3.1 Introduction

This section briefly describes existing conditions at the Newport Banning Ranch Site. More detailed descriptions of existing conditions can be found in the Project EIR, in the technical plans and programs contained in Part V, Appendices, as well as in various technical reports prepared to better plan and design the Project, including:

1. *Draft Jurisdictional Delineations for the Newport Banning Ranch Property* (Glenn Lukos Associates, Inc.);

2. *Draft Biological Technical Report for the Newport Banning Ranch* (Glenn Lukos Associates, Inc.);

3. *Draft Report of Geotechnical Studies, Proposed Newport Banning Ranch Development* (GMU Geotechnical, Inc);

4. *Draft Focused Circulation Evaluation for Newport Banning Ranch* (LSA Associates, Inc.);

5. *Draft Phase I Environmental Site Assessment Update, Newport Banning Ranch* (Geosyntec Consultants); and

6. *Draft Cultural Resource Assessment Survey for the 403-Acre Banning Ranch Property* (LSA Associates, Inc.).

3.2 Access and Visibility

Private access to the Newport Banning Ranch Site is currently provided to serve the active oil production operations, wells and other oil facility areas. To the Lowland oil operations, access is from a gate along West Coast Highway near the southwest corner of the Site. Access to the Upland oil operations is from a gate at the end of 17th Street along the easterly boundary of the Site. Internal oil roads connect the two gated entrances.

Active oil operations have been ongoing on the Site for over 65 years. For safety, liability, and security reasons, the Site has historically been securely fenced. There are no public access points, roads, or trails within the Site.

Public visibility into Newport Banning Ranch is limited. Views along West Coast Highway adjacent to the Project are primarily limited to the bluff and adjacent to the roadway. The Lowland area is also visible from portions of the Newport Shores neighborhood and along the Santa Ana River Channel. Additional bluff views onto the Site are from the California Seabreeze (Costa Mesa) and Newport Crest (Newport Beach) neighborhoods and other adjacent properties along the eastern boundary, and from the Newport Shores neighborhood to the southwest.

3.3 Topography and Landform

3.3.1 Lowland and Upland Areas

The NBR is comprised of two distinct topographic areas as shown in Exhibit I.3-1:

1. A Lowland area that comprises approximately one-third of the total acreage and is located in the northwestern portion of the Site; and

2. An Upland area (i.e., the Newport Mesa) that has been uplifted and, with approximately two-thirds of the total acreage, comprises the larger remaining southeastern portion of the Site.

Elevations in the Lowland area range from approximately one (1) foot above mean sea level (MSL) to ten (10) feet above MSL. Elevations on the Upland mesa range from approximately 50 feet above MSL in the southwestern area to approximately 105 feet above MSL in the east-central portion of the Site.

3.3.2 Bluffs and Slopes

Exhibit I.3-1 illustrates the bluffs and slopes that extend along the southwestern and southern edges of the Upland mesa within the Newport Banning Ranch in more detail than shown on Exhibit I.3-2, City's Banning Ranch Development Constraints Map.

Exhibit I.3-1 shows the bluffs as determined by Geographic Information Systems (GIS) analysis using a high definition topographic map and the definition of bluff from Section 20.35.060 of the City of Newport Beach Municipal Code.[1]

[1] *As used in this Section and per the City of Newport Beach Municipal Code, "bluff" is any landform having an average slope of 26.6 degrees (50%) or greater, with a vertical rise of 25 feet or greater.*

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 04

3.4 Visual Character

3.4.1 Lowland

As shown by the panoramic photographs in Exhibit I.3-3, the Lowland includes degraded wetlands, and is currently traversed by a network of roads, pipelines, utility poles, and pumping unit engines (wells), and is dotted with oil-related buildings. Tidal influences are limited to a small area at the southwest corner of the Lowland, with non-tidal narrow channels and low pockets of periodically standing water scattered throughout the remainder of the Lowland.

3.4.2 Upland

As shown by the panoramic photographs in Exhibit I.3-4, the majority of the Upland is and has been subject to a wide variety of oil extraction activities for more than 65 years. Oil pipelines, active and abandoned equipment, buildings, paved and unpaved roads, and open storage areas for pipes and machinery remain, and are pervasive within the Upland, along the eroding bluffs and slopes, and within portions of the arroyos.

The Newport Mesa has been incised in three points to form three arroyos, two of which are significant–the southernmost Large Arroyo and the more northerly (and considerably smaller) Middle Arroyo.

As shown, bluffs are fairly steep along the southern and southwestern edges of the mesa, where they have also been impacted by historic oil operations and by uncontrolled runoff. Exhibit I.3-5 illustrates the extent of oil operations and erosion along these slopes and bluffs.

Moving from south to north, the topography becomes more gradual and ultimately transitions into sloping hillsides. The Newport Mesa has been incised in several areas, apparently as a result of natural on- and off-site processes, to form the three arroyos of considerably different size.

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 05

3.5 Geotechnical Conditions

A thorough analysis of the geotechnical issues related to the Site is provided for in the Draft Report of Geotechnical Studies, prepared by GMU Geotechnical, Inc., identified in Section 3.1.

This report is based upon all identified geological and geotechnical reports previously prepared for the Site and adjacent properties, interpretation of aerial photographs and topographic maps, completion of appropriate geologic mapping, and field and laboratory investigations.

Newport Banning Ranch is located adjacent to the Newport-Inglewood Fault, which extends from Newport Beach to Inglewood. Splays of the fault have been mapped on-site, and appropriate setbacks have been determined based upon GMU's Geotechnical Fault Investigation that included extensive field work, excavations, soundings, and laboratory analyses.

GMU's fault setback zones are shown on Exhibit I.3-1, which are refinements to the setbacks shown on Exhibit I.3-2, City's Banning Ranch Development Constraints Map.

3.6 Oil Operations

3.6.1 Overview

Most of the Project Site has been the subject of ongoing oilfield operations over an extended period of time. In fact, oil operations including exploration, development, and production, have been conducted continuously within the boundaries of the Newport Banning Ranch since 1944 when the nation was embroiled in World War II.

A portion of the original Lowland oilfield property – 92 acres along the westerly edge adjacent to the Santa Ana River – was sold to the U.S. Army Corps of Engineers in 1992 and converted from a portion of the operating oilfield into full tidal wetlands as part of the Santa Ana River Flood Control Project. This did not significantly affect oil activities in other areas of the oilfield.

There are currently over 460 producing/ potentially producing and abandoned wells located within the Property, together with related oil roads, pipelines, sumps, storage tanks, and other facilities.

The current oilfield operator, West Newport Oil Company (WNOC), has 90 wells available for oil extraction with approximately 50 operating at any one time. The City of Newport Beach operates approximately 15 wells and an oil processing facility located at the West Coast Highway entrance area.

Exhibit I.3-6, Character of Existing Oil Operations, illustrates the visual character of the existing oil operations areas and facilities in both the Upland and Lowland areas of the Site.

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 06

3.6.2 Oilfield Surface Use

Exhibit I.3-7, Existing Oilfield Surface Use Map, provides a composite picture as to the extent of the Property that has been impacted by both historic and currently "known" oil wells, pipelines, utility poles, and related facilities, as well as oilfield operation work areas like graded roads and equipment areas surfaced with gravel, asphalt, oil, or oiled tank sediments, and historic sumps which held produced oil and fluids within in-ground surface containments. This map was assembled from a variety of technical maps, aerial photography, and other sources, and illustrates that the over 65 years of oil producing operations have resulted in substantial impacts to the NBR property. The word "known" is highlighted because, in the context of an extensive 65-year production history, there is a strong likelihood that numerous other facilities areas, mapped and unmapped, will be encountered during oilfield remediation.

As shown, over 460 individual well-site pads have been cleared, cut, and leveled; miles of supporting service roads between the well sites have been constructed; and numerous power poles and facility and equipment areas required in oil and gas operations have been erected and constructed.

There currently remains over 40 miles of pipelines throughout the Property for the conveyance of oil, water, and gas produced from the wells to various separation and treatment facilities on the Property. As shown in Exhibit I.3-6, these operations are spread across both the Upland and Lowland areas of the Site.

Specific oil facilities shown on the map are explained as follows:

1. 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.

2. 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 above ground with some sitting on pipeline support structures that are cemented into the ground to raise the actual pipeline above the ground surface. Some older lines may still exist below the surface.

3. Utility Poles – Power poles to support the electrical system throughout the field. These treated wood poles support transformers, power lines, electrical panels, and other equipment to serve the oil operations. Poles were often left in place (even at abandoned well locations) to support potential future drilling.

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 07

4. Oilfield Operations Areas – All areas historically used in the 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, or other materials.

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

6. Continuing Oil Operations Areas – Composed of two oil consolidation sites, and a related non-exclusive easement that serves as an access road and utility corridor, which are proposed to become the only ongoing oil production areas with the Property, concurrent with the remediation, restoration, and/or development of the other areas within the Property.

There are numerous oil facility areas throughout the Property. These vary 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 amongst these facilities and surface materials. These same areas are typically targeted for demolition and removal during an oilfield abandonment process and may require additional soil work as part of the remediation process.

Today, oil operations within the Property continue to be conducted by WNOC consistent with Federal, State, and local laws, and pursuant to a California Coastal Commission Exemption.

These oil operations provide highly valuable energy resources for the State and country. Oil production and operations activity at the Site has increased in recent years due to higher world oil prices. The WNOC and the mineral resources are wholly owned by Horizontal Drilling LLC (HDLLC), an entity separate and independent of the surface owners.

3.7 Drainage and Jurisdictional Wetlands

3.7.1 Drainages

The drainage area in which the Newport Banning Ranch is located encompasses the Site and the surrounding urban areas. The storm runoff generally flows westerly toward the Santa Ana River Channel and associated Lowlands from the neighboring developed areas through the Project Site.

Uncontrolled surface runoff sheet flows westerly across the Newport Mesa to the Lowland. Along the way, the runoff either collects and concentrates in arroyo corridors or continues to sheet flow over the bluffs and west-facing slopes toward the tidal channel (i.e., the "Oxbow Loop" Channel) and Lowland.

Three drainages exist on-site and define the three arroyos:

- Drainage A defines the most northerly Small Arroyo and supports riparian vegetation along most of its length;
- Drainage B defines the Middle (medium-size) Arroyo and supports both riparian vegetation and a large quantity of non-native invasive weeds, including non-native acacia, pampas grass, and giant reed; and
- Drainage C defines the Large Arroyo in the southern portion of the Site, and supports riparian vegetation along much of its length as well as significant areas of non-native invasives in its lower reach.

The Lowlands are also significantly impacted by 65 years of oil operations, and are mostly separated hydrologically from the Oxbow Loop Channel by the U.S. Army Corps of Engineers (ACOE) dike, although a small area at the southwest corner of the Lowland is subject to muted tidal influence through the ACOE's property.

Further discussion of existing drainage facilities is provided in Chapter II.6, Master Watershed Plan.

3.7.2 Wetlands/Riparian Areas

Surveys have been conducted to determine which areas of the Site meet the definition of "Waters of the United States" under Section 404 of the Clean Water Act as regulated by the U.S. Army Corps of Engineers (ACOE), as well as "Navigable Waters" under Section 10 of the 1899 Rivers and Harbors Act; 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 Wetlands and Riparian Areas as defined by the California Coastal Act (CCA) and regulated by the California Coastal Commission (CCC).

These areas have been mapped and are identified in the Draft Jurisdictional Delineations and Draft Biological Technical Reports identified in Section 3.1. The definitions of jurisdictional areas as regulated by ACOE, CDFG, and CCC were originated and codified many years after the advent of oil operations on the Property. Because of this, some of these areas coincide with historic oil operations areas that may be impacted by surface materials or crude oil remnants. These historic impacts and remnants are typically addressed at the time that oil operations are abandoned and remediated.

Mitigation and additional project features designed to create a higher quality habitat than presently exists are identified in the Habitat Restoration Plan (HRP) provided as Appendix A.

3.8 Vegetation

In order to describe and evaluate potential impacts on vegetation – as well as riparian and wetland resources –located within Newport Banning Ranch, it is necessary to understand the scope of prior oilfield operations that have impacted the Property and the likely scale of future abandonment and remediation activities that would typically be mandated by regulation for any oilfield at the end of production and associated processing.

As previously shown on Exhibit I.3-7, Existing Oilfield Surface Use Map, virtually all of the Newport Banning Ranch property is currently disturbed or at least crisscrossed by existing and historic oil facilities and operations.

The oilfield area includes an extensive road network and a wide variety of production and support facilities, as described below. Despite the physical disruption caused by the construction and use of roads, wells, pipelines and production facilities, many habitat areas while significantly disturbed continue to exhibit some habitat function; whereas other smaller remnants have lost essentially all ecological function due to their isolation and small patch size.

Consequently, Special-Status Habitats, as defined by the City's Coastal Land Use Plan, are significantly coextensive with the extensive oil facilities in the Lowland and on the Mesa as depicted by Exhibit I.3-8, Map Showing Special-Status Habitats Overlaid on Existing Oilfield Surface Use. As shown, this includes a large portion of the Lowland as well as areas within the Large Arroyo and along the southern and northern portions of the Site.

As summarized in Section 3.6, oilfield activities have been extensive and have resulted in disturbed and in some cases highly fragmented, remnant habitats including small fragments of southern coastal bluff scrub, maritime succulent scrub, and coastal sage scrub.

Disturbance from oilfield operations has also created conditions that allow colonization of exotic, non-native plant species including non-native grasslands and large patches of hottentot fig (*Carpobrotus edulis*), and extensive stands of pampas grass (*Cortedaria selloana*), poison hemlock (*Conium maculatum*), giant reed (*Arundo donax*), and ornamental trees such as myoporum (*Myoporum laetum*) and Sydney golden wattle (*Acacia longifolia*), which are interspersed with native riparian and wetland species.

Special-Status Habitats coextensive with oilfield surface use is generally depicted in Exhibit I.3-9, Map Showing Special-Status Habitats Coextensive with Existing Oilfield Surface Use.

The overlap between habitat and oil operations areas is statistically summarized in Exhibit I.3-10, Table Showing Special-Status Habitats Coextensive with Existing Oilfield Surface Use.

It should be noted that this analysis was done using GIS polygon mapping and analysis of habitat and oil surface use. The physical extent of the Oilfield Operations Areas is based upon photogrammetric base maps showing topography and culture in conjunction with high resolution aerial photography, historic oilfield maps, and 2008 field surveys and checks. The size of discrete physical improvements on/near the surface used in the analysis was based on spot locations and assumed dimensions for the facilities. The dimensions that were assumed were generous because the planning team did not want to underestimate the amount of area that could be associated with their existence and/or potentially their removal. They were:

(1) Oil Wells/Pads --10 ' radius from point;
(2) Utility/Power Poles -- 10 ' radius from point;
(3) Oil Pipeline Corridors – 5' either side of line; and
(4) 1947 Oil Sumps – 10 ' radius from limits as shown on historic aerial photo

As shown in Exhibit 1.3-10 and explained above, on the basis of land area, almost one quarter (24%) of the Site's Special Status Habitat is coextensive with oilfield surface use.

A more precise field survey as to the coextent of oil surface use with Special Status Habitat is being conducted.

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 08

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 09

A variety of vegetation types comprise Special-Status Habitat as explained in a Note to Exhibits I.3-8 thru I.3-12:

> *Potential "Special Status Habitats" as identified in the City of Newport Beach certified Coastal Land Use Plan (CLUP) Policies, in particular Sections 4.0 (Coastal Resource Protection) and Section 4.1 (Biological Resources) as potential ESHA, which on the NBR Site includes southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern coastal salt marsh, and a variety of wetland and riparian habitats, including mud flats, vernal pool alkali meadow, southern coastal brackish marsh, southern willow scrub, and southern black willow forest. The areal extent of the specific habitats is addressed in the Newport Banning Ranch Biological Technical Report and the Habitat Restoration Plan.*
>
> *Within the category of Special-Status Habitats shown on this map* (or *table*) *are areas that, because of their compromised physical condition (e.g., significant non-native invasive plants within a wetland) do not meet the definition of ESHA. Some of these compromised areas are proposed to be restored/enhanced pursuant to the Habitat Restoration Plan.*

The area C distribution of component habitat areas, and related wildlife species is described generally in the following paragraphs.

The Lowland in the northwest portion of the Site supports largely ruderal vegetation, although some areas of native alkali meadow and large patches of riparian vegetation also exist. A few least Bell's vireo (*Vireo bellii pusillus*) have been observed in the Lowland riparian habitat. Along the southwest boundary of the Lowland a small amount of tidally-influenced, native salt marsh habitat also exists.

The slopes along the southern and southwestern boundary of the Site support several large patches of coastal sage scrub, maritime succulent scrub, and coastal bluff scrub. The southwestern slope supports several special status plants, and the southern slope supports several gnatcatcher pairs. Other than these slopes and the Southern (Large) Arroyo (i.e., Drainage C), the majority of habitat available to wildlife on-site consists of small fragmented patches, and is significantly disturbed either by non-native vegetation or by historic or ongoing oil operations, as shown on Exhibit I.3-8.

Suitable raptor foraging habitat is present in the Lowland and potential foraging habitat is present where there is non-native grassland in the southeastern corner of the Site.

3.9 Vegetation within Open Space Districts

In anticipation of the Master Site Plan described in Part II, a breakdown of vegetation coextensive with oilfield surface use has been divided into the Project's four (4) Open Space Land Use Districts and graphically depicted in Exhibit I.3-11, Map Showing Special-Status Habitats within Open Space Land Use Districts Coextensive with Existing Oilfield Surface Use. This overlap is statistically summarized in Exhibit 3.12, Table Showing Special-Status Habitats within Open Space Land Use Districts Coextensive with Existing Oilfield Surface Use.

On the basis of land area, 50% of the Lowland Open Space/Public Trails and Facilities District, 34% of the Upland Open Space/Public Trails and Facilities District, and 37% of the Public Parks/ Recreation District are Coextensive with existing oilfield surface use.

As shown, substantial portions of Special-Status Habitats identified within these Open Space Land Use Districts are currently coextensive with existing oilfield surface use. More precise descriptions of the habitat areas and how habitat restoration is proposed by the Project can be found in the Draft Biological Technical Report identified in Section 3.1 and the Habitat Restoration Plan (Appendix A).

SEE EXHIBIT PAGES FOR CHAPTER 03

PDF 10