

3.4 BIOLOGICAL RESOURCES

This section describes the environmental and regulatory setting for biological resources. It also describes existing conditions and potential impacts relative to biological resources that would result from implementation of the proposed project, and mitigation for potentially significant impacts, where feasible.

The analysis in this section is based on the Biological Resources Report prepared by SHN Engineers and Geologists (SHN) (SHN 2016), Aquatic Resources Delineation prepared by Stantec (Stantec 2019), Survey Results Memorandum for the Water Tank Site (Stantec 2020) and a Mitigation, Monitoring, and Reporting Plan prepared by SHN (SHN 2018) that were prepared for the proposed project. These documents are provided in Appendix C1. Results incorporated into these documents are based on biological surveys conducted within the study area for the proposed project. The study area includes the project area and all project related components.

3.4.1 Environmental Setting

Regional Setting

The proposed project is located in the unincorporated area of Humboldt County, California (Township 5 North, Range 1 West, in the Northwest quarter of Section 36) and is within the U.S. Geological Survey (USGS) 7.5-minute Eureka topographic quadrangle. The proposed project would be located on seven parcels (APNs include: 017-032-003, 017-071-004, 017-071-009, 017-072-002, 017-072-003, 017-073-007, and 017-073-009). These parcels total 81 acres and are currently undeveloped.

Project Area

The topography at the proposed project sites includes both flat and steeply sloped areas, with an approximate maximum elevation of 200 feet amsl. The study area is in the Northern California Coastal Hydrologic Region, which extends from southern Oregon to the northern San Francisco Bay, and encompasses 16,744,264 acres (USGS 2019). The entire study area is within the Humboldt Bay-Frontal Pacific Ocean watershed (hydrologic unit code 180101020602) and the Eureka Plain hydrologic unit, which covers 141,191 acres (USGS 2019). The study area includes two unnamed drainages and several small wetlands, as well as a small portion of Ryan Creek located just north of the study area. From a hydrologic perspective, the study area drains north, with two unnamed tributaries feeding Ryan Creek and ultimately draining to Humboldt Bay. Hydrologic sources in the study area include primarily precipitation and groundwater.

The study area is located within the Coast Ranges Geomorphic Province, which is mainly composed of the Franciscan Complex, with schists, sand, and other alluvial deposits associated with the coast. Three soil map units within the study area have been mapped by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) (NRCS 2019a), shown in Table 3.4-1.



Table 3.4-1: Soil Map Units within the Study Area

Map Unit Name	Map Unit Symbol	Hydric Rating Status
Weott, 0 to 2 percent slopes	110	Y
Hookton-Tablebluff complex, 2 to 9 percent slopes	230	N
Lepoil-Espa-Candymountain complex, 15 to 50 percent slopes	258	N

Source: NRCS 2019a

The habitats adjacent to the project area include additional third-growth redwood forest, red alder, and willow-dominated seeps and drainages, suburban development, and, at the base of the slope, Ryan Creek and associated wetlands. The adjacent third-growth redwood forest is very similar to that which occurs within the area of the proposed project that was surveyed. Until recently, the adjacent redwood forest was managed by the Green Diamond Resource Company for timber, and has recently been turned into the McKay Community Forest, which would maintain sustainable harvest across the area, while managing the forest for the enhancement of forest habitat and access for recreation.

3.4.2 Regulatory Setting

Regulatory authority over biological resources is shared by federal, state, and local authorities under a variety of legislative acts. The following section summarizes the federal, state, and local regulations for special status species; jurisdiction over waters of the U.S. and State of California; and sensitive biological resources. This section provides a listing and overview of these federal and state laws; only select regulations would be applicable to this project.

Federal

Clean Water Act Sections 404 and 401

Under Section 404 (33 United States Code [U.S.C.] 1344) of the Clean Water Act (CWA), as amended, the 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 USACE. A permit from 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).

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"(USACE 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 CFR Part 328. They include traditional navigable waters; relatively permanent, non-navigable tributaries of traditional navigable waters; and certain 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.

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

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification from the state in which the discharge originates or would originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate. The discharge must 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 SWRCB and its nine RWQCB's. The proposed project is within the jurisdiction of the North Coast RWQCB.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661-667e, March 10, 1994, as amended 1946, 1958, 1978, and 1995) requires that whenever waters or channel of a stream or other body of water are proposed or authorized to be modified by a public or private agency under a federal license or permit, the federal agency must first consult with USFWS and/or the NMFS, and with the head of the agency exercising administration over the wildlife resources of the state where construction would occur (in this case, the CDFW). The Fish and Wildlife Coordination Act is intended to conserve 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 the ESA. Such action may prompt consultation with CDFW, which would review the proposed project pursuant to CESA and issue a consistency letter with USFWS and/or NMFS, if required.

Federal Endangered Species Act

The U.S. Congress passed the ESA in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the National Environmental Policy Act 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 ESA.



The ESA prohibits the "Take" of endangered or threatened wildlife species. A Take is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 U.S.C. 1531; 50 CFR 17.3). 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 ESA Section 7 consultation or ESA Section 10 consultation. Plants are legally protected under the ESA 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 ESA, 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 would have a potentially significant impact on such a species. In addition, the agency is required to determine whether the proposed project is likely to jeopardize the continued existence of any species proposed to be listed under the ESA or result in the destruction or adverse modification of critical habitat designated or proposed to be designated for such species (16 U.S.C. 1536[3], [4]). Project-related impacts to species on the ESA endangered or threatened list would be considered significant and would require mitigation.

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.

State

Porter-Cologne Water Quality 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 Act (Porter-Cologne Act). Waters of the State are defined by the Porter-Cologne 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 Act. Projects that require a 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.

California Endangered Species Act

The state enacted the CESA in 1984. The CESA is similar to the ESA but pertains to state-listed endangered and threatened species. Under the CESA, CDFW has the responsibility for maintaining a list of threatened and endangered species designated under state law (California Fish and Game Code [CFGF] 2070). Section 2080 of the CFGF prohibits Take of any species that the commission determines to be an endangered or threatened species. Take is defined in Section 86 of the CFGF 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 ESA in that the state regulations include 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 proposed project area and determine whether the proposed project would 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," (SSC) which is a level below threatened or endangered status) would be considered significant and would require mitigation.

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 California Native Plant Society (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 2020). 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 CFGF, 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 CFGF. 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 ESA, 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 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 California Natural Diversity Database [CNDDDB] and VegCAMP programs) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under CEQA (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 would 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."

California Fish and Wildlife Code Section 1600

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

California Fish and Wildlife 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 house 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.

Fully Protected Species and Species of Special Concern

The classification of "fully protected" was CDFW's initial effort to identify and provide additional protection to those animals that were rare or faced 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 ESA. CFGC sections (fish at Sec. 5515, amphibian and reptiles at Sec. 5050, birds at Sec. 3511, and mammals at Sec. 4700) dealing with "fully protected" species states that these species "... may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," 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 CDFW to authorize Take resulting from recovery activities for state-listed species.

SSC are broadly defined as animals not listed under the CESA, but that are nonetheless of concern to 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 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.



Native Plant Protection Act of 1973

The Native Plant Protection Act of 1973 (CFGF Sections 1900-1913) 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 Native Plant Protection Act 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 2016).

Natural Community Conservation Planning Act

The primary objective of the Natural Community Conservation Planning (NCCP) Act of 1991 is to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP Act is an effort by the state and numerous private and public partners that is broader in its orientation and objectives than the CESA and ESA (refer to discussions above). 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.

Local

Humboldt County General Plan

The County General Plan, adopted October 23, 2017, contains several policies that directly pertain to biological resources, including the following:

Goal BR-G1. Threatened and Endangered Species. Sufficient recovery of threatened and endangered species to support de-listing.

Goal BR-G2. Sensitive and Critical Habitat. A mapped inventory of sensitive and critical habitat where biological resource protection policies apply.

Goal BR-G3. Benefits of Biological Resources. Fish and wildlife habitats protected on a sustainable basis to generate long-term public, economic, and environmental benefits.

- **Policy BR-P1. Compatible Land Uses.** Area containing sensitive habitats shall be planned and zoned for uses compatible with the long-term sustainability of the habitat. Discretionary land uses and building activity in proximity to sensitive habitats shall be conditioned or otherwise permitted to prevent significant degradation of sensitive habitat, to the extent feasible consistent with California Department of Fish and Wildlife guidelines or recovery strategies.
- **Policy BR-P4. Development within Stream Channels.** Development within stream channels shall be permitted when there is no lesser environmentally damaging feasible alternative, and where the best feasible mitigation measures have been provided to minimize adverse environmental effects. Development shall be limited to essential, non-disruptive projects as listed in Standard BR-S6 -Development within Stream Channels.
- **Policy BR-P5. Streamside Management Areas.** To protect sensitive fish and wildlife habitats and to minimize erosion, runoff, and interference with surface water flows, the County shall maintain Streamside Management Areas, along streams including intermittent streams that exhibit in-channel wetland characteristics and off-channel riparian vegetation.



- **Policy BR-P6. Development within Streamside Management Areas.** Development within Streamside Management Areas shall only be permitted where mitigation measures (Standards BR-S8 - Required Mitigation Measures, BR-S9 - Erosion Control, and BR-S10 - Development Standards for Wetlands) have been provided to minimize any adverse environmental effects, and shall be limited to uses as described in Standard BR-S7 - Development within Streamside Management Areas.
- **Policy BR-P7. Wetland Identification.** The presence of wetlands in the vicinity of a proposed project shall be determined during the review process for discretionary projects and for ministerial building and grading permit applications, when the proposed building development activity involves new construction or expansion of existing structures or grading activities. Wetland delineation by a qualified professional shall be required when wetland characterization and limits cannot be easily inventoried and identified by site inspection.
- **Policy BR-P11. Biological Resource Maps.** Biological resource maps shall be consulted during the ministerial and discretionary permit review process in order to identify habitat concerns and to guide mitigation for discretionary projects that will reduce biological resource impacts to below levels of significance, consistent with CEQA.
- **Policy BR-P12. Agency Review.** The County shall request the California Department of Fish and Wildlife, as well as other appropriate trustee agencies and organizations, to review plans for development within Sensitive Habitat, including Streamside Management Areas. The County shall request NOAA Fisheries or U.S. Fish and Wildlife Service to review plans for development within critical habitat if the project includes federal permits or federal funding. Recommended mitigation measures to reduce impacts below levels of significance shall be considered during project approval, consistent with CEQA.

Humboldt County Streamside Management Areas and Wetlands Ordinance

Riparian and wetland habitats receive protection under the County's Streamside Management Areas 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) requires 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. SMAs are identified as a 100-foot setback measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater on either side of perennial streams, and a 50-foot setback measured as the horizontal distance from the top of bank or edge of riparian drip-line, whichever is greater on either side of intermittent streams.

Routine maintenance activities are permitted under the SMAWO, if trees that are more than 12 inches in diameter are not cut, and 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, CDFW 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.



3.4.3 Methodology for Analysis

Field Surveys

Surveys were conducted on May 24 and 25, 2016, and July 26, 2016, for an assessment of the habitat, plant and animal species, and vegetation communities found within the proposed project area and the potential for the occurrence of any listed plant or animal species or associated habitat. The survey was floristic in nature, with an attempt to identify all species present, including possible SSC (CDFW 2009). The entire area of potential disturbance from the proposed project was surveyed, including the Arbutus Street right of way (ROW), the tributaries of Ryan Creek to be crossed by Redwood Street, the area around the baseball fields, and throughout the forested remainder of the property, with additional attention given to potential habitat of listed species. Additional surveys were conducted on September 17 and 18, 2019 to determine potential jurisdictional waters of the U.S. (WOTUS) and state (WOS) within the proposed project area. On March 5, 2020 a reconnaissance biological survey was conducted at the water storage tank site, which is an off-site location, separate from the proposed development area. This survey was performed to assess the site for potential special-status species and jurisdictional features.

Regions beyond the property line were not surveyed, as well as the area proposed as open space between the main proposed project off of Redwood Street and the few lots proposed off of Manzanita Avenue, as these areas would not be directly disturbed by the proposed project. In addition to surveying for target species, a list of all botanical and animal species encountered was compiled (SHN 2016). Plants were identified to the lowest taxonomic level possible to distinguish special status species from others. Botanical nomenclature follows The Jepson Manual, Vascular Plants of California (Baldwin et al., 2012) and subsequent taxonomic revisions made to the Jepson eflora (Jepson Flora Project 2015).

The purpose of the field surveys was to determine potential impacts of the proposed project to onsite biological resources and jurisdictional waters (including wetlands). Potential impacts to biological resources and habitats analyzed in this section include impacts from both direct and indirect effects of the proposed project.

Online Database Review

Database searches and literature reviews were conducted to determine which rare natural communities and special-status species have the potential to occur on the proposed project site. A more detailed description of these methods is provided in the proposed project's Biological Report, which is included in this EIR as Appendix C1 (SHN 2016).

Database queries of listed species and special habitats known from the area were performed during March 2020. The following references were reviewed:

- CNDDDB query for the *Eureka* and surrounding USGS 7.5-minute topographic quadrangles (*Tyee City, Arcata North, Arcata South, McWhinney Creek, Fields Landing, and Cannibal Island*) (CDFW 2020a);
- CNDDDB Rarefind Tool for the *Eureka* and surrounding USGS 7.5-minute topographic quadrangles (BIOS; CDFW, 2020b);



- Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020) query for a list of all plant species reported for the Eureka and surrounding USGS 7.5-minute topographic quadrangles;
- USFWS Listed/Proposed Threatened and Endangered Species for the Eureka and surrounding USGS 7.5-minute topographic quadrangles (Candidates Included; USFWS 2020);
- USFWS Information for Planning and Conservation (IPaC)

Additionally, USFWS's Critical Habitat Portal was queried for habitat designated as critical for species listed under the federal ESA. Ryan Creek is listed as critical habitat for the threatened Northern California Distinct Population Segment (DPS) for Steelhead (*Oncorhynchus mykiss*) and the California Coastal Evolutionarily Significant Unit (ESU) of Chinook salmon (*Oncorhynchus tshawytscha*).

Results

Biotic Communities and Alliances

Vegetation communities within the study area were described in a previously conducted biological survey (SHN 2016) and are listed below:

- Redwood forest
- Non-native grassland
- Drainage swales dominated by red alder (*Alnus rubra*), slough sedge (*Carex obnupta*) and,
- Blackberry patches
- Urban

Nomenclature for vegetation communities contained within aquatic resources follows the alliances and associations used in the Manual of California Vegetation (MCV), Second Edition and updated in the online edition (Sawyer et al. 2009, CNPS 2020). Several of the vegetation types within mapped aquatic resources are not described in the MCV. In these instances, a new vegetation alliance and/or association was described and named, following MCV convention.

Jurisdiction over sensitive biotic communities that are considered critical habitat for species listed as threatened or endangered by the federal government lies with the USFWS and NMFS under the National Oceanic and Atmospheric Administration (NOAA). The CDFW considers sensitive biotic communities to be those which are listed in the CNDDDB (e.g., native grasslands). Sensitive biotic communities are either designated by CDFW, considered by local experts to be communities of limited distribution, and/or considered to be WOTUS or WOS.

Vegetation Communities

Currently, habitat in the study area is characterized primarily by third-growth redwood forest. Sequoia sempervirens Forest Alliance consists of a forest canopy with greater than 50 percent relative cover provided by the Coast Redwood (*Sequoia sempervirens*) (SHN 2016). This forest type has a rarity ranking of G3 S3.2, meaning 10-50,000 acres of this community type within California and is considered threatened. The redwood forest habitat found across the study area is of low quality, reflecting the history



of disturbance and continued disturbance. The majority of the trees on the study area are young, estimated at between 25-35 years of age, and are densely spaced preventing much undergrowth over a large portion of the study area. The parcel has been logged a minimum of two times, which included the development of roads. Disturbance continues today with many ungraded paths crisscrossing the parcel (SHN 2016) and evidence of continued uncontrolled recreational use of the study area, including transient camps in places throughout the property. It is unknown when the area was logged, and how long it has been used as it is today.

Additional vegetation communities found on site include grassland, drainage swales dominated by red alder (*Alnus rubra*), and slough sedge (*Carex obnupta*), as well as Rubus alliances. Grassland was found on the perimeter of the baseball fields, within the Arbutus Street right-of-way and utility service right-of-way. The grassland vegetation community was characterized by non-native grass and shrub species, reflecting the disturbed nature of these areas and proximity to urban development with heavy non-native species cover. These areas are periodically mowed which prevents many rare, threatened, or endangered species from occurring within the study area. Grassland areas represented low quality listed species habitat for plants; however, they represent breaks in the forest canopy, and are used as grazing and foraging areas for many wildlife species as evidenced by deer and numerous bird species observed there during the 2016 surveys of the study area.

Drainage swales with red alder and slough sedge were observed along the break of slope primarily outside of the area of proposed development. While these areas represent unique habitat, the majority of these areas are becoming shaded by the expanding coast redwood canopy. The majority of these patches exist outside of the development area; however, those within the potential project area were scrutinized for additional plant species and were ultimately delineated for the McKay Ranch Subdivision in a separate report (Stantec 2019).

Many Rubus patches exist across the study area. These represent patches of Rubus (*parviflorus*, *spectabilis*, *ursinus*) Shrubland alliance within forest openings. The Rubus shrubland alliance has a rarity ranking of G4S3, meaning globally secure, but somewhat threatened/rare in the State of California. Rubus species observed within the thickets included California blackberry (*Rubus ursinus*), thimbleberry (*Rubus parviflorus*), salmonberry (*Rubus spectabilis*), and Himalayan blackberry (*Rubus armeniacus*). Due to the expanding canopy and intrusion of Himalayan blackberry, the rubus patches do not represent high quality examples of the Rubus (*parviflorus*, *spectabilis*, *ursinus*) Shrubland alliance, and most likely represent transient vegetation communities remaining from the last timber harvest that would be shaded by the expanding redwood canopy in the coming years. Currently the thicket areas represent high quality habitat for many bird species within the forest as an area for food, shelter, and protection from predators.

Vegetation within the study area is characterized by a mix of non-native weedy species and native redwood forest species. Due to the site's close proximity to the urban development of Eureka, the study area has a high percentage of non-native plant species. Of the 154 plant species observed within the study area, 43 percent of them were non-native species. While most of these species were not invasive, a number of them such as the Scotch broom (*Cytisus scoparius*), Spanish Heather (*Erica lusitanica*), Himalayan blackberry, and cotoneaster species were exhibiting invasiveness by covering large areas of land to the exclusion of most other plant species.



Wetlands and Other Waters of the United States

The aquatic resources field assessment was conducted on September 17 and 18, 2019 (Stantec 2019). The last appreciable rainfall prior to the start of the field assessment as recorded by the NRCS Climate Analysis for Wetlands Table Eureka 2.2 S weather station was 0.42 inch and occurred on September 16, 2019. On September 18, 2019, during the field assessment, 0.93 inch of rain was also recorded (NRCS 2019b). Plant species observed during field surveys were recorded using botanical nomenclature following *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012). Nomenclatural changes made after the publication date of the Jepson Manual follow the Jepson eFlora (Jepson Flora Project 2019).

A total of 1.053 acres of wetlands and other waters (drainages) potentially under the jurisdiction of RWQCB, USACE, and/or CDFW were mapped in the study area; this includes 0.101 acre (56 linear feet) of riparian canopy potentially under the jurisdiction of CDFW.

Wetlands

The wetlands identified in the study area consist of six different vegetation alliances (Table 3.4-2). The most abundant vegetation type by feature is western rush (*Juncus occidentalis*) marshes, which are present in two wetlands and cover 0.042 acre. The second most abundant vegetation type is hedge nettle (*Stachys ajugoides*) marshes, which are present in two wetlands and cover 0.027 acre. One Pacific willow thicket (*Salix lasiandra*) was identified beyond the southwestern portion of the study area covering 0.227 acre. The wetland indicator status for the dominant species in each vegetation/wetland type is provided below (Lichvar et al. 2016).

Table 3.4-2: Summary of Wetlands by Vegetation Community

Scientific Name	Common Name	Cowardin Code(s) ¹	Acres
Palustrine Emergent			
<i>Stachys ajugoides</i>	Hedge nettle marshes	PEM1b	0.027
<i>Juncus occidentalis</i>	Western rush marsh	PEM1b	0.042
<i>Cyperus eragrostis</i>	Tall flat sedge marsh	PEM1b	0.007
<i>Scirpus microcarpus</i>	Panicled bulrush marsh	PEM1b	0.024
<i>Juncus bufonius</i>	Toad rush marsh	PEM1b	0.011
Subtotal			0.111
Palustrine Scrub-Shrub			
<i>Salix lasiandra</i>	Pacific willow thicket	PSS1a	0.227
Subtotal			0.227
TOTAL			0.338

Notes:

¹PEM1b = palustrine, emergent, persistent, temporarily flooded; PSS1 = palustrine, scrub-shrub, broad-leaved deciduous, and temporarily flooded. Codes based on Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service Report No. FWS/OBS/-79/31. Washington, D.C.



Palustrine Emergent Wetlands

Hedge Nettle Marshes

Two wetlands are classified as hedge nettle marshes. Both features are dominated by hedge nettle (obligate wetland species [OBL]) with minimal abundance of creeping buttercup (*Ranunculus repens*) (facultative species [FAC]), blue wildrye (*Elymus glaucus*) (facultative upland species [FACU]), and blackberry (FACU).

Western Rush Marshes

Two wetlands are classified as western rush marshes. All were dominated by western rush (facultative wetland species [FACW]), with a mixture of hedge nettle (OBL) and velvet grass (*Holcus lanatus*) (FAC).

Tall Flat Sedge Marsh

One wetland is classified as a tall flat sedge (*Cyperus eragrostis*) marsh. This feature was dominated by tall flat sedge (FACW) and co-dominated by hedge nettle (OBL), with a mixture of slender rush (*Juncus occidentalis*) (FAC) and curly dock (*Rumex crispus*) (FAC).

Panicled Bulrush Marsh

One wetland is classified as a panicled bulrush (*Scirpus microcarpus*) marsh. This feature was dominated by panicled bulrush (FACW) with a mixture of Italian rye grass (*Festuca perennis*) (FAC), creeping buttercup (FAC), and smaller populations of blackberry (*Rubus ursinus*) (FACU) and blue wildrye (FACU).

Toad Rush Marsh

One wetland is classified as a toad rush marsh (*Juncus bufonius*). This feature was dominated by toad rush (FACW) with bare ground as it was along an earthen access road.

Palustrine Scrub-Shrub Wetlands

Pacific Willow Thickets

One wetland is classified as a Pacific willow (*Salix lasiandra*) thicket. This shrub community is dominated by Pacific willow (FACW) and this stand is associated with a National Wetlands Inventory mapped freshwater pond; however, this area should be mapped as a fresh emergent wetland because there is no open water. This feature is located just beyond the southwestern portion of the study area but was surveyed based on proposed project activities and its proximity to adjacent aquatic features.

Other Waters

A total of two ephemeral drainages were identified in the study area and are potentially under the jurisdiction of the USACE, RWQCB, and CDFW. Based on topography and database research, all drainages mapped eventually drain into Ryan Creek. Both drainages are first order tributaries to Ryan Creek that ultimately drain into Humboldt Bay, which is a traditionally navigable water.



Riparian Canopy

A total of two riparian canopies were mapped, one along each drainage feature, for a total of 0.101 acre. Both areas were dominated by cascara buckthorn (*Frangula purshiana*) (FAC) patches. The riparian canopy vegetation was located along the top of bank, but also extended beyond the top of bank and ordinary high water mark. Other vegetation observed within the riparian canopies included red elderberry (*Sambucus racemose*) and western brackenfern (*Pteridium aquilinum*).

Plants and Wildlife

Wildlife was identified on-site during the biological surveys conducted in 2016 by SHN through one or more of the following: vocalization calls, scat, remains, or direct sight. Plants were also identified during biological surveys conducted in 2016 to determine the presence or absence of special-status species. Plants and wildlife with potential to occur in the study area and to which special regulatory status apply are discussed in the following section. 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 on 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.
- **Present.** Species listed as "present" in the study area are those species for which:
 - The species was observed in the study area.



Special Status Species

Special status species are those considered to be of management concern to state and/or federal resource agencies, including species:

- Listed as endangered, threatened, or candidate for listing under the ESA
- Listed as endangered, threatened, rare or proposed for listing under the CESA of 1970
- Designated as endangered or rare, pursuant to CFGC Section 1901
- Designated as fully protected, pursuant to CFGC Sections 3511, 4700, or 5050
- Designated as SSC by CDFW
- Meeting the definitions of rare or endangered under CEQA
- Plants ranked by the CNPS to be “rare, threatened or endangered in California” (CRPR 1A, 1B and 2)

Special Status Plant Species

During the May and July 2016 field surveys, all special status species potentially present in the proposed project area were targeted. The botanical surveys were floristic and seasonally appropriate to detect all of the special status plant species with a moderate to high potential for occurrence within the proposed project area. Forty-seven plant species were reported as existing within the Eureka and surrounding quadrangles (CDFW 2020a; CNPS 2020). A majority of the species recorded for the Eureka and surrounding 7.5-minute quadrangles do not have habitat present on-site, or the habitat on-site is of such low quality that it is not expected to support individuals of the species. Of the 47 species reported within the area, eight had a moderate or higher potential to exist on the property (Table 3.4-3). The complete special status species list is contained in Appendix C2.

Table 3.4-3: Special-Status Plant Species

Species	Status ¹ (Federal/ State/CRPR)	General Habitat Description and Blooming Period	Potential to Occur within Project Area
Vascular Plants			
Pacific golden saxifrage (<i>Chrysosplenium glechomifolium</i>)	NL/NL/4.3	North Coast coniferous forest, riparian forest/streambanks, sometimes seeps, sometimes roadsides. Elevation: 30–720 feet. Bloom: Feb–Jun.	Moderate. Suitable habitat occurs in the project area; however, this species was not observed during the 2016 botanical surveys.
Heart-leaved twayblade (<i>Listera cordata</i>)	NL/NL/4.2	Bogs and fens, lower montane coniferous forest, North Coast coniferous forest. Elevation: 20–4,490 feet. Bloom: Feb–Jul.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.



Species	Status ¹ (Federal/ State/CRPR)	General Habitat Description and Blooming Period	Potential to Occur within Project Area
Running-pine (<i>Lycopodium clavatum</i>)	NL/NL/4.1	Lower montane coniferous forest (mesic), marshes and swamps, North Coast coniferous forest (mesic)/often edges, openings, and roadsides. Elevation: 150–4,020 feet. Bloom: Jun–Aug (Sep).	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Leafy-stemmed mitrewort (<i>Mitellastrum caulescens</i>)	NL/NL/4.2	Broadleaf upland forest, lower montane coniferous forest, meadows and seeps, North Coast coniferous forest/mesic, sometimes roadsides. Elevation: 20–5,580 feet. Bloom: (Mar), Apr–Oct.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Ghost-pipe (<i>Monotropa uniflora</i>)	NL/NL/2B.2	Broadleaf upland forest, North Coast coniferous forest. Elevation: 30–1,800 feet. Bloom: Jun–Aug (Sep).	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Howell's montia (<i>Montia howellii</i>)	NL/NL/2B.2	Meadows and seeps, North Coast coniferous forest, vernal pools/vernally mesic, sometimes roadsides. Elevation: 0–2,740 feet. Bloom: (Feb), Mar–May.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Trailing black currant (<i>Ribes laxiflorum</i>)	NL/NL/4.3	North Coast coniferous forest/sometimes roadside. Elevation: 20–4,580 feet. Bloom: Mar–Jul (Aug).	High. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.
Maple-leaved checkerbloom (<i>Sidalcea malachroides</i>)	NL/NL/4.2	Broadleaf upland forest, coastal prairie, coastal scrub, North Coast coniferous forest, riparian woodland/often in disturbed areas. Elevation: 0–2,390 feet. Bloom: (Mar), Apr–Aug.	Moderate. Suitable habitat exists in the project area; however, the species was not observed during the 2016 botanical survey.

Notes:

¹Federal Status Codes:

FE = Federally Endangered Species; NL = Not Listed

State Status Codes:

SE = State Endangered Species; SR = State Rare Species; NL = Not Listed

California Rare Plant Rank Codes and Threat Ranks:

2B Plants rare, threatened, or endangered in California, but more common elsewhere.

4 Plants of limited distribution—a watch list.

0.1 Seriously endangered in California

0.2 Fairly endangered in California

0.3 Not very endangered in California

Source: CDFW 2020a



Although no special status plants were observed during botanical surveys in 2016, a discussion of potential plants that could occur are provided below based on habitat within the proposed project area and length of time since the last survey. Overall, based on the 2019 aquatic delineation of the study area, the site is still heavily disturbed and contains similar conditions as observed during the 2016 botanical surveys. None of these species were detected during the 2016 surveys (SHN 2016).

Pacific Golden Saxifrage

The pacific golden saxifrage (*Chrysosplenium glechomifolium*) is a perennial herb in the family Saxifragaceae. Its elevation range is reported from 10 to 220 meters in California and has a bloom period from February through June within its range in California. It is most commonly found within riparian forests and within the north coast coniferous forest, sometimes along seeps and roadsides. This species was not detected within the study area. Although habitat may exist locally for this species, habitat in the study area is marginal (SHN 2016).

Heart Leaf Twayblade

The heart leaf twayblade (*Listera cordata*) is a perennial herb in the family Orchidaceae. Its elevation range is reported from 30 to 1,180 meters in California; however, it is seldom seen lower than 40 meters. It has a wide bloom period from February through July within its range in California. It is usually found within freshwater wetlands within coniferous forests; however, it can also be found on drier sites within conifer duff. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Running Pine

The running pine (*Lycopodium clavatum*) is a rhizomatous fern in the family Lycopodiaceae. Its elevation range is reported from 45 to 1,800 meters in California and has a bloom period from June through August. It is most common along edges, openings, and roadsides in mesic sites within coniferous forests, and can also be found in marshes and swamps. Running pine was not detected during the 2016 survey (SHN 2016). Although habitat may exist locally for this species, habitat in the study area is marginal.

Leafy Stemmed Miterwort

The leafy stemmed miterwort (*Mitellastrum caulescens*) is a perennial rhizomatous herb in the Saxifragaceae family. Its elevation range is reported from 5 to 1,700 meters above sea level. Within its range state-wide, its blooming period is reported as April through October. This species is reported from broadleafed upland forests, lower montane coniferous forests, meadows and seeps, mesic North Coast coniferous forests, and sometimes roadside habitats. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Ghost Pipe

Ghost pipe (*Monotropa uniflora*) is an achlorophyllous parasitic perennial herb in the Ericaceae family. Its elevation range is reported from 10 to 550 meters in California and has a bloom period from June through August. It is found within mixed evergreen forests and redwood forest, usually on non-wetland sites. Ghost pipe hosts are mycorrhizal fungi. Although this species was observed approximately 0.5 mile away in 1971 and habitat may exist locally for this species; however, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.



Howell's Montia

Howell's montia (*Mantia howellii*) is an annual herb in the Montiaceae family. Its elevation range is reported from 0 to 835 meters above sea level. Within its range state-wide, Howell's montia blooming period is reported as March through May. This species is reported from vernal mesic meadows and seeps, North Coast coniferous forests, and sometimes roadsides habitats. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Trailing Black Currant

Trailing black currant (*Ribes laxiflorum*) is perennial deciduous shrub in the family Grossulariaceae. Elevation range for this species is reported from 5 to 1,395 meters in California and has a bloom period from March through July in California. Trailing black currant is primarily found within north coast coniferous forest. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016).

Maple-leaved Checkerbloom

The maple-leaved checkerbloom (*Sidalcea malachroides*) is a perennial herb in the Malvaceae family. Its elevation range is reported from 0 to 730 meters above sea level. Within its range state-wide, its blooming period is reported as April through August. This species is reported from broadleaved upland forest, coastal prairie, coastal scrub, North Coast coniferous forests, and riparian woodlands, often in disturbed areas. Although habitat may exist locally for this species, it was not detected within the study area during the 2016 surveys (SHN 2016) and habitat in the study area is marginal.

Special Status Animal Species

During the May and July 2016 field surveys, all special status species potentially present (SHN 2016) in the study area were targeted. A total of 43 special status animal species were reported as occurring within the Eureka and six surrounding 7.5-minute quadrangles (Appendix C2), in addition to 19 migratory birds (Table 3.4-4). Of these species, 10 have a moderate or higher potential of occurring within the proposed project area, and two of the migratory birds have a moderate or higher potential of occurring within the proposed project area. A majority of the species recorded for the Eureka and surrounding 7.5-minute quadrangles do not have habitat present on site, or the habitat on-site is of such low quality that it is not expected to support individuals of the species. The complete special status species list is contained in Appendix C2.



Table 3.4-4: Special-Status Animal Species

Common Name (Scientific Name)	Status ¹ (Fed/State)	General Habitat Description	Potential To Occur
Reptiles and Amphibians			
Northern red-legged frog (<i>Rana aurora</i>)	—/SSC	Found in humid forests, woodlands, grasslands, and stream sides in northwestern California, usually near dense riparian cover. Breeds in perennial aquatic habitats including lakes, ponds, reservoirs and streams.	High. Two drainages within the project area provide suitable habitat for this species.
Southern torrent salamander (<i>Rhyacotriton variegatus</i>)	—/SSC	Inhabits shallow, cold, clear, well-shaded streams and seeps often associated with rock or talus and mature to old growth forests. Occasionally found in riparian vegetation.	Moderate. Marginal habitat occurs nearby, outside of the project area.
Birds			
Sharp-shinned hawk (<i>Accipiter striatus</i>)	NL/NL	Cismontane woodland, lower montane coniferous forest, riparian forest, riparian woodland.	High. Suitable habitat occurs within the project area.
Great egret (<i>Ardea alba</i>)	NL/NL	Brackish marsh, estuary, freshwater marsh, marsh and swamp, riparian forest, wetlands.	Moderate. No suitable nesting or foraging habitat in the study area but fly over is possible.
Great blue heron (<i>Ardea Herodias</i>)	NL/NL	Brackish marsh, estuary, freshwater marsh, marsh and swamp, riparian forest, wetland.	Moderate. No suitable nesting or foraging habitat in the study area, however, fly over is possible.
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	FT/SE	Nests in coastal old growth coniferous forests or coastal forests with old growth characteristics. Requires trees with nest platforms.	Moderate. There is no nesting habitat within the project area and any occurrence of this species onsite would be during flight to and from its nest located within appropriate old-growth forest inland.
Snowy egret (<i>Egretta thula</i>)	NL/NL	Marsh and swamp, meadows and seeps, riparian forest, riparian woodland and wetlands.	Moderate. No suitable nesting or foraging habitat, fly over is possible.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	FD/SE, FP	Requires large bodies of water, or free flowing rivers with abundant fish and adjacent snags and large trees for perching and nesting.	Moderate. The project area does not provide suitable habitat and this species would only be seen in the project area during flyover to and from different feeding locations.
Osprey (<i>Pandion haliaetus</i>)	—/WL	Associated with large fish-bearing waters mainly in ponderosa-pine and mixed conifer habitats.	Moderate. The project area does not provide suitable nesting habitat and this species would only be seen in the project area during flyover to and from different feeding locations.



Common Name (Scientific Name)	Status ¹ (Fed/State)	General Habitat Description	Potential To Occur
Northern spotted owl (<i>Strix occidentalis caurina</i>)	FT/ST, SSC	In northern California, resides in stands of old growth or mature coniferous forest with multi-layered canopy and complex forest understory.	High. Habitat for this species is not present within the project area, and no spotted owls have been observed within 0.5 mile of the project area (CDFW 2020a). The dense third-growth redwood forest does not have the conditions necessary to support its species, with a dense single canopy preventing hunting by this species.

Notes:

¹Federal Status Codes: Federal Endangered (FE); Federal Threatened (FT); Federal Proposed Threatened (FPT); Federal Candidate (FC); Federal Delisted (FD); National Marine Fisheries Service Special Concern (FSC)

State Status Codes: State Endangered (SE); State Threatened (ST); State Candidate Endangered (SCE); State Candidate Threatened (SCT); State Fully Protected (FP); State Species of Special Concern (SSC)

Source: CDFW 2020a

The species with a moderate or higher potential of occurring within the proposed project area include the northern red legged frog (*Rana aurora*), southern torrent salamander (*Rhyacotriton variegatus*), sharp shinned hawk (*Accipiter striatus*), great egret (*Ardea alba*), great blue heron (*Ardea Herodias*), marbled murrelet (*Brachyramphus marmoratus*), snowy egret (*Egretta thula*), bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), and the northern spotted owl (*Strix occidentalis caurina*). Habitat for some of these species was present within the study area; however, the great egret, great blue heron, marbled murrelet, snowy egret, bald eagle, and osprey do not have habitat present within the proposed project area, and only have a moderate potential of occurring on-site due to the possibility of flyover, while flying from nesting/roosting sites to foraging locations. No listed species reported as occurring within the Eureka and surrounding 7.5-minute quadrangles, or those with moderate or higher potential of occurring on-site were observed during the surveys.

Amphibians

Red-legged Frog

The northern red-legged frog is known to inhabit moist forests, woodlands, and streamsides in northwestern California. Northern red-legged frogs are usually found near permanent water but can be found far from water in damp woods during non-breeding seasons. Draws and seeps were surveyed for this species; however, northern red-legged frog was not observed during the surveys, possibly due to drier conditions at the time of the surveys. Examination of the drainages showed that they dried up during the summer months; however, the eastern-most of the two drainages had a trickle of water present in July 2016 survey. Substrate within the drainages was fine silt, mud, and sand, with no rocky substrate. Herbaceous vegetation cover was dense within the clearing for the power line right-of-way, with herbaceous cover diminishing within the dense cover of redwood on either side of the right-of-way. Larger drainages and waterways downslope from the proposed project represent higher quality habitat for the red-legged frog.

The nearest CNDDDB occurrence record (occurrence number 203, 2010) for this species is located approximately 1.5 miles southwest of the proposed project area (CDFW 2020a). Two drainages exist at the northwestern edge of the proposed project that are proposed to have portions filled for an extension



of Redwood Street. This area has the highest potential for the northern red-legged frog to occur within the proposed project area, and the filling of these drainages may decrease potentially suitable habitat. Although proposed project construction may impact potentially suitable habitat for this species, overall impacts for this species are anticipated to be less than significant.

Southern Torrent Salamander

Southern torrent salamanders are primarily aquatic but are capable of terrestrial activity during most days and nights. They are principally found within mixed conifer or redwood forests and prefer old growth conditions. Cold, well-shaded permanent streams and seepages or within splash zones or moss-covered substrate within trickling water are its primary habitats. Marginal habitat for this species is represented by the two drainages within the northwestern edge of the proposed project area. The western-most drainage dries up in the summer, precluding it from being year-round habitat for this species. The eastern drainage maintains a trickle of water through the summer months, potentially allowing it to sustain the southern torrent salamander throughout the year.

The nearest CNDDDB occurrence record (occurrence number 164, 2002) is located approximately 5 miles east of the proposed project area (CDFW 2020a). The lack of old growth forest structure and lack of rocky substrate make it unlikely that this species exists within these drainages, or within the proposed project area. Excellent habitat for southern torrent salamander species does exist nearby within Ryan Creek, the Ryan Creek wetland complex, and its larger tributaries. There is moderate potential for the southern torrent salamander to occur within the proposed project area, due to the presence of marginal habitat, and the proximity of the site to high quality habitat within Ryan Creek and some of its larger tributaries.

Birds

Marbled Murrelet

The marbled murrelet feeds near shore of the Pacific Ocean with a range along the Pacific coast of California north into Alaska. It nests in old-growth redwood and Douglas fir forests within the County and requires large branches to provide a horizontal surface on which to build a nest. The marbled murrelet is known to travel from old-growth nesting sites over 6 miles from the coast to feeding grounds in the early morning returning in the evening.

There is no appropriate habitat for the marbled murrelet within the proposed project area and known occurrences are more than 5 miles away. The nearest CNDDDB occurrence (occurrence number 83, 1983) for this species is located approximately 8 miles east of the proposed project area (CDFW 2020a). All other CNDDDB occurrence records are located approximately 10 miles southeast of the proposed project area (CDFW 2020a). This species has low potential to fly over the proposed project area, traveling to and from its nest, since known occurrences are not in a direct line of site from nesting and foraging habitat. Therefore, the proposed project would have no effect on the marbled murrelet.

Bald Eagle and Osprey

The bald eagle and the osprey do not have nesting and/or foraging habitat within the proposed project area or vicinity and would only be seen in the proposed project area during flyover to and from different feeding locations. Bald eagles and osprey are known to nest around Humboldt Bay, located more than 0.5 mile from the proposed project area.



Ospreys hunt fish almost exclusively and require large dead snags overlooking a water body on which to construct their nest. No large water bodies or large dead snags exist within the proposed project area, precluding the existence of this species on-site. There is the potential for this species to flyover the proposed project area en route to Humboldt Bay or Ryan's Slough; however, due to the lack of habitat within the proposed project area, the construction of the proposed project would have no effect on the osprey.

The bald eagle has broader foraging habits than the osprey. They are known to nest in large live trees with thick branches that can support a nest weighing up to several tons. Habitat for the bald eagle is not present within the proposed project area, with no open hunting areas, or water bodies large enough to support the bald eagle. In addition, the third growth trees present across the proposed project area are not large enough to provide suitable nesting habitat. As such, there is still potential for this species to fly over the proposed project area while hunting or on the way to preferred hunting grounds around Humboldt Bay. Because suitable habitat for the bald eagle does not exist on-site, the proposed project would have no effect on this species.

Sharp-shinned Hawk

Sharp-shinned hawk prefer forest edges, and deep conifer forest habitat for nesting. Sharp-shinned hawks hunt within forests and are adept at swiftly maneuvering through a forest canopy while pursuing their prey of smaller songbirds. Although the sharp-shinned hawk was not observed during the surveys, habitat for this species does exist within the proposed project area; however, the dense forest growth may prevent the species from being present within some of the proposed project area. The nearest CNDDDB occurrence for this species is located more than 5 miles south of the proposed project area (CDFW 2020a). While the proposed project would result in a reduction of habitat for this species, the creation of forest edges associated with the proposed project and the introduction of suburban features may actually increase the habitat available to the sharp-shinned hawk.

Sharp-shinned hawks are known to thrive in forested areas near suburban development, as this hawk would hunt around backyard bird feeders and on bird species associated with more suburban settings. Because the proposed project proposes forested setbacks and forested open space, the proposed project could potentially improve habitat for this species, but more accurately would likely have little effect on the sharp-shinned hawk populations within the area.

Northern Spotted Owl

The northern spotted owl is known to inhabit the old growth redwood forests of northern California. The spotted owl hunts primarily rodents within complex forest canopies. The spotted owl prefers old growth forests with multiple canopy layers; they nest in cavities within large old trees. As the species has been studied, it has been seen to nest even in second-growth stands. While early seral stage forests represent marginal habitat, there is still the potential for the spotted owl to inhabit them.

Habitat for the spotted owl is not present within the proposed project area, and no spotted owls have been observed within 0.5 mile of the proposed project area (CDFW 2020a). The dense third-growth redwood forest does not have the conditions necessary to support the spotted owl, with a dense single canopy preventing hunting by this species. Even though it is unlikely that this species exists within the proposed project area, no clearing of the proposed project area would begin before a seasonally appropriate northern spotted owl survey has occurred across the entire proposed project area.



Migratory Birds

Of the 19 migratory birds listed as potentially nesting within the proposed project area, only two species had appropriate nesting habitat represented within the proposed project area. The purple finch (*Carpodacus purpureus*) and the yellow warbler (*Dendroica petechia*) have potential nesting habitat within the proposed project area. The purple finch is known to nest within shrubby areas, cool moist evergreen forests and suburban backyards. Nest placement is typically at the tip of conifer branches in a place that is protected by overhead branches. The yellow warbler is known to nest in thickets and other revegetating areas. While nesting habitat for both of these species would be disturbed during the construction of the proposed project, the completed proposed project would potentially increase the nesting habitat available to these species with the increased forest edge and shrubby growth.

3.4.4 Thresholds of Significance

The CEQA Guidelines' Appendix G Environmental Checklist was assessed during the NOP scoping process to identify the proposed project components that have the potential to cause a significant impact. The following thresholds of significance were used to determine if further evaluation in an EIR was warranted to ascertain whether the proposed project may:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS.
- Have a substantial adverse effect on federal protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal estuaries) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.4.5 Project Impact Analysis and Mitigation Measures

This section analyzes the proposed project's potential to result in significant impacts to biological resources. When a potential impact was determined to be potentially significant, feasible mitigation measures were identified to reduce or avoid that impact.



Candidate, Sensitive, or Special Status Species

Impact BIO-1: **The proposed project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Impact Analysis

The proposed project is expected to drastically change portions of the habitat found across the site, changing upland forest into a suburban development with necessary access roads, utilities, trails, and services. While this represents a large change within the study area, the forest found on-site has a history of disturbance and does not represent high quality habitat for any of the listed species. Given the proposed project's proximity to the City of Eureka and existing development, this location would continue to experience encroachment by human development and the associated impacts of being near a large population center. Because high quality habitat is not present for any of the listed species within the Eureka and surrounding 7.5-minute quadrangles, the conversion of this land does not represent a significant impact to the natural community of Humboldt County. The habitat found across the proposed project is very common across the County, following the timber harvest and regeneration of stands. Forest structure is simple, and habitat value is low; however, this forest type represents a transition into an older forest structure that can eventually become more complex and begin to have a higher habitat value for more species.

The proposed project would have minimal impact on Ryan Creek and the Ryan Creek wetland complex, as proposed project construction would maintain a 100-foot buffer from the 30 percent break in slope (where feasible), preventing erosion and removal of trees within the steep slope above the creek. In addition, the two drainages proposed to be crossed by Redwood Street would have appropriate crossings to minimize impacts to wildlife that utilize the habitat found in the drainages surrounding the proposed project area. Forested open space corridors would be maintained throughout the proposed project area that would facilitate wildlife movement, would maintain nesting sites for birds within the proposed project area, and would minimize the impacts to the species found within the proposed project area by providing refugia within the proposed project area.

Special-status Wildlife

Although no special status species were observed during biological surveys, the proposed project area does contain suitable habitat for special status species, including northern red-legged frog, southern torrent salamander, and sharp-shinned hawk. Suitable habitat does occur within the proposed project area for special status wildlife, in addition to nesting birds and roosting bats. Although suitable habitat does occur within the proposed project area, based on the frequent and historical disturbance of the site the habitat that exists is not high quality. To ensure special status species are not impacted by construction activities, the proposed project would implement MM BIO-1 and MM BIO-2 described below. With implementation of these mitigation measures, including preconstruction surveys and focused surveys to ensure no special status species are present during construction activities, proposed project impacts are anticipated to be less than significant.



Special-status plants

The proposed project area was surveyed for special-status plant species listed as potentially occurring within the proposed project area. While habitat for special-status plant species did exist within the proposed project area, no special-status plant species were observed during appropriate bloom period surveys. This is most likely due to the fact that the habitat found on-site is of low quality and has been heavily manipulated. Large portions of the proposed project area are forested in dense third-growth redwood forest. The forest floor under the dense canopy receives almost no direct sunlight, and in many places was completely devoid of understory vegetation growth. The conditions within the forested habitat throughout the proposed project area may preclude the existence of some of these species.

Forest openings, trails, the area around the baseball fields, and the powerline right-of-way present habitat area for the maple-leaf checkerbloom, as it requires disturbed openings. No maple-leaf checkerbloom plants were found on-site, nor is it expected that there were any missed, due to the high level of brush and competing vegetation within the available forest openings. Many of the seeps and small drainages were surveyed during the survey for potential habitat of the pacific golden saxifrage, leafy stemmed miterwort, Howell's montia, heart-leaf twayblade and the running pine; however, none of these species were observed in any of the seeps or drainages within the proposed project area. Potential habitat was present; however, many of the wet areas were becoming increasingly shaded by young coast redwood canopy, with many of the seep areas supporting little vegetation.

An observation of the ghost pipe has been recorded approximately 0.5 mile northwest of the nearest corner of the proposed project area. The observation was recorded in 1971, prior to the latest timber harvest. The 2016 surveys were conducted within the appropriate blooming period of this species, and this species was not observed, and is not expected to exist on-site, due to the history of disturbance within the proposed project area.

The botanical surveys were conducted within the appropriate bloom period of all the previously mentioned listed species with potential habitat within the proposed project area. No listed botanical species were observed within the proposed project area during the 2016 botanical surveys, nor are they expected to exist within the proposed project area due to the disturbed nature of the area, and lack of high-quality habitat. Based on these results, proposed project impacts to special status plants are anticipated to be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-1: Nesting Bird Surveys: In order to avoid Take of any nesting species, any clearing associated with the proposed project shall occur outside of the nesting period for migratory birds, typically from March 1 through August 15 (California Department of Fish and Wildlife [CDFW] Fish and Game Code 3503, 3503.5, and 3513, and Federal Migratory Bird Act 16 United States Code [U.S.C] 703 et seq.). If clearing is to occur within the nesting window of migratory birds, CDFW and the U.S. Fish and Wildlife Service (USFWS) shall be consulted to assess the potential for Take of active nests, or a focused nesting bird survey would need to take place immediately prior to and within the area of the proposed clearing. Pre-construction surveys for nesting pairs, nests, and eggs



shall occur within the construction limits and within 100 feet (200 feet for raptors) of the construction limits. Focused survey for spotted owls within the nesting season shall be conducted prior to site clearing. If active nests are encountered, species specific measures shall be prepared by a qualified biologist in consultation with the USFWS and CDFW and implemented to prevent abandonment of the active nest.

MM BIO-2: Amphibian Surveys: Project activities in areas near riparian and seasonally wet areas that provide amphibian habitat shall occur from July 15 through October 31 to minimize potential impacts to northern red-legged frog and southern torrent salamander. Focused surveys for northern red-legged frog and southern torrent salamander shall be conducted during appropriate weather conditions. To mitigate potential impacts to these species, the proposed project shall remediate degraded areas from past use of the proposed project area within slopes above Ryan Creek (where feasible), and within forested open space areas proposed within the proposed project area (where feasible).

Level of Significance After Mitigation

Less Than Significant With Mitigation Incorporated.

Riparian Habitat or Natural Communities

Impact BIO-2: The proposed project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Impact Analysis

A total of 0.101 acre of riparian habitat occurs along two drainage features within the proposed project area. Riparian habitat associated with these drainages would be temporarily and permanently impacted during construction. It is anticipated that 0.050 acre of riparian habitat would be temporarily impacted, and 0.041 acre would be permanently impacted. Riparian habitat within the proposed project is dominated by cascara buckthorn (*Frangula purshiana*). The riparian canopy vegetation was located along the top of bank but also extended beyond the top of bank and ordinary high water mark. Other vegetation observed within the riparian canopies included red elderberry (*Sambucus racemose*) and western brackenfern (*Pteridium aquilinum*).

The proposed project would implement MM BIO-3 and MM BIO-4 to mitigate for impacts to riparian vegetation. All mitigation would occur onsite and would be replaced at a 1:1 ratio. The proposed project would prepare a revegetation mitigation and monitoring plan that would detail the exact location, species and number of plants, irrigation requirements and future monitoring needs to ensure survival of planted species. In addition, MM HYD-1, Prepare a Stormwater Pollution and Prevention Plan (SWPPP) and MM HYD-3, Prepare a Low Impact Development Plan, would implement BMPs and features such as bioswales to control potential runoff and sediment from the project area into riparian areas. With implementation of these mitigation measures, impacts to riparian habitat and natural communities are anticipated to be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.



Mitigation Measures

MM BIO-3: Permit Requirements: Prior to filing a map, the Applicant shall consult with the California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and U.S. Army Corps of Engineers (USACE) regarding requirements for state and federal permit applications, including a 1602 Lake and Streambed Alteration Agreement (SAA) from the CDFW, a 401 Water Quality Certification from the RWQCB and/or a 404 Nationwide Permit from the USACE. If any permits are required, the Applicant shall submit the permit application to the respective agency and shall abide by all permit conditions. For impacts to waters of the U.S. and/or waters of the State, a revegetation mitigation and monitoring plan shall also be prepared. It is anticipated that additional special-status species surveys and/or monitoring may also be implemented as part of some of these permit conditions.

MM BIO-4: Riparian Replanting: Riparian vegetation shall be mitigated at a 1:1 impact ratio. Local native riparian vegetation would be replanted along non-impacted creek segments within the proposed project site.

MM HYD-1 and MM HYD-3 would also be required.

Level of Significance After Mitigation

Less Than Significant Impact With Mitigation Incorporated.

Protected Wetlands

Impact BIO-3: The proposed project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Impact Analysis

Approximately 0.338 acre (14,723 square feet) of wetlands exist within the proposed project area. An estimated 0.168 acre (7,318 square feet) of the wetlands (50 percent) would be temporarily (0.017 acre) and permanently (0.151 acre) impacted by the proposed project and project-related activities. This includes smaller isolated wetlands and a large wetland draining Arbutus Street in the southern portion of the proposed project. Wetlands impacts are associated with fill as part of the proposed project. Wetlands to be impacted include freshwater emergent wetland as well as freshwater forested/scrub wetland within the large wetland and manipulated/disturbed isolated freshwater emergent wetland. The proposed project would impact approximately 0.168 acre of waters of the U.S. (wetlands) and 0.067 acre of waters of the State (other waters). Wetlands within the proposed project consisted of western rush marshes, hedge nettle marshes and Pacific willow thicket. These wetlands are isolated features, not associated or within the floodplain of an intermittent drainage.

The proposed project would mitigate wetland impacts at a 1:1 replacement ratio as described in MM BIO-4 above. Wetlands expected to be impacted by the proposed project and project-related activities are estimated as being 7,318 square feet. A 1:1 replacement ratio would result in the creation of 7,318 square feet of wetlands. Wetland mitigation areas would be contoured and planted with native wetland vegetation to create wetlands of equal or greater value than those being lost as a result of the proposed project. Any wetland mitigation would be created within upland areas to ensure that additional wetland area is not lost. Wetlands created would be of the same type as those lost. Loss of wetland buffer around the southern



wetland as a result of the Arbutus Street extension would be mitigated through existing wetland enhancement and revegetating the highly eroded logging road within the northern portion of the proposed project area. Existing wetland should be enhanced with the removal of non-native vegetation and planting of native hydrophytes. In addition, temporary fencing should be installed prior to construction to prevent additional wetland disturbance or accidental encroachment during construction. Wildlife-friendly fencing should be installed to prevent accidental human encroachment into wetlands following completion of the proposed project.

A 1602 SAA from the CDFW, a 401 Water Quality Certification from the RWQCB and/or a 404 Nationwide Permit from the USACE may be required as discussed above in MM BIO-3 if the proposed project impacts waters of the U.S. and/or waters of the State. With implementation of mitigation measures, it is anticipated that the proposed project would result in less than significant impacts to wetlands.

The proposed project would implement MM BIO-3 above, along with MM BIO-5 and MM BIO-6 below to mitigate for impacts to wetlands. Specifically, wetlands would be created within an upland area associated with the ball fields that is currently partially forested with third-growth redwoods, and partially covered in gravel. The wetland mitigation would be situated within an open space area and would enhance the habitat value of the open space lands.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-5: Wetland Creation: Wetland creation shall replace wetlands impacted by the proposed project at a 1:1 ratio with wetlands of equal or better quality. Wetlands shall be designed to provide habitat within an urbanized setting. This shall include proper fencing, vegetation screening, and signage.

MM BIO-6: Wetland Enhancement: Existing wetlands currently have high levels of invasive species dominance, and in many places have historic fill placement. Part of the mitigation shall include restoration of the remaining wetlands onsite following installation of the Arbutus Street extension. This shall include invasive species removal, native plant installation, and where appropriate, removal of historic fill. In addition, existing wetlands shall be connected to the proposed mitigation wetlands for habitat connectivity. This shall include stormwater and wildlife crossing culverts in locations where the wetland would be crossed by the proposed Arbutus Street extension.

MM BIO-3 would also be required.

Level of Significance After Mitigation

Less Than Significant Impact With Mitigation Incorporated.



Fish and Wildlife

Impact BIO-4: **The proposed project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.**

Impact Analysis

Potential impacts to special status wildlife is low based on the frequent and historical disturbance of the site and proposed project construction. To ensure special status species are not impacted by construction activities, the proposed project would implement MM BIO-1, MM BIO-2, and MM BIO-3 described above. With implementation of these mitigation measures, including preconstruction surveys and focused surveys, the proposed project impacts would be less than significant.

Conducting the clearing of the site outside of the nesting period for migratory birds would eliminate any take or destruction of bird nests by the construction of the proposed project. Performing preconstruction surveys for amphibians during the appropriate season along unnamed tributaries would minimize potential impacts and take to northern red-legged frog and southern torrent salamanders. The widespread existence of third-growth redwood forest throughout the County and the relative size of this proposed project would not result in substantial cumulative reduction in third-growth upland redwood forest habitat.

Two tributaries of Ryan Creek are proposed to be crossed by an extension of Redwood Street. It is estimated that each crossing would cover an average of 68 linear feet of the tributaries for a total impact of 136 linear feet. Although these tributaries do not provide habitat for special status fish, they are direct tributaries to Ryan Creek, which is considered critical habitat for steelhead (*Oncorhynchus mykiss*) (USFWS 2020) and also contains state and federally listed coho salmon-southern Oregon/northern California ESU. With implementation of mitigation measures BIO-7 and BIO-8 discussed below, the proposed project impacts to fish and wildlife would be less than significant.

Level of Significance Before Mitigation

Potentially Significant Impact.

Mitigation Measures

MM BIO-7: **Ryan Creek Tributaries:** The 100-foot setback (where feasible) from the 30 percent break in slope designated as non-buildable to reduce erosion and removal of trees thereby reducing impacts to Ryan Creek and associated wetlands. The Ryan Creek tributary crossing impacts shall be minimized by using large half-round culverts and mitigated by recontouring the deteriorating logging road within the northern portion of the proposed project.

MM BIO-8 **Stream Stabilization:** Two stream crossings are proposed as part of the proposed project. Crossings shall be designed to facilitate wildlife movement and shall be designed to minimize impacts to the streams. The crossings are anticipated to impact 68 linear feet of each stream, for a total of 136 linear feet of impacts. Crossings shall be mitigated by the recontouring and stabilization of a former logging road, which contains approximately 727 linear feet of highly eroded terrain. In addition, the former roadway shall be planted with native vegetation to facilitate habitat creation on the slope as mitigation for reduced wetland buffers along the Arbutus Street access.

MM BIO-1, MM BIO-2, and MM BIO-3 would also be required.



Level of Significance After Mitigation

Less Than significant Impact With Mitigation Incorporated.

Local Policies or Ordinances

Impact BIO-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Analysis

The proposed project would result in conversion of 59.27 acres of forest land for development of residential and commercial uses. Approximately 21.73 acres would be conserved as forest land and dedicated to the County as open space. As discussed in this section and Section 3.11, Land Use and Planning, the proposed project would not conflict with any local policies or ordinances protecting biological resources.

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.

Conservation Plans

Impact BIO-6: The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Impact Analysis

The proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan as there is no such plan adopted by the County (Humboldt County 2017c).

Level of Significance Before Mitigation

Less Than Significant Impact.

Mitigation Measures

None required.

Level of Significance After Mitigation

Less Than Significant Impact.



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