2 EXISTING CONDITIONS

2.1 Purpose and Intent

This chapter describes existing conditions within the Project Site. More detailed information on existing site conditions is provided in the Newport Banning Ranch Environmental Impact Report (NBR-EIR).

2.2 Topography and Landform

The Project Site is comprised of two distinct topographic areas as shown in Exhibit 2-1, "Topographic Areas and Features Map":

1. The Lowland is comprised of approximately 147 acres (37%) located in the northwestern portion of the Project Site. Elevations in the Lowland range from approximately one foot above mean sea level (MSL) to ten feet above MSL.

2. The Upland, is comprised of approximately 254 acres (63%) located in the southeastern portion of the Project Site. Elevations on the Upland generally range from approximately 50 feet above MSL in the southwestern area of the Project Site to approximately 105 feet above MSL in the east-central portion of the Project Site. The Upland also includes slopes and bluffs[1] ranging in elevation between 10 and 50 feet above MSL as illustrated on Exhibit 2-1.

3. "Bluff" is defined as a landform having an average slope of 26.6 degrees (50%) or greater, with a vertical rise of 25 feet or greater.

[1]

2.3 Access and Visibility

Active oil operations have been ongoing within the Project Site since 1944. For safety, liability, and security reasons, the Project Site has historically been securely fenced, and the entry gates have been locked. There are currently no public access points, roads, or trails into or within the Project Site.

Private access to the Project Site is provided to serve the active oil production operations which include wells, tanks, pipelines, and other oil facility areas. Access to oil operations is located from a gated entry along West Coast Highway near the southwest corner of the Project Site and from a gated entry at the terminus of 17th Street along the easterly boundary of the Project Site. An extensive network of internal oil roads located throughout the Project Site serves the oil production operations.

Due to the significant topographic variations and lack of public access or roads, public visibility into significant areas of the Project Site is limited. Views from West Coast Highway adjacent to the Project Site are primarily limited to the views of bluff-faces and slopes adjacent to the roadway. Limited views south and west across the Project Site are provided from 19th Street located at the northern boundary of the Project Site. Portions of the Lowland are visible from parts of the Newport Shores neighborhood and public trails along the Santa Ana River located to the west of the Project Site, although views are often limited to bluff faces and slopes. Views into portions of the Project Site are available from lots and homes within the Newport Crest residential community located in Newport Beach and the California Seabreeze residential community located in Costa Mesa, as well as from other adjacent private properties located along the eastern boundary of the Project Site.

2.4 Visual Character

The visual character of the Project Site is illustrated in Exhibits 2-2 through 2-5 and described below.

2.4.1 Lowland

As shown in Exhibit 2-3, "Existing Lowland Conditions," the Lowland includes degraded wetlands, is traversed by a complex network of oil roads, pipelines, and utility wires/poles and contains pumping unit engines (wells) and oil-related buildings. Muted tidal influences occur in a small area at the southwest corner of the Lowland, with narrow non-tidal channels and low pockets of periodically standing water scattered throughout the remainder of the Lowland.

2.4.2 Upland

As shown in Exhibit 2-4, "Existing Upland Conditions," the majority of the Upland is used for a wide variety of oil extraction activities. Oil pipelines, active and abandoned equipment, buildings, paved and unpaved roads and open storage areas for pipes and machinery are pervasive on the uppermost elevations of the Upland, along eroding bluffs and slopes, and within portions of the arroyos.

The topography of the Upland from south to north gradually transitions into sloping hillsides that drop to the Lowland in the northwest. The Upland has been incised in several areas, apparently as a result of on- and off-site processes, to form three arroyos of considerably different size as shown in Exhibit 2-1. The Southern Arroyo and the smaller Northern Arroyo are both considered to be significant landforms. The northernmost Minor Arroyo, although very small, supports riparian vegetation.

2.4.3 Slopes and Bluffs

Slopes and bluffs within the Project Site are steepest along the southern and southwestern edges of the Upland, where they have been especially impacted by historic oil operations and by uncontrolled storm water and nuisance runoff within the Project Site and by storm water and nuisance flows crossing the Project Site from adjacent properties. The five photographs that comprise Exhibit 2-5, "Existing Slopes and Bluff Conditions," illustrate the extent of the oil operations and erosion along these slopes and bluffs.

2.5 Geotechnical Conditions

Geotechnical conditions found within the Project Site are described in the NBR-EIR. Geological conditions have been identified based upon the findings of all geological and geotechnical reports prepared for the Project Site and adjacent properties, interpretation of aerial photographs and topographic maps, completion of appropriate geologic mapping, and field and laboratory investigations as referenced in the NBR-EIR.

The Project Site is located adjacent to the Newport-Inglewood Fault, which extends between Newport Beach and Inglewood. Splays of the fault have been mapped on-site, and appropriate setbacks have been determined based upon geotechnical investigations that included extensive field work, excavations, soundings, and laboratory analyses. Geotechnical setback lines and zones are established for the Project Site based upon the conclusions of all geotechnical reports, and illustrated on Exhibit 2-1. There are no Alquist Priolo faults on the Project Site and thus, it does not fall under the Alquist Priolo Earthquake Fault Zoning Act.

2.6 Oil Operations

2.6.1 Overview

Oil operations, including exploration, development, and production, have been conducted continuously within the boundary of the Project Site since 1944. Currently oil field operations are undertaken by West Newport Oil Company (WNOC) and the City of Newport Beach. There are currently approximately 489 producing, potentially-producing, and abandoned oil wells located within the Project Site, together with related oil roads, pipelines, sumps, storage tanks, and other facilities. Exhibit 2-6, "Character of Existing Oil Operations," illustrates the nature of the existing oil operations and facilities in both the Upland and Lowland areas of the Project Site.

2.6.2 Oilfield Surface Use

Exhibit 2-7, "Existing Oilfield Surface Use Map," illustrates the extent to which the Project Site has been impacted by both historic and currently "known"[1] oil wells, pipelines, utility poles, and related facilities, as well as oilfield operation work areas, including graded roads and equipment areas surfaced with gravel, asphalt, crude oil, or crude oil tank sediments, and historic sumps which held produced oil and fluids within in-ground surface containments.

Over 40 miles of pipelines remain throughout the Project Site for the conveyance of oil, water, and gas produced from the wells to the various separation and treatment facilities on the Project Site. As illustrated in Exhibit 2-7, these operations are distributed across both the Upland and Lowland.

The specific oil facilities shown Exhibit 2-7 are described below:

- Oil Wells and Pads – The surface locations of the existing or abandoned oil wells. A typical oil well pad generally includes an area of 10 to 30 feet around each oil well that contains pipelines, concrete pads, pumping and power equipment, and the work area for large work-over rigs, trucks, and tanks.

- Oil Pipeline Corridors – Areas where one or more pipelines exist to convey oil, water, and gas from each well to larger group lines and then on to each processing facility. Most lines are aboveground, with some located on pipeline support structures that are cemented into the ground to raise the pipeline above the ground surface. Some older lines may still exist below the surface.

- Utility Poles – Power poles to support the electrical system throughout the oilfield. These treated wood poles support transformers, power lines, electrical panels, and other equipment to serve the oil operations. Poles have historically been left in place at abandoned well locations to support potential future drilling.

- Oilfield Operations Areas – All areas historically used in oil- and gas-producing operations. This includes all roads, wells and surrounding wellpads, tanks and facilities, pipeline and utility corridors and general staging and work areas. These areas have generally been graded and may be surfaced with gravel, asphalt, crude oil, crude oil tank sediments, and/or other materials.

- Historic Oil Sumps – In-ground produced oil and fluids storage locations identified from a 1947 aerial photograph.

[1] The word "known" is highlighted because, within the context of the Project Site's over 65-year oil production history, there is a strong likelihood that numerous other facilities, partially mapped and/or unmapped, will be encountered during oilfield remediation.

There are numerous producing and potentially producing oil facility areas throughout the Project Site including the oil wells currently available for extraction. These range from large facility areas that include extensive piping, oil separation and processing tanks, power facilities, mechanics and work shops, and other equipment, to smaller individual tanks, vessels, equipment storage yards, sheds, and staging areas. In some cases vegetation has grown around or within these oil facilities and surface materials. These same areas are typically targeted for demolition and removal during oilfield abandonment, and may require additional soils remediation as part of that process.

Today, oil operations within the Project Site continue to be conducted by West Newport Oil Company, permitted pursuant to the South Coast Regional Coastal Zone Conservation Commission Claim for Exemption No. E-7-27-73-144, and by the City of Newport Beach consistent with Federal, State, and local laws. These oil operations provide valuable energy resources for the State and Country. Oil production and operations activity at the Project Site have increased in recent years due to higher world oil prices.

2.7 Drainage and Jurisdictional Wetlands

2.7.1 Drainages

The drainage area in which the Project Site is located encompasses both the Project Site and surrounding urban areas. Uncontrolled surface storm runoff sheet-flows westerly from the neighboring developed areas across the Project Site's Upland to the Lowland and Santa Ana River Channel. Along the way, the runoff either collects or concentrates in arroyo corridors or continues to sheet flow over the bluffs and west-facing slopes toward the Semeniuk Slough and Lowland.

Three drainages exist on-site which define the three arroyos found within the Project Site as described below:

- Minor Arroyo – The smallest and most northerly drainage area within the Project Site, which supports riparian vegetation along most of its short length;

- Northern Arroyo – An arroyo crossing the middle of the Project Site which supports both riparian vegetation and a large quantity of non-native invasive plants, including non-native acacia, pampas grass, and giant reed; and

- Southern Arroyo – The largest arroyo within the Project Site which supports riparian vegetation along much of its length, as well as significant areas of non-native invasive weeds in its lower reach.

The Lowland is also significantly impacted by historic oil operations, and is largely-separated hydrologically from the Semeniuk Slough by a U.S. Army Corps of Engineers' (ACOE) dike, although a small area at the southwest corner of the Lowland is subject to muted, low-flow tidal influence through the ACOE's property.

2.7.2 Wetlands/Riparian Areas

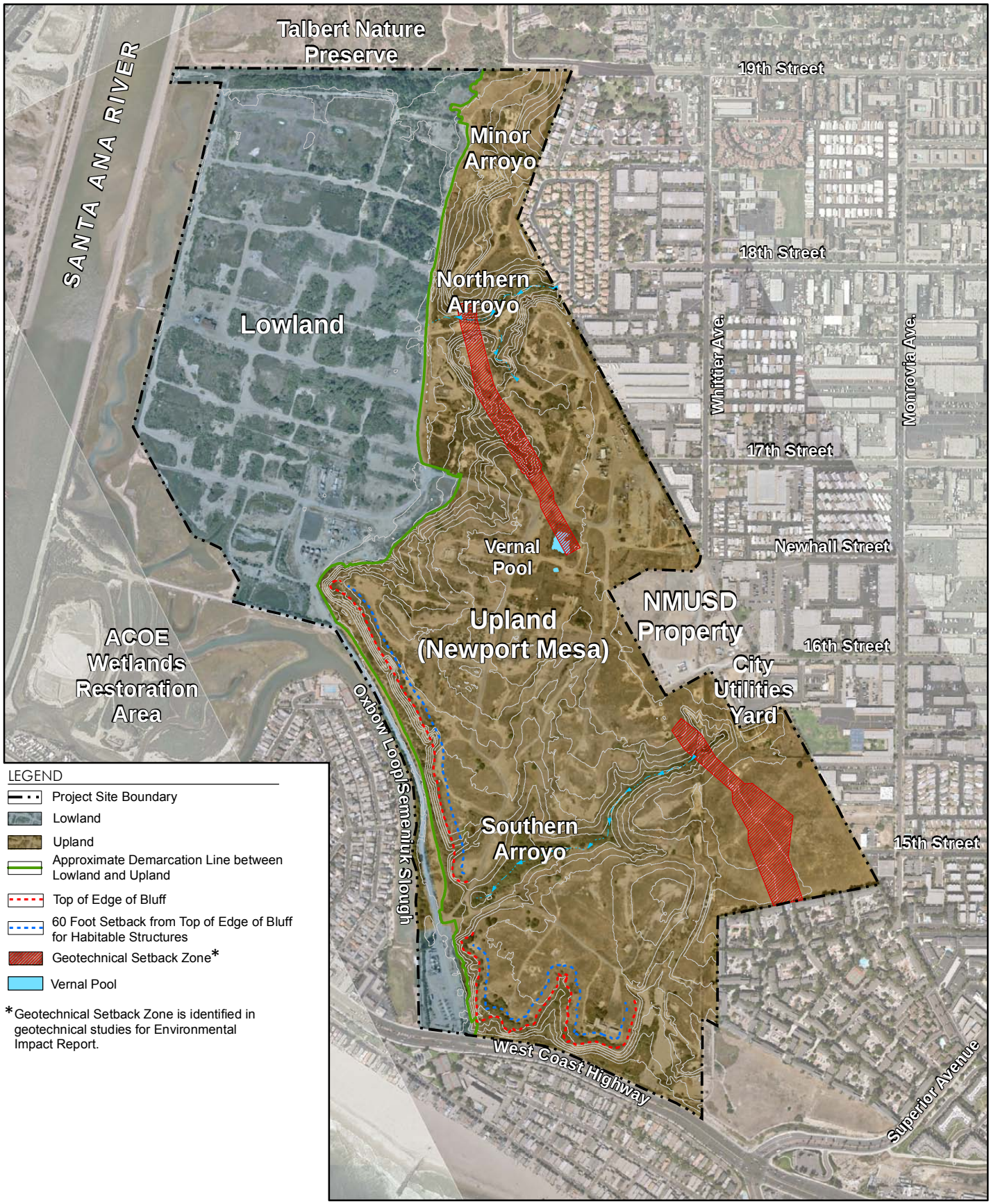
Surveys have been conducted to determine which areas of the Project Site meet the definition of *"Waters of the United States"* under Section 404 of the Clean Water Act, as regulated by the ACOE, as well as *"Navigable Waters"* under Section 10 of the 1899 Rivers and Harbors Act, which meet the definition of streambeds and associated riparian habitat subject to the jurisdiction of the California Department of Fish and Game (CDFG) pursuant to Section 1602 of the Fish and Game Code, and which meet the definition of Wetlands and Riparian Areas as defined by the California Coastal Act (CCA) and regulated by the California Coastal Commission (CCC).

These defined areas have been mapped and are identified in the Jurisdictional Delineations and Biological Technical Reports included as part of the NBR-EIR. The definitions of jurisdictional areas as regulated by the ACOE, CDFG, and CCC were originated and codified many years after the advent of oil operations on the Project Site. Because of this, some of these areas coincide with historic oil operations areas and may have been impacted by oil production surface materials or crude oil remnants. These historic impacts and remnants shall be addressed at the time that oil operations are abandoned and remediated.

2.8 Vegetation

As illustrated on Exhibit 2-7, "Existing Oilfield Surface Use Map," most of the Project Site is currently disturbed and/or fragmented by existing and historic oil facilities which crisscross the Project Site. The oilfield area includes an extensive road network and a wide variety of production and support facilities, as described in Section 2.6.

Despite the physical disruption caused by the construction and use of oil roads, wells, pipelines, and production facilities, many habitat areas continue to exhibit varying degrees of habitat function, whereas smaller remnants have lost most ecological function due to their isolation and small patch size. Over forty vegetation types and land cover types have been identified within the Project Site. These include twenty forms for coastal sage scrub, nine forms of pools, marshes, and mudflats, eight riparian forms, and eight grassland and disturbed/ developed areas. A general description of each of the vegetation types and other areas is included in the NBR-EIR. In general, the coastal sage scrub forms are located along the eastern and southern portions of the Project Site in the Upland. The marshes and mudflats occur within the Lowland subject to tidal influence, while the grassland depression features (pools) are located in the Upland adjacent to grasslands and other disturbed areas. Riparian forms occur in both Lowland and Upland areas that provide the hydrology required by riparian plant species. Scattered throughout, and dominating the Project Site landscape, are the grassland and other disturbed areas that occur in close association with the areas of historic oilfield activities.



NEWPORT BANNING RANCH

Exhibit 2-1

Topographic Areas and Features Map

MASTER DEVELOPMENT PLAN
City of Newport Beach - California

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GLENN LUKOS ASSOCIATES FUSCOE FORMA

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NEWPORT BANNING RANCH

MASTER DEVELOPMENT PLAN
City of Newport Beach - California

Exhibit 2-2
Site Photography Key Map

GLENN LUKOS ASSOCIATES | FUSCOE | FORMA

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L-A Lowland Photograph “A”

L-B Lowland Photograph “B”

L-C Lowland Photograph “C”

L-D Lowland Photograph “D”

L-E Lowland Photograph “E”

NEWPORT BANNING RANCH

MASTER DEVELOPMENT PLAN
City of Newport Beach - California

Exhibit 2-3
Existing Lowland Conditions

GLENN LUKOS ASSOCIATES FUSCOE ENGINEERING LSA

2010 • 08 • 19

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U-A Upland Photograph “A”

U-B Upland Photograph “B”

U-C Upland Photograph “C”

U-D Upland Photograph “D”

U-E Upland Photograph “E”

NEWPORT BANNING RANCH

MASTER DEVELOPMENT PLAN
City of Newport Beach - California

Exhibit 2-4
Existing Upland Conditions

GLENN LUKOS ASSOCIATES FUSCOE ENGINEERING LSA 2010 • 08 • 19

S-A Slopes and Bluffs Photograph “A”

S-B Slopes and Bluffs Photograph “B”

S-C Slopes and Bluffs Photograph “C”

S-D Slopes and Bluffs Photograph “D”

S-E Slopes and Bluffs Photograph “E”

NEWPORT BANNING RANCH

Exhibit 2-5
Existing Slope and Bluff Conditions

MASTER DEVELOPMENT PLAN
City of Newport Beach - California

GLENN LUKOS ASSOCIATES FUSCOE IRVINE 2010 • 08 • 19

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NEWPORT BANNING RANCH

Exhibit 2-6
Character of Existing Oil Operations

MASTER DEVELOPMENT PLAN
City of Newport Beach - California

GLENN LUKOS ASSOCIATES | FUSCOE | LORMA

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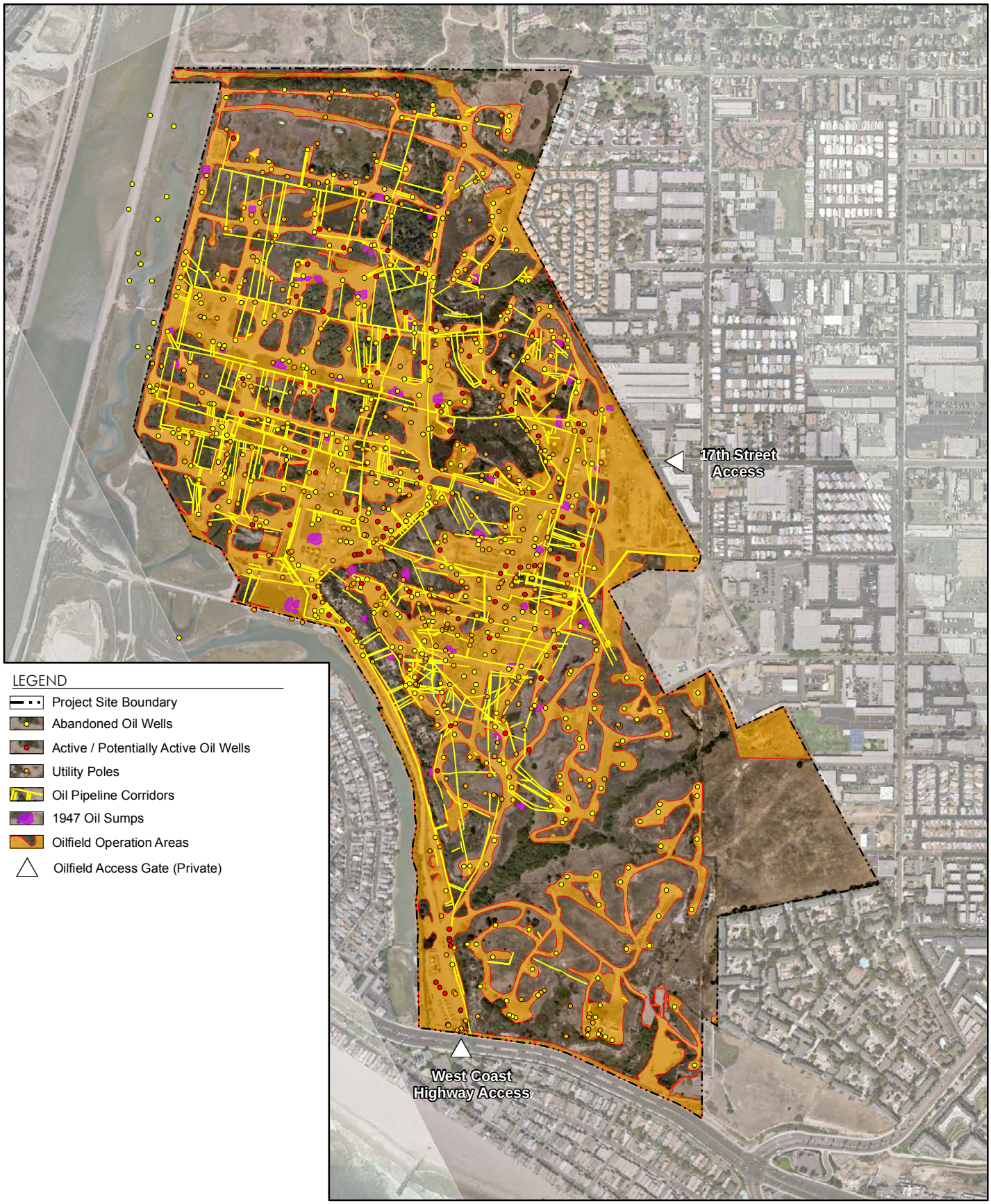

NEWPORT BANNING RANCH

Exhibit 2-7

Existing Oilfield Surface Use Map

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City of Newport Beach - California

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GLENN LUKOS ASSOCIATES FUSCOE FORMA

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