

4.3 Biological Resources

This section evaluates the potential impacts related to biological resources during construction and operation of the project. Information in this section is based in part on the special-status plant and animal species surveys that were conducted by SHN in March and July 2017 and April, May, and June 2018. In addition to the field surveys, literature reviews, including the Resource Protection Maps of the Humboldt Bay Area Plan (HBAP) were conducted to determine if any recent records of sensitive biological resources have been recorded on or in the vicinity of the project site. The natural inventories included resources identified in the California Natural Diversity Database (CNDDDB), California Department of Fish and Wildlife (CDFW) Special Animals List, and California Native Plant Society (CNPS) Electronic Inventory. The findings of the field surveys and literature reviews are provided in the two Natural Resources Assessment reports that collectively cover the project area - *Natural Resources Assessment Samoa Peninsula Wastewater Project* (SHN 2018a) and *Natural Resources Assessment RMT II Samoa Effluent Pipeline Project document* (SHN 2017a). Two wetland delineations were prepared that collectively cover the project area – Wetland and Other Waters Delineation Report Samoa Peninsula Wastewater Project (SHN 2018b) and Wetland Delineation RMT II Samoa Effluent Pipeline (SHN 2017b). The following subjects are related to biological resources, but are evaluated in other sections of this EIR.

- Potential impacts to aesthetics from tree removal are evaluated in Section 4.1, Aesthetics.
- Potential impacts to water quality are addressed in Section 4.8, Hydrology and Water Quality.

4.3.1 Setting

The following describes existing conditions of the proposed project area with emphasis on biological resources.

Regional Setting

The project area is located on the Samoa Peninsula, a sandy spit of land 2,000 to 4,000 feet wide between the Pacific Ocean and Humboldt Bay, extending 12.5 miles from the Mad River in the north to the entrance to Humboldt Bay. The project area is located within former industrial land and roadways; the majority of these lands were historically dune and deflation plain wetland, and brackish marsh habitat. Natural dune and wetland habitat exists within and adjacent to portions of the study area (Figure 3.3 Project Boundary) which extends to 10 feet off pavement edges along the proposed pipeline alignment. The study area is situated at an approximate 7- to 32-foot elevation above mean sea level. The average 30-year precipitation for this area (Eureka Station) from October 1 through August 24 is 40.33 inches (NOAA 2018), with most of precipitation occurring between October and April. Temperatures on the Samoa Peninsula range from an average low of 46.2 degrees Fahrenheit (°F) in December to an average high of 59.6°F in September; extremes in temperatures are relatively uncommon due to the regional maritime influence.

Local Setting

The majority of the project area (including the Approved Samoa WWTF site) includes active roadways, and is covered in old asphalt, fractured concrete, compacted gravel, former log decks obscured by fragmented bark, and railroad infrastructure. Installation of the wastewater collection system is proposed to occur within the existing roadways to minimize impacts to sensitive coastal habitat. Site visits were conducted to identify suitable habitats for special-status species, and map sensitive and non-sensitive habitats on March 24 and 25, and July 26, 2017 and April 11 and 17,

May 31, and June 12, 2018. These survey efforts determined that two special-status plant species and five special-status animal species are present within the project area.

Marine Setting

Off the coast of northern California, sea temperatures average 52°F year-round (NOAA, 2018). North Coast marine waters have high productivity and exceptional biodiversity due to upwelling that brings cold, nutrient-rich waters to the surface, which support blooms of phytoplankton that form the foundation of a diverse and complex food web. Extensive kelp forests support many species of fishes and invertebrates. Further offshore, stretches of soft sandy bottoms and submarine canyons provide habitat and foraging areas for fish, marine mammals, and invertebrates, including deepwater corals (CDFW 2017).

Coastal currents along the Northern California coastline trend southward. The existing RMT II diffuser extends 1.5 miles into the ocean and approximately 82 feet below the water surface perpendicular to the coastline which would result in currents running perpendicular to the diffuser at an angle of 90 degrees (SHN 2016). The outfall location does not fall in a Marine Life Protection Zone (MLPZ) or Area of Special Biological Significance (ASBS). The Samoa State Marine Conservation Area (SMCA) is approximately four miles to the north of the RMT II ocean outfall.

Annual maintenance of the ocean outfall infrastructure occurs and North Coast Regional Water Quality Control Board (NCRWQCB) monitors waste discharge in accordance with the *California Ocean Plan* (State Water Resources Control Board 2015) and NPDES standards.

Vegetation

Vegetation composition within the study area varies widely, but is representative of coastal dune and wetland habitat as well as disturbed and developed coastal areas (see Figures 4.3-1a, 4.3-1b, 4.3-1c, and 4.3-1d). A large portion of the study area is characterized by a mix of disturbance-adapted, primarily non-native, herbaceous species, and other early seral disturbance-adapted shrubby species such as coyote brush (*Baccharis pilularis* ssp. *consanguinea*). Small areas of semi-natural dune and wetland habitat occur between the vacant industrial lands in areas that are used as drainages, or along property lines. These areas are mostly dominated by native vegetation. Native dune habitat and areas of larger undisturbed wetlands occur adjacent to the project site, and are composed of native vegetation communities. Wetland areas and deflation swales are primarily dominated by coastal willow (*Salix hookeriana*) and wax myrtle (*Morella californica*), among others. Many relatively undisturbed sandy areas exist alongside the proposed project alignment, and constitute dune habitat; however large portions of these areas are dominated by non-native species such as European beach grass (*Ammophila arenaria*) or non-native annual grasses.

Critical Habitat

Critical habitat is designated by the U.S. Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA). Critical habitat refers to any specific geographic area that contains features essential for conservation of a threatened or endangered species and that may require special management and protection. This designation may include an area that is not currently occupied by the species, but that will be needed for recovery. According to the USFWS Information, Planning, and Conservation system database, there is no designated critical habitat for threatened and endangered species within the study area.

Sensitive Natural Communities

Sensitive habitats include: a) areas of special concern to resource agencies, b) areas protected under the California Environmental Quality Act (CEQA), c) areas designated as sensitive natural communities by CDFW, and d) areas protected under local regulations and policies. Sensitive biological communities include habitats that fulfill special functions or have special values, such as, streams, riparian, or wetlands habitat. These habitats may be protected under federal regulations, such as the Clean Water Act; state regulations, such as, the Porter-Cologne Water Quality Control Act, and the CDFW Streambed Alteration Program; or local ordinances or policies, such as, county tree ordinances. Other sensitive biological communities include habitats that fulfill special functions or have special values. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. CDFW ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its CNDDDB [CDFW, 2018a]. Sensitive plant communities are also provided in list format (CDFW 2018a). CNDDDB vegetation alliances are ranked 1 through 5 based on NatureServe's (2009) methodology (see Table 4.3-1), with those alliances ranked globally (G) or statewide (S) with status of 1 through 3 considered to be of special concern, as well as imperiled (CDFG 2007; CDFW 2018b).

Table 4.3-1 Score Value Ranges for NatureServe Conservation Status Ranks

Calculated Score Value Range	Calculated Status Rank	Status Description	Definition	Threat Rank
score \leq 1.5	G1S1	Critically Imperiled	Less than 6 elemental occurrences or less than 1,000 individuals or less than 2,000 acres	S1.1 = very threatened S1.2 = threatened S1.3 = no current threats known
1.5 < score \leq 2.5	G2S2	Imperiled	6-20 EOs or 1,000-3,000 individuals or 2,000-10,000 acres	S2.1 = very threatened S2.2 = threatened S2.3 = no current threats known
2.5 < score \leq 3.5	G3S3	Vulnerable	21-100 EOs or 3,000-10,000 individuals or 10,000-50,000 acres	S3.1 = very threatened S3.2 = threatened S3.3 = no current threats known
3.5 < score \leq 4.5	G4S4	Apparently Secure	This rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat.	No threat rank
score > 4.5	G5S5	Secure	Demonstrably secure to ineradicable	No threat rank

The application of global ranking (G#) for determination of sensitive communities is summarized in Table 4.3-1 (NatureServe, 2009). Additionally, CDFW high-priority natural community elements are reserved for those areas exhibiting high-quality occurrences based on criterion such as:

1. lack of invasive species;

2. no evidence of human-caused disturbance, such as, roads or excessive livestock grazing, or high grade logging; or
3. evidence of reproduction present (sprouts, seedlings, adult individuals of reproductive age), and no significant insect or disease damage, etc.

Non-sensitive biological communities are those communities that are not afforded special protection under CEQA and other state, federal, and local laws, regulations, and ordinances. These non-sensitive communities may, however, provide suitable habitat for some special-status plant or wildlife species and are part of the general existing site conditions.

Nine sensitive natural communities (defined as vegetation communities) were observed within the study area (see Figures 4.3-1a, 4.3-1b, 4.3-1c, and 4.3-1d). These vegetation communities are considered environmentally sensitive habitat areas (ESHAs) by the California Coastal Commission and are discussed below.

Dune Mat

The dune mat vegetation community is formed from sand dunes of coastal bars, river mouths and spits along the immediate coast. Dominant species varies widely within this vegetation community, as was observed within the study area. Deflation plains and other depressions not wet enough to support willow growth were dominated by Brewer's rush (*Juncus breweri*). More upland areas and sloping sandy areas were dominated by a wide range of species including sea thrift (*Armeria maritima* ssp. *californica*), beach primrose (*Camissoniopsis cheiranthifolia*), California plantain (*Plantago californica*), creamcups (*Platystemon californicus*), dune knotweed (*Polygonum paronychia*), and sandmat (*Cardionema ramosissimum*). Primary dominants in this vegetation community were non-native including large quaking grass (*Briza maxima*), European beach grass (*Ammophila arenaria*), and other upland non-native grasses. Areas with sandy undisturbed soils dominated by non-native species are still mapped as this vegetation community. Dune mat vegetation community has a rarity ranking of G3S3 meaning that there are less than 100 viable occurrences globally, and less than 100 viable occurrences statewide (NatureServe 2009). This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. This vegetation community was the second most common natural community within the study area, and included areas dominated by non-native species growing on undisturbed soils. Not included in this vegetation community are non-native dominated areas on disturbed or developed soils that was also common throughout the study area.

Wax Myrtle Scrub

Wax myrtle scrub is located in wetlands within coastal dunes, along coastal streams, and on coastal bluffs. This vegetation community is restricted to moist areas along the coast and, consequently, is not very common (Sawyer 2009). Changes in hydrology, fire, and introduction of non-native species have further limited viable occurrences of this vegetation community. Wax myrtle scrub has a rarity ranking of G3S3, meaning this vegetation community occurs on 6,400 to 32,000 acres and is known from 21 to 100 viable occurrences globally and statewide. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. This vegetation community was observed in three places within the study area, with the largest occurrence to the west of Vance Avenue, south of the chip export facility.

Coastal Brambles Vegetation Community

Coastal brambles vegetation community is located in coastal bluffs, headlands, exposed slopes, and gaps in forests. This vegetation community is restricted to coastal areas, which limits the area in which this vegetation community can be found (Sawyer 2009). Consequently, coastal brambles have a rarity ranking of G4S3, meaning that there are more than 100 viable occurrences globally, but fewer than 100 viable occurrences statewide. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. Within the study area, this vegetation community was dominated exclusively by the California blackberry, and was documented throughout the study area commonly surrounding coastal dune hollows, as well as in isolated thickets throughout the study area.

Coastal Dune Willow Thicket

Coastal dune willow thicket is located in areas near the ocean within the summer fog belt, where water stands and seasonally floods, such as, deflation plains and swales among coastal dunes, lagoon margins, and floodplains. This vegetation community is restricted to moist areas along the coast and, consequently, is not very common (Sawyer 2009). The coastal dune willow thicket has a rarity ranking of G4S3, meaning that there are more than 100 viable occurrences globally, but fewer than 100 viable occurrences statewide. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. The coastal dune willow thicket vegetation community is the most common natural vegetation community within the study area, and corresponds closely with coastal dune deflation plain wetlands and other wet depressions. This vegetation community occurs throughout the study area; however, the greatest example of this vegetation community is immediately south of the intersection of Lincoln Avenue and New Navy Base Road south of Fairhaven.

Salt Rush Swales

Salt rush swales are located in seasonally-wet slightly brackish marshes at the upper edge of salt marshes or behind dikes in former salt marsh at intermediate elevations (Sawyer 2009). Salt rush swales have a rarity ranking of G3S2, meaning that there are fewer than 100 viable occurrences globally, and between 6 and 20 viable occurrences statewide, although additional research is needed. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. This vegetation community was observed in one location within the study area, on the southern edge of a salt marsh approximately 1,700 feet north of the entrance to the Samoa RV park and boat launch.

Slough Sedge Swards

Slough sedge swards are found in seasonally-flooded swales in old deflation plains and sand dune complexes, as well as shallowly inundated woods, meadows, roadside ditches, coastal swamps, lakeshores, marshes, and riverbanks (Sawyer 2009). Slough sedge swards have a rarity ranking of G4S3, meaning that there are more than 100 viable occurrences globally, but fewer than 100 viable occurrences statewide. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. This vegetation community was observed in numerous locations within and adjacent to the study area, and corresponds closely with coastal dune deflation plain wetlands and other wet depressions.

Pacific Silverweed Marshes

Pacific silverweed marshes are found in seasonally-flooded brackish marshes at intermediate tidal elevations. Pacific silverweed marshes have a rarity ranking of G4S2, meaning that there are more than 100 viable occurrences globally, but only between 6 and 20 viable occurrences statewide. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. This vegetation community was observed in one location within the study area at the base of the eastern embankment of New Navy Base Road within a salt marsh approximately 1,700 feet north of the entrance to the Samoa RV park and boat launch.

Salt Grass Flats

Salt grass flats are found within coastal salt marshes within Humboldt County. Salt grass flats have a rarity ranking of G5S4 meaning that this vegetation community is demonstrably secure globally and relatively secure statewide with over 100 viable occurrences. As such this vegetation community does not qualify for consideration under CEQA Guidelines Appendix G checklist IVb. Although the saltgrass vegetation community is relatively common statewide coastal occurrences of this vegetation community are found within salt marsh which is considered ESHA by the California Coastal Commission. This vegetation community was observed in one location within the study area to the east of New Navy Base Road within a salt marsh approximately 1,700 feet north of the entrance to the Samoa RV park and boat launch.

Beach Pine Forest

Beach pine forest is found within coastal dune habitat, seaside bluffs, and exposed rocky headlands with salt spray and winds (Sawyer 2009). Beach pine forest has a rarity ranking of G5S3, meaning that this vegetation community is demonstrably secure globally, but has fewer than 100 viable occurrences statewide. This vegetation community is considered ESHA by the California Coastal Commission and qualifies for consideration under CEQA Guidelines Appendix G checklist IVb. This vegetation community was observed in three locations within the northern portion of the study area along Vance Avenue; however, the best example of this vegetation community within the study area is located at the Bay Street and Vance Avenue intersection, south of Bay Street and East of Vance Avenue.

Table 4.3-2 Sensitive Natural Communities Summary

Vegetative Community	Acres within Study Area	Rarity Ranking	Qualify as ESHA?	Qualify for Consideration under CEQA?
Dune mat	0.77	G3S3	Yes	Yes
Wax myrtle scrub	0.08	G3S3	Yes	Yes
Coastal brambles vegetation community	0.94	G4S3	Yes	Yes
Coastal dune willow thicket	1.09	G4S3	Yes	Yes
Salt rush swales	0.02	G3S2	Yes	Yes
Slough sedge swards	0.15	G4S3	Yes	Yes
Pacific silverweed marshes	0.00	G4S2	Yes	Yes
Salt grass flats	0.00	G5S4	Yes	No
Beach pine forest	0.02	G5S3	Yes	Yes

Wetlands and Jurisdictional Waters

The definition and regulatory framework of wetlands and jurisdictional waters are described in the Clean Water Act (CWA) (see Section 4.3.2, Regulatory Framework, below).

Wetland delineation was completed by SHN in March 2017 for the northern portion of the project study area (SHN 2017b) and in August 2018 for the remainder of the project study area (SHN 2018b). Wetland areas and deflation swales within the study area are primarily dominated by coastal willow (*Salix hookeriana*) and wax myrtle (*Morella californica*). Under the California Coastal Act wetland definition, 36 wetlands were found within or immediately adjacent to the study area meeting at least one parameter. Under the United States Army Corps of Engineers (USACE) 3-parameter guidelines, 10 potentially jurisdictional USACE wetlands are located within or immediately adjacent to the study area (See Figures 4.3-2a, 4.3-2b, 4.3-2c, and 4.3-2d). No ordinary high water mark (OHWM) was observed within the study area, as all 36 wetlands delineated were ground-water fed seasonal wetlands without any flowing surface waters.

Wildlife Corridors

Wildlife corridors refer to established migration routes commonly used by resident and migratory species for passage from one geographic location to another. Corridors are present in a variety of habitats and link undisturbed areas that would otherwise be fragmented. Maintaining the continuity of established wildlife corridors is important to:

- a. sustain species with specific foraging requirements,
- b. preserve a species' distribution potential, and
- c. retain diversity among many wildlife populations. Therefore, resource agencies consider wildlife corridors to be a sensitive resource.

The study area is composed of a mixture of developed and undeveloped coastal dune and wetland habitat on a narrow spit of land between Humboldt Bay and the Pacific Ocean. It is unlikely that large scale terrestrial linkages exist; however local wildlife movement corridors exist across the Samoa Peninsula and are expected to be concentrated along shrubby and vegetated areas including wetlands and vegetated swales. The study area is also known to be an important flyover

location for shorebirds and other marine bird species, although it is unlikely that these species would stop within the study area.

Special-status Species

Sensitive biological resources evaluated as part of this analysis include special-status species, which are plants and animals in the following categories:

- listed or proposed for listing as threatened or endangered under FESA or candidates for possible future listing;
- listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA);
- listed as Fully Protected under the California Fish and Game Code;
- taxa identified by CDFW as species of special concern or rare;
- plants assigned a CNPS California Rare Plant Rank (CRPR) 1A, 1B, 2A, or 2B. The ranking system is summarized as follows:
 - CRPR 1A Plants presumed extirpated in California and either rare or extinct elsewhere;
 - CRPR 1B Plants that are rare, threatened, or endangered in California and elsewhere;
 - CRPR 2A Plants presumed extirpated in California, but common elsewhere;
 - CRPR 2B Plants that are rare, threatened, or endangered in California but more common elsewhere;
 - CRPR 3 Plants about which more information is needed (a review list); and
 - CRPR 4 Plants of limited distribution (a watch list).
- considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (State CEQA Guidelines, Appendix G); or
- otherwise meets the definition of rare or endangered under CEQA §15380(b) and (d).

Special-Status Plant Species

Special-status plant species surveys were conducted in 2017 and 2018 to determine the presence of federal, state, and California Native Plant Society CRPR plant species. The *Natural Resources Assessment, Samoa Peninsula Wastewater Project* (SHN 2018a) and *Natural Resources Assessment RMT II Samoa Effluent Pipeline Project* (SHN 2017a) summarize the potential for occurrence of special-status plant species that are recorded as occurring in the project area and beyond (SHN 2017a Appendix A, SHN 2018a Appendix 1). Twenty-seven species have a moderate or high potential of occurring at the project site; however, only two were identified within the project area (see Table 4.3-3) during the seasonally-appropriate floristic surveys. Species descriptions for the special-status plant species identified as having a moderate or high potential to occur are summarized in Table 4.3-3.

The remaining plant species recorded as potentially occurring in the project area are unlikely or have no potential to occur due to one or more of the following reasons:

- Hydrologic conditions (for example, marsh habitat, perennial streams) necessary to support some specific special-status plant(s) are not present in the project sites;

- Edaphic (soil) conditions (for example, serpentine, volcanics) necessary to support some special-status plant(s) are not present in the project sites;
- Topographic positions and landforms (for example, north-facing, slopes) necessary to support some special-status plant(s) are not present at the project sites;
- Associated vegetation communities (for example, chaparral, coastal prairie, coastal dune, coastal bluff) necessary to support some special-status plant(s) are not present at the project sites;
- The degree of disturbance and/or presence of extensive highly competitive, non-native plant species (for example, dense non-native annual grassland);
- The project sites are outside of the known elevation and/or localized distribution of some special-status plant(s) (for example, coastal, montane); and/or,
- Special-status seasonally-appropriate plant surveys were conducted within the appropriate time of year to identify species with moderate or high potential to occur at the project sites, and determined absence of these species.

No special-status species were observed during seasonally-appropriate botanical surveys in 2017. During the special-status plant surveys conducted on April 11, April 17, May 31, and June 12, 2018, two California Rare Plant Ranked plant species were present within the study area; Dark-eyed gilia (*Gilia millefoliata*) and Short-leaved evax (*Hesperevax sparsiflora* var. *brevifolia*). These two species are described in detail following Table 4.3-3.

Dark-eyed gilia (*Gilia millefoliata*) is an annual herb in the Polemoniaceae family. It is neither state nor federally listed, but has a CRPR of 1B.2 and a heritage rank of G2S2. Its elevation range is reported from 1 to 60 meters above sea level. Within its range statewide, its blooming period is reported as April through July. This species is reported from coastal dune habitat. Within the nine-quad search, numerous Rarefind occurrences were reported, several adjacent to, and within the study area. This species was observed within the study area along the western side of the access road leading to the Samoa airstrip, with several individuals present directly adjacent to the road.

Short-leaved evax (*Hesperevax sparsiflora* var. *brevifolia*) is an annual herb in the Asteraceae family. It is neither state nor federally listed, but has a CRPR of 1B.2 and a heritage rank of G4T3S2. Its elevation range is reported from 0 to 215 meters above sea level. Within its range statewide, its blooming period is reported as March through June. This species is reported from coastal bluff scrub, coastal dunes, and coastal prairie where it is found primarily on sandy bluffs and flats. Within the nine-quad search, numerous Rarefind occurrences were reported, several adjacent to, and within the study area. This species was observed within the study area along the eastern side of New Navy Base Road, between the roadway and Humboldt Bay, just north of the Samoa boat launch and RV park.

Table 4.3-3 Special-Status Plant Species with Moderate to High Potential to Occur at Project Site

Scientific Name	Common Name	FedList	CalList	GRank	Srank	Rplant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
<i>Abronia 4.3-10mbellate</i> <i>var. breviflora</i>	pink sand- verbena	None	None	G4G5-T2	S1	1B.1	June-Oct.	Coastal dunes and coastal strand.	Foredunes and interdunes with sparse cover. Usually the plant closest to the ocean. 0-10 m ⁽¹⁾ .	Moderate
<i>Angelica lucida</i>	sea-watch	None	None	G5	S3	4.2	May-Sept.	Coastal strand	Coastal bluff scrub, coastal dunes, coastal scrub, coastal salt marshes. 0-150 m	High
<i>Astragalus</i> <i>pycnostachyus</i> <i>var.</i> <i>pycnostachyus</i>	coastal marsh milk-vetch	None	None	G2T2	S2	1B.2	April-Oct.	Coastal dunes, marshes & swamps, coastal scrub.	Mesic sites in dunes or along streams or coastal salt marshes. 0-155 m.	Moderate
<i>Bryoria</i> <i>pseudocapillaris</i>	false gray horsehair lichen	None	None	G3	S2	3.2	Lichen	Coastal dunes, N. Coast conifer forest (immediate coast).	Usually on conifers. 0-90 m.	High
<i>Bryoria spiralifera</i>	twisted horsehair lichen	None	None	G3	S1S2	1B.1	Lichen	North coast conifer forest.	Usually on conifers. 0-30 m.	Moderate
<i>Carex arcta</i>	northern clustered sedge	None	None	G5	S1	2B.2	June-Sept.	Bogs and fens, north coast conifer forest.	Mesic sites. 60-1405 m.	Moderate
<i>Carex lyngbyei</i>	Lyngbye's sedge	None	None	G5	S3	2B.2	April-August	Marsh & swamp (brackish or freshwater).	0-200 m.	Moderate
<i>Castilleja ambigua</i> <i>var.</i> <i>humboldtiensis</i>	Humboldt Bay owl's-clover	None	None	G4T2	S2	1B.2	April-August	Marshes and swamps.	Coastal saltmarsh with Spartina, Distichlis, Salicornia, Jaumea. 0-20 m.	Moderate
<i>Castilleja litoralis</i>	Oregon coast paintbrush	None	None	G3	S3	2B.2	June	Coastal bluff scrub, coastal dunes, coastal scrub.	Sandy sites. 5-255 m.	Moderate
<i>Chloropyron maritimum</i> <i>ssp. palustre</i>	Point Reyes salty bird's-beak	None	None	G4?T2	S2	1B.2	June-Oct.	Coastal salt marsh.	Usually in coastal salt marsh with Salicornia, Distichlis, Jaumea, Spartina, etc. 0-10 m.	Moderate

Biological Resources

Scientific Name	Common Name	FedList	CalList	GRank	Srank	Rplant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
<i>Collinsia corymbosa</i>	round-headed Chinese-houses	None	None	G1	S1	1B.2	April-June	Coastal Dunes	Coastal dunes from 10-30 m	Moderate
<i>Eleocharis parvula</i>	small spikerush	None	None	G5	S4	4.3	July-August	Marsh & swamp, salt marsh, wetland	In coastal salt marshes. 1-3020 m.	Moderate
<i>Erysimum menziesii</i>	Menzies' wallflower	E	E	G1	S1	1B.1	March-Sept.	Coastal dunes.	Localized on dunes and coastal strand. 0-35 m.	High
<i>Gilia capitata</i> ssp. <i>pacifica</i>	Pacific gilia	None	None	G5T3	S2	1B.2	April-August	Coastal bluff scrub, chaparral, coastal prairie, valley & foothill grassland.	5-1345 m.	Moderate
<i>Gilia millefoliata</i>	dark-eyed gilia	None	None	G2	S2	1B.2	April-July	Coastal dunes.	1-60 m.	Present
<i>Glehnia littoralis</i> ssp. <i>leiocarpa</i>	American glehnia	None	None	G5T5	S3	4.2	May-August	Coastal Dunes	0-20 m.	High
<i>Hesperis matronalis</i> var. <i>brevifolia</i>	short-leaved evax	None	None	G4T3	S2	1B.2	March-June	Coastal bluff scrub, coastal dunes, coastal prairie.	Sandy bluffs and flats. 0-215 m.	Present
<i>Hosackia gracilis</i>	harlequin lotus	None	None	G4	S3	4.2	March-July	Broadleaf upland forest, coast bluff scrub, coast prairie, coast scrub, closed-cone conifer forest, meadow, seep, marsh & swamp, N. coast conifer forest, valley & foothill grassland.	Wetlands and roadsides. 0-700 m.	Moderate
<i>Lasthenia californica</i> ssp. <i>macrantha</i>	perennial goldfields	None	None	G3T2	S2	1B.2	Jan.-Nov.	Coastal bluff scrub, coastal dunes, coastal scrub.	5-185 m.	Moderate
<i>Lathyrus japonicus</i>	seaside pea	None	None	G5	S2	2B.1	May-August	Coastal dunes.	3-65 m.	High

Scientific Name	Common Name	FedList	CalList	GRank	Srank	Rplant Rank	Bloom Period	General Habitat	Micro-Habitat	Potential of Occurrence
<i>Lathyrus palustris</i>	marsh pea	None	None	G5	S2	2B.2	March-August	Bogs & fens, lower montane conifer forest, marsh & swamp, north coast conifer forest, coastal prairie, coastal scrub.	Moist coastal areas. 2-140 m.	Moderate
<i>Layia carnosa</i>	beach layia	E	E	G2	S2	1B.1	March-July	Coastal dunes, coastal scrub.	On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-30 m.	High
<i>Montia howellii</i>	Howell's montia	None	None	G3G4	S2	2B.2	Feb.-May	Meadows and seeps, north coast coniferous forest, vernal pools.	Vernally wet sites; often on compacted soil. 10-1005 m.	Moderate
<i>Oenothera wolfii</i>	Wolf's evening-primrose	None	None	G2	S1	1B.1	May-Oct.	Coastal bluff scrub, coastal dunes, coastal prairie, low montane conifer forest.	Sandy substrates; usually mesic sites. 0-125 m.	Moderate
<i>Sidalcea malachroides</i>	maple-leaved checkerbloom	None	None	G3	S3	4.2	March-August	Broadleaf upland forest, coast prairie, coast scrub, N. coast conifer forest, riparian.	Woodlands and clearings near coast; often in disturbed areas. 0-730 m.	Moderate
<i>Sidalcea malviflora</i> ssp. <i>patula</i>	Siskiyou checkerbloom	None	None	G5T2	S2	1B.2	May-August	Coastal bluff scrub, coastal prairie, north coast conifer forest.	Open coastal forest; roadcuts. 5-1255 m.	Moderate
<i>Spergularia canadensis</i> var. <i>occidentalis</i>	western sand-spurrey	None	None	G5T4	S1	2B.1	June-August	Marshes and swamps (coastal salt marshes).	0-3 m.	Moderate

FP: fully protected

PT: proposed threatened

SSC: species of special concern

T: threatened

WL: watch list

G4S4: apparently secure

G5S5: secure

Table 4.3-4 Special-Status Animal Species with Moderate to High Potential for Occurrence within or Immediate Vicinity to Project Site

Scientific Name	Common Name	FedList	CalList	GRank	SRank	Habitats	GenHab	MicroHab	Potential of Occurrence
Amphibians									
<i>Rana aurora</i>	northern red-legged frog	None	None, SSC	G4	S3	Klamath/N. coast flowing waters, riparian forest, riparian woodland	Humid forests, woodlands, grasslands, & streamsides in NW California, usually near dense riparian cover.	Generally near permanent water, but can be found far from water, in damp woods and meadows, during non-breeding season.	High
Birds									
<i>Ardea alba</i>	great egret	None	None	G5	S4	Brackish marsh, estuary, freshwater marsh, marsh & swamp, riparian forest, wetland	Colonial nester in large trees.	Rookery sites located near marshes, tide-flats, irrigated pastures, and margins of rivers and lakes.	High
<i>Ardea herodias</i>	great blue heron	None	None	G5	S4	Brackish marsh, estuary, freshwater marsh, marsh & swamp, riparian forest, wetland	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes.	Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.	Present
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	T	None, SSC	G3T3	S2S3	Great Basin standing waters, Sand shore, Wetland	Sandy beaches, salt pond levees & shores of large alkali lakes.	Needs sandy, gravelly or friable soils for nesting.	Moderate
<i>Circus cyaneus</i>	northern harrier	None	None, SSC	G5	S3	Coastal scrub, Great Basin grassland, Marsh & swamp, Riparian scrub	Coastal salt & fresh-water marsh. Nest & forage in grasslands, from salt grass in desert sink to mountain cienegas.	Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	Present

Scientific Name	Common Name	FedList	CalList	GRank	SRank	Habitats	GenHab	MicroHab	Potential of Occurrence
<i>Egretta thula</i>	snowy egret	None	None	G5	S4	Marsh & swamp, meadow & seep, riparian forest, riparian woodland, wetland	Colonial nester, with nest sites situated in protected beds of dense tules.	Rookery sites situated close to foraging areas: marshes, tidal-flats, streams, wet meadows, and borders of lakes.	High
<i>Elanus leucurus</i>	white-tailed kite	None	None, FP	G5	S3S4	Cismontane woodland, marsh & swamp, riparian woodland, valley & foothill grassland, wetland	Rolling foothills and valley margins w/scattered oaks & river bottomlands or marshes next to deciduous woodland.	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Moderate
<i>Falco columbarius</i>	merlin	None	None, WL	G5	S3S4	Estuary, Great Basin grassland, Valley & foothill grassland	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches.	Clumps of trees or windbreaks are required for roosting in open country.	Present
<i>Falco peregrinus anatum</i>	American peregrine falcon	DL	DL, FP	G4T4	S3S4	Many open habitats, however, more likely along coastlines, lake edges, mountain edges.	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.	Present
<i>Haliaeetus leucocephalus</i>	bald eagle	DL	E, FP	G5	S3	Lower montane conifer forest, Oldgrowth	Ocean shore, lake margins, & rivers for both nesting & wintering. Most nests within 1 mi of water.	Nests in large, old-growth, or dominant live tree w/open branches, especially ponderosa pine. Roosts communally in winter.	Moderate
<i>Nycticorax nycticorax</i>	black-crowned night heron	None	None	G5	S4	Marsh & swamp, riparian forest, riparian woodland, wetland	Colonial nester, usually in trees, occasionally in tule patches.	Rookery sites located adjacent to foraging areas: lake margins, mud-bordered bays, marshy spots.	High

Scientific Name	Common Name	FedList	CalList	GRank	SRank	Habitats	GenHab	MicroHab	Potential of Occurrence
<i>Pandion haliaetus</i>	osprey	None	None, WL	G5	S4	Riparian forest	Ocean shore, bays, fresh-water lakes, and larger streams.	Large nests built in tree-tops within 15 miles of a good fish-producing body of water.	Present
<i>Pelecanus occidentalis californicus</i>	California brown pelican	DL	DL, FP	G4T3	S3	Estuaries and coastal marine habitat.	Colonial nester on coastal islands just outside the surf line.	Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.	High (flyover)
<i>Phalacrocorax auritus</i>	double-crested cormorant	None	None	G5	S4	Riparian forest, Riparian scrub, Riparian woodland	Colonial nester on coastal cliffs, offshore islands, & along lake margins in the interior of the state.	Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.	High (flyover)
<i>Poecile atricapillus</i>	black-capped chickadee	None	None, WL	G5	S3	Riparian woodland	Inhabits riparian woodlands in Del Norte and northern Humboldt counties.	Mainly found in deciduous tree-types, especially willows and alders, along large or small watercourses.	Moderate
Insects									
<i>Bombus caliginosus</i>	obscure bumble bee	None	None	G4?	S1S2	Nests underground or above ground in abandoned bird nests.	Coastal areas from Santa Barbara county to north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	High
<i>Bombus occidentalis</i>	western bumble bee	None	None	G2G3	S1	Pollinates a wide variety of flowers. Will gnaw through flowers to obtain nectar their tongues are too short to reach.	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Nest in cavities or abandoned burrows.	Moderate

Scientific Name	Common Name	FedList	CalList	GRank	SRank	Habitats	GenHab	MicroHab	Potential of Occurrence
<i>Cicindela hirticollis gravida</i>	sandy beach tiger beetle	None	None	G5T2	S2	Coastal dunes	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico.	Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.	None
Mammals									
<i>Myotis evotis</i>	long-eared myotis	None	None	G5	S3	Roosts in a wide range of substrate.	Found in all brush, woodland & forest habitats from sea level to 9000 ft. prefers coniferous woodlands & forests.	Nursery colonies in buildings, crevices, spaces under bark, & snags. Caves used primarily as night roosts.	Moderate

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

- | | | |
|--------------------------------------|---------------------------------|-----------------------|
| C: candidate | FP: fully protected | SNR: State not ranked |
| CT: candidate threatened | PT: proposed threatened | NR: not ranked |
| D: delisted | SSC: species of special concern | |
| DPS: distinct population segment | T: threatened | |
| E: endangered | WL: watch list | |
| ESU: evolutionarily significant unit | FP: fully protected | |

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

- G1S1: critically imperiled
- G2S2: imperiled
- G3S3: vulnerable
- G4S4: apparently secure
- G5S5: secure

Special-Status Wildlife

Based on review of species' life history and geographic distribution data, habitat requirements, and other available species information, several special-status wildlife species have a potential for occurrence within the project vicinity. However, site-specific investigations show that actual habitat at the project site provides low suitability for many of these species; therefore, they are not expected to be present at the site and are not considered further. Wildlife with a potential for occurrence within or near the project area, based on review of available data, are presented in Table 4.3-4 and discussed further below.

Five special-status wildlife species were observed within the study area during the 2017 and 2018 Natural Resource Assessments (SHN 2017a, SHN 2018a); osprey (*Pandion haliaetus*), American peregrine falcon (*Falco peregrinus anatum*), merlin (*Falco columbarius*), northern harrier (*Circus cyaneus*), and great blue heron (*Ardea herodias*). Eighteen species have a moderate to high potential to occur near or within the project site. For the remaining species, the study area either lacks potentially suitable habitat or may contain potential habitat, but the habitat is disturbed to the extent that the occurrence of special-status species is unlikely. Table 4.3-4 summarizes the special-status wildlife species with moderate to high potential to occur within the study area. Special-status wildlife species observed within the study area are also presented in Table 4.3-3 and are discussed in further detail following the table.

Great blue heron (*Ardea herodias*) is a bird in the Ardeidae family. It is not listed under either federal or California endangered species acts, but is considered a sensitive species by CDFW and has a heritage ranking of G5S4. This species occurs in shallow estuaries and emergent wetlands. It is less common along riverine, rocky marine shores, and pastures. The great blue heron searches for prey in shallow water and open fields. It nests in colonies in tops of secluded large snags/live trees. Within the nine-quad search, numerous Rarefind occurrences were reported, with the nearest across Humboldt Bay approximately 1.6 miles to the northeast of the study area. This species was observed within the study area to the east of Vance Avenue foraging in a man-made water feature associated with the former pulp mill.

Northern harrier (*Circus cyaneus*) is a bird in the Accipitridae family. It is not listed under either FESA or CESA, but is considered a species of special concern by CDFW and has a heritage ranking of G5S3. This species occurs in coastal scrub, Great Basin grassland, marshes, swamps, and riparian scrub. The northern harrier nests and forages in grasslands usually near wet areas, with nesting usually occurring at a marsh edge. This species feeds primarily on rodents and small birds, hunting over open areas. Within the nine-quad search, one Rarefind occurrence was reported across Humboldt Bay approximately 2.5 miles to the northeast of the study area. This species was observed hunting adjacent to the study area.

Merlin (*Falco columbarius*) is a bird in the Falconidae family. It is not listed under either FESA or CESA, but is on the CDFW watch list and has a heritage ranking of G5S3S4. This species occurs along the coast, and tidal estuaries, savannahs, edges of grasslands and deserts, farms and ranches, and within open woodlands. Clumps of trees or windbreaks are required for roosting in open country. Nesting can occur within trees, or clefts of cliffs, or on the ground in pre-existing nests. Merlins hunt small birds, large insects, and less commonly, bats. There is no Rarefind occurrence for this taxon within the nine-quad search. This species was observed hunting adjacent to the study area.

American peregrine falcon (*Falco peregrinus anatum*) is a bird in the Falconidae family. It has been delisted from both FESA and CESA, but is considered a fully protected species by CDFW and has a heritage ranking of G4T4 S3S4. This species occurs within many open habitats; however, it is more likely along coastlines, lake edges, and mountain edges. It is most common near wetlands, lakes, rivers, or other water. It often nests on cliffs, banks, dunes, and mounds; also, human-made structures, with the nest consisting of a scrape, depression, or ledge in an open area. The American peregrine falcon hunts birds, which it will surprise by diving out of the sky to capture or stun. There is no Rarefind occurrence for this taxon within the nine-quad search. This species was observed hunting adjacent to the study area.

Osprey (*Pandion haliaetus*) is a bird in the Pandionidae family. It is not listed under either FESA or CESA, but is on the CDFW watch list and has a heritage ranking of G5S4. This species occurs near rivers, lakes, and coast where large numbers of fish are present. Ospreys are most common around major coastal estuaries and salt marshes. Within the nine-quad search, numerous Rarefind occurrences were reported surrounding Humboldt Bay, with the nearest approximately 2.3 miles to the east of the study area. This species was observed nesting within the study area during the field investigations. Nesting season generally is considered to be March 15 through August 1. Three nests were observed within the study area (see Figure 4.3-1b), two of which were active nests with young observed and feeding occurring. The third nest appeared abandoned; however, it could be reused in coming nesting seasons. All three nests were atop power poles with one of the nests on a platform designed for osprey nests.

Other Raptors and Migratory Birds

Trees within the project area provide potential nest sites for common raptors that could also forage within the study area. Migratory birds also forage and nest in a variety of habitats, including landscaped and developed areas.

4.3.2 Regulatory Framework

Federal

Federal Endangered Species Act

The FESA of 1973 (16 United States Code [USC] 1531 et seq.) establishes a national policy that all federal departments and agencies provide for the conservation of threatened and endangered species and their ecosystems. The Secretary of the Interior and the Secretary of Commerce are designated in the FESA as responsible for:

1. maintaining a list of species likely to become endangered within the foreseeable future throughout all or a significant portion of its range (threatened) and that are currently in danger of extinction throughout all or a significant portion of its range (endangered);
2. carrying out programs for the conservation of these species; and
3. rendering opinions regarding the impact of proposed federal actions on listed species.

The FESA also outlines what constitutes unlawful taking, importation, sale, and possession of listed species and specifies civil and criminal penalties for unlawful activities.

Pursuant to FESA requirements, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed or proposed species may be present in the project region, and whether the proposed project would result in a “take” of such species. The FESA prohibits

“take” of a single threatened and endangered species except under certain circumstances and only with authorization from the USFWS or the NOAA Fisheries through a permit under Section 7 (for federal entities) or 10(a) (for non-federal entities) of the act. “Take” under the FESA includes activities such as, “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS regulations define harm to include “significant habitat modification or degradation.” On June 29, 1995, a U.S. Supreme Court ruling further defined harm to include habitat modification “...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA, or result in the destruction or adverse modification of critical habitat for such species (16 USC 1536[3][4]). If it is determined that a project may result in the “take” of a federally-listed species, a permit would be required under Section 7 or Section 10 of the FESA.

Clean Water Act

The Clean Water Act (CWA 1977, as amended) establishes the basic structure for regulating discharges of pollutants into waters of the U.S. It gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The CWA makes it unlawful for any person to discharge any pollutant from a point source into navigable waters, without a permit under its provisions.

Discharge of fill material into “waters of the U.S.,” including wetlands, is regulated by the USACE under Section 404 of the CWA (33 USC 1251-1376). USACE regulations implementing Section 404 define “waters of the U.S.” to include intrastate waters (such as, lakes, rivers, streams, wetlands, and natural ponds) that the use, degradation, or destruction of could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as “areas that are inundated or saturated by surface or groundwater 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” (33 Code of Federal Regulations [CFR] 328.3; 40 CFR 230.3). The placement of structures in “navigable waters of the U.S.” is also regulated by the USACE under Section 10 of the Federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are approved by USACE under standard (that is, individual) or general (that is, nationwide, programmatic, or regional) permits. The type of permit is determined by the USACE and based on project parameters.

The USACE and the EPA announced the release of the Clean Water Rule on May 27, 2015 (80 Federal Register [FR] 124: 37054-37127). The Rule is intended to ensure waters protected under the CWA are more precisely defined, more predictable, easier to understand, and consistent with the latest science. The intent is to:

1. clearly define and protect tributaries that impact the quality of downstream waters,
2. provide certainty in how far safeguards extend to nearby waters,
3. protect unique regional waters,
4. focus on streams instead of ditches,
5. maintain the status of waters associated with infrastructure (that is, sewer systems), and
6. reduce the need for case-specific analysis of all waters.

The U.S. Court of Appeals for the Sixth Circuit stayed implementation of the Clean Water Rule pending further action of the court in October 2015. In response, the USACE and EPA resumed case-by-case analysis of waters of the U.S. determinations. Implementation of the Clean Water Rule is pending ongoing litigation.

The Fish and Wildlife Coordination Act requires consultation with the USFWS, NOAA Fisheries, and responsible state wildlife agency for any federally authorized action to control or modify surface waters. Therefore, any project proposed or permitted by the USACE under the CWA Section 404 must also be reviewed by the federal wildlife agencies and CDFW.

Section 401 of the CWA requires any applicant for a federal license or permit, which involves an activity that may result in a discharge of a pollutant into waters of the U.S., obtain a certification that the discharge will comply with applicable effluent limitations and water quality standards. CWA 401 certifications are issued by Regional Water Quality Control Boards (RWQCBs) under the California Environmental Protection Agency.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. A migratory bird is defined as any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle. The MBTA prohibits the take, possession, buying, selling, purchasing, or bartering of any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21).

State

California Environmental Quality Act

CEQA requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. Lead agencies are charged with evaluating available data and determining what specifically should be considered an “adverse effect.”

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act provides for statewide coordination of water quality regulations by establishing the California State Water Resources Control Board. The State Board is the statewide authority that oversees nine separate RWQCBs that collectively oversee water quality at regional and local levels. California RWQCBs issue CWA, Section 401 Water Quality Certifications for possible pollutant discharges into waters of the U.S. or state.

State Water Resources Control Board - California Ocean Plan

The Water Quality Control Plan, Ocean Waters of California, California Ocean Plan (Ocean Plan) was adopted and has been effective since 1972 (SWRCB 2015). There have been multiple amendments of the Ocean Plan since its adoption. The following provisions of the Ocean Plan are applicable to the project:

Part III. A. 2: General Requirements For Management Of Waste Discharge To The Ocean

- a) *Waste management systems that discharge to the ocean must be designed and operated in a manner that will maintain the indigenous marine life and a healthy and diverse marine community.*

Waste discharged to the ocean must be essentially free of:

- (1) Material that is floatable or will become floatable upon discharge.*
 - (2) Settleable material or substances that may form sediments which will degrade benthic communities or other aquatic life.*
 - (3) Substances which will accumulate to toxic levels in marine waters, sediments or biota.*
 - (4) Substances that significantly decrease the natural light to benthic communities and other marine life.*
 - (5) Materials that result in aesthetically undesirable discoloration of the ocean surface.*
- b) *Waste effluents shall be discharged in a manner which provides sufficient initial dilution to minimize the concentrations of substances not removed in the treatment.*
- c) *Location of waste discharges must be determined after a detailed assessment of the oceanographic characteristics and current patterns to assure that:*
- (1) Pathogenic organisms and viruses are not present in areas where shellfish are harvested for human consumption or in areas used for swimming or other body-contact sports.*
 - (2) Natural water quality conditions are not altered in areas designated as being of special biological significance or areas that existing marine laboratories use as a source of seawater.*
 - (3) Maximum protection is provided to the marine environment. Waste that contains pathogenic organisms or viruses should be discharged a sufficient distance from shellfishing and water-contact sports areas to maintain applicable bacterial standards without disinfection. Where conditions are such that an adequate distance cannot be attained, reliable disinfection in conjunction with a reasonable separation of the discharge point from the area of use must be provided. Disinfection procedures that do not increase effluent toxicity and that constitute the least environmental and human hazard should be used.*

California Coastal Act

The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower cost visitor accommodations, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the California Coastal Commission and by local governments, pursuant to the Coastal Act.

Coastal Act Chapter 3 – Coastal Resources Planning and Management Policies

Section 30230 states that marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30233 states that the diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, limited to particular activities that include (as applicable to the proposed project) public service purposes such as burying pipes and outfall lines.

Coastal Act Section 30121 defines the term “wetland” as: [L]ands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.

California Code of Regulations Title 14 (14 CCR) establishes a “one parameter definition” that only requires evidence of a single parameter to establish wetland conditions: Wetland shall be defined as land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to, vegetated wetlands or deep-water habitats. (14 CCR Section 13577) The Commission’s one parameter definition is similar to the USFWS wetlands classification system, which states that wetlands must have one or more of the following three attributes: (1) at least periodically the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

Section 30240 states that ESHA shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts that would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

California Department of Fish and Wildlife

The CDFW enforces and permits actions regulated by the California Fish and Game Code, which governs the taking or possession of birds, mammals, fish, amphibians and reptiles, as well as natural resources, such as, wetlands and waters of the state. The code includes the CESA (Sections 2050-2115), Lake or Streambed Alteration Agreement regulations (Section 1600-1616), Native Plant Protection Act (Section 1900-1913), and Natural Community Conservation Planning (NCCP) Act (Section 2800 et seq.) as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife.

California Endangered Species Act

The CESA includes provisions for the protection and management of species listed by the State of California as endangered, threatened, or designated as candidates for such listing (California Fish and Game Code Sections 2050 through 2085). The CESA generally parallels the main provisions of the FESA and is administered by the CDFW, who maintains a list of state threatened and endangered species, as well as candidate and species of special concern. The CESA prohibits the “take” of any species listed as threatened or endangered unless authorized by the CDFW in the form of an Incidental Take Permit. Under California Fish and Game Code, “take” is defined as to “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.”

The species of special concern (SSC) are broadly defined as species that are of concern to the CDFW, because of population declines and restricted distributions and/or they are associated with habitats that are declining in California. Impacts to special-status plants and animals may be considered significant under CEQA.

State Species of Special Concern

The CDFW maintains a list of species and habitats of special concern. These are broadly defined as species that are of concern to the CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California; the criteria used to define special-status species are described by the CDFW. Impacts to special-status plants, animals, and habitats may be considered significant under CEQA.

State Species of Special Concern include those plants and wildlife species that have not been formally listed; yet are proposed or may qualify as endangered or threatened, or are candidates for such listing under the CESA. This affords protection to both listed species and species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, USFWS Birds of Conservation Concern, and CDFW special-status invertebrates are considered special-status species by CDFW. Plant species included within the CNPS Inventory of Rare and Endangered Plants (Inventory) with CRPR of 1 and 2 are also considered special-status plant species. Few Rank 3 or Rank 4 plants meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act (see below) or Sections 2062 and 2067 of the California Fish and Game Code that outlines the CESA. There are occasions where CRPR List 3 or 4 species might be considered of special-concern particularly for the type locality of a plant, for populations at the periphery of a species range, or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology.

Also under the jurisdiction of CDFW and considered sensitive are vegetation alliances with a state (S) ranking of S1 through S3 in the List of Vegetation Alliances (CDFG 2009). CDFG ranks sensitive communities as “threatened” or “very threatened” and keeps records of their occurrences in its CNDDDB.

Fully Protected Species

The California Fish and Game Code also accords “fully protected” status to a number of specifically identified fish (Section 5515), reptiles and amphibians (Section 5050), birds (Section 3511), and mammals (Section 4700). As fully protected species, the CDFW cannot authorize any project or action that would result in “take” of these species even with an incidental take permit.

Native Plant Protection Act

The CDFW administers the California Native Plant Protection Act (Sections 1900–1913 of the California Fish and Game Code). These sections allow the California Fish and Game Commission to designate rare and endangered plant species and to notify landowners of the presence of such species. Section 1907 of the California Fish and Game Code allows the commission to regulate the “taking, possession, propagation, transportation, exportation, importation, or sale of any endangered or rare native plants.” Section 1908 further directs that “[n]o person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the Commission determines to be an endangered native plant or rare native plant.”

California Species Preservation Act

The California Species Preservation Act (California Fish and Game Code Sections 900–903) includes provisions for the protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California. The administering agency is the CDFW.

Natural Community Conservation Planning Act

The CDFW is the principal state agency responsible for implementing the Natural Community Conservation Planning (NCCP) Act of 1991. The act is designed to conserve natural communities at the ecosystem scale while accommodating compatible land use. The NCCP plans developed in accordance with the act seek to ensure the long-term conservation of multiple species, while allowing for compatible and appropriate economic activity to proceed.

California Fish and Game Code–Section 3503 (Birds of Prey)

Section 3503 of the California Fish and Game Code prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the MBTA, essentially serve to protect nesting native birds of prey.

Regional and Local

Humboldt Bay Area Plan of the Local Coastal Program

Relevant natural resources protection policies from the HBAP are described below. Section 3.30 (Natural Resources Protection Policies and Standards) states in part:

30240. (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

30233. (a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division,

where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(5) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

Section 3.30(B)(1) states in part:

1. Identification of Environmentally Sensitive Habitats

a. Environmentally sensitive habitats within the Humboldt Bay Planning Area include:

(1) Wetlands and estuaries, including Humboldt Bay to the mouth of the Mad River.

2) Vegetated dunes along the North Spit to the Mad River and along the South Spit.

(3) Rivers, creeks, gulches, sloughs, and associated riparian habitats, including Mad River Slough, Ryan Slough, Eureka Slough, Freshwater Slough, Liscom Slough, Fay Slough, Elk River, Salmon Creek, and other streams.

(4) Critical habitats for rare and endangered species listed on state or federal lists.

Section 3.30(B)(6) states in part:

6. Wetland Buffer

a. No land use or development shall be permitted in areas adjacent to coastal wetlands, called Wetland Buffer Areas, which degrade the wetland or detract from the natural resource value. Wetland buffer areas shall be defined as:

(1) The area between a wetland and the nearest paved road, or the 40 foot contour line (as determined from the 7.5' USGS contour maps), whichever is the shortest distance, or,

(2) 250 feet from the wetland, where the nearest paved road or 40 foot contour exceed this distance, or

(3) Transitional Agricultural lands designated Agriculture Exclusive shall be excluded from the wetland buffer.

d. Outside an urban limit line, the setback shall be between 100 and 200 feet, depending upon the size and sensitivity of the wetland, drainage boundaries, vegetation, adjacent uses, and the potential impacts of the project on the wet habitat values. The precise width of the setback shall be sufficient to prevent significant impacts to the wetland.

e. In both urban and rural areas, setbacks of less than the distance specified above may be permitted only when the prescribed buffer would prohibit development of the site for principal use for which it is designated. Any such reduction in setback shall still retain the maximum setback feasible, and may require mitigation measures, in

addition to those specified below, to ensure new development does not adversely affect the wetland's habitat values.

f. All new development within the wetland buffer shall include the following mitigation measures:

(6) Development and construction shall minimize cut and fill operations and erosion and sedimentation potentials through construction of temporary and permanent sediment basins, sediment basins, seeding or planting bare soil, diversion of runoff away from graded areas and areas heavily used during construction, and when feasible, avoidance of grading during the rainy season (November through April).

g. The County shall request the Department of Fish and Game to review plans for development within 200 feet of the boundary of a wetland.

Section 3.30(B)(8) states in part:

8. Coastal Streams, Riparian Vegetation and Marine Resources

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Use of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Section 3.30(B)(14) states:

14. Menzies Wallflower

Adverse impacts to Menzies Wallflower shall be mitigated. If feasible, mitigation for adverse impacts to the Menzies Wallflower shall be accomplished within the dune restoration study area located south of the Coastal Dependent Industrial designation or within the proposed BLM native plant protection area. If mitigation within these areas is not feasible, an alternative mitigation program may be approved by the County and the State Coastal Commission in consultation with the Department of Fish and Game and the U.S Fish and Wildlife Service.

Humboldt County Zoning Code

The Humboldt County Zoning Code is the Implementation Program for the Humboldt County Local Coastal Program. In particular, Chapters 2 (Administration, Procedures, Amendments and Enforcement) and 3 (Regulations Inside the Coastal Zone) establish the Principal and Combining

Zones that are applied consistent with the HBAP to protect to ensure coastal access and priority coastal uses and to protect coastal resources. In particular, the “W-Coastal Wetland Areas” combining zone is applied to lands containing wetlands to provide that any development in coastal wetlands will not degrade the wetland, but will maintain optimum populations of marine or freshwater organisms and, where feasible, will enhance wetland resources. Chapter 2 contains supplemental findings (in Section 312- 39.14 Coastal Wetlands) that must be made for development to be approved on lands with the “W-Coastal Wetland Areas” combining zone.

4.3.3 Evaluation Criteria and Thresholds of Significance

For the purpose of this EIR, the evaluation criteria and significance thresholds summarized below are used to determine if the project would have a significant effect related to biological resources. According to the CEQA Guidelines Appendix G, Environmental Checklist, Section IV to determine whether impacts to biological resources are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

- a. 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?
 - Direct loss or harm of a special-status species
 - Loss or alteration of habitat that could result in the ‘take’ of a special-status species
 - Indirect disturbance (e.g., construction noise) that could disrupt essential activities (e.g., nesting) of a special-status species
- b. 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?
 - Direct removal of riparian habitat, ESHA, or other sensitive natural community (except wetlands)
 - Substantial degradation of riparian habitat, ESHA, or other sensitive natural community
 - Indirect disturbance (for example, erosion or sedimentation from construction activities) that could reduce function and value of riparian habitat, ESHA, or other sensitive natural community
- c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
 - Placement of fill in California Coastal Act wetlands, waters of the U.S., or waters of the state
 - Indirect disturbance that could substantially affect hydrology or contribute to erosion and/or negatively impact water quality of California Coastal Act wetlands, waters of the U.S., or waters of the state
- d. 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?

- Create a substantial barrier to movement resulting in loss or harm to native resident or migratory fish or wildlife species
- e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
 - Conflict with requirements of the HBAP
- f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?
 - Conflict with the provisions of an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plan.

4.3.4 Methodology

Potential impacts resulting from implementation of the project were evaluated based on field reconnaissance surveys performed by qualified biologists on March 23 and 24 and July 26, 2017, and April 11 and 17, May 31, and June 12, 2018, and a review of the following sources:

- a. Existing resource maps and aerial photographs of Fairhaven, Finntown, the town of Samoa, and the greater area
- b. Database searches for the Arcata South, Cannibal Island, McWhinney Creek, Tyee City, Arcata North, and Fields Landing U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles, which include the project site and vicinity, from the CNDDDB (CDFW 2018a), CNPS Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2018), and USFWS (USFWS 2018) databases
- c. Other available literature regarding the natural resources of the area, such as, the “List of California Vegetation Alliances, Vegetation Classification and Mapping Program” (CDFG 2009), Natural Communities–Background Information on the “List of Vegetation Alliances and Associations” (CDFW 2014), and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast (USACE 2010).

For purposes of this EIR, the analysis considered the following three principal components of the guidelines and criteria outlined above:

- a. Magnitude of the impact (for example, substantial/not substantial)
- b. Uniqueness of the affected resource (rarity)
- c. Susceptibility of the affected resource to perturbation (sensitivity)

The evaluation of significance must consider the interrelationship of these three components. For example, a relatively small magnitude impact to a state or federally listed species would be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community (such as, California annual grassland) is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact. Impacts are generally considered “less than significant” if the habitats and species affected are common and widespread in the region and the state.

4.3.5 Impact Analysis

Impact BIO-1: Would the project 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?

This impact analysis addresses CEQA Guidelines Appendix G checklist item IV.a) identified in Section 4.3.3.

Construction

Special-status Plants

The proposed project site includes active roadways, and many areas are covered with old asphalt, fractured concrete, compacted gravel on former log decks, and railroad infrastructure. Installation of the wastewater collection system is proposed to occur within the existing roadways to minimize impacts to sensitive coastal habitat, although ground disturbance may occur out to 10 feet beyond existing edge of pavement. At the WWTF site, the exact areas to be disturbed are not known at this time. It is therefore assumed that the entire area may be subject to ground disturbance, either from construction, access, and/or staging activities. The dark-eyed gilia (rare plant rank 4.2, heritage rank G5T5S3) and short-leaved evax (rare plant rank 1B.2, heritage rank G5T5S3) were the only state special-status plant species detected within the study area. Dark-eyed gilia was observed along the western side of the access road leading to the Samoa airstrip, with several individuals present directly adjacent to the road (SHN 2018a) (see Figure 4.3-1d). This road is proposed to be used to access a staging area during project construction. Short-leaved evax was observed along the eastern side of New Navy Base Road, between the roadway and Humboldt Bay, just north of the Samoa RV park and boat launch (SHN 2018a) (see Figure 4.3-1d). Construction of collection system piping is proposed to occur in this roadway. Ground disturbance related to construction activities has the potential to impact these species by direct impact from construction vehicles parking off the pavement where individuals of this species are present. Disturbance or take of special-status plant species would be a **significant** impact.

American Peregrine Falcon, Merlin, and Northern Harrier

American peregrine falcon (state Fully Protected, heritage rank G4T4S3S4), merlin (Watch List, heritage rank G5S3S4), and northern harrier (state Species of Special Concern, heritage rank G5S3) were observed foraging adjacent to the project area, and great blue heron (state Sensitive, heritage rank G5S4) was observed foraging within the project area. Suitable foraging habitat exists for these species adjacent to the project area and suitable foraging and nesting habitat exists around Humboldt Bay. If disturbed during nesting, project construction would have a **significant** impact to these species.

Osprey

Osprey (state Watch List, heritage rank G5S4) was found to have three nests (two active and one apparently abandoned) at the northern end of the project area (see Figure 4.3-1b). Osprey tend to return to the same nest year after

year. If construction were to occur within 500 feet of an active nest, construction activities could disturb or cause the osprey to abandon the nest. This would be **a significant impact**.

Marine Species

Project construction includes improvements that would connect to the existing Redwood Marine Terminal (RMT II) ocean outfall and diffuser system which is considered an outfall line per section 30233 of the Coastal Act. Project construction does not include any in-water infrastructure installation or near-water construction activities; therefore, there would be **no impact** to marine special-status species.

Operation

Project operation would collect, process, and dispose of wastewater from existing facilities (Short-Term Phase) and potential future infill development consistent with HBAP and zoning (Long-Term Phase). Operation of the improvements to the WWTF would not impact land-based special-status species (a discussion of marine impacts follows). With implementation of the improvements, there would be few changes to the operation of the Approved Samoa WWTF such that it would result in substantial impacts to special-status species. The pipelines would be underground, and neither noise nor lighting would increase to an extent that would be noticeable let alone create a substantial impact. Impacts from operation would be **less than significant**.

Currently, DG Fairhaven Power, located between Fairhaven and Samoa, discharges approximately 170,000 gallons per day (gpd) of processed water, following treatment, through the RMT II ocean outfall. The Short-Term phase would add approximately 23,000 gpd, bringing the total estimated daily flow through the outfall to approximately 193,000 gpd. The Long-Term phase would add approximately 45,000 gpd, bringing the total estimated daily flow through the outfall to approximately 237,000 gpd.

If unregulated, biological resources in the vicinity of the outfall diffuser including benthic and pelagic organisms may be impacted by changes to water quality, discharges of settleable particles or nutrients, and changes to water currents.

Increased nutrient inputs in an aquatic environment promote excessive growth of phytoplankton and macro algae which can block sunlight to submergent vegetation. Changes in naturally occurring amounts of nutrients can potentially cause blooms of toxic algae which eventually die off, then the bacteria decomposing the algae consume oxygen, reducing oxygen availability for other organisms. Offshore winds cause colder deep water to replace surface water that has been warmed by the sun. The ocean water is constantly churning underneath, bringing nutrients up to the top. Therefore, impacts to water quality may not only affect ocean floor marine organisms, but could affect surface feeding animals as well. However, the Approved Samoa WWTF would be required to obtain an NPDES permit which would specify an acceptable level of a pollutant or pollutant parameter including physical properties, solids, biologicals, and chemicals in a discharge and make sure that the state's

mandatory standards for clean water and the federal minimums are met. The NPDES permit would be required to be amended to accommodate increased flow from the project.

The anticipated effluent water quality limits, established to protect the beneficial uses of the ocean including marine habitat and fish migration, are shown in Table 4.3-5. These are the regulated standards that would be required to be met during operation, prior to discharge through the ocean outfall pipe.

The NPDES permit would require monitoring to determine compliance with established effluent limitations, establish a basis for enforcement actions, assess treatment efficiency, characterize effluents, and characterize the receiving water. The NPDES regulations require the permittee to maintain records and periodically report on monitoring activities. Because ocean outfall is regulated by existing standards established for the purpose of protecting the ocean, and the additional flow from the project would contribute a small fraction of the existing discharge and Approved Samoa WWTF discharge, the impact to the ocean environment from increased discharge from the project would be **less than significant**.

Table 4.3-5 Effluent Water Quality Limits - Approved Samoa Peninsula Wastewater Treatment Facility

Parameter	Units	Monthly Average (except where noted)	Weekly Average	Instantaneous Maximum	Source
Biochemical Oxygen Demand	mg/L ¹	30	45	NA ²	TBEL ³
Total Suspended Solids	mg/L	30	45	NA	TBEL
Grease and Oil	mg/L	25	40	75	COP 2015 ⁴
Settleable Solids	ml/L ⁵	1.0	1.5	3.0	COP 2015
Turbidity	NTU ⁶	75	100	225	COP 2015
Total Coliform	MPN/100 ml ⁷	70 ⁸	NA	230	COP 2015
pH	Units	Within limit of 6.0 to 9.0 at all times			COP 2015

1. mg/L: milligrams per liter

2. NA: not applicable

3. TBEL: technology based effluent limitations

4. California Ocean Plan, 2015. Source: Table 2 Effluent Limitations

5. ml/L: milliliters per liter

6. NTU: nephelometric turbidity units

7. MPN/100 ml: most probable number per 100 milliliters

8. Monthly median

Summary

Construction-related impacts to land-based special-status biological resources may occur and would be **significant**.

The project’s construction would not cause any impacts to the marine environment with no activities proposed within the ocean.

The project’s operational throughput (both Short-Term and Long-Term phases) would continue to be required to meet regulatory requirements of the NPDES

permit, governed by the requirements and approval of the NCRWQCB. Therefore, impacts from operation would be **less than significant**.

Significance

Significant

Mitigation

BIO-1a: Protect Nesting Birds

The PCSD shall ensure that preconstruction nesting bird surveys shall be conducted by a qualified biologist if construction begins in the breeding season (January 15 to August 31 to include raptors and all other migratory birds). Surveys are to be conducted within seven days of construction activities and repeated if construction ceases for seven days in the same location, prior to construction resuming. An area of at least 500 feet within the construction area will be surveyed for nesting birds. If active nests are found, the biologist will monitor the nest(s) and establish protective buffers (no-disturbance area around the nest) determined with consultation with CDFW and based on the nesting species, its sensitivity to disturbance, and type of and duration of disturbance expected.

Any work conducted within 500 feet of an osprey nest will either be conducted outside of the nesting season (March through August) or a qualified biologist in consultation with CDFW will observe the nests prior to the commencement of construction within the vicinity of the nests to ensure that juveniles have fledged, and that the nest is empty during construction, or determine an adequate buffer that will not impact the nest or nestlings.

BIO-1b: Protect Rare Plants during Construction

The PCSD shall protect rare plants during construction. Prior to the start of construction, where construction activities occur within close proximity (100 feet) to identified special-status plant species during preconstruction surveys, high visibility construction fencing shall be erected to establish a no-disturbance buffer that would be adequate for the protection of the plants, determined by a qualified biologist. The fencing will be checked weekly by a biological monitor to ensure its continued correct placement and stability.

After Mitigation

Less Than Significant with Mitigation

Impacts to special-status species can be minimized by mitigation measures implemented prior to and during construction by identifying the locations of natural resources and establishing and maintaining a protective buffer around them through the duration of the project activities. Minimizing the impact of construction activities by adhering to the above mitigation measures during the breeding season will prevent “take” of special-status species and avoid jeopardizing local wildlife and plant populations.

Impact BIO-2: Would the project 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?

This impact analysis addresses CEQA Guidelines Appendix G checklist item IV.b) identified in Section 4.3.3.

Construction

The following S3 communities (as assigned by CDFW) exist within the study area for this project and are considered ESHA by the California Coastal Commission: beach pine forest, salt grass flats, Pacific silverweed marshes, slough sedge swards, salt rush swales, dune mat vegetation, coastal dune willow thicket, coastal brambles vegetation, and wax myrtle scrub (SHN 2017a and SHN 2018a) (see Figures 4.3-1a, 4.3-1b, 4.3-1c, and 4.3-1d). In addition, numerous wetlands were documented throughout the study area (SHN 2017b and 2018b) (see Impact BIO-3, below, for an analysis of the project's impacts on wetlands). The project site includes active roadways, and many areas are covered with old asphalt, fractured concrete, compacted gravel on former log decks, and railroad infrastructure. Installation of the wastewater collection system is proposed to occur within the existing roadways to minimize impacts to sensitive coastal habitat, although ground disturbance may occur out to 10 feet beyond existing edge of pavement. At the WWTF site, the exact areas to be disturbed are not known at this time. It is therefore assumed that the entire area of approximately 74,000 square feet may be subject to ground disturbance, either from construction, access, and/or staging activities. The plan to limit installation of the pipelines to within the existing roadways would generally avoid ESHA. However, construction activities have the potential to impact ESHAs that are immediately adjacent to the work area where ground disturbance may occur out to 10 feet beyond existing pavement. This would be a **significant impact**.

At the Approved Samoa WWTF site, it is assumed that the entire area may be subject to ground disturbance, either from construction, access, and/or staging activities. Impacts to the special status habitats and ESHA documented at the WWTF (coastal brambles, coastal dune willow thickets, and wax myrtle scrub) would be a **significant impact**.

The ocean outfall location is not a sensitive natural community and no construction is proposed at the ocean outfall, so **no impact** would occur there.

Operation

Project operation would collect, process, and dispose of wastewater from existing facilities. Operational activities would not impact ESHAs. Long-term operations and maintenance of the collection system will take place within the paved and developed areas of the project. Operation of the project would result in **no impact**.

Summary

Direct short-term impacts to riparian habitat, ESHAs, or other sensitive natural communities may occur during project construction along roadways. Direct permanent impacts to (removal of) ESHA or other sensitive natural communities is likely at the WWTF site. This would be a **significant** impact. **No impact** would occur during operation of the Project.

Significance

Significant

Mitigation

BIO-2a: Protect ESHAs and Sensitive Natural Communities

The PCSD shall implement the following measures to protect sensitive natural communities:

- Prior to the start of construction a qualified biologist will develop and distribute educational materials to construction crews at a “tail-gate” meeting identifying sensitive natural resources within the project area. This will include (but is not limited to) hard copy information about sensitive plant community identification and defining protective buffer flagging or fencing to explain where the buffers are placed and what they are intended to protect.
- Except where direct impact (removal) is proposed at the WWTF site, establish and maintain appropriate buffers, and BMPs in accordance with Mitigation Measure HWQ-1 Manage Stormwater during Construction, for the duration of construction. Vegetation communities with a Species Heritage rarity ranking of S3 (vulnerable), S2 (imperiled), or S1 (critically imperiled), as assigned by CDFW, shall be demarcated with high visibility fencing to avoid ground disturbance. A biologist or biological monitor shall inspect the sensitive areas and the protective buffers once a week for the duration of construction to ensure the buffers and BMPs are adequately protecting the ESHA and/or Sensitive Natural Communities. Modifications to the buffers and BMPs, recommended by the Qualified Biologist, shall be implemented as soon as feasible.

BIO-2b: Replace or Restore ESHAs or Other Sensitive Natural Communities Removed during Construction

The PCSD shall prepare and implement a plan to identify and compensate for removal of ESHAs or other sensitive natural communities that cannot be avoided during construction. The Plan will include the following components, and must adequately replace habitat and be approved by the California Coastal Commission and California Department of Fish & Wildlife:

- Identify, map, and quantify the impacted ESHA and/or Sensitive Natural Community.
- Determine the appropriate replacement or restoration ratio to impact.

- Identify suitable location for creating replacement habitat or restoring a site that previously had the equivalent ESHA and/or Sensitive Natural Community.
- Determine success criteria against which the replacement/restoration site would be judged to successfully have replaced or restored the ESHA and/or Sensitive Natural Community.
- Determine appropriate ongoing monitoring for the respective ESHA and/or Sensitive Natural Community. Monitoring shall include the timing and frequency of inspections, and documentation of inspections, until it is determined the success criteria has been met.
- If during monitoring it is found that the replacement and/or restoration is not succeeding, the PCSD shall consult with California Coastal Commission and California Department of Fish & Wildlife to determine appropriate corrective actions.

*After Mitigation**Less than Significant with Mitigation*

Establishing, maintaining, and monitoring protective buffers around sensitive natural communities during construction of the project would protect the sensitive natural communities and reduce the potential indirect impact during construction to less than significant. Creating a plan to determine and implement appropriate compensatory mitigation for ESHA or other sensitive natural community (where avoidance is not possible), would reduce the impact to less than significant.

Impact BIO-3:

Would the project have a substantial adverse effect on protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

This impact analysis addresses CEQA Guidelines Appendix G checklist item IV.c) identified in Section 4.3.3.

Construction

A total of 10 USACE-jurisdictional three-parameter wetlands were delineated with an additional 36 Coastal Act-defined wetland areas having one or two parameters identified (SHN 2017b and 2018b) (see Figures 4.3-2a, 4.3-2b, 4.3-2c, and 4.3-2d). Most of these wetlands are located along the roadways. However, two wetland areas at the WWTF site may be filled (eliminated) during construction of the WWTF improvements, if not already filled by the Approved Samoa WWTF. This would be a **significant impact**. Sediment transfer from construction activities could indirectly impact roadside wetlands and violate water quality standards, which would also be a **significant impact**.

No improvements would be made to the existing ocean outfall, therefore **no impact** would occur in the ocean.

Operation

Operational activities would not impact wetlands. Long-term operations and maintenance of the collection system would take place within the paved and developed areas of the project. **No impact** to wetlands would occur from operation of the project improvements.

Summary

Two wetland areas at the WWTF site may be filled during construction of the WWTF improvements. Sediment transfer from construction activities could indirectly impact roadside wetlands and violate water quality standards. Potential impacts to wetlands would be **significant**. Project operations would not affect wetlands and would result in **no impact**.

Significance

Significant

Mitigation

BIO-3a: Protect Wetlands during Construction

Excluding wetlands that will be filled by project construction, the PCSD shall protect jurisdictional wetlands during construction. Prior to the start of construction, where construction activities occur within close proximity (100 feet) to delineated wetlands, high visibility construction fencing shall be erected to establish a no-disturbance buffer that would be adequate for the protection of the wetlands, determined by a qualified biologist. The fencing shall be checked weekly by a biological monitor to ensure its continued correct placement and stability.

BIO-3b: Create Compensatory Mitigation Wetlands

The PCSD shall avoid fill of seasonal wetlands and waters, to the extent feasible. If fill cannot be avoided, the PCSD shall compensate for the loss of seasonal wetland habitat through the creation of on-site seasonal wetlands at a ratio of 3:1, so that there is no net loss in wetlands. Required permits and approvals from the U.S. Army Corp of Engineers, the North Coast Regional Water Quality Control Board, the California Department of Fish and Wildlife, and the California Coast Commission shall be received prior to the start of any on-site construction activity. The County shall ensure any additional measures outlined in the permits are implemented.

HWQ-1: Manage Stormwater during Construction

Refer to Section 4.8 Hydrology and Water Quality for the complete description of this mitigation measure. Mitigation Measure HWQ-1 requires the PCSD to prepare a stormwater pollution prevention plan (SWPPP) specific to the project and be responsible for securing coverage under SWRCB's NPDES stormwater permit for general construction activity (Order 2009-0009-DWQ).

After Mitigation

Less than Significant with Mitigation

Avoiding wetlands where feasible through the appropriate use of BMPs, protective setbacks, and requiring the creation of replacement wetlands to be approved by the California Coastal Commission, CDFW, USACE, and RWQCB, would reduce the impact on wetlands to less than significant.

Impact BIO-4: Would the project interfere substantially with the movement of any native resident or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

This impact analysis addresses CEQA Guidelines Appendix G checklist item IV.d) identified in Section 4.3.3.

Humboldt Bay is along the Pacific Flyway and is considered an internationally important area for migratory birds by the American Bird Conservancy and the Western Hemisphere Shorebird Reserve Network. Dune forest and riparian areas around Humboldt Bay provide habitat for breeding and non-breeding migratory birds. The project area is composed of a mixture of developed and undeveloped coastal dune and wetland habitat on a narrow spit of land between Humboldt Bay and the Pacific Ocean. It is unlikely that large scale terrestrial linkages exist; however local wildlife movement corridors exist across the Samoa Peninsula and wildlife movement is expected to be concentrated along shrubby and vegetated areas including wetlands and vegetated swales. There are no identified wildlife nursery sites within the project area.

Construction

No vegetation removal would occur along the pipeline alignments. Minimal vegetation removal may occur at the pump station locations. Vegetation removal may occur at the WWTF site, which includes a mix of disturbance-adapted, primarily non-native, herbaceous species, along with some shrub-dominated areas and areas with higher native vegetation cover. Due to the disturbed and developed nature of the areas proposed for construction, impacts on the movement of wildlife or migratory corridors would be **less than significant**.

Project construction does not include any in-water infrastructure installation, equipment use, or otherwise create any barrier or impediment that would interfere with marine wildlife movement or the use of native marine wildlife nursery sites. Therefore, there would be **no impact** on the marine environment.

Operation

Project operation will not create any significant barrier that would prevent wildlife movement through the project area; there is **no impact** to avian or other wildlife movement.

Project operations would not include any in-water infrastructure installation, equipment use, or otherwise create any barrier or impediment that would interfere with marine wildlife movement or the use of native marine wildlife nursery sites. With regard to water quality in general, and its potential impact on species occurring in the vicinity of the outfall, refer to the analysis under Impact BIO-1. The impact would be **less than significant**.

Summary

Due to the disturbed and developed nature of the areas proposed for construction, impacts on the movement of wildlife or migratory corridors from construction would be **less than significant**.

Because project operations will not create any significant barrier that would prevent wildlife movement through the project area, or create any barrier or impediment that would interfere with marine wildlife movement or the use of native marine wildlife nursery sites, the impact from operations would be **less than significant**.

Significance *Less Than Significant*

Mitigation **None Required**

Impact BIO-5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

This impact analysis addresses CEQA Guidelines Appendix G checklist item IV.e) identified in Section 4.3.3.

Construction

Installation of the wastewater collection system is proposed to occur within the existing roadways to minimize impacts to sensitive coastal habitat. At the WWTF site, the exact areas to be disturbed are not known at this time. It is therefore conservatively assumed that the entire area may be subject to ground disturbance, either from construction, access, and/or staging activities. Wetlands and other ESHAs may be subject to potential disturbance and/or removal (especially at the WWTF site), which would conflict with HBAP Section 3.30(B)(6) which requires establishment of buffers between development and wetlands, as described in the regulatory framework section 4.3.2, above.

Operation

Operation and maintenance would be consistent with local policies and ordinances protecting natural resources. **No impact** would occur.

Significance *Significant*

Mitigation **BIO-2a: Protect ESHAs and Sensitive Natural Communities**

See Impact BIO-2, above, for the complete description of this mitigation measure.

BIO-2b: Replace or Restore ESHAs or Other Sensitive Natural Communities Removed during Construction

See Impact BIO-2, above, for the complete description of this mitigation measure.

BIO-3a: Protect Wetlands during Construction

See Impact BIO-3, above, for the complete description of this mitigation measure.

BIO-3b: Create Compensatory Mitigation Wetlands

See Impact BIO-3, above, for the complete description of this mitigation measure.

HWQ-1: Manage Stormwater during Construction

Refer to Section 4.8 Hydrology and Water Quality for the complete description of this mitigation measure.

After Mitigation *Less than Significant with Mitigation*

By adhering to the HBAP of the Humboldt County Local Coastal Program to the degree possible as it pertains to protection of biological resources (Section 3.30), and through implementation of Mitigation Measures BIO-2a, BIO-2b, BIO-3a, BIO-3b, and HWQ-1, the project’s conflict with the HBAP would be reduced to less than significant.

Impact BIO-6: Would the project conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan?

This impact analysis addresses CEQA Guidelines Appendix G checklist item IV.f) identified in Section 4.3.3.

The proposed project is not located within the boundaries of an adopted habitat conservation plan; natural community conservation plan; or other approved local, regional, or state habitat conservation plan. As such, the project would not conflict with the provisions of an adopted habitat conservation plan. **No impact** would occur.

Significance *No Impact*

Mitigation **None Required**

4.3.6 Cumulative Impacts

Impact BIO-C-1: Would the project result in a cumulatively considerable contribution to cumulative impacts related to biological resources?

Known projects that may, or are currently proposed to occur in the area of the proposed project, consist of the Coast Seafoods onshore shellfish hatchery and the Samoa Townsite Master Plan (STMP) project in Samoa.

The Coast Seafoods proposed project (Coastal Development Plan [CDP] 9-16-0033) would construct and operate an onshore shellfish hatchery at the RMT II facility. If this project was developed at a future date, its development would be on a site that has been historically developed for commercial and industrial uses, and implementation of the project is not expected to have significant impact on biological resources. Discharge of any wastewater from the facility would only be allowed through other regulatory permits developed specifically for that project. Details of this project are not known at this time, and future

analysis of this project would be required through other CEQA documents and associated regulatory permits.

The Humboldt County Planning Commission has approved the Samoa Pacific Group, LLC Coastal Development Permit, Conditional Use Permit, and Planned Development Permit for activities related to the STMP. Those activities include:

- reconstruction and sections of new construction for Vance Avenue from the north end of Samoa near Cookhouse Road southerly to the south end of the Samoa Pacific Group property. The work will include sidewalk construction, shoulder widening and installation of underground utilities;
- development of an 80-unit affordable housing project which includes ten buildings, including a community building with kitchen, office and meeting room;
- construction of a water storage tank for domestic water and fire suppression for Samoa; and
- construction of a new wastewater treatment and effluent disposal system for the town of Samoa (construction will be the first phase of a system that will be enlarged incrementally as new development progresses in Samoa).

The proposed development activities of the STMP project have been previously analyzed by separate CEQA documentation and approvals issued by Humboldt County. While these developments may have the potential to impact biological resources, implementation of site specific mitigation measures for this project have been developed to reduce impacts to less than significant levels.

When evaluating the proposed project, in light of the other approved and known potential projects in the immediate vicinity, the proposed project is not anticipated to contribute to a cumulatively considerable impact to biological resources. This is because the other projects impacts have been fully evaluated and mitigated to less than significant.

While the proposed project could impact biological resources, the implementation of uniform development standards from federal, state and local plans, policies and regulations, in addition to project specific mitigation measures would result in biological impacts being avoided, minimized and otherwise reduced to a less than significant level and the project's contribution to the cumulative impact would not be considerable.

Significance *Less Than Cumulatively Considerable (Less than Significant)*

Mitigation **None Required**

4.3.7 References

CDFW. 2014. Natural Communities – Background Information on the List of Vegetation Alliances and Associations. Website:

http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_background.asp. Accessed May 1, 2018.

- CDFW. 2017. State of the California North Coast: Summary of Findings from Baseline Monitoring of Marine Protected Areas, 2013–2017. California Department of Fish and Wildlife, California Ocean Science Trust, and California Ocean Protection Council, California, USA. November.
- CDFW. 2018a. California Natural Diversity Database (CNDDDB), Eureka, Arcata South, Cannibal Island, McWhinney Creek, Tyee City, Arcata North, and Fields Landing USGS Quads. Accessed April 30, 2018.
- CDFW. 2018b. Vegetation Classification and Mapping Program. Website: <https://www.wildlife.ca.gov/Data/VegCamp>. Accessed October 30, 2018.
- CNPS. 2018. Electronic Inventory of Rare and Endangered Vascular Plants of California. Website: <http://rareplants.cnps.org/>. Accessed April 30, 2018.
- Environmental Protection Agency. 2018. Regulation 40 CFR part 133. Website: <https://www.epa.gov/laws-regulations/regulations>. Accessed August 8, 2018.
- Humboldt County. 2014. Humboldt County General Plan Volume II, Humboldt Bay Area Plan of the Humboldt County Local Coastal Program. December.
- Humboldt County. 2017. Humboldt County General Plan for the Areas Outside the Coastal Zone. October 23.
- Humboldt County. 2018. Humboldt County Zoning Code. Website: <https://humboldt.county.codes/Code/31>. Accessed August 15, 2018.
- NatureServe. 2009. NatureServe Conservation Status Assessments: Methodology for Assigning Ranks. Website: <http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=235EFD78A62B9D24FB82C7053477391C?doi=10.1.1.177.4281&rep=rep1&type=pdf>. Accessed August 14, 2018.
- NOAA. 2018. Eureka Station Climate Report. Website: <https://w2.weather.gov/climate/index.php?wfo=eka>. Accessed August 16, 2018.
- Sawyer, J.O., T. Keeler-Wolf, and J. Evans. 2009. A Manual of California Vegetation, 2nd edition. Sacramento, CA:CNPS Press.
- SHN. 2016. Infrastructure Needs and Reuse on the Samoa Peninsula, Redwood Marine Terminal II. February 2016.
- SHN. 2017a. Natural Resources Assessment, RMT II Samoa Effluent Pipeline Project, Samoa, California. March 2017.
- SHN. 2017b. Wetland Delineation, RMT II Samoa Effluent Pipeline, Samoa, California. September 2017.
- SHN. 2018a. Natural Resources Assessment, Samoa Peninsula Wastewater Project, Samoa, California. August 2018.
- SHN. 2018b. Wetland and Other Waters Delineation Report, Samoa Peninsula Wastewater Project, Samoa Peninsula Community Services District. August 2018.
- SWRCB. 2015. Water Quality Control Plan, Ocean Waters of California. California Environmental Protection Agency.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast, U.S. Army Corps of Engineers. J.S. Wakeley, R.W. Lichvar, and C.V. Noble (eds) ERDC/EL TR-08-03. Vicksburg, MS: USACE Research and development Center USFWS. 2018. Information, Planning, and Conservation System (IPAC),

“Trust Resources List.” Washington D.C.: USFWS. Website:
<http://ecos.fws.gov/ipac/location/index>. Accessed April 30, 2018.



EXPLANATION	
	STUDY AREA
	COASTAL BRAMBLES
	COASTAL DUNE WILLOW THICKETS
	COYOTE BRUSH SCRUB
	LANDSCAPING
	WASTEWATER TREATMENT POND
	WAX MYRTLE SCRUB

<p>Paper Size ANSI B</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>			<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Vegetation Communities - Approved Samoa WWTF Site to Manhole 5</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p> <p>FIGURE 4.3-1a</p> <p><small>Data source: Created by SHN: hhummel</small></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	---------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------

This page intentionally left blank

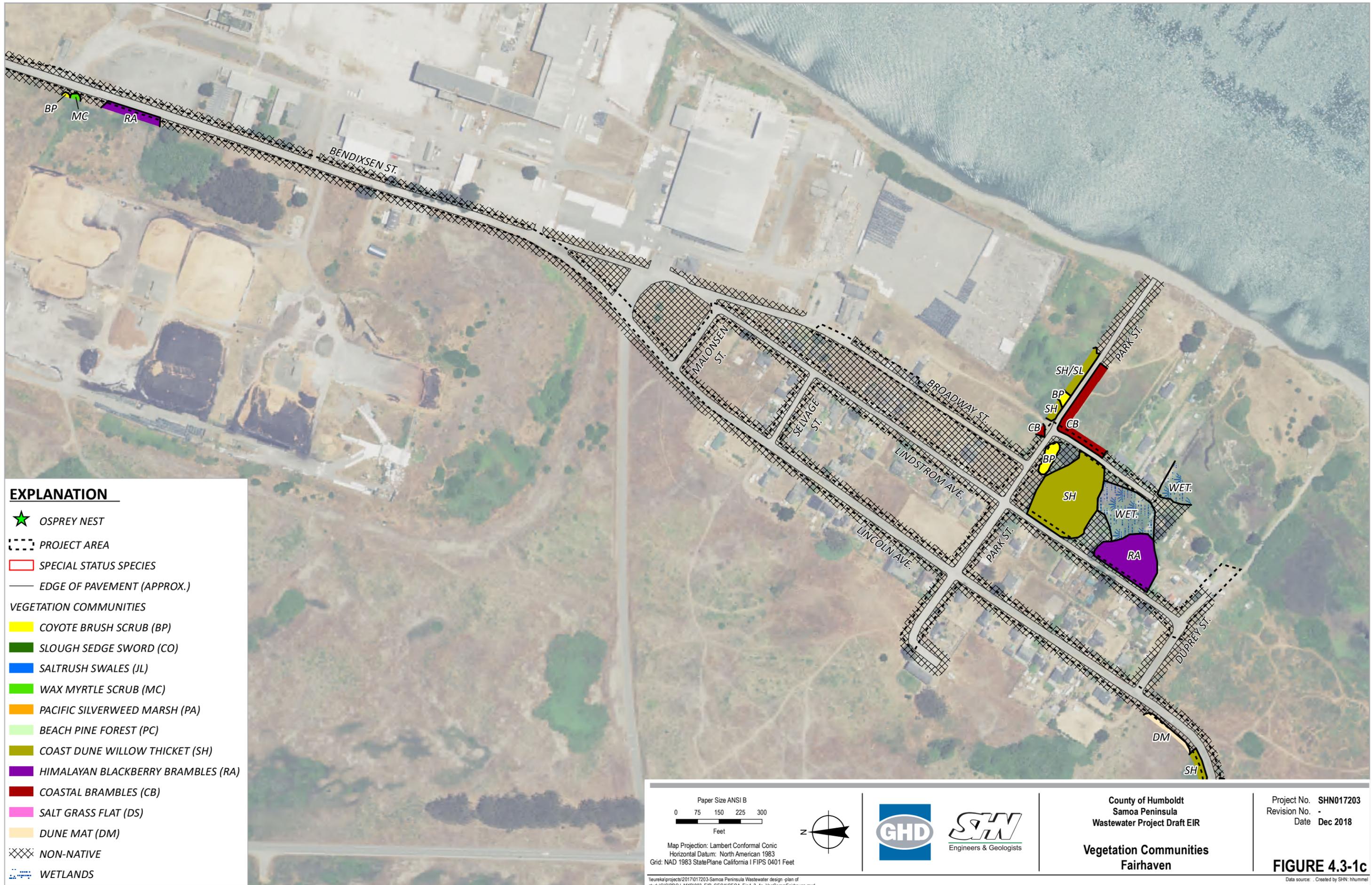


EXPLANATION

- OSPREY NEST
- PROJECT BOUNDARY
- SPECIAL STATUS SPECIES
- EDGE OF PAVEMENT (APPROX.)
- VEGETATION COMMUNITIES**
- COYOTE BRUSH SCRUB (BP)
- SLOUGH SEDGE SWORD (CO)
- SALTRUSH SWALES (JL)
- WAX MYRTLE SCRUB (MC)
- PACIFIC SILVERWEED MARSH (PA)
- BEACH PINE FOREST (PC)
- COAST DUNE WILLOW THICKET (SH)
- HIMALAYAN BLACKBERRY BRAMBLES (RA)
- COASTAL BRAMBLES (CB)
- SALT GRASS FLAT (DS)
- DUNE MAT (DM)
- NON-NATIVE
- WETLANDS

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>				<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Vegetation Communities Finntown</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p>
<p>Figure 4.3-1b</p>				<p>FIGURE 4.3-1b</p> <p><small>Data source: Created by SHN: hhumme</small></p>	

This page intentionally left blank



EXPLANATION

- ★ OSPREY NEST
- PROJECT AREA
- SPECIAL STATUS SPECIES
- EDGE OF PAVEMENT (APPROX.)
- VEGETATION COMMUNITIES**
- COYOTE BRUSH SCRUB (BP)
- SLOUGH SEDGE SWORD (CO)
- SALTRUSH SWALES (JL)
- WAX MYRTLE SCRUB (MC)
- PACIFIC SILVERWEED MARSH (PA)
- BEACH PINE FOREST (PC)
- COAST DUNE WILLOW THICKET (SH)
- HIMALAYAN BLACKBERRY BRAMBLES (RA)
- COASTAL BRAMBLES (CB)
- SALT GRASS FLAT (DS)
- DUNE MAT (DM)
- XXXX NON-NATIVE
- WETLANDS

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>			<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Vegetation Communities Fairhaven</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p>
<p>FIGURE 4.3-1c</p> <p><small>Data source: Created by SHN: hhumme</small></p>				

This page intentionally left blank



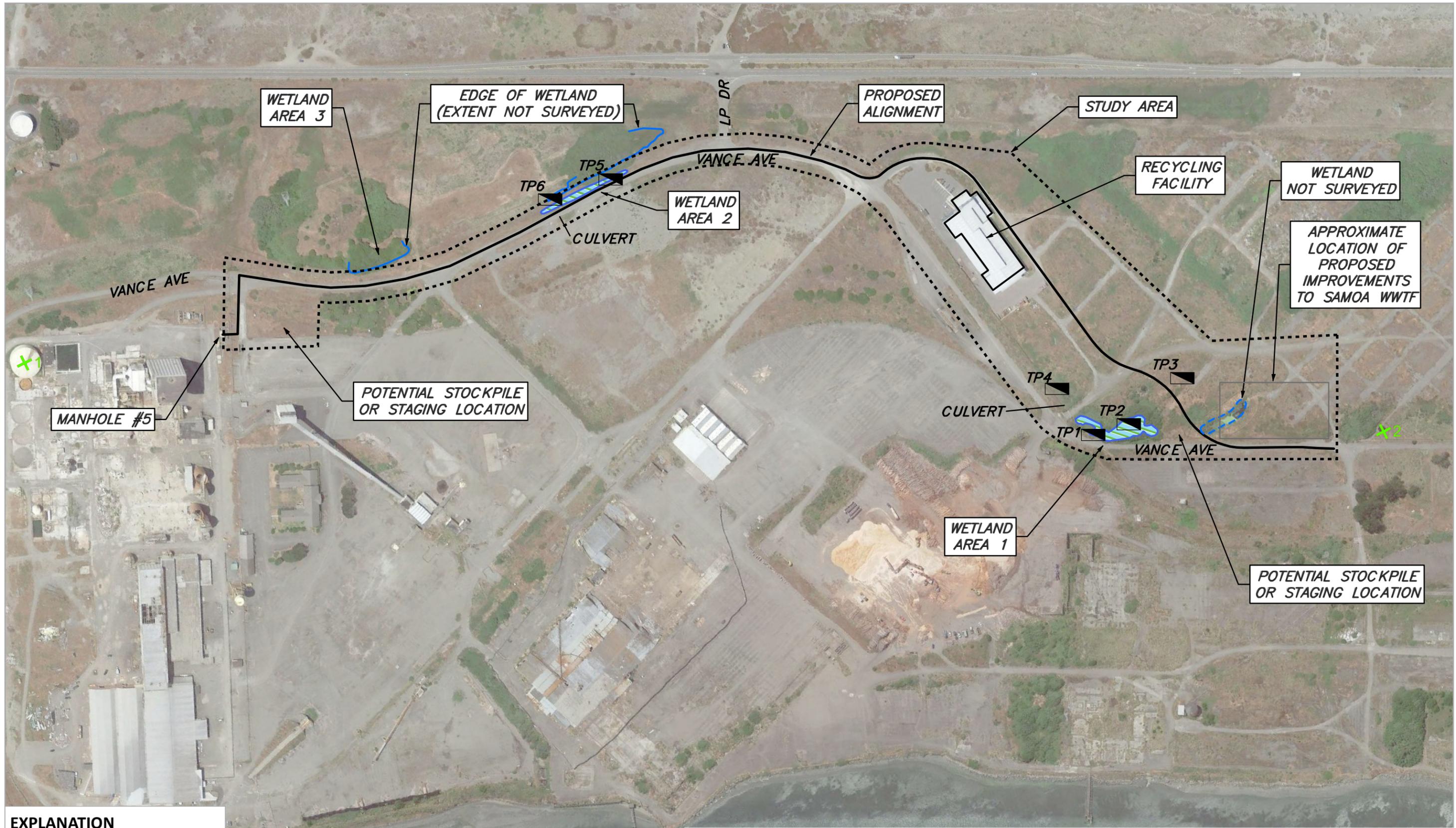
EXPLANATION

- ★ OSPREY NEST
- PROJECT BOUNDARY
- SPECIAL STATUS SPECIES
- EDGE OF PAVEMENT (APPROX.)
- VEGETATION COMMUNITIES**
- COYOTE BRUSH SCRUB (BP)
- SLOUGH SEDGE SWORD (CO)
- SALTRUSH SWALES (JL)
- WAX MYRTLE SCRUB (MC)
- PACIFIC SILVERWEED MARSH (PA)
- BEACH PINE FOREST (PC)
- COAST DUNE WILLOW THICKET (SH)
- HIMALAYAN BLACKBERRY BRAMBLES (RA)
- COASTAL BRAMBLES (CB)
- SALT GRASS FLAT (DS)
- DUNE MAT (DM)
- XXXX NON-NATIVE
- WETLANDS

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>			<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Vegetation Communities - South New Navy Base Road</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p>
<p>FIGURE 4.3-1d</p>				<p>Data source: Created by SHN: hhummel</p>

\\eureka\projects\2017\017203-Samoa Peninsula Wastewater design -plan of study\GIS\PROJ_MXD\003_EIR_CEQ\CEQA_Fig4.3_1d_VegCommStHNewNavyBaseRd.mxd
Print date: 20 Dec 2018 - 13:15

This page intentionally left blank



EXPLANATION

	Study Area
	Effluent Pipeline
	Wetland Test Pit
	Wetland
	Wetland (Extent Not Surveyed)

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>		 	<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Wetland Delineation - Approved Samoa WWTF Site to Manhole 5</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p>
			<p>FIGURE 4.3-2a</p> <p><small>Data source: Created by SHN; jsousa</small></p>	

This page intentionally left blank



EXPLANATION

--- Project Boundary

● Test Pit Location

Wetlands

— 3-Parameter

— 2-Parameter

— 1-Parameter

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>		<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Wetland Delineation - Finntown</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p> <p>FIGURE 4.3-2b</p> <p><small>Data source: Created by SHN: hhumel</small></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	---------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------

\\leureka\projects\2017\017203-Samoa Peninsula Wastewater design-plan of study\GIS\PROJ_MXD\003_EIR_CEQ\CEQA\Fig4_3_2b_DelineatedWetlandsFinntown.mxd
Print date: 20 Dec 2018 - 13:15

This page intentionally left blank



EXPLANATION

--- Project Boundary

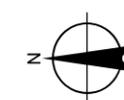
● Test Pit Location

Wetlands

— 3-Parameter

— 2-Parameter

— 1-Parameter

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>	  	<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Wetland Delineation - Fairhaven</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p> <p>FIGURE 4.3-2c</p> <p><small>Data source: Created by SHN: hhummel</small></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------

\\ureka\projects\2017\017203-Samoa Peninsula Wastewater design -plan of study\GIS\PROJ_MXD\003_EIR_CEO\CEQA_Fig4_3_2c_DelineatedWetlandsFairhaven.mxd
Print date: 20 Dec 2018 - 13:15

This page intentionally left blank



EXPLANATION

--- Project Boundary

● Test Pit Location

Wetlands

— 3-Parameter

— 2-Parameter

— 1-Parameter

<p>Paper Size ANSI B</p> <p>0 75 150 225 300</p> <p>Feet</p> <p>Map Projection: Lambert Conformal Conic Horizontal Datum: North American 1983 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet</p>			<p>County of Humboldt Samoa Peninsula Wastewater Project Draft EIR</p> <p>Wetland Delineation - South New Navy Base Road</p>	<p>Project No. SHN017203 Revision No. - Date Dec 2018</p> <p>FIGURE 4.3-2d</p> <p><small>Data source: Created by SHN: hhummel</small></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	-------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------

This page intentionally left blank