CALIFORNIA RESOURCES CORPORATION

PALM/GOLDENWEST SPECIFIC PLAN AMENDMENT

HUNTINGTON BEACH, ORANGE COUNTY, CALIFORNIA

Delineation of State and Federal Jurisdictional Waters

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June 2025

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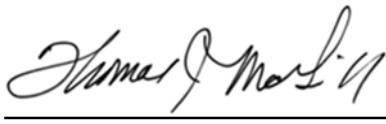
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Delineation of State and Federal Jurisdictional Waters

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.



Travis J. McGill
Biologist/Director



Thomas J. McGill, Ph.D.
Managing Director

June 2025

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional Waters Report for the Palm/Goldenwest Specific Plan Amendment Project located in the City of Huntington Beach, Orange County, California. ELMT biologist Rachael A. Lyons conducted the jurisdictional delineation on May 19, 2025. This report documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), the California Department of Fish and Wildlife (CDFW), and the California Coastal Commission (CCC) pursuant to Sections 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, Sections 1600 *et. seq.* of the California Fish and Game Code, and the Coastal Zone Management Act respectively.[1]

No Corps, Regional Board, CDFW, or CCC jurisdictional resources were observed onsite during the field delineation. It should be noted that the project site supports two detention basins. These are man-made, maintained features which do not bear any hydrologic connectivity to aquatic resources. Further, these features only support surface water for brief periods following storm events and were wholly excavated in upland areas. These features do not support natural plant communities and therefore do not have the potential to provide habitat for wildlife species known to occur in the area.

The detention basins will not qualify as waters of the United States under the regulatory authority of the Corps. Additionally, the detention basins will not qualify as waters of the State under the regulatory authority of the Regional Board or CDFW. Therefore, no jurisdictional features are present within the boundaries of the project site, and regulatory approval will not be required prior to proposed project implementation.

Further, no CCC-defined Environmentally Sensitive Habitat Areas are present onsite. However, since the project site falls in within the coastal zone, a coastal development permit (CDP) is required prior to construction, as well as approval from the City that the Project complies with its Coastal Land Use Plan.

[1] The field survey for this jurisdictional delineation was conducted on May 19, 2025 pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008); and *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Corps 2017).

Table of Contents

Section 1 Introduction 1

1.1 Project Location 1
1.2 Project Description 1

Section 2 Regulations 5

2.1 U.S. Army Corps of Engineers 5
2.2 Regional Water Quality Control Board 5
2.3 California Department of Fish and Wildlife 6
2.4 California coastal commission 6

Section 3 Methodology 8

3.1 Waters of the UnIted States 8
3.2 Waters of the State 10
3.2.1 Regional Water Quality Control Board 10
3.2.2 California Department of Fish and Wildlife 10
3.2.3 California Coastal commission 10

Section 4 Literature Review 12

4.1 Watershed Review 12
4.2 Local Climate 12
4.3 USGS Topographic Quadrangle 12
4.4 Aerial Photographs 13
4.5 Soils 13
4.6 Hydric Soils List of California 14
4.7 National Wetlands Inventory 14
4.8 Flood Zone 14

Section 5 Site Conditions 16

5.1 On-Site Features 16
5.1.1 Detention Basins 16

Section 6 Findings 18

6.1 U.S. Army Corps of Engineers Determination 18
6.1.1 Waters of the United States Determination 18
6.1.2 Federal Wetland Determination 18
6.2 Regional Water Quality Control Board 18
6.2.1 Waters of the State Determination 18
6.2.2 State Wetland Determination 18
6.3 California Department of Fish and Wildlife 19
6.4 California Coastal Comission 19

6.4.1 Coastal Wetland Determination 19

Section 7 Regulatory Approval Process 20

7.1 United States Army Corps of Engineers 20
7.2 Regional Water Quality Control Board 20
7.3 California Department of Fish and Wildlife 20
7.4 California coastal commission 20

Section 8 References 21

EXHIBITS

Exhibit 1: Regional Vicinity 2
Exhibit 2: Site Vicinity 3
Exhibit 3: Project Site 4
Exhibit 4: Soils 15
Exhibit 5: Onsite Water Features 17

APPENDIX

Appendix A Site Plan
Appendix B Site Photographs
Appendix C Documentation
Appendix D Methodology

Section 1 Introduction

This jurisdictional delineation has been prepared for the proposed Palm/Goldenwest Specific Plan Amendment Project (Project site or site) in order to document the potential jurisdictional authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), the California Department of Fish and Wildlife (CDFW), and the California Coastal Commission (CCC) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, Sections 1600 *et seq.* of the California Fish and Game Code, and the Coastal Zone Management Act respectively. The analysis presented in this report is supported by field surveys and verification of site conditions conducted on May 19, 2025.

This report explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT. This report documents the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies.

1.1 PROJECT LOCATION

The Project site is generally located west of State Route 39, south of Warner Avenue, and northwest of the Pacific Ocean (Exhibit 1, Regional Vicinity). The site is depicted on the Seal Beach quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Sections 3 and 4 of Township 6 South, Range 11 West (Exhibit 2, Site Vicinity). Specifically, the Project site is bounded to the southwest by State Route 1, to the southeast by Goldenwest Street, to the northwest by Seapoint Street, and is partially bounded to the northeast by Palm Avenue within Assessor Parcel Numbers (APNs) 023-181-53 and -54 (Exhibit 3, Project Site).

1.2 PROJECT DESCRIPTION

The Project proposes the revision of an adopted specific plan for a portion of the 92-acre project site. Development includes high-quality housing and resort-style hospitality and commercial offerings including retail and dining. Specifically, housing will encompass approximately 53 acres of the site with up to 800 residential units consisting of a mix of single-family detached homes, townhomes, and condominiums, ten percent of which will comply with City affordable housing policies. Resort-style hospitality and commercial spaces will encompass approximately 16 acres of the site with up to 350 hotel rooms, retail and dining. Additionally, approximately 23 acres will be allocated to open space, including a one-mile linear park along Pacific Coast Highway.

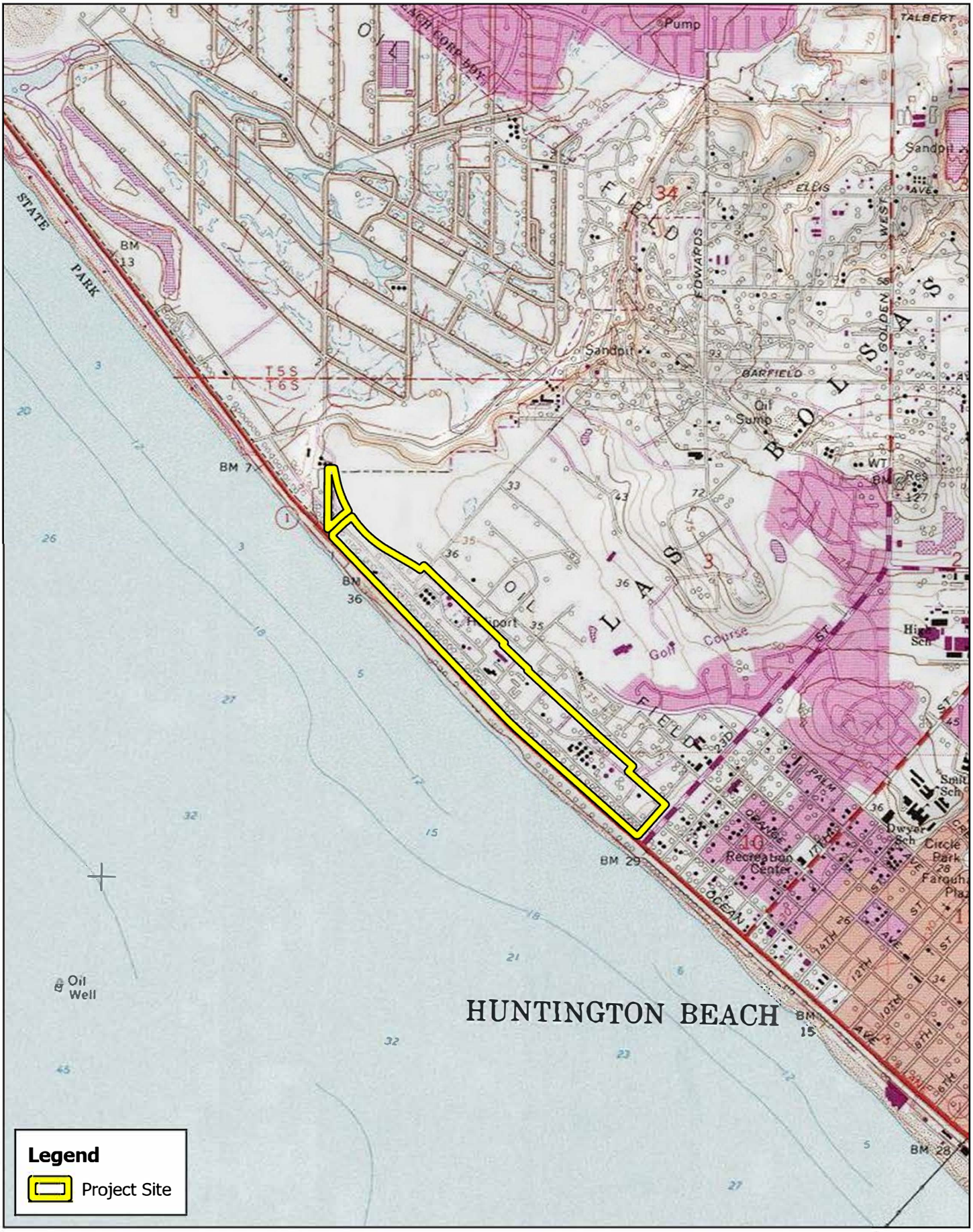


PALM & GOLDENWEST SPECIFIC PLAN AMENDMENT
JURISDICTIONAL DELINEATION

Regional Vicinity

Source: World Street Maps; County of Orange

Exhibit 1



PALM & GOLDENWEST SPECIFIC PLAN AMENDMENT
JURISDICTIONAL DELINEATION

Site Vicinity

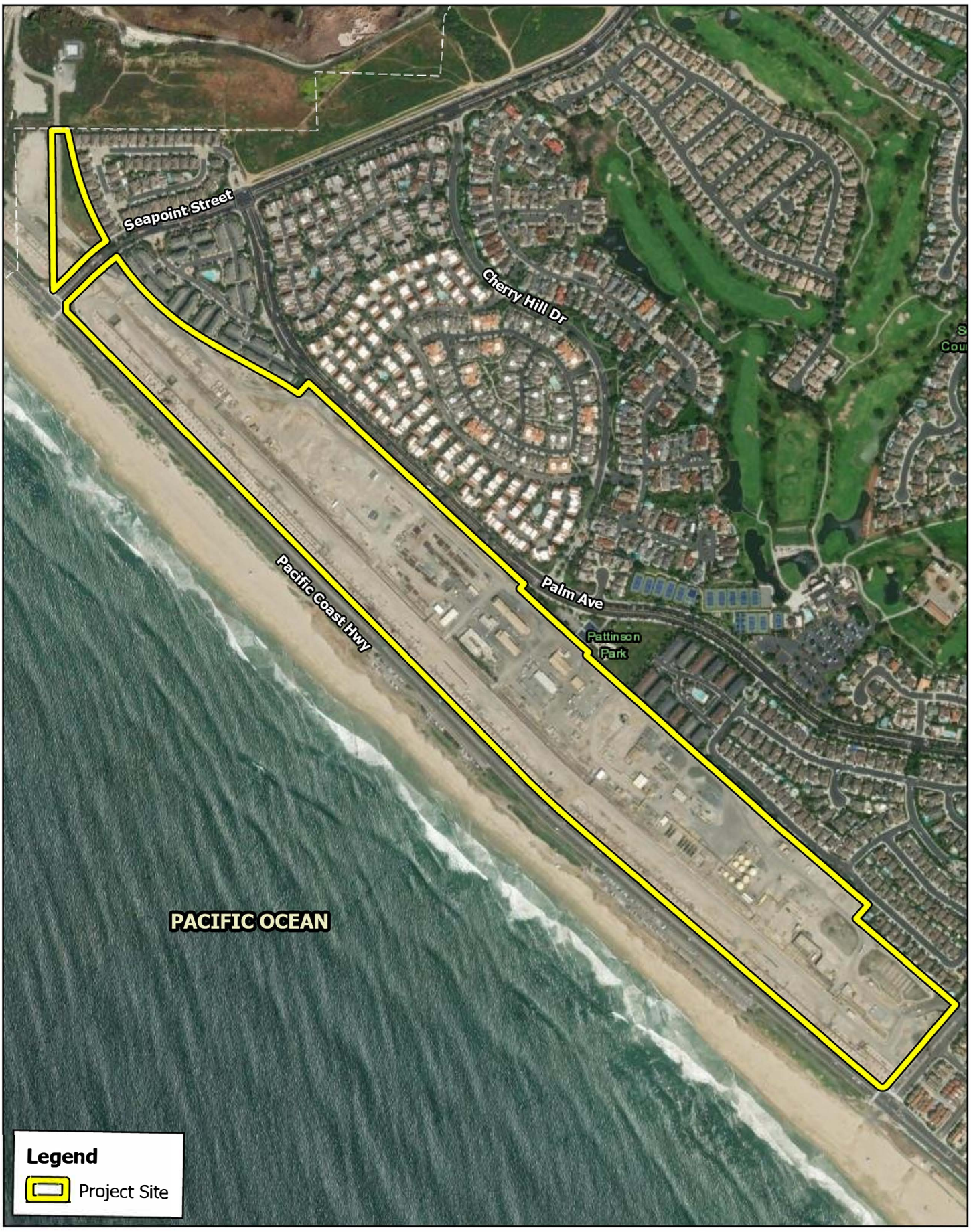
N

0 750 1,500 3,000 US Feet

Source: USGS Topographic Map; County of Orange

ELMT CONSULTING

Exhibit 2



PALM & GOLDENWEST SPECIFIC PLAN AMENDMENT
JURISDICTIONAL DELINEATION

ELMT CONSULTING

N

0 500 1,000 2,000 US Feet

Project Site

Source: ESRI Aerial Imagery; County of Orange

Exhibit 3

Section 2 Regulations

There are four key agencies that regulate activities within coastal streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act; the CDFW regulates activities under Sections 1600 *et seq*. of the California Fish and Game Code; and the California Coastal Commission (CCC) regulates activities in or affecting the coastal zone under the Coastal Zone Management Act.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." The terms *waters of the United States* and *wetlands* are defined under CWA Regulations 33 Code of Federal Regulations (CFR) §328.3 (a) through (b).

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits and helps ensure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board (SWRCB) assumes this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important tool post *Solid Waste Agency of Northern Cook County vs. United States Corps of Engineers*[2] (SWANCC) and *Rapanos v. United States*[3] (Rapanos) court cases with respect to the State's regulatory authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste

[2] Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001)
[3] Rapanos v. United States, 547 U.S. 715 (2006)

Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not substantially adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the California Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. One CDFW guidance document, although not a formally adopted rule or policy, requires notification for activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators. If the project will not "substantially adversely affect an existing fish or wildlife resource," following notification to CDFW, the project may commence without an agreement with CDFW. (Fish & G. Code, § 1602(a)(4)(A)(i).)

2.4 CALIFORNIA COASTAL COMMISSION

Chapter 3 of the California Coastal Act (§30000 *et seq*) contains policies to protect water quality and the biological productivity of coastal waters (PRC Section 30231); avoid and minimize dredging, diking, and filling sediments (PRC Section 30233); and mitigate wetland impacts (PRC Section 30607.1). In addition, under the California Coastal Act "environmentally sensitive area means 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" (PRC Section 30107.5).

The California Coastal Act requires that jurisdictions protect Environmentally Sensitive Habitat Areas (ESHA). Specifically, PRC Section 30240 states that:

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

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

The Coastal Act generally protects ESHAs where they exist; it also protects "against any significant disruption of habitat values". Section 30007.5 of the Coastal Act states that where there is a conflict between policies that it:

...be resolved in a manner, which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

Section 3 Methodology

The analysis presented in this report is supported by field surveys and verification of site conditions conducted on May 19, 2025. ELMT conducted a field delineation to determine the jurisdictional limits of the "waters of the United States", "waters of the State" and jurisdictional streambed (including potential wetlands), located within the boundaries of the Project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the Project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which is defined as "*. . . 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.*"[4] Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). In addition to characteristics listed above, wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community.

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:
- (1) Waters which are:
  - (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
  - (ii) The territorial seas; or
  - (iii) Interstate waters;
- (2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
- (3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
- (4) Wetlands adjacent to the following waters:
  - (i) Waters identified in paragraph (a)(1) of this section; or

[4] CWA regulations 33 CFR §328.3(e).

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.,* gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as 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.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this Project, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008).

3.2 WATERS OF THE STATE

3.2.1 REGIONAL WATER QUALITY CONTROL BOARD

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands. The Regional Board shares the Corps' jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq*. of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. riparian), including wetlands and vernal pools, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions.

3.2.3 CALIFORNIA COASTAL COMMISSION

Chapter 3 of the California Coastal Act (§30000 et seq) contains policies to protect water quality and the biological productivity of coastal waters (PRC Section 30231); avoid and minimize dredging, diking, and

filling sediments (PRC Section 30233); and mitigate wetland impacts (PRC Section 30607.1). In addition, under the California Coastal Act "environmentally sensitive area means 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" (PRC Section 30107.5).

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…be resolved in a manner, which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.

Section 4 Literature Review

ELMT conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during ELMT's literature review is provided below and in Appendix C, *Documentation*. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The project site lies within the Anaheim Bay watershed (HUC 180702010001). This water contributes directly to the Huntington Beach-Pacific Ocean watershed (HUC 180702010002). The Anaheim Bay watershed consists of twelve (12) water bodies and encompasses approximately 55,436 acres. The primary hydrogeomorphic features in this watershed are the Bolsa Chica Channel and the associated wetlands, the Wintersburg Channel, Huntington Harbour, the Westminster Channel, and Seal Beach, with most of these features concentrated in the western portion of the watershed, adjacent to the Pacific Ocean.

Regional topography within the Anaheim Bay watershed is relatively flat and supports primarily developed land which has eliminated much of the topographic variation within the watershed. The Bolsa Chica and Wintersburg Channels primarily receive surface water from urban runoff, while the Pacific Ocean provides a tidal influence within these features. This watershed plays a crucial role in the brackish conditions within the Bolsa Chica Wetlands which supports a variety of wildlife and plant species in the coastal zone. This watershed ultimately terminates into the Pacific Ocean.

4.2 LOCAL CLIMATE

Orange County features a subtropical Mediterranean climate with high summer temperatures and cool winter months. Climatological data obtained for the City of Huntington Beach indicates the average annual precipitation is approximately 12 inches with almost all the precipitation occurring between the months of December and March and hardly any occurring in between the months of June through August. The wettest month is February with a monthly average total precipitation of 2.9 inches. The average annual maximum and minimum temperatures of Huntington Beach 69.8 and 45 degrees Fahrenheit (F) respectively with August being the hottest month (monthly average of 75° F) and December being the coldest month (monthly average of 64.4° F). Temperatures during the site visits were in the high 60s to low-70s (degrees Fahrenheit) with infrequent, moderate winds and intermittent cloud cover.

4.3 USGS TOPOGRAPHIC QUADRANGLE

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within the Project site.

The Project site is located within the Seal Beach quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Lot 28 of an un-sectioned portion of Township 6 South, Range 11 West (Exhibit 2, *Site Vicinity*). On-site surface elevation ranges from approximately 31 to 42 feet above mean sea level. Onsite topography is generally flat with no areas of significant topographic relief.

The project site supports primarily developed and disturbed land. Pipeline, derricks, detention basins, administrative and abandoned building, as well as mechanical housing structures occur throughout the majority of the projects site and correspond with active and historical oil and natural gas production and processing operations within the project site. The north-west corner of the project site supports undeveloped land and an ice plant mat plant community.

4.4 AERIAL PHOTOGRAPHS

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1985-2024) of the Project as available from Google Earth Pro Imaging. Aerial photographs can be useful during the delineation process, as they often indicate the presence of drainage features and riverine habitat within the boundaries of the Project site, if any.

The Project site is located in a heavily developed area in the City of Huntington Beach, Orange County, California. Surrounding land uses consist of residential development, and undeveloped open space which supports a variety of ecological and recreational uses. The project site is bounded to the southwest by State Route 1 with Huntington Dog Beach beyond; to the northwest by undeveloped open space, with the Bolsa Chica Ecological Reserve beyond; to the northeast by residential development, with Harriet Wider Regional Park beyond; and to the southeast by Goldenwest Street with residential development beyond.

The Project site itself primarily consists of developed and disturbed land which supports industrial development and active oil and natural gas production and processing. The northeast portion of the project site consists of undeveloped land which supports an iceplant mat plant community. Refer to Appendix B, *Site Photographs*, for representative site photographs. The site has supported development associated with current industrial use since prior to 1952 and has gone through minor changes since that time.

4.5 SOILS

Soils within and adjacent to the Project site were researched prior to the field delineation using the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for the Merced County Area. The NRCS furnishes soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use, and management; and in planning, research, and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color).

Based on the USDA NRCS Soil Survey, the Project site is surrounded and underlain by the following soil series:

- Beaches

- Marina Loamy Sand (0 to 2 percent slopes)
- Myford Sandy Loam (0 to 2 percent slopes; 9 to 30 percent slopes, eroded)
- Hanford fine sandy loam (moderately deep and deep over sand; 0 to 1 percent slopes)
- Tidal Flats

4.6 HYDRIC SOILS LIST OF CALIFORNIA

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric[5]. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the USDA NRCS County list of hydric soils. According to the hydric soils list Beaches, Myford sandy loam (0 to 2 percent slopes), and Tidal flats are all listed as hydric in Orange County and part of Riverside County, California.

4.7 NATIONAL WETLANDS INVENTORY

ELMT reviewed the U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI) maps. According to the NWI no aquatic resources have been historically mapped within the boundaries of the project site. The nearest aquatic resource is the Pacific Ocean, which is located approximately 450 feet west of the project site.

4.8 FLOOD ZONE

The Federal Emergency Management Act (FEMA) website was searched for flood data for the Project site. Based on Flood Insurance Rate Map No. 06059C0242K, mapped the Project site is located within Zone X – Areas of minimal flood risk.

[5] A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.



PALM & GOLDENWEST SPECIFIC PLAN AMENDMENT
JURISDICTIONAL DELINEATION

ELMT CONSULTING

N

0 500 1,000 2,000 US Feet

Soils

Source: ESRI Aerial Imagery; County of Orange

Exhibit 4

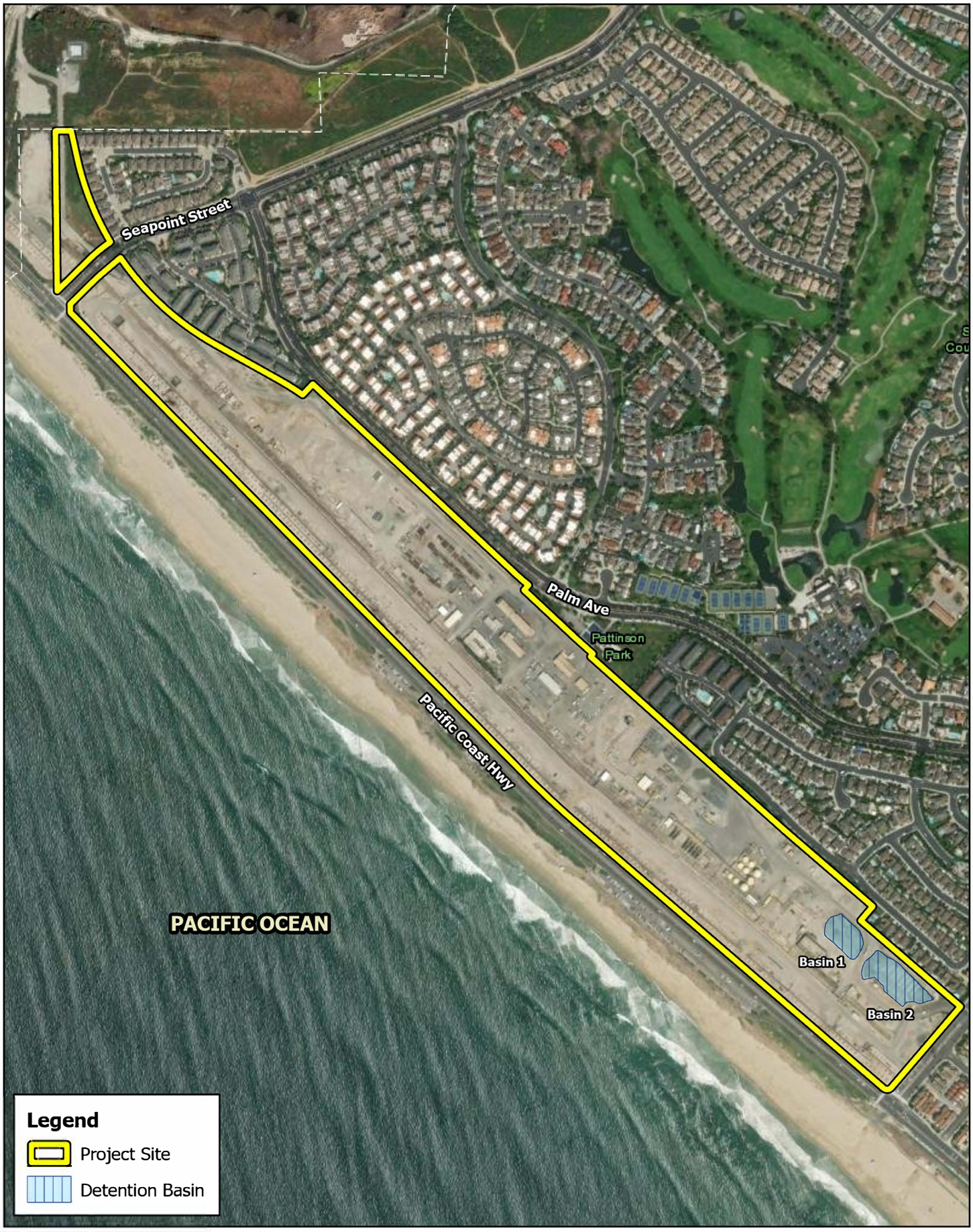
Section 5 Site Conditions

ELMT biologist Rachael A. Lyons conducted a field delineation on May 19, 2025 to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the Project site. ELMT carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding 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. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology. ELMT field staff encountered no limitations during the field delineation.

5.1 ON-SITE FEATURES

5.1.1 DETENTION BASINS

Two (2) detention basins (Basins 1 and 2) were observed on the southeast corner of the Project site during the field delineation. Water within these basins is pumped from Detention Basin 1 to Detention Basin 2, before eventually conveying flowing into the public underground storm drain system. At the time of the investigation, neither basin contained any surface water or soil saturation. Both detention basins are completely void of vegetation. As such, the detention basins onsite do not have the potential to provide habitat for wildlife species known to occur in the area. Therefore, Detention Basins 1 and 2 will not qualify as jurisdictional features and will not fall under the authority of the Corps, Regional Board, CDFW, or CCC. No regulatory approval will be required prior to modification of these features.



PALM & GOLDENWEST SPECIFIC PLAN AMENDMENT
JURISDICTIONAL DELINEATION

Onsite Water Features

ELMT CONSULTING

N

0 500 1,000 2,000 US Feet

Source: ESRI Aerial Imagery; County of Orange

Exhibit 5

Section 6 Findings

This report presents the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to the following sections for a summary of jurisdictional areas within the Project site.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

The Detention Basins onsite were excavated wholly in upland areas to support industrial operations associated with active oil and natural gas production and processing within the project site, and therefore will not fall under the regulatory authority of the Corps.

6.1.2 FEDERAL WETLAND DETERMINATION

In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., hydrophytic vegetation, hydric soils, and hydrology) described in the Corps Arid West Regional Supplement. Although hydric soils are recorded as historically underlaying the project site and hydrology occurs within the detention basins, these features are artificial and were constructed to support industrial operations associated with active oil and natural gas production and processing within the project site. Additionally, the onsite detention basins do not support any vegetation, specifically hydrophytic vegetation. Therefore, the onsite basins would not be considered a wetland.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

6.2.1 WATERS OF THE STATE DETERMINATION

The detention basins do not exhibit characteristics consistent with the Regional Board's methodology and would not be considered jurisdictional waters of the State. Therefore, no impacts will occur to Regional Board waters of the State.

6.2.2 STATE WETLAND DETERMINATION

Under the State Water Resources Control Board State Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The Detention Basins onsite were created to support industrial operations associated with active oil and natural gas production and processing within the project site. The onsite basins will not qualify as State wetland features.

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

The detention basins do not exhibit characteristics consistent with CDFW's methodology and would not be considered CDFW jurisdictional features. Therefore, no impacts will occur to CDFW jurisdictional features and no regulatory permits will be required.

6.4 CALIFORNIA COASTAL COMISSION

No coastal waters, wetlands, or environmentally sensitive areas were identified onsite at the time of the investigation. However, since the Project site is located within the coastal zone, a coastal development permit (CDP) is required prior to construction, as well as approval from the City that the Project complies with its Coastal Land Use Plan. It is anticipated that the CDP would be concurrently processed with the other regulatory permit applications.

6.4.1 COASTAL WETLAND DETERMINATION

The CCC's regulations (California Code of Regulations Title 14 (14CCR)) establish a "one parameter definition" that only requires evidence of a single parameter to establish wetland conditions. The upland limit of a wetland is defined as the boundary between land with predominantly hydrophytic cover and land with predominantly mesophytic or xerophytic cover; the boundary between soil that is predominantly hydric and soil that is predominantly nonhydric; or in the case of wetlands without vegetation or soils, the boundary between land that is flooded or saturated at some time during years of normal precipitation, and land that is not. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominately hydrophytes; (2) the substrate is predominately undrained hydric soil; and (3) the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year.

The project site is primarily void of vegetation and is specifically void of hydrophytic vegetation. Although historically, hydric soils have been mapped as underlying the project site, these soils have been highly disturbed and compacted due to historic and ongoing land uses. Additionally, there are no portions of the site which support saturated soils. Therefore, the project site does not support wetland conditions per the CCC's regulations, and no coastal wetlands will be impacted through proposed project implementation.

Section 7 Regulatory Approval Process

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

7.1 UNITED STATES ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into waters of the United States and wetlands pursuant to Section 404 of the CWA. No Corps jurisdictional areas were identified within the Project site. Therefore, a CWA Section 404 permit would not be required for the proposed Project.

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. No Regional Board jurisdictional areas were identified onsite at the time of the investigation. Therefore, regulatory approvals from the Regional Board would not be required.

7.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. No CDFW jurisdictional features occur within the boundaries of the Project site. Therefore, a Section 1602 Streambed Alteration Agreement will not be required.

7.4 CALIFORNIA COASTAL COMMISSION

No coastal waters, wetlands, or environmentally sensitive areas were identified onsite during the field investigation. However, since the Project site is located within the coastal zone, a coastal development permit (CDP) is required prior to construction, as well as approval from the City that the Project complies with its Coastal Land Use Plan.

Section 8 References

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Appendix A Site Plan

CRC DEVELOPMENT CONCEPT

LEGEND

- CRC Property Boundary
- Open Space
- Park

CRC PROPERTY AREA:
92.9 AC

OPEN SPACE/PARK:
23.7 AC

DEVELOPMENT AREA:
69.2 AC

COMMERCIAL VISITOR:16.0 AC
FAR: 0.5:1
GFA: 348,480 sf

RESIDENTIAL: 53.2 AC
DU: 800

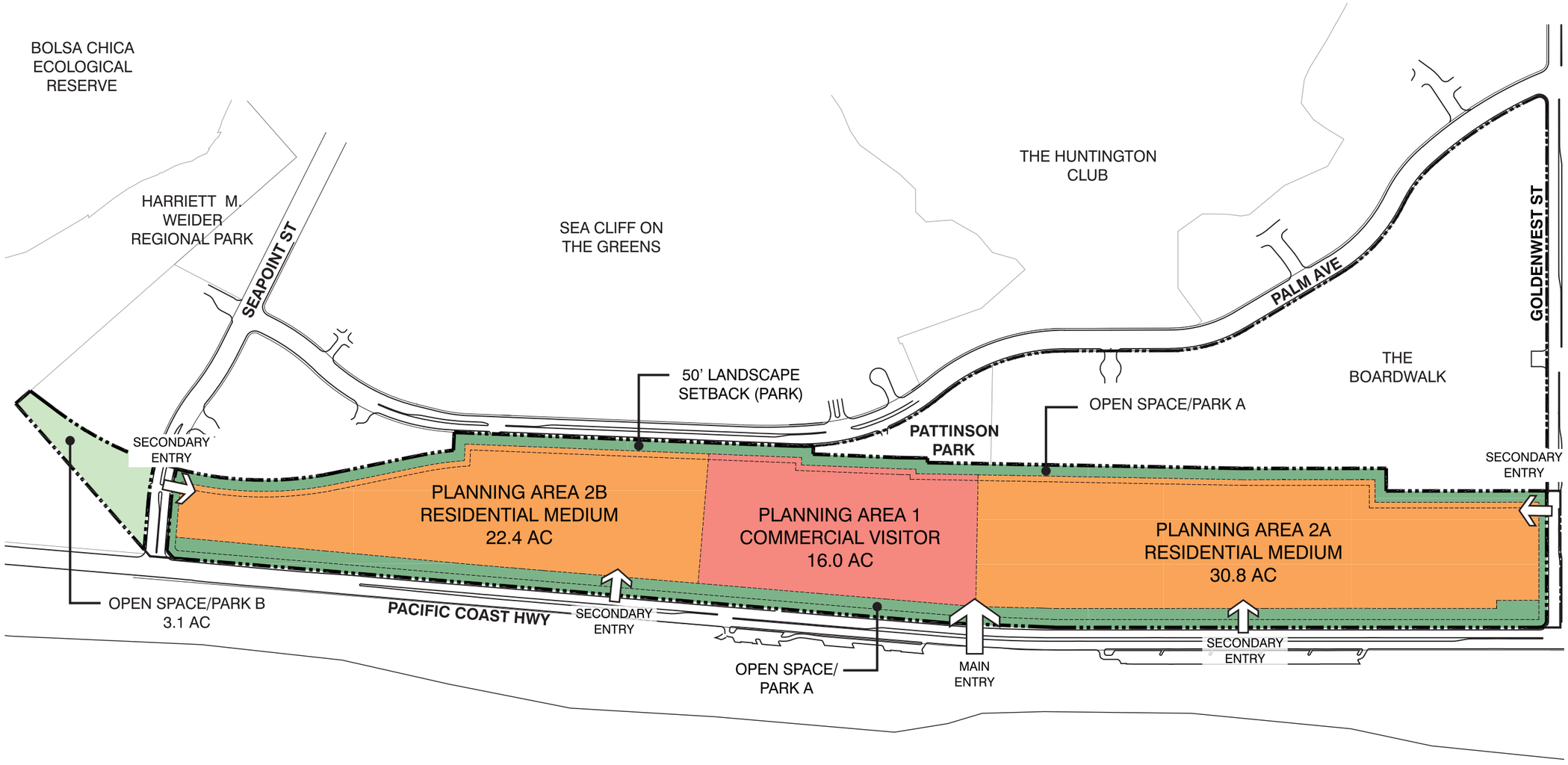


FIGURE 2.1: DEVELOPMENT CONCEPT PLAN

Appendix B Site Photographs



Photograph 1: From the northeast bank of Detention Basin 1, looking west through the Project site.



Photograph 2: From the northeast bank of Detention Basin 1, looking southeast.



Photograph 3: Depicting the pump system which actively moves water from Detention Basin 1 into Detention Basin 2.



Photograph 4: From the western bank of Detention Basin 2, looking east.



Photograph 5: From the western bank of Detention Basin 2, looking northeast.



Photograph 6: From the central portion of the project site, looking southwest toward Goldenwest Street.

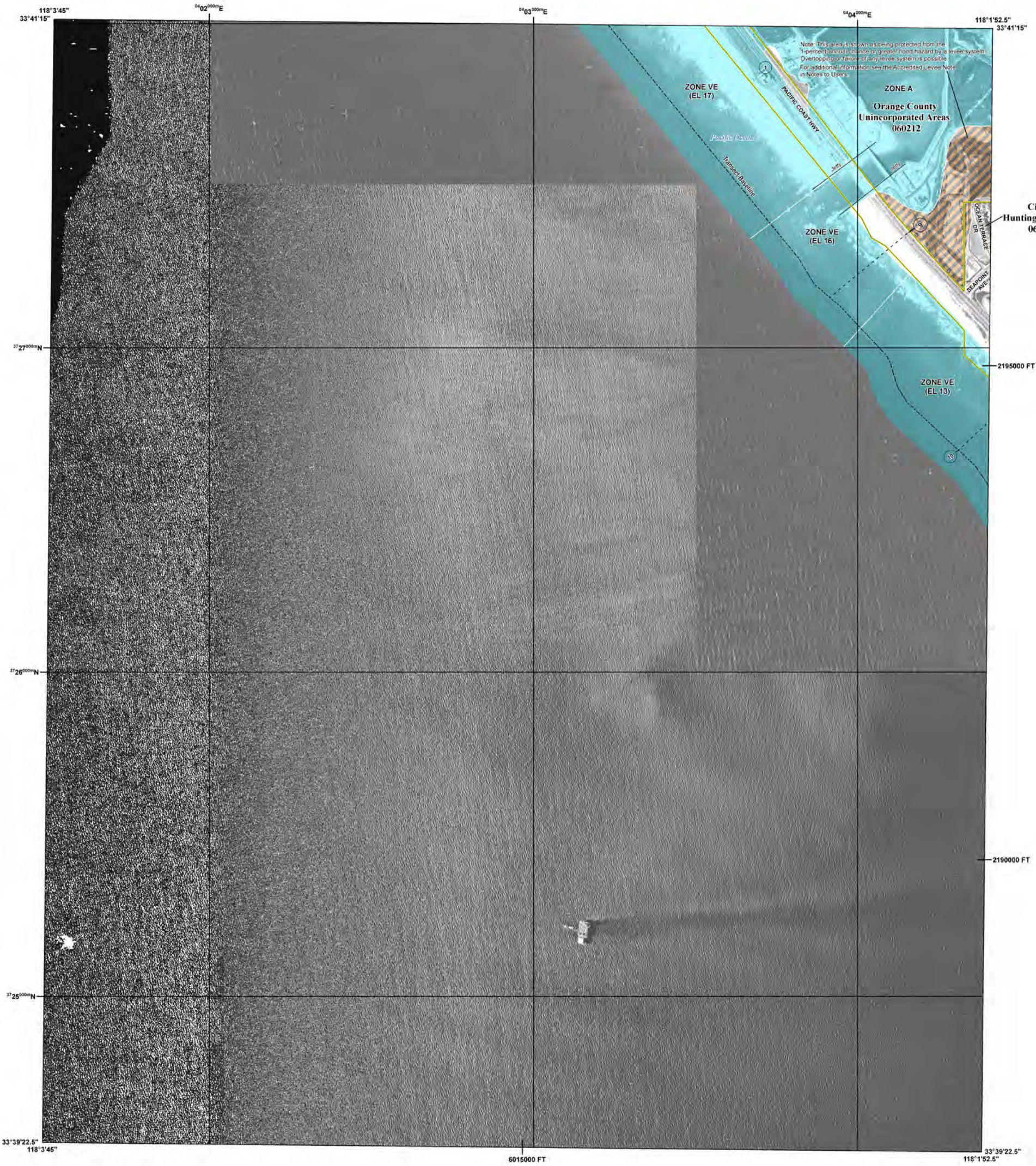


Photograph 7: From the central portion of the project site, looking northwest.



Photograph 8: From the northern corner of the Project site, looking northwest toward the Pacific Ocean and the Bolsa Chica Wetlands, outside the project footprint.

Appendix C Documentation



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTPS://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- E 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base Map information shown on this FIRM was derived from multiple sources. Coastal California LiDAR and Digital Imagery dated 2011 was compiled from the Coastal Services Center where available, and it was supplemented with 2014 USDA National Agriculture Imagery Program 2014 (NAIP) Imagery.

ACCREDITED LEVEE NOTES TO USERS: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at https://www.fema.gov/business/nfip/index.shtm.

SCALE

Map Projection:

NAD83 UTM Zone 11N
Western Hemisphere; Vertical Datum: NAVD88

1 inch = 500 feet 1:6,000

0 1,000 2,000 feet

0 250 500 meters

PANEL LOCATOR



* PANEL NOT PRINTED

FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

ORANGE COUNTY, CALIFORNIA
and Incorporated Areas

PANEL 241 OF 539

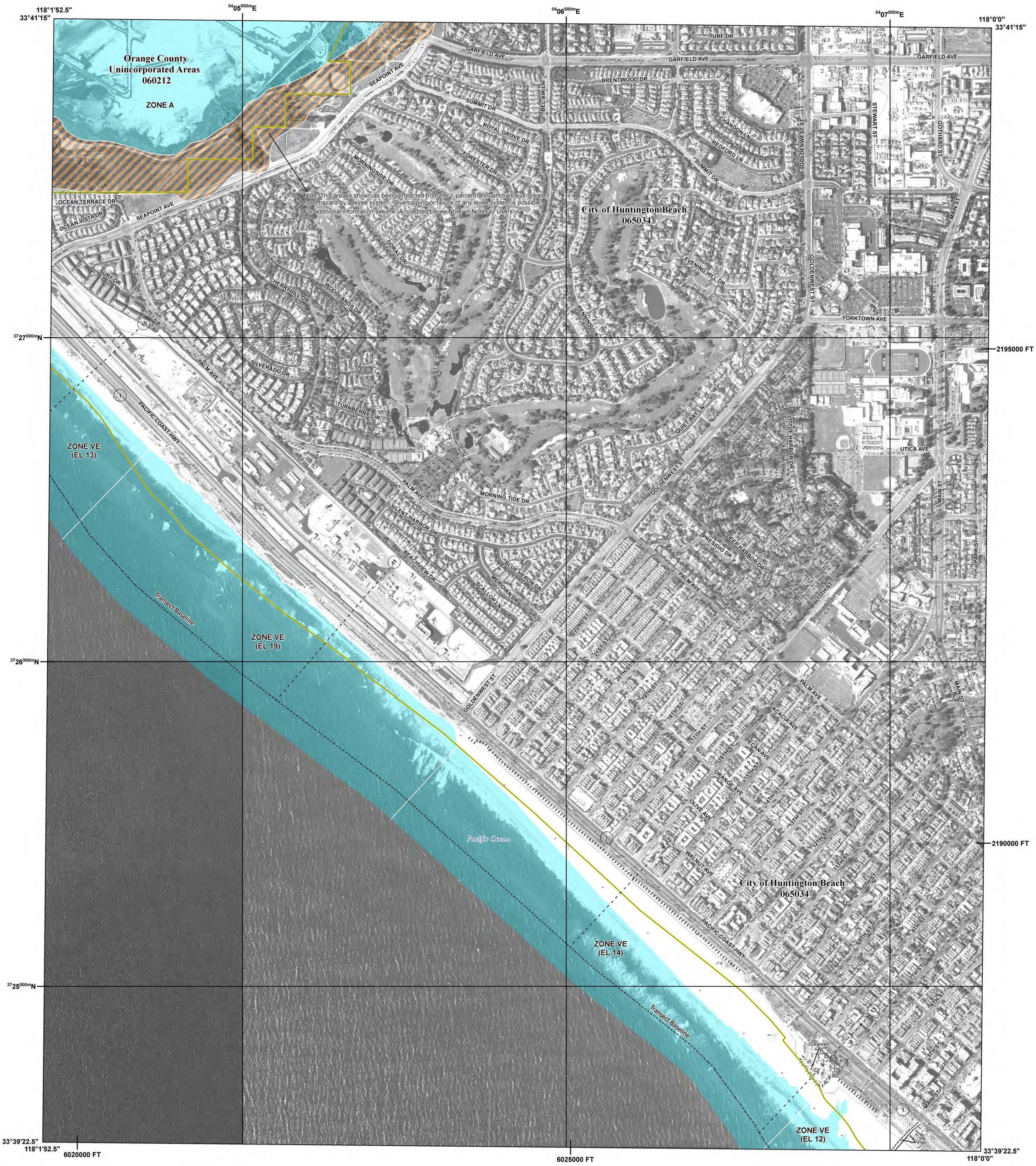
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HUNTINGTON BEACH, CITY OF	065034	0241	K
ORANGE COUNTY	060212	0241	K

VERSION NUMBER
2.3.3.1

MAP NUMBER
06059C0241K

MAP REVISED
MARCH 21, 2019



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

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- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

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SCALE

N

Map Projection:

NAD83 UTM Zone 11N
Western Hemisphere; Vertical Datum: NAVD88

1 inch = 500 feet 1:6,000

0 1,000 2,000 feet

0 250 500 meters

PANEL LOCATOR

* PANEL NOT PRINTED

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

ORANGE COUNTY, CALIFORNIA
and Incorporated Areas

PANEL 242 OF 539

FEMA

Panel Contains:

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ORANGE COUNTY	060212	0242	K

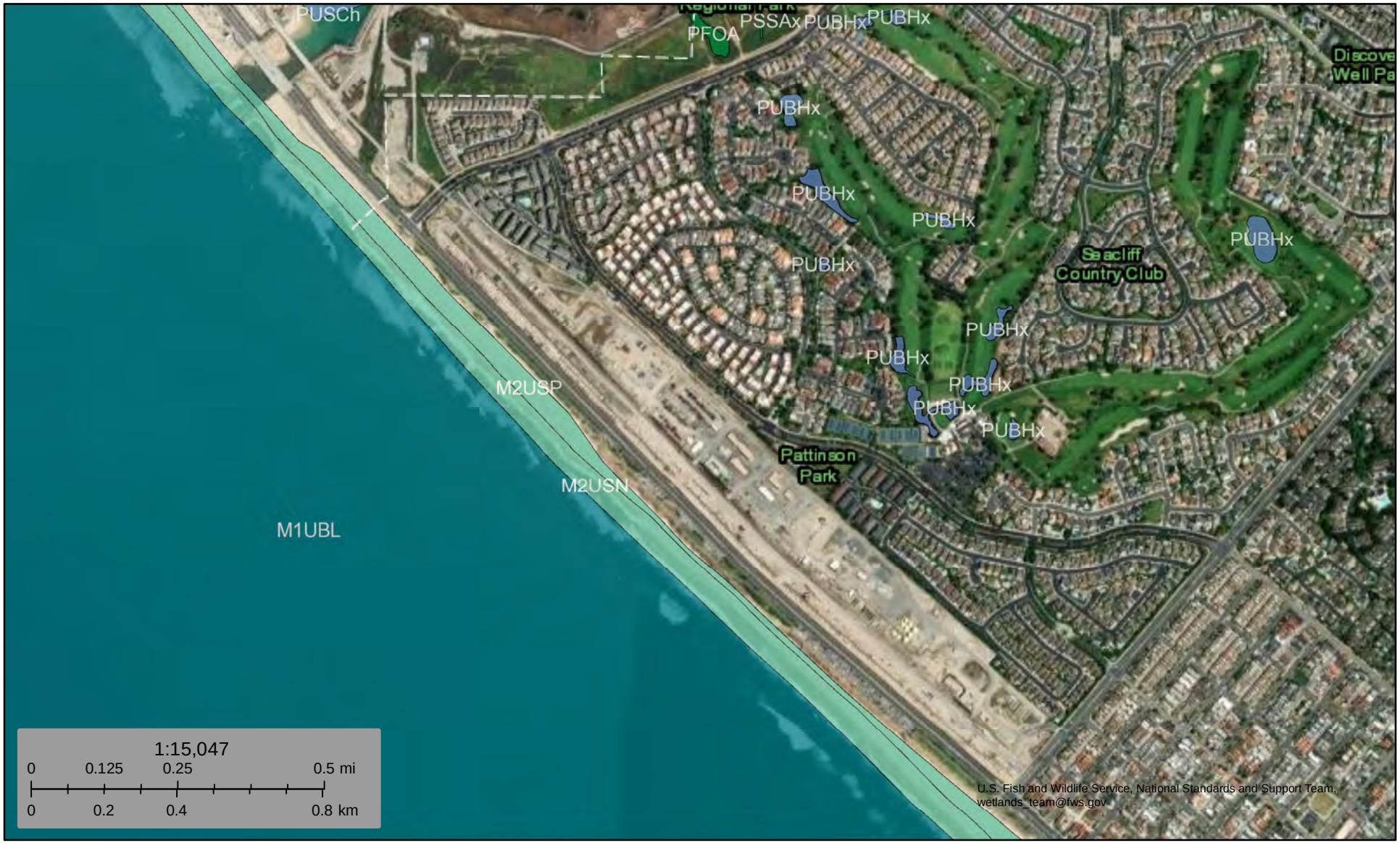
VERSION NUMBER
2.3.3.1

MAP NUMBER
06059C0242K

MAP REVISED
MARCH 21, 2019

U.S. Fish and Wildlife Service
National Wetlands Inventory

Palm/Goldenwest Project Site



June 5, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix D Methodology

WATERS OF THE UNITED STATES

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.,* gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as 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.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- *Sapling/shrub stratum:* Consists of woody plants less than 3 inches DBH, regardless of height;
- *Herb stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- *Woody vines:* Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.[1] Hydrophytic vegetation is present if any of the indicators are satisfied.

[1] Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

Indicator 1 – Dominance Test

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the "50/20 rule") of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- *Obligate Wetland (OBL):* Plants that almost always occur in wetlands;
- *Facultative Wetland (FACW):* Plants that usually occur in wetlands, but may occur in non-wetlands;
- *Facultative (FAC):* Plants that occur in wetlands and non-wetlands;
- *Facultative Upland (FACU):* Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- *Obligate Upland (UPL):* Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.[2] The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

<u>All Soils</u>

"All soils" refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

<u>Sandy Soils</u>

"Sandy soils" refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

[2] According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Loamy and Clayey Soils

"Loamy and clayey soils" refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term "isolated waters" is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.