CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
1385 EIGHTH STREET, SUITE 130
ARCATA, CA 95521
VOICE (707) 826-8950
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F10a

1-20-0216 (CITY OF POINT ARENA)

FEBRUARY 12, 2021

EXHIBITS

Exhibit 1 – Regional Location
Exhibit 2 – Vicinity Map
Exhibit 3 – Project Plans
Exhibit 4 – Bio-retention Detail
Exhibit 5 – Wetland and Other Waters Delineation (excerpts)
Exhibit 6 – Point Arena Mountain Beaver Habitat Assessment and Survey, and Biological Report (PAMB) (excerpts)
Exhibit 7 – Area of Willow Removal


HUMBOLDT
PACIFIC
OCEAN
Rockport
Westport
Ten Mile R
MENDOCINO
City of Fort Bragg
Noyo R
Town of Mendocino
Big R
Albion
Albion R
Navarro R
Garcia R
Pt. Arena
Manchester - Point Arena Rancheria
City of Point Arena
Approximate Project Location
EXHIBIT NO. 1
CDP Application No.
1-20-0216 (Point Arena)
REGIONAL LOCATION

EXHIBIT NO. 2

CDP Application No.
1-20-0216 (Point Arena)
VICINITY MAP

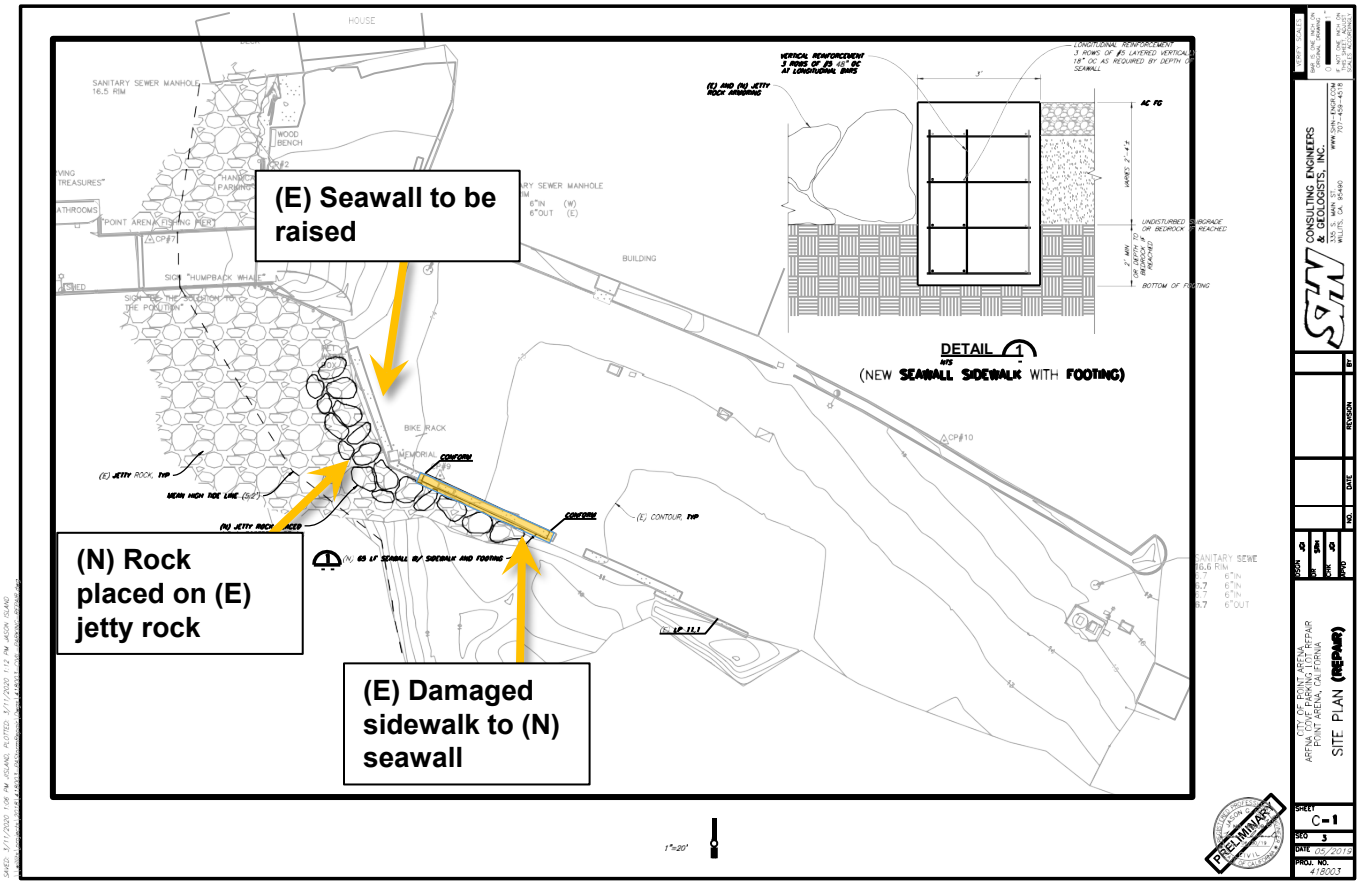


EXHIBIT NO. 3

CDP Application No.
1-20-0216 (Point Arena)
PROJECT PLANS (1 of 3)

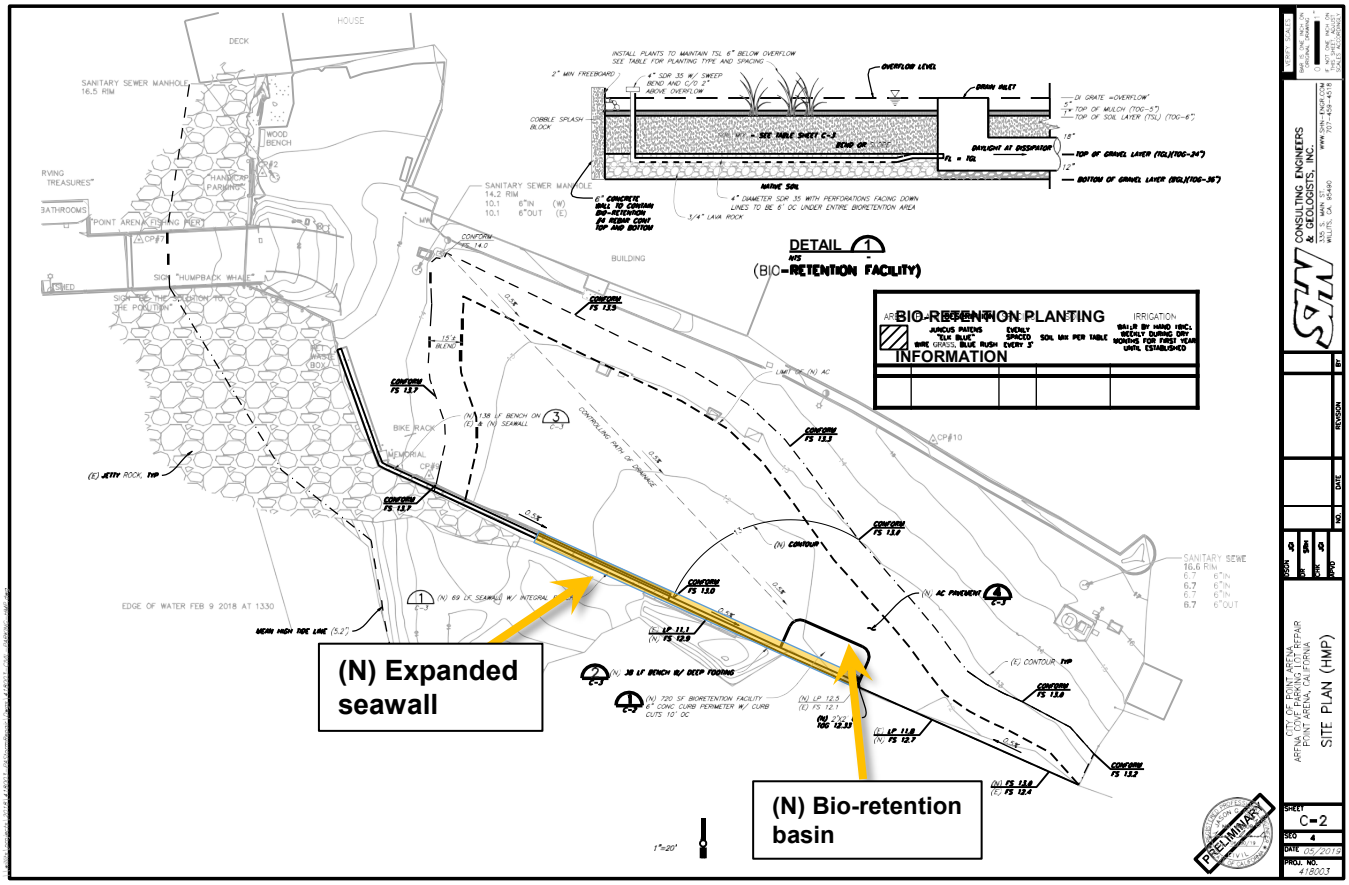
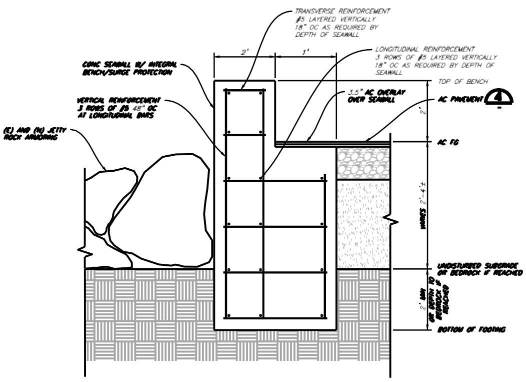
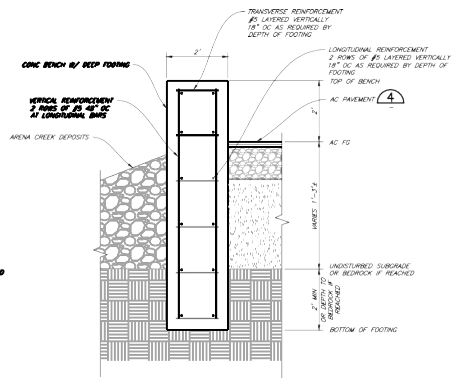


EXHIBIT NO. 3

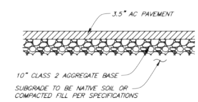
CDP Application No.
1-20-0216 (Point Arena)
PROJECT PLANS (2 of 3)



DETAIL 1
NTS
(NEW SEAWALL WITH INTEGRAL BENCH)



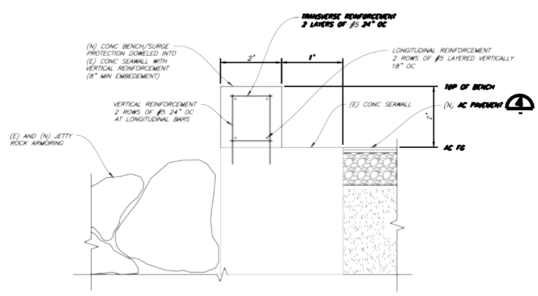
DETAIL 2
NTS
(NEW BENCH WITH DEEP FOOTING)



DETAIL 4
NTS
(AC PAVING)

BIO-RETENTION SOIL SPECIFICATIONS

PARAMETER	RANGE	REPORTED AS (UNITS)
ORGANIC MATTER CONTENT	35-75	% DRY WEIGHT BASIS
CARBON TO NITROGEN RATIO	15:1 TO 25:1	RATIO
MATURITY (SEED EMERGENCE AND SEEDING VIGOR)	>80	AVERAGE % OF CONTROL
STABILITY (CO_2 EVOLUTION RATE)	<8	mg CO_2 -C/g UNIT OM/DAY
SOLUBLE SALTS (SALINITY)	<6.0	mmhos/cm
PH	6.5-8.0 MAY VARY W/ PLANT SPECIES	UNITS
HEAVY METALS CONTENT	PASS	PASS/FAIL US EPA CLASS A STD 40 CFR § 503.13 TABLES 1 & 3
PATHOGENS		
FECAL COLIFORM	PASS	PASS/FAIL US EPA CLASS A STD 40 CFR § 503.32(A) LEVELS
SALMONELLA	PASS	PASS/FAIL US EPA CLASS A STD 40 CFR § 503.32(A) LEVELS
NUTRIENT CONTENT (PROVIDE ANALYSIS INCLUDING):		
TOTAL NITROGEN (N)	>0.9	%
TOTAL BORON (B)	<80	PPM
CALCIUM (Ca)	FOR INFO ONLY	%
SODIUM (Na)	FOR INFO ONLY	%
MAGNESIUM (Mg)	FOR INFO ONLY	%
SULFUR (S)	FOR INFO ONLY	%

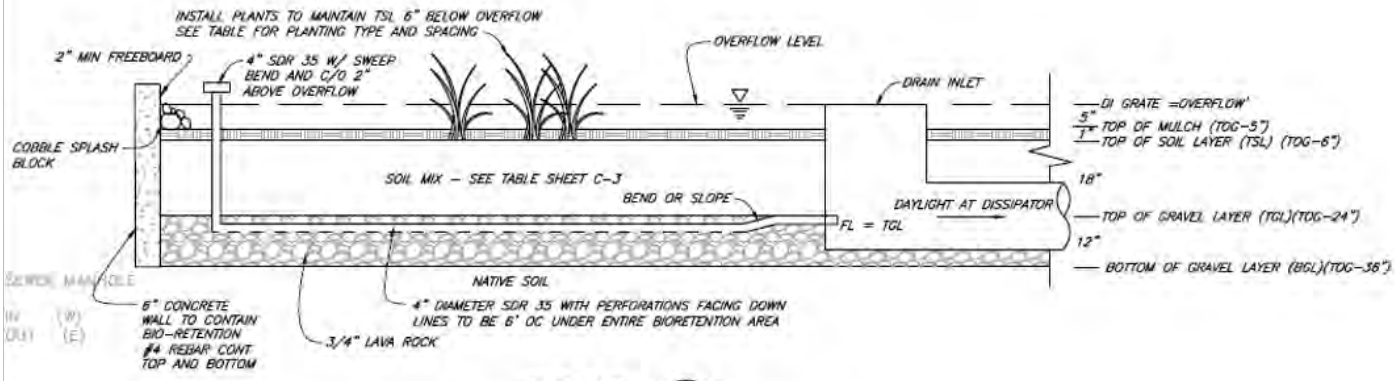


DETAIL 3
NTS
(NEW BENCH ON EXISTING SEAWALL)

SHN CONSULTING ENGINEERS & GEOLOGISTS, INC.
CITY OF POINT ARENA
ARENA COVE PARKING LOT REPAIR
POINT ARENA, CALIFORNIA
DETAILS (HMP)
SHEET C-3
SEQ 6
DATE 05/2019
PROJ. NO. 418003
PRELIMINARY

EXHIBIT NO. 3

CDP Application No.
1-20-0216 (Point Arena)
PROJECT PLANS (3 of 3)



DETAIL 1

NTS

(BIO-RETENTION FACILITY)

BIO-RETENTION PLANTING INFORMATION

AREA	PLANT DESCRIPTION	SPACING	SOIL	IRRIGATION
	JUNCUS PATENS "ELK BLUE" WIRE GRASS, BLUE RUSH	EVENLY SPACED EVERY 3'	SOIL MIX PER TABLE	WATER BY HAND TWICE WEEKLY DURING DRY MONTHS FOR FIRST YEAR UNTIL ESTABLISHED

EXHIBIT NO. 4

CDP Application No.
1-20-0216 (Point Arena)
BIO-RETENTION DETAIL

Wetland and Other Waters Delineation

Assessor's Parcel Number 027-041-41-00
Point Arena, California

Prepared for:

City of Point Arena

SHN

February 2020
418003

EXHIBIT NO. 5

CDP Application No.
1-20-0216 (Point Arena)
WETLANDS (page 1 of 26)

Reference: 418003

Wetland and Other Waters Delineation

Assessor's Parcel Number 027-041-41-00

Point Arena, California

Prepared for:
City of Point Arena

Prepared by:

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

February 2020

QA/QC:SJP

\\willits\projects\2018\418003-PAStormRepair\PUBS\rpts\20200218-WetlndDelin.doc

EXHIBIT NO. 5

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Appendices

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List of Illustrations

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Abbreviations and Acronyms

ft	feet
APN	Assessor's parcel number
CCA	California Coastal Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDEC	California Data Exchange Center
CFR	Code of Federal Regulations
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
ERDC/CRREL	United States Army Engineer Research and Development Center/Cold Regions Research and Engineering Laboratory
FAC	facultative wetland plant species
FACU	facultative-upland plant species
FACW	facultative-wet wetland plant species
FWS	United States Fish & Wildlife Service
LCP	Local Coastal Program
M2USN	Regularly flooded marine intertidal wetland with unconsolidated bottom
NGTOC	National Geospatial Technical Operations Center
NL	not listed wetland plant species
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OBL	obligate wetland plant species
OHWM	Ordinary High Water Mark
PSS1C	Palustrine broad-leaved deciduous scrub shrub seasonally saturated
Redox	redoximorphic
RWQCB	Regional Water Quality Control Board
SWRCB	State Water Resources Control Board
TP	test pit
UPL	upland plant species
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Survey
WDR	waste discharge requirement
WETS	Climate Analysis for Wetlands Tables
WoS	waters of the State
WoUS	waters of the United States

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1.0 Introduction

SHN has prepared this wetland and other waters delineation for the Arena Cove parking lot repair project in Point Arena, California (Figure 1). The project occurs on city-owned property within a 2.1-acre parcel containing pier facilities, a restaurant, and store building, as well as a large parking lot which occupies over half of the parcel. The parking lot and study area exist immediately east of the active surf line between 6 and 10 feet above the mean high tide line and immediately north of the outlet of Arena Creek (Figure 2 and Appendix 1, Photos 1 and 2). Fieldwork was performed by an SHN soil scientist with eight years of wetland delineation experience and an SHN wetland ecologist with five years of wetland delineation experience.

1.1 Purpose

The purpose of this report is to identify wetlands and other waters of the United States (WoUS) and State (WoS) at the project site, as defined by the United States Army Corps of Engineers (USACE) three-parameter methodology and Ordinary High Water Mark (OHWM) methodology. Additionally, the site is within the coastal zone, requiring conformance to the California Coastal Commission's (CCC) one-parameter wetland definition. The delineation of these features will help determine setbacks and potential impacts to one and three-parameter wetland areas occurring within the vicinity of the proposed project and will aid in project permitting and reducing impacts to these wetland resources.

1.2 Project Location

The project is located at 810 Port Road within the city limits of the City of Point Arena, California (Figure 1) The project area is located within the United States Geological Survey (USGS) Point Arena 7.5-minute Quadrangle (USGS, 2020); Township 12 north, Range 17 east, Section 11, Mount Diablo Meridian. The Assessor's parcel number (APN) is 027-041-41-00 with a total area of 2.1 acres, however the study area occupied approximately 4 acres (Figure 2), which includes the parking lot (area of direct effects) and a 100-foot buffer around the parking lot. A large portion of the study area included paved parking lot, existing structures, and other developed surfaces; therefore, the focus of this study is along the southern and eastern portion of the study area that includes Arena Creek, riparian woodland, and a small open field. Work for the project will be conducted within the footprint of the existing paved parking lot, with the majority of the work occurring in the southern portion of the parking lot for the construction of a seawall for flood control (Appendix 1, Photos 1 and 2). To the north of the study area are open grasslands of the Point Arena-Stornetta public lands on an elevated terrace above the study area. To the west lies the Pacific Ocean and the inlet of Arena Cove, south of the project site is open private grassland and coastal bluffs, and east of the project site is the Arena Creek Canyon, with the City of Point Arena approximately 4,000 feet east.

2.0 Project Description

The parking lot serving the Point Arena pier was damaged by a January 15, 2016 storm that produced unusually large waves. As a result of the storm, the parking lot with an integral seawall, the flanking jetty rock, and adjacent rock cobble shoulder were damaged. Jetty rock acts as the primary swell energy dissipater which protects the parking lot and adjacent structures from storm damage. Storm waves moved the jetty rock surrounding the pier and re-distributed it away from the parking area out into the ocean. The concrete seawall that acts as a second line of defense against storm damage was also compromised. Much of the seawall was either cracked, or in some locations, completely separated from its location and lifted up onto the adjacent parking lot. A rock cobble shoulder that separates Arena Creek from the parking lot was pushed up on the parking lot at a low point, allowing Arena Creek to inundate the parking lot and deposit debris.

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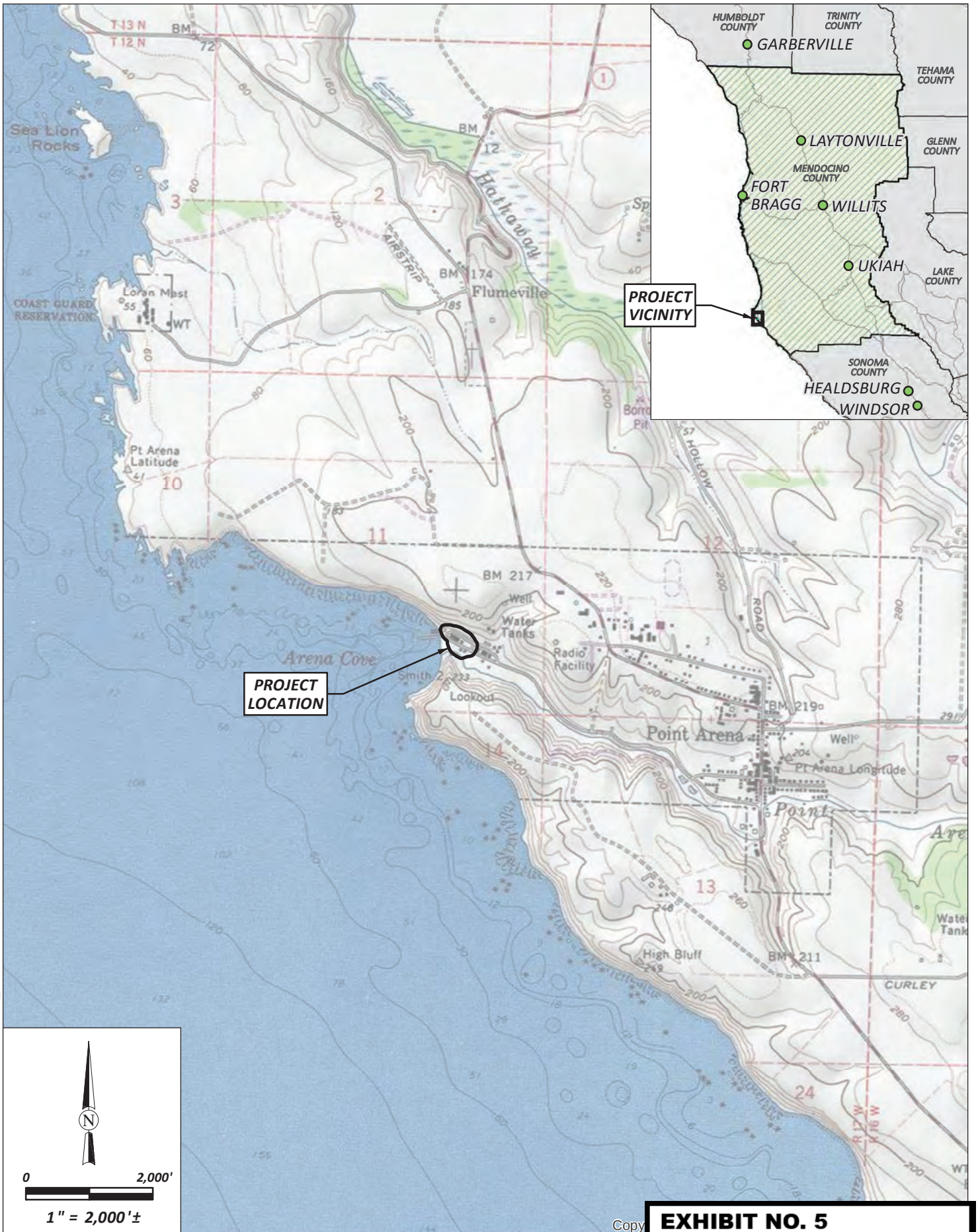

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City of Point Arena
Wetland & Other Waters Delineation
Point Arena, California

February 2020 | WD_Fig1_ProjectLocation

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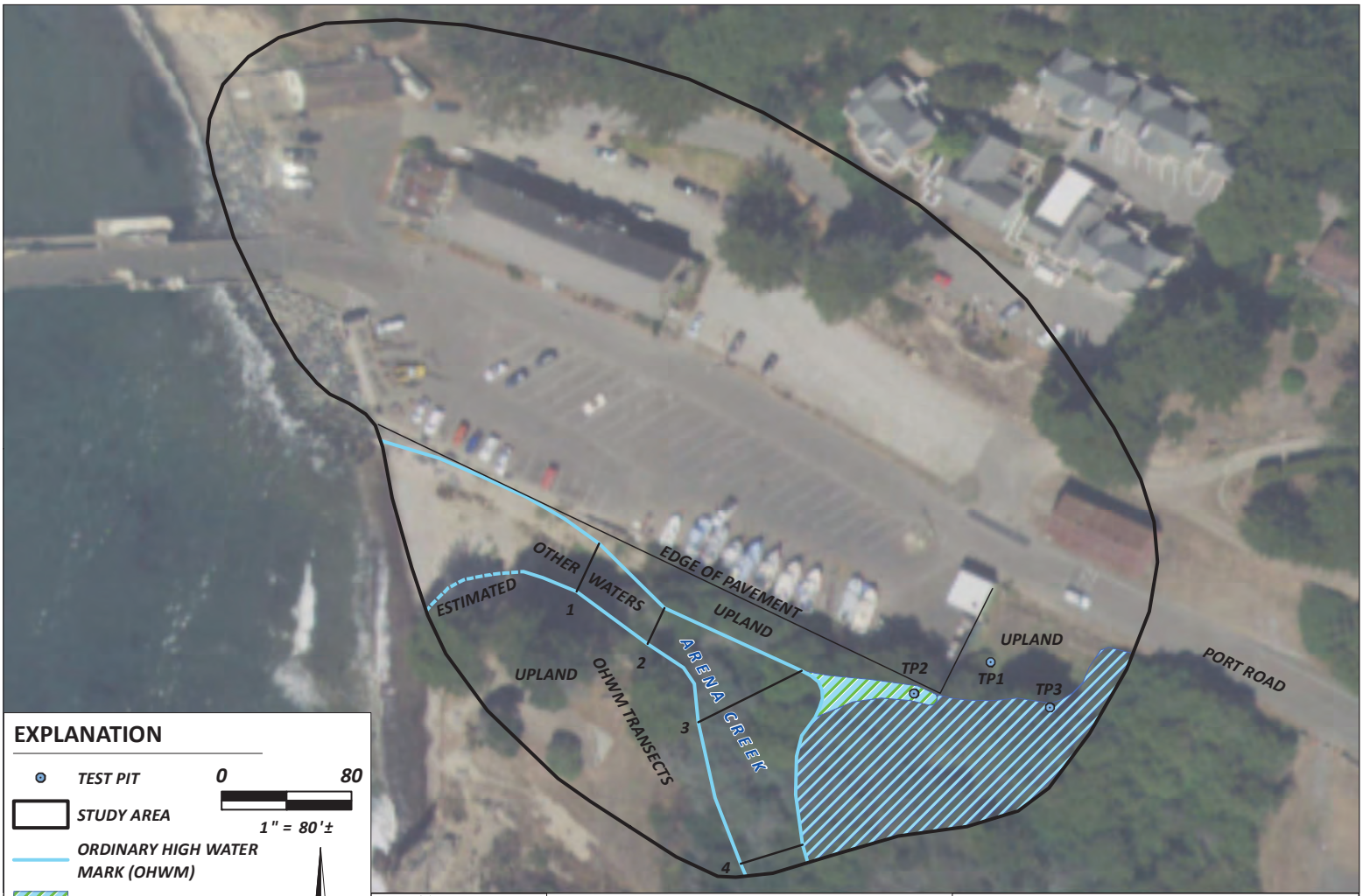

SHN	City of Point Arena Wetland & Other Waters Delineation Point Arena, California	Wetland & Other Waters Map SHN 418003
	February 2020 | WD_Fig2_WetlandAndOtherWaters	Figure 2

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The existing jetty rock will be augmented with additional jetty rock. The jetty rock will be strategically placed within the footprint of the existing jetty rock using land-based equipment. In addition, the proposed repair project includes the replacement of 65 linear feet of damaged seawall with a new reinforced concrete seawall with sidewalk and footing. In addition, a portion of the existing parking lot will be raised and the seawall along the south edge of the parking lot will be extended. Additionally, a two-foot concrete bench is proposed to sit atop the seawall to provide additional protection against floodwaters and storm surge. The two-foot wide by two-foot high concrete parapet bench integral to the new seawall will include through-drains to maintain drainage.

3.0 Environmental Setting

3.1 Site Uses

Located in Arena Cove, the pier extends into the Pacific Ocean and is the only commercial boat launch between Fort Bragg and Bodega Bay. The Arena Cove parking lot provides public access to the pier and ocean. The parking lot also serves as the only parking area for the Cove buildings, restaurants, shops, and offices. A portion of the parking lot is allocated for commercial fishing vessels that use the pier's hoist launch to operate.

The entire parcel and study area is within the Coastal Zone within the Point Arena city limits. The majority of the parcel is developed; however, Arena Creek exists immediately south of the project area and supports a well-developed willow-dominated riparian woodland, with a mixed understory comprised of native and non-native species. A small open field to the east of the project area is dominated by non-native pasture grass. The portion of the study area within the intertidal zone is comprised of jetty rock. No change of use or intensity of use is proposed as a result of this project. The existing parking lot will be used for staging, and construction will occur within the footprint of the existing development.

3.2 Site Hydrology

The United States Department of Agriculture-Natural Resources Conservation Service (USDA-NRCS) Climate Analysis for Wetlands Table (WETS) method was used to determine the precipitation pattern, prior to the wetland assessment, compared to long-term precipitation records which establish normal precipitation levels. Certain aspects of the delineation are guided by using the WETS dataset. These norms can be compared with recent rainfall data records (Fort Ross Station, Fort Ross) to determine whether the field work was performed during a "below normal," "normal," or "above normal" rainfall period. The WETS method reviews current rainfall conditions for the previous three months prior to the initial site and test pit (TP) investigations (or the same month and two months prior if after the 15th; Table 1; USDA-NRCS, 2020a). The TP investigations occurred on January 22, 2020. The rainfall data for November 2019, December 2019, and January 2020 were compared to the 30-year rainfall average at the Fort Bragg weather station (1981-2010). If the current rainfall of each month is between 30% and 70% of the 1981-2010 precipitation average, it is a "normal" rainfall period; if above 70%, it's ranked "above normal"; if below 30%, it's ranked "below normal." The rainfall for this time period is considered "normal", as shown in Table 1 (California Data Exchange Center [CDEC], 2020; USDA-NRCS, 2020a).

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Table 1. WETS Rainfall Data, November 2019 through January 2020
Point Arena, CA

Month	WETS data	Rank	Weight	Value
January 22, 2020: TP Excavation				
November 2019	Below Normal	1	3	3
December 2019	Above Normal	3	2	6
January 2020	Normal	2	1	2
Total[1]				**11**

1. A sum of 6-9 prior to site investigation is considered a drier than normal rainfall.
10-14 prior to site investigation is considered a normal rainfall.
15-18 prior to site investigation is considered above normal rainfall.

Sources: CDEC, 2020; USDA-NRCS, 2020a

3.3 National Wetlands Inventory

The United States Fish & Wildlife Service (USFWS) National Wetlands Inventory (NWI) website has two wetland types mapped within the study area. Seasonally saturated, broad-leaved deciduous, palustrine scrub shrub wetlands (PSS1C) are mapped immediately south of the parking lot along the eastern half of the parking lot and are associated with Arena Creek (Appendix 2). Regularly flooded marine intertidal wetland with unconsolidated bottom is mapped immediately south of the parking lot along the western half of the parking lot (Appendix 2). This general categorization by the NWI is not intended for planning purposes because of the lack of ground-truthing. In the "Data Limitations, Exclusions and Precaution" disclaimer, it states that:

> *The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high-altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.*
> (USFWS, 2020)

The intention of this report is to clarify general NWI boundaries with the addition of onsite soils, hydrology, and vegetation mapping investigations.

4.0 Vegetation

The wetland indicator status of plant species for this investigation was based on the *Western Mountains, Valleys, and Coast 2016 Regional Wetland Plant List* (USACE, 2016). Synonyms were checked for species that did not appear on the USACE wetland plant list. Plant species were classified as:

- Obligate (OBL)–almost always occurs in wetlands
- Facultative-wet (FACW)–usually occurs in wetlands, but may occur in non-wetlands
- Facultative (FAC)–occurs in wetlands and non-wetlands
- Facultative-upland (FACU)–usually occurs in non-wetlands, but may occur in wetlands
- Upland (UPL)–almost never occurs in wetlands
- Not listed (NL)–scored as an upland plant and calculated as such on wetland determination data forms

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A mix of native riparian species and non-native species dominate the project site within the vicinity of Arena Creek. Non-native pasture grass and forb species exist within disturbed areas or unkept developed areas and are the primary dominant species within the small open field to the east of the parking lot. Dominant species within vegetated portions of the study area included coast willow (*Salix hookeriana* [FACW]), pacific willow (*Salix lasiandra* var. *lasiandra* [FACW]), common nasturtium (*Tropaeolum majus* [NL]) and California blackberry (*Rubus ursinus* [FACU]), among others along Arena Creek and wild radish (*Raphanus sativa* [NL]), common nasturtium, velvet grass (*Holcus lanatus* [FAC]), poison hemlock (*Conium maculatum* [FAC]), and vinca (*Vinca major* [NL]), among others within developed and more disturbed locations. Vegetation cover and species composition is relatively homogenous along Arena Creek, or within developed areas, but varies widely between the two areas reflecting historical disturbance and ongoing use.

5.0 Geologic and Soil Composition

The project site lies on alluvium associated with the mouth of Arena Creek where it empties into the Pacific Ocean at Arena Cove. The parking lot and associated development is built on fill overlaying the alluvium and exists within the historical flood plain of Arena Creek. Steep eroded, shale bluffs rise to the north and south of the project area confining Arena Creek to a narrow canyon. The active channel of Arena Creek is currently three feet from the edge of the parking lot at its nearest point (Figure 2).

The underlying soils in the study area have the USDA-NRCS soil series of Dystropepts, 30 to 75 percent slopes (map unit 139), as described below and in the web soil map (Appendix 3). Dystropepts soils are not rated as hydric. The actual soil description at each exploratory soil TP is included in the wetland determination data forms found in Appendix 4, with photos in Appendix 1.

139—Dystropepts, 30 to 75 percent slope

Map Unit Composition
Dystropepts and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the map unit.

Description of Dystropepts
Setting
Landform: Marine terraces
Parent material: Residuum weathered from sandstone and shale

Typical profile
NA

Properties and qualities
Slope: 30 to 75 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Interpretive Groups
NA
(USDA-NRCS, 2020b)

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6.0 Regulatory Setting

6.1 Federal Laws

6.1.1 Section 401 and 404 of the Clean Water Act

Under Section 404 of the Clean Water Act (CWA; 33 U.S. Code [USC] 1344; U.S. Code of Federal Regulations (CFR), 1986), as amended, the USACE and the Environmental Protection Agency (EPA) retain primary responsibility for regulating discharge of dredged or fill material into "navigable waters of the United States." All discharges of dredged or fill material into jurisdictional WoUS that result in permanent or temporary losses of WoUS are regulated by the USACE. A permit from the USACE must be obtained before placing fill or grading in wetlands or other WoUS, unless the activity is exempt from CWA Section 404 regulation (for example, certain farming and forestry activities).

In summary, the definition of WoUS as defined by 33 CFR Section 328.3 includes:

1. waters used for commerce,
2. interstate wetlands,
3. all other waters (including lakes, rivers, streams, mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds),
4. impoundments of water,
5. tributaries to aforementioned waters,
6. territorial seas, and
7. wetlands adjacent to waters.

Under 33 CFR 328.3, WoUS do not include prior converted cropland or waste treatment systems.

In 2008, the EPA and USACE released a guidance memorandum implementing the Supreme Court's decision in the cases of the Rapanos v. U.S. and Carabell v. U.S. Because of these cases, the agencies will apply a significant nexus standard to the following categories of waterbodies to determine if it meets the definition of a WoUS:

- Non-navigable tributaries that are not relatively permanent
- Wetland adjacent to non-navigable tributaries that are not relatively permanent
- Wetland adjacent to but that does not directly abut a relatively permanent tributary

Section 401 of the CWA (33 USC 1341) requires that applicants for a federal license or permit obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The certification is obtained from the state in which the discharge originates or would originate, or if appropriate, from the interstate water pollution control agency having jurisdiction over the affected waters at the point where the discharge originates or would originate. The responsibility for the protection of water quality in California rests with the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs).

6.1.2 Rivers and Harbors Appropriation Act of 1899

The River and Harbors Appropriation Act of 1899 addresses activities that involve the construction of dams, bridges, dikes, and other structures across any navigable water. Placing obstructions to navigation outside

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established federal lines and excavating from or depositing material in such waters require permits from the USACE. Section 10 of the Rivers and Harbors Appropriation Act (33 USC 403) prohibits the unauthorized obstruction or alteration of any navigable WoUS.

6.2 State Laws

6.2.1 California Coastal Act

The California Coastal Act (CCA; California Public Resources Code Sections 30000 et seq.) was enacted by the State Legislature in 1976 to provide long-term protection of California's 1,100-mile coastline. The mission of the CCC, as the lead agency responsible for carrying out California's coastal management program, is to plan for and regulate development in the coastal zone consistent with the policies of the CCA. The CCC has the same authority over federal activities and federally licensed or assisted activities in the coastal zone.

The CCC regulates the alteration of wetlands within the Coastal Zone under jurisdiction of the CCA. The California Coastal Zone is broken into local coastal program (LCP) units that specifically oversee land use and management of resources within local government jurisdictions.

The California Public Resources Code, Division 20, CCA (2013), Section 30121 broadly defines wetlands as, *"*lands 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*."*

However, the CCC Administrative Regulations (Title 14 California Code of Regulations [CCR] Section 13577 (b); CCC, 1989) provides a more explicit definition:

> *Wetlands are lands 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 or drastic fluctuations of water surface levels, wave action, water flow, turbidity or high concentrations of salt or other substance 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 deepwater habitat.*

The 1994 CCC Procedural Guidance for the Review of Wetland Projects in California's Coastal Zone provides the following information:

> *Although the U. S. Fish & Wildlife Service (FWS) classification system is complex, it does provide an objective method for identifying virtually any wetland landscape. Relative to the USACE definition, the FWS definition is generally regarded as being more inclusive in the classification and subsequent delineation of a wetland. This is because the FWS classification system defines a wetland by the presence of the proper hydrology and either the presence of hydric soils or hydrophytic vegetation, except in nonsoil areas, such as rocky intertidal areas, where only the presence of proper hydrology is required* (CCC, 1994).

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For purposes of delineation, a location with any of the three wetland parameters (hydrophytic vegetation, hydrology, or hydric soils) is considered a wetland as defined by the Coastal Act.

6.2.2 Porter-Cologne Water Quality Control Act

The State maintains independent regulatory authority over the placement of waste, including fill, into WoS under the Porter-Cologne Water Quality Control Act. WoS are defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." The SWRCB protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. WoS are regulated by the RWQCBs under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act.

Projects that require a USACE permit, or fall under other federal jurisdiction, and have the potential to impact WoS are required to comply with the terms of the Water Quality Certification Program. If a proposed project does not require a federal license or permit, but does involve activities that may result in a discharge to WoS, then the local RWQCB has the option to regulate such activities under its state authority in the form of waste discharge requirements (WDRs) or certification of WDRs. Water Quality Order No. 2004-0004-DWQ specifies general WDRs for dredge or fill discharges to waters deemed by the USACE to be outside of federal jurisdiction under Section 404 of the CWA.

7.0 Methodology

Wetland delineation fieldwork was conducted on January 22, 2020. Wetland delineation methods described in *U.S. Army Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) and *The Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)* (USACE, 2010) were used to identify potential wetlands and other waters. The routine method for wetland delineation described in the Environmental Laboratory 1987 manual was used to identify potential wetlands within the study area. The USACE method relies on a three-parameter approach, in which criteria for hydrophytic vegetation, hydric soils, and wetland hydrology must each be met (present at the point of field investigation) to conclude that an area qualifies as a wetland. Additionally, the CCC requires one of the three wetland parameters be present for an area to qualify as a coastal wetland. Mapping reflects CCC and USACE requirements by showing areas meeting one and three parameters.

Hydrophytic vegetation refers to plant species known to be adapted to wetland sites. To classify the hydrophytic plants onsite, the most recent *Western Mountains, Valleys, and Coast 2016 Regional Wetland Plant List* was used (USACE, 2016). Hydric soils are those formed under saturated conditions, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (USDA, 2017). Wetland hydrology is demonstrated through direct evidence (primary indicators) or indirect evidence (secondary indicators) of flooding, ponding, or saturation for a significant portion of the growing season (USACE, 2010).

Prior to conducting the field investigation, SHN staff reviewed the USGS topographic quadrangle map (Figure 1); Google Earth (Google Earth, 2019); USDA-NRCS Web Soil Survey website (USDA, 2020b); and NWI map (USFWS, 2020; Appendix 2). Prior to the TP investigation, a preliminary site investigation was performed to assess site conditions. During the subsequent TP subsurface investigation, sample points were characterized at each pit for the aforementioned botanical, hydrological, and soil parameters.

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Wetland TP locations were selected to:

- achieve appropriate coverage and characterization of wetland and upland habitats,
- document potential changes in the vegetative community (such as, a shift in the dominant species), and
- determine the approximate boundary line between wetlands and uplands by evaluating the extent of key wetland criteria (hydrology, hydric soils, and hydrophytic vegetation).

All field mapping was completed with a 300-foot tape measure, as GPS signals were unreliable within Arena Canyon. Distances were referenced from stationary hard points visible on aerial imagery.

7.1 Vegetation Methodology

Prior to the field investigation, a review of plant species reported to be within the project area was performed by querying the "Consortium of California Herbaria" (Consortium of California Herbaria, 2020) database records and "Calflora" (Calflora, 2020) observations. It was determined that the site investigations were performed during a "normal" rainfall period for the January site visit by reviewing rainfall data (see Section 3.2 Site Hydrology, Table 1). Absolute percent cover of each plant species was visually estimated within the sample point and within each vegetation stratum. The tree stratum was inspected at a 30-foot radius centered on the sample point, and the herb and sapling/shrub strata at a 5-foot radius. Botanical nomenclature follows *The Jepson Manual, Vascular Plants of California* (Baldwin et al., 2012) in addition to the online Jepson Interchange (University of California, Berkeley, 2020) for verification of species whose taxonomy may have changed since its publication. For plant species classification, see Section 4.0 Vegetation.

The 50/20 method[1] was applied to each stratum to determine the dominant plant species and to satisfy the hydrophytic vegetation criteria. If hydric soils and wetland hydrology were present, the prevalence index[2] was applied. The occurrence and type of plant cover determine whether jurisdictional areas are identified as satisfying the vegetation criteria of a wetland or other waters. Those sites with little or no hydrophytic plant cover, or other sites not capable of supporting hydrophytic plant communities in normal circumstances, are identified as wetlands if other wetland parameters are present, or other waters provided they have an Ordinary High Water Mark.

7.2 Soils Methodology

Soils were field-verified for the presence or absence of hydric conditions. All TPs were dug to a minimum depth of 20 inches, and the thickness of each soil horizon was measured. The Munsell Soil Color Chart (Munsell Color, 2010) was referenced to determine the colors of the moist soil matrix and redoximorphic (redox) features (if present). Soils were closely inspected for hydric soil indicators, as defined by the NRCS "Field Indicators of Hydric Soils in the United States" (USDA-NRCS, 2017). TPs were excavated to ascertain the presence or absence of hydric soils within the study area, and any potential wetland boundaries.

[1] The 50/20 rule: for each stratum of the plant community, dominant species are the most abundant species that (when ranked in descending order of abundance and cumulatively totaled) immediately exceed 50% of total dominance measure for the stratum, plus any additional species that individually comprise 20% or more of the total dominance measure for the stratum (USACE, 2010).

[2] The prevalence index is a weighted-average wetland indicator status of all plant species in the sampling plot or other sampling unit, where each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and weighting is by abundance (absolute percent cover).

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7.3 Hydrology Methodology

Wetland hydrology observations were made during TP excavations on January 22, 2020. This included the presence or absence of standing water, soil saturation, and a water table in addition to indirect hydrologic indicators (such as, water marks, drift deposits, sediment deposits, alpha-alpha dipyridyl, drainage patterns, geomorphic position, water-stained leaves, and similar features). Indicators of extended periods of saturation would include oxidized rhizospheres surrounding living roots or the presence of reduced iron or sulfur in the soil profile. A TP must contain at least one primary indicator or two secondary indicators to qualify for the hydrology parameter. Wetland hydrology observations were made during a normal rainfall period, and wetland hydrology indicators should have been observable during the site visit with precipitation occurring just two days prior to the wetland delineation field work.

7.4 Ordinary High Water Mark Methodology

For purposes of Section 404 of the CWA, the lateral limits of federal jurisdiction over non-tidal water bodies in the absence of adjacent wetlands extends to the OHWM. When adjacent wetlands are present, CWA jurisdiction extends beyond the OHWM to the limits of the adjacent wetlands provided a nexus exists. For purposes of Sections 9 and 10 of the Rivers and Harbors Act of 1899, the lateral extent of federal jurisdiction, which is limited to the traditional navigable waters of the United States, extends to the OHWM, whether or not adjacent wetlands extend landward of the OHWM (USACE, 2014).

USACE regulations define the term OHWM for the purposes of the CWA lateral jurisdiction as follows:

> *"The term "ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas at 33 CFR 328.3(e)."*

The OHWM in non-perennial streams corresponds with the boundaries of the active channel, which are typically expressed by some combination of three primary indicators: a topographic break in slope, change in sediment characteristics, and change in vegetation characteristics (USACE, 2014). The following supporting features should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable (USACE, 2014):

- Drift/wrack
- Erosion/scour
- Bank undercutting
- Root exposure
- Point bars
- Water staining
- Litter removal
- Silt deposits
- Shelving
- Headcut/knickpoint
- Macroinvertebrates

Field work for the delineation of the OHWM of Arena Creek occurred concurrently with the wetland delineation field work on January 22, 2020 during a "normal" rainfall period.

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8.0 Discussion and Results

8.1 Wetland Results and Discussion

TP investigations were conducted on January 22, 2020. A total of three TPs and four OHWM transects were investigated across the site to characterize the project area (Figure 2). TP examination results were recorded for soils, vegetation, and hydrology on USACE Wetland Determination Data Forms (Appendix 4). The site is in the City of Point Arena within the Coastal Zone, where one wetland parameter is used to delineate a Coastal Act wetland.

8.1.1 USACE Classification

No USACE jurisdictional wetland or three-parameter features were found within the study area (Figure 2).

8.1.2 CCC Classification

Two areas within the southeastern portion of the study area met the CCC one-parameter wetland definition. A portion of this area contained within a geomorphic position associated with Arena Creek had two wetland parameters present (Figure 2, Appendix 1, Photos 5, 6, and 12). Both the hydrophytic vegetation parameter and wetland hydrology parameter were present within the depression represented by TP2 (see Appendix 4 for datasheets). Dominant species included Pacific willow [FACW], water parsley (*Oenanthe sarmentosa* [OBL]), and the garden nasturtium (*Tropaeolum majus* [UPL]). Wetland hydrology was observed with the presence of the primary hydrology indicators of a high water table (A2) (8 inches) and saturation to the surface (A3), as well as the secondary hydrology indicators of water stained leaves (B9) and geomorphic position (D2). Hydric soils were not present, likely as a result of the recently-deposited loose rocky and gravelly nature of the soils occurring within the depression. The area with two wetland parameters represented by TP2 was contained within the small depression associated with Arena Creek.

The other portion of the study area with two wetland parameters is represented by TP3. TP3 was excavated on the eastern edge of the small field immediately east of the existing parking lot (see Figure 2 and Appendix 1, Photos 7 and 8). Both hydrophytic vegetation dominance and hydric soils were present within the area represented by TP3, and this area meets the definition of a coastal wetland (see Appendix 4 for datasheets). Dominant species included coast willow [FACW], box elder (*Acer negundo* [FAC]), California blackberry [FACU], wild radish [UPL], poison hemlock [FAC], and velvet grass [FAC]. Hydric soils were observed with the hydric soil indicator Redox Dark Surface (F6). Wetland hydrology was lacking at this location, likely as a result of the raised nature of the area and historical disturbance. Had wetland hydrology been present, it should have been visible as a result of precipitation occurring two days prior to the field work.

Tables 2 and 3 summarize the type, location, and description of the test pits and wetlands. Results from the field work completed on January 22, 2020 are recorded on the Wetland Determination Data Forms located in Appendix 4. See Figure 2 for TP locations and Appendix 1 for photos of the study area.

8.1.3 Upland Area

The majority of the small open field immediately east of the existing parking lot had no wetland parameters present and is considered upland (see Figure 2 and Appendix 1, Photos 3, 4, and 7). TP1 was excavated within the west central portion of the small field and no wetland parameters were present (see Figure 2 and Appendix 1, Photos 3 and 4). Upland vegetation dominance throughout the majority of the area indicates that upland conditions exist until within approximately five feet of TP3. Upland conditions reflect historical disturbance and the raised topography of the small field. Dominant species within this area included wild

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radish [UPL], vinca [UPL], and bittercress (*Cardamine oligosperma* [FAC]). The open field is also regularly maintained by mowing, which prevents the encroachment of woody species, which exist along the eastern and southern perimeter.

8.2 OHWM Results and Discussion

An OHWM was observed along the Arena Creek channel. Four OHWM transects were completed along Arena Creek within the vicinity of the project area, representing the largest area of jurisdictional waters within the vicinity of the project. Figure 2 shows the transect locations as well as the location of the OHWM and its proximity to the proposed project. OHWM #1 is the westernmost transect, within 150 feet of the Pacific Ocean. OHWM #1 is only 7.5 feet south of the edge of the existing parking lot and occurs on a highly-eroded, anthropogenically-created bank, constructed of cobbles piled into a berm (see Appendix 1, photos 9 and 10, and Appendix 4, OHWM sheet 1). The stream channel is 33 feet wide and OHWM #1 was approximately 12 inches above the water level at the time of the field work. OHWM #2 is 53 feet upstream (east) of OHWM #1 and is 26 feet south of the existing parking lot. OHWM #2 also occurs on an anthropogenically-created bank constructed of cobble, boulders, and gravel (see Appendix 1, photo 11, and Appendix 4, OHWM sheet 2). OHWM indicators were more evident on the natural south bank. The stream channel at OHWM #2 is 24 feet, 3 inches wide and OHWM #2 was approximately 11 inches above the water level at the time of field work. OHWM #3 is 93 feet upstream (east) of OHWM #2 and is 24.5 feet south of the existing parking lot. OHWM #3 also occurs on an anthropogenically-created bank constructed of cobble, boulders and gravel, however the channel is much wider at this location, and conditions are less disturbed than the previous OHWM transects (see Appendix 1, Photo 12, and Appendix 4, OHWM Sheet 3) . The stream channel at OHWM #3 is 71 feet wide and OHWM #3 was approximately 6 inches above the water level at the time of field work, reflecting a less constricted and manipulated channel with slower moving water. OHWM #4 is 107 feet upstream (southeast) of OHWM #3 and is 120 feet south of the existing parking lot. OHWM #4 was found on natural streambanks comprised of alluvium, densely vegetated with native brambles and willows (see Appendix 4, OHWM Sheet 4). The streambank is wider at this location, and conditions are relatively undisturbed. The stream channel at OHWM #4 is approximately 40 feet wide; depth to the current water level was not measured at this location and clear photos were not taken due to dense vegetation growth.

9.0 Conclusions

This region experienced a normal seasonal rainfall in the three months preceding the January 2020 field work (Section 3.2 Site Hydrology). Two-parameter Coastal Act wetlands exist within a geomorphic position immediately south of the existing parking lot, as well as in the riparian woodland associated with Arena Creek east and south of the small field east of the existing parking lot (Figure 2). USACE Jurisdictional waters occur immediately south of the existing parking lot, consisting of the active channel of Arena Creek below the documented OHWM. The Arena Creek active channel is the largest wetland and other water feature within the study area and is within close proximity to the proposed project. Care will need to be taken to avoid impacts to this feature and Arena Creek. See Section 11.0 Recommendations to reduce impacts to wetlands and other waters adjacent to the project area. Table 2 describes the number and type of parameters for each TP and OHWM transect, and Table 3 describes the wetland areas occurring within the study area. Figure 2 indicates wetland and other waters boundaries as well as TP locations, OHWM transect locations, and upland area.

Seasonally saturated, broad-leaved deciduous, palustrine scrub shrub wetlands (PSS1C) are mapped immediately south of the parking lot along the eastern half of the parking lot and are associated with Arena Creek (Appendix 2). Regularly flooded marine intertidal wetland with unconsolidated bottom is mapped immediately south of the parking lot along the western half of the parking

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10.0 Limitations

The conclusions in this report represent a "snapshot in time" and some species or ephemeral wetland hydrology may not have been present at the time of the fieldwork. This report documents the investigation by using the best professional judgment of SHN's wetland ecologist and soil scientist.

11.0 Recommendations

The following recommendations are provided to reduce impacts to wetlands and other waters within the vicinity of the project area.

- Avoid the Arena Creek active channel during the construction effort;
- Avoid 1- and 2-parameter coastal wetlands;
- Limit ground disturbance and vegetation clearing to the minimal extent necessary to accomplish project goals;
- Conduct ground-disturbing work during the dry season, especially when in close proximity to Arena Creek to minimize impacts to water quality;
- Use native and locally-sourced plant material for revegetation if needed; and
- All best management practices detailed within the project description and/or required by permit conditions shall be adhered to in order to reduce impacts during construction.

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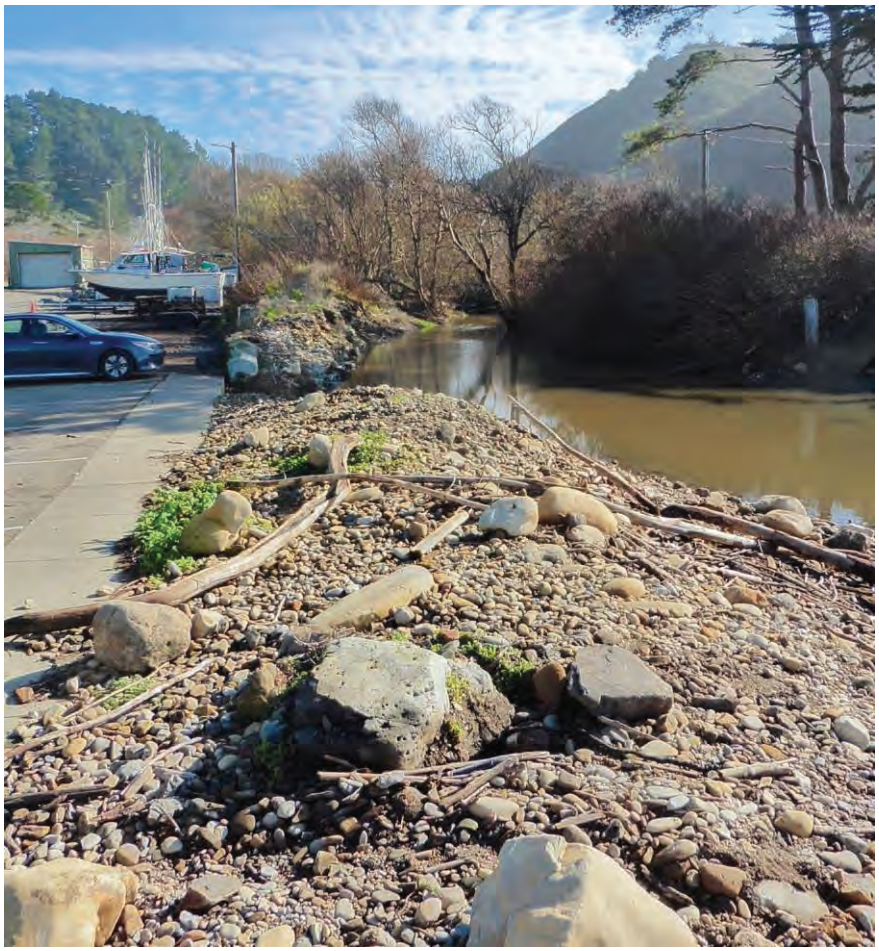

Photo 1: Project area, looking east. Note rocky cobble nature of imported fill to protect parking lot. The sea wall will be constructed along the edge of the existing parking lot. Photo taken January 22, 2020.

Photo 2: Looking east towards the project area from the Point Arena pier. Note proximity of parking lot and study area to the Pacific Ocean and wave action. Photo taken January 22, 2020.

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Photo 3: Small field east of the existing parking lot, looking south. Soil scientist is investigating TP1. This area is upland (see Section 8.1.3 Upland Area and Tables 2 and 3). Photo taken January 22, 2020.

Photo 4: TP1 soil profile, showing well drained rocky upland soils. Note buried iron debris at 16 inches, indicating historical disturbance. Photo taken January 22, 2020.

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Photo 5: TP2 location, approximately 9 feet south of fence within a geomorphic depression, approximately 18 inches lower than surroundings. 2 Parameters present, photo looking north. Photo taken January 22, 2020.

Photo 6: TP2 soil profile, showing very rocky, cobbly, disturbed soils. Note water table stabilized at 8-inch depth after 30 minutes. Photo taken January 22, 2020.

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Photo 7: Small field east of the existing parking lot, looking south towards TP3. Upland transitions into two-parameter coastal wetland approximately 5 feet west of TP3, visible as the change in vegetation cover. Photo taken January 22, 2020.

Photo 8: TP3 soil profile, showing a redox dark surface under fill. Soils are well drained, and no wetland hydrology was present. Photo taken January 22, 2020.

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Photo 9: OHWM transect #1, looking upstream (east). OHWM is located at the feet of the wetland ecologist as delineated by the blue line and is approximately 7.5 feet from the edge of the parking lot. Photo taken January 22, 2020.

Photo 10: OHWM #1 looking west. OHWM extends to cobble and wood berm created by wave action. Photo taken January 22, 2020.

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Photo 11: OHWM Transect #2 looking southwest. OHWM is delineated by the blue line and is approximately 26 ft south of the edge of the parking lot. Photo taken January 22, 2020.

Photo 12: Conditions within the vicinity of OHWM #3, looking south. Dense vegetation made photographing the OHWM difficult and unclear. Pictured is the beginning of the two-parameter swale that connects to the OHWM and leads to TP2 (Figure 2). Photo taken January 22, 2020.

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Point Arena Mountain Beaver Habitat Assessment and Survey, and Biological Report

Arena Cove Parking Lot Repair Project
Point Arena, California

Prepared for:
City of Point Arena

November 2020

418003

Phone: (707) 822-
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CDP Application No.
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Point Arena Mountain Beaver Habitat Assessment and Survey, and Biological Report

Arena Cove Parking Lot Repair Project Point Arena, California

Prepared for:

City of Point Arena

Prepared by:

1062 G Street
Arcata, CA 95521-5800
707-822-5785

November 2020

QA/QC:SJP___
Reference: 418003

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Abbreviations and Acronyms

Units of Measure

C	celsius
ft	foot
km	kilometers
m	meters
mi	miles
ppt	parts per thousand

Additional Terms

AOI	areas of interest
APN	Assessor's Parcel Number
BIOS	Biogeographical Information and Observation System
BMP	best management practice
C	candidate
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CT	candidate threatened species status
D	delisted species status
DPS	distinct population segment species status
E	endangered species status
ESHA	Environmentally Sensitive Habitat Area
ESU	evolutionarily significant unit species status
FESA	Federal Endangered Species Act
FP	fully protected species status
G1/S1	critically imperiled species heritage rank
G2/S2	imperiled species heritage rank
G3/S3	vulnerable species heritage rank
G4/S4	apparently secure species heritage rank
G5/S5	secure species heritage rank
IPaC	Information for Planning and Conservation
NGTOC	National Geospatial Technical Operations Center
NRCS	National Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PAMB	Point Arena mountain beaver
PT	proposed threatened species status
ROW	right-of-way
S	sensitive species status
SSC	species of special concern
T	threatened species status
U.S.	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WL	watch list species status

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Introduction

SHN has prepared this Point Arena Mountain Beaver (PAMB) Habitat Assessment and Survey, and Biological Report for the Arena Cove Parking Lot Repair Project in Point Arena, California (Figure 1). This report is intended to be a summary of findings for PAMB Habitat Assessment and survey as well as botanical and Environmentally Sensitive Habitat Area (ESHA) surveys conducted in January, April, and July 2020, for the Arena Cove Parking Lot Repair Project. A wetland delineation was also conducted at the site and the results are recorded in the Wetland Delineation Report (SHN, 2020), but are summarized in this report, as wetlands are considered ESHA. Results from this report will help guide planning and construction to reduce impacts to biological resources potentially occurring within the study area. Surveys for this report were conducted over a 4.5-acre study area, which contains the parking lot and pier facilities, as well as a staging area and access road to the east of the parking lot (Figure 2).

Project Location

The project is located at 810 Port Road within the city limits of the City of Point Arena, California (Figure 1). The project area is located within the United States Geological Survey (USGS) Point Arena 7.5-minute Quadrangle (USGS, 2020); Township 12 north, Range 17 east, Section 11, Mount Diablo Meridian. The Assessor's parcel number (APN) is 027-041-41-00, which contains the approximately 2.1-acre parking lot. However, the study area occupied approximately 4.5 acres (Figures 2 and 3), which includes the parking lot (area of direct effects), riparian woodland south of the parking lot, Point Arena Creek, and riparian woodland east of the parking lot. The parking lot and study area exist immediately east of the active surf line between 6 and 10 feet above the mean high tide line and immediately north of the outlet of Point Arena Creek (Figures 2 and 3; Appendix 1, Photos 2 and 5). A large portion of the study area included paved parking lot, existing structures, and other developed surfaces; therefore, the focus of this study is along the southern and eastern portion of the study area that includes Point Arena Creek, riparian woodland, and a small open field. Work for the project will be conducted within the footprint of the existing paved parking lot, with the majority of the work occurring in the southern portion of the parking lot for the construction of a seawall for flood control (Appendix 1, Photos 2, 3, and 6). To the north of the study area are open grasslands of the Point Arena-Stornetta public lands on an elevated terrace above the study area. To the west lies the Pacific Ocean and the inlet of Arena Cove, south of the project site is open private grassland and coastal bluffs, and east of the project site is the Point Arena Creek Canyon, with the City of Point Arena approximately 4,000 feet east.

Project Description

On January 15, 2016, a storm that produced unusually large waves damaged the parking lot with an integral seawall, the flanking jetty rock, and adjacent rock cobble shoulder. Jetty rock acts as the primary swell energy dissipater, which protects the parking lot and adjacent structures from storm damage. Storm waves moved the jetty rock surrounding the pier and redistributed it away from the parking area out into the ocean. The concrete seawall that acts as a second line of defense against storm damage was also compromised. Much of the seawall was either cracked, or in some locations, completely separated from its location and lifted onto the adjacent parking lot. A rock cobble shoulder that separates Point Arena Creek from the parking lot was pushed up on the parking lot at a low point, allowing Point Arena Creek to inundate the parking lot and deposit debris.

The remaining jetty rock will be augmented with additional jetty rock. It will be strategically placed within the footprint of the existing jetty rock using land-based equipment. In addition,

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EXPLANATION

- OHWM DELINEATED
- OHWM ESTIMATED
- 2-PARAMETER WETLAND
- PACIFIC WILLOW
- NON NATIVE
- COAST WILLOW
- BARE/DEVELOPED
- STUDY AREA

1"=60'±

0 60

FEET

OHWM - ORDINARY HIGH WATER MARK
IMAGE SOURCE: NAIP, 2018
ELEVATION DATA SOURCE: NOAA, 2017 FEMA LIDAR: CALIFORNIA REGION 9

	City of Point Arena Biological Report Point Arena, California	Vegetation Map SHN 418003
October 2020	BIO_Fig2_Vegetation20201030	Figure 2

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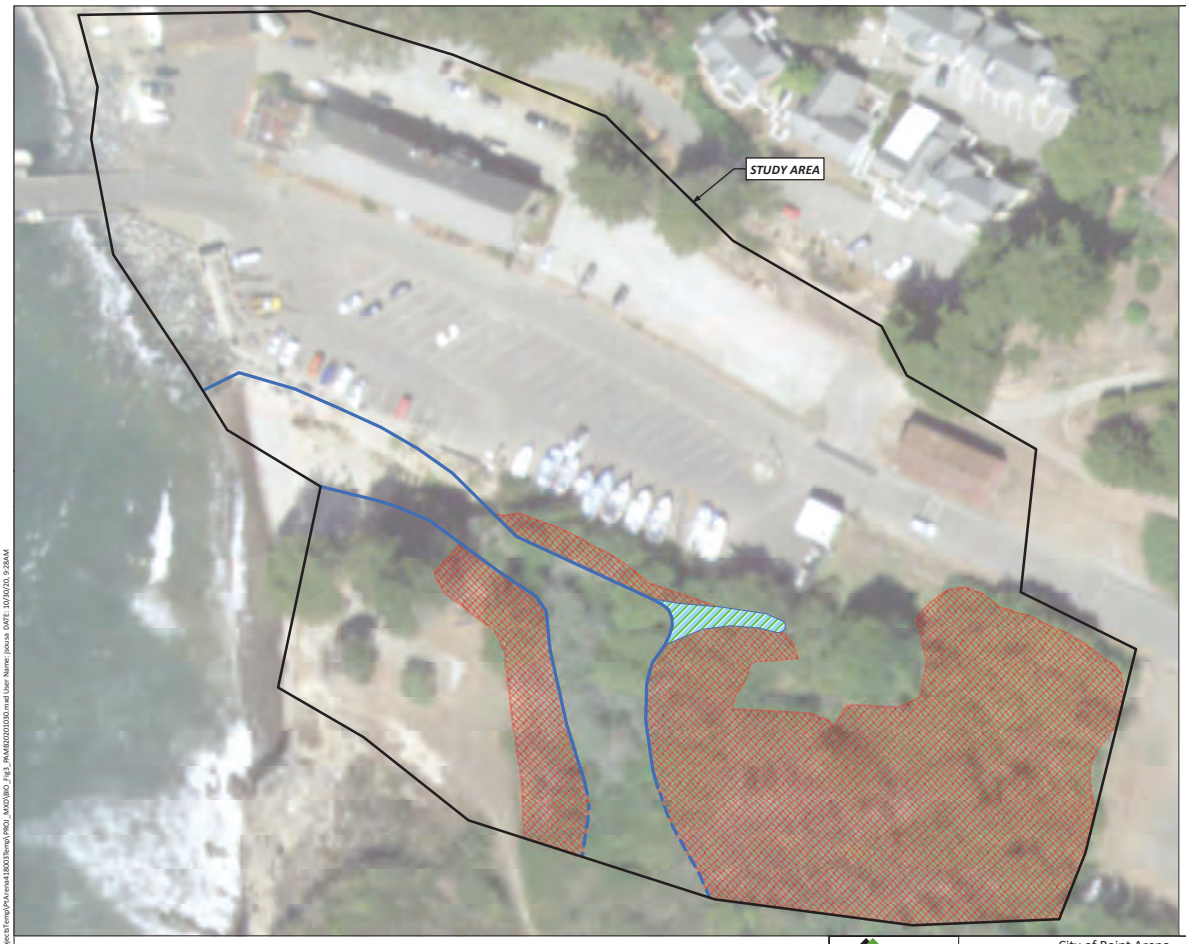

EXPLANATION

- STUDY AREA
- OHWM DELINEATED
- OHWM ESTIMATED
- 2-PARAMETER WETLAND
- PAMB HABITAT

1"=60'±

0 60

FEET

PAMB - POINT ARENA MOUTAIN BEAVER
OHWM - ORDINARY HIGH WATER MARK
IMAGE SOURCE: NAIP, 2018
ELEVATION DATA SOURCE: NOAA, 2017 FEMA LIDAR: CALIFORNIA REGION 9

City of Point Arena
Biological Report
Point Arena, California

PAMB Map

SHN 418003

October 2020 | BIO_Fig3_PAMB20201030 | Figure 3

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project includes the replacement of 65 linear feet of damaged seawall, with a new reinforced concrete seawall with sidewalk and footing. A portion of the existing parking lot will be raised and the seawall along the south edge of the parking lot will be extended. A two-foot concrete bench is proposed to sit atop the seawall to provide additional protection against floodwaters and storm surge. The two-foot wide by two-foot high concrete parapet bench integral to the new seawall will include through-drains to maintain drainage.

Existing Conditions

Located in Arena Cove, the pier extends into the Pacific Ocean and is the only commercial boat launch between Fort Bragg and Bodega Bay. The Arena Cove parking lot provides public access to the pier and ocean (Appendix 1, Photos 1 and 4). The parking lot also serves as the only parking area for the Cove buildings, restaurants, shops, and offices. A portion of the parking lot is allocated for commercial fishing vessels that use the pier's hoist launch to operate (Appendix 1, Photos 3 and 12). The entire parcel and study area are within the Coastal Zone and within the Point Arena City limits. The majority of the parcel is developed; however, Point Arena Creek exists immediately south of the project area and supports a well-developed willow-dominated riparian woodland, with a mixed understory comprised of native and nonnative species. The proposed staging area and a small field to the east of the project area is dominated by non-native pasture grass. The portion of the study area within the intertidal zone is comprised of jetty rock (Appendix 1, Photo 5).

The project site lies on alluvium associated with the mouth of Point Arena Creek, where it empties into the Pacific Ocean at Arena Cove. The parking lot and associated development is built on fill overlaying the alluvium and exists within the historical flood plain of Point Arena Creek. Steep eroded, shale bluffs rise to the north and south of the project area confining Point Arena Creek to a narrow canyon. The active channel of Point Arena Creek is currently three feet from the edge of the parking lot at its nearest point (Figure 2 and Appendix 1, Photos 2 and 6). The underlying soils in the study area have the United States Department of Agriculture (USDA)-National Resources Conservation Service (NRCS) soil series of Dystropepts, 30 to 75 percent slopes (map unit 139), as shown on the web soil map (USDA-NRCS, 2020; Appendix 2). Dystropepts soils are not rated as hydric.

A mix of native riparian species and non-native species dominate the project site within the vicinity of Point Arena Creek. Non-native pasture grass and forb species exist within disturbed areas and unkept developed areas and are the primary dominant species within the small open field and proposed staging area to the east of the parking lot. Dominant species within vegetated portions of the study area included coast willow (*Salix hookeriana* [FACW]), pacific willow (*Salix lasiandra* var. *lasiandra* [FACW]), garden nasturtium (*Tropaeolum majus* [NL]) and California blackberry (*Rubus ursinus* [FACU]), among others along Point Arena Creek; and wild radish (*Raphanus sativa* [NL]), common nasturtium, velvet grass (*Holcus lanatus* [FAC]), poison hemlock (*Conium maculatum* [FAC]), and vinca (*Vinca major* [NL]), among others within developed and more disturbed locations. Vegetation cover and species composition is relatively homogenous along Point Arena Creek, and within developed areas, but varies widely between the two areas, reflecting historical disturbance and ongoing use. See Appendix 3, Table 3 for a complete list of the botanical species observed within the study area, and Figure 2 for a map of the habitat areas observed within the study area.

The study area has seen little change over the past 22 years (Google Earth, 2013), however the large storm event in 2016 damaged the parking lot and jetty rock. Parking lot area, buildings, and staging area all appear unchanged throughout the years.

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Methods

The botanical and ESHA surveys in January, April, and July 2020 consisted of focused early- and late-season surveys, conducted pursuant to the California Department of Fish and Wildlife (CDFW) *Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Natural Communities* (CDFW, 2018). Vegetation communities were identified using the CDFW-California Native Plant Society (CNPS) Protocol for the Combined Vegetation Rapid Assessment and Releve' Form (CDFW, 2019).

The survey protocol consisted of botanical database queries and focused botanical field surveys for target species and vegetation communities within suitable and potentially suitable habitat. Prior to conducting fieldwork, the following references were reviewed:

- California Natural Diversity Database (CNDDB) query for the Point Arena and surrounding USGS 7.5-minute topographic quadrangles[1] (CDFW, 2020a);
- Electronic Inventory of Rare and Endangered Vascular Plants of California (California Native Plant Society (CNPS, 2020) query for a list of all botanical species reported for the Point Arena and surrounding USGS 7.5-minute topographic quadrangles[1];
- United States Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC; USFWS, 2020a); and
- Biogeographical Information and Observation System (BIOS; CDFW, 2020b).

From the database query, lists of special-status botanical and animal species potentially occurring within the study area were compiled and include all species reported by the CNDDB, CNPS, and IPaC. Results from the database query are included in Appendix 3, Tables 1 and 2.

Field surveys were conducted by an SHN Biologist with 9 years of experience on January 22, April 1, and July 10, 2020 for all special-status species potentially present in the study area. The January and April surveys were conducted over the course of one hour each, and the July survey was conducted over the course of one and a half hours. All surveys covered the entire study area totaling 4.5 acres, which included portions the study area shown on Figure 2.

In addition to surveying for target species, a list of all botanical species encountered was compiled. Plants were identified to the lowest taxonomic level possible to distinguish special-status species from others. A list of observed botanical species is included as Appendix 3, Table 3. Botanical nomenclature follows *The Jepson Manual, Vascular Plants of California* (Baldwin et al., 2012) and subsequent online revisions as well as calflora (Calflora, 2020).

During the surveys, habitat types and vegetation composition were recorded to map vegetation communities within the study area. All vegetation communities were identified using Combined Vegetation Rapid Assessment and Releve' Protocol (CDFW, 2019) and the Manual of California Vegetation (Sawyer, 2009) and any subsequent online additions recorded in the California Natural

[1]Mallo Pass Creek, Cold Spring, Eureka Hill, Gualala, Saunders Reef

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Community List (CDFW, 2019). Vegetation communities within the study area are discussed further in the Sensitive Natural Communities and Other Habitats section and are mapped on Figure 2, which shows ESHA as well as other vegetation communities.

Wetland areas are considered ESHA and are mapped on Figure 2. The routine method for wetland delineation described in the United States Army Corp of Engineers (USACE) 1987 manual was used to identify potential wetlands within the study area. The study area is within the Coastal zone and therefore relies on a one-parameter approach, in which criteria for either hydrophytic vegetation, hydric soils, or wetland hydrology must be met (present at the point of field investigation) to conclude that an area is a coastal wetland. Methods and results from the wetland delineation are recorded within the Wetland Delineation Report (SHN, 2020).

PAMB Site Investigation

Portions of the project area are located within a CNNDB polygon depicting a known occurrence of PAMB and suitable habitat is immediately adjacent to the project area within the riparian habitat along Point Arena Creek and on the north-facing slope across Point Arena Creek (see Appendix 1, Photo 12). PAMB is known from areas with lush mesic herbaceous and woody vegetation, often on north-facing slopes or gullies where soils are well drained and friable. This typically includes riparian habitat, moist coastal scrub, and dune scrub comprised of a wide variety of brushy and herbaceous cover (USFWS, 1998). The methods described in the "Draft Guidelines for Project Related Habitat Assessments and Presence-Absence Surveys for the Point Arena Mountain Beaver" (USFWS, 2017a) were used to determine suitable habitat for PAMB within the vicinity of the project and to determine the presence or absence of the species within the observed suitable habitat. In brief, the PAMB habitat assessment included surveying for and mapping suitable habitat for PAMB within the vicinity of the project area, including indicator species. Results from this effort are recorded in the Results section of this report. Areas mapped as PAMB habitat are considered ESHA by the California Coastal Commission and are mapped as such on Figure 3.

Presence/Absence surveys were conducted in areas found to be suitable habitat for PAMB. Presence/Absence surveys were conducted by walking through the PAMB habitat areas with approximately 75% of the ground surface observed. In many cases, this involved crawling through thick brush along Point Arena Creek. If burrows were observed, they were investigated more closely to determine if they were PAMB burrows. If they were found to be PAMB burrows, then it was determined if the burrows were active or inactive. Impacts were kept to a minimum during the surveying effort. All areas along the north side of Point Arena Creek within the vicinity of the project were surveyed. Portions of the south side of Arena Creek were surveyed as well, however the north-facing bluff slope with the highest quality PAMB habitat was not surveyed on account of unknown property ownership and lack of permission to survey there. As such, it is assumed that these areas are occupied by PAMB. Survey coverage and PAMB habitat is recorded on Figure 3. PAMB habitat assessment field work and Presence/Absence surveys were conducted concurrently with the botanical surveys. The PAMB Presence/Absence surveys were conducted by SHN Biologist Joseph Saler, who has nine years of experience. He is also USFWS PAMB survey trained and has three years PAMB surveying experience. Presence/Absence surveys were conducted on January 22, April 1, and July 10, 2020. The January and April surveys were conducted over the course of one hour each, and the July survey was conducted over the course of one and one half hours. All PAMB surveys covered the study area shown on Figure 3.

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Results

Special-status Botanical Species

During the biological scoping process, a total of 59 special-status botanical species were identified as occurring within the Point Arena and surrounding USGS quadrangles.

A total of sixteen (16) special-status botanical species were determined to have a moderate or high potential of occurring within the study area, of these, three (3) were determined to have a high potential of occurrence and thirteen (13) were determined to have a moderate potential of occurrence within the study area. Special-status species with moderate or high potential of occurring within the study area are listed below:

- *Astragalus rattanii* var. *rattanii* (Rattan's milkvetch): Moderate
- *Bryoria pseudocapillaris* (false gray horsehair lichen): Moderate
- *Calystegia purpurata* ssp. *saxicola* (coastal bluff morning glory): High
- *Castilleja mendocinensis* (Mendocino coast paintbrush): Moderate
- *Ceanothus gloriosus* var. *exaltatus* (glory brush): Moderate
- *Ceanothus gloriosus* var. *gloriosus* (Pt. Reyes ceanothus): Moderate
- *Erigeron supplex* (supple daisy): High
- *Fritillaria roderickii* (Roderick's fritillary): Moderate
- *Gilia capitata* ssp. *pacifica* (Pacific gilia): High
- *Hesperevax sparsiflora* var. *brevifolia* (short-leaved evax): Moderate
- *Horkelia marinensis* (Pt. Reyes horkelia): Moderate
- *Lasthenia californica* ssp. *macrantha* (perennial goldfields): Moderate
- *Oenothera wolfii* (evening primrose): Moderate
- *Perideridia gairdneri* ssp. *gairdneri* (Gairdner's yampah): Moderate
- *Sidalcea malachroides* (maple-leaved checkerbloom): Moderate
- *Sidalcea malviflora* ssp. *purpurea* (purple-stemmed checkerbloom): Moderate

All special-status species reported from the Point Arena and surrounding quadrangles were searched for, however the species with moderate or high potential for occurrence were specifically searched for during the surveys.

No special-status botanical species were observed within the study area. While suitable habitat does exist within the study area for a number of special-status species, they were not observed during the surveys. Additional habitat for special-status species exists outside of the study a

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these areas are occupied by special-status species. These areas will not be impacted by the proposed project and are separated from the project by developed areas or landscape features such as Point Arena Creek and were not surveyed for this project.

Special-status Animal Species

During the biological scoping process, a total of 48 special-status animal species were identified as occurring within the Point Arena and surrounding USGS quadrangles.

A total of twenty one (21) special-status animal species were determined to have a moderate or high potential of occurring within the study area, of these three (11) were determined to have a high potential of occurrence and ten (10) were determined to have a moderate potential of occurrence within the study area. Special-status species with moderate or high potential of occurring within the study area are listed below:

Amphibians:

- *Rana aurora* (Northern red-legged frog): High
- *Rana boylii* (foothill yellow-legged frog): Moderate
- *Rana draytoni* (California red-legged frog): High
- *Rhyacotriton variegatus* (southern torrent salamander): Moderate
- *Taricha rivularis* (red bellied newt): Moderate

Birds

- *Ardea herodias* (great blue heron): High
- *Pandion haliaetus* (Osprey): High
- *Pelecanus occidentalis californicus* (California brown pelican): Moderate

Fish

- *Entosphenus tridentatus* (Pacific lamprey): Moderate
- *Eucyclogobius newberryi* (tidewater gobi): High
- *Oncorhynchus clarkii clarkii* (coast cutthroat trout): High
- *Oncorhynchus gorbuscha* (pink salmon): High
- *Oncorhynchus kisutch* pop.4 (Coho salmon (central CA)): High
- *Oncorhynchus mykiss irideus* pop.16 (steelhead (northern CA)): High
- *Oncorhynchus tshawytscha* (Chinook salmon): High
- *Spirinchus thaleichthys* (longfin smelt): Moderate

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Insects

- *Bombus caliginosus* (obscure bumblebee): Moderate
- *Bombus occidentalis* (western bumblebee): Moderate
- *Lavinia semmetricus navarroensis* (Navarro roach): Moderate

Mammals

- *Aplodontia rufa nigra* (Point Arena mountain beaver): High

Mollusks

- *Margaritacea falcata* (western pearlshell): Moderate

All special-status species reported from the Point Arena and surrounding quadrangles were searched for, however the species with moderate or high potential for occurrence were specifically searched for during the surveys.

No special-status animal species were observed within the study area. While suitable habitat does exist within the study area for a number of special-status species, they were not observed during the surveys. Species specific protocol level surveys were not conducted for the majority of these species with the exception of the Point Arena mountain beaver, which is discussed in detail in this report. Additional habitat for special-status species exists outside of the study area and it is likely that these areas are occupied by special-status species. These areas will not be impacted by the proposed project and are separated from the project by developed areas or landscape features such as Point Arena Creek and were not surveyed for this project.

Point Arena Creek likely supports several special-status fish species and impacts to Point Arena Creek pose the greatest threat to special-status animal species potentially occurring within the study area. Due to the proximity of the project to Point Arena Creek, it will be nearly impossible to avoid impacts to aquatic habitat. Impacts to fish and amphibian species likely occurring within Point Arena Creek can be minimized, and possibly avoided if work is conducted during the dry season when the Point Arena Creek is at its lowest levels and amphibian and fish species are least active. Appropriate best management practices (BMPs) will be needed along Point Arena Creek to minimize any potential for encroachment or disturbance of water quality during construction of the project.

Environmentally Sensitive Habitat Areas

ESHA is defined in the California Coastal Act as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments". Within the project area, this includes two sensitive vegetation communities, wetlands and riparian areas, as well as habitat for the Point Arena mountain beaver. Each of these are described in detail below.

Sensitive Natural Communities

Sensitive vegetation communities, with a rank of S3 or lower, require California Environmental Quality Act (CEQA) analysis if potential impacts may occur because of the proposed proje

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ESHA by the California Coastal Commission (CCC). Two sensitive vegetation communities as defined by the Manual of California Vegetation or CDFW Natural Communities list occur within the study area (Sawyer, 2009; CDFW, 2019; Figure 2).

Pacific willow groves (*Salix lasiandra* ssp. *lasiandra* forest and woodland Alliance) occupy approximately 85% of the wooded portion of the study area (Figure 2). Pacific willow groves are ranked G4S3.2, which means that this vegetation community is secure globally, but is uncommon and threatened within the state of California. Within the study area, this vegetation community is characterized by mature and regenerating Pacific willow trees along Point Arena Creek (Appendix 1, Photos 3, 6-8, 10, and 11). The tree canopy is mostly continuous, except in places along Point Arena Creek that have been damaged by high stream flows or in areas that were historically cleared. The understory composition and cover vary and is well developed in places to non-existent in other portions of the vegetation community (Appendix 1, Photos 3 and 6). Dominant species in the understory include slough sedge (*Carex obnupta*), stinging nettle (*Urtica dioica*), garden nasturtium (*Tropaolum majus*), lady fern (*Athyrium filix-femina* var. *cyclosorum*), and California blackberry (*Rubus ursinus*), among others.

Coastal dune willow thickets (*Salix hookeriana* Shrubland Alliance) occupy several locations within the study area and account for approximately 12 percent of the wooded area within the study area (Figure 2). Coastal dune willow thickets are ranked G4S3, which means that this vegetation community is secure globally but is uncommon within the state of California. Within the study area, this vegetation community occurs immediately east of the small field and parking lot and southeast of the proposed staging area, in addition to a small area north of Port Road across from the proposed staging area (Figure 2). Understory composition is similar to that observed associated with the pacific willow groves, with similar species dominance. In general, the understory is less developed with lower cover by understory species than was observed within the Pacific willow groves (Appendix 1, Photos 8 and 9). Pacific willow groves are adjacent to the coastal dune willow thickets observed within the study area and the two vegetation communities intergrade along Point Arena Creek.

Ruderal vegetation is dominant within the remaining portions of the study area reflecting historical and ongoing disturbance and use. These areas are not considered ESHA and characterize the edges of the parking lot, the small field east of the parking lot, the proposed staging area, the right-of-way (ROW) along Port Road and other developed areas within the study area. Dominant species included buckhorn plantain (*Plantago coronopus*), Italian wildrye (*Festuca perennis*), white clover (*Trifolium repens*), English plantain (*Plantago lanceolata*), tall fescue (*Festuca arundinacea*) and six-weeks grass (*Festuca myuros*), among others.

Wetlands

A wetland delineation was conducted concurrently with this study. Coastal wetlands (defined as having one or more wetland parameters) were observed within the study area (Figure 2). These wetland features are described in detail within the wetland delineation report (SHN, 2020). All wetland areas are considered ESHA.

Riparian Areas and Other Drainage Features

Streams and seasonal drainage features that flow into waters of the U.S. or State will likely fall under the jurisdiction of the U.S. Clean Water Act, California Porter-Cologne Water Quality Control Act, and California Fish and Game Code 1600, and are considered ESHA by the CCC. Point Arena Creek, a third order stream, exists south of the parking lot and passes through the study area

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The conditions of the stream, including Ordinary High-Water Mark (OHWM) characteristics, in-stream conditions, and supported vegetation, are described in detail within the wetland delineation report (SHN 2020). In brief, the stream is perennial and has an OHWM that is between 24 and 71 feet wide within the study area (Appendix 1, Photos 2, 6, and 11). The stream channel is shallow and aggraded in places where it is wider, but has deep pools in other places where the stream has been restricted by development of the parking lot. During the summer, stream flows are not enough to breach a high cobbly berm that develops due to wave action, however the stream empties directly into the Pacific Ocean during the winter and storm events. The stream supports salmonids and other fish species. Vegetation surrounding the Point Arena Creek consists of the aforementioned Pacific willow groves and coastal dune willow thickets. (Appendix 1, Photos 2, 6, 7, and 11). Point Arena Creek and associated wetlands are reported on the National Wetlands Inventory (NWI; USFWS, 2020b; Appendix 3).

PAMB Habitat and Survey Results

PAMB Habitat Areas

PAMB habitat exists within and south of the study area. PAMB habitat within the study area is primarily within the vicinity of Point Arena Creek and is closely associated with the Pacific willow groves and coastal dune willow thickets (Figure 3). Areas shown on Figure 2 as Pacific willow groves and coastal dune willow thickets are considered suitable habitat for the PAMB. Within these vegetation communities, areas with abundant herbaceous vegetation, such as above the banks on the south side of Point Arena Creek, are considered the most suitable habitat locations within close proximity of the project area, however Point Arena Creek does not provide a barrier for the species as PAMB can swim. Dominant species within these areas are described above in the Sensitive Natural Communities section. Additional habitat occurs on within the coastal bluff scrub vegetation of the north-facing slope above Point Arena Creek approximately 240 feet south of the project area at its nearest point. PAMB populations have been recorded from this location (CDFW, 2020a) and it is presumed to be occupied. PAMB habitat is considered ESHA and is mapped on Figure 3. Areas that are not mapped as habitat for PAMB are either developed, unvegetated, frequently disturbed, too dry, or within the active stream channel of Point Arena Creek.

PAMB Presence/Absence Survey

No PAMB were detected within the Presence/Absence surveys conducted along Point Arena Creek adjacent to the project area (Figure 3). No burrows or evidence of PAMB were observed within the area surveyed (Figure 3). Additional PAMB habitat exists within 500 feet of the proposed project area, including areas that were not surveyed. These areas were not surveyed on account of the steep terrain, dense vegetation, and the lack of access on account of unknown ownership. These areas are presumed to be occupied by PAMB on account of the suitable habitat and historical observation of the species nearby in similar habitat.

Conclusions

No special-status botanical or animal species were observed within the study area, likely as a result of historical and ongoing disturbance and use of the area. ESHA occurs to the south of the project area along Point Arena Creek, represented by Pacific willow groves, coastal dune willow thickets, coastal wetland, riparian habitat (Figure 2), and PAMB habitat (Figure 3). Additional ESHA exists adjacent to the study area as represented by coastal bluff scrub and PAMB habitat. ESHA, coastal wetlands, and streams are protected and should be avoided. PAMB habitat adjacent to the project area is unoccupied, however suitable habitat not surveyed is considered occupied.

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The project does not propose an increase in the project footprint and consists of upgrades to the existing facility; therefore, impacts to sensitive vegetation communities, coastal wetlands, and riparian habitat will be minimal. Project impacts will be contained within the footprint of the existing development. Similarly, impacts to PAMB habitat will be minimal, as project impacts will be contained within the footprint of the existing facilities and intensity of use shall remain unchanged. It is unknown if PAMB presumed to be occupying habitat approximately 200 feet south of the project area will be impacted by project activities such as soil vibration resulting from heavy equipment usage. Consultation with USFWS biologists will be necessary to determine if impacts are anticipated and what measures should be taken to reduce potential impacts. The following measures from the "*Draft Point Arena Mountain Beaver Standard Protection Measures for "No-Take" Determinations* (USFWS, 2017b) are recommended for this project and typically result in a low likelihood of incidental take of PAMB:

- No operation of above-ground noise-generating equipment (includes chainsaws and weed eaters) within 100 feet of active burrows or unsurveyed suitable habitat.
- No operation of mechanical equipment that is in direct contact with, or below, the ground which causes ground vibrations (includes water well drilling, heavy equipment such as graders, soil excavators, air compressors, and directional boring equipment) within 100 feet of active burrows or unsurveyed suitable habitat during the breeding season (December 1 through June 30), and not within 50 feet during the remainder of the year.
- No operation of mechanical equipment that is in direct contact with the ground, or below ground, which causes severe ground vibrations (includes operation of log landings and soil compaction with vibrators) within 500 feet of active burrows or unsurveyed suitable habitat during the breeding season (December 1 through June 30), and not within 100 feet during the remainder of the year. Very severe disturbance (such as pile driving or blasting) should not occur within 500 feet at any time.

Outstanding items that will likely need to be addressed during project review by regulatory/ permitting agencies:

- Project impacts to PAMB will need to be evaluated in consultation with USFWS biologists. Specific timing and duration limitations on heavy equipment use may be needed to reduce impacts to PAMB presumed to be occupying habitat approximately 200 feet south of the project area.
- Appropriate BMPs and work windows need to be established for work occurring adjacent to Point Arena Creek to minimize impacts to fish and amphibian species potentially occurring there. Ideally work will commence after the cessation of rains and drying of the stream channel (see Appendix 1, photo 2). This will likely limit the allowable work period to between June 30 and October 15, or until just prior to first rains. Proper erosion control measures and temporary fencing to minimize encroachment into special-status habitats are also recommended.

Every effort was taken to conduct the botanical surveys during the optimal floristic window to enhance detection of special-status species and aid in proper identification of species present within the study area; however, results in this report do represent conditions at the time of field work and there is the possibility that species present were not detected. This can result from years of dormancy resulting

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from sub-optimal conditions, lack of proper germinating conditions, and early dehiscence. Late rains and slightly below normal rainfall amounts preceding the survey season in 2020 makes it unlikely that species were undetected due to drought conditions or sub-optimal climatic conditions.

Reduced Buffer Justification

Project activities will occur immediately adjacent to ESHA within the footprint of existing development, as such it will be infeasible to establish buffers between the project and adjacent ESHA. The seven buffer establishment criteria are typically used to determine suitable ESHA buffers, however these seven criteria are more applicable to new development still in the planning stages, whereas this project consists of improvements to existing development in place for decades in its current configuration. No work is proposed outside of the existing developed footprint. It is recommended that the edge of the existing development footprint be considered the beginning of ESHA, leaving no buffer present. The lack of buffer area is warranted in this situation for the following reasons:

- All work will occur within the existing footprint and will not lead to additional impacts of ESHA;
- The project will not change or increase the intensity of use of the site;
- The biological integrity of the project area is already compromised and does not represent habitat for any of the species using the ESHA;
- Work will be conducted during work windows that minimize impacts to sensitive species that may utilize the ESHA such as the PAMB, amphibian, or fish species; and
- Stormwater runoff will be reduced as a result of the project, on account of the construction of a stormwater bioretention basin designed catch stormwater flows currently flowing directly into Point Arena Creek.

ESHA within the vicinity of the project needs be treated with extra care and protection, as no buffer is afforded by the existing development. Temporary fencing should be installed along the ESHA edge immediately prior to construction to prevent accidental encroachment into ESHA. Native vegetation should be planted within the vicinity of the ESHA and within the stormwater bioretention basin. If feasible, a permanent wildlife-friendly fence or screening vegetation (such as California wax-myrtle [*Morella californica*]) should be planted between the parking lot and the ESHA to minimize encroachment and disturbance from day-to-day use of the parking lot.

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Site Photos

1

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Photo 1: Looking east across the Point Arena Pier parking lot. Note existing development to be rehabilitated to better withstand storm events. Photo taken April 1, 2020.

Photo 2: Looking southeast along parking lot edge adjacent to Point Arena Creek. Note that the stream edge is immediately adjacent to the parking lot. Photo taken April 1, 2020.

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Photo 3: Looking south toward Point Arena Creek within the eastern portion of the parking lot. Note berm along edge of parking lot and riparian vegetation beyond. Photo taken January 22, 2020.

Photo 4: Looking north from Point Arena Creek across parking lot toward pier building. Note rocky berm and existing development to be rehabilitated. Photo taken January 22, 2020.

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Photo 5: Looking east from the Point Arena pier toward the parking lot and study area. Photo taken January 22, 2020.

Photo 6: Looking southeast along the rocky berm separating Point Arena Creek and the parking lot. Note Pacific willow tree canopy along the creek and dense brushy understory. Photo taken January 22, 2020.

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Photo 7: Looking south across Point Arena Creek from the rocky berm. Note Pacific willow tree canopy along the creek and dense brushy understory. Photo taken January 22, 2020.

Photo 8: Looking southwest within riparian woodland along Point Arena Creek away from the parking lot. Pacific willow dominant in the canopy. Note slough sedge (*Carex obnupta*) dominance in the understory. This area is PAMB habitat, however no PAMB or burrows were present. Photo taken January 22, 2020.

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Photo 9: Looking south within riparian woodland along Point Arena Creek away from the parking lot. Coast willow dominant in the canopy. Note slough sedge and California blackberry dominance in the understory. This area is PAMB habitat, however no PAMB or burrows were present. Photo taken January 22, 2020.

Photo 10: Looking south within riparian woodland along Point Arena Creek away from the parking lot. Pacific willow dominant in the canopy. Note California blackberry dominance in the understory. This

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area is PAMB habitat, however no PAMB or burrows were present. Photo taken January 22, 2020.

Photo 11: Looking west along Point Arena Creek immediately south of the rocky berm. Pacific willow dominant in the canopy. Note California blackberry dominance and native vegetation along south bank which is PAMB habitat, however no PAMB or burrows were present. Note garden nasturtium dominance along rocky berm. Photo taken January 22, 2020.

Photo 12: Looking south toward north-facing bluff slope known to have PAMB populations. This slope was not surveyed but does contain prime PAMB habitat and is presumed to be inhabited by PAMB. Photo taken July 10, 2020.

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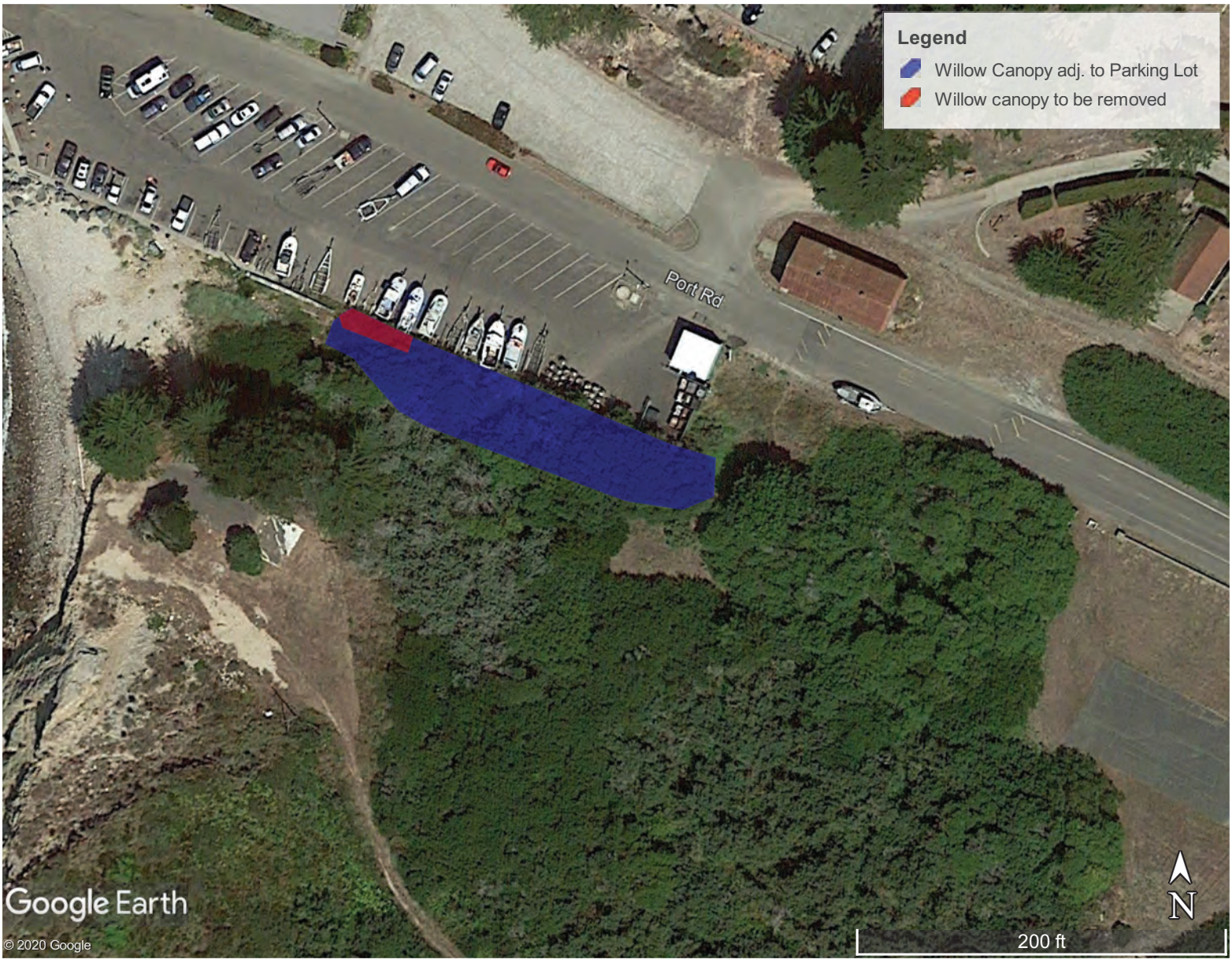

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WILLOW REMOVAL