

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT TITLE: OXY USA INC. DOMINGUEZ OIL FIELD DEVELOPMENT PROJECT

In accordance with the California Environmental Quality Act (CEQA), the City of Carson is the Lead Agency and will prepare a Draft Environmental Impact Report for the project identified above. The purpose of this Notice of Preparation (NOP) is to solicit comments on the environmental analysis contained in the EIR.

In conjunction with the development of the proposed project, it is necessary to address the potential adverse effects of the proposed project on the environment. The City of Carson is preparing the appropriate environmental analysis consistent with CEQA. The NOP serves two purposes: to solicit information on the scope of the environmental analysis for the proposed project and notify the public that the City of Carson will prepare a Draft EIR to further assess potential adverse environmental impacts that may result from implementing the proposed project.

This Notice is not a City of Carson application or form requiring a response from you. Its purpose is simply to provide information to you on the above project. If the proposed project has no bearing on you or your organization, no action on your part is necessary. If you wish to receive the Initial Study, please call the City of Carson at (310) 952-1700.

Comments relative to the environmental analysis should be addressed to City of Carson, 701 East Carson Street, Carson, CA, 90745, or by FAX to (310) 835-5749. Comments must be received no later than 5:00 p.m. on Wednesday, April 4, 2012. Please include the name and phone number of the contact person for your organization.

Project Applicant: OXY USA, Inc.

Date: March 2, 2012

Signature:

Title: Saied Naaseh, Associate Planner

Telephone: (310) 952-1700

CITY OF CARSON
701 East Carson Street, Carson, CA 90745

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Project Title:

OXY USA Inc. Dominguez Oil Field Development Project

Project Location:

The proposed Project Site is approximately 6.5 acres and will be located entirely within the Dominguez Technology Centre located at 1450-1480 Charles Willard Street, Carson, CA 90746

Description of Nature, Purpose, and Beneficiaries of Project:

OXY proposes to construct a production facility consisting of up to 200 wells, an oil and gas processing facility, water treatment, water injection operations, slurry injection or disposal operations, an electrical substation, emergency flare, and shipping and pipeline facilities to produce and transport approximately 6,000 barrels per day of oil and 3 million standard cubic feet per day of natural gas. Directional drilling techniques will be used in order to pinpoint oil reservoirs at depths of 4,000 to 13,500 feet. The Facility will be located in a 30-foot high walled compound with the drill rig mast enclosed. The Initial Study concluded that the impacts of the proposed Project on air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, and transportation and traffic are potentially significant and will be evaluated in the EIR.

Lead Agency:

City of Carson

The Initial Study and all supporting documentation are Available at:

City of Carson
701 East Carson Street
Carson, CA 90745

Or by Calling:
(310) 952-1700

Public Notice of the NOP is provided through the following:

Newspaper (Los Angeles Times and Dailey Breeze)

Review Period:

March 6, 2012 through April 4, 2012

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CITY OF CARSON

**Notice of Preparation/Initial Study for
OXY USA Inc. Dominguez Oil Field Development Project**

Prepared for:
City of Carson
Carson, California

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March 2, 2012

Prepared by:



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CHAPTER 1

PROJECT DESCRIPTION

Introduction
Agency Authority
Project Location
Background
Proposed Project Description
Construction
Construction Schedule

1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

OXY USA, Inc. (OXY) is proposing the construction and operation of a new oil and gas production facility to develop a portion of the Dominguez Oil Field that has been out of production for many years. The proposed Project will be designed and constructed to incorporate an existing oil and gas test well facility and to be visually compatible with the existing industrial and commercial buildings at the Dominguez Technology Centre.

1.2 AGENCY AUTHORITY

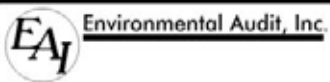
The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. To fulfill the purpose and intent of CEQA, the City of Carson (City) is the lead agency for the proposed Project and has prepared this Notice of Preparation and Initial Study (NOP/IS) to address the potential environmental impacts associated with the construction and operation of a new oil and gas production facility.

The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment (Public Resources Code Section 21067). It was determined that the City has the primary responsibility for supervising or approving the proposed Project as a whole and is the most appropriate public agency to act as lead agency (CEQA Guidelines Section 15051(a)). The proposed Project requires discretionary approvals from the City for constructing and operating the proposed new improvements.

1.3 PROJECT LOCATION

The proposed Project will be located in the northern portion of the City of Carson within Los Angeles County as shown on the site map, Figure 1-1. The proposed Project Site is approximately 6.5 acres and will be located entirely within the Dominguez Technology Centre as shown in Figure 1-2. The Dominguez Technology Centre is an approximately 288 acre business park developed to support light industrial and commercial land uses. The proposed Project location currently consists of an industrial building and two oil and gas test wells (and associated process equipment) located at 1450-1480 Charles Willard Street. The proposed Project location is bounded on the north by Charles Willard Street, on the east by Bishop Avenue, on the west by a commercial/light industrial building, and on the south by a vegetated swale that acts as a conveyance for storm water and adjacent commercial/light industrial buildings.

OXY USA Inc. – Proposed Dominguez Oil Field Development Project



SITE VICINITY MAP
 OXY Dominguez Oil Field
 1450 Charles Willard Street
 Carson, CA 90746

Figure 1-1



SOURCE: Envision

SITE DETAIL
OXY Dominguez Oil Field
1450 Charles Willard Street
Carson, CA 90746

ENVIRONMENTAL AUDIT INC.



Project No. 2757
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Figure 1-2

1.4 BACKGROUND

Oil and gas production or extraction is the process of extracting crude oil and natural gas from the earth. Oil and gas production is accomplished by finding oil and/or gas in the ground and by drilling wells into the earth to enable the product to flow, usually by pumping from the earth into the wells and up to the surface. Oil and gas are decayed organic matter that is embedded and trapped in the openings or pores in the rocks. In the Dominguez Oil Field, the oil and gas are trapped in sandstone and siltstone layers between non-porous and non-permeable shale layers. The oil and gas bearing sandstones and siltstones occur from approximately 4,000 feet (0.8 miles) to 13,500 feet (2.6 miles) below the surface and are called reservoir rocks. Reservoir rocks hold the oil and gas like a sponge, confined by the non-porous shale that forms a trap that holds the oil and gas. In the Dominguez Oil Field, there are hundreds of separate layers of sandstone and siltstone that are separated by non-porous shale.

The Dominguez Oil Field is approximately five miles long and 1.5 miles wide and extends from the 710 Long Beach Freeway and Del Amo Boulevard on the southeast to the 110 Harbor Freeway and 105 Gardena Freeway to the northwest (see Figure 1-3). Because the Dominguez Oil Field is large and thick, with many separate layers of oil and gas bearing sandstones and siltstones separated by non-porous rock and faults, many wells are needed to access all of the pockets. In addition, because the Dominguez Oil Field is an old field that was discovered in 1923 and has already produced 274 million barrels of oil, it is generally low in energy and will produce in excess of 90 percent water, typically require pumping to move the oil to the surface, and require salt water injection into the reservoir rock to increase production.

Once brought to the surface, the oil, water, and gas mixture is processed to recover the salable products (crude oil and natural gas) from the water. Figure 1-4 shows the steps involved to process the crude oil produced from the wells.

1.5 PROPOSED PROJECT DESCRIPTION

OXY proposes to construct a production facility consisting of up to 200 wells, an oil and gas processing facility, water treatment, water injection operations, slurry injection or disposal operations, an electrical substation, emergency flare, and shipping and pipeline facilities to produce and transport approximately 6,000 barrels per day of oil and 3 million standard cubic feet per day of natural gas. Directional drilling techniques will be used in order to pinpoint oil reservoirs at depths of 4,000 to 13,500 feet. A preliminary plot plan for the proposed Project is shown in Figure 1-5. The Facility will be located in a 30-foot high walled compound with the drill rig mast enclosed. An artistic rendering is shown in Figure 1-6.

1.5.1 Oil and Gas Production

The oil and gas production facilities will include up to 200 wells, well cellars, and a well drilling rig. Of the 200 wells to be installed during the life of the project, approximately 130 will be



SOURCE: ORY USA INC.

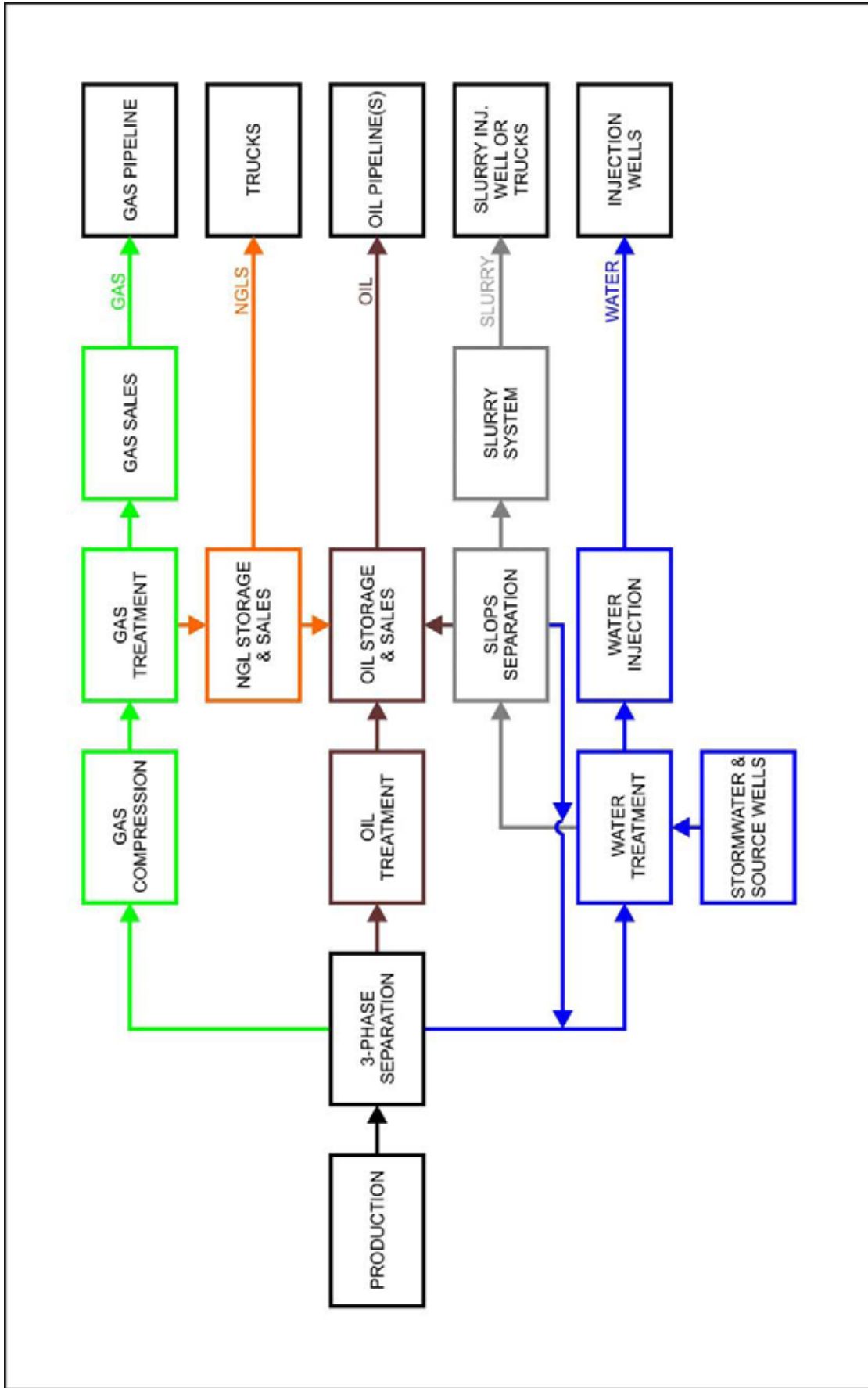
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DOMINGUEZ OIL FIELD LOCATION
OXY Dominguez Oil Field
1450 Charles Willard Street
Carson, CA 90746

Project No. 2757
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Figure 1-3



SOURCE: Environ / SPEC Services



BLOCK FLOW DIAGRAM
 OXY Dominguez Oil Field
 1450 Charles Willard Street
 Carson, CA 90746

Figure 1-4



SOURCE: Environ / SPEC Services

Source:
OXY USA Inc.

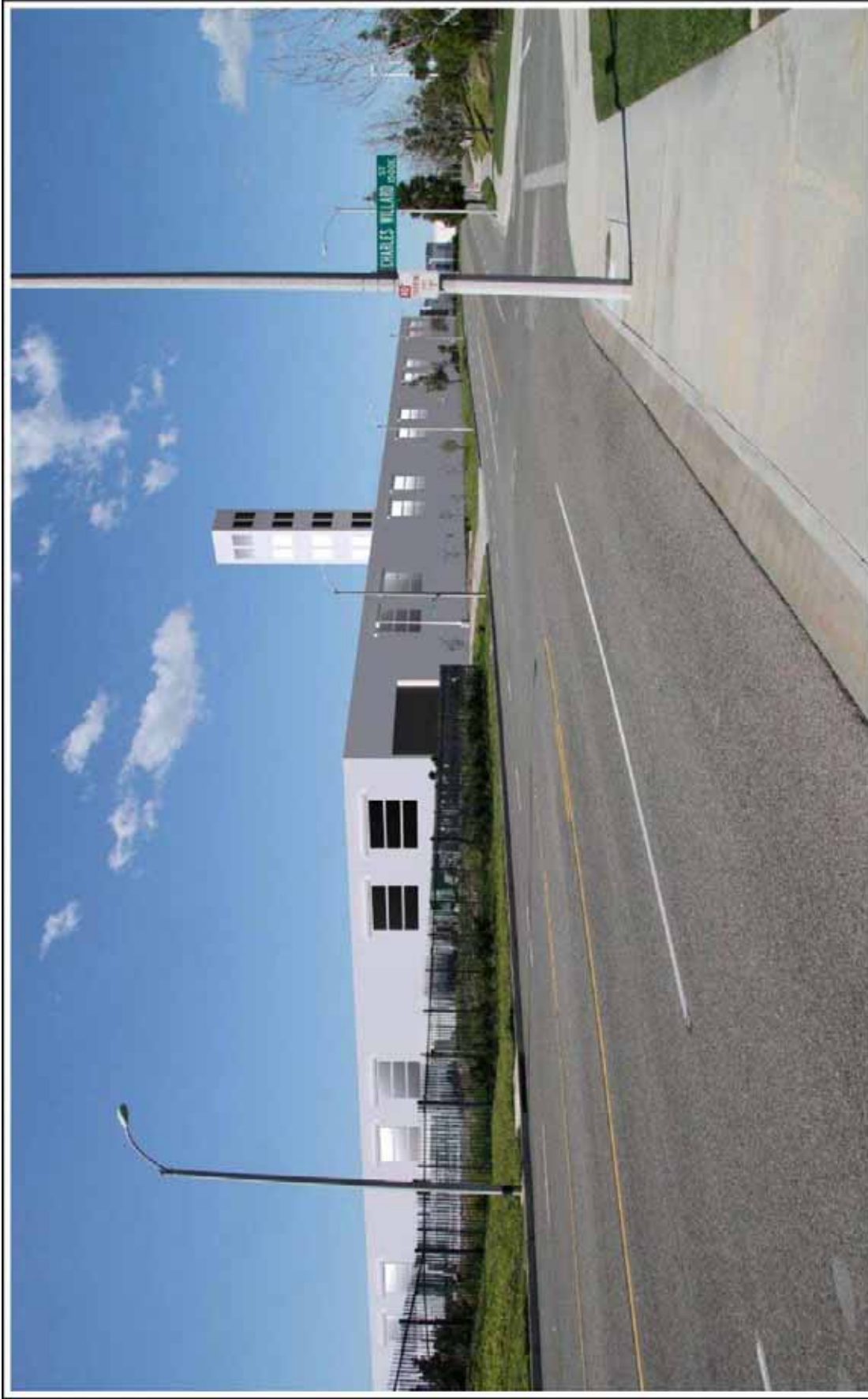
Legend

- Property Boundary
- Location of Test Wells



PROPOSED FACILITY
OXY Dominguez Oil Field
 1450 Charles Willard Street
 Carson, CA 90746

Figure 1-5



SOURCE: Environ / SPEC Services



ARTISTIC RENDERING OF VIEW FROM SOUTHEAST ON BISHOP
OXY Dominguez Oil Field
1450 Charles Willard Street
Carson, CA 90746

Project No. 2757
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Figure 1-6

production wells, 65 salt water injection wells, four salt water production wells, and one slurry injection well. The water produced during production will be reintroduced to the oil reservoir to improve oil recovery and maintain reservoir pressure. If the slurry injection well is not constructed, cuttings and solids from well installation will be transported off-site to an appropriately licensed disposal facility. It is expected that up to 20 wells per year will be installed.

All wells (except for the two existing test wells) will be located in well cellars on the north and east side of the Facility (see Figure 1-5). The well cellars are below grade and contain the well head, piping, and pumps. The below-grade cellars allow equipment to position over the wells with no obstructions. The well cellars are approximately eight feet deep and equipped with storm water management collection sumps and pumps.

A custom-designed drill rig equipped with a 2,000 horsepower electric motor will reside at the Facility to install the wells. The drill rig will be equipped with a 145-foot high mast enclosed in sound proofing (see Figure 1-6). Support equipment including pumps and compressors will be located at the base of the mast.

A truck-mounted maintenance rig (referred to as a workover rig) will reside at the Facility approximately 210 days per year for routine maintenance of the wells. The rig is mobile and used when needed to perform maintenance necessary to sustain production from the wells including such tasks as pulling tubing and replacing down-hole pumping equipment. The workover rig will not drill new wells.

1.5.2 Oil and Gas Processing Facilities

The Oil and Gas Processing Facilities will remove water and gas from the produced oil. The oil and natural gas will be transported via new pipeline connections to existing nearby pipelines and the produced water is treated and returned to the oil reservoir. The Oil and Gas Processing Facilities will consist of the following and are described in the following subsections:

- Three-Phase Separation System;
- Oil Treatment System;
- Gas Compression and Treatment System; and,
- Water Treatment.

1.5.2.1 Three-Phase Separation System

The first step of oil processing will be designed to separate oil, gas, and water (called phases). Two horizontal three-phase separator vessels (referred to as Freewater Knockouts) will use the difference in density of the phases (i.e., the gas rises and the majority of the oil floats on the

water). This separation typically reduces the water content of the oil to less than 25 percent and the oil content of the water to less than one percent. The three-phase separators will typically operate at pressures between 100 and 150 pound per square inch gauge (psig).

1.5.2.2 Oil Treatment System

The oil from the Three-Phase Separation System will be further treated to remove additional water in order to make it saleable. The Oil Treatment System reduce the water content of the oil from approximately 25 percent to between one and three percent. Water removal will be accomplished by using an electric field produced by grids placed perpendicular to the flow of fluids in the treatment vessel. The electric field will break up the oil/water emulsion to provide better separation.

Oil produced for sale will be stored in a fixed-roof, gas-blanketed, 5,000-barrel oil storage tank. An additional fixed-roof, gas-blanketed, 5,000-barrel storage tank referred to as the Wet Oil Tank will be used for off-specification oil (i.e., too much water or solids) diverted from the Oil Treatment System or the Oil Sales Custody Transfer Equipment. The oil from the Wet Oil Tank will be reprocessed or processed in the Slops Separation System.

Sales oil charge pumps will be used to transfer the oil from the oil storage tank to the customer in either a batch mode, where the oil accumulates in the storage tank until almost full, or a continuous mode, where the tank level will be kept relatively constant with oil being withdrawn at a rate about equal to that being placed in the tank. The operating pressure of the pumps will be compatible with the existing Crimson Pipeline, which operates at up to 720 psig.

Oil custody transfer equipment necessary to sell the oil in the pipeline will be installed. Both OXY and the customer will have the ability to shut down oil shipment either on-site or remotely.

1.5.2.3 Gas Compression and Treatment System

The gas produced from the wells will be used to blanket the storage tanks. As the tanks are filled, any vapors present will be pushed to the vapor recovery system. As the tanks are emptied, gas will be pulled from the vapor recovery system. Gas blanketing will be used to minimize the tank emissions as well as prevent outside air, moisture, and other contaminants from entering the tanks.

In addition to the vapor recovery compressors, sales gas compressors will be used to raise the pressure of the gas from 70 psig to 550 psig. Once compressed, the gas will be treated to remove hydrogen sulfide (H₂S). The system will be designed to remove up to 75 parts per million (ppm) H₂S, which is well above the expected concentrations of H₂S (less than 10 ppm). The H₂S removal will be accomplished by using a catalyst in a SulfaTreat vessel. The system will be equipped with two 25-foot tall SulfaTreat vessels in series. When the first vessel is at capacity the gas stream will be diverted from the first vessel to the second vessel. The catalyst will be

changed in the first vessel and will be returned to service as the second vessel. This allows the system to remain online continuously.

The final step before gas transfer into the sales pipeline will be to remove any heavy hydrocarbons and water by using a combined refrigeration/dehydration system. Ethylene glycol will be injected to prevent freezing at low temperatures before the gas is chilled to sub-zero temperatures in the Low Temperature Separator. At sub-zero temperatures, the heavy hydrocarbons (i.e., propane, butane, etc. (referred to as C3+ for the number of carbon atoms in the compounds)) will condense to liquids and be removed in a three-phase Low Temperature Separator. The gas will then be transferred into the sales pipeline.

The glycol/water mixture will be separated by boiling off the water in the Glycol Reboiler and the glycol will be recycled back to the gas chiller. The removed water will be sent to the Vapor Recovery Compressors or to the water treatment system.

The heavy hydrocarbons (also called natural gas liquids (NGLs)), which were separated in the three-phase Low Temperature Separator, will be sent to the NGL System to remove entrained methane, ethane, and propane, so as to meet the specification for NGLs to be injected into the crude oil stream. The methane, ethane, and propane will be used on-site as fuel gas to produce process heat with any excess blended into the sales gas stream.

NGLs will be accumulated in storage vessels and injected into the crude oil stream as possible. Excess NGLs will be stored in a separate NGL Storage Vessel and transported from the Facility by truck from a truck loading rack.

Gas custody transfer equipment will be installed to odorize the gas, filter, meter, and regulate pressure. A shutdown valve will also be installed. The custody transfer facility will be monitored from the Operations Building and remotely by the Southern California Gas Company (SCGC).

1.5.2.4 Water Treatment Facilities

The Water Treatment Facilities will remove oil and solids from the water that is generated as a byproduct of oil production. All water produced as well as storm water captured on-site will be treated and injected into the oil reservoir using the salt water injection wells. The Water Treatment Facilities will consist of Primary Water Treatment, Secondary Water Treatment, and Final Water Filtration.

Water produced from the Three-Phase Separation System will be further cleaned before it can be injected into the oil reservoir. Primary Water Treatment will remove the sand and oil droplets using four hydrocyclones – two for sand removal and two for oil removal. Secondary Water Treatment will treat the effluent water from the hydrocyclones by using induced gas floatation (IGF) in two IGF vessels, which will reduce the total oil and grease to approximately 10 - 20 milligrams per liter (mg/l) and total suspended solids to 10 - 20 mg/l. Final Water Filtration, will

only be used if the water from the IGF is performing poorly and will consist of Nutshell Filter Vessels to further reduce the oil and grease concentration of the water.

A fixed-roof, gas-blanketed, 5,000-barrel water storage tank will be used as a surge tank between the water treatment system and the water injection pumps. The surge tank will allow for a consistent flow rate to be produced by the water injection pumps.

1.5.3 Other Support Systems

1.5.3.1 Slop Oil Systems

Oil-water emulsions from primary separation equipment (commonly referred to as "Slops") will require further treatment to separate the oil from water. Slops that accumulate in the Wet Oil Tank will be processed through a heat exchanger to heat the emulsion. The heated emulsion will be separated in two, vertical pressure vessels. The recovered oil will be transferred to the Sales Oil Tank, water will be transferred to the Slurry System or the Secondary Water Treatment System, and gas will be incorporated into the Vapor Recovery System.

1.5.3.2 Slurry Injection System

Solids generated during drilling operations and from wells during production may be re-injected into the oil reservoir via a dedicated slurry injection well. Alternatively, the solids generated may be collected in plastic lined bins and transported off-site to a licensed commercial disposal facility.

1.5.3.3 Electrical Substation

Electrical service for the Facility will be provided by Southern California Edison (SCE). The facility will have a substation of electrical switch gear and step-down transformers to provide power for motor control centers, power and control conduits, motor operated valves, and heating, ventilation, air conditioning, and lighting for buildings. An uninterruptible power supply (UPS) and emergency generator will be installed for critical systems such as control systems, critical valves, lights, etc.

SCE will provide 25 megavolt-amperes (MVA) of power for the Facility. SCE will use the existing Jersey 66-16 kV Substation, and three new 16 kV circuits would be installed below grade for approximately 8,000 feet, and come overhead onto the Facility.

1.5.3.4 Emergency Ground Flare

An emergency ground flare will be installed to combust gas that may be potentially released from pressure vessels during a process upset. The emergency ground flare will be a maximum of 60-feet tall.

1.5.4 Pipeline Connections

1.5.4.1 Crude Oil Pipeline

Crude oil will be transferred to the ConocoPhillips refinery or other local refineries via the existing six-inch Crimson Pipeline. The proposed Project will install approximately 2,000 feet of six-inch pipeline under Charles Willard Street to tie into the existing six-inch Crimson Pipeline under South Central Avenue. An additional section of six-inch pipeline will be installed at the corner of South Central Avenue and University Avenue to replace a section that was previously removed. Also, a new section of six-inch pipeline and a new valve box will be installed near the intersection of 223rd Street and Wilmington Avenue to tie the existing six-inch Crimson Pipeline to the existing ten-inch Crimson East Crude Pipeline. The Project will also assess the existing six-inch Crimson Pipeline to determine if additional repair or maintenance work may be required. Additional maintenance work may include short-term construction in localized areas. A "pigging" station will be installed at the Facility and a temporary "pig" receiver will be installed at the junction of the Crimson and Crimson East Crude Pipelines. "Pigs" are internal instrumented inspection tools used for pipeline data acquisition as well as line cleaning. Typically, there is a launcher at one end of the pipeline and a receiver at the other end of the pipeline. Figure 1-7 shows the locations of the proposed crude oil pipelines.

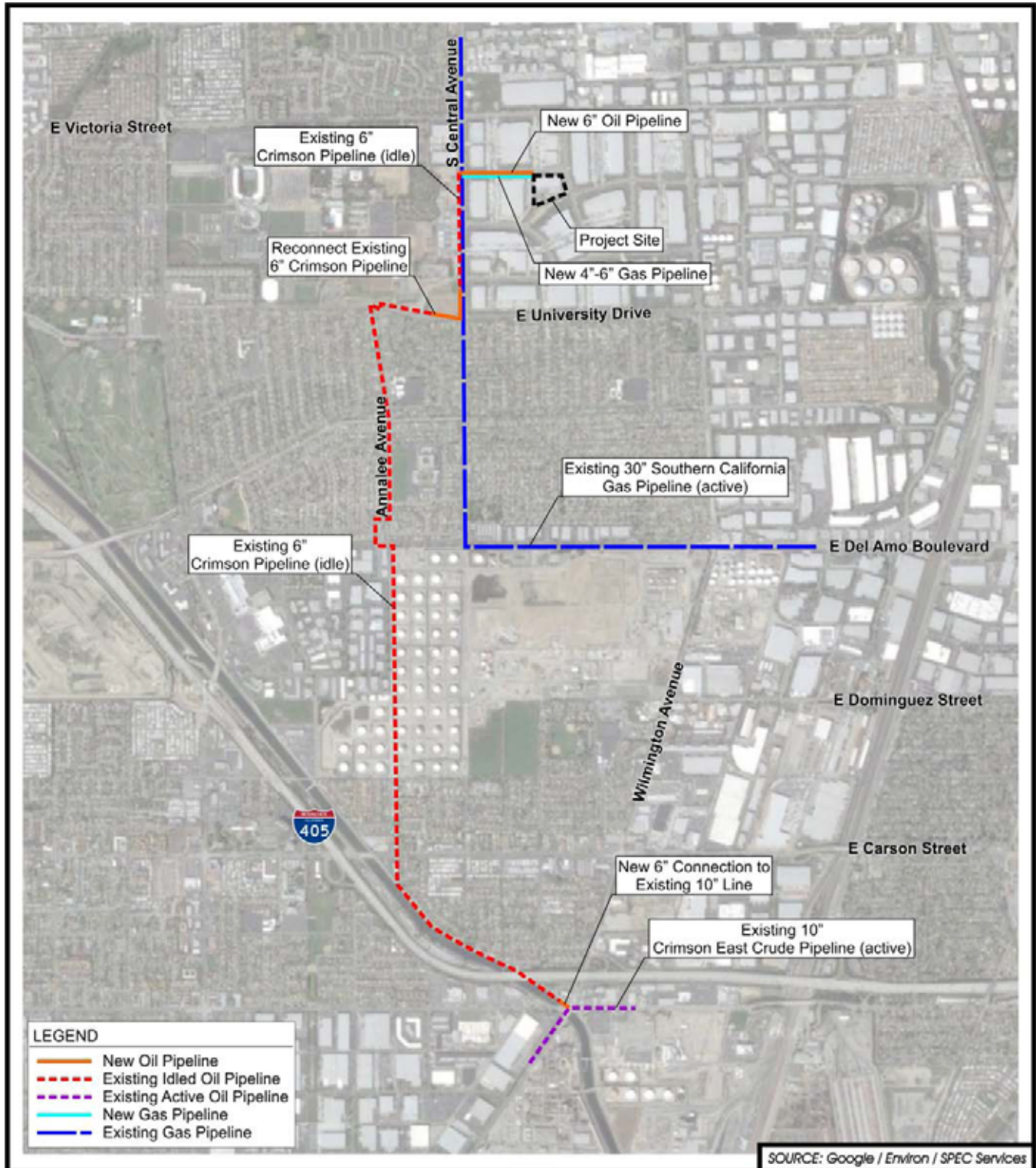
1.5.4.2 Natural Gas Pipeline

A new four- to six-inch pipeline approximately 2,000 feet in length under Charles Willard Street will connect the Facility to the existing 30-inch SCGC Line 1014 under South Central Avenue to transfer natural gas from the proposed Project site (see Figure 1-7). The pipeline will operate at up to 200 psig and will carry odorized natural gas. Temporary pig launcher and receiver stations will be installed at the Facility and the intersection with the 30-inch SCGC Line 1014. Figure 1-7 shows the locations of the proposed natural gas pipeline.

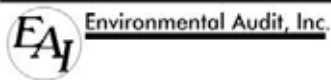
1.6 CONSTRUCTION ACTIVITIES

There are two primary components to the construction phase, the construction of the oil and gas facility and off-site improvements. There will be two construction work crews, one for the oil and gas facility development, and one for pipeline development. The proposed Project is expected to use between 70 and 140 construction workers (up to 120 for facility construction and 20 for pipeline installation). A majority of the work force will likely originate in Southern California, mainly from the Los Angeles Basin. It is expected that most construction workers will meet in a staging yard expected to be located within one mile of the proposed Project and go to the construction site in work buses due to the limited space at the proposed Project site. SCE will have its own construction crew to construct the electrical substation.

The specific equipment expected for the proposed Project and off-site construction will be determined after preliminary designs are completed. The major material components of the



SOURCE: Google / Environ / SPEC Services



LOCATION OF PIPELINES
 OXY Dominguez Oil Field
 1450 Charles Willard Street
 Carson, CA 90746



Figure 1-7

proposed Project will be concrete, pipe and piping components, tank and structural steel, pumps, electrical equipment, and potential soil stabilization materials.

The existing industrial warehouse building located at the proposed Project location will be demolished as part of the proposed Project. Demolition operations will be performed in accordance with South Coast Air Quality Management District (SCAQMD) Rule 403 for Fugitive Dust. Construction wastes might include soils, asphalt, and concrete. The non-hazardous wastes will be hauled to a sanitary landfill or recycled. Water will be used as necessary to control fugitive dust, which will include dust suppression and street washing and sweeping.

The two, existing test wells are expected to remain on-site once the proposed Project is complete. However, they may be plugged and abandoned under a permit from the California Department of Oil, Gas, and Geothermal Resources (DOGGR).

The construction site will require on-site diesel fuel generators for a temporary supply of electricity. Temporary connections to the existing power distribution system will also be used whenever possible.

The proposed Project will include the installation of separate oil and gas shipping pipelines from the facility to their respective tie-in points, both located at the intersection of Charles Willard Street and South Central Avenue. Both pipelines are expected to be constructed in parallel at the same time. The proposed crude oil pipeline will be designed, constructed, and operated per the requirements of the Department of Transportation (DOT) found in Title 49, Code of Federal Regulations (CFR), Part 195. The natural gas pipeline will be designed, constructed, and operated per the DOT requirements of 49 CFR Part 192.

Pipeline routes are expected to be under existing streets with right-of-way agreements arranged with the City of Carson. Asphalt and soil will be excavated to trench for the installation of the pipelines. Traffic control will be necessary and coordination with affected businesses along the route will occur to maintain access to the affected establishments.

Excavation of 36-inch wide ditches at various locations will be performed by backhoes and track hoes with soft digging used to locate buried utilities. Soils removed from the ditch will be used to backfill the trench to the extent practicable or will be removed and the ditch will be backfilled with slurry material, as required by the City. Materials not used for backfill will be disposed of at an appropriate landfill. Compaction of the trench will be performed as required. Steel plates will cover the open trench at the end of each workday. Upon completion of the pipeline installation, the affected areas will be repaved and returned to their pre-construction condition.

Pipeline testing will include visually inspecting and x-raying all welds and hydrostatic testing of the pipeline following completions of construction, prior to startup. Hydrostatic testing water will be reused or trucked off-site for disposal.

1.7 CONSTRUCTION SCHEDULE

The proposed construction schedule for the proposed Project is approximately 12 to 18 months and is anticipated to begin in January of 2013. The construction will include demolition of the existing structures at the proposed Project site, which is expected to take approximately three months, followed by construction of the facility and off-site improvements. An estimated construction schedule is included as Table 1-1.

Well drilling is estimated to begin in January 2014 and will continue as part of the proposed Project operations since it is anticipated that the facility will operate during the time wells are being drilled. The final phases of construction may overlap with the initial well drilling in 2014. For the purposes of analysis, it is assumed that all construction is occurring within 12 to 18 months; however, some equipment may be put in place later. Given the uncertainty and coordination required with SCE for the SCE substation, it is assumed that the SCE construction may occur at anytime during the proposed Project construction schedule.

1.8 PROJECT OPERATIONS

The proposed Project will operate 24-hours per day, 365 days per year. Operations will consist of drilling wells, maintaining wells, and operating and maintaining the production and transportation systems.

1.8.1 Drilling Activities

Each new well is expected to take four to six weeks to install with up to 20 wells installed per year. Over time, re-drilling of wells will need to take place and it is expected that up to 20 re-drills per year will be performed. Re-drilling occurs when a drilling rig is used to drill a new hole or lateral from an existing surface well site (wellhead). A re-drill does not add to the number of wells, but changes the down-hole properties of the well. The on-site electric drill rig would be utilized for re-drilling using directional drilling techniques.

Water for drilling will use non-potable water from the oil reservoir for all but the first ten wells. The first ten wells will use approximately 4,500 gallons per day (gpd) of potable water. Slurry used for drilling (referred to as drilling mud) will be collected on-site in steel tanks located within secondary containment berms and reused, injected back into the oil reservoir or trucked off-site to an appropriate disposal facility by truck. An estimated one truck per day of slurry will be generated.

Blowout Prevention (BOP) systems will be employed to prevent an uncontrolled release of reservoir fluids and shut off the flow to prevent spills and releases of materials. A BOP system will be placed on each wellhead during drilling and will be replaced by a well head after the well has been drilled. BOP systems are composed of a stack, actuation systems, a choke manifold, stop systems, and other equipment. The BOP system will be designed to handle the maximum possible pressure expected at the wellhead.

Table 1-1: Estimated Construction Schedule Summary

Location and Activities	Month #																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Demolition / Site Preparation																		
Well Cellars / Wall																		
Process Equipment Areas																		
Storage Tanks																		
Crude Oil and Natural Gas Pipeline Construction on Charles Willard Street																		
Crude Oil Pipeline Tie-ins																		

H₂S levels are expected to be below 10 ppm, but the proposed Project will be designed to handle H₂S concentrations above 20 ppm in accordance with DOGGR requirements. A contingency plan will be developed that addresses safety equipment, personnel responsibilities, first aid, and evacuation procedures. H₂S detection equipment will be used to monitor during drilling activities and additional permanent monitors will be located on-site.

Hydraulic fracturing may be required to improve oil extraction as well as water injection. Hydraulic fracturing will likely occur at a depth of at least 6,500 feet below the surface. Drinking water aquifers are located at depths of less than 1,000 feet below the surface. Approximately one mile of natural barrier exists between the oil reservoir and the drinking water aquifers. To supplement the natural barriers to fluid migration and further protect drinking water sources, man-made barriers will also be created during the well construction process including steel casing installed in the well to seal it from the surrounding rock and specially-engineered cement slurry pumped into the void space between the rock and the steel casing to prevent leakage of fluids around the well. These procedures protect both the environment and the mechanical integrity of the well.

1.8.2 Production Activities

Once constructed, the proposed Project will be operated and maintained as an oil and gas production facility, and designed to current oil field technology standards, including automated alarms and shut downs for abnormal conditions. Operations will be designed to utilize automated equipment for emergency shutdowns due to major equipment and system malfunctions, as well as natural disasters, such as earthquakes. Oil field operators will be present on-site 24 hours per day to monitor activity and check for safety and security of operations.

Well maintenance and workover operations will be periodically necessary to sustain production from the wells. A workover rig will be used for repairs to help pull tubing and replace downhole pumping equipment.

It is anticipated that during peak production, one to two trucks per day may be required to remove excess NGLs from the facility. The NGLs will be loaded at the proposed truck loading rack and trucked to a local refinery or as far away as Bakersfield, California.

Periodic inspections of the crude oil and natural gas pipelines will be required. Pigging and hydrostatic testing will be conducted as required by the governing regulations.

Wastewater and operational wastes will be generated as on-going waste streams from the Facility. Materials will be disposed of at the appropriate waste handling facilities.

CHAPTER 2

ENVIRONMENTAL CHECKLIST

Introduction
General Information
Potentially Significant Impact Areas
Determination
Environmental Checklist and Discussion
 Aesthetics
 Agriculture and Forest Resources
 Air Quality
 Biological Resources
 Cultural Resources
 Geology and Soils
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 Land Use and Planning
 Mineral Resources
 Noise
 Population and Housing
 Public Services
 Recreation
 Transportation/Traffic
 Utilities/Service Systems
 Mandatory Findings of Significance
References

2.0 ENVIRONMENTAL CHECKLIST

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed Project.

GENERAL INFORMATION

Project Title:	OXY USA Inc., Dominguez Oil Field Development Project (located at 1450-1480 Charles Willard Street, Carson, California)
Lead Agency:	City of Carson
Lead Agency Address:	701 East Carson Street, Carson, CA 90745
Contact Person:	Mr. Saied Nasseh Associate Planner
Contact Phone Number:	(310) 952-1700
General Plan Designation:	Light Industrial
Zoning:	Light Manufacturing (SP-2)
Description of Project:	The proposed Project includes the construction and operation of a new oil and gas production facility to develop a portion of the Dominguez Oil Field that has been out of production for many years. The proposed Project includes the installation of up to 200 wells, oil and gas processing facilities, and the installation of crude oil and pipeline connections to existing pipelines.
Surrounding Land Uses and Setting:	The proposed Project is located within the Dominguez Technology Centre, which is comprised of light industrial and commercial development. The adjacent land uses are warehouse and distribution facilities.
Other Public Agencies Whose Approval is Required:	Department of Oil, Gas and Geothermal Resources (DOGGR), State Water Resources Control Board (SWRCB), California Public Utilities Commission (CPUC), California Division of Occupational Safety and Health (CalOSHA), State Fire Marshall, South Coast Air Quality Management District (SCAQMD), City of Carson, LA County Fire Department (LACFD)

POTENTIALLY SIGNIFICANT IMPACT AREAS

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed Project. As indicated by the checklist on the following pages, environmental topics marked with a "✓" may be adversely affected by the proposed Project. An explanation relative to the determination of impacts can be found following the checklist for each area.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input checked="" type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology/Soils |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

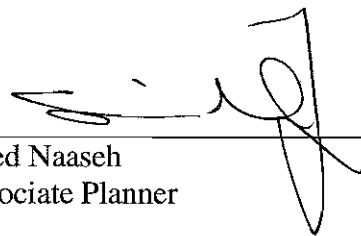
On the basis of this initial evaluation:

- I find the proposed project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: March 2, 2012

Signature: _____

Saied Naaseh
Associate Planner



ENVIRONMENTAL CHECKLIST AND DISCUSSION

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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1. AESTHETICS

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

SIGNIFICANCE CRITERIA

The proposed project impacts on aesthetics will be considered significant if:

- The proposed project will block views from a scenic highway or corridor.
- The proposed project will adversely affect the visual continuity of the surrounding area and impact views from residential areas.
- The impacts on light and glare will be considered significant if the proposed project adds lighting which would add glare to residential areas or sensitive receptors.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

1. a) and b) The proposed Project will be located in the northern portion of the City of Carson within Los Angeles County as shown on the site map, Figure 1-1. The proposed Project is located in an existing industrial facility. The Project Site is approximately 6.5 acres and will be located entirely within the Dominguez Technology Centre as shown in Figure 1-2. The Site currently consists of an industrial building and two oil and gas test wells (and associated process equipment). The proposed Project site is bounded on the north by Charles Willard Street, on the east by Bishop Avenue, on the west by a commercial/light industrial building, and on the south by a vegetated swale that acts as a conveyance for storm water with commercial/light industrial adjacent to the swale. Except for pipeline construction, all project activities are expected to take place within the boundaries of the proposed Project site (see Figure 1-5).

The proposed Project, once complete, will be behind a 30-foot tall perimeter wall designed to look like the neighboring warehouse building and not be substantially different from the existing building, with the exception of the 145-foot high drill rig mast which will be enclosed and designed to look similar to the perimeter wall (see Figure 1-6). There are no scenic vistas in the vicinity of the proposed Project. Therefore, the proposed Project will not change any scenic vistas. No scenic resources are present within the Facility. Therefore, the proposed Project will not have substantial adverse effects on scenic vistas or scenic resources.

1.c) The proposed Project will result in the installation of the drill mast that will be approximately 145 feet high. The drill rig mast will be visible to the surrounding industrial and commercial areas within the Dominguez Technology Centre. However, because of the surrounding structures and topography, the drill rig mast is not expected to be visible in residential areas of the City and, thus, will not degrade the existing visual character or quality of the surrounding environment.

1. d) The proposed Project lighting will be within the perimeter wall, shrouded to project light downward, and below the height of the wall. The enclosed drill rig will be equipped safety lighting and red, pulsating warning lights for air traffic safety. Safety lighting is typically low wattage, sufficient to illuminate walking surfaces to minimize trip and fall hazards. The existing facility is equipped with lights mounted on the exterior of the warehouse as well as 30-foot tall, downward facing lights located approximately 100 feet apart along the perimeter of the property. There are no sensitive receptors in the vicinity of the proposed Project. Therefore, the proposed Project is not expected to create substantial new sources of light or glare which would adversely affect sensitive receptors or day or nighttime views in the area.

CONCLUSION

Based upon these considerations, no significant impacts on aesthetics (i.e., impacts to the visual character to the site and surrounding areas) or light and glare are expected from the proposed Project. Therefore, aesthetic impacts will not be analyzed further in the EIR.

Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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2. AGRICULTURE AND FOREST RESOURCES

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

- a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

CHAPTER 2: ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
b) Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

Project-related impacts on agricultural resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.

- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

2. a), c), d), and e) All proposed construction and operation would occur within the confines of the existing Facility or in existing street rights-of way. No agricultural or forest resources are present at or in the vicinity of the Project and no new land will be acquired as part of the proposed Project. Further, the proposed Project would not convert farmland (as defined in Question 2. a) or forest land (as defined in Question 2 c.) to non-agricultural or not-forest use, or involve other changes in the existing environment, that could convert farmland or forest land to non-agricultural or non-forest use or conflict with agricultural or forest land uses, or Williamson Act contracts. The proposed Project site and adjacent properties are not located within an area mapped by the General Plan or California Farmland Mapping and Monitoring Program (FMMP) as containing Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

2. b) Land in the vicinity of the proposed Project is not currently zoned for agricultural use, so there are no Williamson Act contracts in effect. The proposed Project does not conflict with an existing agricultural zone or Williamson Act contract since these are not located in the vicinity of the Project and does not include converting agricultural land for non-agricultural uses. Development of the proposed Project would not create changes in the environment which could potentially convert farmland to other uses.

CONCLUSION

Based upon these considerations, no significant impacts on agricultural or forest resources are expected as a result of the proposed Project. Therefore, agricultural and forest resources impacts are considered to be less than significant and will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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3. AIR QUALITY

When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

- | | | | | |
|--|-------------------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SIGNIFICANCE CRITERIA

To determine whether or not air quality impacts from the proposed Project may be significant, impacts will be evaluated and compared to the SCAQMD's air quality significance criteria in Table 2-1. If impacts exceed any of the criteria in Table 2-1, they will be considered further in the EIR.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

3. a) The proposed Project will be located in the northern portion of the City of Carson within Los Angeles County. An inventory of existing emissions is included in the baseline inventory in the Air Quality Management Plan (AQMP) prepared by the SCAQMD. The AQMP identifies emission reductions from existing sources and air pollution control measures that are necessary in order to comply with the state and federal ambient air quality standards (SCAQMD, 2007). The control strategies in the AQMP are based on projections from the local General Plans provided by the cities and counties in the district. Projects that are consistent with the local General Plans are consistent with the air quality related regional plans. The proposed Project is considered to be consistent with the air quality related regional plans since it is consistent with the City of Carson General Plan.

3. b), c), and f) Construction Emissions: Construction activities associated with the proposed Project would result in emissions of carbon monoxide (CO), particulate matter less than 10 microns in diameter (PM10), particulate matter less than 2.5 microns in diameter (PM2.5), volatile organic compounds (VOCs), nitrogen oxides (NOx) and sulfur oxides (SOx). Heavy equipment including excavators, loaders, backhoes, plate compactors, cranes, and welding equipment will generate emissions from combustion of diesel fuel. Construction activities include demolition of existing structures, construction of new foundations, installation of the new equipment, and paving to develop oil and gas production and processing facilities. Emissions from construction are potentially significant and will be evaluated in the EIR.

TABLE 2-1
Air Quality Significance Thresholds

Mass Daily Thresholds^(a)		
Pollutant	Construction^(b)	Operation^(c)
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk \geq 10 in 1 million Chronic and Acute Hazard Index \geq 1.0 (project increment) Cancer Burden \geq 0.5 excess cancer cases (in areas \geq 1 in 1 million)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants^(d)		
NO₂ 1-hour average annual average	In attainment; significant if project causes or contributes to an exceedance of any standard: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^(e) and 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM2.5 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^(e) and 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
SO₂ 1-hour average 24-hour average	0.255 ppm (state) and 0.075 ppm federal – 99 th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 $\mu\text{g}/\text{m}^3$ (state)	
CO 1-hour average 8-hour average	In attainment; significant if project causes or contributes to an exceedance of any standard: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average Quarterly average	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal) 1.5 $\mu\text{g}/\text{m}^3$ (federal)	

(a) Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

(b) Construction thresholds apply to both the SCAB and Coachella Valley (Salton Sea and Mojave Desert Air Basin)

(c) For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

(d) Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

(e) Ambient air quality threshold based on SCAQMD Rule 403.

KEY: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = microgram per cubic meter; lbs/day = pounds per day; \geq greater than or equal to, $>$ = greater than

Source: <http://www.aqmd.gov/ceqa/handbook/signthres.pdf>

Operational Emissions: The emissions related to the operation of the proposed Project include emissions from the oil and gas production wells, processing facilities, and vehicles from worker vehicles and truck deliveries. Emissions from operations are potentially significant and will be evaluated in the EIR.

3. d) The nearest residences are approximately 1,700 feet west of the proposed Project. The proposed Project is expected to emit TACs from fugitive emission sources as well as combustion sources. Therefore, the proposed Project has the potential to expose sensitive receptors and the impact of the potential exposure will be evaluated in the EIR.

3. e) The proposed Project has the potential to create objectionable odors. The potential sources of odors include produced fluids and gases that may contain hydrogen sulfide, and treating chemicals. Therefore, the proposed Project has the potential to generate significant odor impacts to the surrounding areas and will be analyzed in the EIR.

CONCLUSION

Project-specific and cumulative adverse air quality impacts associated with increased emissions of air contaminants (criteria air pollutants and TACs) during the construction and operation phases of the proposed Project will be evaluated in the EIR. Impacts to sensitive receptors will also be analyzed in the EIR. Odor impacts will be analyzed in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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4. BIOLOGICAL RESOURCES

Would the project:

- | | | | | | |
|----|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) | Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) | Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) | Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) | Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
f) Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

The impacts on biological resources will be considered significant if any of the following criteria apply:

- The proposed project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The proposed project interferes substantially with the movement of any resident or migratory wildlife species.
- The proposed project adversely affects aquatic communities through construction or operation of the project.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

4. a), b), c,) d), e), and f) The construction and operational activities that would occur as a result of the proposed Project will occur within the confines of a previously developed site or in streets which have been previously graded. A biological survey was performed by Environ for the proposed Project site and the vicinity, which did not find any natural habitats on the proposed Project site (see Appendix A). No species of rare, threatened, or endangered plants or animals were identified in the vicinity of the proposed Project. The proposed Project is subject to stormwater management requirements for construction under the California General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ), which requires control of storm water runoff. Operational storm water is expected to be controlled, processed, and used for oil reservoir injection. Therefore, storm water is not expected to potentially impact any native habitat present in the drainage swale. The proposed Project is not located on or near a wetland habitat, and will not create any barriers to the movements of animals. The proposed Project would be consistent with the industrial nature of the area. The proposed Project does not conflict with the Tree Preservation Ordinance (06-

1347) as no trees will be removed. There are no adopted Habitat Conservation, Natural Community Conservation or other approved conservation Plans which apply to the proposed Project site. Therefore, no significant impacts on biological resources are expected from the proposed Project.

CONCLUSION

Based on the above considerations the proposed Project is not expected to adversely affect special-status animal and plant species or other biological resources (riparian habitats, wetlands, or migratory corridors); or conflict with ordinances or conservation plans. Therefore, biological resources are expected to be less than significant and will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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5. CULTURAL RESOURCES

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside a formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SIGNIFICANCE CRITERIA

Impacts to cultural resources will be considered significant if:

- The proposed project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group.
- Unique paleontological resources are present that could be disturbed by construction of the proposed project.
- The proposed project would disturb human remains.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

5. a) CEQA Guidelines §15064.5 state that resources listed in the California Register of Historical Resources or in a local register of historical resources are considered “historical resources.” Additionally, CEQA Guidelines §15064.5(a)(3) state that “generally, a resource shall be considered by the lead agency to be ‘historically significant’ if the resource meets the criteria for listing in the California Register of Historical Resources including the following:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values;
- Has yielded or may be likely to yield information important in prehistory or history.”

The existing building on the site is a concrete warehouse constructed in the early 2000's. The structure is not distinctive or historically significant to the history or cultural heritage of California. Therefore, no significant impacts to historic cultural resources are expected as a result of implementing the proposed Project.

5. b), c), and d) All construction and operational activities will occur in areas that have been previously graded and developed. While the likelihood of encountering cultural resources is low, there is still a potential that archaeological resources may exist. Any such impact would be eliminated by using standard construction practices and complying with provisions of Section 21083.2 of the Public Resources Code, which requires the following in the event that unexpected subsurface resources are encountered:

- Conduct a cultural resources orientation for construction workers involved in excavation activities. This orientation will show the workers how to identify the kinds of cultural resources that might be encountered, and what steps to take if cultural resources are encountered during excavation activities;
- Monitoring of subsurface earth disturbance by a professional archaeologist and an appropriate representative if cultural resources are exposed during construction;
- Provide the archaeological monitor with the authority to temporarily halt or redirect earth disturbance work in the vicinity of cultural resources exposed during construction so the find can be evaluated and mitigated as appropriate; and

- As required by state law, prevent further disturbance if human remains are unearthed, until the County Coroner has made the necessary findings with respect to origin and disposition, and the Native American Heritage Commission has been notified if the remains are determined to be of Native American descent.

CONCLUSION

Based on the above considerations the proposed Project is not expected to have significant adverse impacts on historic or prehistoric cultural resources or paleontological resources. Therefore, cultural resources are expected to be less than significant and will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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6. GEOLOGY AND SOILS

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
- Strong seismic ground-shaking?
- Seismic-related ground failure, including liquefaction?
- Landslides?

b) Result in substantial soil erosion or loss of topsoil?

c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

The impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.
- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

6. a), c), and d) The proposed Project site is located near the northerly margin of the Peninsular Ranges geomorphic province, which is characterized by steep, elongated ranges and valleys that generally trend northwestward. A geology, soils, and mineral resources technical study was performed for the proposed Project, which determined that there are no known active faults crossing the proposed Project site and proposed pipelines are not within an Alquist-Priolo Earthquake Fault Zone (GSI, 2011).

The proposed Project will be constructed in an area of known seismic activity. Approximately 35 active faults are known to exist within a 50-mile radius of the Facility. Of primary concern is the Newport-Inglewood Fault located approximately 1.9 miles southwest of the Facility.

The Newport-Inglewood Fault Zone represents the most significant source of strong seismic ground shaking at the Facility. The Newport-Inglewood Fault Zone extends more than 40 miles from Newport Bay to Beverly Hills and trends northwest. The greatest concentration of seismic events on the Newport-Inglewood Fault Zone is related to the 1933 Long Beach earthquake and its aftershocks. The fault is considered capable of generating a 7.1 magnitude earthquake.

Although within a seismically active area, the proposed Project is not located on a known fault trace that would define the site as a special seismic study zone under the Alquist-Priolo Act. Thus, the risk of earthquake-induced ground rupture is considered less than significant.

Based on historical record, it is highly probable that earthquakes will affect the Los Angeles region in the future. Research shows that damaging earthquakes will occur on or near recognized faults which show evidence of recent geologic activity. The proximity of major faults to the Facility increase the probability that an earthquake may impact the Facility. There is the potential for damage in the event of an earthquake. Impacts of an earthquake could include structural failure, spill, etc. The hazards of a hazardous materials release during an earthquake are addressed in the "8. Hazards and Hazardous Materials" section of this document.

Additionally, there is the possibility that minor earthquakes can be a result of anthropogenic (man-made) activities such as extraction of oil at major oil fields, due to a net liquid mass depletion (i.e., removal of oil without replacement with water). The Dominguez Oil Field was discovered in 1923 and was operated using salt water injection beginning in the mid-1940s as a means to extract more oil. The oil and gas production activities associated with the proposed Project will include the injection of salt water as well. Therefore, net liquid mass depletion will not occur. The proposed project also includes the use of hydrofracturing to improve oil recovery. While it is generally accepted in the technical community that hydrofracturing does not produce damaging earthquakes, anthropogenic sources of earthquakes will be analyzed in the EIR.

Liquefaction is a mechanism of seismic ground failure in which earthquake-caused ground motion causes loose, water-saturated, cohesionless soils to transform to a liquid state. The

proposed Project is not located in a designated Liquefaction Hazard Zone based on the Long Beach Seismic Hazard Map (California Division of Mines and Geology (CDMG), 1998). The depth to groundwater, at least 50 feet, and the dense nature of the underlying sediments are not conducive to liquefaction. Therefore, no significant impact from liquefaction at the proposed Project site is expected.

The proposed Project is not located within a known deep-seated landslide or near land features which would be subject to mudflows (GSI, 2011). Therefore, no significant adverse impacts due to landslides or mudflows are expected.

The proposed Project is located in an area where subsidence or ground fissures is considered low (GSI, 2011). Additionally, the proposed Project will utilize salt water injection to maintain formation pressure. Therefore, proposed Project impacts from subsidence or ground fissures are expected to be less than significant.

New structures at the proposed Project site must be designed to comply with the California Building Code requirements. Chapters 16 and 18 of the California Building Code contain specific requirements for seismic safety and excavation, foundations, and retaining walls, respectively. The City of Carson is responsible for ensuring that the proposed Project complies with the California Building Code as part of the issuance of the building permits, and would conduct inspections to ensure such compliance. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the California Building Code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage. The California Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The California Building Code requirements operate on the principle that providing appropriate foundations helps to protect buildings from failure during earthquakes. The basic formulas used for the California Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site.

The proposed modified Project would be required to obtain building permits, as applicable, for construction of all new proposed above-ground structures, including tank foundations. The Project applicant would be required to receive approval of all building plans and building permits to assure compliance with the latest Building Code prior to commencing construction.

The proposed pipelines would be intrastate pipelines and would be governed by the California State Fire Marshal regulations. New pipelines must be designed to comply with the requirements of the California State Fire Marshal, Pipeline Safety Division. The California State Fire Marshal exercises safety regulatory and enforcement authority over hazardous liquid pipelines, and acts as the agent for the DOT to implement the federal Hazardous Pipeline Safety Act within California. Pipeline design drawings will be submitted to the California State Fire Marshal for code compliance review and approval prior to construction.

The DOGGR regulates oil and gas, as well as geothermal resources, within California. The proposed Project wells are required to adhere to the DOGGR requirements for well design and construction, surface production equipment, and pipelines.

Accordingly, the proposed Project conformance with the California Building Code, California State Fire Marshall, and DOGGR requirements would result in less than significant impacts from seismic hazards.

6. b) During construction of the proposed Project, the possibility exists for temporary erosion resulting from excavation and grading activities for foundations. These activities are expected to be minor since the site has been previously graded and the proposed Project will not require significant grading to prepare the site for development, thus eliminating the potential for significant wind erosion or runoff from affected areas. The proposed Project will be required to comply with SCAQMD Rule 403 – Fugitive Dust, which imposes requirements to minimize emissions associated with wind erosion. Additionally, the proposed Project must comply with stormwater management requirements to minimize soil erosion from storm runoff. Therefore, impacts from soil erosion are expected to be less than significant.

6. e) Sewer service is available through a Publicly Owned Treatment Works (POTW), so the soil will not need to support septic tanks, or alternative wastewater disposal systems. Therefore, no impacts on soils due to septic systems or alternative wastewater systems are expected.

CONCLUSION

Based on these considerations, impacts on geology and soils are considered to be less than significant and not analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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7. GREENHOUSE GAS EMISSIONS

Would the project:

- | | | | | |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|
| a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SIGNIFICANCE CRITERIA

To determine whether or not greenhouse gas emissions from the proposed Project may be significant, impacts will be evaluated and compared to the SCAQMD threshold of 10,000 metric tons CO₂ equivalent (CO₂e) per year for industrial sources. The emissions of annual operations and construction emissions amortized over 30 years are to be included in the evaluation.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

7. a) and b) The proposed Project is expected to generate GHG emissions from construction and operation of the proposed Project. GHG emissions from construction activities are associated with the use of heavy construction equipment (e.g., excavator, loader, backhoes, plate compactors, cranes, etc.) as well as trucks and vehicles. Sources of GHG emissions during operations include oil and gas production wells, processing facilities, truck deliveries, and worker vehicles as well as indirect emissions associated with electricity use and potable water delivery. The impacts associated with GHG emissions are potentially significant and will be analyzed further in the EIR.

CONCLUSION

Project-specific and cumulative adverse air quality impacts associated with increased GHG emissions from construction and operation of the proposed Project will be analyzed in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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8. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- | | | | | |
|---|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
e) Be located within an airport land use plan, or where such a plan has not been adopted, be within two miles of a public airport or public use airport, and results in a safety hazard for the people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

The impacts associated with hazards will be considered significant if any of the following occur:

- Create a significant hazard to the public or environment through routine transport, storage, use, or disposal of hazardous materials.
- Non-conformance to National Fire Protection Association standards.

- Create a health and/or safety hazard identified in Title 5 of the California Code of Regulations, Sections 14001 through 14012.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

8. a), b), and c) The proposed Project involves the production, processing, and transport of oil and gas. Process upsets have the potential to release petroleum hydrocarbon and natural gas into the environment. While OXY maintains and implements stringent operating and maintenance procedures designed to reduce the risk of upset, leakage, accidents, and other hazards, the potential for significant hazard impacts exists and will be evaluated in the EIR.

There is one school, Annalee Avenue Elementary School, located within one-quarter of a mile of the proposed Project pipeline work at the corner of South Central Avenue and University Boulevard. No schools are located within one-quarter mile of the proposed Project oil and gas production facility. Operation of the pipeline is not expected to emit hazardous emissions as the pipeline is underground. However, the potential for a pipeline upset to impact the school will be evaluated in the EIR.

8. d) The proposed Project is not listed as a hazardous materials site pursuant to Government Code Section 65962.5. However, the Los Angeles Regional Water Quality Control Board closed the Dominguez Energy Reyes Lease - Area B (Case SL0603767483) case in 2003. The proposed Project location is within the case area. Since the case has been closed and the proposed Project area has been graded and previously developed, the proposed Project is not expected to create a significant hazard to the public or the environment from excavation activities during construction.

8. e) and f) The closest airport to the proposed Project is the Compton Woodley Airport located approximately 1.75 miles north of the proposed Project at 901 West Alondra Boulevard, Compton, CA. Additionally, the Goodyear Blimp Base Airport, a private use airport, is located approximately 1.75 miles southwest of the proposed Project. The proposed Project is not located within the takeoff/landing patterns of the Compton Woodley Airport or the Goodyear Blimp Base Airport. Therefore, the proposed Project will not result in the exposure of additional persons to airport-related safety risks.

8. g) The proposed Project is not expected to interfere with an emergency response plan or emergency evacuation plan. The proposed Project will not permanently reroute streets. During construction of the pipelines, traffic will be temporarily rerouted and access to impacted businesses may be interrupted. Therefore, potentially significant impacts to emergency response routes may occur during construction and will be evaluated in the EIR.

8. h) The proposed Project is located in an area that has been disturbed for urban development, and is not located within an area that contains dense vegetation. Project plans and

implementation must comply with state and local fire codes. Therefore, no significant impacts on the proposed Project from wildland fires are expected.

CONCLUSION

Based on the above considerations, the project-specific and cumulative adverse hazards impacts associated with construction and operation of the proposed Project will be evaluated in the EIR. Impacts to sensitive receptors will also be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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9. HYDROLOGY AND WATER QUALITY

Would the project:

- | | | | | |
|---|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Violate any water quality standards or waste discharge requirements? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
d) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

Potential impacts on water resources will be considered significant if any of the following criteria apply:

- The proposed Project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The proposed project will cause the degradation of surface water substantially affecting current or future uses.
- The proposed project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the proposed project.
- The proposed project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The proposed project results in alterations to the course or flow of floodwaters.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

9. a) Water Quality

Crude oil production results in produced fluids (oil, water, and gas liquids) and natural gases that must be processed to meet specifications and for transportation. The proposed Project will include the installation of oil handling equipment and facilities to process the crude oil, natural gas, and natural gas liquids so they can be transported to local refineries and other off-site facilities. The production facility will consist of wells; equipment for oil and gas processing, salt water treatment, salt water injection, slurry treatment and possible injection, and oil and natural gas shipping; and an electrical substation to be operated by Southern California Edison. Natural gas liquids will be blended into the crude oil to the extent allowed by oil sales specifications and the remainder will be transported off-site by trucks. Produced salt water and stormwater will be treated to remove solids and oil, and reinjected into the oil bearing formations to enhance production. The proposed Project is expected to produce approximately 6,000 barrels per day of oil, 94,000 barrels per day of salt water from the oil wells, 20,000 barrels per day of salt water from water wells.

The proposed Project will produce a substantial volume of water/wastewater that will need to be handled, treated, and reinjected, which could potentially result in significant water quality impacts. Therefore, the impacts of the proposed Project on water quality are potentially significant and will be evaluated in the EIR.

9. b) Groundwater

The West Coast Groundwater Basin underlies 160 square miles in the southwestern part of the Los Angeles Coastal Plain in Los Angeles County. The proposed Project is located on the eastern edge of the West Coast Groundwater Basin. The West Coast Groundwater Basin includes several smaller aquifers. The aquifers underlying the proposed Project site are (in order of shallowest to deepest) the Exposition Aquifer, the Gage/Gardena Aquifer, the Holydale Aquifer, the Lynnwood Aquifer, the Silverado Aquifer, and the Sunnyside aquifer. These aquifers range in depth from less than 100 feet to about 1,000 feet below mean sea level and the location of these aquifers are shown in Figure 2-1. Additional brackish and saltwater aquifers are located at greater depths.

The proposed Project will produce a substantial volume of water/wastewater that will need to be handled, treated, and reinjected, which could potentially result in significant ground water impacts. Therefore, the impacts of the proposed Project on ground water and quality are potentially significant and will be evaluated in the EIR.

9. c) and d) Stormwater Runoff

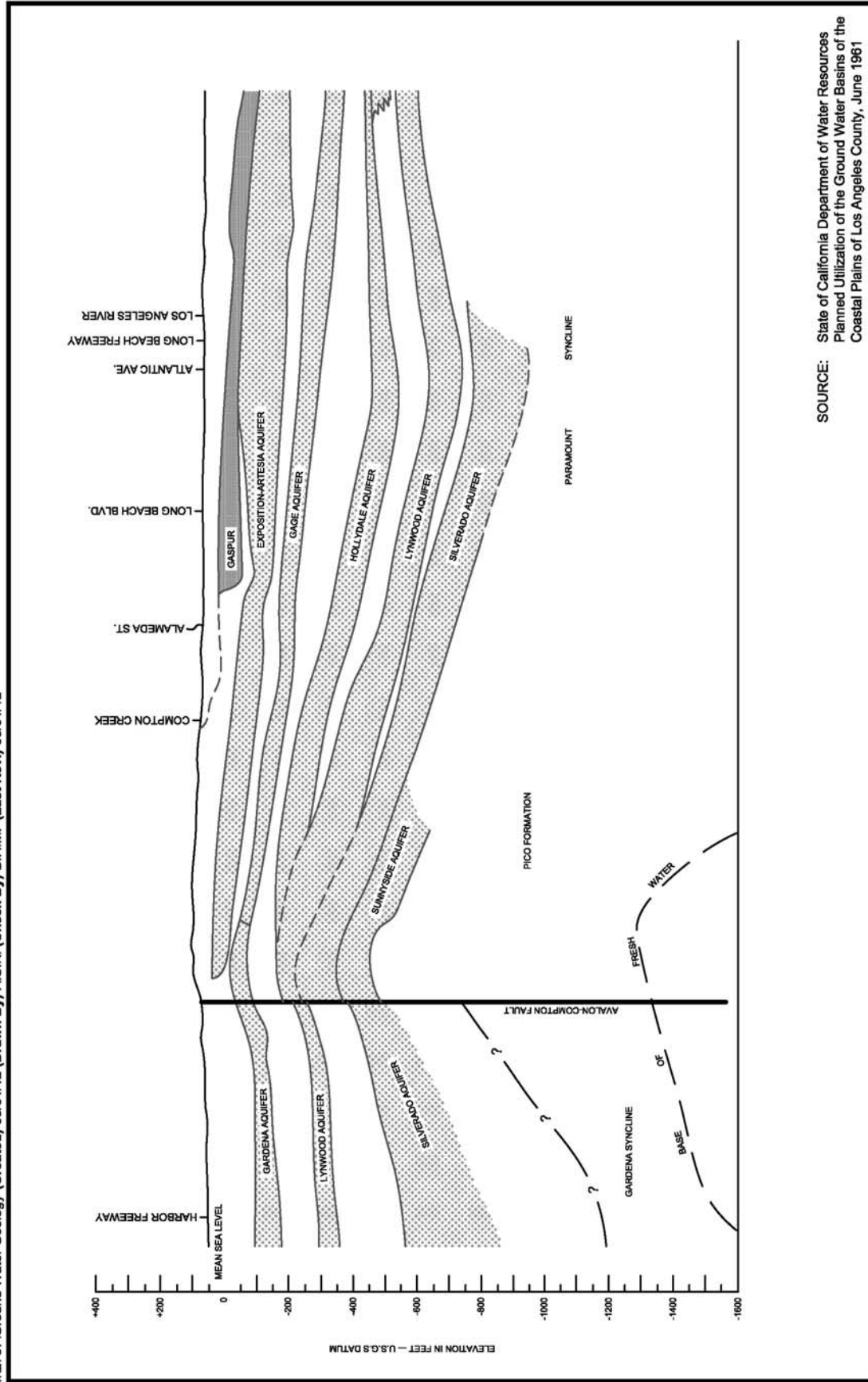
There are no streams or rivers in the vicinity of the proposed Project site. Therefore, the construction and operation of the proposed Project is not expected to impact or alter a stream or river.

The proposed Project would not result in a substantial increase to impervious area over existing conditions and would generally retain current drainage patterns. Runoff from the proposed Project site is conveyed into and through the existing storm drains along Bishop Avenue and Charles Willard Street, located southwest of the proposed Project site. A 1.6 acre retention basin is located south of and adjacent to the project site. This retention basin is designed to contain the 100-year flood event and drains approximately 60 acres in the Dominguez Technology Center, including the proposed Project site. The proposed Project is not expected to alter or increase the rate of surface water runoff. Therefore, the impact of the proposed Project on drainage patterns and drainage volumes is expected to be less than significant.

9. e) and f) Stormwater Runoff

The proposed Project is not expected to increase the surface water runoff from the site. However, the proposed Project will result in the generation, storage and/or transport of 6,000 barrels per day of oil, 94,000 barrels per day of salt water from the oil wells, 20,000 barrels per day of salt water from water wells. The presence of these and other materials on-site has the potential to result in migration of contaminants off-site, if not properly controlled. Therefore, the potential surface water impacts associated with the proposed Project will be evaluated in the EIR.

I:\2757\Ground Water Geology (Created) 03/01/12 (Drawn By) A.S.K. (Check By) B.H.M. (Last Rev.) 03/01/12



LOCAL AQUIFERS
OXY Dominguez Oil Field Development Project
 Carson, CA 90746

SOURCE: State of California Department of Water Resources
 Planned Utilization of the Ground Water Basins of the
 Coastal Plains of Los Angeles County, June 1961

9. g), h), and i) According to the Federal Emergency Management Agency, Flood Insurance Rate Map, the proposed Project site is not located within a 100-year flood zone and is outside the 500-year floodplain. In the Carson vicinity, some of the areas adjacent to the Dominguez Channel are located within flood zones. The mapped 500-year floodplain boundary is approximately 2,000 feet south and 4,000 feet west of the proposed Project site. Additionally, the proposed Project is not located in a mapped dam inundation area and is not subject to hazards associated with dam hazards or flooding. No dams or levees will be constructed as part of the proposed Project, and there are no existing dams or levees within the vicinity of the proposed Project. Further, the proposed Project would not result in the construction of any additional housing, so no housing will be placed within a 100-year floodplain.

9. j) Based on the flat terrain of the proposed Project site, the site would not be subject to mudflows. The site is located at elevations between 164 to 178 feet above mean sea level and is more than 7.5 miles inland from the nearest water body (the Pacific Ocean). Therefore, the proposed Project site would not be subject to tsunami or seiche.

CONCLUSION

Based on the above considerations, the proposed Project could result in potentially significant surface and ground water quality impacts associated with the handling, storage, treatment and reinjection of water and wastewater. Therefore, project impacts on surface and ground water quality will be analyzed in the EIR. No significant impacts are expected due to alteration of drainage patterns, an increase in the volume of surface water runoff, flooding, or inundation by seiche, tsunami or mudflow and these resources will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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10. LAND USE AND PLANNING

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to a general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

SIGNIFICANCE CRITERIA

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by the City of Carson.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

10. a) and b) The proposed Project would be located within the Dominguez Technology Center Specific Plan. The current use of the site is an industrial warehouse that is currently leased by a retail hardware and merchandise distributor, an electronic equipment manufacturer, and a global freight forwarder. Existing operations included freight warehousing and distribution operations. Current oil and gas site operations at the site include two production test wells and production testing equipment, which operate 24 hours a day, seven days a week.

OXY USA, Inc. is proposing to construct an oil drilling and production facility within the confines of the existing industrial site. The General Plan designates the land use of the proposed Project site as Light Industrial (LI). The zoning for the proposed Project site is Manufacturing, Light (ML).

The Dominguez Technology Center Specific Plan recognizes that oil production and recovery have occurred within the specific plan area for over 65 years and will continue to be a component of the overall development of the Specific Plan area. The Dominguez Technology Center Specific Plan lists the permitted land uses of the area which include, but are not limited to, the following:

- General manufacturing or assembly;
- Manufacture, research, assembly, testing, maintenance and repair of components, devices, equipment, parts and systems;
- Business engaged in research and development activities;
- Industries engaged in distribution, storage or warehousing;
- Exploration, production and transmission of oil and gas products appropriate screened;
- Accessory uses and industrial support activities when part of, and related and incidental to, a permitted industrial use;
- Headquarters or regional offices; and
- General administrative, professional, and business offices.

Oil and gas exploration, production and transmission are allowable land uses within the Dominguez Technology Center Specific Plan. Therefore, the proposed Project is consistent with the designated land use and zoning of the site and will not conflict with the adopted General Plan or Specific Plan for the site.

10. c) As discussed in Section 4, the proposed Project will be in an area previously disturbed and is not expected to conflict with any habitat conservation plan or natural community conservation plan. Therefore, no significant impact to habitat conservation is expected.

CONCLUSION

Based on the above considerations, no significant land use impacts are expected due to implementation of the proposed Project. Therefore, the proposed Project impacts on land use will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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11. MINERAL RESOURCES

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

SIGNIFICANCE CRITERIA

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The proposed project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

11. a) and b) The proposed Project would allow the construction and operation of an oil drilling and oil and gas processing facility to remove oil and gas from the Dominguez Oil Field. The Dominguez Oil Field is approximately five miles long and 1.5 miles wide and extends from the Long Beach Freeway and Del Amo Boulevard in the southeast to the Harbor Freeway and Gardena Freeway in the northwest (see Figure 1-3). The Dominguez Oil Field, discovered in 1923, is a large, thick deposit, with many separate layers of oil and gas bearing sandstones and siltstones separated by non-porous rock and faults. Cumulative oil production from the field has resulted in about 274 million barrels and over 400 million barrels of oil are estimated to remain

in the Dominguez Oil Field. A total of 603 wells have been drilled in the field, however, only three active oil production wells and one idle well remain. The remaining wells have been plugged with cement and abandoned (Environ, 2011). In addition, there are two test wells that were recently installed for production testing purposes at a portion of the proposed Project site.

The purpose of the proposed Project is to extract oil and natural gas for production and sale. Extraction of these resources will make them available to the residents of California by allowing the removal of additional quantities of oil and gas from the Dominguez Oil Field. Therefore, the proposed Project will not result in the loss of availability of a known mineral resource.

CONCLUSION

Since the proposed Project would allow the removal of additional quantities of oil and gas from the Dominguez Oil Field, the proposed Project would not result in the loss of availability of a known resource. Therefore, the proposed Project impacts on mineral resources are less than significant and will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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12. NOISE

Would the project:

- | | | | | | |
|----|--|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| a) | Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) | Expose persons to or generate of excessive groundborne vibration or groundborne noise levels? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) | Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) | Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e) | Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
f) Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

Impacts on noise will be considered significant if:

- Construction noise levels exceed the City of Carson noise ordinance or, if the noise threshold is currently exceeded, proposed project noise sources increase ambient noise levels by more than five decibels (dBA) at the site boundary.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, proposed project noise sources increase ambient noise levels by more than three dBA at the site boundary.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

12. a), b), c), and d) Construction activities associated with the proposed Project will generate noise from heavy construction equipment and construction-related traffic and localized vibration during excavation activities. The types of construction equipment that will be used during construction of the oil drilling and gas processing facility include excavators, loaders, backhoes, water trucks, compactors, cranes, hydrofracturing equipment, generators, air compressors, welders, paving equipment, and delivery trucks. The types of construction equipment that will be used along the pipeline route include cranes, dump trucks, generators, sidebooms, backhoes, welders, and delivery trucks. Potential generation and exposure to construction noise and vibration impacts may be significant, especially to the residents near the pipeline construction activities.

Once constructed, the proposed Project will result in the operation of additional equipment including an electric powered drill rig, pumps, injection wells, oil/water/gas separation equipment, water treatment systems, flares and vapor recovery equipment, and natural gas treatment equipment including deethanizer/stabilizer columns, storage tank, and truck loading rack. Most of this equipment has the potential to generate additional noise and/or vibration.

Based on the above, noise impacts associated with the construction and operation of the proposed Project is potentially significant and will be evaluated in the EIR.

12. e) and f. The proposed Project is not located within an airport land use plan. The closest airport to the proposed Project is the Compton Woodley Airport located approximately 1.75 miles north of the proposed Project at 901 West Alondra Boulevard, Compton, CA. Additionally, the Goodyear Blimp Base Airport, a private use airport, is located approximately 1.75 miles southwest of the proposed Project. The two airports in the vicinity of the proposed Project site are not large commercial airports. The Goodyear Blimp airport only provides services for the blimp. The Compton Woodley Airport, a small local airport, only handles general aviation and does not handle military, scheduled airlines, or regular cargo. The proposed Project is not located within the takeoff/landing patterns of the Compton Woodley Airport or the Goodyear Blimp Base Airport. Further, the proposed Project will not result in additional housing in the vicinity of these airports and will not result in the exposure of additional residents to airport noise. An additional 15 workers are expected to be employed at the proposed Project site; however, the project site is not impacted by existing airport noise so that workers will not be exposed to excessive airport-related noise.

CONCLUSION

Based on the above considerations, the noise associated with the construction and operation phase of the proposed Project could result in potentially significant noise and vibration impacts. Therefore, noise impacts associated with the construction and operation phase of the proposed Project will be analyzed in the EIR. No noise impacts are expected due to local airports and these impacts will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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13. POPULATION AND HOUSING

Would the project:

a) Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SIGNIFICANCE CRITERIA

The impacts of the proposed Project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

13. a), b), and c) Construction of the proposed Project will take place over a period of approximately 12 to 18 months. At the peak of construction, approximately 120 temporary construction jobs will be created by construction activities at the oil drilling and processing facility, with an additional 10-20 workers associated with pipeline construction. Because of

the large size of the construction work force available in the southern California area, all temporary construction jobs are expected to be filled from the existing regional labor pool. Once construction is completed, an additional 15 workers will be required for the long-term operation of the proposed Project. These permanent workers are also expected to come from the existing southern California labor pool. Thus, the proposed Project will not induce substantial growth either directly or indirectly. No additional housing will be necessary to accommodate the labor force needed during construction and, further, no existing housing or population will be displaced. Substantial housing growth in the area will not occur as a result of the proposed Project. Therefore, no significant adverse population or housing impacts are expected to result from the proposed Project.

CONCLUSION

Based on the above, no significant impacts to population and housing are expected due to implementation of the proposed Project. Therefore, the proposed Project impacts on population and housing will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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14. PUBLIC SERVICES

Would the project:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

- | | | | | |
|----------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| • Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

SIGNIFICANCE CRITERIA

Impacts on public services will be considered significant if the proposed Project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

14. a)

Fire: Fire protection and emergency services in the City of Carson are provided by the County of Los Angeles Fire Department. Fire stations that service the City of Carson are listed in Table

2-2. Stations #10 and #116 are the closest to the oil and gas production facilities and would be responsible for emergency fire services.

TABLE 2-2

Fire Stations Servicing the City of Carson

Fire Station	Location – Distance from Proposed Project
Station #10	1860 E. Del Amo Boulevard Carson, CA 90745
Station #95	137 W. Redondo Beach Boulevard Carson, CA 90248
Station #116	755 Victoria Street Carson, CA 90746 (951) 699-0351
Station #36	127 W. 223 rd Street Carson, CA 90745
Station #105	18915 Santa Fe Avenue Compton, CA 90221
Station #127	2049 E. 223 rd Street Carson, CA 90745

The proposed Project involves the installation of new oil and gas drilling and processing facilities, as well as new pipelines to transport materials from the site. The proposed Project would result in the closure of existing warehouse facilities at the site. The oil drilling and gas processing facility would be protected by a firewater loop fed by the local water main. The main firewater loop line within the facility will be continuously pressurized and will supply water to multiple hydrants, firewater monitors and foam monitors within the facility. Each fire hydrant will be equipped with a fire hose and nozzles. Further, the office/control building will be provided with a sprinkler system in accordance with Los Angeles County Fire Department requirements. While the proposed Project involves the use of hazardous materials, numerous regulations applies to the handling, storage, and transport of those materials, such that the proposed Project is not expected to require additional fire fighting services. As discussed under Section 8 – Hazards and Hazardous Materials, the fire hazards associated with the proposed Project will be evaluated. However, significant impacts that would affect service ratios, response times, etc., are not expected from the implementation of the proposed Project.

Police: The Los Angeles County Sheriff’s Department is the responding agency for law enforcement needs in the City of Carson. The closest Sheriff station to the proposed Project is

the Carson Station located at 21356 S. Avalon Boulevard, Carson. Because sheriff units are in the field, response times vary depending on the location of the nearest unit. The proposed Project site will have a 30-foot high perimeter wall to prevent unauthorized entry and access to the site will be provided through two gates controlled by plant personnel or from within the Control Building. Thus, no additional or altered police protection will be required for the proposed Project.

The proposed Project also involves the modification and installation of underground pipelines and equipment related to the operation of the pipeline. Pipelines associated with the proposed Project are not expected to increase the need or demand for additional public services (e.g., fire departments and police departments) above current levels because the pipelines would be located underground, beneath street and railroad right-of-ways, and in existing industrial areas. Local fire protection and police agencies will be notified of the construction schedule so they are aware of the location of activities in the event of emergency response.

Schools and Other Public Services: The local labor pool (e.g., workforce) from the southern California area is expected to be adequate to fill the short-term construction positions for the proposed Project. The proposed Project will require 70 -120 construction workers at the oil drilling and processing facility and an additional 10-20 workers for pipeline construction. These workers are expected to come primarily from the labor pool in southern California. The proposed Project will result in about 15 additional permanent workers to operate the oil drilling and gas processing facility and these workers are also expected to come from the labor pool in southern California. Thus, the proposed Project is not expected to impact local schools, public facilities, or government services.

Based upon these considerations, significant public service impacts that could adversely affect service ratios, response times, etc., are not expected from the implementation of the proposed Project.

CONCLUSION

Based on the above considerations, no significant impacts to public services are expected due to implementation of the proposed Project. Therefore, the proposed Project impacts on public services will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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15. RECREATION

Would the project:

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

SIGNIFICANCE CRITERIA

The impacts to recreation will be considered significant if:

- The proposed project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The proposed project adversely affects existing recreational opportunities.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

15. a) and b) Park and recreational facilities within the Carson area include the following:

- James Anderson, Jr. Memorial Park: 19101 S. Wilmington Avenue, Carson;
- Carriage Crest Park: 23800 S. Figueroa Street, Carson;
- Del Amo Park: 703 E. Del Amo Boulevard, Carson;
- Dominguez Park: 21330 Santa Fe Avenue, Long Beach;
- Friendship Mini Park: 21930 S. Water Street, Carson;
- Vernon Hemingway Memorial Park: 700 E. Gardena Boulevard, Carson;

- Dr. Thomas Mills Memorial Park: 1340 E. Dimondale Drive, Carson;
- Stevenson Park/Gym: 17400 Lysander Drive, Carson;
- Victoria Park: 419 E. 192nd Street, Carson;
- John D. Calas, Sr. Park: 1000 E. 220th Street, Carson;
- Carson Park and Pool: 21411 S. Orrick Street;
- Dolphin Park: 21205 S. Water Street, Carson;
- Perry Street Mini Park: Corner of 215th and Perry Street, Carson;
- Hemingway Aquatic Center: 16605 S. San Pedro Street, Carson;
- Scott Park and Pool: 23410 Catskill Avenue, Carson;
- Veterans Park/Sports Complex: 22400 Moneta Avenue, Carson; and,
- Walnut Street Park: 440 E. Walnut Street, Carson.

As previously concluded in Section 13, Population and Housing, of this document, implementation of the proposed Project modifications is not expected to substantially increase the local population. The construction work force, which is temporary, is expected to come from the existing labor pool in southern California. Additionally, once the proposed Project is complete, operational activities are expected to about 15 new permanent employees. Therefore, implementation of the proposed Project is not expected to increase the demand for neighborhood or regional parks or other recreational facilities, nor would it adversely affect existing recreational facilities.

Implementation of the proposed Project modifications would not require new recreational facilities or expansion of existing recreational facilities because it does not induce population growth and, thus, the proposed Project modifications are not expected to impact recreation.

CONCLUSION

Based on the above considerations, no significant impacts to recreational facilities are expected. Therefore, recreation will not be analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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16. TRANSPORTATION/TRAFFIC

Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause, either individually or cumulatively, exceedance of a level-of-service standard established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SIGNIFICANCE CRITERIA

The impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to E or F for more than one month.
- An intersection’s volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

16.2 Environmental Setting and Impacts

16. a) and b) Traffic Congestion

The proposed Project site is located at 1450 Charles Willard Street in the City of Carson. Four major freeways are located within the City of Carson including the Gardena Freeway (Route 91), Long Beach Freeway (Interstate 710), the Harbor Freeway (Interstate 110), and the San Diego Freeway (Interstate 405). Regional access to the site is provided by the Gardena Freeway (Route 91) which lies just north of the site and runs east/west. The Long Beach Freeway (Interstate 710) and the Harbor Freeway (Interstate 110) are major north and

south highways, which extend from the Ports of Los Angeles and Long Beach through Los Angeles County. Wilmington Avenue, Central Avenue, and Alameda Street are key arterials servicing the area. Alameda Street has been, and continues to be upgraded, expanded and modified to provide a dedicated roadway system for trucks and railcars leaving the Ports of Los Angeles/Long Beach to provide more efficient movements of goods and materials into/out of the port areas.

Construction of the proposed Project has the potential to contribute additional traffic in the Carson area associated with construction workers, transport of oversized loads, and pipeline installation. The proposed Project will involve the installation of additional piping to transport crude oil and natural gas from the site. The pipelines will be installed along existing street rights-of-way including Charles Willard Street, South Central Avenue, and at the intersection of 223rd and Wilmington Avenue. Pipeline construction activities could result in lane closures, street closures, and result in traffic impacts. The intersection of 223rd Street and Wilmington Avenue is a congested intersection and construction activities at this location could result in significant traffic impacts. Therefore, the construction activities have the potential to cause significant adverse traffic impacts. The impacts of proposed Project modifications on traffic during the construction phase will be analyzed further in the EIR.

Once construction of the proposed Project is completed, the facility is expected to require up to 15 workers. Operations will occur 24-hours a day, seven days a week, so traffic would be spread throughout the day. One to two truck trips are also expected to be required to transport supplies or remove natural gas liquids, hazardous/solid wastes, etc. The Los Angeles County traffic study guidelines require traffic impact analysis for projects that generate 500 trips or more in a day (County of Los Angeles, 1997). Operational activities associated with the proposed Project are expected to generate a peak of 15 trips per day. Since the project will generate less than 500 trips per day, no significant LOS impacts are expected at any of the local intersections. No increase in traffic during peak hours is expected during project operations. Therefore, traffic impacts associated with the operational phase of the proposed Project is less than significant.

16. c) Air Traffic Patterns

The proposed Project involves the construction and operation of a new oil and gas production facility. The proposed Project does not involve the delivery of materials via air, so no increase in air traffic is expected.

16. d) Traffic Design Hazards

The proposed Project does not include construction of roadways that could include design hazards. The proposed Project includes construction of pipelines within the right-of-way of existing streets. As noted in 16 a) and b), the construction activities associated with the proposed pipelines could generate significant adverse traffic impacts along the pipeline route and these impacts will be evaluated in the EIR. All public rights-of-way would be returned to

pre-construction condition following completion of construction, as required by the Work Area Traffic Control Handbook (11th edition, 2009), and no permanent traffic hazards would remain. Therefore, the proposed Project would not result in a new significant impact associated with operational traffic hazards and design features.

16. e) Emergency Access

The proposed Project would not impact emergency access at the site as there would be no permanent change in streets, roadways, or entrances to these facilities. The proposed Project modifications include construction of pipelines within the right-of-way of existing streets. As noted in 8 g) – Emergency Response during construction and 17 a) and b) – Traffic Impacts, construction activities associated with the proposed pipelines could generate significant adverse traffic impacts along the pipeline route and these impacts will be evaluated in the EIR. Emergency access was and is expected to be maintained during the construction of pipelines. Therefore, the proposed Project modifications would not have new significant adverse impacts to emergency access.

16. f) Parking

There will be two construction worker groups: one for the oil and gas facility development, and one for the pipeline development. Construction activities at the oil and gas facility are expected to average about 70 workers, with a peak work force of 120. It is expected that most construction workers will meet in a staging yard and be transported to the construction site in work buses due to the limited space at the site. Sufficient parking does not exist at the proposed Project site; however, the use of buses to transport workers to the project site would mitigate the lack of parking.

Approximately 10 to 20 construction workers will be employed during construction of the pipelines. It is expected that pipeline construction workers will also meet at a staging area and be transported via buses to the pipeline location due to the limited parking in the vicinity of pipeline construction activities. The use of buses to transport construction workers to the site would minimize potential parking impacts.

During operation of the proposed Project, 15 permanent employees are expected to be required to operate the oil drilling and processing equipment. Parking for these employees and for visitors to the site will be provided onsite. Therefore, no significant parking impacts are expected from the proposed Project.

16. g) Public Transit, Bicycle, or Pedestrian Facilities

The proposed Project does not include the installation of new roadways, bicycle lanes, or sidewalks. The proposed Project would not significantly adversely affect adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The proposed Project is not expected to create new significant adverse impacts to public transit, bicycle or pedestrian facilities during operation of the proposed Project modifications. Therefore, these

issues will not be evaluated further in the EIR. As noted in 16 a) and b), the construction activities associated with the proposed pipelines could generate significant adverse traffic impacts along the pipeline route, including impacts on public transit (bus stops) and pedestrian facilities (sidewalk closures) and these impacts will be evaluated in the EIR.

CONCLUSION

Based on the above considerations, the traffic associated with the construction phase of the proposed Project could result in new and potentially significant traffic impacts as the proposed Project includes pipeline routes along existing roadways, some of which are heavily traveled. Therefore, traffic impacts associated with the construction phase of the proposed Project will be analyzed in the EIR. Traffic impacts related to the operational phase of the proposed Project are expected to be less than significant as explained above. Potential adverse impacts of the proposed Project modifications on other transportation related areas are expected to be less than significant. Therefore, only construction related traffic impacts will be analyzed in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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17. UTILITIES/SERVICE SYSTEMS

Would the project:

- | | | | | |
|---|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

CHAPTER 2: ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

SIGNIFICANCE CRITERIA

The impacts to utilities/service systems will be considered significant if any of the following criteria are met:

- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the proposed project.
- The existing water supply does not have the capacity to meet the increased demands of the proposed project, or the proposed project would use a substantial amount of potable water.
- The proposed project increases demand for water by more than 300,000 gallons per day.
- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

DISCUSSION OF ENVIRONMENTAL CHECKLIST

17. a) and e) Wastewater

The Dominguez Oil Field is an old field that has already produced 274 million barrels of oil and it contains a large portion of water. It is expected that 90 percent of the materials removed from the wells will be water (an estimated 94,000 barrels per day). An additional 20,000 barrels per day of salt water is expected to be produced from the water wells. The oil will be separated from the water. The water will be treated on-site in the water treatment

facilities and re-injected into the oil reservoir. Therefore, the proposed Project is not expected to result in an increase in process wastewater sent to a wastewater treatment facility.

The proposed Project includes the demolition of the existing warehouse facility and related office space, prior to the construction of an operations/maintenance building which will provide new office space for about 15 workers. The wastewater generated from the proposed office building is expected to be the same or less than the wastewater generated by the existing warehouse facilities. Therefore, the proposed Project is not expected to result in an increase in wastewater that would need to be treated at a wastewater treatment plant.

17. b) and d) Water Use

Construction: Water use for construction activities is expected to be required for sanitary use, facility safety showers, wash down connections, fire protection, and fugitive dust abatement. Potable water will be supplied by tying into existing Central Basin or West Basin Municipal Water District supply lines that currently supply water to the site. In addition, to the daily construction water needs, hydrostatic testing for the new pipelines and storage vessels will also require water, which will be obtained from the California Water Service Company. The amount of water that will be used for hydrostatic tests will occur on a one time basis and will be minimized by transferring water from one component to another. Therefore, construction activities are not expected to result in a substantial increase in water at the site or require the expansion water treatment or water supply facilities.

Operation: Potable water will be supplied by tying into existing Central Basin or West Basin Municipal Water District supply lines currently used for the existing warehouse and related facilities. The proposed Project would demolish the existing warehouse facilities and related offices. Approximately 2,000 gallons per day of potable water will be required for operations at the proposed facility, which is not expected to result in a substantial increase in water use at the site. Potable water will be required for the operations building, facility safety showers, wash down connections, and fire protection. The only process user of potable will be the slurry facility, which will require a small amount of water for truck clean-out and operation of the shakers. Most process water will be supplied from the deep salt water aquifers on-site. Used water will be sent to the slurry facility which injects water via the slurry injection well or to the flotation tanks and ultimately injected into water injection wells. Therefore, construction of the proposed Project is not expected to require the construction of new water supply or treatment facilities.

17 c) Stormwater Runoff

As discussed in 9 e) and f) above, the proposed Project is not expected to increase the surface water runoff from the site as the site is already paved. Therefore, the proposed Project is not expected to result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. As noted in Section 9 e) and f), the proposed Project will result in the generation, storage and/or

transport of 6,000 barrels per day of oil, 94,000 barrels per day of salt water from the oil wells, 20,000 barrels per day of salt water from water wells. The presence of these and other materials on-site has the potential to result in migration of contaminants off-site, if not properly controlled. Therefore, the potential surface water impacts associated with the proposed Project will be evaluated in the EIR under Hydrology and Water Quality.

17. f) and g) Wastes

Construction waste will include waste from demolition of the existing buildings and from other construction activities. The existing buildings are tilt-up concrete shells with interior divisions. Demolition will include removal of interior divisions and materials, followed by cutting the exterior walls into manageable sections for removal. Waste generated from construction will generally be in the form of short sections of pipe, wastes from welding and coating, as well as boxes and crates used in the shipment of materials. Waste materials will typically be hauled to the local recycling centers. The demolition wastes will be recycled where possible and otherwise disposed of at an appropriate landfill.

Other construction wastes may include soils, asphalt, and concrete. The non-hazardous wastes will be hauled to a sanitary landfill or recycled. Hazardous wastes will be sent to a permitted treatment or disposal facility.

Operation of the proposed Project is expected to generate a variety of wastes including typical wastes from office activities such as cardboard and paper boxes, paper, and plastics. The proposed Project is not expected to result in an increase in these types of waste as there is an existing warehouse/office building on the site. Other wastes would include pallets, scrap steel, scrap aluminum, and scrap wire, most of which will be recycled. The facility will also generate solid wastes from oil and gas production operations, which include sands from production wells, and spent catalyst from the H₂S Treatment System. These wastes will typically be injected into the slurry well, or collected and disposed of off-site at a licensed commercial disposal site.

The Los Angeles County Sanitation District maintains three active Class III landfills that would likely receive waste from the proposed Project and can handle a total of approximately 20,000 tons per day of non-hazardous solid waste. These landfills include Puente Hills Landfill, Scholl Canyon and Calabasas Landfill. Projected closure dates for the three landfills range from 2013 at Puente Hills to 2030 at Calabasas. Permitted daily capacity ranges from 3,400 tons per day at Scholl Canyon to 13,200 tons per day at Puente Hills (CDRRR, 2011). The combined capacity of these three landfills exceeds the anticipate amounts of non-hazardous waste that may be generated during construction of the proposed Project.

Hazardous waste can be handled at two facilities in California; the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow in Kern County. Kettleman Hills receives an average of 2,700 tons per day and has an estimated two million cubic yard capacity. The facility is expected to

continue receiving wastes for approximately three years without an expansion or 25 years with an expansion. The facility operators are in the process of obtaining permits for expansion that would increase the landfill's life by another five years. The facility operators would then seek a permit for development of a new landfill with a 15-year life (email communication, Fred Paap, Chemical Waste Management Inc.). Buttonwillow receives approximately 960 tons per day of hazardous waste and has an approximate remaining capacity of 8.8 million cubic yards. The expected life of the Buttonwillow Landfill is approximately 40 years (Personal communication, Marianna Buoni, Clean Harbors Buttonwillow, Inc.). Hazardous waste also can be transported to permitted facilities outside of California. Therefore, sufficient capacity is expected to be available should any hazardous waste be generated.

CONCLUSION

Based on the above considerations, no significant impacts on utilities and/or service systems are expected from construction or operation of the proposed Project. Therefore, utilities/services systems impacts will not be further analyzed further in the EIR.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
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18. MANDATORY FINDINGS OF SIGNIFICANCE

- | | | | | | |
|----|--|-------------------------------------|--------------------------|-------------------------------------|--------------------------|
| a) | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) | Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) | Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

DISCUSSION OF ENVIRONMENTAL CHECKLIST

18. a) No significant impacts to biological impacts are expected due to development of the proposed Project because no native habitat exists at the site as the site is paved and currently contains a warehouse and related facilities. Further, because the proposed Project site is surrounded by industrial development or other commercial uses, the site is not used for the movement or migration of native wildlife species. Therefore, the proposed Project is not expected to degrade the quality of the environment, reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

All construction and operational activities will occur in areas that have been previously graded and developed so that the likelihood of encountering cultural resources is low. The existing building on the site is a concrete warehouse constructed in the early 2000's. The structure is not distinctive or historically significant to the history or cultural heritage of California. Therefore, no significant impacts to historic cultural resources are expected as a result of implementing the proposed Project.

18. b) The proposed Project may cause cumulative impacts depending on other projects in the area that are likely to occur concurrently with or subsequent to the proposed Project. The EIR will evaluate potential cumulative impacts for project-specific impacts that are determined to be significant.

18. c) The proposed Project may cause adverse effects on human beings. Air Quality, hazards and hazardous materials, hydrology/water quality, noise and transportation/traffic may be adversely affected as a result of the proposed Project. These environmental issues will be evaluated in the EIR.

CONCLUSION

Project-specific impacts to the following environmental areas will be further analyzed further in the EIR: air quality, greenhouse gas, hazardous and hazardous materials, hydrology and water quality, noise, and transportation/traffic during construction. Potential adverse cumulative impacts to these environmental areas will also be evaluated in the EIR.

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ACRONYMS

ABBREVIATION	DESCRIPTION
AQMP	Air Quality Management Plan
BOP	Blowout Prevention
CalOSHA	California Division of Occupational Safety and Health
CDMG	California Division of Mines and Geology
CEQA	California Environmental Quality Act
City	City of Carson
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂ e	CO ₂ equivalent
CPUC	California Public Utilities Commission
CWMI	Chemical Waste Management Inc.
dBA	Decibels
DOGGR	California Department of Oil, Gas, and Geothermal Resources
DOT	Department of Transportation
FMMP	Farmland Mapping and Monitoring Program
GHG	Greenhouse Gas
gpd	gallons per day
H ₂ S	hydrogen sulfide
IGF	induced gas floatation
kV	kilovolt
LACFD	Los Angeles County Fire Department
LI	Light Industrial
LOS	level of service
mg/l	milligrams per liter
ML	Manufacturing, Light
MTCO ₂ e/yr	metric tons of CO ₂ equivalent emissions per year
MVA	megavolt-amps
NGLs	natural gas liquids
NOP/IS	Notice of Preparation and Initial Study
NO _x	Nitrogen Oxide
NPDES	National Pollutant Discharge Elimination System
OXY	OXY USA, Inc.
PM _{2.5}	particulate matter less than 2.5 microns in diameter
PM ₁₀	particulate matter less than 10 microns in diameter
POTW	Publicly Owned Treatment Works
ppm	parts per million
psig	pound per square inch gauge
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCGC	Southern California Gas Company
SO _x	Sulfur Oxide
SWRCB	State Water Resources Control Board
TACs	toxic air contaminants

CHAPTER 2: ENVIRONMENTAL CHECKLIST

UPS
VOC

uninterruptible power supply
volatile organic compounds

GLOSSARY

TERM	DEFINITION
Ambient Noise	The background sound of an environment in relation to which all additional sounds are heard.
Anthropogenic	man-made
dBA	The decibel (dDB) is one tenth of a bel where one bel represents a difference in noise level between two intensities I_1 , I_0 where one is ten times greater than the other. (A) indicates the measurement is weighted to the human ear.
Drilling Mud	Slurry mixture used for drilling oil and gas wells
Heavy Hydrocarbons	Propane, butane, etc., referred to as C3+ for the number of carbon atoms in the compounds
Hydrocarbon	Organic compound containing hydrogen and carbon, commonly occurring in petroleum, natural gas, and coal.
L ₅₀	Sound level exceeded 50 percent of the time (average or mean level).
Natural Gas	A mixture of hydrocarbon gases that occurs with petroleum deposits, principally methane together with varying quantities of ethane, propane, butane, and other gases.
Net Liquid Mass Depletion	Removal of oil from an oil reservoir without replacement with water
Paleontological	Prehistoric life.
Peak Hour	This typically refers to the hour during the morning (typically 7 AM to 9 AM) or the evening (typically 4 PM to 6 PM) in which the greatest number of vehicles trips are generated by a given land use or are traveling on a given roadway.
Production Fluids	Mixture of oil, water and gas extracted from an oil reservoir

CHAPTER 2: ENVIRONMENTAL CHECKLIST

Seiches A vibration of the surface of a lake or landlocked sea that varies in period from a few minutes to several hours and which may change in intensity.

Slops Oil-water emulsions

APPENDIX A
Biological Survey



OXY USA, Inc.
Dominguez Oil Field
Biological Survey

Prepared for:
City of Carson
Carson, California

On behalf of:
OXY USA, Inc.
Long Beach, California

Prepared by:
ENVIRON International Corporation
Irvine, California

Date:
February 2012

Project Number:
04-25072H

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List of Acronym's

BPD	Barrels per Day
CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Carson
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	United States Army Corps of Engineers
CWA	Clean Water Act
ENVIRON	ENVIRON International Corporation
FESA	Federal Endangered Species Act
MBTA	Migratory Bird Treaty Act
MMSCFD	Million Standard Cubic Feet per Day
msl	Mean Sea Level
NOAA Fisheries Service	National Oceanic and Atmospheric Administrations' National Marine Fisheries Service
NPPA	Native Plant Protection Act
NRCS	Natural Resource Conservation Service
Project	Dominguez Oil Field Development Project
SCE	Southern California Edison
SITE	The Project Site
SWPPP	Storm Water Pollution Prevention Plan
State Water Board	State Water Resources Control Board
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
Water Board	Regional Water Quality Control Board

1 Introduction

This report presents the results of ENVIRON International Corporation's (ENVIRON) Biological Survey of the approximately 6.5-acre Project site (Site) proposed for the Dominguez Oil Field Development Project (Project). The Project would involve drilling wells and producing oil and gas from the Site. The Project Applicant is OXY USA Inc. The Site is owned by the Carson Dominguez Properties, LP. Equipment installed at the Site would include vessels and tanks for storing and processing the oil and gas.

OXY USA, Inc. proposes to construct a production facility consisting of wells, an oil and gas processing facility, water treatment, slurry and water injection operations, an electrical substation, and shipment and pipeline facilities to produce and transport approximately 6,000 BPD of oil and 3 MMSCFD of natural gas. Directional drilling techniques will be used to pinpoint oil reservoirs at depths of 4,000 to 13,500 feet. In general, the Project will consist of the following elements: 1) wells surrounded by well cellars; 2) an office/control buildings; 3) a resource (oil and natural gas) staging area; 4) facades along the streets; 5) ground flares for combusting vent gases; 6) oil and natural gas pipeline interconnections and 7) a SCE electrical substation.

The Project will use directional drilling to extract oil and natural gas resources from the subsurface and distribute them via pipeline and tanker truck for off-site treatment and refining. The Site was chosen to consolidate drilling and production operations at a previously developed industrial site located near existing pipelines, thereby limiting the need to construct additional internal and offsite pipelines and related infrastructure, and to develop local oil reserves to minimize emissions of criteria pollutants and greenhouse gases associated with the transportation of foreign crude oil to local refineries.

Compliance with the California Environmental Quality Act (CEQA) is required because the Project requires discretionary approval from the City of Carson (City) for a Development Application. Therefore, this Draft Biological Survey provides the basis for preparation of CEQA documentation with the City as the lead agency under CEQA. The purpose of this assessment is to evaluate the potential impacts to biological resources resulting from the construction and operation of the Project. ENVIRON conducted field surveys on the Project site on January 26, 2011. This report provides (1) a description of the physical characteristics of the Project site, (2) an account of vegetation communities and associated wildlife habitats present on the Project site, (3) a discussion of special-status plant and animal species and sensitive communities that are known to or that could potentially occur on the Project site, and (4) an evaluation of the potential impacts to biological resources that may occur as a result of the project. The evaluation of potential project impacts is consistent with the Los Angeles CEQA Thresholds Guide for biological resources.

1.1 Regional and Local Setting

The Project site is located at 1450-1480 Charles Willard Street. The Project site covers approximately 6.5 acres and is bounded on the north by Charles Willard Street, the east by Bishop Avenue, the west by a commercial light industrial building, and to the south by a storm water retention basin that serves the Industrial Park (Figures 1 and 2). The Project site is

comprised of one parcel (Assessor Information Number [AIN] 7319039118) located within the Dominguez Technology Centre in the northern portion of the City, Los Angeles County, California. Access to the Project site is provided by driveway entrances on Charles Willard Street and Bishop Avenue.

2 Regulatory Setting

The following discussion identifies federal, state, and local environmental regulations that serve to protect sensitive biological resources relevant to the proposed Project and CEQA review process.

2.1 Federal

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973, as amended, provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the FESA. The FESA has the following four major components: (1) provisions for listing species, (2) requirements for consultation with the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), (3) prohibitions against "taking" (meaning harassing, harming, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct) of listed species, and (4) provisions for permits that allow incidental "take". The FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the NOAA Fisheries Service share the responsibility for administration of the FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of the proposed Project to affect plants and animals listed, proposed for listing, or candidate for listing.

2.1.2 The Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.), Title 50 Code of Federal Regulations (CFR) Part 10, prohibits taking, killing, possessing, transporting, and importing of migratory birds, parts of migratory birds, and their eggs and nests, except when specifically authorized by the Department of the Interior. As used in the act, the term "take" is defined as meaning, "to pursue, hunt, capture, collect, kill or attempt to pursue, hunt, shoot, capture, collect or kill, unless the context otherwise requires." With a few exceptions, most birds are considered migratory under the MBTA. Disturbances that causes nest abandonment and/or loss of reproductive effort or loss of habitat upon which these birds depend would be in violation of the MBTA.

2.2 State

2.2.1 California Endangered Species Act

The State of California enacted similar laws to the FESA, the California Native Plant Protection Act (NPPA) in 1977, and the California Endangered Species Act (CESA) in 1984. The CESA expanded upon the original NPPA and enhanced legal protection for plants, but the NPPA remains part of the California Fish and Game Code. To align with the FESA, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the CESA as threatened species, but did not do so for rare plants. Thus, these laws provide the legal framework for protection of California-listed rare, threatened, and endangered plant and animal species. The California Department of Fish and Game (CDFG) implements NPPA and CESA, and its Wildlife and Habitat Data Analysis Branch maintains the California Natural

Diversity Database (CNDDDB), a computerized inventory of information on the general location and status of California's rarest plants, animals, and natural communities. During the CEQA review process, the CDFG is given the opportunity to comment on the potential of the proposed Project to affect listed plants and animals.

2.2.2 Fully Protected Species and Species of Special Concern

The classification of "fully protected" was the CDFG's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibian and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under CESA and/or FESA. The Fish and Game Code sections (fish at §5515, amphibian and reptiles at §5050, birds at §3511, and mammals at §4700) dealing with "fully protected" species states that these species "...may not be taken or possessed at any time and no provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected species," (CDFG Fish and Game Commission 1998) although take may be authorized for necessary scientific research. This language makes the "fully protected" designation the strongest and most restrictive regarding the "take" of these species. In 2003, the code sections dealing with fully protected species were amended to allow the CDFG to authorize take resulting from recovery activities for state-listed species.

Species of special concern are broadly defined as animals not listed under the FESA or CESA, but which are nonetheless of concern to the CDFG because they are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. This designation is intended to result in special consideration for these animals by the CDFG, land managers, consulting biologist, and others, and is intended to focus attention on the species to help avert the need for costly listing under FESA and CESA and cumbersome recovery efforts that might ultimately be required. This designation also is intended to stimulate collection of additional information on the biology, distribution, and status of poorly known at-risk species, and focus research and management attention on them. Although these species generally have no special legal status, they are given special consideration under the CEQA during project review.

2.2.3 California Fish and Game Code Sections 3503 and 3513

According to Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird (except English sparrow (*Passer domesticus*) and European Starling (*Sturnus vulgaris*)). Section 3503.5 specifically protects birds in the orders Falconiformes and Strigiformes (birds-of-prey). Section 3513 essentially overlaps with the MBTA, prohibiting the take or possession of any migratory non-game bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by the CDFG.

2.2.4 Other Sensitive Plants – California Native Plant Society

The California Native Plant Society (CNPS), a non-profit plant conservation organization, publishes and maintains an Inventory of Rare and Endangered Vascular Plants of California in both hard copy and electronic version (www.cnps.org/rareplants/inventory/6thedition.htm).

The Inventory assigns plants to the following categories:

- 1A Presumed extinct in California;
- 1B Rare, threatened, or endangered in California and elsewhere;
- 2 Rare, threatened, or endangered in California, but more common elsewhere;
- 3 Plants for which more information is needed – A review list; and
- 4 Plants of limited distribution – A watch list.

Additional endangerment codes are assigned to each taxon as follows:

- 1. Seriously endangered in California (over 80% of occurrences threatened/high degree of immediacy of threat).
- 2. Fairly endangered in California (20-80% occurrences threatened).
- 3. Not very endangered in California (<20% of occurrences threatened or no current threats known).

Plants on Lists 1A, 1B, and 2 of the CNPS Inventory consist of plants that may qualify for listing, and the CDFG, as well as other state agencies (e.g., California Department of Forestry and Fire Protection [CDF]), and the CNPS recommends these plants be given special consideration under CEQA during project review. In addition, the CDFG and CNPS recommend, and local governments may require, consideration of plants on List 3 and 4 during project review.

2.2.5 Other Sensitive Species – NatureServe

NatureServe is a non-profit conservation organization whose mission is to provide a scientific basis for effective conservation action. NatureServe and its natural heritage member programs have developed a method for evaluating the relative imperilment of both species and ecological communities. These assessments lead to the designation of a conservation status rank, which are a valuable complement to legal status designations assigned by government agencies such as the USFWS and the NOAA Fisheries Service in administering the FESA. NatureServe conservation status ranks, and the documentation that support them, are often used by such agencies in making official determinations, particularly in the identification of candidates for future legal protection.

The conservation status of a species or community is designated by a number from 1 to 5, preceded by a letter reflecting the appropriate geographic scale of the assessment (G = Global, N = National, and S = Subnational). The numbers have the following meaning:

- 1. Critically imperiled (at very high risk of extinction due to extreme rarity [often 5 or fewer populations], very steep declines, or other factors).
- 2. Imperiled (at high risk of extinction due to very restricted range, very few populations [often 20 or fewer], steep declines, or other factors).
- 3. Vulnerable to extirpation or extinction (at moderate risk of extinction due to a restricted range, relatively few populations [often 80 or fewer], recent and widespread declines, or other factors).

4. Apparently secure (uncommon but not rare; some cause for long-term concern due to declines or other factors).
5. Demonstrably widespread, abundant, and secure (common; widespread and abundant).

For example, G1 would indicate that a species is critically imperiled across its entire range (i.e., globally). In this sense the species as a whole is regarded as being at very high risk of extinction. A rank of S3 would indicate the species is vulnerable and at moderate risk within a particular state or province, even though it may be more secure elsewhere. The letters have the following significance:

- G Global (global-wide assessment of condition).
- N National (condition in a particular country).
- S Subnational (status in a particular state or province).

Extinct or missing species and ecological communities are designed with the following letters:

- X Presumed extinct/extirpated; or
- H Possibly extinct or extirpated.

Other ranks include:

- ? Represents rank uncertainty; and
- NR Not ranked.

Infraspecific taxa refer to subspecies, varieties, and other designations of organisms below the level of species. T-ranks apply to plants and animal species only.

For plant and animal species, the list of ranks provides an estimate of extinction risk, while for ecological communities they provide an estimate of the risk of elimination. There is currently no conservation status rank determined for ecological systems. The NatureServe database is less detailed than that of the CNDDDB where the emphasis is on rare and endangered species and communities, whereas the CNDDDB concerns California's endangered, threatened, and rare plants, animals, and natural communities.

2.2.6 Porter-Cologne Water Quality Control Act

Waters of the State are defined by the Porter-Cologne Act as “any surface water or groundwater, including saline waters, within the boundaries of the state.” The State Water Resources Control Board (State Water Board) protects all waters in its regulatory scope, but has special responsibility for isolated wetlands and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated by other programs, such as Section 404 of the Clean Water Act (CWA). Waters of the State are regulated by the Regional Water Quality Control Boards (Water Board) under the State Water Quality Certification Program, which regulates discharges of dredged and fill material under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act. Projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State are required to comply with the terms of the Water Quality Certification Program. If a proposed

project does not require a federal license or permit, but does involve activities that may result in a discharge of harmful substances to Waters of the State, the Water Boards have the option to regulate such activities under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements.

2.2.7 California Fish and Game Code Section 1600

Streams, lakes, and riparian vegetation, as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFG under Sections 1600-1616 of the California Fish and Game Code. Any activity that will do one or more of the following: (1) substantially obstruct or divert the natural flow of a river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake generally require a 1602 Lake and Streambed Alteration Agreement. The term “stream”, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life”. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as “on, or pertaining to, the banks of a stream”; therefore, riparian vegetation is defined as, “vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself” (CDFG ESD 1994). Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFG.

2.2.8 Sensitive Vegetation Communities

Sensitive vegetation communities are natural communities and habitats that are either unique, of relatively limited distribution in the region, or of particularly high wildlife value. However, these communities may or may not necessarily contain special-status species. Sensitive natural communities are usually identified in local or regional plans, policies or regulations, or by the CDFG (i.e., CNDDDB) or the USFWS. Impacts to sensitive natural communities and habitats must be considered and evaluated under the CEQA (CCR: Title 14, Div. 6, Chap. 3, Appendix G).

2.3 Local

Local agencies, such as the City Planning Department and the Department of Public Works, aid in the protection and preservation of sensitive natural resources in exercising land use controls. The Open Space and Conservation Element portion of the General Plan - City, CA (2003), combined with other General Plan Update Elements, strives to achieve this control in defining certain goals, objectives, and polices for the conservation of sensitive natural resources.

3 Methods

The analysis of potential biological resources impacts associated with the development and operation of the proposed Project involved a review of available background information pertaining to biological resources on and in the vicinity of the Project site and completion of a field survey by ENVIRON. The methods of the background review and field survey are summarized below. The specific methods used to assess the existing conditions of the Project site (i.e., assessment of the plant communities and wildlife habitats and their potential to support special-status species and sensitive natural communities) are described in more detail at the beginning of each appropriate subsection in Section 4.0 (Existing Conditions) below.

3.1 Background Review

Prior to conducting field surveys, ENVIRON reviewed available background information pertaining to the biological resources on and in the vicinity of the Project site proposed for development of the Project. The following information was reviewed:

- CDFG's CNDDDB record search of the Inglewood (090A), Long Beach (089C), Los Alamitos (089D), San Pedro (073A), Seal Beach (072A), South Gate (089B), Torrance (090D) and Whittier (089A) USGS 7 ½ Minute Quadrangles. Please note the Long Beach OES USGS 7 ½ Minute Quadrangle is not included in the CNDDDB. The Long Beach OES USGS 7 ½ Minute Quadrangle contains the southern portions of Long Beach Middle Harbor and Outer Harbor, Island Freeman, Island Chaffee, and the Pacific Ocean;
- CNPS Electronic Inventory search of the Inglewood (090A), Long Beach (089C), Los Alamitos (089D), San Pedro (073A), Seal Beach (072A), South Gate (089B), Torrance (090D) and Whittier (089A) USGS 7 ½ Minute Quadrangles. Please note the Long Beach OES USGS 7 ½ Minute Quadrangle is not included in the CNDDDB. The Long Beach OES USGS 7 ½ Minute Quadrangle contains the southern portions of Long Beach Middle Harbor and Outer Harbor, Island Freeman, Island Chaffee, and the Pacific Ocean;
- USFWS's list of Federal Endangered and Threatened Species in Los Angeles County;
- United States Department of Agricultural (USDA) Natural Resource Conservation Service (NRCS) web soil survey;
- USFWS's National Wetlands Inventory "NWI"; and
- The City General Plan.

3.2 Field Survey

ENVIRON conducted the general biological resources survey on January 26, 2011. The purpose of the general biological resources survey was to assess the existing conditions of the Project site, including characterizing and delineating the vegetation communities and associated wildlife habitats and evaluating the potential for these habitats to support special-status species and sensitive communities.

During the general biological resources survey, Laura Moran (ENVIRON, Senior Biologist), assisted by Melissa McMeechan (ENVIRON, Associate), traversed the perimeter of the off-site stormwater retention basin accessible from the public roads by foot, and noted all vegetation communities present on the Project site and within the off-site basin.

4 Existing Conditions

The following provides a description of the physical characteristics, vegetation communities and associated wildlife habitats, wildlife movement corridors, sensitive natural communities, special-status species, and jurisdictional wetlands and other waters present or potentially present on the Project site. Representative photographs of the Project site and vicinity are included in Appendix A of this report.

4.1 Physical Characteristics

The Project site is part of the Dominguez Technology Centre. Current site operations include warehousing and test drilling operations. Past grading or other ground disturbing activities appear to have substantially influenced the existing terrain (as well as the existing vegetation). The Project site is relatively flat. A stormwater retention basin is located to south of the Project site and extends from Bishop Ave to Beachey Place. This engineered stormwater basin along the southern Project site boundary collects stormwater flows from the surrounding Industrial Park properties. The topography along the other Project site boundaries are characterized as relatively flat, with slight engineered grading to direct stormwater off the Project site, onto the roads, and ultimately into the storm drain system. The stormwater retention basin is confluent to the Dominguez Channel located west of the Project site. Elevations on the Project site range from a low of about 164 feet mean sea level (msl) to a high about 178 feet msl.

USDA - NRCS does not provide soils mapping for this area of LA County. The Los Angeles County Department of Public Works Hydrology Manual maps a majority of the site as Montezuma Clay Adobe and the remainder as Ramona Loam (Figure 3).

4.2 Vegetation Communities & Associated Wildlife Habitats

The vegetation communities identified on the Project site are broadly classified as “ornamental” due to the highly urbanized and developed nature of the Project site. No natural or undisturbed vegetation occurs on or in the immediate vicinity of the Project site. In general, the vegetation communities on the Project site appear to have been significantly influenced by past disturbance activities (e.g., grading, development of Industrial uses, etc.). There is a small patch of cattails within the western end of the retention basin immediately adjacent to and south of the Project site (Figure 4). The cattail patch and potential associated wildlife habitat is discussed below. The retention basin is not part of the Project site and no alterations to the basin are proposed as part of Project implementation.

4.2.1 Cattails

Cattails (*Typha latifolia*) form one stand within sediment deposited in the western end of the retention basin equaling approximately 0.05 acres (Figure 4). Cattail is listed as an obligate species on the national inventory of wetland plants (Reed 1988). Cattail is a perennial aquatic herb that is native to California and is also found elsewhere in North America and beyond in meadow and freshwater wetlands. This emergent species occurs as a mono-cultural stand and therefore was mapped as a separate community. This vegetation community was observed from public streets through the fence that surrounds the retention basin.

Although no wildlife was observed in the cattails during the site visit, birds such as red-winged blackbirds (*Agelaius phoeniceus*) have the potential to utilize this habitat.

4.2.2 Ornamental

There is approximately 0.81 acres of Ornamental vegetation planted along Charles Willard Street and Bishop Avenue. The Project site vegetation is comprised of several unidentified Ornamental shrubs planted in close proximity to a row of Ornamental trees, and also a large strip of lawn area.

Ornamental vegetation can provide limited habitat for highly urbanized species such as birds, squirrels and other small rodents.

4.3 Wildlife Movement Corridors

The movement and migration of wildlife species has been substantially altered due to habitat fragmentation over the past century. This fragmentation is most commonly caused by development of open areas, which can result in large patches of land becoming inaccessible and forming a virtual barrier between undeveloped areas. Additional roads associated with development, although narrow, may result in barriers to smaller or less mobile wildlife species. Habitat fragmentation results in isolated islands of habitat, which affects wildlife behavior, foraging activity, reproductive patterns, immigration and emigration or dispersal capabilities, and survivability. Corridors can consist of a sequence of stepping-stones across the landscape (i.e., discontinuous areas of habitat such as isolated wetlands and roadside vegetation), continuous lineal strips of vegetation and habitat (e.g., riparian strips and ridge lines), or they may be parts of larger habitat areas selected for its known or likely importance to local wildlife. The Project site is completely surrounded by an Industrial Complex and provides little habitat for wildlife. In addition, the retention basin which could potentially provide a habitat linkage is completely fenced and for the most part devoid of vegetation. For these reasons, the Project site does not serve as a continuous regional connection for wildlife species. However, the habitats on the Project site may provide stepping stone linkages for birds and insects during migration, although the Project site is not unique in this respect, as there are other properties in the general vicinity that may serve the same purpose.

4.4 Sensitive Communities

Based on a search of the CNDDDB occurrences, there are four sensitive natural communities recorded in the vicinity of the Project site (CDFG 2011). The Project site does not have these sensitive habitats that include southern coastal bluff scrub, southern coastal salt marsh, southern dune scrub and southern foredunes. The site does not contain wetlands or other waters also considered sensitive by the regulatory and resource agencies. The retention basin previously discussed located off-site and to the south of the Project site does not appear to be inundated or saturated to the surface at a frequency or duration sufficient to support a prevalence of vegetation typically adapted to life in saturated soil conditions. Although cattails were observed during field surveys within the basin, they represent a small isolated patch within sediment trapped at the western end of the basin and are not representative of vegetation typically found in the Project vicinity.

4.5 Special-Status Plant & Animal Species

For the purposes of this assessment, special-status species include those plant and animals listed, proposed for listing or candidates for listing as threatened or endangered by the USFWS or NOAA Fisheries Service under the FESA, those listed or proposed for listing as rare, threatened or endangered by the CDFG under CESA, animals designated as “Fully Protected” or “Species of Special Concern” by the CDFG, birds protected by the USFWS under the MTBA and/or by the CDFG under Fish and Game Code Sections 3503 and 3513, and plants occurring on List 1A, List 1B, List 2, List 3, and List 4 of the CNPS Inventory.

The potential occurrence of special-status plant and animal species on the Project site was initially evaluated by developing a list of special-status species that are known to or have the potential to occur in the vicinity of the Project site based on a search of current database records (e.g., CNDDDB and CNPS Electronic Inventory records) and review of the USFWS list of federal endangered and threatened species. The potential for occurrence of those species included on the list were then evaluated based on the habitat requirements of each species relative to the conditions observed during the field surveys conducted by ENVIRON. Each species was evaluated for its potential to occur on or in the immediate vicinity of the Project site according to the following criteria:

Not Expected. There is no suitable habitat present on the Project site (i.e., habitats on the Project site are clearly unsuitable for the species requirements [e.g., foraging, breeding, cover, substrate, elevation hydrology, plant community, disturbance regime, etc.]). The species has an extremely low probability of being found on the Project site.

Low Potential. Limited suitable habitat is present on the Project site (i.e., few of the habitat components meeting the species requirements are present and/or the majority of habitat on the Project site is unsuitable or of very low quality). Additionally, there are no or few recent known records of occurrence in the vicinity of the Project site. The species has a low probability of being found on the Project site.

Moderate Potential. Suitable habitat is present on the Project site (i.e., some of the habitat components meeting the species requirements are present and/or the majority of the habitat on the Project site is suitable or of marginal quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the Project site. The species has a moderate probability of being found on the Project site.

High Potential. Highly suitable habitat is present on the Project site (i.e., all habitat components meeting the species requirements are present and/or all of the habitat on the Project site is highly suitable or of high quality). Additionally, there are few or many recent known records of occurrences in the vicinity of the Project site. This species has a high probability of being found on the Project site.

Present. Species was observed on the Project site (i.e., species was either observed during recent surveys or has a recorded observation in the CNDDDB on the Project site).

Table 1 and Table 2 beginning on page 13 present the list of special-status plants and animals, (respectively) that have the potential to occur in the vicinity of the Project site (Figure 5), their habitat requirements, and a ranking of potential for occurrence on the Project site.

4.5.1 Special-Status Plants

Fifty-one special-status plant species are known to or have the potential to occur in the vicinity of the Project site which includes plants that occur in coastal and marine habitats (CNDDDB 2011). However, none of the habitat conditions necessary to support these plants are present on the Project site or within the retention basin located off-site and adjacent to the Project site. Based on the results of the site survey, no special-status plants are present on the Project site.

4.5.2 Special-Status Animals

Sixty special-status animal species are known to or have the potential to occur in the vicinity of the Project site which includes animals that occur in coastal and marine habitats (CNDDDB 2011). Of these animal species, none are expected to occur on the Project site (species ranked as “Not Expected”) for varying reasons. Reasons include the absence of essential habitat requirements for the species, the distance to known occurrences and/or the species distributional range, the limited availability of foraging habitat, and/or the proximity of human-related disturbances. This includes Tricolored Blackbird (*Agelaius tricolor*), a highly colonial species known to use cattails for roosting and nesting but requiring large contiguous areas of habitat and consistent available open water. The small patch of cattails within the retention basin off-site does not provide suitable habitat or hydrology for this species.

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
Plants												
<i>Aphanisma blitoides</i>	Aphanisma	1B.2			G3G4	S3	Coastal bluff scrub, coastal dunes, coastal scrub. On bluffs and slopes near the ocean in sandy or clay soils. In steep decline on the islands and the mainland.	March - June	1-305	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Arenaria paludicola</i>	Marsh Sandwort	1B.1	FE	CE	G1	S1	Sandy, openings. Marshes and swamps (freshwater or brackish)	May - August	3-170	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Astragalus brauntonii</i>	Braunton's milk-vetch	1B.1	FE		G2	S2.1	Recent burns or disturbed areas, usually sandstone with carbonate layers. Chaparral. Coastal scrub. Valley and foothill grassland	January - August	4-640	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>	Ventura Marsh milk-vetch	1B.1	FE	CE	G2T1	S1	Coastal salt marsh within reach of high tide or protected by barrier beaches, more rarely near seeps on sandy bluffs.	June - October	1-35	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
<i>Astragalus tener</i> var. <i>titi</i>	Coastal dunes milk-vetch	1B.1	FE	CE	G1T1	S1.1	Coastal bluff scrub, coastal dunes. Moist, sandy depressions of bluffs or dunes along and near the pacific ocean; one site on a clay terrace.	March - May	1-50	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3
<i>Atriplex coulteri</i>	Coulter's saltbush	1B.2			G2	S2.2	Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Ocean bluffs, ridgetops, as well as alkaline low places.	March - October	3-460	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Atriplex pacifica</i>	South Coast saltscale	1B.2			G3G4	S2.2	Coastal scrub, coastal bluff scrub, playas, chenopod scrub. Alkali soils.	March - October	0-140	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Atriplex parishii</i>	Parish's brittlescale	1B.1			G1G2	S1.1	Alkali meadows, vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils.	June - October	25-1900	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Atriplex serenana</i> var. <i>davidsonii</i>	Davidson's saltscale	1B.2			G5T2?	S2?	Coastal bluff scrub, coastal scrub. Alkaline soil.	April - October	10-200	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Berberis nevinii</i>	Nevin's barberry	1B.1	FE	CE	G2	S2.2	Sandy or gravelly. Chaparral. Cismontane woodland. Coastal scrub. Riparian scrub	March - June	274-825	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
<i>Brodiaea filifolia</i>	Thread-leaved brodiaea	1B.1	FT	CE	G2	S2.1	Often clay. Chaparral (openings). Cismontane woodland. Coastal scrub. Playas. Valley and foothill grassland. Vernal pools	March - June	25-1219	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	1B.2			G3	S3	Coastal scrub, chaparral, valley and foothill grassland, cismontane woodland, lower Montane coniferous forest. Occurs on rocky and sandy sites, usually of granitic or alluvial material. Can be very Common after fire.	May - July	100-1700	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Calochortus weedii</i> var. <i>intermedius</i>	Intermediate mariposa-lily	1B.2			G3G4T2	S2.2	Coastal scrub, chaparral, valley, and foothill grassland. Dry, rocky open slopes and rock outcrops.	May - July	105-855	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Calystegia sepium</i> ssp. <i>Binghamiae</i>	Santa Barbara morning-glory	1A			G5TH	SH	Coastal marshes.	April - May	0-20	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Camissonia lewisii</i>	Lewis' evening-primrose	3			G2G3	S1S3	Sandy or clay. Coastal bluff scrub. Cismontane woodland. Coastal dunes. Coastal scrub. Valley and foothill grassland.	March - June	0 - 300	Not Expected	Project Site does not support habitats this species typically inhabits.	2

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA CESA	Global	State							
<i>Castilleja grisea</i>	San Clemente Island Indian paintbrush	1B.2	FE	CE	G3	S3	Rocky. Coastal bluff scrub. Coastal scrub	December - August	10-535	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Centromadia parryi</i> ssp. <i>Australis</i>	Southern tarplant	1B.1			G4T2	S2.1	Marshes and swamps (margins), valley and foothill grassland. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with Saltgrass.	May - November	0 - 425	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Cercocarpus traskiae</i>	Catalina Island mountain-mahogany	1B.1	FE	CE	G1	S1.1	Rocky, saussurite gabbro. Chaparral. Coastal scrub	March - May	100-250	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Chorizanthe parryi</i> var. <i>fernandina</i>	San Fernando Valley Spineflower	1B.1	FC	CE	G2T1	S1.1	Coastal scrub (sandy). Valley and foothill grassland	April - July	150-1220	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Cordylanthus maritimus</i> ssp. <i>Maritimus</i>	Salt marsh bird's-beak	1B.2	FE	CE	G4?T2	S2.1	Coastal salt marsh, coastal dunes. Limited to the higher zones of the salt marsh habitat.	May - October	0-30	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3
<i>Crossosoma californicum</i>	Catalina crossosoma	1B.2			G2	S2	Chaparral, coastal scrub. On rocky sea bluffs, wooded canyons, and dry, open sunny spots on rocky clay.	February - May	0-500	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
<i>Delphinium variegatum</i> ssp. <i>Kinkiense</i>	San Clemente Island larkspur	1B.1	FE	CE	G4T1	S1.1	Valley and foothill grasslands on San Clemente Island.	March - April	75-500	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Dodecahema leptoceras</i>	Slender-horned spineflower	1B.1	FE	CE	G1	S1	Sandy. Chaparral. Cismontane woodland. Coastal scrub (alluvial fan)	April - June	200-760	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Dudleya cymosa</i> ssp. <i>marcescens</i>	Marcescent dudleya	1B.2	FT	CR	G5T2	S2.2	Volcanic, rocky. Chaparral	April - July	150-520	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Dudleya cymosa</i> ssp. <i>ovatifolia</i>	Santa Monica Mountains dudleya	1B.2	FT	FT	G5T2	S2.2	Volcanic or sedimentary, rocky. Chaparral. Coastal scrub	March - June	150-1675	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Dudleya virens</i> ssp. <i>Insularis</i>	Island green dudleya	1B.2			G2T2	S2.2	Coastal bluff scrub, coastal scrub. Rocky soils.	April - June	5-300	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Dudleya verityi</i>	Verity's dudleya	1B.2	FT		G1	S1.1	Volcanic, rocky. Chaparral. Cismontane woodland. Coastal scrub	May - June	60-120	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
<i>Lasthenia glabrata</i> ssp. <i>Coulteri</i>	Coulter's goldfields	1B.1			G4T3	S2.1	Coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands.	February - June	1-1220	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Lithophragma maximum</i>	San Clemente Island woodland-star	1B.1	FE	CE	G1	S1.1	Rocky. Coastal bluff scrub. Coastal scrub	April - June	120-400	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Lotus dendroideus</i> ssp. <i>traskiae</i>	San Clemente Island broom	1B.1	FE	CE	G4T2	S2.1	Coastal bluff scrub. Coastal scrub. Valley and foothill grassland	February - August	15-365	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Lycium brevipes</i> var. <i>hassei</i>	Santa Catalina Island desert-thorn	1B.1			G1Q	S1.1	Coastal bluff scrub, coastal scrub. Coastal bluffs and slopes.	June	10-300	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Malacothamnus clementinus</i>	San Clemente Island bush-mallow	1B.1	FE	CE	G1G3	S1S3.2	Valley and foothill grassland (rocky)	March - August	10-275	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5
<i>Nama stenocarpum</i>	Mud nama	2.2			G4G5	S1S2	Marshes and swamps. Lake shores, river banks, intermittently wet areas.	January - July	5-500	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
<i>Nasturtium gambelii</i>	Gambel's water cress	1B.1	FE	CT	G1	S1	Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level.	April - October	5-330	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3
<i>Navarretia fossalis</i>	Moran's nosegay	1B.1	FT		G1	S1	Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan & San Diego claypan vernal pools; in swales & v.p.'s, often surr.by other habitat types.	April - June	30-655	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3
<i>Navarretia prostrata</i>	Prostrate vernal pool navarretia	1B.1			G2?	S2.1?	Coastal scrub, valley, and foothill grassland, vernal pools. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites.	April - July	15-1210	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Nemacaulis denudata</i> var. <i>denudata</i>	Coast woolly-heads	1B.2			G3G4T3?	S2.2	Coastal dunes.	April - September	0-100	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Orcuttia californica</i>	California Orcutt grass	1B.1	FE	CE	G2	S2.1	Vernal pools.	April - August	15-660	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank								
		CNPS	FESA	CESA	Global							State
<i>Pentachaeta lyonii</i>	Lyon's pentachaeta	1B.1	FE	CE	G2	S2	Chaparral, valley, and foothill grassland. Edges of clearings in chap., usually at the ecotone between grassland and chaparral or edges of firebreaks.	March - August	30-630	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3
<i>Phacelia hubbyi</i>	Hubby's phacelia	4.2			G3	S3.2	Gravelly, rocky, talus. Chaparral. Coastal scrub. Valley and foothill grassland	April - June	0-1000	Not Expected	Project Site does not support habitats this species typically inhabits.	2
<i>Phacelia stellaris</i>	Brand's star phacelia	1B.1	FC		G2?	S1	Coastal scrub, coastal dunes. Open areas.	March - June	1-400	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2, 3
<i>Ribes divaricatum</i> var. <i>parishii</i>	Parish's gooseberry	1A			G4TH	SH	Riparian woodland	February - April	65-300	Not Expected	Project Site does not support habitats this species typically inhabits.	2
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	1B.2			G3	S3	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches.	May - October	0-650	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Sibara filifolia</i>	Santa Cruz Island rockcress	1B.1	FE		G1	S1.1	Coastal scrub (rocky, volcanic)	March - April	60-305	Not Expected	Project Site does not support habitats this species typically inhabits.	3, 4, 5

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDDB Rarity Rank							
		CNPS	FESA CESA	Global	State						
<i>Sidaicea neomexicana</i>	Salt Spring checkerbloom	2.2		G4?	S2S3	Alkali playas, brackish marshes, chaparral, coastal scrub, lower Montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes.	March - June	15-1530	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Southern Coastal Bluff Scrub</i>				G1	S1.1				Not Expected	Project Site does not support this habitat.	1
<i>Southern Coastal Salt Marsh</i>				G2	S2.1				Not Expected	Project Site does not support this habitat.	1
<i>Southern Dune Scrub</i>				G1	S1.1				Not Expected	Project Site does not support this habitat.	1
<i>Southern Foredunes</i>				G2	S2.1				Not Expected	Project Site does not support this habitat.	1
<i>Suaeda esteroa</i>	Estuary seablite	1B.2		G3	S2	Marshes and swamps. Coastal salt marshes in clay, silt, and sand substrates.	May - January	0-5	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Symphotrichum defoliatum</i>	San Bernardino aster	1B.2		G2	S2	Meadows and seeps, marshes and swamps, coastal scrub, cismontane woodland, lower Montane coniferous forest, grassland. Vernally mesic grassland or near ditches, streams and springs; disturbed areas.	July - November	2-2040	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2

¹ Sensitivity/Regulatory Status Codes:

Table 1. Special-Status Plants Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹			General Habitat	Blooming Period	Elevation (meters)	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank						
		CNPS	FESA CESA							
<p>FESA: Federal Endangered Species Act of 1972, as amended FE = Federally listed as Endangered; FT = Federally listed as Threatened; FD = Federally delisted (monitored for 5 years); FC = Candidate to become a proposed species. CESA: California Endangered Species Act; CE = State listed as Endangered; CT = State listed as Threatened; CR = State listed as Rare CNDDB: California Natural Diversity Database G1/S1 = Extremely endangered: less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres; G2/S2 = Endangered: 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres; G3/S3 = Restricted range, rare: 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres; G4/S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continued threats; G5/S5 = Demonstrably secure; commonly found throughout its historic range; GnTn = Subspecies receive a T-rank attached to the G-rank, Grank reflects the condition of the entire species and T-rank reflects the global situation of just the subspecies; GH/SH = All sites historical, the element has not been seen for at least 20 year, but suitable habitat exists; GX/SX = All site extirpated, this element is extinct in the wild (0.1 = very threatened, 0.2 = threatened, 0.3 = no current threats known) CNPS: California Native Plant Society List 1B = Plants listed as rare, threatened, or endangered in California and elsewhere; List 2 = Plants rare, threatened, or endangered in California, but more common elsewhere; List 3 = Plants about which more information is needed; List 4 = Limited distribution (.1 = Seriously endangered in California [>80% of occurrences threatened/high degree of immediacy of threat]; .2 = Fairly endangered in California [20-80% occurrences threatened]; .3 Not very endangered in California [<20% of occurrences threatened or no current threats known]) 2 Potential for Occurrence: Based on species requirements, occurrences recorded in the CNDDB, and focused special-status plant surveys conducted in May and June 2008. 3 Source: 1 = Search of the California Natural Diversity Database (Biogeographic Data Branch, California Department of Fish and Game 2003) occurrences recorded on the Inglewood (090A), Long Beach (089C), Los Alamitos (089D), San Pedro (073A), Seal Beach (072A), South Gate (089B), Torrance (090D) and Whittier (089A) Quadrangles; 2 = Search of the California Native Plant Society's On-line Inventory (CNPS 2011) of the Inglewood (090A), Long Beach (089C), Los Alamitos (089D), San Pedro (073A), Seal Beach (072A), South Gate (089B), Torrance (090D) and Whittier (089A) Quadrangles; 3 = Review of the US Fish and Wildlife Service's list of Federal Endangered and Threatened Species for Los Angeles County; 4 = Search of NatureServe Explorer for supplement information on species listed in the US Fish and Wildlife Service's list of Federal Endangered and Threatened Species for Los Angeles County; 5 = Search of California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants for supplement information on species listed in the US Fish and Wildlife Service's list of Federal Endangered and Threatened Species for Los Angeles County.</p>										

Table 2. Special-Status Animals Evaluated for Potential to Occur on the Project Site.

Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global					State
Animals										
Invertebrates										
<i>Cicindela gabbii</i>	Western tidal-flat tiger beetle				G4	S1	Inhabits estuaries and mudflats along the coast of southern California. Generally found on dark-colored mud in the lower zone; occasionally found on dry saline. Flats of estuaries.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Cicindela hirticollis gravida</i>	Sandy beach tiger beetle				G5T2	S1	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not. Affected by wave action.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Cicindela latesignata latesignata</i>	Western beach tiger beetle				G4T1T2	S1	Mudflats and beaches in coastal southern California.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Cicindela senilis frosti</i>	Senile tiger beetle				G4T1	S1	Inhabits marine shoreline, from central California coast south to salt marshes of San Diego. Also found at Lake Elsinore. Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Danaus plexippus</i>	Monarch butterfly				G5	S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with Nectar and water sources nearby.	Not Expected	Project Site does not support habitats this species typically inhabits.	1

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank					
		CDFG	FESA	CESA	Global	State			
<i>Euphilotes battoides allyni</i>	El Segundo blue butterfly		FE		G5T1	S1	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Euphydryas editha quino</i> (=E. e. <i>wrighti</i>)	Quino checkerspot butterfly		FE		G5T1T2	S1	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Glaucopteryx lydamus palosverdesensis</i>	Palos Verdes blue butterfly		FE		G5T1	S1	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Panoquina errans</i>	Wandering (=saltmarsh) skipper				G4G5	S1	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Trigonoscuta dorothea dorothea</i>	Dorothy's El Segundo Dune weevil				G1T1	S1	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Tryonia imitator</i>	Mimic tryonia (=California brackishwater snail)				G2G3	S2S3	Not Expected	Project Site does not support habitats this species typically inhabits.	1

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank					
		CDFG	FESA	CESA	Global				
Crustaceans									
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp		FT		G3	S2S3	This species inhabits vernal pools and similar ephemeral wetlands. It is most commonly found in grassed or mud bottomed pools or basalt flow depression pools in unplowed grasslands	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp		FE		G1G2	S1	The 5 sites in Riverside County are vernal pools, seasonally astatic (dry up and refill one or more times during the year), and occur in earth slump basins or tectonic swales, in patches of grassland and agriculture interspersed in coastal sage scrub vegetation.	Project Site does not support habitats this species typically inhabits.	2, 3
Fishes									
<i>Catostomus santaanae</i>	Santa Ana sucker		FT		G1	S1	Usually found in pools and runs of small to medium-sized (less than 7m wide), shallow streams (creeks and small to medium rivers) with cool (less than 22 C) unpolluted water; streams flood periodically and have high turbidity at times. Generally associated with coarse substrates of boulder, rubble, and sand, but sometimes occurs on sand/mud bottom. Can inhabit reservoirs. Prefers permanent streams with high water quality and with pools and riparian vegetation that provide cover and refuge from floods	Project Site does not support habitats this species typically inhabits.	2, 3

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹					General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global	State				
<i>Eucyclogobius newberryi</i>	Tidewater goby		FE		G3	S2S3	Benthic. Small coastal lagoons, lower reaches of streams and uppermost portions of large bays. Most abundant in the upper ends of lagoons created by small coastal streams. In lower sections of coastal streams, occurs in fresh to brackish water (preferably less than 10 ppt). Occurs in vegetated pools of slow (but not stagnant) areas of streams. Has been documented in ponded freshwater habitats as far as 8 km upstream from San Antonio lagoon in Santa Barbara County. Generally occurs in water 25-100 cm deep. Able to complete life cycle in fresh or brackish water.	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4
<i>Gasterosteus aculeatus williamsoni</i>	Unarmored threespine stickleback		FE	CE	G5T1	S1	Clear, slow-flowing streams with sand or mud substrate, water temperature less than 24 C, and abundant aquatic vegetation; occurs in deeper pools with slow current or, in stronger currents, behind obstructions. Lack of turbidity is a requirement.	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4
<i>Siphateles bicolor mohavensis</i>	Mohave tui chub		FE	CE	G4T1	S1	Endemic to the Mojave river basin, adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.	Not Expected	Project Site does not support habitats this species typically inhabits.	1

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global					State
Amphibians										
<i>Bufo californicus</i> (= <i>microscaphus</i>)	Arroyo (=arroyo southwestern) toad		FE		G2G3	S2S3	Washes, streams, and arroyos, and adjacent uplands (desert, shrubland). On sandy banks in riparian woodlands (willow, cottonwood, sycamore, and/or coast live oak) in California. Along rivers that have shallow gravelly pools adjacent to sandy terraces	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Rana draytonii</i>	California red-legged frog		FT		G2G3	S2S3	Usually occurs in or near quiet permanent water of streams, marshes, ponds, lakes, and other quiet bodies of water. Individuals may range far from water along riparian corridors and in damp thickets and forests.	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4
<i>Rana muscosa</i>	Mountain yellow-legged frog		FE	CC	G2	S1	The habitat includes sunny riverbanks, meadow streams, isolated pools, and lake borders in the Sierra Nevada, rocky stream courses in southern California	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4
<i>Spea hammondi</i>	Western spadefoot	SC			G3	S3	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood Woodlands. Vernal pools are essential for breeding and egg-laying.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
Reptiles										
<i>Anniella pulchra pulchra</i>	Silvery legless lizard	SC			G3G4T3T4	S3	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Low Potential	Project Site does not support habitats this species typically inhabits.	1

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status	CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global	State			
<i>Aspidocheilus tigris stejnegeri</i>	Coastal whiptail				G5T3T4	S2S3	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Caretta caretta</i>	Loggerhead sea turtle		FT		G3	SNR	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Chelonia mydas</i>	Green turtle		FT		G3	S1	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Dermochelys coriacea</i>	Leatherback sea turtle		FE		G2	SNA	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Emys marmorata</i>	Western pond turtle	SC			G3G4	S3	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Gopherus agassizii</i>	Desert tortoise		FT	CT	G4	S2	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank					
		CDFG	FESA	CESA	Global	State			
<i>Lepidochelys olivacea</i>	Olive ridley sea turtle		FT		G3	SNA	Habitat includes tropical and subtropical waters, ranging from protected, shallow, marine and estuarine waters, including bays and lagoons, to offshore areas well beyond the continental shelf	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Phrynosoma blainvillii</i>	Coast horned lizard	SC			G4G5	S3S4	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, & abundant supply of ants & other insects.	Project Site does not support habitats this species typically inhabits.	1
<i>Xantusia riversiana</i>	Island night lizard		FT		G1	S1	Inhabits grassland, chaparral, oak savannah, clumps of cactus and boxthorn, dry sandy or rocky streambeds, cliffs, and rocky beaches	Project Site does not support habitats this species typically inhabits.	2, 3
Birds									
<i>Agelaius tricolor</i>	Tricolored blackbird	SC			G2G3	S2	Highly colonial species, most numerous in central valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, & foraging area with insect prey within a few kilometers of the colony.	Project Site does not support habitats this species typically inhabits.	1
<i>Amphispiza belli clementeae</i>	San Clemente sage sparrow		FT		G5T1	S1	Moderately dense, dry scrub areas along west coast of island; vegetation includes mixture of low-growing, dry-season deciduous shrubs, mainly box thorn, ragwort, and cactus.	Project Site does not support habitats this species typically inhabits.	2, 3

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹					General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global	State				
<i>Athene cunicularia</i>	Burrowing owl	SC			G4	S2	Open, dry annual or perennial grasslands, deserts, & scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Brachyramphus marmoratus</i>	Marbled murrelet		FT	CE	G3G4	S1	Coastal areas, mainly in salt water within 2 km of shore, including bays and sounds; not uncommon up to 5 km offshore; occasionally also on rivers and lakes usually within 20 km of ocean (but up to 75 km), especially during breeding season	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4
<i>Buteo regalis</i>	Ferruginous hawk				G4	S3S4	Open grasslands, sagebrush flats, desert scrub, low foothills, & fringes of pinyon-juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Charadrius alexandrinus nivosus</i>	Western snowy plover	SC	FT		G4T3	S2	Sandy beaches, salt pond levees, & shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Coccyzus americanus occidentalis</i>	Western yellow-billed cuckoo		FC	CE	G5T3Q	S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, w/ lower story of blackberry, nettles, or wild grape.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Empidonax traillii eximius</i>	Southwestern willow flycatcher		FE	CE	G5T1T2	S1	Riparian woodlands in southern California	Not Expected	Project Site does not support habitats this species typically inhabits.	1, 2

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank					
		CDFG	FESA	CESA	Global	State			
<i>Gymnogyps californianus</i>	California condor		FE	CE	G1	S1	Usual habitat is mountainous country at low and moderate elevations, especially rocky and brushy areas with cliffs available for nest sites, with foraging habitat encompassing grasslands, oak savannas, mountain plateaus, ridges, and canyons	Project Site does not support habitats this species typically inhabits.	2, 3, 4
<i>Lanius ludovicianus mearnsi</i>	San Clemente loggerhead shrike		FE		G4T1	S1	Open country with scattered trees and shrubs. Nests in tall shrub (at least 7 feet high) or small tree in open area in forest or in open country. Prefers sites that provide a significant canopy).	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow			CE	G5T3	S3	Inhabits coastal salt marshes, from Santa Barbara south through San Diego county. Nests in Salicornia on and about margins of tidal flats.	Project Site does not support habitats this species typically inhabits.	1
<i>Pelecanus occidentalis californicus</i>	California brown pelican		FD		G4T3	S1S2	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.	Project Site does not support habitats this species typically inhabits.	1
<i>Poliioptila californica californica</i>	Coastal California gnatcatcher	SC	FT		G3T2	S2	Obligate, permanent resident of coastal sage scrub below 2500 ft in southern California. Low, coastal sage scrub in arid washes, on mesas & slopes. Not all areas classified as Coastal sage scrub are occupied.	Project Site does not support habitats this species typically inhabits.	1, 2

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³
		Regulatory Status		CNDDB Rarity Rank					
		CDFG	FESA	CESA	Global	State			
<i>Rallus longirostris levipes</i>	Light-footed clapper rail		FE	CE	G5T1T2	S1	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the Dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on molluscs and crustaceans.	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Rynchops niger</i>	Black skimmer	SC			G5	S1S3	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.	Project Site does not support habitats this species typically inhabits.	1
<i>Stemula antillarum browni</i>	California least tern		FE	CE	G4T2T3Q	S2S3	Nests along the coast from San Francisco bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Vireo bellii pusillus</i>	Least Bell's vireo		FE	CE	G5T2	S2	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak, in arid regions but often near water; moist woodland, bottomlands, woodland edge, scattered cover and hedgerows in cultivated areas. Willow-dominated riparian woodlands. Open woodland, brush in winter.	Project Site does not support habitats this species typically inhabits.	2, 3, 4

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global					State
Mammals										
<i>Dipodomys merriami parvus</i>	San Bernardino Merriam's kangaroo rat		FE		G5T1	S1	Alluvial sage scrub on alluvial fans, flood plains, along washes, in adjacent upland areas, and in areas with historic braided stream channels; these habitats characterized by sand, loam, sandy loam, or gravelly soils. Prefers the more open early and intermediate phases of alluvial sage scrub, but mature sage scrub is important as refugia during floods	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3
<i>Eumops perotis californicus</i>	Western mastiff bat	SC			G5T4	S3?	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral etc. Roosts in crevices in cliff faces, high buildings, trees, & tunnels.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Lasiorycteris noctivagans</i>	Silver-haired bat				G5	S3S4	Primarily a coastal and montane forest dweller feeding over streams, ponds, & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes & rarely under rocks. Needs drinking water.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Lasiurus xanthinus</i>	Western yellow bat	SC			G5	S3	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	Not Expected	Project Site does not support habitats this species typically inhabits.	1
<i>Microtus californicus stephensi</i>	South coast marsh vole	SC			G5T1T2	S1S2	Tidal marshes in Los Angeles, Orange and southern Ventura Counties	Not Expected	Project Site does not support habitats this species typically inhabits.	1

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		Regulatory Status		CNDDB Rarity Rank					
		CDFG	FESA	CESA	Global				
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	SC			G5T3?	S3?	Coastal scrub of southern California from San Diego county to San Luis Obispo county. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs & slopes.	Project Site does not support habitats this species typically inhabits.	1
<i>Nyctinomops femorosaccus</i>	Pocketed free-tailed bat	SC			G4	S2S3	Variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm Oasis, desert wash, desert riparian. Rocky areas with high cliffs.	Project Site does not support habitats this species typically inhabits.	1
<i>Nyctinomops macrotis</i>	Big free-tailed bat	SC			G5	S2	Low-lying arid areas in southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	Project Site does not support habitats this species typically inhabits.	1
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	SC	FE		G5T1	S1	Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County. Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned.	Project Site does not support habitats this species typically inhabits.	1, 2
<i>Sorex ornatus salicornicus</i>	Southern California saltmarsh shrew	SC			G5T1?	S1	Coastal marshes in Los Angeles, orange and Ventura counties. Requires dense vegetation and woody debris for cover.	Project Site does not support habitats this species typically inhabits.	1
<i>Taxidea taxus</i>	American badger	SC			G5	S4	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils & open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Project Site does not support habitats this species typically inhabits.	1

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Scientific Name	Common Name	Sensitivity/Regulatory Status ¹				General Habitat	Potential for Occurrence ²	Discussion of Potential	Source ³	
		Regulatory Status		CNDDB Rarity Rank						
		CDFG	FESA	CESA	Global	State				
<i>Urocyon littoralis catalinae</i>	Santa Catalina Island Fox		FE	CT	G1T1	S1	Santa Catalina Island	Not Expected	Project Site does not support habitats this species typically inhabits.	2, 3, 4

¹ Sensitivity/Regulatory Status Codes:

FESA: Federal Endangered Species Act of 1972, as amended

FE = Federally listed as Endangered; FT = Federally listed as Threatened; FD = Federally delisted (monitored for 5 years); FC = Candidate to become a proposed species.

CESA: California Endangered Species Act

CE = State listed as Endangered; CT = State listed as Threatened; CR = State listed as Rare; CC = State listed as Candidate

CNDDB: California Natural Diversity Database

G1/S1 = Extremely endangered: less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres; G2/S2 = Endangered: 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres; G3/S3 = Restricted range, rare: 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres; G4/S4 = Apparently secure; some factors exist to cause some concern such as narrow habitat or continued threats; G5/S5 = Demonstrably secure; commonly found throughout its historic range; Gn/Tn = Subspecies receive a T-rank attached to the G-rank, G-rank reflects the condition of the entire species and T-rank reflects the global situation of just the subspecies;

GH/SH = All sites historical, the element has not been seen for at least 20 year, but suitable habitat exists; GX/SX = All site extirpated, this element is extinct in the wild (0.1 = very threatened, 0.2 = threatened, 0.3 = no current threats known)

CDFG: California Department of Fish and Game

CSC = Species of Special Concern; FP = Fully Protected

The words "nesting", "nesting colony" or "wintering" following the sensitivity/regulatory status of the bird species indicates the regulatory status only while the species is nesting or wintering.

² Potential for Occurrence: Based on species requirements, occurrences recorded in the CNDDB, and general biological resources surveys conducted in May and June 2008, and reconnaissance-level and focused Tehachapi pocket mouse surveys conducted in June and July 2008.

³ Source: 1 = Search of the California Natural Diversity Database (Biogeographic Data Branch, California Department of Fish and Game 2003) occurrences recorded on the Inglewood (090A), Long Beach (089C), Los Alamitos (089D), San Pedro (073A), Seal Beach (072A), South Gate (089B), Torrance (090D) and Whittier (089A) Quadrangles; 2 = Review of the US Fish and Wildlife Service's list of Federal Endangered and Threatened Species for Los Angeles County; 3 = Search of NatureServe Explorer for supplement information on species listed in the US Fish and Wildlife Service's list of Federal Endangered and Threatened Species for Los Angeles County; 4 = Search of State & Federally Listed Endangered & Threatened Animals of California January 2011.

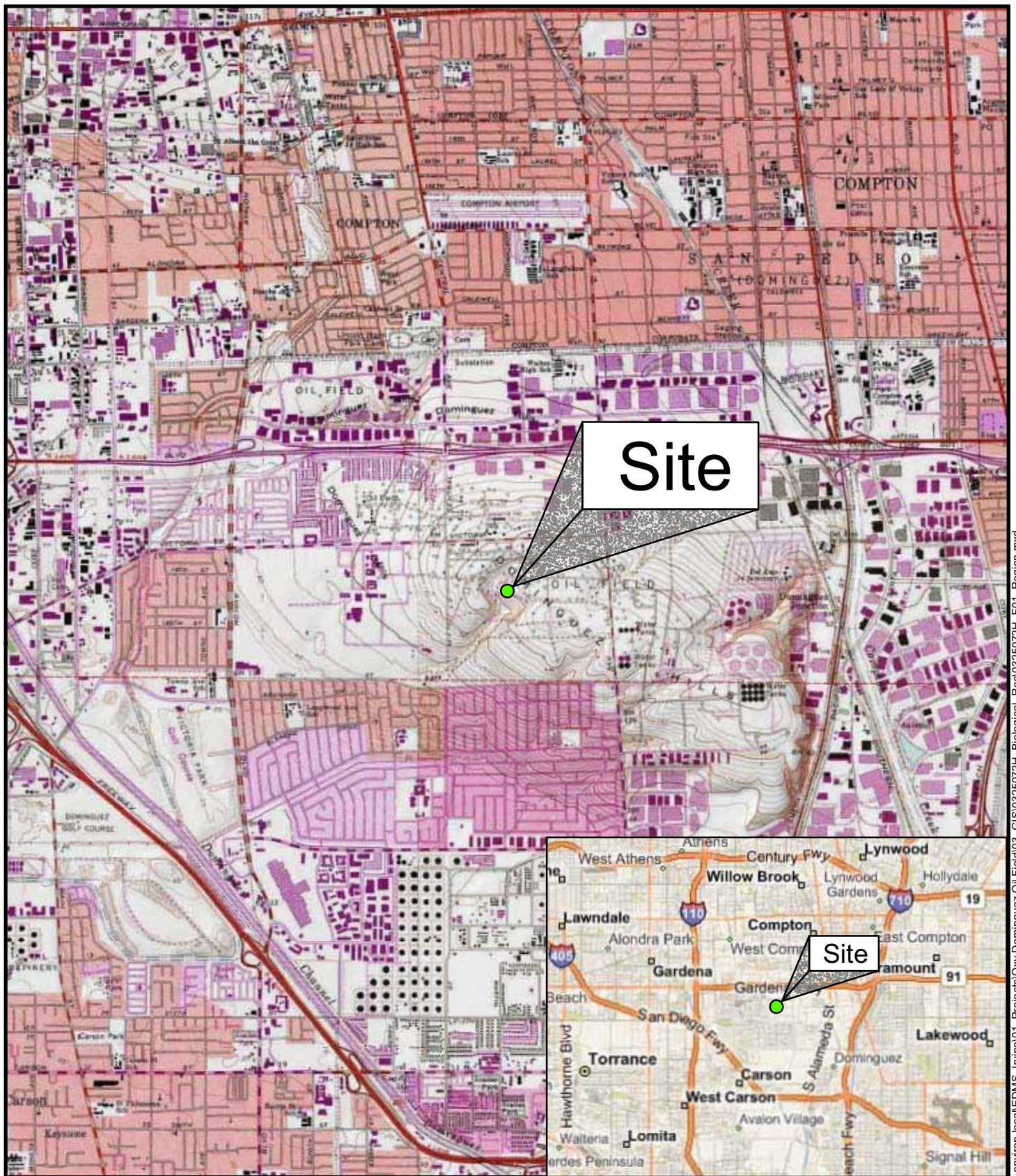
4.5.3 Other Protected Bird Species

Besides the bird species discussed above, the vegetation communities on the Project site support suitable nesting habitat for other birds. Although no active nests were observed during the field surveys, there is potential for ground-, tree-, and shrub-nesting birds to establish nests on the Project site in the future. These species are protected under the MBTA and would be protected under the California Fish and Game Code when actively nesting.

5 References

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Figures



SOURCE:
 U.S.G.S. 7.5 minute series (topographic)
 Inglewood/Long Beach (digital),
 South Gate, Torrance, CA Quadrangle
 National Geographic TOPOI
 Seamless, scanned images of
 USGS paper topographic maps
 © 2010 National Geographic Society

Map Created with ESRI ArcMap and National Geographic TOPOI™ ©2001 National Geographic Holdings [www.topo.com]



CONTOUR INTERVAL 40 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929
 1:39,382.23



FILE: \\irvine06.irvine.environ.local\EDMS_irvine01_Projects\Oxy Dominguez Oil Field\03_GIS\0325072H_Biological_Res\0325072H_F01_Regions.mxd

	<h2>Regional Vicinity Map</h2> <p>Oxy Dominguez Oil Field 1450 Charles Willard St Carson, CA 90746</p>	<p>Figure 1</p>
<p>DRAFTED BY: SShin/MMcMeechan</p>	<p>DATE: 6/20/2011</p>	<p>PROJECT: 03-25072H</p>



Charles Willard Street

Charles Willard Street

Bishop Avenue

Beachey Place

Legend

— Subject Site Boundary

Notes:
1. Aerial source: i3_Imagery_Prime_World_2D
MapServer Copyright© 2010 i-cubed



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DATE: 6/20/2011

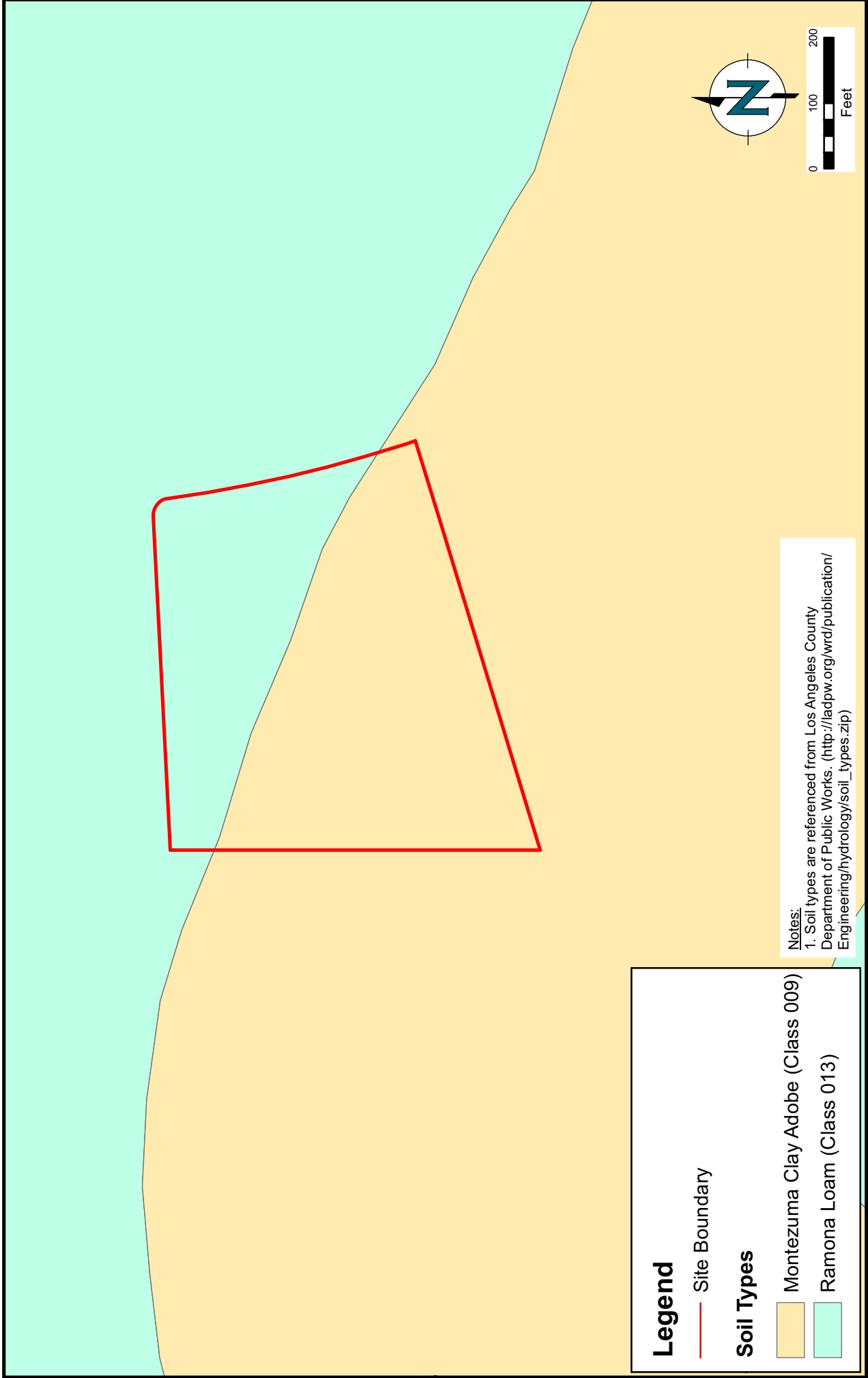
Property Site Location Map

Oxy Dominguez Oil Field
1450 Charles Willard St
Carson, CA 90746

Figure

2

PROJECT: 03-2507ZH



Legend

— Site Boundary

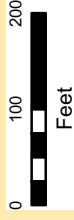
Soil Types

Montezuma Clay Adobe (Class 009)

Ramona Loam (Class 013)

Notes:

1. Soil types are referenced from Los Angeles County Department of Public Works. (http://ladpw.org/wrd/publication/Engineering/hydrology/soil_types.zip)



DRAFTED BY: MMcMeechan

DATE: 6/20/2011

Mapped Soil Units

Oxy Dominguez Oil Field
1450 Charles Willard St
Carson, CA 90746

Figure

3

PROJECT: 03-25072H



Legend

— Site Boundary

Habitat

Wetlands

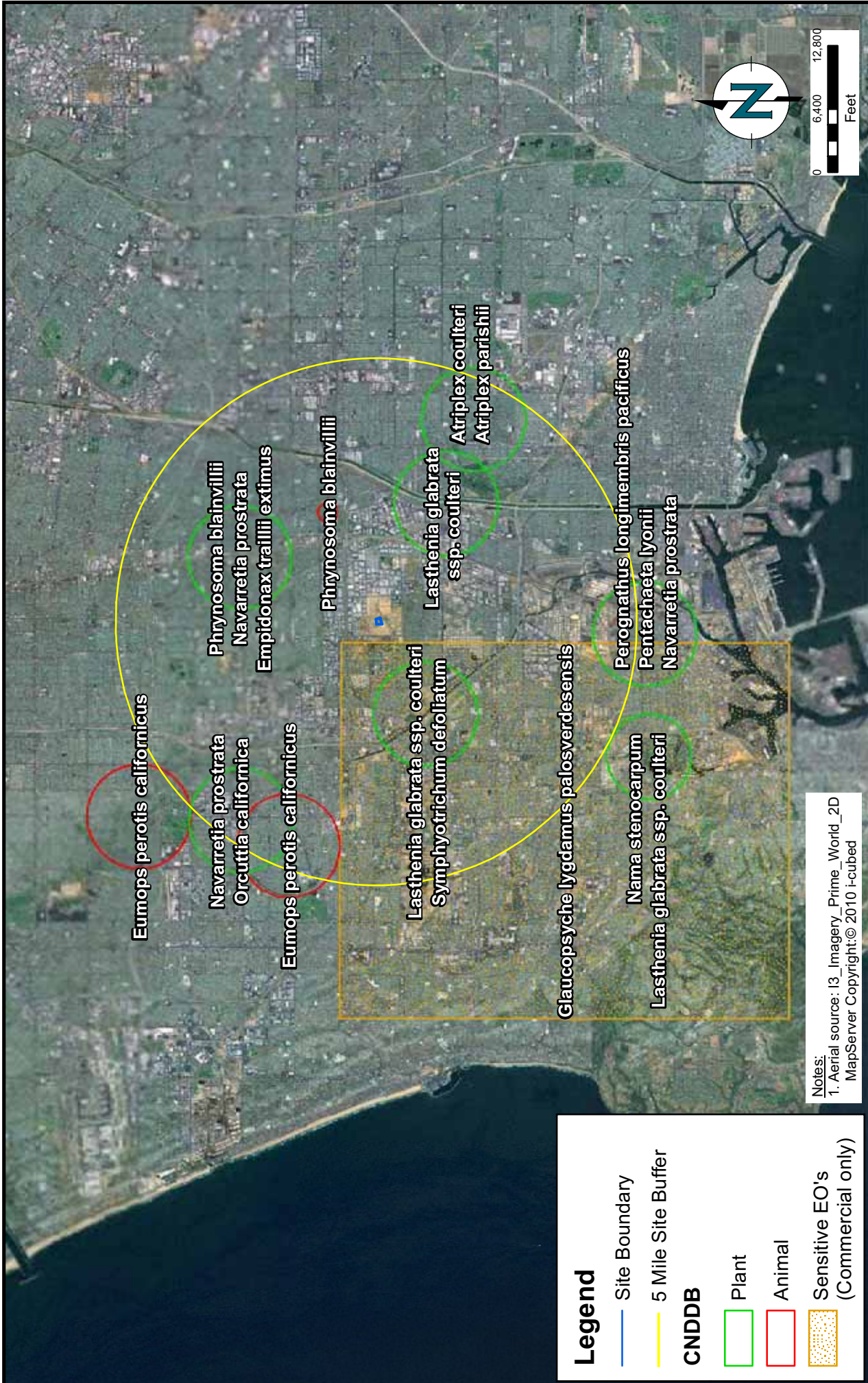
Notes:
 1. Habitat referenced from United States Fish and Wildlife Service National Wetlands Inventory (<http://137.227.242.85/wetland/wetland.html>)



DRAFTED BY: M/McMeehan DATE: 6/20/2011

Vegetation Communities and Associated Wildlife Habitats

Oxy Dominguez Oil Field
 1450 Charles Willard St
 Carson, CA 90746



California Natural Diversity Database Map

Figure 5

Oxy Dominguez Oil Field
 1450 Charles Willard St
 Carson, CA 90746

PROJECT: 03-25072H



DATE: 6/20/2011

DRAFTED BY: MMcMechan

Appendix A



Photo 1: Stormwater basin, facing south at fence along driveway of 18030 Bishop Avenue (approximate address). Side slopes of basin are vegetated with dense, shrubby groundcover and drip irrigation.



Photo 2: Stormwater basin, facing south-southwest at fence along driveway of 18030 Bishop Avenue (approximate address). Ruderal vegetation occurs between ornamental plantings.

Title: Site Photographs – Oxy Dominguez Drill Site
Site: 1450 Charles Willard Street, Carson, California

Date: January 2011
ENVIRON



Photo 3: Stormwater basin, facing southwest at fence along driveway of 18030 Bishop Avenue (approximate address)



Photo 4: Fence at stormwater basin along driveway of 18030 Bishop Avenue (approximate address), facing west. This is one driveway entrance to the Oxy site.

Title: Site Photographs – Oxy Dominguez Drill Site
Site: 1450 Charles Willard Street, Carson, California

Date: January 2011
ENVIRON



Photo 5: Stormwater Basin, facing west-southwest from fence along Bishop Avenue. Oxy site photo right.

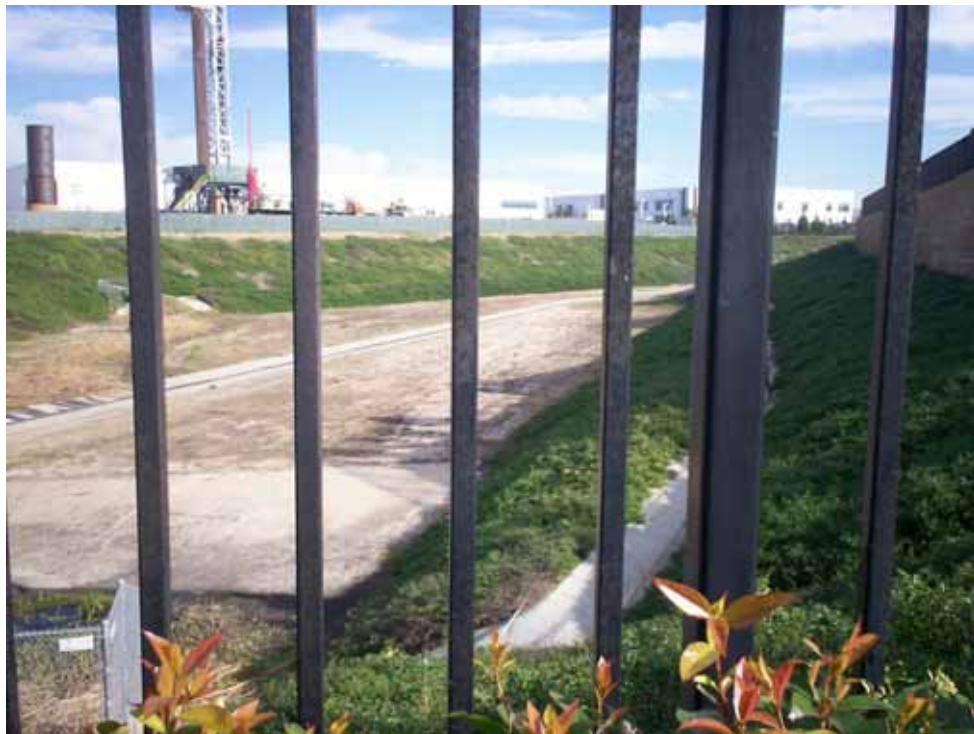


Photo 6: Stormwater Basin, facing northeast from fence along Beachey Place

Title: Site Photographs – Oxy Dominguez Drill Site
Site: 1450 Charles Willard Street, Carson, California

Date: January 2011
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Photo 7: Outfall with ponding and cattails in stormwater basin sediment deposit, facing north-northeast from fence along Beachey Place



Photo 8: Outfalls with ponding and maintained cattail in stormwater basin, facing north-northeast from fence along Beachey Place

Title: Site Photographs – Oxy Dominguez Drill Site
Site: 1450 Charles Willard Street, Carson, California

Date: January 2011
ENVIRON

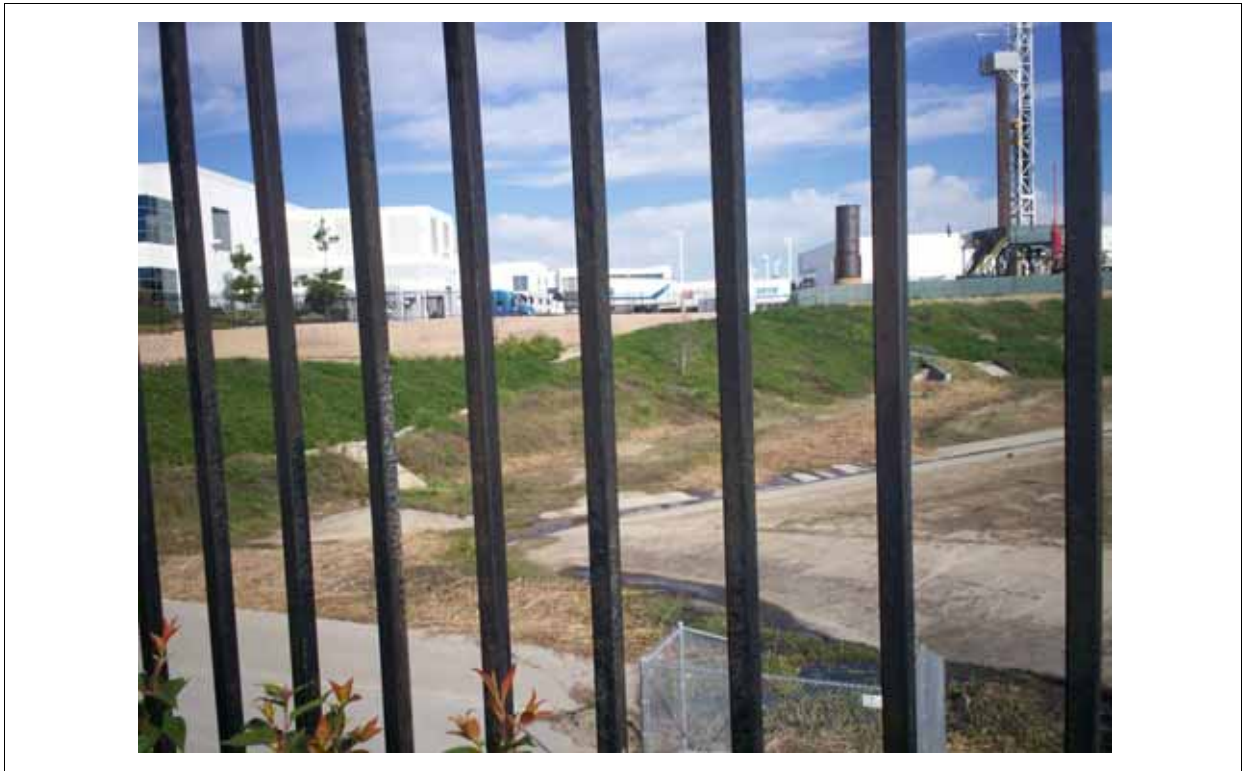


Photo 9: Stormwater Basin, facing north from fence along Beachey Place



Photo 10: Stormwater Basin, facing northeast from fence along Beachey Place

Title: Site Photographs – Oxy Dominguez Drill Site
Site: 1450 Charles Willard Street, Carson, California

Date: January 2011
ENVIRON