacus*). Due to the presence of non-native grass and herbaceous species on adjacent landscapes, it is unlikely that control of observed non-native grasses would be effective. Populations of invasive plant species are limited and isolated. It is unlikely that chemical control methods would be necessary.

See Section 7.0 Recommendations for managing and avoiding spreading non-native invasive species.

6.0 Conclusion

This Biological Resources Assessment outlines information related to biological resources that were observed and have the potential to occur within the study area. Plants observed during site visits are presented in Appendix 3, Table 3. Animals observed during site visits are presented in Appendix 3, Table 4.

Two special-status animal species were observed within the study area. The single adult Foothill yellow-legged frog (*Rana boylii*) was observed during the May 21 site visit while water was flowing in the tributary that contains the spring box (Figure 2; Appendix 2, Photo 4). During the July 2 site visit, this drainage was not flowing and no Foothill yellow-legged frogs were observed (Appendix 2, Photo 5). Western pond turtle (*Emys marmorata*) was observed in the off-channel irrigation pond which retains some water year-round. Current water use from the pond for project activities is not likely to impact this species.

No special-status plant species were observed in the study area.

Two distinct observations of one special-status plant community were observed in the study area (Figure 2), which was California oat grass prairie (*Danthonia californica* Herbaceous Alliance [G4 S3]). Two special-status plant communities were observed adjacent or nearby the study area, consisting of Oregon white oak woodland (*Quercus garryana* Woodland Alliance [G4S3]) and red alder riparian forest (*Alnus rubra* Deciduous Woodland Alliance [G3/S2.2]). Direct and indirect impacts to the S3 vegetation communities and sensitive habitat will not have substantial adverse effects or contribute substantially to potential cumulative effects with the implementation of the recommendations contained within Section 7.0 Recommendations.

Several special-status species have the potential to occupy the study area based on the available habitat, although there are no proposed project-related activities that are likely to impact special-status species or their habitat if the recommendations below are followed. For minimizing impacts on wildlife, plants, and natural communities discussed, as well as development effects, and avoiding conflicts with local policies protecting biological resources, the following recommendations are provided.

7.0 Recommendations

- Conduct spring box maintenance and culvert replacement when there is no flowing water to reduce the chance of Foothill yellow-legged frog presence as well as reduce sediment discharge to Chamise Creek.

- Avoid "stocking" the pond with any type of fish or other aquatic species to prevent the accidental introduction of bullfrogs.

- Avoid impacting California oat grass prairies near study area. If these areas are impacted, consult with a qualified biologist to mitigate for impacts.

- Avoid impacting any sensitive natural plant community adjacent to the project area. If these areas are impacted, consult with a qualified biologist to mitigate for impacts.

- Conserve existing wetlands and riparian habitats within and adjacent to the project areas. Use standard Best Management Practices during ground disturbance activities to prevent sediment run-off into waterways and wetlands.

- Remove construction debris and waste from and up to 100 feet around wetlands, drainage ditches, and streams.

- Leave downed woody debris in place for wildlife habitat.

- Limit clearing of vegetation to the non-breeding season for birds. If vegetation removal or work on structures is done between September 15 and February 28 (outside reproductive season for most

birds), these activities are not likely to affect reproductive success. If brush clearing must occur during the reproductive season, nesting bird surveys should be performed by a qualified biologist to ensure that no active nests are destroyed.

- Consider enclosing open structures that may provide nesting or roosting sites for birds or bats.
- Use native and locally-sourced plant material for landscaping and revegetation when applicable.
- Remove any populations of Himalayan blackberry, teasel, and thistle in project area when possible.
- In order to prevent further spread of invasive plant species, clean vehicle tires and boots before and after completing work on construction-related activities in the project area.
- Ensure that future development or new fencing does not prevent wildlife movement through nearby riparian corridors and refrain from the use of monofilament netting in any project-related activities to prevent wildlife entanglement.
- 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.

8.0 Limitations

The conclusions in this report represent a "snapshot in time" and some species were not identifiable or may not have been present at the time of the fieldwork. This report documents the investigation by using the best professional judgment of SHN's botanist and biologist.

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

Consortium of California Herbaria. (NR). *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.

---. (1994) *A Field Guide to Lake and Streambed Alteration Agreements, Sections 1600-1607, California Fish and Game Code*. Sacramento, CA:CDFW.

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

---. (2009*). Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities*. Accessed May 2019 at: https://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf .

---. (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.

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

California Native Plant Society. (2019*). 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. (1988). *Humboldt County General Plan: Volume I Framework Plan (Amended 1998*). Eureka, CA.

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

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 May 2019 at: www.nrcs.usda.gov/internet/FSE_DOCUMENTS/16/nrcs143_020653.pdf.

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

---. *Section 401 of the Clean Water Act, 33 USC § 1341.* 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. Fish and Wildlife Service. (1918). *Migratory Bird Treaty Act.* 50 CFR 21, 16 USC 703. Washington, D.C.

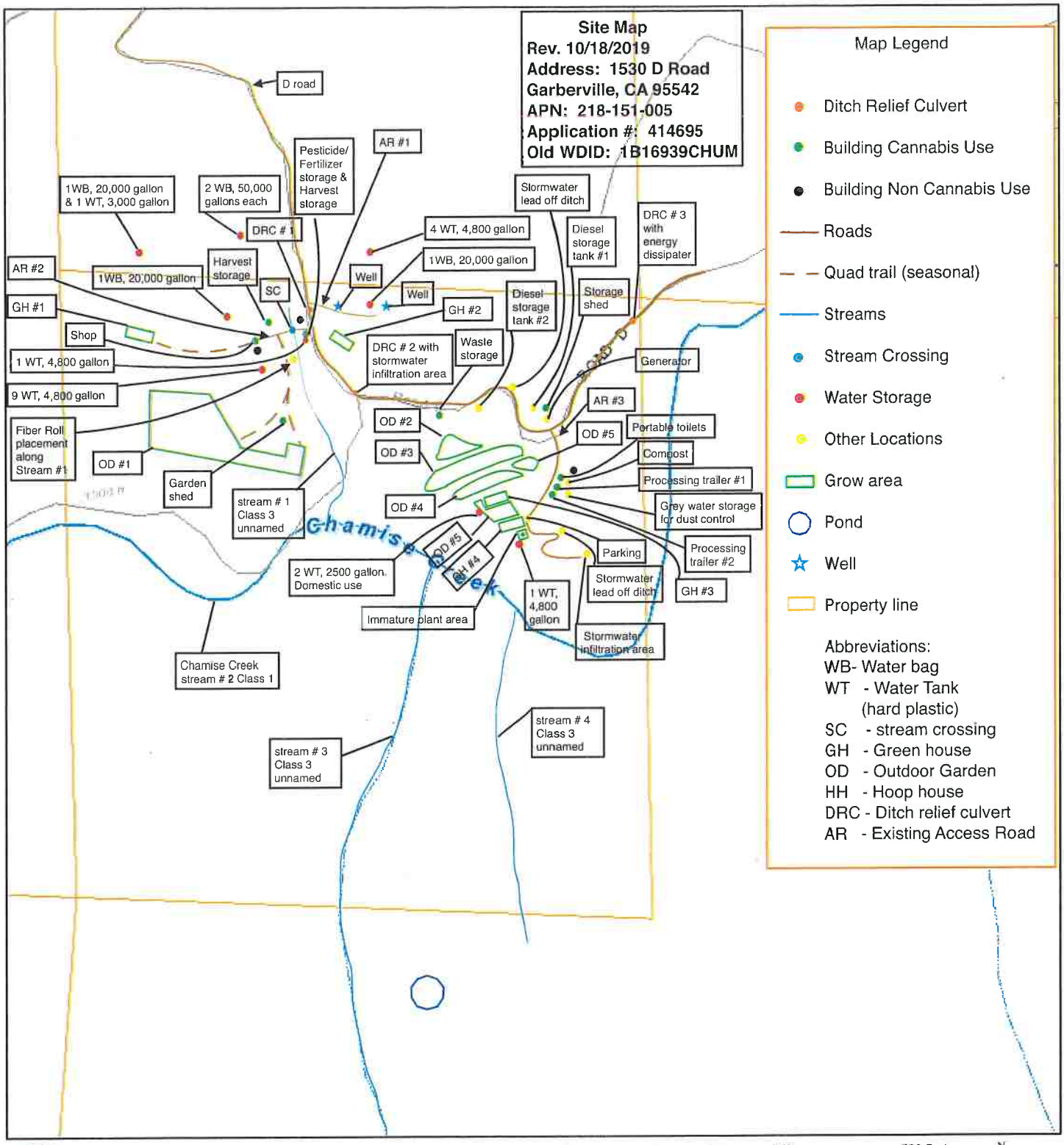
---. (1934). *The Fish and Wildlife Coordination Act (16 USC Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995).* Washington, D.C.

---. (1973). *Endangered Species Act. 16 USC 1532, 16 U.S.C. 1536, 50 CFR 17.3.* 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 for Threatened and Endangered Species. Accessed July 2019 at: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77.

Site Plan 1



ArcGIS Web Map

Humboldt County Planning and Building Department

0 180 360 720 Feet

0 0.0325 0.065 0.13 Miles

RF= 1:4,514 1 in = 376 ft

Printed: October 1, 2019 Web AppBuilder 2.0 for ArcGIS

Photos 2

Photo 1. Spring box location within Class II drainage, photo taken May 21.

Photo 2. Off-channel pond with pump and water line to project area, photo taken July 2.

Photo 3. Class I Chamise Creek photo taken May 21.

Photo 4. Foothill yellow-legged frog in Class II stream near culvert, photo taken May 21.

Photo 5. Class II stream containing spring box, photo taken July 2.

Photo 6. California oat grass habitat observation at south end of pond, photo taken July 2.

Species Lists

3

Table 1
Regionally-Occuring Special-Status Plan Species Scoping List CNDDB, CNPS, IPaC
Finley – Harris, CA May 2019
Jewett Rock and Surrounding 7.5-min. Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Arabis mcdonaldiana	McDonald's rockcress	Brassicaceae	E	E	G3	S3	1B.1	May-Jul	Lower montane coniferous forest, upper montane coniferous forest.	serpentinite	Low
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	Ericaceae	None	None	G5T3	S3	1B.3	(Jan) March-May (July)	Chaparral, cismontane woodland, lower montane coniferous forest.	volcanic	Low
Arctostaphylos stanfordiana ssp. raichei	Raiche's manzanita	Ericaceae	None	None	G3T2	S2	1B.1	Feb-April	Chaparral, lower montane coniferous forest (openings)	rocky, often serpentinite	Low
Astragalus rattanii var. rattanii	Rattan's milk vetch	Fabaceae	None	None	G4T4	S4	4.3	April-Jul	Chaparral, cismontane woodland, lower montane coniferous forest.	gravelly streambanks	Moderate
Brasenia schreberi	watershield	Cabombaceae	None	None	G5	S3	2B.3	June-Sept	Freshwater marshes and swamps.	Aquatic from water bodies both natural and artificial in Calif. 30-2,200 m.	Low
Calycadenia micrantha	small flowered calycadenia	Asteraceae	None	None	G2	S2	1B.2	June-Sept	Chaparral, meadows, seeps (volcanic), valley and foothill grassland	Roadsides, rocky, talus, scree, sometimes serpentinite, sparsely vegetated areas	Low
Calystegia atriplicifolia ssp. buttensis	Butte County morning-glory	Convolvulaceae	None	None	G5T3	S3	4.2	May-July	Chaparral, lower montane coniferous forest, valley and foothill grassland.	Rocky, sometimes roadsides	Low
Ceanothus foliosus var. vineatus	Geyer's sedge	Cyperaceae	None	None	G3T1	S1	1B.1	March-May	Chaparral	Sandy, acidic soil in chaparral. 45-305 m.	Low

Table 1
Regionally-Occuring Special-Status Plan Species Scoping List CNDDB, CNPS, IPaC
Finley – Harris, CA May 2019
Jewett Rock and Surrounding 7.5-min. Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
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
Cypripedium californicum	California lady's-slipper	Orchidaceae	None	None	G4	S4	4.2	Apr-Aug (Sep)	Bogs and fens, Lower montane coniferous forest	seeps and streambanks, usually serpentinite	Low
Cypripedium fasciculatum	clustered lady's-slipper	Orchidaceae	None	None	G4	S4	4.2	March-Aug	Lower montane & north coast coniferous forests.	Seeps, streambanks, serpentinite	Low
Cypripedium montanum	mountain lady's-slipper	Orchidaceae	None	None	G4	S4	4.2	Mar-Aug	broadleaved upland forest, cismontane woodland, Lower montane & no.coast coniferous forest	185 – 2,225 m	Moderate
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
Erigeron biolettii	streamside daisy	Asteraceae	None	None	G3?	S3?	3	June-Oct.	Broadleaved upland forest, cismontane woodland, north coast coniferous forest	Dry slopes, rocks, ledges along rivers; mesic sites. 30-1,100 m.	Low
Erigeron maniopotamicus	Mad River fleabane daisy	Asteraceae	None	None	G2?	S2?	1B.2	May-Aug	Lower montane coniferous forests, meadows, seeps	open, disturbed areas, road cuts; rocky	Low
Erigeron robustior	robust daisy	Asteraceae	None	None	G3	S3	4.3	June-July	Lower montane coniferous forest, meadows and seeps	In glades, meadows, sometimes serpentine substrates. 200-610 m.	Low
Eriogonum kelloggii	Kellogg's buckwheat	Polygonaceae	None	E	G2	S2	1B.2	(May) June-Aug	Lower montane coniferous forest (rocky, serpentinite)		Low

Table 1
Regionally-Occuring Special-Status Plan Species Scoping List CNDDB, CNPS, IPaC
Finley – Harris, CA May 2019
Jewett Rock and Surrounding 7.5-min. Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Erythronium citrinum var. citrinum	lemon-colored fawn lily	Liliaceae	None	None	G4T3T4	S3	4.3	Mar-May	Chaparral, lower montane coniferous forest	usually serpentinite	Low
Erythronium oregonum	giant fawn lily	Liliaceae	None	None	G4G5	S2	2B.2	Mar-Jun (Jul)	Cismontane woodland, meadows and seeps	sometimes serpentinite, rocky, openings	Moderate
Erythronium revolutum	coast fawn lily	Liliaceae	None	None	G4G5	S3	2B.2	Mar-Jul (Aug)	Bogs, fens, broad-leaved upland & no. coast coniferous frst.	Mesic, streambanks	Moderate
Frangula purshiana ssp. ultramafica	Caribou coffeeberry	Rhamnaceae	None	None	G4T2T3	S2S3	1B.2	May-July	Lower montane & upper montane coniferous forest, chaparral, meadows and seeps.	On serpentine. 725-1,830 m.	Low
Fritillaria purdyi	Purdy's fritillary	Liliaceae	None	None	G4	S4	4.3	Mar-Jun (Jul)	Chaparral, cismontane woodland, lower montane coniferous forest.	Usually serpentinite	Low
Gentiana setigera	Mendocino gentian	Gentianaceae	None	None	G2	S2	1B.2	(April-July) Aug-Sept	Lower montane coniferous forests, meadows, seeps	Mesic	Low
Hemizonia congesta ssp. tracyi	Tracy's tarplant	Asteraceae	None	None	G5T4	S4	4.3	May-Oct	Coastal prairie, lower montane & north coast coniferous forest	openings, sometimes serpentinite	Moderate
Howellia aquatilis	water howellia	Campanulaceae	T	None	G3	S2	2B.2	June	Marshes and swamps.		Low
Leptosiphon latisectus	broad-lobed leptosiphon	Polemoniaceae	None	None	G4	S4	4.3	Apr-June	Broadleaved upland forest, cismontane woodland.	170-1,500 m.	Low
Leptosiphon rattanii	Rattan's leptosiphon	Polemoniaceae	None	None	G4	S4	4.3	May-July	Cismontane woodland, lower montane coniferous forest.	Rocky or gravelly soils. 1,700-2,000 m.	Moderate

Table 1
Regionally-Occuring Special-Status Plan Species Scoping List CNDDB, CNPS, IPaC
Finley – Harris, CA May 2019
Jewett Rock and Surrounding 7.5-min. Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
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	Moderate
Lomatium engelmannii	Engelmann's lomatium	Apiaceae	None	None	G4	S3	4.3	May-August	Chaparral, lower montane coniferous forests, upper montane coniferous forest	Serpentinite	Low
Micranthes marshallii	Marshall's saxifrage	Saxifragaceae	None	None	G5	S3	4.3	Mar-Aug	Riparian forest	rocky streambanks	Low
Montia howellii	Howell's montia	Montiaceae	None	None	G3G4	S2	2B.2	(Feb)Mar-May	Meadows and seeps, north coast coniferous forest, Vernal pools	vernally mesic, sometimes roadsides	Moderate
Piperia candida	white-flowered rein orchid	Orchidaceae	None	None	G3	S3	1B.2	(Mar)May-Sep	Broadleaved upland forest, lower montane coniferous forest, north coast coniferous forest	sometimes serpentinite	Moderate
Sanicula tracyi	Tracy's sanicle	Apiaceae	None	None	G4	S4	4.2	Apr-Jul	Cismontane woodland, lower & upper montane coniferous forest	openings	Moderate
Sedum laxum ssp. eastwoodiae	Red Mountain stonecrop	Crassulaceae	None	None	G5T2	S2	1B.2	May-Jul	Lower montane coniferous forest	serpentinite	Low
Silene campanulata ssp. campanulata	Red Mountain catchfly	Caryophyllaceae	None	E	G5T3Q	S3	4.2	Apr-Jul	Chaparral, lower montane coniferous forest	usually serpentinite	Low
Tracyina rostrata	beaked tracyina	Asteraceae	None	None	G2	S2	1B.2	May-June	Chaparral, cismontane woodland, valley and foothill grassland.		Moderate

Table 1
Regionally-Occuring Special-Status Plan Species Scoping List CNDDB, CNPS, IPaC
Finley – Harris, CA May 2019
Jewett Rock and Surrounding 7.5-min. Quadrangles

Scientific Name	Common Name	Family	FedList	CalList	GRank	SRank	RPlant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
Usnea longissima	Methuselah's beard lichen	Parmeliaceae	None	None	G4	S4	4.2	n/a	Broadleaved upland forest, North Coast coniferous forest	On tree branches; usually on old-growth hardwoods and conifers	Low
Viburnum ellipticum	oval leaved viburnum	Adoxaceae	None	None	G4G5	S3?	2B.3	May-June	Chaparral, cismontane woodland, lower montane coniferous forest		Moderate

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):

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

2. 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, & IPaC
Finley – Harris, CA May 2019
Jewett Rock and surrounding USGS 7.5-min. Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global Rank	State Rank	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.	Moderate
Rana boylii	Foothill yellow-legged frog	None	CT	S/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.	High/ **Present**
				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 floodplains; also, live oaks.	High
Accipiter gentilis	northern goshawk	None	None	S/SSC	G5	S3	Within, and in vicinity of, coniferous forest. Uses old nests, and maintains alternate sites. Usually nests on north slopes, near water. Red fir, lodgepole pine, Jeffrey pine, and aspens are typical nest trees.	High
Aquila chrysaetos	golden eagle	None	None	FP/S	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.	High
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

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & IPaC
Finley – Harris, CA May 2019
Jewett Rock and surrounding USGS 7.5-min. Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global Rank	State Rank	Habitat	Potential of Occurrence
Coccyzus americanus	yellow-billed cuckoo	T	E	Bcc, S	G5T2T3	S1	Use wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.	None
Haliaeetus leucocephalus	Bald Eagle	D	E	S	G5	S3	Typically inhabit forested areas adjacent to large bodies of water. Wintering birds can be found in dry, open uplands with open water. Primarily eat fish and build large stick nests near the top of a large, tall tree.	Moderate
Strix occidentalis caurina	Northern spotted owl	T	T	S, SSC	G3T3	S2S3	Generally inhabit older forested areas that contain multi-layered, multi-species, closed canopy structures 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								
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 County, California. State listing refers to populations between the Oregon border and Punta Gorda, California.	Low
Oncorhynchus mykiss irideus pop. 1	steelhead - Klamath Mountains Province DPS	None	None	SSC	G5T3Q	S2	Aquatic, flowing waters in Northern California and Southern 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.	Moderate

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & IPaC
Finley – Harris, CA May 2019
Jewett Rock and surrounding USGS 7.5-min. Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global Rank	State Rank	Habitat	Potential of Occurrence
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.	Moderate
Insects								
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								
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 occasionaly take needles of grand fir, hemlock or spruce.	Low
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
Pekania pennanti	fisher - West Coast DPS	None	T	S/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.	Moderate
Mollusks								
Anodonta oregonensis	Oregon floater	None	None	None	G5Q	S2?	Prefers low gradient and low elevation rivers, lakes and reservoirs, and often shares habitat with the California floater. The coho salmon serves as a host for immature Oregon floaters.	Low
Margaritifera falcata	western pearlshell	None	None	None	G4G5	S1S2	Aquatic.Prefers lower velocity waters.	Moderate

Table 2
Regionally-Occurring Special-status Animal Species Scoping List CNDDB, Rarefind, & IPaC
Finley – Harris, CA May 2019
Jewett Rock and surrounding USGS 7.5-min. Quadrangles

Scientific Name	Common Name	Federal Status	State Status	Other Status	Global Rank	State Rank	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.	High/ Present

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 5/21/2019 and 7/2/2019 Finley, New Harris, CA			
Scientific Name	**Common Name**	**Family**	**Native?**
Trees			
Aesculus californica	California buckeye	Sapindaceae	Y[1]
Arbutus menziesii	madrone	Ericaceae	Y
Notholithocarpus densiflorus	tanoak	Fagaceae	Y
Pseudotsuga menziesii	Douglas fir	Pinaceae	Y
Acer macrophyllum	big leaf maple	Sapindaceae	Y
Umbellularia californica	California bay tree	Lauraceae	Y
Alnus rubra	red alder	Betulaceae	Y
Quercus wislizeni	interior live oak	Fagaceae	Y
Quercus garryana var. garryana	Oregon white oak	Fagaceae	Y
Shrubs			
Baccharis pilularis ssp. consanguinea	coyote brush	Asteraceae	Y
Ceanothus thyrsiflorus	blue blossom	Rhamnaceae	Y
Holodiscus discolor	ocean spray	Rosaceae	Y
Berberis nervosa	Oregon grape	Berberidaceae	Y
Cytisus scoparius	Scotch broom	Fabaceae	N[2]
Rubus leucodermis	black capped raspberry	Rosaceae	Y
Rosa gymnocarpa	wood rose	Rosaceae	Y
Rubus armeniacus	Himalayan blackberry	Rosaceae	N
Rubus ursinus	California blackberry	Rosaceae	Y
Salix hookeriana	Hooker's willow	Salicaceae	Y
Salix lasiolepis	arroyo willow	Salicaceae	Y
Vaccinium ovatum	evergreen huckleberry	Ericaceae	Y
Rubus parviflorus	thimbleberry	Rosaceae	Y
Ferns and Allies			
Athyrium filix-femina	lady fern	Woodsiaceae	Y
Blechnum spicant	deer fern	Blechnaceae	Y
Equisetum arvense	horsetail	Equisetaceae	Y
Pteridium aquilinum	bracken fern	Dennstaedtiaceae	Y
Polystichum munitum	sword fern	Dryopteridaceae	Y
Sedges and Rushes			
Carex densa	dense flowered sedge	Cyperaceae	Y
Carex leptopoda	slender footed sedge	Cyperaceae	Y
Carex unilateralis	lateral sedge	Cyperaceae	Y
Cyperus eragrostis	three cornered sedge	Cyperaceae	Y
Isolepis cernua	low bulrush	Cyperaceae	Y
Juncus bufonius	toad rush	Juncaceae	Y
Juncus occidentalis	slender juncus	Juncaceae	Y
Juncus patens	spreading rush	Juncaceae	Y
Luzula comosa	common woodrush	Juncaceae	Y
Grasses			
Agrostis avenacea	pacific bent grass	Poaceae	N
Aira caryophyllea	silver hairgrass	Poaceae	N
Anthoxanthum odoratum	sweet vernal grass	Poaceae	N
Avena barbata	slender wild oat	Poaceae	N
Briza maxima	large quaking grass	Poaceae	N
Bromus carinatus	California brome	Poaceae	Y

Table 3 Botanical Species Observed 5/21/2019 and 7/2/2019 Finley, New Harris, CA			
Scientific Name	**Common Name**	**Family**	**Native?**
Bromus hordeaceus	soft chess	Poaceae	N
Dactylis glomerata	orchard grass	Poaceae	N
Danthonia californica	California oat grass	Poaceae	Y
Deschampsia danthonoides	annual hairgrass	Poaceae	Y
Elymus glaucus ssp. glaucus	blue wild rye	Poaceae	Y
Festuca arundinacea	tall fescue	Poaceae	N
Festuca bromoides	brome fescue	Poaceae	N
Festuca idahoensis	Idaho fescue	Poaceae	Y
Holcus lanatus	velvet grass	Poaceae	N
Hordeum murinum	foxtail barley	Poaceae	N
Melica subulata	Alaska melic	Poaceae	Y
Polypogon monspeliensis	annual beard grass	Poaceae	N
Trisetum canescens	nodding trisetum	Poaceae	Y
Herbs			
Acmispon americanus	American bird's foot trefoil	Fabaceae	Y
Agrostemma githago	common corncockle	Caryophyllaceae	N
Anthriscus caucalis	bur chervil	Apiaceae	N
Aquilegia formosa	western columbine	Ranunculaceae	Y
Artemisia douglasiana	California mugwort	Asteraceae	Y
Bellis perenne	English daisy	Asteraceae	N
Calochortus amabilis	golden fairy lantern	Liliaceae	Y
Cardamine oligosperma	bittercress	Brassicaceae	Y
Carduus pycnocephalus	Italian thistle	Asteraceae	N
Carduus pycnocephalus ssp. pycnocephalus	Italian thistle	Asteraceae	N
Cerastium glomeratum	mouse-ear chickweed	Caryophyllaceae	N
Cirsium vulgare	bull thistle	Asteraceae	N
Clarkia amoena ssp. amoena	farewell to spring	Onagraceae	Y
Clarkia rhomboidea	diamond clarkia	Onagraceae	Y
Claytonia perfoliata	miner's lettuce	Montiaceae	Y
Collomia heterophylla	varied leaved collomia	Polemoniaceae	Y
Cryptantha affinis	common cryptantha	Boraginaceae	Y
Daucus carota	Queen Anne's lace	Apiaceae	N
Dichelostemma ida-maia	firecracker flower	Themidaceae	Y
Epilobium densiflorum	willow herb	Onagraceae	Y
Erodium botrys	big heron bill	Geraniaceae	N
Eurhyrichium oreganum	Oregon eurhynchium moss	Brachytheciaceae	Y
Galium aparine	cleaver plant	Rubiaceae	Y
Galium parisiense	wall bedstraw	Rubiaceae	N
Galium trifidum	trifid bedstraw	Rubiaceae	Y
Geranium dissectum	cutleaf geranium	Geraniaceae	N
Heracleum maximum	common cowparsnip	Apiaceae	Y
Hydrophyllum tenuipes	pacific water leaf	Boraginaceae	Y
Hypochaeris glabra	smooth cats ear	Asteraceae	N
Hypochaeris radicata	hairy cats ear	Asteraceae	N
Leucanthemum vulgare	oxeye daisy	Asteraceae	N
Limnanthes douglasii ssp. nivea	snow white meadowfoam	Limnanthaceae	Y
Linum bienne	flax	Linaceae	N

Table 3
Botanical Species Observed 5/21/2019 and 7/2/2019
Finley, New Harris, CA

Scientific Name	Common Name	Family	Native?
Lupinus bicolor	annual lupine	Fabaceae	Y
Lysimachia arvensis	scarlet pimpernel	Myrsinaceae	N
Lysimachia latifolia	pacific star flower	Myrsinaceae	Y
Madia exigua	small tarweed	Asteraceae	Y
Malva parviflora	cheeseweed mallow	Malvaceae	N
Matricaria discoidea	pineapple weed	Asteraceae	Y
Medicago polymorpha	bur clover	Fabaceae	N
Mentha pulegium	pennyroyal	Lamiaceae	N
Myosotis discolor	forget me not	Boraginanceae	N
Osmorhiza berteroi	mountain sweet cicely	Apiaceae	Y
Petasites frigidus var. palmatus	western coltsfoot	Asteraceae	Y
Plantago lanceolata	English plantain	Plantaginaceae	N
Plantago major	broadleaf plantain	Plantaginaceae	N
Raphanus sativus	jointed charlock	Brassicaceae	N
Ranunculus californicus	California buttercup	Ranunculaceae	Y
Ranunculus repens	creeping buttercup	Ranunculaceae	N
Ribes spp.	gooseberry	Grossulariaceae	Y
Rumex acetocella	sheep sorrel	Polygonaceae	N
Rumex crispus	curly dock	Polygonaceae	N
Sanicula crassicaulis	pacific sanicle	Apiaceae	Y
Sagina apetala	dwarf pearlwort	Caryophyllaceae	N
Saxifraga mertensiana	wood saxifrage	Saxifragaceae	Y
Senecio minimus	coast burnweed	Asteraceae	N
Senecio sylvaticus	woodland groundsel	Asteraceae	N
Sherardia arvensis	field madder	Rubiaceae	N
Silene laciniata ssp. californica	California Indian pink	Caryophyllaceae	Y
Sonchus oleraceus	common sowthistle	Asteraceae	N
Stachys ajugoides	bugle hedge nettle	Lamiaceae	Y
Stellaria media	chickweed	Caryophyllaceae	N
Taraxacum officinale	dandelion	Asteraceae	N
Tillima grandiflorus	fringe cups	Saxifragaceae	Y
Torilis arvensis	hedge parsley	Apiaceae	N
Trifolium dubium	little hop clover	Fabaceae	Y
Trifolium fucatum	bull clover	Fabaceae	Y
Trifolium repens	white clover	Fabaceae	N
Trifolium subterranean	subterranean clover	Fabaceae	N
Trifolium subterraneum	subterranean clover	Fabaceae	N
Trifolium variegatum var. major	large variegated clover	Fabaceae	Y
Urtica dioica	hedge nettle	Urticaceae	Y
Vancouveria hexandra	inside out flower	Berberidaceae	Y
Vicia ludoviciana ssp. ludoviciana	Louisiana vetch	Fabaceae	Y
Vicia sativa	spring vetch	Fabaceae	N
Whipplea modesta	modesty	Hydrangeaceae	Y
Vines			
Lonicera hispidula	pink honeysuckle	Caprifoliaceae	Y
Toxicodendron diversilobum	poison oak	Anacardiaceae	Y
133 Species		**61% Native**	

1. Y: Yes 2. N: No

Table 4 Animals Observed 5/21/19 & 7/26/19 New Harris, CA				
Scientific Name	**Common Name**	**Family**	**Nesting Habit**	**Listed?**
Amphibians				
Rana boylii	Foothill yellow-legged frog	Ranidae	Males and females pair up in streams and rivers 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[1]
Birds				
Vireo cassinii	cassin's vireo	Vireonidae	Open cup suspended by rim from a fork of a branch of a tree or sapling.	NL[2]
Setophaga occidentalis	hermit warbler	Parulidae	Open cup of fine twigs, rootlets, dry moss, bark, pine needles, and spider silk placed on top of a conifer branch.	NL
Pheucticus melanocephalus	black-headed grosbeak	Cardinalidae	Nests are typically placed in the outer branches of a small deciduous tree or bush near a stream and made of slim twigs, stems, rootlets, and pine needles with no mud or cementing	NL
Passerina amoena	Lazuli buntung	Cardinalidae	The female builds the nest with grasses, strips of bark, and leaves which she weaves together with spiderweb or silk from tent caterpillars to form a cup-shaped nest in a shrub.	NL
Icteria virens	yellow-breasted chat	Icteriidae	The female builds a bulky cup of grasses, leaves, bark strips, and weed stems lined with fine grasses, wiry plant stems, pine needles, and sometimes roots and hair in low, dense vegetation.	NL
Aphelocoma californica	California scrub-jay	Corvidae	Nests are made of a basket of twigs lined with rootlets, fine strands of plant fibers, and livestock hair placed fairly low in a tree or shrub.	NL
Cyanocitta stelleri	Steller's jay	Corvidae	Put their nests on horizontal branches close to the trunk and often near the top of the tree. The nest is a bulky cup of stems, leaves, moss, and sticks held together with mud.	NL
Pipilo maculatus	spotted towhee	Passerellidae	Place their nests either on the ground or near it with a framework of dry leaves, stems, and bark strips.	NL
Cathartes aura	turkey vulture	Cathartidae	Nest in rock crevices, caves, ledges, thickets, mammal burrows and hollow logs, fallen trees, abandoned hawk or heron nests, and abandoned buildings	NL
Corvus corax	common raven	Corvidae	Build their nests on cliffs, in trees, and on structures such as power-line towers, telephone poles, billboards, and bridges	NL
Poecile rufescens	chestnut-backed chickadee	Paridae	Nest sites can be holes in rotted trees, stumps, and posts soft enough for the chickadees to excavate themselves, or old woodpecker holes	NL

Table 4 Animals Observed 5/21/19 & 7/26/19 New Harris, CA				
Scientific Name	**Common Name**	**Family**	**Nesting Habit**	**Listed?**
Junco hyemalis	dark-eyed junco	Passerellidae	Nests are typically in a depression or niche on sloping ground, rock face, or amid the tangled roots of an upturned tree.	NL
Vireo gilvus	warbling vireo	Vireonidae	Nest in the outer portions of deciduous trees and tall shrubs from 3 to 140 feet above the ground.	NL
Melanerpes formicivorus	acorn woodpecker	Picidae	Excavate multiple cavities, any one of which may be used for nesting (the rest are used for nocturnal roosting). They dig cavities in dead or living limbs, large or small, either in the granary (storage) tree or any other large tree. The woodpeckers reuse nest holes for many years.	NL
Sayornis nigricans	black phoebe	Tyrannidae	Originally nested in places like sheltered rock faces, streamside boulders, and tree hollows but have adjusted well to human-made structures such as building eaves, irrigation culverts, and abandoned wells.	NL
Callipepla californica	California quail	Odontophoridae	Female typically hide their nests on the ground amid grasses or at the bases of shrubs or trees. Occasionally places nest up to 10 feet off the ground	NL
Empidonax difficilis	pacific-slope flycatcher	Tyrannidae	Nest site is sometimes in the fork of a small tree, in a cleft of a vertical streambank, on a stump, among the upturned roots of a fallen tree,	NL
Insects				
~	dragonfly spp.	Odonata	Eggs are deposited in water, nymphs live submerged for several years before crawling out and emerging as an adult from the nymph carapace.	N/A
Mammals				
Sciurus griseus	Gray Squirrel	Sciuridae	Nests are in hollow logs or placed on a branch near the trunk made of twigs and lined with grass or moss.	NL
Thomomys bottae	Botta's Pocket Gopher	Geomyidae	(signs found - mounds & excavated tunnel entrances)	NL
CT = Candidate Threatened		NL = Not Listed		

Eureka, CA | Arcata, CA | Redding, CA | Willits, CA | Coos Bay, OR | Klamath Falls, OR

www.shn-engr.com