LOS CERRITOS WETLANDS OIL CONSOLIDATION AND RESTORATION PROJECT

CEQA Findings of Fact and Statement of Overriding Considerations State Clearinghouse #2016041083

Prepared for
City of Long Beach

November 2017

Planning Bureau, Development Services Department
333 West Ocean Boulevard, 5th Floor
Long Beach, CA 90802

626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300
www.esassoc.com

Bend	Oakland	San Francisco
Camarillo	Orlando	Santa Monica
Delray Beach	Pasadena	Sarasota
Destin	Petaluma	Seattle
Irvine	Portland	Sunrise
Los Angeles	Sacramento	Tampa
Miami	San Diego	

150712.00

OUR COMMITMENT TO SUSTAINABILITY | ESA helps a variety of public and private sector clients plan and prepare for climate change and emerging regulations that limit GHG emissions. ESA is a registered assessor with the California Climate Action Registry, a Climate Leader, and founding reporter for the Climate Registry. ESA is also a corporate member of the U.S. Green Building Council and the Business Council on Climate Change (BC3). Internally, ESA has adopted a Sustainability Vision and Policy Statement and a plan to reduce waste and energy within our operations. This document was produced using recycled paper.

CONTENTS

Los Cerritos Wetlands Oil Consolidation and Restoration Project Findings of Fact on the Final EIR

FINDINGS OF FACT ON THE FINAL EIR

CHAPTER 1
Background

The California Environmental Quality Act (CEQA) requires that written findings be made by the lead agency in connection with certification of an environmental impact report (EIR) prior to approval of the project pursuant to *CEQA Guidelines* Sections 15091 and 15093 and Public Resources Code Section 21081. This document provides the findings required by CEQA and the specific reasons for considering the project acceptable even though the project has significant impacts that are infeasible to mitigate.

The lead agency is responsible for ensuring the adequacy and objectivity of the EIR. The City of Long Beach (City), as lead agency, has subjected the Draft EIR and Final EIR to the agency's own review and analysis process.

1.1 Project Summary

Beach Oil Minerals Partners (BOMP, the Applicant) proposes to consolidate their existing oil operations and implement a wetlands habitat restoration project (proposed project) that would also provide new public access opportunities to a portion of the Los Cerritos Wetlands. The proposed project would occur on four individual sites, which together comprise the project site. These sites are commonly known as the Synergy Oil Field site, the City Property site, the Pumpkin Patch site, and the Los Cerritos Wetlands Authority (LCWA) site. Existing oil operations on the Synergy Oil Field and City Property sites would be phased out over time, and new oil production facilities would be constructed and operated on the Pumpkin Patch and LCWA sites. The northern portion of the Synergy Oil Field site would be remediated, if necessary, and restored to a natural wetland area that would be operated as a wetlands mitigation bank. Oil operations on the southern portion of the Synergy Oil Field site and on the City Property site would continue for a fixed period of time of up to 40 years, but would ultimately be phased out as new operations are established on the Pumpkin Patch and LCWA sites. The proposed project also includes the construction of a new office building and storage structure on the Pumpkin Patch site to support the oil operations. Once the offices are relocated to the Pumpkin Patch site, the proposed project would relocate the existing office building on the Synergy Oil Field site to another location (also on the Synergy Oil Field site) and repurpose the existing site and surrounding area for use as a visitors center, a small parking area, and a perimeter trail to provide public access to the portion of the Los Cerritos Wetlands restored as part of this project.

1.2 Project Objectives

The following objectives have been established for the proposed project and will aid decision makers in their review of the project and the associated impacts. The objectives guide the intent and purpose of the proposed project:

- Restore historic tidal connection to a greater portion of the degraded Los Cerritos Wetlands through establishing a wetlands mitigation bank that will result in restoration and creation of a self-sustaining 78-acre restored coastal wetlands habitat, including habitat for special-status plant and animal species.
- Restore tidal salt marsh habitat and associated subtidal, intertidal, transitional, and upland habitats, taking into consideration potential sea level rise due to climate change.
- Provide public access and education opportunities through construction of a trail and interpretive facility, and future conveyance of privately owned property into public ownership through a land exchange.
- Reduce the footprint of oil production operations on both privately owned and City-owned portions of the Los Cerritos Wetlands to less than 10 acres of property with minimal habitat impacts.
- Improve the efficiency of oil production operations through the eventual phase out of early-20th-century oil production equipment and replacement with more-efficient and modern equipment and operations that will utilize the latest technology and operational advancements related to safety, energy, and production efficiency and concentrate production on a smaller footprint.
- Protect coastal dependent energy development by optimizing oil and gas production from the oil reserves within the City's jurisdiction that will help fund the costs of wetlands restoration and continue to provide a source of revenue to the City of Long Beach as well as short-term and long-term employment opportunities.
- Provide environmental clean-up of old landfills on private property proposed for oil production and wetlands protection, and contaminated soils on the oil field site.
- Assist the Los Cerritos Wetlands Authority in accomplishing its purpose "to provide for a comprehensive program of acquisition, protection, conservation, restoration, maintenance and operation and environmental enhancement of the Los Cerritos Wetlands area consistent with the goals of flood protection, habitat protection and restoration, and improved water supply, water quality, groundwater recharge, and water conservation" by providing for the eventual transfer through a land exchange of an approximately 156-acre, privately owned oil field into the Authority's ownership, the construction of a new visitors/interpretive center, and new public access trail.
- Help implement the Los Cerritos Wetlands Conceptual Restoration Plan by relocating existing oil production activities and making available the former oil field for wetlands restoration and future transfer of the property from private ownership to LCWA stewardship.
- Enhance gateway entry points to the City over existing industrial conditions and improve pedestrian walkability.
- Help achieve State-wide goal of sustainability by reducing reliance on foreign oil and inter-state natural gas pipelines by developing locally sourced and consumed resources using energy-efficient technology.
- Reduce energy use environmental impacts, efficiently use project-sourced natural gas, and increase project reliability/safety with a microgrid that integrates multiple on-site energy sources with high-efficiency controls on energy-using equipment.

1.3 Environmental Review Process

In conformance with CEQA and the *CEQA Guidelines*, the City of Long Beach conducted an extensive environmental review of the proposed project. The environmental review process has included:

- Completion of an Initial Study (IS)/Notice of Preparation (NOP) on April 28, 2016. The 30-day public review period extended from April 28, 2016, to May 27, 2016. The NOP was posted at the Los Angeles County Clerk's office on Aril 28, 2016. Copies of the IS were made available for public review at City Hall, located at 333 West Ocean Boulevard, 5th Floor; the Long Beach Main Library, located at 101 Pacific Avenue, and on the City's website (http://www.lbds.info/planning/).
- Completion of the scoping process where the City invited the public to participate in a scoping meeting held on May 11, 2016, at the at Kettering Elementary School, Cafeteria Dining Room, 550 Silvera Avenue, Long Beach, CA. The notice of a public scoping meeting was included in the NOP.
- Preparation of a Draft EIR, which was made available for a 45-day public review period beginning July 24, 2017, and ending September 6, 2017. The scope of the Draft EIR was determined based on the City's Initial Study, comments received in response to the NOP, and comments received at the scoping meeting conducted by the City. Draft EIR Section 1.3.3, Scope of Analysis and Mitigation Measures, describes the issues identified for analysis in the Draft EIR. The Notice of Availability (NOA) for the Draft EIR was sent to interested persons and organizations, sent to the State Clearinghouse in Sacramento for distribution to public agencies, posted at the Long Beach Public Library at 101 Pacific Avenue, posted on the City's website (http://www.lbds.info/planning/), and sent to all property owners within at least 300 feet of the project site. The NOA was posted at the Los Angeles County Clerk's office on July 21, 2017. Copies of the Draft EIR were made available for public review at the following locations: the City's Planning Bureau, Development Services Department, located at 333 West Ocean Boulevard, 5th Floor; the Long Beach Public Library; and the City's website. In addition, the Notice of Completion was sent to the Office of Planning and Research pursuant to *CEQA Guidelines* Section 15085, for distribution to the responsible regional agencies on July 24, 2017, with a review period ending on September 6, 2017.
- Preparation of a Final EIR, including comments, the responses to comments on the Draft EIR, and revisions to the Draft EIR. The Final EIR was released for a 10-day agency review period prior to certification of the Final EIR.
- Public hearings on the proposed project were held, which included a Planning Commission hearing held on November 30, 2017, and two City Council Hearings held on January 16, 2018, and January 23, 2018.

1.4 Record of Proceedings

For purposes of CEQA and these Findings, the Record of Proceedings for the proposed project includes, but is not limited to, the following documents and other evidence:

- The NOP, the NOA, and all other public notices issued by the City in conjunction with the proposed Project.
- The Draft EIR and Final EIR for the proposed project.
- All written comments submitted by agencies or members of the public during the public review comment period on the Draft EIR.
- All responses to written comments submitted by agencies or members of the public during the public review comment period on the Draft EIR.

- All written and verbal public testimony presented during a noticed public hearing for the proposed project.
- The Mitigation Monitoring and Reporting Program.
- The reports and technical memoranda included or referenced in the Draft EIR and Final EIR.
- All documents, studies, EIRs, or other materials incorporated by reference in the Draft EIR and Final EIR.
- The Resolutions adopted by the Planning Commission and City Council in connection with the proposed project, and all documents incorporated by reference therein, including comments received after the close of the comment period and responses thereto.
- Matters of common knowledge to the City, including but not limited to federal, state, and local laws and regulations.
- Any documents expressly cited in these Findings.

1.5 Custodian and Location of Records

The documents and other materials that constitute the administrative record for the City's actions related to the project are available at the City of Long Beach Development Services Department, 333 West Ocean Boulevard, Long Beach, CA 90802. The City's Development Services Department is the custodian of the administrative record for the project. Copies of these documents, which constitute the record of proceedings, are and at all relevant times have been and will be available upon request at the offices of the Development Services Department. This information is provided in compliance with Public Resources Code Section 21081.6(a)(2) and Guidelines Section 15091(e).

CHAPTER 2
Findings and Facts

The City of Long Beach, as lead agency, is required under CEQA to make written findings concerning each alternative and each significant environmental impact identified in the Draft EIR and Final EIR.

Specifically, regarding findings, *CEQA Guidelines* Section 15091 provides:

(a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
2. Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
3. Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

(b) The findings required by subsection (a) shall be supported by substantial evidence in the record.

(c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subsection (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section.

The "changes or alterations" referred to in Section 15091(a)(1) may include a wide variety of measures or actions as set forth in Guidelines Section 15370, including:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

2.1 Format

This section summarizes the significant environmental impacts of the project, describes how these impacts are to be mitigated, and discusses various alternatives to the proposed project, which were developed in an effort to reduce the remaining significant environmental impacts. All impacts are considered potentially significant prior to mitigation unless otherwise stated in the findings.

This remainder of this section is divided into the following subsections:

- **Section 2.2, Summary of Environmental Impacts**, presents the summary of impacts of the proposed project.
- **Section 2.3, Findings on Impacts Determined to Be Less Than Significant**, presents the impacts of the proposed project that were determined in the Draft EIR to be less than significant without the addition of mitigation measures and presents the rationales for these determinations.
- **Section 2.4, Findings on Impacts Mitigated to Less Than Significant**, presents significant impacts of the proposed project that were identified in the Final EIR, the mitigation measures identified in the Mitigation Monitoring Program, and the rationales for the findings.
- **Section 2.5, Findings on Significant Unavoidable Impacts**, presents significant impacts of the proposed project that were identified in the Final EIR, the mitigation measures identified in the Mitigation Monitoring Program, the findings for significant impacts, and the rationales for the findings.
- **Section 2.6, Findings on Project Alternatives**, presents alternatives to the Project and evaluates them in relation to the findings set forth in *CEQA Guidelines* Section 15091(a)(3), which allows a public agency to approve a project that would result in one or more significant environmental effects if the project alternatives are found to be infeasible because of specific economic, social, or other considerations.

2.2 Summary of Environmental Impacts

Based on the NOP and Draft EIR, the following is a summary of the environmental topics considered to have no impact, a less than significant impact, a less than significant impact with incorporation of mitigation measures, and a significant and unavoidable impact:

- **No Impact**
  - Hazards and hazardous materials
  - Mineral resources
  - Transportation and traffic
  - Utilities and service systems
- **Less-than-Significant Impact**
  - Hydrology and Water Quality
  - Land Use and Planning

- Mineral Resources
- Population and Employment
- Recreation
- Transportation and Traffic
- Utilities and Service Systems

- **Less-than-Significant Impact with Mitigation Incorporated**
  - Aesthetics
  - Air Quality
  - Biological Resources
  - Cultural Resources
  - Geology, Seismicity, and Soils
  - Greenhouse Gas Emissions
  - Hazards and Hazardous Materials
  - Noise
  - Public Services
  - Tribal Cultural Resources
  - Energy Consumption
- **Significant and Unavoidable Impact**
  - Air Quality (violate the air quality standard and contribute substantially to an existing or projected air quality violation for construction-related VOC and NO_X emissions; result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) during construction; result in cumulative impacts to air quality during construction).

2.3 Findings on Impacts Determined to Be Less than Significant

2.3.1 Initial Study

An Initial Study was prepared by the City of Long Beach to identify the potential significant effects of the project. The Initial Study was completed and distributed with the Notice of Preparation for the proposed Project, dated April 28, 2016. The Initial Study determined that the proposed project would not have the potential to result in significant impacts to Agriculture and Forestry Resources, as described in further detail below. All other topical areas of evaluation included in the Environmental Checklist were determined to require further assessment in the EIR.

2.3.1.1 Agriculture and Forestry Resources

The project would not convert farmland to nonfarmland uses.

The project site is located within a highly urbanized area and is currently in use as privately owned or leased oil fields. No farmland, agricultural uses, or related operations are present within the project site or surrounding areas. According to the California Department of Conservation (CDC), pursuant to Farmland Mapping and Monitoring Program (FMMP), there are no farmlands located within the vicinity of the project site (CDC 2015). Therefore, the project would not convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. This topic was not evaluated in the EIR.

Finding

No impacts to farmland would occur, and no mitigation measures would be necessary.

The project would not conflict with zoning for agricultural uses or conflict with an existing Williamson contract.

The Williamson Act of 1965 allows local governments to enter into contract agreements with local landowners with the purpose of trying to limit specific parcels of land to agricultural or other related open space use. The project sites are not zoned for agricultural use nor is it subject to a Williamson Act Contract within the vicinity of the project site (CDC 2013). Therefore, the proposed project would not conflict with any zoning for agricultural uses or a Williamson Act Contract. This topic was not evaluated in the EIR.

Finding

No impact to existing Williamson Act contracts or agriculturally zoned land would occur, and no mitigation measures would be necessary.

The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

The project site is currently developed with facilities associated with oil extraction and located in a highly urbanized area with a zoning designation of Planned Development (PD-1) within the Southeast Community Plan Area (SEADIP). The project site is not zoned as forest land or timberland. Thus, the proposed project would not conflict with forest land or timberland zoning or result in the loss of forest land or conversion of forest land or timberland to non-forest uses. This topic was not evaluated in the EIR.

Finding

No impacts to forest zoned land or timberland zoned land would occur, and no mitigation measures would be necessary.

The project would not result in the loss of forest land or conversion of forest land to non-forest use.

See response above.

Finding

No impacts to forest land or conversion to non-forest use would occur, and no mitigation measures would be necessary.

The project would not 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.

As discussed above, the project site is not expected to contain farmland, forest land, or timberland. Accordingly, the project would not result in the conversion of farmland to non-agricultural uses or forest land to non-forest uses. The project site is located in a highly urbanized area and is not adjacent to existing farmland or forest lands. This topic was not evaluated in the EIR.

Finding

No impacts to forest land or agricultural use would occur, and no mitigation measures would be necessary.

2.3.2 Draft EIR

It was determined that several potential environmental effects would not result from the proposed project or would result but would not have a significant impact on the environment, and no mitigation was determined to be necessary. This determination was made based on the findings of the Draft EIR prepared for the project. The following summary briefly describes those environmental topics that were either found not to be significant or not to be significant assuming with the implementation of existing regulations, as detailed in each respective topical section of Draft EIR Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*.

2.3.2.1 Aesthetics

Impact AES-1: The project would not have a substantial adverse effect on a scenic vista.

Scenic vistas in the area include views of the Los Cerritos Wetlands complex, Los Cerritos Channel, Steamshovel Slough, and San Gabriel River in the fore- and middle-ground with the San Gabriel Mountains rising in the background.

Construction

Synergy Oil Field Site

The proposed restoration activities on the northern portion of the Synergy Oil Field site would temporarily alter scenic vistas as seen from areas surrounding the project site. Similarly, views of the southern portion of the site would temporarily be altered during construction activities. Restoration and construction activities could partially obscure scenic vistas when viewed in close proximity to the site. In addition, views of scenic vistas from public roads surrounding the site, including PCH, 2nd Street, and Studebaker Road, could be affected by the restoration and construction activities; however, views from these roadways are from the same elevation as the project site and, thus, any restoration and construction work viewed from these roads would be seen in the foreground views and restoration and construction activities would not block or obscure broader

views of background scenic vistas, such as those of the San Gabriel Mountains. Furthermore, all restoration and construction activities on the Synergy Oil Field site would be temporary in nature and, thus, would not permanently alter a scenic vista.

City Property Site

While the City Property site is within the Los Cerritos Wetlands complex, it is currently developed with oil wells and infrastructure and contains non-native species which degrade the quality of the scenic vista in this portion of the wetlands. The proposed construction and remediation activities proposed on this site would temporarily alter the conditions on the site as viewed from areas surrounding the project site, including the bike path on the San Gabriel River and 2nd Street. Construction and remediation activities could partially obscure scenic vistas when viewed in close proximity to the site. While views of this work could potentially be seen in the foreground from the San Gabriel River and 2nd Street, construction and remediation activities would not block or obscure broader views of background scenic vistas, such as those of the San Gabriel Mountains. Furthermore, all construction and remediation activities on the City Property site would be temporary in nature and, thus, would not permanently alter a scenic vista.

Pumpkin Patch Site

The proposed construction and remediation activities proposed on this site would temporarily alter the conditions on the site as viewed from areas surrounding the project site, including the bike path on the San Gabriel River and PCH (State and County eligible scenic highway). Construction activities could partially obscure scenic vistas when viewed in close proximity to the site. Once a perimeter wall is built on the site, starting in year two, views of a majority of the construction activities would no longer be visible. The remaining views of the site would be obstructed in Year 3 when the office building and warehouse are constructed. The views looking toward the Pumpkin Patch site from the San Gabriel River Bike Trail would include views of the San Gabriel River in the foreground and the site and construction activities in the middle ground. Views of the San Gabriel River, which is considered the scenic vista, would not be obstructed. Furthermore, given that construction would occur in the middle ground, background views of the San Gabriel Mountains would remain unobstructed. Thus, views from the San Gabriel River Bike Trail of a scenic vista would not be adversely affected.

Views from PCH looking east and southeast towards the Pumpkin Patch site is currently obstructed by a chain-link fence with matting to block views of the site. In addition, the street is slightly raised over the project site and, thus, there is no view of the San Gabriel River beyond the site. Furthermore, the elevation of the San Gabriel River is below that of the Pumpkin Patch site and, as such, even if the fence were removed views of the scenic vista would be obstructed from this location. Given the already obstructed views of San Gabriel River, construction activities would not have an adverse effect on a scenic vista.

LCWA Site

Restoration and construction activities could partially obscure scenic vistas when viewed in close proximity to the site. Once a perimeter wall is built on the site, starting in year two, views of a majority of the construction activities would no longer be visible. While views of this work could potentially be seen in the foreground from the Studebaker Road and Westminster Avenue, construction and remediation activities would not block or obscure broader views of background scenic vistas, such as those of the San Gabriel Mountains.

Operation

Synergy Oil Field Site

During operation, the northern portion of the Synergy Oil Field site would be permanently restored to its natural wetland state and invasive species would be removed. There would be a permanent berm on the south side of Steamshovel Slough and the visitors center would be permanently relocated southwest of its current location and raised. Overall, once restoration and removal and/or abandonment of the oil production facilities are complete, the site would return to a more natural state as viewed from the surrounding areas. Thus, these activities would enhance the scenic vista of the Los Cerritos Wetlands. The Bixby Ranch Field Office structure, which would become the visitors center, would be visible from 2nd Street. As a CEQA historic resource, it is considered a valued landscape feature and, thus, would enhance the existing Los Cerritos Wetlands complex scenic vista. Given the enhanced features that would improve the Synergy Oil Field site, the proposed project's impact on the scenic vista of the Los Cerritos Wetlands would be beneficial.

City Property Site

After construction is complete, there would be an aboveground pipeline corridor with an 18-inch-high protective berm traversing the site between the Pumpkin Patch and LCWA sites. Upon completion of well removal and/or abandonment, areas in which wells were located would be remediated. No further operational activities would take place on the site besides pipeline maintenance and inspection. Given that the pipeline would be within an 18-inch-high berm, views from the San Gabriel River Bike Trail to the south and 2nd Street to the north would remain relatively unchanged from existing conditions. In addition, scenic vista views, including background views of the San Gabriel Mountains and foreground views of the San Gabriel River would not be altered.

Pumpkin Patch Site

During operation, the LCWA site would have a fully operational oil production facility, an 18-foot-high screen wall surrounding the site along Studebaker Road, PCH, and the San Gabriel River, a 10-foot-high wall along the eastern boundary of the site along the 100-foot buffer separating the oil operations area from the wetland habitat area, landscaping buffering the screen wall from the street, an entry monument at the corner of the site at PCH to enhance the entry into Long Beach, a 160-foot-high drilling rig, and a 120-foot-high workover rig. Views of the San Gabriel River, which is considered a scenic vista, would not be obstructed from the San Gabriel River Bike Trail. Views from PCH looking east and southeast towards the Pumpkin Patch site are currently obstructed by a chain-link fence with matting to block views of the site Thus, there is no view of the San Gabriel River beyond the site. Views from PCH would be of the project's landscaping in the foreground, office building in the middle ground, and 18-foot-high screen wall in the background. The drilling rig would move from well location to well location and would not be a permanent fixture. The workover rig would be brought on site on a temporary basis in the future when workover of the oil wells is required; however, as described above, the elevation of the San Gabriel River is below that of the Pumpkin Patch site and, as such, views of the scenic vista are permanently obstructed from this location under existing conditions. Given the already obstructed views of San Gabriel River, operational activities would not have an adverse effect on a scenic vista.

LCWA Site

During operation, the LCWA site would have a fully operational oil production facility, a 160-foot-high drilling rig, a 120-foot-high workover rig, 10-foot high screen wall surrounding the site, and landscaping buffering the screen wall from the street. The drilling rig would move from well location to well location and would not be a permanent fixture. The workover rig would be brought on site on a temporary basis in the future. As described above, the LCWA site is not considered a scenic vista; however, distant views of the San Gabriel Mountains can be viewed from the roadways surrounding the project site., The facilities on the LCWA site would not block background views of the San Gabriel Mountains.

Finding

Impacts on scenic vistas during construction and operation of the project would be less than significant, and no mitigation measures would be necessary.

Impact AES-2: The project would not substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

PCH has been identified by Caltrans as an "Eligible State Scenic Highway," but has not been designated as an Official State or County Scenic Highway (Caltrans 2016). Both the Synergy Oil Field and Pumpkin Patch sites are visible from PCH; however, given the disturbed and undeveloped nature of the Pumpkin Patch site, there are no scenic resources on the site. Scenic resources on the Synergy Oil Field site include the Bixby Ranch Field Office (visitors center), Steamshovel Slough, and the remaining wetland areas north of the slough. None of these scenic resources on the site is visible from PCH, nor would any of these scenic resources be damaged as a result of the proposed project. Furthermore, construction and operation of the proposed project would remove non-native invasive plant species and oil production facilities, which would enhance the scenic value of the project site.

Finding

Project-related impacts on scenic resources would be less than significant, and no mitigation measures would be necessary.

2.3.2.2 Air Quality

Impact AQ-1: The project would not conflict with or obstruct implementation of the applicable air quality plan.

CEQA Guidelines Section 15125 requires an air quality assessment to discuss any inconsistencies between the proposed project and applicable General Plans and regional plans. Regional plans that apply to the proposed project include the Southern California Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP).

A proposed project would be considered consistent with the plan if it furthers one or more policies and does not obstruct other policies. The *CEQA Air Quality Handbook* identifies two key indicators of consistency (SCAQMD 1993):

1. Whether the project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
2. Whether the project would exceed the assumptions in the AQMP or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criterion 1: Increase in the Frequency or Severity of Existing Air Quality Violations

Based on the air quality modeling analysis contained in this report, with mitigation the project construction would not result in exceedances of the SCAQMD localized significance thresholds (LSTs); therefore, local concentrations of NO_X would not exceed the ambient air quality standards. Therefore, short-term construction activities would not increase the frequency or severity of existing air quality violations.

The proposed project operation would increase regional emissions, but the increase would be less than the SCAQMD regional thresholds except for NO_X. The operational LST analysis indicates that operation of the project would not result in exceedances of the SCAQMD LSTs; therefore, local concentrations of NO_X would not exceed the ambient air quality standards, and local air quality impacts would be less than significant. Because the project is not projected to impact the local air quality, the project is found to be consistent with the AQMP for the first criterion.

Additionally, the project is proposing to use an energy-efficient microgrid system which would provide the energy needed for the drilling rigs and supporting equipment, pumps, two electric vehicle charging stations, and other equipment.

Criterion 2: Exceedance of Assumptions in the AQMP

Consistency with the AQMP assumptions is determined by performing an analysis of the project with the assumptions in the AQMP. The AQMP assumptions are based upon projections from local general plans. Projects that are consistent with the local general plan are consistent with the AQMP assumptions. The emission projections for the project show that the project would not impact local air quality significantly in excess of the ambient air quality standards.

Additionally, the project would comply with any new requirements specified in the 2016 AQMP. The project would result in the replacement of old facilities that tend to leak VOC at flanges, valves, pumps, and other equipment with newer equipment that would essentially eliminate these leaks. The proposed project would be consistent with Measure CMB-03 of the AQMP which calls out for replacing flares with turbines or other equipment that make use of any natural gas generated. Therefore, the project in terms of its design and operation appear to be consistent with the control measures contained in the 2016 AQMP.

Finding

The proposed project would be consistent with the SCAQMD AQMP and, therefore, impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.3 Biological Resources

Impact BIO-5: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

There are no wildlife movement corridors within or adjacent to the project site. Terrestrial wildlife movement within the project site is primarily localized due to the surrounding development, including adjacent roadways. The Alamitos Bay and Los Cerritos Channel could provide limited movement for marine fish, mammals, or reptiles species (i.e., green sea turtle) to move into and out of the project site via Steamshovel Slough; however, Steamshovel Slough lacks an outlet and does not have connectivity to other water bodies allowing it to provide a movement corridor for marine animals to move through the project site. Further, Steamshovel Slough would be avoided during construction activities and no in-water work would occur.

Finding

Implementation of the proposed Project would not interfere substantially with the movement of any fish or wildlife species, or with established wildlife corridors, or impede the use of native wildlife nursery sites, and therefore, impacts would be less than significant, and no mitigation measures would be necessary.

Impact BIO-6: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The following discussion provides an evaluation of the project's consistency with applicable plans and policies that have been adopted for the purpose of protecting biological resources.

Tree Protection

Potential impacts to street trees protected by the City of Long Beach's Tree Maintenance Policy could include tree removal or trimming. Tree removal would result in a permanent impact, while trimming would be considered a temporary impact. A permit from the City of Long Beach Department of Public Works would be required prior to the removal of any street trees. Trees that are removed must be replaced with an approved 15-gallon tree to be planted in an appropriate area. Therefore, the project would be consistent with tree protection policies.

Potential ESHA Pursuant to California Coastal Act

The proposed project is a restoration project whose implementation would require work in potential environmentally sensitive area (ESHA). As such, there is no other way to accomplish the project purpose without impacting potential ESHA. Pursuant to California Coastal Act (CCA) Section 30240, impacts to ESHA are generally limited to activities such as habitat restoration as noted by the Coastal Commission Staff (CCC as cited in Glen Lukos Associates (GLA) 2017d):

> The Coastal Act establishes a high standard for protection of areas that are identified as environmentally sensitive. Only resource-dependent uses, such as habitat restoration, are allowed within an environmentally sensitive area (ESHA). Final determinations regarding ESHA will be made by the CCC.

Synergy Oil Field Site

There are 14 wildlife species and associated habitats that are potential ESHA on the Synergy Oil Field site: American peregrine falcon, Belding's Savannah Sparrow, California least tern, Pacific green sea turtle, California brown pelican, Western snowy plover, white-tailed kite [nesting only], mudflat tiger beetle, salt marsh wandering skipper, sandy beach tiger beetle, senile tiger beetle, Western beach tiger beetle, western tidal-flat tiger beetle, and northern harrier [nesting only]. Of these, 4 would not be affected by project grading (Pacific green sea turtle, sandy beach tiger beetle, senile tiger beetle, western tidal-flat tiger beetle) and 2 are associated with habitat present on the site that does not have potential for nesting (foraging white-tailed kite and northern harrier). Project grading would have minimal impact to habitat associated with the remaining 8 wildlife species and would be necessary to establish expanded tidal areas as a component of the wetland reestablishment and rehabilitation aspect of the project. As habitat restoration could be considered a use dependent on those resources, as set forth in CCA Section 30240, temporary impacts could be determined to be consistent with the CCA. Following the completion of grading, the potential habitat areas would be expanded for the 8 wildlife species due to the addition of tidal channels, salt marsh, and mudflats.

There are three special-status plants that are potential ESHA: southern tarplant, estuary seablite, and woolly seablite. Woolly seablite would not be affected by project grading. Project grading would have minimal impact to habitat associated with the southern tarplant and estuary seablite, and is necessary to establish expanded tidal connection associated with the wetland reestablishment, therefore the impacts could be allowed under the CCA. It is also important to note that estuary seablite is included in the plant palette and there will be a substantial net increase in this species with the wetland reestablishment program.

City Property Site

Special-Status Wildlife. The City Property site does not support habitat for wildlife species that are potential ESHA and as such there would be no potential impacts to ESHA.

Special-Status Plants. Limited areas of the City Property site support a scattered small population of southern tarplant that occurs within areas of native alkali meadow, mulefat scrub and coastal brackish marsh, which could potentially be considered ESHA. Other areas occupied by the southern tarplant occur in highly disturbed areas or are limited in number and would likely not be considered ESHA. No potential impacts to ESHA would occur.

Sensitive Natural Communities. The City Property site includes one special-status vegetation alliance, pickleweed mats, which corresponds to southern coastal saltmarsh and could be determined to be ESHA; however, the proposed pipeline that would traverse the site fully avoids this alliance. No potential impacts to ESHA would occur.

Pumpkin Patch Site

Sensitive Natural Communities. The Pumpkin Patch site includes areas of non-tidal pickleweed mats that could potentially be determined to be ESHA; however, there would be no construction or operational activities proposed for the lower area; therefore, there would be no potential impacts to ESHA.

Special-Status Wildlife. The Pumpkin Patch site does not support habitat for wildlife species that are potential ESHA and as such there would be no potential impacts to ESHA.

GLA has completed a 2-year protocol of focused surveys for listed fairy shrimp, and the surveys have identified only the common versatile fairy shrimp from a seasonal ponding feature at the northeast corner of the site. No listed fairy shrimp occur on the site. No potential impacts to ESHA would occur.

Special-Status Plants. The Pumpkin Patch site does not support habitat for special-status plants that are potential ESHA and as such there would be no potential impacts to ESHA. Similarly, there are no special-status vegetation alliances on the Pumpkin Patch site that exhibit potential for ESHA that would be affected by the project; therefore, no potential impacts to ESHA would occur.

LCWA Site

The LCWA site does not contain any habitats capable of supporting special-status plants or animals and does not support native vegetation alliances with a Rarity Ranking of S3 or lower; therefore, the site does not contain any areas that could potentially be considered ESHA.

Finding

The project would be consistent with the City of Long Beach's Tree Maintenance Policy and the California Coastal Act policies related to ESHA; therefore, impacts would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

Cumulative impacts during project construction and project operation were analyzed in the Draft EIR. During project construction, two cumulative projects were identified that could potentially contribute cumulative impacts: the Ballona Wetlands Restoration Project and single-family homes and hotel rooms proposed at 1st Street and Marina Drive in Seal Beach. The construction-related impacts of both of these projects would be temporary in nature and would be mitigated to less than significant or avoided by design; therefore, the cumulative impacts during construction would not be cumulatively considerable (less than significant). During project operations, the nearby cumulative projects identified included the Ballona Wetland Restoration Project and the Bolsa Chica Lowlands Restoration Project. Each project would be required to comply with federal, state, and local regulations pertaining to the protection of biological resources. Additionally, these two projects and the proposed project would have an overall net benefit upon coastal wetlands and sensitive biological resources and, therefore, cumulative impacts during project operation would not be cumulatively considerable (less than significant).

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.4 Geology and Soils

Impact GEO-1: The project would not expose people or structures to potential substantial adverse effects as a result of rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map.

The Newport-Inglewood Fault Zone is designated by the State as an Alquist-Priolo Earthquake Fault Zone (i.e., on a state-recognized active fault trace) that crosses the Synergy Oil Field and City Property sites, as

shown in Draft EIR Figure 3.5-2. In the event of an earthquake along the Newport-Inglewood Fault Zone, fault rupture could occur on these two sites. The Newport-Inglewood Fault Zone passes near but not through the Pumpkin Patch and LCWA sites.

Construction

Synergy Oil Field Site

Proposed Synergy Oil Field site construction activities within the fault zone include the relocation of the existing building (to be repurposed as a visitors center) to the southwest corner of the Synergy Oil Field site outside of the fault zone by approximately 1,000 feet which would reduce the risk of fault rupture damaging the building or injuring people. Ninety-five percent of aboveground pipelines and all storage tanks would be removed from the Synergy Oil Field site during the first phase of the project, with the remaining infrastructure removed later as wells are removed. Oil wells and associated infrastructure would be removed if the oil production in each well decreases to less than one full barrel of oil per day for a period of 18 consecutive months or within 40 years from the New Occupancy Date. The habitat restoration construction activities would not alter the seismic environment or increase the risk of fault rupture.

City Property Site

Similar to the Synergy Oil Field Site, the proposed construction activities on the City Property site would involve the removal of existing oil production wells and associated infrastructure if the oil production in each well decreases to less than one full barrel of oil per day for a period of 18 consecutive months or within 40 years from the New Occupancy Date. Two to three of the wells on the City Property site are located within the Alquist-Priolo fault zone (Newport-Inglewood Fault) and would be plugged and abandoned at some time in the future, which would reduce the risk of damage to an operating oil well. An oil pipeline system and utility corridor would be constructed to transport oil from the Pumpkin Patch site, through the City Property site, to the LCWA. The likelihood of a fault rupture occurring during construction would be relatively low with minimal risk of injury or property damage because the pipeline would be constructed over a relatively short period of time and does not include habitable structures (workers would not be on site for extended time periods and within or near tall structures that could collapse or shed debris during a seismic event).

Pumpkin Patch and LCWA Sites

The Pumpkin Patch and LCWA sites are not located within the Newport-Inglewood Fault Zone. Therefore, although fault rupture is possible along new or unknown fault traces, the likelihood of a fault rupture occurring during construction would be relatively low with minimal risk of injury or property damage because construction would occur over a relatively short period of time and the buildings would not be occupied until after construction is complete.

Operation

Induced Fault Rupture, Seismic Event, and/or Seismic-Related Ground Failure

The older wells on the Synergy Oil Field, City Property, and Pumpkin Patch sites would be replaced with newer wells installed on the Pumpkin Patch and LCWA sites over time. Some of the oil production zones associated with the newer wells could be close to or bordered by the Newport-Inglewood Fault Zone. The removal of oil and produced water from the subsurface would reduce the volume of fluids in the oil production

zone and, if not replaced, could result in a vacancy or voids that could cause subsidence that in turn could trigger a fault rupture, seismic event, and/or seismic-related ground failure.

To prevent subsidence, produced water that has been separated from the oil or water from water source wells would be injected back into the production zone. Consistent with the California Division of Oil, Gas, and Geothermal Resources (DOGGR) regulations (see DOGGR regulations in Draft EIR Section 3.5.3), all injection wells would be equipped with an accurate, operating pressure gauge or pressure recording device and underground reservoir pressures would be closely monitored. The injection would be specifically and only back into the same oil production zone and not into underlying units; some induced seismic activity has been attributed to this practice.

Impacts Related to the Future Restoration Area on Synergy Oil Field

For the Synergy Oil Field site, there would be no above ground structures or large amounts of people located within the Newport-Inglewood Fault Zone and exposed to fault rupture. Restoration monitors would inspect the site on a routine but occasional basis. The trail would only be open to the public for specific daytime hours, thereby limiting the use and presence of persons on site. Therefore, exposure of people to fault rupture impacts on the Synergy Oil Field site during project operation would be unlikely.

Impacts Related to the Future Pipeline and Utilities across City Property Site

A pipeline system and utility corridor would be constructed to transport oil, water, natural gas, electricity and communication lines from the Pumpkin Patch site through the City Property site to the LCWA site. The proposed pipelines, electrical lines, and control cables were evaluated for potential displacement or damage in the event of a seismic event (Honegger 2016). The study identified seismic design elements to accommodate the anticipated maximum amount of displacement and minimize the damage risk from rupture. The study concluded that maximizing an aboveground pipeline configuration would enable the pipeline to accommodate a larger amount of fault offset and still operate safely. The aboveground fault crossing design would allow relative lateral displacement and relative axial displacement to be accommodated. In addition, the pipeline system would be designed to shut down in the event that a seismic event compromised the system. Implementation of the geotechnical recommendations for pipeline safety is a standard condition (required by law) required by DOGGR.

Impacts Related to the Future Structures on Pumpkin Patch and LCWA sites

As previously discussed, the Pumpkin Patch and LCWA sites are not located within the Newport-Inglewood Fault Zone. Therefore, although fault rupture is possible along new or unknown fault traces, the likelihood of a fault rupture occurring during operations would be relatively low.

Finding

Impacts related to fault rupture during construction and operation would be less than significant, and no mitigation measures would be necessary.

Impact GEO-4: The project would not expose people or structures to potential substantial adverse effects as a result of seismic-induced landslides.

The project area has a relatively flat topography. Based on a review of aerial photographs and available geotechnical reports and topographic conditions, no landslides are present on or at a location that could impact

the project site. The proposed project facilities would not alter the topography so substantially as to introduce the potential for landslides to occur on site.

Finding

No impact from seismic-induced landslides would occur, and no mitigation measures would be necessary.

Impact GEO-5: The project would not result in substantial soil erosion or the loss of topsoil.

Construction

Because the overall footprint of construction activities would exceed 1 acre, the proposed project would be required to comply with the *NPDES [National Pollutant and Discharge Elimination System] General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit), and the Long Beach Storm Water Management Program Manual, all of which are described in Draft EIR Section 3.5.3 of the. These state and local requirements were developed to ensure that stormwater is managed and erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a stormwater pollution prevention plan (SWPPP), which requires applications of BMPs to control runon and runoff from construction work sites.

Although all of the four individual sites that comprise the project site are entirely within disturbed areas, the construction activities would be purposely designed to retain and restore what topsoil there is and reuse that soil to restore the ecosystem.

- Soil at the Synergy Oil Field site would be rearranged for habitat restoration. No topsoil would be exported off site unless the topsoil has been contaminated with petroleum hydrocarbons above action levels requiring off-site disposal.
- At the City Property site, some fill would be imported to build a berm to protect the aboveground pipeline and utilities that would cross the eastern portion of the site; no topsoil would be exported.
- At the Pumpkin Patch site, the buried landfill materials may be excavated and removed, requiring the import of clean fill for the excavation; no existing clean fill or topsoil would be exported. If removal of the landfill is not necessary, approximately 21,000 cubic yards of soil would be graded and approximately 19,000 cubic yards of soil would be exported off site.
- The LCWA site was previously raised by the placement of imported fill; no native topsoil is present. Therefore, there would be no impacts related to the loss of topsoil.

Operation

The proposed project would reconnect Steamshovel Slough with the marshplain to the south, which would increase the amount of water moving on the site with the tides, and could in turn cause the slough to experience some erosion; however, hydraulic modeling showed that the increased velocities in the slough due to the proposed project would not be high enough to cause wide-spread erosion, nor would they require erosion and/or bank protection (M&N 2017). After some initial channel adjustment, erosion during typical tides is expected to be minimal.

In a stable estuary, mature marshes remain in a dynamic equilibrium between erosional and depositional processes. The marsh vegetation and its root structures help hold sediments in place, so the marsh would be expected to capture sediment running onto the site, reducing erosion.

The Synergy Oil Field, Pumpkin Patch, and LCWA sites would be required to comply with the Long Beach MS4 Permit and would be integrated into the City stormwater system. In addition, all aboveground structures with the exception of new wells and areas of well removal would be required to comply with the City of Long Beach low-impact development (LID) requirements and the LID Plan prepared for the Pumpkin Patch site, LCWA site, and visitors center (Wilson Mikami 2017). The LID plan describes the BMPs that would control surface water such that erosion would not occur.

Finding

With compliance with regulations discussed above, impacts associated with soil erosion during construction and operation would be less than significant for all project components, and no mitigation measures would be necessary.

2.3.2.5 Hazards and Hazardous Materials

Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal, or reasonable foreseeable upset and accident conditions that release hazardous materials.

Demolition and Building Relocation

The project includes the demolition and removal of all oil storage tanks and 95 percent of all pipelines. In addition, the existing Synergy office building would be relocated to the southwest corner of the site and repurposed for use as a visitor center. The following discussion analyzes anticipated hazardous materials issues:

- **Asbestos-Containing Material (ACM) and Lead-Based Paint (LBP):** The tanks, pipelines, and existing office building may contain ACM and/or LBP which, if disturbed or removed, would trigger a requirement by South Coast Air Quality Management District for ACM and/or 8 CCR 1532.1 for LBP to prepare an ACM Management Plan and/or a LBP Management Plan, and retain a state-licensed ACM and/or LBP contractor to prepare and implement the management plan(s).
- **Pipelines:** Pipelines would be removed from service, cleaned, and disposed of per DOGGR and California Department of Toxic Substances Control (DTSC) requirements, including the utilization of adequate spill containment equipment and practices.
- **Aboveground Storage Tanks:** ASTs would be removed from service, cleaned, demolished, and the material disposed of per regulatory DOGGR and DTSC requirements.
- **Petroleum Hydrocarbon Affected Soil:** Previous investigations indicate that some of the soil on the Synergy Oil Field and City Property sites around the storage tank farms and near the Steamshovel Slough have soils with elevated concentrations of diesel and gasoline range total petroleum hydrocarbon (TPH), lead, and naphthalene. Approximately 24,000 tons of impacted soils would be excavated from the HA-3 and HA-5 sample locations on the Synergy Oil Field site and hauled to a disposal facility, likely the Simi Landfill in Simi Valley, California, and 200 tons of impacted soil from the HA-9 sample location near Steamshovel Slough on the Synergy Oil Field site hauled to Waste Management at Kettleman Hills Landfill, in Kettleman City, California. Additional sampling is proposed for the City Property site to further identify areas where chemical concentrations exceed

screening levels (AEC 2017d); however, the nature of the hydrocarbon-impacted soils on the City Property site is assumed to be consistent with the contamination identified around the three sample sites on the Synergy Oil Field site. The soil on the Synergy Oil Field and City Property sites would be excavated to the lateral extent of contamination above screening levels described in Draft EIR Section 3.7.3, Regulatory Framework.

Construction

Construction activities are required to comply with numerous hazardous materials and storm water regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, to reduce the potential for a release of construction-related fuels or other hazardous materials to affect storm water and downstream receiving water bodies, and to respond to accidental spills, if any. The numerous regulations discussed in Draft EIR Section 3.7.3 would require measures for the safe transportation, storage, handling, and disposal of hazardous materials used for construction, including appropriate containers, secondary containment to contain a potential release. The construction contractors would be required to prepare an SWPPP for construction activities according to the NPDES General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction and describe spill prevention measures, equipment inspections, equipment and fuel storage, and protocols for responding immediately to spills.

Well Plugging and Abandonment

The project includes the phased plugging and abandonment of 53 existing oil wells on the Synergy Oil Field, City Property, and Pumpkin Patch sites. A well is plugged in a manner that prevents fluid from migrating between underground rock layers. A well operator must also comply with regulations for plugging and abandonment of oil wells stipulated in Public Resources Code (PRC) Section 3229, Division 3, and California Department of Health Services regulations in Section 30346 of CCR Title 17, Division 1, Chapter 5, Subchapter 4, Group 3, Article 7.

Well Drilling and Operation

The proposed production and injection wells would be drilled using oil well drilling techniques that include multiple approaches to contain fluids, including: using drilling mud in a closed system, installing conductor casing to prevent fluids from entering shallower aquifers, and once the drilling is completed, pumping out the drilling mud and placing the cuttings and drilling mud in a storage container for off-site hauling and disposal. Non-corrosive, environmentally inert, biodegradable additives might be used to keep the borehole open, prevent corrosion, increase mud weight, and prevent mud loss. In addition, all wells would be installed in well cellars designed to contain fluids, as described in an Oil Drilling and Production Overview white paper (BOMP 2017a).

During drilling, and initially during production for a period of time after a well has been drilled, there may be time periods and within zones of the reservoir where substantial pressures are encountered. If a zone of high pressure is encountered during drilling, a pressurized release could occur. Risks associated with a drilling blowout would be associated with either a production or injection well.

Various features incorporated into the well design and the location and characteristics of the oil field reduce the risk of a well blowout. All wells would be equipped with blowout prevention equipment (BOPE), which are designed to prevent the uncontrolled flow of well bore fluids through the casing, by either containing the

flow completely or by diverting it. Requirements for casing and BOPE are stipulated in Section 3219, Division 3, of the PRC and several sections of CCR Title 14, particularly Section 1722.5. Additionally, the project will include venting to flare and non-cascading shutdown systems. Due to the long history of oil extraction from the various oil fields in Long Beach, the pressure in the reservoirs has decreased. Drilling will likely be in fault blocks that have already experienced some depletion which has resulted in decreasing the amount of pressure in the reservoir. Moreover, California reservoirs are known to not be abnormally pressured.

If none of the wells encounter a pressurized reservoir and with a functioning BOPE, potential impacts from drilling would be less than significant; however, and though very unlikely, if a pressurized reservoir were encountered, the BOPE system, and other safety measures employed during the drilling process, including operator training, will minimize the potential impacts from a well blowout scenario. Given these measures and the remote likelihood of occurrence given the characteristics of California reservoirs with decreased pressure, the potential impacts of a well blowout during drilling would be considered less than significant.

During the oil extraction process, oil, water, and natural gas are brought to the surface from the production formation. Once these components reach the surface, they are separated and processed. This project proposes to inject the produced water back in to the formation from which it came, injecting sufficient quantities of water to replace the volume of fluids extracted. Corrosion inhibitors, scale inhibitors, biocides, and/or oxygen scavengers may also be added to the water prior to injection. Water injection activities to maintain underground pressures, and serves to prevent subsidence, are heavily regulated by DOGGR, under provisions of the PRC and the federal Safe Drinking Water Act. The project's water injection wells (Class II injection wells) fall under DOGGR's Underground Injection Control (UIC) program, which is monitored and audited by the USEPA. The main features of the UIC program include permitting, inspection, enforcement, mechanical integrity testing, plugging, and abandonment oversight, data management, and public outreach. With compliance with existing regulations, and inasmuch as the injected produced water would meet Class II standards, impacts would be reduced to a less-than-significant level.

Operation

As noted above, the operation of oil production and injection wells, pipelines, and associated infrastructure is regulated by DOGGR and other federal, state, and local regulations discussed in Draft EIR Section 3.7.3:

- **Pipeline and Utility Corridor:** The project involves the operation of an approximately 2,200-foot aboveground pipeline system and utility corridor through the City Property site connecting the Pumpkin Patch site to the LCWA site. This pipeline would be subject to federal regulations (49 CFR Part 192 and 49 CFR Part 195) that mandate hydrostatic testing of new, cathodically protected pipelines prior to placing the pipeline into operation. Additionally, the connecting pipeline would be inspected in accordance with City of Long Beach Department of Transportation requirements and state and federal regulations to ensure the ongoing integrity of the pipeline. Other inspection and maintenance of the connecting pipeline may include the use of pigs, devices inserted into the pipeline, to clean and/or inspect the pipeline for damage that has affected the pipeline wall thickness or shape of the pipe. Emergency isolation valves and shutdown instrumentation would be regularly tested for set points and functionality. Installation of fiber optic lines would detect leaks and seismic accelerometers would detect seismic activity. The pipeline would be treated to decrease the potential for corrosion. An earthen berm up to approximately 18 inches high would be installed on each side of the pipeline and would be designed to contain the estimated spill volume in the unlikely event of a pipeline spill or rupture.

- **Storage Tanks:** The project includes the operation of two storage tanks on the Pumpkin Patch site and four tanks on the LCWA site (ranging from 2,000 barrel to 28,000 barrel tanks that would store oil or water). Each tank would be fixed-roof and gas-blanketed design which eliminates direct emissions from tanks by capturing tank vapors through a vapor recovery system. All tanks would be equipped with leak detection systems, overfill protection, instrumentation to monitor and control level, and instrumentation to monitor temperature and pressure, and would have pressure relief valves. The tanks would also sit in secondary containment basins designed to hold the contents of the largest tank, plus a 25-year storm event. All tanks would be designed in accordance with the API Standard for Welded Steel Tanks for Oil Storage (API-650), which is the industry standard.
- **Oil Processing Facility:** The project would be equipped with a computerized control, monitoring, and communication systems, which are generally designed to monitor and control all process equipment that would operate within the facility, and used to detect and prevent an upset or release of material. Upon detection of a process upset, the operator would have the capability to shut down the affected systems. The operator console in the new office building would be staffed 24 hours a day. The Supervisory Control and Data Acquisition (SCADA)[1] system would provide the ability to control systems operation from the Operations Building and respond to alarms that are initiated when operating conditions fall outside established parameters. Equipment would typically be provided with independent automated shutdown instrumentation as well as remote indication with both pre-alarms and shutdowns, providing redundancy in safety systems. The building would be provided with an uninterruptible power supply, a diesel emergency generator, and a gas and fire detection systems and a fire suppression system. The oil processing facilities would be subject to the Beach Oil Minerals Partners (BOMP, the Applicant) mechanical integrity requirements as well as federal regulation (29 CFR Section 1910.119), the federal OSHA process safety management of highly hazardous chemicals.
- **Microgrid and Natural Gas Turbine System:** The turbines would be self-contained in an all-steel full length enclosure which would be weatherproof, insulated, sound-attenuated, and assembled to mount on the generator base frame. The enclosure incorporates a ventilation system, dust protection system, fire and gas detection and monitoring system, and a fire suppression system. The enclosure has a positive pressure to prevent the entry of potentially hazardous external atmospheres through the enclosure seams. A differential pressure switch is provided to indicate an alarm when low pressures are detected. Fire and gas monitoring and detection are managed by a separate control system that interfaces with the main unit control system The detection of combustible gas concentrations above established levels generates an alarm or a package shutdown, as appropriate. The detection of fire or excessive heat results in the immediate shutdown of the package and activation of the fire suppression system, using CO_2 as the extinguishing agent. All gas turbine systems would be designed in accordance with the API Standard for Gas Turbines for the Petroleum, Oil, and Gas Industry Services (API-616), which is the industry standard.
- **Odorant:** Other possible upset scenarios associated with the gas operations include release or spill of the utilized odorant. As gas is typically odorless, a sulfur based odorant (mercaptan) is added to aid in leak detection. Mercaptan is colorless gas with a distinctive putrid smell. At very high concentrations, it is highly toxic and affects the central nervous system. Its penetrating odor provides warning at dangerous concentrations. All odorant will be properly stored on site and provided in secondary containment systems.
- **General Office Building and Visitors Center:** The office building and visitors center would use small quantities of cleaning products and occasional paints, solvents, and thinners for routine

[1] *SCADA is a control system that uses computers, networked data communications, and graphical user interfaces for high-level process supervisory management, along with other peripheral devices such as programmable logic controllers, discrete controllers, field sensors, and actuators to interface to the process plant.*

maintenance. The Hazardous Management Business Plan (HMBP) would require the materials be stored and labeled in appropriate containers.

Finding

With compliance with existing regulations, policies and industry standards and implementation of measures identified above, the impacts would be reduced to a less-than-significant level, and no mitigation measures would be necessary.

Impact HAZ-2: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

As discussed in Draft EIR Section 3.7.2, there are no schools located within 0.25 mile of the project site. Therefore, there would be no impacts related to hazardous materials near schools.

Finding

No impacts related to hazards or hazardous materials within 0.25 mile of an existing or planned school would occur, and no mitigation measures would be necessary.

Impact HAZ-4 The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Construction

The proposed project would not interfere with the designated agency's responsibilities and reporting in the event of an emergency because no roads would be closed. All construction activities would occur within the four individual sites. In addition, construction of the oil pipeline that would run from the LCWA site to the City Property would use horizontal drilling techniques that would not require street closures because the pipeline and associated utilities would pass beneath the adjacent roadways. Construction vehicles periodically transporting equipment and materials would use public roads but would not affect the carrying capacities of the roadways.

Operation

The project facilities would be protected by a continuously pressurized firewater loop fed by a Long Beach Water Department (LBWD) water main. The system would supply water to multiple hydrants, firewater monitors, and foam monitors located on the project site. Each fire hydrant would be equipped with a fire hose and nozzles. The local LBWD water main can provide adequate flow and pressure to the site with no additional need for firewater storage tank or pumps. The new office building would be provided with a sprinkler system in accordance with City requirements. The turbine system enclosure is equipped with a CO_2 fire suppression system. In addition to the BOPE on the wells, a foam system for fire suppression will be installed on the oil storage tanks to address the potential for fires involving these facilities.

As analyzed in Impact HAZ-1, released fluids from a pipeline rupture would remain within the containment system and not migrate off site. Emergency response or emergency evacuation plans would not likely be impacted due to pipeline spills.

In addition, the proposed project would not interfere with the designated agency responsibilities and reporting in the event of an emergency because no roads would be closed. All operation activities would occur within the four individual sites. The operation vehicles periodically transporting equipment and materials would use public roads but would not affect the carrying capacities of the roadways, as discussed in Draft EIR Section 3.15, *Transportation and Traffic*.

Finding

With implementation of adequate fire detection and suppression systems, emergency response or emergency evacuation plans would not be likely be impacted due to project-related fires; therefore, potential impacts would be less than significant, and no mitigation measures would be necessary.

Impact HAZ-5 The project would not 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.

As discussed in Draft EIR Section 3.7.2, the four individual sites are not located within very high or high fire hazard severity zone. Therefore, there would be no impact relative to wildland fires.

Finding

No impacts related to wildland fires would occur, and no mitigation measures would be necessary.

Cumulative Impacts

Cumulative impacts during project construction and project operation were analyzed in the Draft EIR. During project construction, none of the cumulative projects geographically overlap with the proposed project. Additionally, all cumulative projects would be subject to the same regulatory requirements, including the implementation of health and safety plans, soil and groundwater management plans, and ACM/LBP management plans, as needed. Cumulative projects involving the potential releases of hazardous materials also would be required to remediate their respective sites to the same established regulatory standards. This would be the case for each project regardless of the number, frequency, or size of the release(s), or the residual amount of chemicals present in the soil from previous spills. Therefore, while it is possible that the proposed project and cumulative projects could result in releases of hazardous materials at the same location and at the same time (e.g., two trucks carrying hazardous materials), the responsible party associated with each spill would be required to remediate site conditions to the same established regulatory standards. The residual less-than-significant effects of the proposed project that would remain after mitigation would not combine with the potential residual effects of cumulative projects to cause a potential significant cumulative impact because residual impacts would be highly site-specific. Accordingly, no significant cumulative impact with respect to the use of hazardous materials would result. Therefore, the proposed project would not cause or contribute to a cumulatively significant impact with respect to the use of hazardous materials during construction activities (less than significant). Although the locations of oil production wells and pipelines would change, all oil would still be piped off and the transport would not be substantially changed. Therefore, this would not result in a significant change over existing conditions. In addition, the replacement of the older wells and pipelines with newer wells, pipelines, and associated equipment would result in a decrease in the potential for spills.

Therefore, the proposed project would not cause or contribute to a cumulatively significant impact with respect to the use of hazardous materials during operations (less than significant).

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.6 Hydrology and Water Quality

Impact HY-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Construction

Construction of the proposed project facilities would involve the use of hazardous materials and ground-disturbing activities which would expose and rework soils for periods of time. If the excavation of soil releases sediment to surface waters or hazardous materials are accidentally released, these pollutants could mix with runoff on site and result in sedimentation and/or contamination of receiving water bodies such as the Los Cerritos Channel, Steamshovel Slough and associated wetlands, or the San Gabriel River. The drilling of oil wells could adversely impact the water quality of non-oil-production zones if drilling muds or oil escape the well boreholes and enter aquifers with beneficial uses other than oil production. The construction activities could damage the well seals of previously plugged and abandoned oil production wells or injection wells, which could contaminate aquifers.

- **Construction of Oil Wells:** As described above under Impact HAZ-1, the proposed production and injection wells would be drilled using oil well drilling techniques that include multiple approaches to contain fluids. Numerous regulations required by the state DOGGR would require measures for the safe transportation, storage, handling, and disposal of hazardous materials used for the drilling and construction of wells, including appropriate containers, and secondary containment to contain a potential release. In addition, conductor casing would be used to seal off non-oil-producing layers, preventing drilling mud or oil from entering aquifers.
- **Construction over the Location of Wells:** Construction activities have the potential to damage plugged wells and break the subsurface seals to aquifers. Similarly, construction activities would have the potential to damage active and idle wells, with the same potential to cross contaminate aquifers. The most northerly plugged wells on the Synergy Oil Field site would be located within the restoration area where grading activities would occur. The locations of the one active and one plugged well on the Pumpkin Patch site would not be within an area of construction. The location of the one plugged well on the LCWA site is located along Second Street and would not be within an area of construction. Seven wells on the City Property site are located near but just west of the alignment of the proposed aboveground pipeline system and utility corridor and would not be within an area of construction. Numerous regulations are required by DOGGR to manage oil field operations, including requirements that site owners track the locations of all wells in perpetuity, including previously plugged and abandoned wells, and prohibit construction activities that would damage the well seals. Construction contractors would be required to mark and avoid all well locations (active, idle, and plugged) as a condition of project approval.
- **Landfill Remediation on Pumpkin Patch:** If it is determined that removal of the landfill at the Pumpkin Patch site is required, remediation of the landfill would require the following work: (1) removal from the site of the dry trash, which would be hauled to a landfill for disposal (see

Section 3.17, *Utilities and Service Systems*, for landfill locations and capacities), and (2) removal of "wet trash" using excavation equipment with a dredging bucket so that once the wet trash is removed, the water would be allowed to drain within the confines of the excavation. Wet trash excavation would require the placement of the wet trash on a rack or other platform in the landfill excavation pit where the trash would be allowed to dry before it is transported to a landfill. Analytical testing would be used to characterize the waste as hazardous or nonhazardous and identify the appropriate disposal location. Nonhazardous waste would be hauled to a Class II or III disposal facility and hazardous waste would be hauled to a Class I or Class II facility, likely the Kettleman Hills Landfill. It is assumed that approximately 63,000 cubic yards of waste would be exported, and approximately 45,000 cubic yards of clean dirt would be imported.

- **Construction of All Other Structures:** Because the overall footprint of construction activities would exceed 1 acre, the proposed project's ground-disturbing activities would be required to comply with the NPDES Construction General Permit. The Construction General Permit would require the preparation and implementation of an SWPPP, which would include implementation of BMPs to control run-on and run-off from construction work sites. The BMPs would include a variety of measures that would substantially reduce or prevent erosion from occurring during construction. In addition, the project would be required to comply with the Long Beach Municipal Code for stormwater control.

Operation

Operation of the proposed project facilities would include the production of oil and produced water which could adversely impact water quality if not properly managed and/or the oil or produced water is discharged to surrounding surface water bodies. The new office buildings, landscaping, and parking areas could adversely affect surface water quality with sediment or other pollutants if surface water runoff is not properly managed. The restored northern portion of the Synergy Oil Field site would change the existing habitat and could adversely impact surface water quality via erosion if not properly maintained.

- **Oil Production at LCWA and Pumpkin Patch Sites.** The operation of oil production and injection wells, pipelines, and associated infrastructure is regulated by DOGGR as per the applicable federal, State, and local regulations. For the operation of wells, storage of oil, and transportation of the oil to refineries through pipelines, regulations include measures to routinely monitor and inspect wells, pumps, pipelines, storage tanks, and associated equipment for leaks and pressure issues. Storage tanks would be required to have secondary containment. The wells would be installed in well cellars designed to contain fluids in the event of a leak. The wells, pipelines, and storage tanks are required to have established emergency procedures in the event of a release or spill. The produced water that would be pumped out along with the oil is typically brackish to saline, but would be entirely injected back into the production zone from whence it came.
- **Restored Habitat at Synergy Oil Field Site.** Reconnection of the slough with the marshplain could cause erosion of the slough channel and adjacent areas, which could deliver sediment-laden runoff and associated constituents to Steamshovel Slough and Los Cerritos Channel. Constituents associated with these sediments could then settle out into the channel and marsh at concentrations that may adversely affect water quality. Given the low concentrations of the reported constituents (based on a sediment sample taken in 2005), the reworking of the soils in the proposed restoration area would not be anticipated to release chemical constituents at concentrations above background levels or that are not already being transported by the Los Cerritos Channel. The landfill along the eastern edge of the site is buried 25 feet deep, so any erosion at the site is not expected to reach levels that would expose this material. The natural function of the salt marsh habitat would improve water quality by capturing sediment and pollutants from upstream and upslope sources. The improved function of the marsh plants and the associated biological activity would serve to capture, filter, and naturally degrade

pollutants and would potentially be a beneficial impact. The implementation of the 5-year mitigation and monitoring program would monitor and, if needed, adjust the restoration and functioning of the salt marsh and would result in a beneficial impact.

- **Tidal Inundation.** By establishing tidal channels and connecting Steamshovel Slough to the marshplain to the south, the extent of tidal inundation would increase. This could possibly result in some localized increase in salinity within the restoration area; however, the change to water quality would not be considered to have an adverse impact on water resources because the groundwater in this area is all brackish to saline and is not used for domestic or municipal supply. The inland migration of saline groundwater, if any, would likely be limited and not extend much beyond the southern limits of the Synergy Oil Field area. While the increased inundation could cause more salt water to infiltrate to the water table, it would be infiltrating into an already brackish to saline estuarine water table that is not used for public or private supply.

All Other Project Components

The operation of the oil production system, office building, and visitors center would also use small quantities of cleaning products and occasional paints, solvents, and thinners for routine maintenance. As discussed in Section 3.7, *Hazards and Hazardous Materials*, the preparation and implementation of the Hazardous Materials Business Plan (HMBP) would require hazardous materials to be stored and labeled in appropriate containers. Compliance with existing regulations would reduce the potential for the release of chemicals that could adversely affect surface water quality.

In addition, and as described above in the Regulatory Framework, the proposed project would be required to implement various treatment, structural, and non-structural source control BMPs to reduce potential impacts to water quality from sediments and other pollutants, as recommended in the LID Plan prepared for the project. The discussion below in Impact HY-2 on impervious surfaces provides detail of the proposed BMPs in the LID plan. The installation of these BMPs would reduce impacts to water quality to a less-than-significant level.

Finally, and as described above in the Regulatory Framework, the proposed project would be required to comply with the requirements of the City of Long Beach MS4 Permit for various specific discharge categories, including landscape irrigation using potable water, landscape using reclaimed or recycled water, and street/sidewalk wash water. The MS4 Permit lists source control BMPs pertaining to pollutant-generating activities to be implemented at commercial and industrial facilities. With implementation of and compliance with the HMBP, LID Plan, and the MS4 Permit, impacts related to water quality during operation would be less than significant.

Finding

With the implementation of and compliance with the requirements noted above, impacts to water quality would be less than significant, and no mitigation measures would be necessary.

Impact HY-2: The project would not 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 groundwater table.

Construction

Construction of the proposed project facilities would involve activities that would require the use of water, including the drilling of new oil production and produced-water injection wells, plugging of existing oil and

injection wells, the hydrostatic pressure testing of pipelines and storage tanks, and other construction activities such as concrete mixing and dust control for buildings, well cellars, and associated infrastructure. The local water supply is served by the Long Beach Water District (LBWD), which receives a mix of groundwater, imported water and recycled water. LBWD acquires its groundwater supply from the landward side of the Alamitos Barrier Project, and groundwater beneath the four individual sites is not used for potable water due to seawater intrusion. The required water would be supplied by tapping into existing LBWD water lines. Table 3.17-4, Summary of Projected Annual Water Usage, in the Draft EIR summarizes the projected water use for construction and operation activities over the next 60 years. Both construction and operations water use are listed because the activities overlap over time. The maximum combined construction and operations water use would be about 124 acre-feet from the third year through eleventh year when oil wells would be constructed at the Pumpkin Patch and LCWA sites. Water use would be less in all other years. The LBWD expects to have at least 76,983 acre-feet/year (afy) of available surplus water, which far exceeds the needs of the proposed project for any year.

Operation

Oil Wells

The extraction of oil also results in the extraction of brackish to saline water from the production zones. The proposed project would reinject the produced water back into the production zone to prevent subsidence and damage to overlying aquifers, returning the produced water to the depth levels from which it was extracted.

The processes of separating the oil from the produced water, as well as other operational activities, would require water supply; however, as previously discussed, the LBWD expects to have at least 76,983 afy of available surplus water, which far exceeds the needs of the proposed project for any of the next 60 years. In addition, groundwater beneath the four individual sites has been intruded by seawater for some years and consequently is not used for potable water.

All Other Non-Oil Wells Structures

Operation of the proposed project would require water supply for various other uses, including irrigation of the restoration areas on the Synergy Oil Field site and operation of the office building and visitors center. Water would be provided by the LBWD, which receives some of its water from groundwater; however, as previously discussed, the LBWD expects to have at least 76,983 afy of available surplus water, which far exceeds the needs of the proposed project for any of the next 60 years. In addition, groundwater beneath the four individual sites has been intruded by seawater for some years and consequently is not used for potable water.

Impervious Surfaces

The Synergy Oil Field site would have no net change in impervious area. The drainage would be conveyed to seven proposed bioretention basins designed for the 85th percentile 24-hour storm volume and located around the visitors center. Therefore, all of the rainfall that currently falls on the site will still continue to infiltrate back into the subsurface after supporting some landscaping. In addition, the Synergy Oil Field site would experience an overall net reduction in impervious surfaces following the eventual removal of its oil production infrastructure that consists of oil and injection wells, wells pads, storage tanks, processing equipment, and access roads. No other impervious structures would be constructed on the Synergy Oil Field site.

The City Property site would experience an overall reduction in impervious surfaces following the plugging and abandonment of wells and eventual removal of its oil production infrastructure. The addition of the oil pipeline and utility lines that would cross the City Property site would not increase impervious surfaces because the lines would be protected by earthen berms with no surrounding pavement. Rain would flow around the lines and infiltrate into the subsurface similar to existing conditions. No other impervious structures would be constructed on the City Property site.

The Pumpkin Patch site would experience an increase of about 196,244 square feet (sf) (4.5 acres) of impervious surfaces the LCWA site would experience an increase of about 121,314 sf (2.8 acres) of impervious surfaces (Wilson Mikami 2017a). Drainage on the Pumpkin Patch and LCWA sites currently flows north to Studebaker Road. Under the proposed project and in accordance with the LID Plan, drainage would be conveyed through proposed swales, gutters, and storm drains to the well cellars designed to contain a 25-year storm event. Larger storm flows would overflow from the well cellars to Studebaker Street, as is the current condition. Water collected in the well cellars would be conveyed to the on-site water treatment system and injected into the subsurface oil production zones, along with the produced water. Therefore, all of the rainfall that currently falls on the Pumpkin Patch site would be injected into the subsurface, recharging the volume of water in the oil production zones.

Finding

Project-related impacts to groundwater would be less than significant, and no mitigation measures would be necessary.

Impact HY-3: The project would not substantially alter the existing drainage pattern of a site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation or flooding off site.

Construction

Construction of the proposed project would involve the demolition of existing structures and the construction of new structures on the project site, construction of earthen berms, establishment of tidal channels, removal of existing berms and roads, and lowering elevations on the Synergy Oil Field site and would thereby alter the existing drainage patterns on site such that erosion, siltation, and flooding could occur.

The proposed project would be required to implement erosion and sediment control BMPs as specified in the SWPPP prepared in accordance with the Construction General Permit. This would prevent erosion and siltation from occurring during construction activities for both oil facilities and habitat restoration. Some of the BMPs implemented to reduce erosion and siltation would impede or slow the speed of stormwater runoff flow, and would reduce the potential for flooding to occur. Further, flooding in the Synergy Oil Field site near the restored areas is anticipated since it is naturally flooded by tidal channels; flooding would not be viewed as a negative impact during construction.

Operation

Operation of the proposed project would involve altered drainage patterns for the Synergy Oil Field, Pumpkin Patch, and LCWA sites; the drainage pattern for the City Property site would remain essentially unchanged. Per the recommendations of the project LID Plan (Wilson Mikami 2017a), water quality BMPs would be

installed on all sites except the City Property site. Through the retention and infiltration of stormwater runoff, stormwater flow rates would be controlled to be equal or less than the pre-developed condition.

While some erosion of Steamshovel Slough is expected initially, the natural function and increased footprint of the marsh habitat would increase the capture of sediment in the long term, which would be a beneficial impact. With implementation of the 5-year mitigation and monitoring program established for the mitigation bank, the restoration and functioning of the salt marsh would be a beneficial impact.

The proposed restoration activities on the northern 76.52-acre Synergy Oil Field site would expand tidal connection, so that areas south of Steamshovel Slough that currently lack tidal connection would receive tidal flows. Although expanded tidal connections would increase flooding in these areas, increased flooding is the goal of the proposed restoration to recreate natural flooding conditions, and flooding would not be viewed as a negative impact.

As described in Draft EIR Section 3.8.4.2, Methodology, hydraulic modeling evaluated any changes to flood water elevations that would result due to the proposed project (Moffatt & Nichol 2017). Modeling was conducted for both existing and project conditions. The existing conditions model results indicate that both storm and tidal waters coming from Steamshovel Slough would be contained within the Synergy site without overtopping surrounding streets. Model results showed that for the proposed project condition, water levels would be the same as under existing conditions and both storm and tide water would be contained within the Phase 1 property boundary, due to flood protection provided by the proposed berm along the Phase 1 boundary. The proposed berm would have an elevation of 9.0 feet NGVD29[2], providing approximately 3.4 feet of freeboard above the 100-year coastal flood event (1 percent annual change of occurrence) water level. This would add 2 to 3.6 feet of freeboard when compared to existing conditions. Since freeboard would increase with the project, this would be a beneficial impact.

Sea level rise is projected to occur worldwide in the mid- to long-term future (Moffatt & Nichol 2017). Based on the measured highest anticipated tidal elevation, the 100-year flood elevation, and 2.6 feet of sea level rise in year 2060 (consistent with the 2015 California Coastal Commission guidance), the projected flood elevation would be modeled at 8.18 feet NAVD29, hence the conclusion to design the interim berm separating the two project phases at 9.0 feet NGVD29. Without the proposed project and the interim berm, an 8.18-foot water level would overtop both the Pacific Coast Highway and 2nd Street. Therefore, the proposed project with the proposed interim berm would improve the flood protection in the area and provide a beneficial impact.

Finding

Project-related impacts on erosion, siltation, and flooding would be less than significant, and no mitigation measures would be necessary.

[2] National Geodetic Vertical Datum of 1929 (NGVD29) is one of several datums used for measuring elevation relative to sea level.

Impact HY-4: The project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Construction

Runoff water would be controlled in compliance with the Construction General Permit and the BMPs identified in the required SWPPP. Therefore, construction is not expected to generate an amount of runoff that would exceed storm water drainage system capacity.

Operation

Once operational, runoff flow rates would be equal or less than the pre-developed flow rate condition. All new storm drain facilities on site would provide capacity for a 25-year storm event. Therefore, the proposed project would not generate substantial stormwater runoff such that existing or planned drainage system capacities are exceeded.

Finding

Project-related impacts to the capacity of existing or planned stormwater drainage systems would be less than significant, and no mitigation measures would be necessary.

Impact HY-5: The project would not place buildings, oil production infrastructure, workers, or the public within areas anticipated to be inundated due to sea level rise.

Construction

During construction, there would be no impacts due to sea level rise because of the short-term nature of the construction work. Sea level rise is not anticipated occur over the 4-year construction period (when a majority of the construction work is being implemented). This impact would be less than significant.

Operation

The proposed restoration activities on the northern portion of the Synergy Oil Field site would expand tidal connection so that areas south of Steamshovel Slough that currently lack tidal connection would receive tidal flows. Increasing the tidal connections would increase flooding in these areas, and could increase the risk of flooding with sea level rise.

Hydraulic modeling evaluated flood levels in the marsh with sea level rise. Modeling was conducted for both existing and proposed project conditions. Model results showed that water levels would be the same (6.9 feet NGVD29) for the proposed project condition and existing conditions with 2.6 feet of sea level rise (Moffat & Nichol 2016). The existing conditions modeling showed that the west bound lanes of 2nd Street just east of the PCH may be inundated if sea level rise is more than 2.6 feet; however, the proposed project would increase flood protection from existing conditions through construction of the proposed berm. The berm was designed to consider sea level rise, so during the 100-year coastal flooding event with 2.6 feet of sea level rise, the berm would still maintain 0.82 feet of freeboard. Since freeboard would increase with the project, this would be a beneficial impact.

Finding

Project-related impacts from potential inundation due to sea level rise would be less than significant, and no mitigation measures would be necessary.

Impact HY-6: The project would not 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.

Construction

The project proposes to reconnect Steamshovel Slough to the surrounding marshplain by removing the existing berms, which could result in increased flooding within that local area; however, the proposed project would construct permanent sheet pile walls and an earthen berm along the perimeter of the southern edge of the restoration area to prevent tidal water spillover into the southern portion of the site that currently contains active oil operations. Additionally, the four individual sites are not in a dam inundation area. Therefore, people and structures would not be exposed to substantial flooding during project construction.

Operation

The proposed project would increase public access to the Synergy Oil Field site and construct buildings, oil production operations, and associated infrastructure on the Pumpkin Patch and LCWA sites, which could increase the exposure of people and structures to flooding during operation in the event of a levee or dam failure.

Reconnection of Steamshovel Slough to the surrounding marshplain on the Synergy Oil Field site would increase flooding potential on site and could increase flood risk to the surrounding areas; however, the goal of the berm removal is to allow for expansion of tidal influence in the northern 77.3-acre area to convert non-tidal areas to tidal wetlands; therefore, flooding of the tidal wetlands is expected and necessary, and would provide additional areas to contain flood waters. Further, the proposed sheet pile wall and earthen berm along the southern perimeter of the Steamshovel Slough would reduce the flood risk to the southern portion of the site, which would contain the visitors center. The proposed berm would actually increase the level of flood protection from existing conditions, resulting in a beneficial impact.

The new buildings, oil production operations, and associated infrastructure on the Pumpkin Patch and LCWA sites would result in the increased presence of people on those two sites. The LCWA site is not adjacent or near a levee and would have a low potential for flooding due to a distant levee failure. The Pumpkin Patch site is immediately adjacent to the San Gabriel River and would be dependent on the levees along the San Gabriel River for flood protection. Since the project does not propose to change these levees, the proposed project would not change the flood risk to the area. Additionally, roughly half the Pumpkin Patch site is at elevations equal to or greater than the levee elevation. The remaining areas of the site are above 13.5 feet NGVD, which is 5.3 feet higher than the 100-year coastal flood event with 2.6 feet of sea level rise, so flooding at this elevation would be extremely rare. Therefore, people and structures would not be exposed to substantial flooding during project operation.

Finding

Project-related impacts from the potential to expose people or structures to seiches, tsunamis, or mudflow would be less than significant, and no mitigation measures would be necessary.

Impact HY-7: The project would not expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow.

Construction

The proposed project is not located in an area that could be exposed to mudflows because the four individual sites are all relatively flat. By connecting Steamshovel Slough to the marshplain to the south, the proposed project would be creating a large basin that could potentially experience a seiche and overtop the berm to cause flooding; however, for a seiche to occur, the site would have to be filled with water, which would only occur during a large, infrequent storm event (e.g., 100-year event). It would be extremely unlikely that a large storm event would occur at the same time as a large earthquake induces a seiche. Additionally, the proposed project includes a berm that has 3.4 feet of freeboard during the 100-year event, so it is unlikely that a seiche would be large enough to overtop the berm and cause flooding.

The entire project area is located within a tsunami inundation area; therefore, existing and partially constructed structures and construction workers could be exposed to tsunamis during project construction; however, the County of Los Angeles is in the process of becoming "tsunami ready," meaning it would implement mitigative, preparatory, and response measures to avoid or lessen substantial impacts to structures and persons associated with tsunami events, including 24-hour notice and evacuation route signs. Further, PCH is located adjacent to the project site and is considered a disaster route used to bring in emergency personnel and supplies to aid in the event of a disaster, which includes tsunamis. Construction activities would not alter the topography of the site so substantially that tsunami risks would be increased when compared to existing conditions.

Operation

As stated previously, the entire project site is located in a tsunami inundation zone. Over a 40-year period, the oil production operations on the Synergy Oil Field and City Property sites would be removed and replaced with oil production operations on the Pumpkin Patch and LCWA sites, with about the same number of workers. Therefore, the project would not increase the number of workers being exposed to risk of a tsunami.

As previously discussed, the County of Los Angeles is working on becoming a TsunamiReady community that would implement measures to avoid or lessen potential tsunami impacts to structures and persons. The Pacific Coast Highway could be used to bring in emergency personnel and supplies to the project site in the event of a tsunami. Further, the project would restore the northern portion of the Synergy Oil Field site to wetland habitat. Wetlands provide protection from tsunamis and tidal surges and would thus help mitigate potential damage from a tsunami on the Synergy Site and adjacent areas.

Finding

Project-related impacts would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

Cumulative impacts during project construction and project operation were analyzed. The regulations required by DOGGR on all projects would require measures for the safe transportation, storage, handling, and disposal of hazardous materials used for the drilling and construction of wells, including appropriate containers, and secondary containment to contain a potential release. In addition, conductor casing would be used to seal off non-oil-producing layers, preventing drilling mud or oil from entering aquifers, and construction activities that could damage active, idle, and plugged wells are prohibited. Because the well installation activities would be subject to the requirements noted above, impacts associated with pollutants entering surface water bodies or aquifers would be less than significant. These regulations would be required of any and all cumulative projects that drill oil wells. Therefore, with compliance with applicable regulations, the cumulative impacts would not be cumulatively considerable (less than significant).

The state Construction General Permit and the Long Beach Storm Water Management Program would require each cumulative project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff and prevent erosion for each project. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. Construction sites regardless of location would each be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites, including from erosion. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations below action levels and would not be cumulatively considerable. Similarly, the impacts of the proposed project combined with other cumulative projects within the region would not cause a significant cumulative impact related to soil erosion and the proposed action's contribution to cumulative impacts on soil erosion would not be cumulatively considerable (less than significant).

The local water supply is served by the LBWD, which receives a mix of groundwater, imported water and recycled water. The LBWD expects to have at least 76,983 AFY of available surplus water. LBWD's analysis considers the anticipated growth (effectively the summation of anticipated cumulative projects) within its area of service. Therefore, with compliance with applicable regulations, the cumulative impacts would not be cumulatively considerable (less than significant).

Until the construction of structures has been completed, there would be no impacts from changed drainage patterns, the placement of structures in areas susceptible to sea level rise, levee or dam failure, seiches, tsunamis, or mudflows.

During project operations, oil production at the four individual sites and other oil production sites (e.g., the Thermo oil field located adjacent to the northwest of the Synergy Oil Field site) would all be required to comply with the same DOGGR regulations that include regulations to routinely monitor and inspect wells, pumps, pipelines, storage tanks, and associated equipment for leaks and pressure issues. Storage tanks would be required to have secondary containment. In the case of the proposed project, wells would be installed in well cellars designed to contain fluids in the event of a leak. The wells, pipelines, and storage talks are required to have established emergency procedures in the event of a release or spill. The produced water that would be pumped out along with the oil is typically brackish to saline, but would be entirely injected back into

the production zone from where it came. Additionally, the proposed project and all cumulative projects would be required to prepare and implement HMBPs to manage any hazardous materials used by operations, including appropriate storage, labeling, and use. In addition, all facilities in the City of Long Beach would be required to comply with the Long Beach MS4 program and LID requirements that would require managing surface water on their respective facilities. Therefore, with compliance with existing regulations, impacts related to water quality from the operation of oil well fields and facility operations of the proposed project and cumulative projects would not be cumulatively considerable (less than significant).

The local water supply is served by the LBWD, which receives a mix of groundwater, imported water, and recycled water. It is assumed that the water supply for cumulative projects would also be the LBWD. The LBWD expects to have at least 76,983 AFY of available surplus water. LBWD's analysis considers the anticipated growth (effectively the summation of anticipated cumulative projects) within its area of service. All facilities in the City of Long Beach would be required to comply with the Long Beach MS4 program and LID requirements that would require managing surface water on their respective facilities. This would include minimizing the impacts of adding impervious surface. Therefore, with compliance with existing regulations, the cumulative impacts relative to groundwater supplies would not be cumulatively considerable (less than significant).

All projects within the local area are required to comply with the city's LID and MS4 regulations that would require controlling surface water runoff and reducing impacts from sediment and other pollutants. These regulations would also apply to any cumulative projects that change drainage patterns. Therefore, with compliance with existing regulations, impacts related to water quality from facility operations of the proposed project and cumulative projects would not be cumulatively considerable (less than significant).

The proposed project would be designed to account for sea level rise. Consequently, the proposed project would not cumulatively contribute to sea level rise issues with nearby cumulative projects and would not be cumulatively considerable (less than significant).

The reworking of the Synergy Site to a more natural wetland function and the improvement of berms would result in a beneficial impact. Therefore, the proposed project would not contribute to cumulative impacts (less than significant).

The proposed project area is not within an area subject to seiches or mudflows, which would also be the case for nearby cumulative projects. The project area, which would include nearby cumulative projects, is located within a tsunami inundation area and could be exposed to tsunamis; however, the County of Los Angeles is in the process of becoming TsunamiReady, meaning it would implement mitigative, preparatory, and response measures to avoid or lessen substantial impacts to structures and persons associated with tsunami events, including 24-hour notice and evacuation route signs. This program would apply to all cumulative projects within the tsunami zone. Therefore, with compliance with tsunami program, impacts related to tsunamis would not be cumulatively considerable (less than significant).

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.7 Land Use and Planning

Impact LU-1: The project would not physically divide an established community.

The existing character of the project vicinity is a mixture of open space/wetland areas which includes industrial facilities, (energy facilities and oil extraction facilities), and commercial retail uses along PCH and portions of 2nd Street. The proposed structures, facilities, and surrounding walls on the Pumpkin Patch and LCWA sites would be of a similar scale to that which is present on adjacent properties and, thus, would not create an obstruction that would physically divide a community. In addition, abandonment of oil production facilities on the Synergy Oil Field, City Property, and Pumpkin Patch sites over a period of 40 years would create open space and wetlands areas that would create a more natural landscape for the area on those sites, consistent with their original habitat. By removing the existing facilities and consolidating them on two much smaller sites, both the Synergy Oil Field and City Property sites would be more compatible with and similar to the overall Los Cerritos Wetlands complex.

Furthermore, street, sidewalk, and landscaping improvements on and fronting the project site would make it easier and safer for the community to access the surrounding areas. Thus, it is not anticipated that the proposed project would physically divide, disrupt, or isolate an established community.

Finding

No impacts related to division of established communities would occur, and no mitigation measures would be necessary.

Impact LU-2: The project would not conflict with most applicable land use plan, policy, or regulation of an agency with jurisdiction over the project, adopted for the purpose of avoiding or mitigating an environmental effect.

Below is an evaluation of the project's consistency with applicable plans and policies that have been adopted for the purpose of avoiding or mitigating an environmental effect. See Draft EIR Table 3.9-1, Consistency Analysis with Local Land Use Plans, for a discussion of consistency with specific applicable goals and policies that apply to the proposed project.

Consistency with the Long Beach General Plan

Synergy Oil Field and City Property Sites

The Synergy Oil Field and City Property sites are within the SEADIP; however, they are not assigned a specific land use designation under the City's General Plan. Given that there is no existing land use designation for these sites, a general discussion of consistency with the General Plan and its elements is included in Draft Table 3.9-1. Implementation of the proposed project on the Synergy Oil Field and City Property sites would not conflict with the City's General Plan.

Pumpkin Patch and LCWA Sites

The Pumpkin Patch and LCWA sites are designated as LUD No. 7, Mixed Uses under the General Plan, which allows retail, offices, medical facilities, higher density residences, visitor-serving facilities, personal and professional services, and recreational facilities (City of Long Beach 1989, 65). Under the proposed project, the Pumpkin Patch site would be developed with industrial and office uses and the LCWA site would be

developed with industrial uses. While the LUD No. 7 designation does not promote industrial uses, it also does not preclude the assignment of this district designation to areas for industrial, manufacturing, and/or warehousing uses if the site has a previous history of this use or is in an area where this use exists. The General Plan discusses the existing active oil operations on the Synergy Oil Field and City property sites (City of Long Beach 1989, 169). In these situations, the General Plan encourages appropriate accompanying land uses, including office use (City of Long Beach 1989, 66). While the 1989 General Plan Land Use Element is not entirely clear on this point, it has in practice been interpreted to allow industrial uses as part of a mix but discourage heavy industry such as standalone metal smelter. Given that the Pumpkin Patch site has been used for oil production and the LCWA site has been used for storage of industrial manufacturing items, development of industrial uses on both sites, and accompanying office uses on the Pumpkin Patch site would be consistent with LUD No. 7 in light of the prior industrial history on both sites and the adjacent industrial activities on the City Property, the Plain All American, and AES Power Plant sites. Therefore, industrial development on the Pumpkin Patch and LCWA sites would not conflict with the Long Beach General Plan.

Both sites are also within the SEADIP and are addressed in the Neighborhood Plan section of the Land Use Element of the General Plan. The sites are also near areas of active oil operations described in the General Plan.

Consistency with the Long Beach Zoning Code

Synergy Oil Field Site

The project has a zoning designation of PD-1 (SEADIP). The site is within Subarea 11a, which allows for residential uses and Subarea 33, which designates the site for wetlands purposes, with 2 acres devoted as a least tern nesting site. The project proposes an amendment to the SEADIP that would establish both short-term industrial (oil production) uses and long-term open space, recreation (i.e., the visitors center and recreational trail) and wetlands restoration uses for the two subareas that encompass the Synergy Oil Field site.

The proposed project would restore the northern 76.52-acre restoration area portion of the Synergy Oil Field site (Subareas 11a and 33) and would abandon and remediate existing oil production facilities over time within the southern portion. All of the restoration work within the northern portion of the site would take place within Subarea 33, which designates this area for wetlands purposes. The central portion of the site is entirely within Subarea 33 and the southern portion is split between Subarea 33 and Subarea 11a. As described in the SEADIP, there is only an indefinite boundary between Subarea 33 and Subarea 11a and development in Subarea 11a is contingent upon wetlands preservation in Subarea 33. Furthermore, oil extraction operations on the site predate the adoption of the SEADIP's PD-1 designation. As such, the current operation of oil extraction facilities is allowed under this zoning. The proposed project would implement a phasing out of oil operations on the southern portion of the Synergy Oil Field site, which could take up to 40 years to complete. As wells are plugged and abandoned, they would be remediated and revegetated in the immediate area around each well. Eventually, the southern portion of the site could be restored as a wetland area; however, as described above, that would not occur as a part of the proposed project. The planned restoration in the northern portion of the site and around the well plugging and abandonment that would occur under the proposed project would be consistent with the zoning on the Synergy Oil Field site and, thus, would not conflict with PD-1. Currently, uses on the Synergy Oil Field site are not consistent with the uses identified in the SEADIP Subarea 11a, which identifies this portion of the project site for residential uses.

Under the proposed SEASP, the Synergy Oil Field site would be given a land use designation of CHWR. The CHWR land use designation provides for coastal restoration, access, visitor-serving recreation (boating, public launching, kayaking, paddle boarding, etc.), and biological reserves. Under the proposed SEASP, public access to coastal water is encouraged and uses such as interpretive centers and public parking associated with coastal resources are permitted. All uses proposed on the Synergy Oil Field site would be consistent with the land use designations in the proposed SEASP.

City Property Site

The City Property site is in Subarea 25 of SEADIP, which allows business park (office commercial and light industrial), restaurant, and hotel uses. As the oil extraction operations on the site predate the adoption of the SEADIP's PD-1 designation, the current operation of oil extraction facilities is allowed to continue under this zoning. The project proposes an amendment to the SEADIP that would establish both short-term industrial (oil production) uses and long-term open space and wetlands restoration uses for this area of Subarea 25 that would allow for the continued oil operations, the construction of a new oil pipeline between the Pumpkin Patch site (also within Subarea 25), and the eventual use of the non-oil production areas of the City Property site for open space. With these amendments, the proposed project would not conflict with the existing PD-1 designation on the City Property site under SEADIP.

Under the proposed SEASP, the land use designation on the City Property site would be CHWR, and the zoning, would therefore be CHWR, which would provide for the continuation of an existing use. As described above, under the proposed project, oil production and extraction would be phased out on the site over a period of 40 years. As wells are plugged and abandoned the immediate areas around each well would be revegetated. A pipeline would be constructed through the central portion of the site along an existing dirt road would be considered a continuation of the existing oil production facilities and, thus, would be consistent with the uses proposed under the SEASP.

Pumpkin Patch Site

The Pumpkin Patch site is also in Subarea 25 of SEADIP which allows light industrial uses. Therefore, the proposed project would not conflict with the existing PD-1 designation. The project proposes an amendment to the SEADIP that would permit oil production uses for this area of Subarea 25. Because oil and gas activities are governed by Title 12 of the City's Municipal Code, in addition to the zoning standards, the project also proposes an amendment to the City's Oil Map that would allow oil operations on the Pumpkin Patch site. With these amendments, the project would not conflict with the existing PD-1 designation on the City Property site under SEADIP and the uses would be consistent with those allowed under the SEADIP and the City's Oil Code.

Under the proposed SEASP, the land use designation on the Pumpkin Patch site would be industrial, and the zoning would, therefore, also be industrial. The SEASP would also allow for the retention of the office and industrial uses currently allowed under the SEADIP. Given the industrial uses proposed as part of the project, those uses would be consistent with the zoning in the proposed SEASP.

LCWA Site

The LCWA site is within Subarea 19, which allows industrial uses. Proposed uses on the LCWA site would be consistent with the existing zoning. The project proposes an amendment to SEADIP to clarify the applicability of height limits to oil storage facilities. There would be no conflict with the existing PD-1 designation.

Because oil and gas activities are governed by Title 12 of the City's Municipal Code, in addition to the zoning, the project also proposes an amendment to the City's Oil Map that would allow oil operations on the LCWA site.

Under the proposed SEASP, the land use designation for the LCWA site would be industrial and the zoning would also be industrial. Given the industrial uses proposed as part of the project, those uses would be consistent with the zoning in the proposed SEASP.

Consistency with Municipal Code 12.08 the Oil Map

As described above, City of Long Beach Municipal Code Chapter 12.08 defines the areas within the City where oil operations are permissible. To be consistent with the oil map, the proposed project would amend the oil map to include the Pumpkin Patch and LCWA sites on the oil map.

Consistency with the California Coastal Act and Long Beach Local Coastal Program

Synergy Oil Field Site

The Synergy Oil Field site (Subareas 11a and 33) has been removed from the LCP. Because it is not covered by the City's LCP, any development on the Synergy Oil Field site is reviewed for consistency with the Chapter 3 policies of the CCA, PRC Sections 30210–30265.5. The proposed project would be consistent with the overall goals and policies of the CCA to provide public access and recreational opportunities within the coastal zone.

The proposed SEASP would replace the existing PD-1 zoning in its entirety. In order to do this, an amendment to the City's LCP would need to be processed through the CCC. Overall, the proposed SEASP would support the goals of the LCP by directing development away from the wetlands, parks, and open space areas in the coastal zone and towards the urban core where development is currently present. The proposed SEASP also encourages public access to the coastal zone by creating view corridors, pedestrian walkways to the wetlands and the marina, and bicycle access opportunities. As a part of the proposed project, sidewalk improvements would be made to PCH, adjacent to the Pumpkin Patch site and bikeway improvements would be on the streets that front all four individual sites that comprise the project site.

City Property Site

The City Property site is not within the City's certified LCP; therefore, any new development would be required to be consistent with CCA policies. Implementation of the proposed project would be consistent with CCA policies that provide for continued energy production, and encourage the restoration of wetlands and habitat areas. Specifically, the proposed project would remove and remediate existing oil production facilities in order to consolidate operations to the maximum extent feasible, as required by CCA Policy 30262.

Pumpkin Patch and LCWA Sites

The Pumpkin Patch site (Subarea 25) and LCWA site (Subarea 19) are located within the LCP jurisdiction. The LCP provides policies regarding public access, recreation, marine environment, land resources, development, and industrial development. When the LCP was adopted, the PD-1 zoning regulations from the SEADIP were adopted by reference in the LCP and function as the current zoning for the project site. As described above, the proposed project is consistent with the existing zoning on the Pumpkin Patch and LCWA sites, and therefore, would be consistent with the LCP. The proposed project includes an amendment to the

SEADIP and the City's Oil Map that would allow for new oil production activities on the Pumpkin Patch and LCWA sites. The amendments would require an amendment to the City's LCP, and with implementation of the proposed amendments, there would be no significant impacts with respect to land use consistency.

Development on the Pumpkin Patch and LCWA sites would be consistent with the LCP because it would direct development away from the Synergy Oil Field and City Property sites and would consolidate oil production facilities and operations to a site that currently has adjacent industrial development. In addition, the sites would improve bicycle access by improving the existing bike lane on adjacent roadways.

Consistency with the Long Beach Bicycle Master Plan

As a part of the proposed project, improvements would be made to upgrade the existing bicycle lanes adjacent to all four of the individual sites that comprise the project site; thus, the proposed project would be consistent with the Bicycle Master Plan goal of identifying, developing, and maintaining a complete and convenient bicycle network and would be consistent with the overall Citywide Bicycle Master Plan.

Consistency with the AELUP

The proposed project is located within the Airport Environs Land Use Plan (AELUP) area for the Joint Forces Base Los Alamitos, which is a federally owned and operated airport facility located approximately 2.7 miles northwest of the Synergy Oil Field site (OCALUC 2002). According to the AELUP, notice to the FAA is required for any proposed structure more than 200 feet above ground level of its site within any jurisdiction. The project site is also located approximately in the 300-foot height restriction contour (OCALUC 2008). Given that development under the proposed project would be constructed to a maximum height of 35 feet on the Pumpkin Patch site, it would not adversely affect navigable airspace or require review by the FAA or OCALUC. The drilling rig on the Pumpkin Patch and LCWA sites would be 160 feet tall and would not adversely affect navigable airspace or require review by the FAA or ALUC. Therefore, the proposed project would be consistent with the AELUP.

Consistency with SCAG Policies

Southern California Association of Government's (SCAG's) 2016–2040 Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) establishes goals, objectives and policies with regard to High Quality Transit Areas, Livable Corridors, and Neighborhood Mobility Areas. The proposed project would be consistent with SCAG's goals to maximize mobility and accessibility, to protect the environment and health of residents by improving air quality and encouraging active transportation, and by actively encouraging energy efficiency. Therefore, the proposed project would be consistent with the SCAG 2016–2040 RTP/SCS.

Finding

Implementation of the proposed Project would not result in significant land use impacts with respect to consistency with applicable plans and policies that have been adopted for the purpose of avoiding or mitigating an environmental effect, and no mitigation measures would be necessary.

Cumulative Impacts

The adopted growth projections used for the cumulative analysis in the EIR are derived from the SCAG Integrated Growth Forecast of the 2016–2040 RTP/SCS, for the City. The proposed project would be consistent with the applicable state, regional, and local plans and policies, including the General Plan and,

thus, is consistent with the SCAG Integrated Growth Forecast of the 2016–2040 RTP/SCS. Therefore, cumulative impacts with regard to land use would be less than significant.

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.8 Mineral Resources

Impact MR-1: The project would not result in the loss of availability of a known or locally important mineral resource that would be of value to the region and the residents of the state or is delineated on a local General Plan, Specific Plan, or other land use plan.

All oil wells on the Synergy Oil Field and City Property sites would be plugged and abandoned over time and the oil production currently generated by these wells would be replaced over time with oil wells drilled on the Pumpkin Patch and LCWA sites. Oil production facilities would continue to operate on the Synergy Oil Field and City Property sites until one of the following "trigger" events occur:

- Upon completion and occupancy of the oil production facilities on the Pumpkin Patch and LCWA sites, specifically occupancy of the new office facility on the Pumpkin Patch site (referred to as the New Occupancy Date), if an oil well on the Synergy Oil Field site produces less than one full barrel of oil per day for a period of 18 consecutive months or longer, the well would immediately be abandoned as required by the abandonment guidelines established by DOGGR.
- Within 20 years from the New Occupancy Date, 50 percent of the existing wells on the Synergy Oil Field and City Property sites would be removed and plugged and abandoned per DOGGR regulations.

The balance of the existing 53 wells, if not previously plugged and abandoned, would be removed and abandoned on or before the 40-year anniversary of the New Occupancy Date.

Once construction of oil production facilities on the Pumpkin Patch and LCWA sites is complete, oil resources would be extracted from these properties. Thus, oil resources would continue to be available and there would be no loss of oil and natural gas production availability. In addition, the older wells and equipment would be replaced with more efficient modern equipment. For example, the use of directional drilling would result in targeted extraction that would increase the production efficiency.

Finding

No impacts to mineral resources would occur, and no mitigation measures would be necessary.

Cumulative Impacts

The proposed project would allow for the continued availability of oil resources and, thus, the project would have no impact on continued availability of this mineral resource. When considered with other cumulative projects, the proposed project does not contribute any impacts to the potential loss of mineral resources and, therefore, has no significant cumulative impact relative to mineral resources.

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.9 Noise

Impact NOI-2 The project would not result in exposure of persons to, or generation of, excessive groundborne vibration or groundborne noise levels.

Construction

According to the 2004 Caltrans *Transportation- and Construction-Induced Vibration Guidance Manual* (Greve & Associates 2017), the most critical construction vibration concern is whether impact pile driving is used, as vibration levels can be higher than typical heavy construction equipment. The project would likely use vibratory pile driving for sheet piles, and no vibration impacts would occur with vibratory sheet pile driving. However, impact pile driving may also be considered for this project and the potential for impacts are discussed below.

In describing vibration in the ground and in structures, the motion of a particle (i.e., a point in or on the ground or structure) is used. Accordingly, vibratory motion is commonly described by identifying the PPV in inches per second (in/sec), which is generally accepted as the most appropriate descriptor for evaluating the potential for building damage.

The equipment to be used has not been determined; however, if impact pile driving was selected, as a worst case, a Delmag diesel hammer Model D30-32 was used for this analysis. The number of piles, length of construction, and size of piles is not yet known, and would be engineered as part of the design. The hours of the pile driving would be limited by the allowable construction hours of the City of Long Beach Noise Ordinance (Section 8.80.202). Caltrans equations were used to project the vibration level at the nearest receptor of 0.01 in/sec PPV, which is well below the 0.5 in/sec threshold of structural damage established in the Caltrans manual for the new residential structures and modern commercial buildings surrounding the project site; therefore, no structural damage would occur.

The potential for humans to feel the vibrations from project construction vibration, considered more of an annoyance issue rather than an impact, was also considered. At the mobile home park, which is at a distance of approximately 621 feet, the vibration levels of 0.01 in/sec PPV would be considered “barely perceptible.” Since the pile driving activities are short term in nature, annoyance is usually not used as the determinant for impacts. In addition, as no pile driving or grading would take place during the nesting season for sensitive bird species, pile driving vibration would not have an impact on any sensitive species on site.

Operation

The proposed project would develop oil wells, which when in operation, would generate vibration; however, the oil wells would be centrally located within the project site boundary, and not in proximity to humans or structures where they would exceed vibration thresholds for annoyance or structural damage.

Finding

Project-related impacts from groundborne vibration and noise would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

Cumulative impacts during project construction and project operation were analyzed. Project construction noise was determined to not 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. Project construction would occur in proximity to noise-sensitive receptors (i.e., residences), resulting in a substantial temporary increase in ambient noise levels at the receptors during construction; however, implementation of construction mitigation measures would reduce the construction noise impacts to a level of less than significant. Therefore, project construction noise would not be of the magnitude to potentially combine with other cumulative projects where noise could combine together to cumulatively substantially temporarily increase the ambient noise environment in the project area. Therefore, project construction would not be a cumulatively considerable noise impact (less than significant). Regarding vibration, project construction would occur in proximity to structures and inhabited buildings; however, construction vibration levels would be less than the vibration thresholds at the buildings. Therefore, project construction would not be a cumulatively considerable noise or vibration impact (less than significant).

Project operation would generate off-site vehicle traffic noise on area roadways and on-site noise from operating oil wells. The project does not have the potential to generate a substantial number of construction or operational vehicle trips. Therefore, project traffic noise increase on roadways surrounding the project site would be imperceptible and future traffic-related noise levels would not be cumulatively significant (less than significant). The Pumpkin Patch and LCWA sites would be developed with oil production facilities, which would generate noise from operational oil wells. The noise levels projected for oil production would be less than the ambient noise levels and would not exceed the Noise Ordinance criteria. Therefore, the noise impact from oil production operations at the Pumpkin Patch and LCWA sites would result in a less-than-significant impact, based on proper facility design. A mitigation measure has been prescribed to ensure that the facility is properly designed and future operational noise levels in these specific locations would not be cumulatively significant (less than significant).

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.10 Population and Employment

Impact PE-1: The project would not induce substantial indirect population growth.

Construction

There would be an increase in construction jobs at the project site as a result of implementation of the proposed project, estimated to necessitate 110 to 160 workers for construction activities, 40-60 personnel for the drilling process, and substantially less personnel for workover operations. A majority of the proposed project would be implemented in 4 years, while the remaining components (well plugging and abandonment,

well drilling, and operations) would occur over a 40-year period. Construction would last approximately 8 years on the Pumpkin Patch and approximately 11 to 12 years on the LCWA site.

There are over 250,000 construction workers in Los Angeles County (U.S. Census Bureau 2013). Recent overall unemployment estimates from April 2017 from the EDD show unemployment rates of approximately 4.1 percent for Los Angeles County. With an unemployment rate of approximately 4.1 percent countywide, it is likely that several thousand construction industry workers would be available, and it is expected that construction jobs would be filled from the local and/or regional (County) labor force. Given the availability of a construction workforce in Los Angeles County, which includes the project site, and also that the assignment would be temporary, it is assumed that construction workers would commute daily to the site. Therefore, construction-related activities would not result in an increase in the local population or require existing or projected local housing resources. Construction activities associated with the proposed project would not induce substantial indirect population growth.

Operation

The proposed project would create up to 30 new permanent employment positions for the oil operations, in addition to the 15 existing employees. The operation of the visitors center and operation and maintenance of the public access trails on the Synergy Oil Field site would also generate 5 additional employees, including 3 full-time employees and 2 volunteers.

The proposed project would provide employment opportunities for the local economy, and it is anticipated that the majority of the new jobs would be filled by the local labor force. According to the 2016–2040 RTP/SCS Growth Forecast, it anticipated that the city would have 181,700 available jobs by 2040, an increase of 22,772 jobs from the 158,928 jobs available in 2015 (SCAG 2016; Bureau of Labor Statistics 2017).

As described above, the employment opportunities projected for the proposed project are within the growth projections anticipated for the city for the year 2040 (SCAG RTP/SCS). Because the proposed project construction employment and operational employment would be within the anticipated growth projections, the project could be considered growth accommodating and not growth inducing. Furthermore, future employment would also include existing employees that would be relocated to the new operations site, and a majority of employment opportunities that would be generated by the proposed project are anticipated to be filled by the local employment pool and would, therefore, not induce substantial population growth in an area, either directly or indirectly. Operation of the proposed project, including ongoing operation of the oil production facilities and the new visitors center and public access trail, would not induce substantial population growth.

Finding

Population and employment impacts of the proposed project would be less than significant, and no mitigation measures would be required.

Cumulative Impacts

Development of cumulative projects could result in increases in population and employment; however, according to the 2016–2040 RTP/SCS, the population in Long Beach is projected to be approximately 484,500 persons by the year 2040. This represents a decrease of approximately 458 persons from the 484,958 persons in 2016. The number of jobs in the City is expected to increase to approximately 181,700 jobs by the year 2040 from the 158,928 jobs available in 2015 (SCAG 2016). Thus, the employment opportunities projected for

the proposed project are within the growth projections anticipated for the City for the year 2040 (SCAG RTP/SCS). The proposed project would not include any permanent housing on site and, thus, would not contribute to an increase in residents to the City. Therefore, the project would not make a cumulatively considerable contribution to any potential cumulative impact related to substantial increases in population, and the project's cumulative impact would be less than significant.

Development of cumulative projects in in the project area would be expected to result in indirect population growth through provision of increased employment opportunities. Employment growth would be considered substantial if it resulted in housing demand that would exceed planned regional housing development. The proposed project would provide up to 160 temporary construction jobs. It is expected that construction jobs would be filled from the local and/or regional (County) labor force. As workers would be drawn from areas within Los Angeles and Orange Counties to the project site, and their assignment would be temporary, it is assumed that they would commute daily to the site; thus, increased employment as a result of the project would not result in a significant cumulative impact regarding inducing substantial population growth to the project vicinity.

During operation, the proposed project would create up to 30 new permanent employment positions for the oil operations, in addition to the 15 existing employees. The operation of the visitors center and operation and maintenance of the public access trails on the Synergy Oil Field site would also generate 5 additional employees, including 3 full-time employees and 2 volunteers. The proposed project would provide employment opportunities for the local economy, and it is anticipated that the majority of the jobs would be filled by the local labor force. Therefore, the proposed project would not have a significant cumulative impact with regard to inducing substantial population growth to the project vicinity during project operations.

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.11 Public Services

Impact PS-2: The project would not result in the need for new or physically altered facilities in order to maintain acceptable response times for police protection services.

Construction

During the construction activities, the need for police services would increase due to the potential for additional crime and accidents associated with construction sites which may include: theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism.

To deter crime, the proposed project would include security measures such as fencing along site perimeter of the construction sites, lighting during non-construction hours, and security personnel located on site at night during the construction phase. Given that construction activities are temporary and the security measures that would be in place during construction, the proposed project would not substantially increase the demand for Long Beach Police Department's (LBPD's) services. Nor would implementation of the proposed project significantly increase LBPD's response times to either to the project site or the surrounding vicinity.

Therefore, it is not anticipated that the proposed project would substantially increase the service demand for police services in the area.

Operation

During the project operation, the need for police services potentially increase due to the potential for additional crime and accidents associated with more structures and more people on site. Crime and safety issues during project operation may include: theft of building materials and operational equipment, malicious mischief, graffiti, and vandalism.

The proposed project would include security measures such as fencing along site perimeter of all four individual sites, security cameras, and security lighting, which would decrease the likelihood of crime on the project site during operation. There will be a long-term increase of 5 employees, including 3 full-time employees and 2 volunteers, associated with the visitors center on the Synergy Oil Field Site. The increase in the number of employees is considered negligible in terms of the impact on the need for police services, and would not require the construction of a new police station or improvements to the existing station that serves the project site. Although the proposed visitors center would increase the number of daytime visitors on the Synergy Oil Field site, the proposed project would pay fees to compensate for any impacts to police services anticipated from its operation. This includes the City's Police Facilities Impact Fee as part of the project building fees, as well as the Proposition H oil barrel tax that funds police services including salaries, worker benefits and academies. Therefore, it is not expected that the proposed project would result in the need for new or physically altered facilities in order to maintain acceptable response times for police protection.

Finding

Project-related impacts to police protection services would not result in the need for new or altered facilities to maintain acceptable response times; therefore, impact would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

Similar to the proposed project, other projects in the LBFD and LBPD's service area would pay the Fire Facilities and Police Facilities Impact Fees as determined appropriate by LBFD and LBPD, which would help offset any impacts from those projects on fire and police services. Further, any oil-producing projects would be taxed like the proposed project according to Proposition H, which generates funding to support fire and police protection services. According to the most recent 2016 RTP/SCS Growth Forecast, the population in Long Beach is projected to be approximately 484,500 persons by the year 2040. This represents a decrease of approximately 458 persons from the 484,958 persons in 2016; however, the number of jobs in the City is expected to increase to approximately 181,700 jobs by the year 2040 from the current 158,928 jobs (SCAG 2016). Increased property and sales tax from future new developments would increase the City's General Funds, which would also provide funding for any capital improvements necessary to maintain adequate fire protection facilities, equipment, and/or personnel. Furthermore, as with the proposed project, individual development projects pursuant to the City' General Plan would be reviewed by the City and LBFD for consistency with fire code requirements including emergency access as detailed in the City's Municipal Code, and would be required to comply with all applicable IFC and City Municipal Code fire-related regulations in effect at the time building permits are issued. Therefore, compliance with existing regulations pertaining to fees

and fire code would ensure the proposed project in combination with other projects would not result in significant cumulative impacts to fire and police protection services.

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.12 Recreation

Impact RE-1: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated.

Construction

During construction of the proposed project, there would be a temporary increase in construction workers on the project site who would not likely relocate their households as a consequence of working on the proposed project. Therefore, the short-term increased employment of construction workers would not increase demand or use of the existing parks and recreation facilities. It is anticipated that construction workers would not use nearby parks during their lunch break, as lunch breaks are not typically long enough for workers to take advantage of such facilities; however, if construction workers were to use the existing recreational facilities it would only increase use at those facilities for up to 60 minutes a day, which would be considered a less than substantial impact.

Construction of the Class II bikeway improvements and new sidewalks are proposed by the project and would result in temporarily inaccessibility to portions of the bikeway; however, bikeway detour signs would be posted to redirect bike users to utilize other bikeways in the area during this temporary construction period. The streets that would be impacted would be adjacent to the four property sites.

Operation

The proposed project would not introduce any permanent residents to the project area. The proposed project would create up to 30 new permanent employment positions for the oil operations, in addition to the 15 existing employees, for an approximately 40-year time period while the wells are phased out. For the oil production facilities at the Pumpkin Patch and LCWA sites, there would be approximately 40 to 60 total personnel per day, and once all drilling has been completed, the number of on-site employees would be reduced to approximately 4 to 8 full-time employees on each site. As these employees would most likely come from the workforce in the project area, this would not introduce an increased use on the existing parks and recreational facilities in the project area.

The proposed project would also introduce approximately 5 new employees, including 3 full-time employees and 2 volunteers, to the Synergy Oil Field site, as a result of the development of the visitors center, associated parking lot, and public access trail. It is anticipated that the majority of jobs would be filled by the local labor force who would not likely relocate their households as a consequence of working on the proposed project. Accordingly, there would not be a corresponding demand or increased use of the existing parks and recreation facilities. Moreover, recreational opportunities would be provided on site for new employees. Similar to the construction workers, as discussed above, it is anticipated that the employees would not use nearby parks

during their lunchbreak; however, if employees were to use the existing recreational facilities during their lunch break, it would only increase use at those facilities for up to 60 minutes a day.

Additionally, the proposed project would introduce parkland, a public access trail, overlook terrace with picnic facilities, visitors center, and associated parking on the Synergy Oil Field site. The Synergy Oil Field site would be open to public access from dawn until dusk, 7 days a week. This would introduce an anticipated 15,000 to 20,000 visitors to the project site each year. Due to the increased availability of recreational amenities at the Synergy Oil Field site, the proposed project could increase the use of existing recreational facilities in the surrounding area. Proposed improvements to the bikeways and sidewalk improvements along the frontages of the four individual sites would be direct beneficial effects. Therefore, the proposed project would not result in the increased use of existing parks or recreational facilities such that substantial deterioration of these resources would occur or be accelerated. Additionally, the project would expand and enhance recreational opportunities available within the project vicinity. This would be a direct beneficial effect.

Finding

Project construction workers and permanent employees would not generate an increase in demand for park and recreation facilities such that it would result in the accelerated physical deterioration of a park or recreation facilities; therefore, impacts would be less than significant, and no mitigation measures would be necessary.

Impact RE-2: The project would include recreational facilities but would not require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Currently, there are no existing recreational facilities located on the project site. The proposed project would both construct and enhance recreational facilities on site. As described throughout this EIR, the visitors center, public access trail, and associated parking lot would be constructed in areas with the least potential to disturb native habitat and any potentially significant impacts associated with the visitors center, public access trail, and upgraded bikeway would be mitigated to the maximum extent possible. No additional mitigation measures would be needed.

The project includes the construction of a new pedestrian perimeter trail along the Studebaker edge of the Synergy Oil Field site, the relocation of the Bixby Office building and renovation of the building for use as a visitors center and wetlands restoration on the northern portion of the Synergy Oil Field site. The impacts of wetlands restoration and trail construction have been analyzed in other sections of the EIR, including air quality, traffic, and noise. The impacts of renovating the existing Bixby Ranch Field Office building has been analyzed in Section 3.4, *Cultural Resources,* due to its potential historical significance. None of the impacts of the construction work associated with the open space and habitat restoration and construction of these recreational/public access amenities was considered a significant, unavoidable impact, and would, once constructed and operational, provide a beneficial impact with respect to increased recreational opportunities in the City.

Finding

Project-related impacts with the increased availability of recreational amenities would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

The cumulative project area for the consideration of cumulative recreation impacts is the SEADIP area. Although the 16 cumulative projects identified in Table 3-1, List of Cumulative Projects, in the EIR could contribute to a cumulative impact to recreation by increasing the demand for recreational opportunities and facilities, the project could also result in recreational opportunities in the area. As the proposed project would have a less-than-significant impact on recreation, its incremental effects would not be considered cumulatively considerable and, therefore, cumulative impacts on recreation would be less than significant.

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.13 Transportation and Traffic

Impact TRA-1: The project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

Construction

Construction of the proposed project has the potential to affect the transportation system through the hauling of excavated materials and debris, the transport of construction equipment, the delivery of construction materials, and travel by construction workers to and from the project site. Although construction activities would be phased over the course of the overall construction period, the analysis of potential impacts assumed that they would all occur simultaneously, in order to evaluate a worst-case scenario with the maximum number of workers and trucks accessing the project site. This conservative approach yielded a total of approximately 556 daily trips that could be generated by the up to 160 workers (320 daily trips) and up to 118 trucks (236 daily trips) accessing the project site. Therefore, the maximum trip generation associated with construction activity would be approximately 594 daily trips for about 10 days. It should be noted that due to typical construction start and finish times, these trips would occur outside the heavily-congested peak traffic periods and would, therefore, not contribute to delay currently experienced by vehicles traveling through the study area. Additionally, trucks accessing the project site would use City-designated truck routes (e.g., PCH, Bellflower Boulevard, 7th Street) to the extent feasible (LBDPW 2006); the Applicant has agreed to work with City staff to avoid sensitive areas and/or areas of concern to avoid any impacts to the highway network and adjacent properties.

While construction impacts would be less than significant, the City is proposing the following standard Condition of Approval for a Construction Traffic Management Plan (CTMP) for the project. The CTMP shall be submitted to the City's Development Services Department for review, and issuance of demolition, grading, or building permits is subject to approval of the CTMP. The City is proposing the following Conditions of Approval as part of its Site Plan Review procedures:

Condition of Approval TRA-1: Construction Traffic Management Plan

The following conditions are recommended:

- A flagman shall be placed at the truck entry and exit from the project site.
- To the extent feasible, truck trips (i.e., hauling of export and import materials, and deliveries and pick-ups of construction materials) shall be scheduled during non-peak travel periods and coordinated to reduce the potential of trucks waiting to load or unload for protracted periods of time.
- Access shall remain unobstructed for land uses in proximity to the project site during project construction.
- Minimize lane and sidewalk closures to the extent feasible. In the event of a temporary lane or sidewalk closure, a worksite traffic control plan, approved by the City of Long Beach, shall be implemented to route traffic, pedestrians, or bicyclists around any such lane or sidewalk closures.
- A CTMP shall be developed by the contractor and approved by the City of Long Beach. In addition to the measures identified above, the CTMP shall include the following:
    - Schedule vehicle movements to ensure that there are no vehicles waiting off site and impeding public traffic flow on the surrounding streets.
    - Establish requirements for the loading, unloading, and storage of materials on the project site.
    - Coordinate with the City and emergency service providers to ensure adequate access is maintained to the project site and neighboring businesses.
    - Establish hotline operating 24 hours per day, 7 days per week that concerned citizens can contact to lodge construction traffic-related concerns.
    - Maintain a daily log of which trucks and equipment are used on site.
    - Pre- and post-construction surveys of site-adjacent City roadways and properties in order to identify and repair any damage caused by construction activities.

Operation

Operational trip generation characteristics of the proposed project are provided as worst-case estimates and summarized below:

- Oil production facilities would generate a total of 61 daily trips with approximately five trips during the AM and PM peak hours.
- Visitors center would provide about 50 parking spaces for employees and visitors. There is no quantitative information regarding the trips associated with the visitors center; however, the on-site parking supply would not be expected to accommodate a high number of daily vehicle trips, and based on knowledge of operations at similar, nearby visitors centers, it is assumed that the majority of these trips would not occur during the peak traffic hours.
- Drilling of wells – Personnel and ancillary truck traffic would generate 132 to 192 trips per day. Because oil drilling operations occur throughout the day, it is assumed that the majority of these trips would not occur during the peak traffic hours. Once the wells have been drilled, they would require periodic maintenance and workover operations. Vehicle trips associated with these activities are much less than those required during the active drilling process. Consistent with well drilling activities, the majority of these trips would be outside of the peak traffic periods.

Based on the above, the proposed project would not generate 50 or more net new peak-hour trips during the AM and PM peak hours, which is the screening criterion to determine when project-specific traffic impacts are required to be assessed based on the City's guidelines.

Finding

The construction and operation of the proposed project would result in a less-than-significant impact to operating conditions for the existing area roadway system. Implementation of Condition of Approval TRA-1, would further reduce a less-than-significant construction impact. Therefore, no mitigation measures would be necessary.

Impact TRA-2: The project would not conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Construction

Metro is responsible for implementing the CMP for the County of Los Angeles. The CMP for Los Angeles County requires an analysis of any project that could add 50 or more trips to any CMP intersection or more than 150 trips to a CMP mainline freeway location in either direction during either the AM or PM weekday peak hours. The only CMP facility located in the vicinity of the proposed project is the intersection of PCH and 2nd Street/Westminster Avenue, which currently operates at LOS E during both the AM and PM peak hours. As stated above in the discussion of Impact TRA-1, implementation of the proposed project would not generate 50 or more new net trips during the AM or PM peak hours; therefore, the proposed project would not result in a significant impact to a CMP roadway intersection or CMP freeway segment during construction activities. Implementation of Condition of Approval TRA-1 would further reduce this less than significant impact.

Operation

As stated in the discussion Construction impacts above, the only CMP facility located in the vicinity of the proposed project is the intersection of PCH and 2nd Street/Westminster Avenue, which currently operates at LOS E during both the AM and PM peak hours. As stated above in the discussion of Impact TRA-1, implementation of the proposed project would not generate 50 or more new net trips during the AM or PM peak hours; therefore, the proposed project would not result in a significant impact to a CMP roadway intersection or CMP freeway segment during operation of the project.

Finding

Construction and operation of the proposed project would not conflict with the CMP for Los Angeles County and, therefore, would result in a less-than-significant impact. Implementation of Condition of Approval TRA-1, would further reduce the less-than-significant construction impact.

Impact TRA-3: The project would not 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

The proposed project is located within the airport influence area of the Joint Forces Training Base (JFTB) Los Alamitos (OCALUC 2016); however, as established in the *Southeast Area Specific Plan Draft EIR* (PlaceWorks 2016), the project site is not within safety hazard zones or noise contours of the JFTB. Further, the proposed project would not include any height elements that would conflict with height restrictions identified in the Airport Environs Land Use Plan (OCALUC 2016). Therefore, implementation of the proposed project would not result in any impacts to air traffic patterns.

Finding

No impact to air traffic patterns would occur, and no mitigation measures would be necessary.

Impact TRA-4: The project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Construction

Trucks accessing the project site would use City-designated truck routes (e.g., PCH, Bellflower Boulevard, 7th Street) to the extent feasible. Additionally, the Applicant has agreed to avoid sensitive areas and/or areas of concern to avoid any impacts to the highway network and adjacent properties. The implementation of Condition of Approval TRA-1, described above under impact discussion TRA-1, would further reduce this less-than-significant construction impact.

Operation

The proposed project would include the following new driveways:

- **Pumpkin Patch Site:** a new 24-foot-wide access driveway off of Studebaker Road with access to the two-story office building; two new one-way driveways (33.5 feet wide for ingress, 31 feet wide for egress) off Studebaker Road with access to the warehouse and oil production facilities; and
- **LCWA Site:** replacement of the existing driveway with a new 30-foot-wide access driveway off Studebaker Road; a new 30-foot-wide access driveway (right in/right out) off Westminster Avenue.

On-site traffic signing and striping would be implemented in conjunction with detailed construction plans for the project. Sight distance at the project accesses would comply with standard California Department of Transportation and City of Long Beach sight distance standards. The final grading, landscaping, and street improvement plans would demonstrate that sight distance standards are met. Such plans would be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

In addition to the driveways described above, on-site vehicular and pedestrian circulation would be accommodated by the proposed project. The proposed project would also upgrade the streets fronting all four properties of the project site with pedestrian and bikeway improvements.

All of the transportation facilities described above would be designed and constructed to comply with all relevant City standards to ensure that facilities operate safely and efficiently. The City and the Long Beach

Fire Department (LBFD) have adopted roadway standards that preclude the construction of any unsafe design features. Therefore, no significant impact with operation of the proposed project would occur.

Finding

Construction of the proposed project would result in a less-than-significant impact with regard to hazards and incompatible uses. The implementation of Condition of Approval TRA-1, described above under impact discussion TRA-1, would further reduce this less-than-significant construction impact. Compliance with adopted roadway design standards would ensure that operation of the proposed project would result in a less-than-significant impact with regard to hazards and incompatible uses.

Impact TRA-5: The project would not result in inadequate emergency access.

Construction

Construction activities for the proposed project would generate truck trips and employee trips, which could temporarily increase the daily traffic volumes on local roadways and intersections; however, as described above in the discussion of Impact TRA-1, construction-related truck and employee trips would occur outside the heavily-congested peak traffic hours and would, therefore, not contribute to delay currently experienced by emergency vehicles traveling on PCH or on 2nd Street/Westminster Avenue.

Construction staging would occur primarily on site and would not be expected to disrupt access to nearby uses. No road closures are anticipated. While roadway closures are not anticipated, any work within the existing right of way would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the California Manual on Uniform Traffic Control Devices (MUTCD) (Caltrans 2017). As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers. The implementation of Condition of Approval TRA-1, described above under impact discussion TRA-1, would further reduce this less-than-significant construction impact.

Operation

The proposed project would be designed and constructed in accordance with all applicable LBFD design standards for emergency access (e.g., minimum lane width and turning radius). Compliance with these codes and standards is ensured through the City's and LBFD's development review and building permit process. Therefore, no significant emergency access impacts would occur with operation of the proposed project.

Finding

Project-related impacts to emergency access would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

Cumulative traffic impacts are generated when the proposed project, combined with traffic generated by complete buildout of the City's General Plan, contributes to unacceptable operating conditions on study area roadways. A significant cumulative impact would be identified when a facility is projected to operate below

the LOS standards due to cumulative future traffic in combination with project-related traffic increases. The proposed project would not generate 50 or more net new peak-hour trips, which is the screening criterion for which impacts are required to be assessed based on the City's guidelines. As such, the operation of the proposed project would result not result in a cumulatively considerable impact to the performance of nearby roadways (less than significant).

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.14 Utilities and Service Systems

Impact UT-1: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Construction

During project construction activities a minimal amount of wastewater would be generated by construction workers and collected by portable toilet facilities. All wastewater generated in portable toilets would be collected by a permitted portable toilet waste hauler and appropriately disposed of at one of the County identified liquid waste disposal stations. These waste disposal stations are permitted by the Los Angeles Regional Water Quality Control Board (LARWQCB).

Operation

The majority of wastewater generated by the proposed project would be saline water produced as a result of oil extraction operations. In addition, some wastewater is generated during the processing of the extracted oil, largely through the cleaning of oil processing equipment. Currently, the produced water and processing water is disposed of into the sanitary sewer system for treatment at Los Angeles County Sanitation District (LACSD) treatment facilities. The proposed project would change this practice by installing injection wells on the Pumpkin Patch and LCWA sites. The produced water and processing water would be treated and injected back into the oil production zones. The re-injection would remove this wastewater from the current practice of discharge to the sewer system to the LACSD treatment facilities. This would eliminate the potential to conflict with Regional Water Quality Control Board (RWQCB) wastewater treatment requirements and would result in no impact.

Operation of the proposed visitors center at the Synergy Oil Field site has the potential to result in a nominal increase of the amount of sanitary wastewater generated due to the use of the visitors center facilities. Sanitary wastewater generated by the visitors center would be treated at the existing LACSD treatment facilities. LACSD has been issued a facility-specific NPDES permit by the LARWQCB. Waste discharge requirements (WDRs) for the proposed project are based on all applicable State and federal regulations, policies, and guidance. Although the volume of wastewater would nominally increase, the nature of wastewater disposed to the sanitary sewer system would remain unchanged and would, therefore, still be acceptable under the existing site discharge requirements. The proposed project would continue to be served by existing sewer systems located within public streets and rights-of-way and the LACSD treatment facilities.

The transfer of oil production operations personnel to the Pumpkin Patch site would relocate the existing sanitary wastewater source from the Synergy Oil Field to the Pumpkin Patch site. The sanitary waste would still be discharged to the same sewer distribution system and to the same LACSD treatment facilities, all under the same discharge requirements and regulations.

Finding

Project-related impacts related to wastewater treatment requirements would be less than significant, and no mitigation measures would be necessary.

Impact UT-2a: The project would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The current operational water use is about 0.15 afy. The following construction activities would require water:

- Installation of oil production wells and water injection wells
- Plugging and abandonment of existing wells
- Hydrostatic testing of new pipelines and storage tanks
- Construction of new facilities (buildings, well cellars, pads for storage tanks, oil processing equipment, and associated infrastructure)
- Cleaning equipment and dust suppression

The following operational activities would require water:

- Routine processing of oil
- Irrigation of the vegetation installed for the wetlands habitat restoration for the first two years
- Visitors center and the Pumpkin Patch Operations Building

Water for construction and operations would be provided by the Long Beach Water Department (LBWD). The projected water use for construction activities and operations that would be acquired from the LBWD over the next 60 years is summarized in Draft EIR Table 3.17-4, Summary of Projected Annual Water Usage. The maximum combined construction and operations water use would be about 124 acre-feet from the third year through eleventh year when oil wells would be constructed at the Pumpkin Patch and LCWA sites. Water use would be less in all other years. The LBWD expects to have at least 76,983 afy of available surplus water, which exceeds the needs of the proposed project for any year.

The proposed project would continue to receive water supplies through the existing water lines that serve the project area. Water supply pipelines would be installed to connect the Synergy Oil Field site, the Pumpkin Patch site, and the LCWA site to existing water supply pipelines in adjacent roadways. The City Property site would not require water service. Although construction of the on-site public water main and distribution lines would be required to support the operations facility, no extensions or expansions to the water pipelines supplying the project site would be required. The necessary water supply line improvements are included as part of the proposed project and would not result in any physical environmental effects beyond those identified in the EIR.

Finding

Although the proposed project would result in an increased volume of water used for some years, the proposed project would not require or result in the construction of new water facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, and impacts would be less than significant. No mitigation measures would be necessary.

Impact UT-2b: The project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Wastewater Treatment Facilities

Construction

Drilling wells for the proposed project would require the use of water for mixing the drilling mud; however, upon completion, the drilling mud would be sent off site for disposal to a landfill permitted to accept drilling mud. The mud would not be sent to a wastewater treatment facility.

All wastewater generated during construction, including water from washing down trucks, equipment, and concrete construction pads, would be stored on site within temporary storage tanks. These tanks would store all wastewater and would be periodically hauled off site by vacuum trucks. Construction workers would use portable sanitary units during construction activities for the proposed project. Wastewater generated during construction of the proposed project would be minimal and would not require the construction of new wastewater treatment facilities. After settling out the solids, the wastewater would be sent to the LACSD treatment facilities for treatment and disposal. The LACSD treatment plants have capacity to accommodate this increase. Therefore, construction of new or expanded facilities would not be required to accommodate the construction of the proposed project and no significant impact would occur.

Operation

Currently, the majority of wastewater associated with the project site is the saline water produced as a result of oil extraction operations. This produced water is currently conveyed to the sanitary sewer system for treatment at LACSD treatment facilities. The proposed project would no longer convey saline water into the sewer system. Instead, the produced water would be injected back into the oil production zones. This injection practice would decrease the volume of wastewater currently discharged to the sanitary sewer system.

In addition, area drains on the Pumpkin Patch and LCWA sites would be routed to the well cellars, which would provide the capacity to contain a 25-year 24-hour rainstorm. The stormwater would be processed through into the facility's water treatment system and then injected into the oil production zones, preventing any on-site rainfall from being discharged from the facilities. Stormwater that accumulates within the curbed areas around process equipment would be held within the curbed area until it can be visually inspected before being drained to the well cellars, processed through the water treatment system and then injected into the oil production zones. Similarly, stormwater that accumulates within the containment walls around the storage tanks would be held until it can be pumped to the water treatment system and then injected into the oil production zones.

Although the volume of sanitary wastewater (e.g., toilets, washrooms) would increase due to the increase of employees and by the public using the visitors center, such an increase can be accommodated by the LACSD treatment plants.

Because of the comparatively large reduction in waste water generated from oil production, there would be no requirement for the construction of new or expanded wastewater treatment facilities to serve the proposed project. Additionally, the existing sewer lines are sized to accommodate the volume of wastewater produced from the project. Because construction of new or expanded facilities is not required to accommodate the proposed project and the overall volume of wastewater would decrease, there would be no operational impacts associated with the provision of these facilities to serve the project.

Finding

There would be no impact to wastewater treatment facilities, and no mitigation measures would be necessary.

Impact UT-3: The project would not require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.

Construction and Operation

Stormwater runoff from the area around the visitors center of the Synergy Oil Field site would be routed to bioretention basins that would control stormwater flow rates to be equal or less than the pre-developed condition. The northern portion of the Synergy Oil Field site would be restored where stormwater would flow naturally into the restored wetlands and ultimately into the Los Cerritos Channel. The proposed drainage patterns around the visitors center of the Synergy Oil Field site would be designed to have stormwater runoff sheetflow into swales, gutters, and biofiltration BMPs before discharging into the existing City-wide storm drain system. Per the recommendations of the project LID Plan, water quality BMPs would be implemented on all individual sites except the City Property site.

All stormwater on the Pumpkin Patch and LCWA sites would be routed to the well cellars designed to contain a 25-year 24-hour rainstorm event. The stormwater would then be pumped into the facility's on-site water treatment system to ultimately be injected into the oil reservoirs, preventing any on-site rainfall or stormwater from being discharged from the Pumpkin Patch and LCWA sites.

Therefore, the project would not require the expansion of any off-site stormwater drainage facilities. The construction of the on-site stormwater drainage facilities would be designed in accordance with the City Stormwater Manual and MS-4 Permit requirements.

Finding

With the addition of on-site injection of stormwater (Pumpkin Patch and LCWA sites), implementation of the new BMPs proposed within the LID Plan, and compliance with applicable regulatory requirements, impacts related to the need to construct or expand stormwater drainage facilities would be less than significant, and no mitigation measures would be necessary.

Impact UT-4: The project would have sufficient water supplies available to serve the project from existing entitlements and resources.

As discussed above in Impact UT-2a, the existing public water supply would have sufficient available surplus water supplies compared to the maximum 1-year needs of the project.

Finding

Impacts related to water supply would be less than significant, and no mitigation measures would be necessary.

Impact UT-5: The project would result in a determination by the wastewater treatment provider that would serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Construction

Currently, wastewater flows from the Synergy Oil Field and City Property sites are conveyed to existing LACSD trunk sewer lines; no wastewater is currently generated at the Pumpkin Patch and LCWA sites. Wastewater generated during construction, including water from washing down trucks, equipment, and concrete construction pads would be stored on site within temporary storage tanks. Tanks would be used to store all wastewater to be hauled off site periodically by vacuum trucks. Hydrostatic test water would be acquired from the LBWD, and would be stored and reused on site to the extent possible. Then the water would be routed to the on-site injection wells and not routed to the sanitary sewer system. Wastewater generated during construction activities would be nominal compared to the 425 mgd capacity of the JWPCP and LBRP treatment facilities of the LACSD. Therefore, the construction of the proposed project would not result in substantial capacity impacts to LACSD and impacts related to the provision of wastewater treatment in addition to LACSD's existing commitments.

Operation

As discussed above in Impact UT-2b, the majority of currently generated wastewater is produced water from oil extraction operations. The project would install injection wells that would return this produced water to the oil production zones, thus eliminating this wastewater source. This would reduce the volume of wastewater produced by the site by approximately 0.5 mgd or 566 afy. Wastewater from facilities safety showers, wash down connections, and facility operations would be also sent to the injection wells. Wastewater generated from on-site employees and recreational visitors to the visitors center would be nominal compared to the 425 mgd capacity of the combined JWPCP and LBRP treatment facilities and no new or expanded facilities would be needed. Therefore, because the proposed project would result in an overall decrease in the volume of wastewater, there would be no impact to the operational capacity of the LACSD wastewater treatment facilities.

Finding

Project-related impacts regarding the adequacy of the wastewater treatment provider to serve the proposed project's demands in addition to their existing commitments would be less than significant, and no mitigation measures would be necessary.

Impact UT-6: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Construction

Demolition and construction activities would generate solid waste from the demolition of existing structures (the existing oil wells, piping, and associated infrastructure to be removed from the Synergy Oil Field and City Property sites); the previously landfilled waste to be removed from the Pumpkin Patch site, if needed; and construction activities at the Pumpkin Patch site, LCWA site, and the oil and utility pipeline connecting the Pumpkin Patch and LCWA sites. The solid waste would include metals, concrete, asphalt, wood, cardboard, glass, plastics, soil, and other materials.

The majority of the metals waste would be recycled at local metals recyclers. Some other solid waste may also be recycled such as asphalt, concrete, and the boxes and crates used in the shipment of materials, depending on the nature of the material. For example, asphalt plants would be unlikely to accept asphalt mixed with soil. Consequently, it is anticipated that some of the listed demolition and construction waste may not be acceptable for recycling. The types and volumes of solid waste anticipated to be sent for disposal at landfills is summarized in Draft EIR Table 3.17-5, Anticipated Volumes of Solid Waste for Landfill Disposal During Construction. The anticipated volumes conservatively assume that all of the landfill material at the Pumpkin Path would be removed.

The five landfills that can serve the project would have the capacity to accept all of the solid waste. Therefore, construction and demolition activities of the proposed project would not result in the need to expand the existing landfill facilities or construct a new landfill facility. Contaminated soil would be segregated and disposed of at the Kettleman Landfill, which is permitted to accept hazardous waste. The Kettleman Landfill is in the process of expanding its hazardous waste unit capacity by an additional 4.9 million cubic yards, which is anticipated to provide an additional 8 to 9 years based on the typical rate of hazardous waste disposal (DTSC 2014).

Operation

Operation and maintenance of the proposed project would result in minimal trash generation, mainly personal waste generated by operation and maintenance crews. The new office building would recycle waste such as pallets, cardboard and paper boxes, paper, plastics, scrap steel, scrap aluminum, and scrap wire. Other office-type trash and rubbish would be collected in waste bins and disposed of by Long Beach waste haulers. The typical volume of operations waste that would be sent for disposal at an off-site landfill is anticipated to be about 13 tons per year. The project facilities would also generate solid waste from oil and gas production operations, primarily solids brought up from production wells during the extraction process. This material would be transported off site for further processing, likely to a petroleum processing facility.

As discussed above, the five landfills would have the capacity to accommodate the amount of trash generated by the proposed project. The proposed project would not result in the need to expand the existing landfill facilities or construct a new landfill facility.

Finding

Construction and operational activities would result in less-than-significant impacts related to landfill facilities, and no mitigation measures would be necessary.

Impact UT-7: The project would comply with federal, state, and local statutes and regulations related to solid waste.

Construction

As previously discussed, the project would generate various materials that would be considered solid waste. A majority of this material would consist of non-hazardous materials that would be acceptable at the five landfills that can serve the project under the waste acceptance criteria in their current operating permits. As previously discussed, the three landfills that can serve the project have the daily and total available capacity to accept the solid waste that would be generated from operation of the proposed project. There are two sources of solid waste that may require disposal as a hazardous waste at a disposal facility permitted to accept hazardous waste.

- Soil at the Synergy Oil Field and the City Property sites is currently being investigated (tested) for the presence of contaminants in soil at concentrations above screening levels. If present, contaminated soil would be segregated and disposed of at the Kettleman Landfill, which is permitted to accept hazardous waste.
- Pipeline segments that exceed action levels for naturally occurring radioactive materials would be segregated from other materials for handling, disposed as low-level radioactive waste, and hauled to a facility designed to accept these wastes, likely the landfill in McKittrick, California.

For all remaining solid waste, the project would comply with all City and County construction and demolition requirements during construction of the proposed facilities. All non-hazardous solid waste would be hauled off site by truck to one or more of the previously listed solid waste landfills. The proposed project would comply with all federal, State, and local statues related to solid waste disposal.

Operation

The City is required to comply with the California Integrated Waste Management Act of 1989, requiring diversion of solid waste from landfills through reuse and recycling. The project would be required to recycle during its operation. As previously discussed, any recyclable materials would be segregated and sent to recycling facilities permitted to recycle the materials. Materials that cannot be recycled would be sent to disposal facilities licensed to accept the solid waste.

Finding

Project-related impacts regarding compliance with solid waste regulations would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

Cumulative developments within the urban and developed areas of the City that are served by the JWPCP or LBRP would consist of infill and redevelopment projects. Cumulative development could also include industrial uses that could include similar uses to those that would be implemented by the proposed project. These similar land uses are not expected to discharge wastewater that contains harmful levels of toxins beyond the regulations of the LARWQCB, and all effluent would comply with the wastewater treatment standards of the RWQCB. Similar to the proposed project, industrial facilities that have the potential to discharge hazardous wastewater would require specific permitting by the RWQCB prior to connecting to the sewer system, which would ensure that flows are within the regulations of the LARWQCB. Therefore, impacts

related to the potential for cumulative projects to exceed wastewater treatment requirements of the LARQCB would be less than significant.

Implementation of the proposed project would not generate wastewater that contains harmful levels of toxins and all effluent would comply with the wastewater treatment standards of the LARWQCB. Therefore, the project would not generate wastewater that could combine with wastewater from related projects to result in an exceedance of the LARWQCB regulations. The project would result in a less than cumulatively considerable impact to wastewater treatment requirements of the LARWQCB (less than significant).

Cumulative projects in the area would result in the need for new or upgraded water infrastructure. The construction activities associated with new or upgraded water facilities, if needed in by future cumulative projects, would be analyzed at such time discretionary approvals for those projects are considered. The proposed project has evaluated infrastructure needs for its water service and has included connections to existing water service pipelines to ensure that implementation of the project would be served by adequate infrastructure. Because the project would not require the construction of water facilities beyond the improvements that are part of the project, the project would not have a cumulatively considerable contribution to potential significant cumulative impacts associated with water infrastructure (less than significant).

The proposed project would reduce the volume of wastewater sent to the sewer system. Therefore, the project would not have a cumulatively considerable contribution to potential significant cumulative impacts associated with wastewater infrastructure (less than significant).

Groundwater rights are adjudicated in the Basin, which has regulated groundwater supplies. Management of the adjudicated Basin and the prescriptive allowable pumping rights for LBWD and other agencies that access the groundwater basin reduces the potential of incremental increases to groundwater pumping that could result in a cumulatively considerable impact on the groundwater supplies. In addition, every water purveyor provides projections for water supply and demand through 2040 that includes imported water and recycled water sources. By using SCAG growth projections, each water supply agency within the project area should adequately be able to monitor supplies and plan accordingly. As a result, cumulative development would result in less than significant cumulative impacts to water supply. Because the proposed project as well as cumulative projects would result in less than significant impacts, the implementation of the proposed project would not result in cumulatively considerable impacts to water supply (less than significant).

Because the cumulative area is urban, developed, and is generally covered with impervious surfaces, development of cumulative projects would not result in a substantial increase in impervious surfaces in the area or substantially increase stormwater and runoff flows through the stormwater drainage system. In accordance with state and regional MS4, LID, and County SUSWMP regulations, projects are required to maintain pre-project hydrology, such that no net increase of off-site stormwater flows would occur. City of Long Beach MS4 Permit conditions require a hydrology/drainage study to demonstrate that all runoff would be appropriately conveyed and not leave the project site at rates exceeding pre-project conditions, prior to receipt of necessary permits. As a result, increases of runoff from cumulative projects that could cumulatively combine to impact stormwater drainage capacity would be less than cumulatively significant (less than significant).

Areas surrounding the project area are generally covered with impervious surfaces and development of cumulative projects would not substantially increase the amount of impervious surfaces and runoff, such that

existing storm drains would be overwhelmed because all development projects would be required to comply with the same SUSWMP, LID, and RWQCB permit requirements to retain the difference between the volume pre- and post-construction runoff volume. In addition, implementation of the proposed project would include installation of drainage inlets that lead to bioretention BMPs. The drainage facilities would help to capture, retain, and utilize some surface water runoff, which would reduce the amount of surface runoff in the storm drains. Overall, with implementation of new drainage/bioretention BMPs and compliance with applicable regulatory requirements, the project's contribution to cumulative impacts related to stormwater drainage capacity would be less than cumulatively considerable (less than significant).

The geographic scope of cumulative analysis for landfill capacity is the service area for the Olinda Alpha Landfill, Frank R. Bowerman Landfill, El Sobrante Landfill, Waste Management Simi Landfill, Azusa Land Reclamation, and Kettleman Landfill, which serve the project area. These five landfills are projected to remain open until about 2030 to up to 2053. The lifespan of these landfills include the existing and projected solid waste that is anticipated from the growth in the County. As a result, impacts from future growth on landfill capacity would be less than cumulatively significant. Although the proposed project would contribute solid waste to the landfills, the addition of up to approximately 103 tons of demolition and construction solid waste and 13 tons of operational solid waste per year would not substantially impact the permitted capacity of the landfills. The increase in solid waste from operation of the proposed project in combination with planned growth within the County would not require construction of a new landfill or expansion of the existing landfill to meet capacity needs. Additionally, disposal of solid waste generated by cumulative development would be subject to the requirements set forth in AB 939, AB 341, and the policies within the Los Angeles County Integrated Waste Management Plan. As a result, the project's contribution to cumulative impacts on the capacities of the landfill facilities would be less than cumulatively considerable and cumulative development would result in no impacts to solid waste statutes and regulations (less than significant).

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.3.2.15 Energy Consumption

Impact EN-2: The project would not increase demand on local and regional energy supplies, resulting in the need for additional capacity.

Construction and operation of the project would require energy primarily for the use of off-road equipment, on-road trucks and vehicles, and operations of the visitors center and Pumpkin Patch and LCWA sites. The estimated fuel consumption for the project would require a very small fraction of the state's annual fuel usage.

While construction and operation of the project would result in an increase in fuel demand as compared to existing conditions, according to the USEIA International Energy Outlook 2016, the global supply of crude oil, other liquid hydrocarbons, and biofuels is expected to be adequate to meet the world's demand for liquid fuels through 2040 (USEIA 2016e). As of December 31, 2015, California had approximately 2,333 million barrels (approximately 98.0 trillion gallons) of crude oil left in the State's reserves (USEIA 2017a). The project's fuel demand would not represent a substantial fraction of the available energy supply in terms of equipment and transportation fuels and would not substantially affect existing local and regional supply and capacity for the

foreseeable future. Furthermore, construction and operation of the project would use equipment that would be consistent with the energy standards applicable to heavy-duty equipment including limiting idling fuel consumption and utilizing fuel-efficient heavy-duty equipment that meet the stringent Tier 4 standards that reduce emissions and fuel consumption. The turbines and microgrid system means that the project would provide almost all of its own electricity and, therefore, would avoid capacity impacts on local or regional energy suppliers. The limited amount of power not generated by the turbines would be supplied by SCE and would be fraction of SCE's and the State's total usage. The project would provide crude oil supplies to refineries in the region thus providing net additional oil energy supplies.

Finding

Construction and operational energy impacts on supplies and infrastructure would be less than significant, and no mitigation measures would be necessary.

Cumulative Impacts

The State has adopted numerous regulations to improve energy efficiency from all sectors of the economy including the transportation sector. Transportation energy end-users would be required to utilize vehicles that meet increasingly stringent fuel economy standards. In addition, the State has promulgated measures, such as the anti-idling measure and emissions standards for off-road equipment and on-road vehicles and trucks. Other individual projects located within the State would be required to comply with these regulations. Compliance with these regulations would ensure cumulative projects achieve improved energy efficiency, minimize the wasteful and inefficient use of energy, and not create substantial additional demand for energy beyond the demand that is already planned for as a result of general growth in the State's population and economy. As a result, cumulative impacts would be less than significant.

Finding

The cumulative impacts of the project would not be cumulatively considerable; therefore, cumulative impacts would be less than significant, and no mitigation measures would be necessary.

2.4 Findings on Impacts Mitigated to Less than Significant

The following summary describes impacts of the proposed project that, without mitigation, would result in significant impacts. Upon implementation of the mitigation measures provided in the Draft EIR, these impacts would be less than significant.

2.4.1 Aesthetics

Impact AES-3: The project would not result in substantial degradation of the visual character or quality of the site.

Construction

Construction activities would temporarily alter the general character and quality of the project sites. For the City Property site, the only public views of the City Property site are from the San Gabriel River Bike Trail and 2nd Street and, given the broad size of the City Property site, much of the construction activities would be shielded from view. Mitigation Measure AES-1, below, would serve to relieve the visual distractions typically

associated with construction activities and commonly encountered in developed areas, particularly during excavation and foundation construction. This mitigation would also serve to reduce the potential for construction equipment traveling along local roadways and inadvertently depositing dirt and debris on the streets by requiring the staging of all construction equipment on the project sites and reducing the amount of mud and debris that leaves the sites.

Operation

Development of the proposed project would change views from public viewpoints; however, a majority of the viewpoints would be enhanced by the proposed project, and the overall visual character and quality of the site would increase with the restoration of native vegetation and wetland habitat and consolidation of oil production facilities. In order to minimize noise and visual impacts during drilling, the drilling rig on the Pumpkin Patch and LCWA sites would be enclosed in a camouflaged sound-abatement shell.

Synergy Oil Field Site

View 1: View from Pacific Coast Highway Looking Northeast toward the Synergy Oil Field Site

Over time as non-native plants, aboveground pipelines, tanks, and wells are removed a broader panoramic view of the surrounding area would be visible from PCH. Views of the restored wetlands and associated vegetation would replace existing views of non-native palm trees and oil wells and pumps located on the Synergy Oil Field site. Therefore, the proposed project would improve views of the surrounding areas. The proposed project would not alter or degrade the scenic quality of the view; instead it would enhance the quality and character of the project site as seen from PCH looking east.

View 2a: View from 2nd Street Looking North toward the Synergy Oil Field Site

Over time the aboveground pipelines, powerlines, and non-native vegetation would be removed and oil field production equipment would be plugged and abandoned or removed. The Bixby Ranch Field Office building would be relocated and raised, a surface parking lot, an overlook terrace with picnic facilities, and a trail would be constructed, and native trees and other native vegetation would be planted. The changes proposed as a part of the project would serve to enhance the scenic value and views of the Los Cerritos Wetland complex and would improve the visual character and quality of the project site.

View 2b: View from 2nd Street Looking North toward the Synergy Oil Field Site

The Bixby Ranch Field Office structure would be relocated as the visitors center and raised 5 feet to the middle ground of the viewpoint. There would be a parking lot and roadway to the left of the visitors center that would blend in with the natural landscaping of the site. Thus, the changes proposed as a part of the project would serve to enhance the scenic value and views of the Los Cerritos Wetland complex and would improve the visual character and quality of the project site.

View 3: View from Studebaker Road Looking West toward the Synergy Oil Field Site

Over time, existing non-native, invasive vegetation would be removed, native species would be planted, and wetland habitats would be restored, which would increase the quality of the scenic vista as seen from Studebaker Road and restore and enhance the visual character and quality of the Los Cerritos Wetland complex.

View 4: View from Loynes Drive Looking South toward the Synergy Oil Field Site

Over time, the non-native vegetation and chain link fence that borders the northern boundary of the site would be removed and planted native vegetation and wetland habitat would grow which would serve to enhance the existing scenic views of this portion of the Los Cerritos Wetland complex.

LCWA Site

Views 5 and 6: View from Studebaker Road Looking East toward the LCWA Site and View from Westminster Avenue (2nd Street) Looking North toward the LCWA Site

The proposed project would introduce streetscape and landscape features, including the introduction of a pedestrian sidewalk around the site, streetscape planting, and a new block wall around the perimeter of the LCWA site. The streetscape planting would, over time, provide a natural buffer and obscure views of the block wall. The proposed streetscape improvements would be the prominent focal point and would be visible to travelers on Studebaker Road and Westminster Avenue. The motorists' sensitivity to change in the viewshed is considered low to moderate. Compared to existing conditions, project implementation would enhance the visual quality of the LCWA site from viewers traveling along Studebaker Road and Westminster Avenue. In order to minimize noise and visual impacts during drilling, the 160-foot drilling rig that would move from well to well would be enclosed in a camouflaged sound-abatement shell. Occasionally, a 120-foot workover rig may be utilized on site as required for well maintenance. The collapsible workover rig would be stored on site and would only be visible to the public when in use. When visible, the view of the 120-foot workover rig would not substantially degrade the overall aesthetic character or quality of this viewshed.

City Property Site

View 7: View from 2nd Street Looking South toward the City Property Site

Over time, the pipeline infrastructure and non-native vegetation would be removed, oil wells and related infrastructure would be plugged and abandoned and/or removed, and areas would be remediated and/or revegetated. Overall, the City Property site would appear less developed the visual character and quality of the site would improve.

Pumpkin Patch Site

View 8: View from the San Gabriel River Bike Trail Looking Northwest toward the Pumpkin Patch Site

Views of the San Gabriel River in the foreground would not change with implementation of the proposed project. Additionally, a wall and landscape buffer would replace views of non-native habitat and existing structures in the middle ground. Overall, development on the Pumpkin Patch site would generally be consistent with the existing character of the site and its surroundings.

Views 9 and 10: View from Pacific Coast Highway Looking East and Looking North toward the Pumpkin Patch Site

Views from this vantage would include a view of a two-story office building and a warehouse in the distance, associated surface parking lot, streetscape planting along the eastern side of PCH, and an 18-foot-high screening wall, which would be hidden from view by landscaping on either side of the office building. The view looking north would also include a view of an entry monument welcoming visitors to the city. The warehouse would be buffered from the street by an approximately 30 feet wide vegetation buffer of trees and

shrubs. The office building and adjacent warehouse would consist of modern architecture, utilizing contemporary architectural materials. While implementation of the proposed project would obscure potential views from this vantage point, there are no significant scenic vistas in the background that would be substantially impacted. Furthermore, this type of development would be consistent with the commercial development that abuts the site to the north. Similar to the LCWA site, the 160-foot drilling rig would be enclosed in a camouflaged sound-abatement shell and a 120-foot-high workover rig may be utilized as required for well maintenance. The collapsible workover rig would be stored on site and would only be visible to the public when in use.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure AES-1:** Construction contractors shall be required to strictly control the staging and cleanliness of construction equipment stored on the project site. Staging areas shall be screened from view at street level with solid wood fencing or green fence. Prior to the issuance of a building permit, the Applicant shall submit a Construction Staging, Access, and Parking Plan to the City of Long Beach Planning and Development Services Department for review and approval. Construction workers would be required to park on the Synergy Oil Field site and would be bussed to their respective construction site. Construction worker vehicles and work vehicles shall be kept clean and free of mud and dust before leaving the project site. Project contractors shall be required to sweep surrounding streets used for construction access on a daily basis to keep them free of construction-related dirt and debris.

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.1-38. This change is identified in the form of mitigation measure AES-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact AES-4: The project would not create a new source of substantial light or glare that would adversely affect day or night views in the area or that would substantially impact other people or properties.

Construction

Construction and restoration activities associated with the proposed project would create new sources of light or glare, as lighting would be used during early morning and evening work activities. Construction activities on the project site would occur between 7:00 a.m. and 7:00 p.m. and in compliance with LBMC Section 8.8.202, Construction Noise Regulations. Thus, construction lighting would be limited to a few hours a day, with most lighting use occurring during hours when the project site is partially lighted by natural dawn or dusk conditions. A minimal amount of glare could result from reflection of sunlight off windows of trucks, but this would be negligible and would not affect daytime views in the area given that there are no light-sensitive uses near the project site. Construction lighting would be aimed toward the activity and would be mostly contained within the area where work would be occurring; however, construction lighting still could result in substantial light and glare during the evening on areas with direct views of the site if lighting is not controlled and directed appropriately.

Security lighting would be provided from dusk to dawn on all construction sites, but this lighting would be minimal, restricted to the project site, and would not exceed the level of existing night lighting levels in urban areas. Mitigation Measures AES-2 would also ensure that security lighting does not pose undue light and/or glare.

Operation

The proposed project would introduce new light sources associated with security, safety, and wayfinding. While the proposed project would introduce new sources of light, it should be noted that the four individual sites that comprise the project site are located in an urban environment. Thus, lighting is not unusual in the project vicinity. Nevertheless, in compliance with the standards set forth in the SEADIP (PD-1), all lighting would be directed downward and exterior lighting would be designed and located in such a way that it does not project off site or onto adjacent uses. Automatic timers would be programmed to maximize personal safety at night while conserving energy and would be reset seasonally to match the flux of dusk and dawn. In addition, the proposed project would be required to comply with LBMC Section 21.41.259, which requires that all parking area lighting be directed and shielded to prevent light spillover to adjacent properties. Compliance with these standards would be implemented through the City's development review and building plan check process and would ensure that impacts from light and glare are reduced to a less-than-significant level.

Mitigation Measure

The following mitigation measure is included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure AES-2: Lighting Plan.** Prior to issuance of a grading permit for each site, a Lighting Plan for the site shall be developed and submitted to the City of Long Beach that requires all exterior lighting to be directed downward and focused away from adjacent sensitive uses and habitats to encourage wayfinding and provide security and safety for individuals walking to and from parking areas and working at the oil facilities on the Pumpkin Patch site and the LCWA site. Compliance with the approved Lighting Plan shall be implemented through the City's development review and building plan check process.

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.1-39. This change is identified in the form of mitigation measure AES-2. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Cumulative Impacts

Scenic vistas considered in this analysis include the Los Cerritos Wetlands complex, Steamshovel Slough, Los Cerritos Channel, San Gabriel River, and the San Gabriel Mountains. Construction of the proposed project would not have an adverse effect on any of the scenic vistas. No projects have been identified adjacent to the project site that would cumulatively combine to have a substantial adverse effect on a scenic vista during construction activities. Thus, cumulative impacts on the identified scenic vistas would be less than significant.

PCH has been identified by Caltrans as an "Eligible State Scenic Highway," but has not been designated as an Official State or County Scenic Highway (Caltrans 2016). Both the Synergy Oil Field and Pumpkin Patch sites are visible from PCH; however, given the disturbed and undeveloped nature of the Pumpkin Patch site, there are no scenic resources on the site and the scenic resources identified on the Synergy Oil Field site (Bixby Ranch Field Office, Steamshovel Slough, and the remaining wetland areas north of the slough) are not visible from PCH. Thus, the proposed project would not result in construction impacts on scenic resources within a scenic highway. No projects have been identified adjacent to either the Synergy Oil Field or Pumpkin Patch site that would cumulatively combine to have a substantial adverse effect on a scenic resource within a scenic highway during construction activities. Thus, cumulative impacts on scenic resources within a designated scenic highway during construction would be less than significant.

While construction activities would alter the general character and quality of the project site, Mitigation Measure AES-1 would serve to relieve the visual distractions typically associated with construction activities and would reduce the potential for construction related dirt and debris on nearby roadways. With implementation of this mitigation measure, the proposed project's visual character impacts would be reduced to a less than significant level. No projects have been identified adjacent to the project site that would cumulatively combine to substantially degrade the visual character and quality of the project site during construction activities. Thus, cumulative impacts on visual character and quality of the project site during construction would be less than significant.

While the proposed project would create new sources of light and glare during construction activities, it would be required to comply with LBMC Section 8.8.202, Construction Noise Regulations, which would limit the hours of construction to primarily daytime hours. Thus, light and glare impacts from the proposed project during construction would be less than significant. No projects have been identified adjacent to the project site that would cumulatively combine to result in lighting impacts during construction activities. Thus, light and glare cumulative impacts during construction would be less than significant.

During operation of the proposed project, existing oil production facilities and invasive species would be removed and native vegetation and wetland areas would be restored on the Synergy Oil Field and City Property sites and oil production facilities would be consolidated onto the Pumpkin Patch and LCWA sites. Overall these activities would not obstruct any of the scenic vistas and would likely enhance the scenic vista of the Los Cerritos Wetlands complex. Thus, impacts on scenic vistas on the project site during operation would be less than significant. No projects have been identified adjacent to the project site that would cumulatively combine to have a substantial adverse effect on a scenic vista during operational activities. Thus, cumulative impacts on the identified scenic vistas would be less than significant.

PCH has been identified as a state- and county-eligible scenic highway and both the Synergy Oil Field and Pumpkin Patch sites are visible from PCH. Given that no scenic resources have been identified that would be visible from PCH, the proposed project would not result in operational impacts on scenic resources within a scenic highway. No projects have been identified adjacent to the Synergy Oil Field or Pumpkin Patch sites that would cumulatively combine to have a substantial adverse effect on a scenic resource within a scenic highway during operation. Thus, cumulative impacts on scenic resources within a designated scenic highway during operation would be less than significant.

Development of the proposed project would change views from public viewpoints; however, a majority of the viewpoints would be enhanced by the proposed project, and the overall visual character and quality of the

project site would increase with the restoration of native vegetation and wetland habitat and consolidation of oil production facilities and, thus, the proposed project would not degrade the existing visual character or quality of the project site or its surroundings, and impacts would be less than significant. No projects have been identified adjacent to the project site that would cumulatively combine to substantially degrade the visual character and quality of the project site during operation. Thus, cumulative impacts on visual character and quality of the project site during operation would be less than significant.

While the proposed project would introduce new sources of light associated with security, safety, and wayfinding, it should be noted that the four individual sites that comprise the project site are located in an urban environment. Thus, lighting is not unusual in the project vicinity. In addition, the proposed project would be required to comply with SEADIP (PD-1), which requires all lighting to be directed downward and designed not to project off site or onto adjacent uses, and LBMC Section 21.41.259, which requires that all parking area lighting be directed and shielded to prevent light spillover to adjacent properties. Compliance with these standards would ensure that impacts from light and glare are reduced to a less than significant level. No projects have been identified adjacent to the project site that would cumulatively combine to result in lighting impacts during operation. Thus, the proposed project would not cumulatively combine to result in light and glare impacts and would be less than significant.

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the project's contribution to the significant cumulative environmental effects, which are identified and described on Draft EIR pp. 3.1-39 to 3.1-41. This change is identified in the form of mitigation measures AES-1 and AES-2. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.2 Air Quality

Impact AQ-2b: The project would not violate the air quality standard and contribute substantially to an existing or projected air quality violation for operational-related NO_X emissions.

Operation

Emissions from operational activities would occur at various sites and during various phases of the proposed project. The Pumpkin Patch site would generate emissions primarily from vehicle travel, natural gas for space heating, and a diesel-powered drilling rig. Most of the site's electricity would be generated by the turbines located at the LCWA site. One drilling rig would be operated at both the LCWA and Pumpkin Patch sites but would be electrically powered. Additionally, both sites would have diesel-powered workover drilling rigs that would operate during the daytime hours for approximately 50 hours per week.

There would be four turbines at the LCWA site to combust natural gas (which is naturally co-located with crude oil deposits) to produce electricity. The turbines are expected to provide the majority of energy to the Pumpkin Patch and LCWA sites with occasional support from the Southern California Edison (SCE) grid. The office and visitors center at the Synergy Oil Field site would generate emissions mainly from vehicle travel and natural gas for heating. All sites would be subject to routine painting (i.e., for maintenance, etc.) that would also contribute to VOC emissions.

The change in project emissions would be below the SCAQMD thresholds for all pollutants except regional operational NO_X emissions. The primary emission source for this pollutant would be the turbines. The diesel drilling rigs at the Pumpkin Patch and LCWA sites would be secondary contributors. Mitigation Measure AQ-3 requires the use of diesel-powered drilling rigs that meet the most stringent emissions standards for off-road equipment. With implementation of this measure, the NO_X emissions for operations would be reduced to below the operational regional NO_X threshold.

Mitigation Measure

The following mitigation measure is included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure AQ-3: Operational NO_X Reduction Measures.** Require all diesel-powered drilling rigs located at the Pumpkin Patch and LCWA sites to comply with EPA-certified Tier IV emission controls. This drilling rig equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.2-28. This change is identified in the form of Mitigation Measure AQ-3. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact AQ-3b: The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) during operations.

Operation

The project area is located within the SCAB, which is currently classified as nonattainment area for ozone, PM_{10}, and $PM_{2.5}$. Based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants (VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.

The proposed project would exceed regional significance thresholds for operational-related NO_X emissions. Implementation of Mitigation Measure AQ-3 would reduce operational-related NO_X emissions to below the threshold.

Mitigation Measure

The following mitigation measure is included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure AQ-3.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.2-30. This change is identified in the form of Mitigation Measure AQ-3. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact AQ-4: The project would not expose sensitive receptors to substantial pollutant concentrations in excess of the localized significance thresholds and would not result in CO hotspot impacts.

Construction

Localized Construction Air Quality Impacts—Criteria Air Pollutants

The localized impacts of the project were assessed using the SCAQMD's methodology and LSTs. The nearest sensitive receptors were identified and impacts were analyzed based on the receptor's distance from the source and size (in acres) of the proposed project area. Of the four sites, the Synergy Oil Field and Pumpkin Patch sites represent the worst-case emissions scenarios for the proposed project and were, therefore, the sites analyzed using LSTs. The Synergy Oil Field site is the closest site to any sensitive receptor and, together, the Synergy Oil Field and Pumpkin Patch sites account for the greatest levels of construction and operational activity. The on-site construction emissions generated by the proposed project would not exceed the applicable SCAQMD LSTs for NO_X, CO, PM_{10}, or $PM_{2.5}$. Therefore, construction of the project would not expose sensitive receptors to substantial criteria pollutant concentrations.

Operation

Operational LSTs, like construction LSTs, are evaluated for the on-site emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ from stationary, area, and energy sources, such as building heating and cooling units, landscaping equipment and consumer products. The primary source of emissions generated from operation of the proposed facilities would be from the turbines located on the LCWA site. Furthermore, localized air impacts were analyzed at the LCWA site because its emissions represent the overwhelming majority of operational emissions between the four individual sites. The LCWA effectively represents the worst-case scenario of operational emissions on any given day. The on-site operational emissions generated at the LCWA site would not exceed the SCAQMD's LSTs for the criteria pollutants studied.

CO Hotspots

A CO hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. Projects may worsen air quality if they increase the percentage of vehicles in cold start modes; significantly increase traffic volumes; or worsen traffic flow. While construction-related traffic on the local roadways would occur during construction, the net increase of construction worker vehicle trips to the existing daily traffic volumes on the local roadways would be relatively small and would not result in CO hotspots. Additionally, the construction-related vehicle trips would only occur in the short term, and would cease once construction activities have been completed.

During operation, truck trips would occur to transport crude oil from the site to off-site refinery locations. Worker trips and visitors would also travel to and from the site; however, the number of trips would not be

expected to cause a substantial change in traffic flow. Furthermore, CO concentrations in the project area are relatively low. Project construction or operation would not generate sufficient traffic to cause a substantial change in the CO levels.

Toxic Air Contaminants

The purpose of conducting a health risk assessment is to determine whether a significant health risk impact would result from continued exposure to toxic air contaminant (TAC) emissions emitted during project construction and operation. TAC emissions would be emitted from various sources throughout construction and operation of the project, as described in further detail below.

Construction Health Impacts

Removal of the existing facilities and construction of the new facilities would expose members of the public to diesel exhaust, which contains a variety of gaseous and solid particulate chemical compounds, many of which have been identified by CARB as TACs. During construction, diesel exhaust would be generated by off-road diesel-powered equipment, such as loaders, drill rigs, dozers, rollers, backhoes, forklifts, etc. and by on-road heavy duty hauling trucks traveling to and from the site. Of the TACs found in diesel exhaust, the primary TAC of concern is DPM, which is generated from the combustion of diesel fuel.

Operational Health Impacts

Project operations would also produce harmful emissions of TACs, which may adversely impact the health of the surrounding communities. Unlike project construction, toxic emissions associated with future operations of the project are not exclusively limited to diesel exhaust emissions. Rather, toxic emissions associated with future operations would vary based on the emission source, details of which are described in further detail below.

Turbines

The project proposes to install four gas-powered turbines to generate electricity on site, which can result in hazardous air pollutant (HAP) emissions such as formaldehyde, acetaldehyde, and benzene that can contribute to increased cancer and non-cancer risks; however, the project applicant proposes, as part of the project design, to install a CO oxidation catalyst on the turbines to reduce these harmful pollutant emissions. Formaldehyde is the most significant HAP emitted from combustion turbines and accounts for about two-thirds of the HAP emissions.

Drilling and Workover Rigs

Well stimulation activities, including the use of drill rigs and workover rigs, also produce emissions of TACs. Specifically, the use of drilling and workover rigs would generate emissions of Diesel Particulate Matter (DPM), formaldehyde, benzene, and 1,3-butadiene, which are all known TACs. Diesel-powered workover drilling rigs on the Pumpkin Patch and LCWA sites would be in operation periodically, and would contribute to the project's health risk impact.

Fugitive Emission Sources

Fugitive emissions from pipes, storage tanks, and process losses would also contribute to the project's TAC emissions. The TACs of concern from fugitive emission sources include benzene, toluene, ethyl benzene, xylene, and hexane; however, tanks at both Pumpkin Patch and LCWA sites would be fixed-roof gas blanket

design, and are designed to be both liquid- and vapor-tight, thus reducing the fugitive TAC emissions emitted by these tanks.

Off-Road Equipment and On-Road Mobile Sources

Finally, the use of on-site equipment and mobile sources, including heavy-duty diesel trucks visiting the site, would also generate emissions of DPM, which is the primary TAC found in diesel exhaust. During operation, diesel exhaust would be generated by off-road diesel-powered equipment and by on-road heavy duty hauling trucks traveling to and from the site.

Health Risk Assessment Results

Health Risk for Existing Emissions

Of the 53 wells on the Synergy Oil Field, City Property, and Pumpkin Patch sites, there are approximately 33 wells currently in production. A minimal amount of TAC emissions is generated by the operation of these wells, including DPM and VOC emissions associated with diesel workover rigs, oil truck trips, and employee travel. The operation of these existing oil wells have a combined health risk impact of approximately 92.8 in one million once the proposed project has a certified EIR and has received the necessary building permits to begin construction of the new oil facilities, the project would reduce current operations and oil production of these 53 existing wells by 75 percent to facilitate their removal. Therefore, by reducing existing oil production by 75 percent once the first building permits are issued and eventually plugging and abandoning all existing wells over a period of 40 years, implementation of the project would substantially reduce the health risk impact to nearby sensitive receptors.

Health Risk for Unmitigated Future Emissions

Overall, the worst-case health risk associated with project construction and operation exceeds the applicable health risk criteria for infant, child, adult, and lifetime cancer risk of 10 per one million. The cancer burden associated with future project emissions was calculated to be 0.958, which exceeds the SCAQMD significance threshold of 0.50.

Based on the health risk assessment modeling results, health risks would be considered potentially significant. Sources that contribute the greatest to high health risk levels mainly include diesel engines associated with short-term construction equipment and on-road hauling trucks.

Mitigation measures have been identified as part of the AQ Assessment for both short-term (construction) and long-term (operational) impacts. Mitigation Measures AQ-2 and AQ-3 would reduce NO_X emissions and effectively reduce emissions of DPM and other TACs emitted during project construction and operations, respectively. In order to reach acceptable levels of public health risk, Mitigation Measure AQ-2 must be applied to each phase of construction and Mitigation Measure AQ-3 must be applied to drilling operations.

The health risk associated with project construction and operations, when these mitigation measures are implemented, are all well below the applicable health risk criteria for infant, child, adult, and lifetime risk at the Maximum Exposed Individual Resident (MEIR).

With implementation of the mitigation measures listed above, the project's lifetime maximum individual cancer risk (MICR) of 7.50 in one million would be reduced to below the significance threshold of 10 in one million. Additionally, the chronic and acute non-cancer risks are below the significance threshold of 1.

The mitigated cancer burden associated with future project emissions was calculated to be 0.004, which is well below the SCAQMD significance threshold of 0.50.

Mitigation Measures

The following mitigation measures are included in the Draft EIR and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

Mitigation Measure AQ-2: Construction NO_X Reduction Measures. The Applicant for the proposed project shall be responsible for the implementation of the following construction-related NO_X reduction measures:

- Require all off-road diesel-powered construction equipment greater than 50 hp (e.g., excavators, graders, dozers, scrappers, tractors, loaders, etc.) to comply with EPA-Certified Tier IV emission controls where commercially available. Documentation of all off-road diesel equipment used for this project, including Tier IV certification, or lack of commercial availability if applicable, shall be maintained and made available by the contractor to the City for inspection upon request. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB such as certified Level 3 Diesel Particulate Filter or equivalent. A copy of each unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment. If Tier IV vehicles and construction equipment is not available, the City shall require the contractor to implement other feasible alternative measures, such as reducing the number and/or hp rating of construction equipment, and/or limiting the number of individual construction phases occurring simultaneously. The determination shall be made by the City prior to issuance of grading or building permits where evidence of the use of Tier IV equipment is not provided.
- Eliminate the use of all portable generators. Require the use of electricity from power poles rather than temporary diesel or gasoline power generators.
- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow, including during the transportation of oversized equipment vehicles.
- Provide dedicated turn lanes for movement of construction trucks and equipment on and off site. The location of these dedicated lanes shall be addressed in the Construction Trip Management Plan.
- Reroute construction trucks away from congested streets or sensitive receptor areas.
- Limited idling time to 5 minutes for both on-road trucks and off-road equipment.

Mitigation Measure AQ-3: Operational NO_X Reduction Measures. Require all diesel-powered drilling rigs located at the Pumpkin Patch and LCWA sites to comply with EPA-certified Tier IV emission controls. This drilling rig equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by CARB.

Mitigation Measure AQ-4: Technology Review. To promote new emission control technologies, every five years following the Project approval date, the Lead Agency shall conduct a review of new air quality technological advancements. These technologies would be evaluated based on operational feasibility, technical feasibility, and cost effectiveness and financial feasibility for application. If a technology is determined to be feasible in terms of financial, technical, and operational feasibility, the Lead Agency shall identify as mitigation in any subsequent CEQA document prepared for a subsequent

discretionary construction permit to implement such technology, subject to the requirements as set forth in the *CEQA Guidelines* Section 15162(a)(3)(C).

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.2-37. These changes are identified in the form of Mitigation Measures AQ-2, AQ-3, and AQ-4. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

Impact AQ-5: The project would not create objectionable odors affecting a substantial number of people.

Construction

During the construction of the project, exhaust from construction equipment may produce discernible odors typical of most construction sites; however, such odors would be temporary. The proposed project would comply with the applicable provisions of the CARB ATCM regarding idling limitations for diesel trucks. Construction of the project would require the use of architectural coatings. Implementation of Mitigation Measure AQ-1 would minimize VOC emissions to a less-than-significant level. In addition, Mitigation Measure AQ-2 would minimize diesel emissions. Through mandatory compliance with SCAQMD rules and implementation of Mitigation Measures AQ-1 and AQ-2, construction activities are not expected to create objectionable odors affecting a substantial number of people.

Operation

Odors are considered significant if they produce a nuisance. The determination of a significant odor impact is based on creating a nuisance per SCQMD Rule 402. The SCAQMD has an established Public Nuisance Investigation Policies and Procedures to guide the SCAQMD inspectors in determining whether to issue a Notice of Violation (NOV) for a nuisance. The procedures direct SCAQMD investigators to interview complainants and observe, identify, or otherwise establish evidence odorous emissions. An NOV is issued if a "multiple complaint condition" is documented, defined as six or more complainants.

Odor complaints are expected not to be an issue with the proposed facilities. The oil production facilities that are being replaced are old with minimal emission controls at well heads, flanges, pumps, and other equipment that has seen many years of use. The proposed facility would use new equipment that must meet all of the latest SCAQMD regulations. Second, the Pumpkin Patch and LCWA sites are located at some distance from residential areas and are separated from residential areas with either other industrial development or arterials. This distance and the intervening uses help to disperse any odorous material that might accidentally be released from the facility. Finally, the facilities must comply with SCAQMD Rule 402, which requires that the facilities cannot be a nuisance and must modify operations to comply.

Mitigation Measures

The following mitigation measures are included in the Draft EIR and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

> **Mitigation Measure AQ-1: Construction-Period Use of Low-VOC Paints.** The Applicant for the proposed project shall be responsible for the use of SCAQMD Rule 1113–compliant paints with a VOC content of 50 grams per liter or less.

Refer to Mitigation Measure AQ-2.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.2-39. These changes are identified in the form of Mitigation Measures AQ-1 and AQ-2. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.3 Biological Resources

Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on southern tarplant, estuary seablite and woolly seablite, which are special-status plant 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 Wildlife or U.S. Fish and Wildlife Service.

Construction

Southern tarplant, a special-status plant, is located within the proposed restoration and improvement areas on the Synergy Oil Field and Pumpkin Patch sites and, therefore, would likely be disturbed. Southern tarplant is also present on the City Property site in areas that would be improved by the project and likely to be disturbed. Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts to southern tarplant to a less-than-significant level by requiring avoidance of special-status plants, and restoration of any impacts to southern tarplant, respectively. Estuary seablite and woolly seablite are present on the Synergy Oil Field site and would be avoided.

The LCWA site does not have habitat that supports potentially-occurring special-status plants; therefore, there would not be any impacts to special-status plants associated with the portion of the proposed project that is on the LCWA site.

Operations

Following the completion of project construction activities, well plugging and abandonment or trail maintenance activities (such as the establishment and maintenance of a buffer zone between the trail and upper edge of restored habitats) could result in an adverse indirect impact to special-status plants such as the introduction or spread of weeds. In addition, improper installation or maintenance of fencing, or improper habitat restoration signage that would otherwise restrict people to the trail could result in adverse direct impacts to restored habitats and special-status plants. The direct and indirect impacts caused by these activities

could be significant, but would be reduced through implementation of Mitigation Measure BIO-2, which addresses weed management and maintenance and monitoring procedures for southern tarplant restoration areas.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

> **Mitigation Measure BIO-1: Avoidance of Special-Status Plants.** Prior to vegetation or ground disturbance, a qualified botanist/biologist shall flag special-status plants located within 25 feet of proposed disturbance areas on the project site including southern tarplant, estuary seablite, and woolly seablite. Individual plants shall be marked or flagged for avoidance and a minimum no-disturbance buffer of 10 feet shall be established. The appropriate buffer distance shall be determined by the qualified botanist/biologist. If southern tarplant plants cannot be avoided, Mitigation Measure BIO-2 shall be implemented.
>
> **Mitigation Measure BIO-2: Re-establish Southern Tarplant on Synergy Oil Field, City Property, and Pumpkin Patch Sites.** Prior to any disturbance to special-status plants, a Southern Tarplant Restoration Plan shall be prepared and approved by CDFW. At a minimum, the Restoration Plan shall include the following:
>
> - A map showing the areas to be restored following temporary impacts
> - Weed management procedures to prevent introduction of invasive plant species on site prior to and during construction, and during maintenance
> - Seed collection protocol
> - Seed dispersal protocol
> - Performance standards for the areas to be re-established
> - Maintenance and monitoring procedures for the areas to be re-established
> - Adaptive management strategies
> - Reporting requirements

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR pp. 3.3-58 and 3.3-59. These changes are identified in the form of Mitigation Measures BIO-1 and BIO-2. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

Impact BIO-2: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any special-status wildlife 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 Wildlife or U.S. Fish and Wildlife Service.

Construction

Synergy Oil Field Site

Mudflat Tiger Beetle, Wandering Skipper, Sandy Beach Tiger Beetle, Senile Tiger Beetle, Western Beach Tiger Beetle, and Western Tidal-Flat Tiger Beetle

Grading associated with northern area restoration activities would result in direct temporary impacts to habitat for these species; however, given the limited area of impact and the extensive area of suitable habitat that would be preserved in Steamshovel Slough and other portions of the site, the proposed impacts to these species and their preferred habitat would not cause the local populations to drop below self-sustainable levels. Impacts would be less than significant following the implementation of Mitigation Measure BIO-3, which would require biological monitoring and avoidance or relocation of special-status invertebrates.

Pacific Green Sea Turtle

The westernmost portion of Steamshovel Slough has been identified as potential habitat for the Pacific green sea turtle. There is no potential for project activities to impact this species since there would be no impacts to Steamshovel Slough.

American Peregrine Falcon

The Synergy Oil Field site contains suitable foraging habitat for the peregrine falcon. Grading and restoration activities associated would be temporary and may temporarily prevent American peregrine falcons from foraging on the project site; however, the proposed project would improve the existing habitat conditions following the completion of construction and improve the long-term viability and extent of foraging habitat for this species. Therefore, impacts to peregrine falcon and its foraging habitat would be less than significant following the implementation of the proposed project.

Belding's Savannah Sparrow

Project grading and associated restoration activities within the northern area would result in potentially significant direct and indirect impacts on the Belding's savannah sparrow. Potential direct impacts include the permanent and temporary loss of vegetation used by Belding's savannah sparrow for nesting or foraging (occupied habitat); however, impacts would be less than significant with the implementation of Mitigation Measure BIO-4, which requires a minimum habitat replacement ratio of 1:1 (created:impacted) and Mitigation Measure BIO-5, which requires re-establishment of permanent and temporary impacts to sensitive natural communities.

Indirect impacts to Belding's savannah sparrow would include noise and dust generated during construction that could disrupt breeding or other essential activities during the breeding season (e.g., vocalizing to attract mates, foraging, etc.). With implementation of Mitigation Measure BIO-6 below, indirect impacts to nesting Belding's savannah sparrow would be mitigated to a less-than-significant level through avoidance of active bird nests.

The southern area does not support suitable breeding or foraging habitat for Belding's savannah sparrow; however, potential indirect impacts to the species during construction activities could disrupt breeding behavior, which would be mitigated to a level of less than significant with implementation of Mitigation Measure BIO-6 through avoidance of active bird nests.

Burrowing Owl

Potential impacts could occur should a burrowing owl or owls occupy the site prior to construction activities. In accordance with Mitigation Measure BIO-7, potential impacts on burrowing owl would be less than significant through pre-construction surveys and specific avoidance measures.

Ridgway's Rail

Potential direct impacts could occur during the northern area activities should a Ridgway's rail occupy the site. In addition, indirect impacts on Ridgway's rail could occur through disruption of nesting or other essential behaviors from construction noise and dust. Potential impacts on light-footed clapper rail would be avoided and minimized through pre-construction nesting bird surveys and avoidance as identified in Mitigation Measure BIO-6.

California Least Tern, Merlin

Limited grading of the berm that demarcates the limits of Steamshovel Slough exhibits potential for affecting foraging activities for brief periods; however, given that expansive areas of foraging areas both on site and off site are available, such short-term and localized impacts would not be considered significant. Southern area activities exhibit no potential for impacts on foraging by Merlins.

Western Snowy Plover

Grading associated with northern area restoration activities would temporarily remove potential foraging habitat; however, given the limited area of impact and the extensive area of suitable habitat preserved, potential habitat impacts would be less than significant.

White-Tailed Kite and Northern Harrier (Nesting)

Grading or other restoration activities associated with northern or southern area activities could result in significant impacts on the white-tailed kite and/or northern harriers if these species were found to be nesting on site. Potential nesting impacts would be avoided and minimized through pre-construction nesting avian surveys and avoidance as identified in Mitigation Measure BIO-6.

Nesting Birds and Migratory Bird Treaty Act Considerations

Each of the four individual sites contains vegetation, including trees, shrubs, and other low-growing vegetation that have the potential to support nesting birds. Impacts to migratory and resident nesting avian species are prohibited under the Migratory Bird Treaty Act (MBTA) and provisions of the California Fish and Game Code. Potential impacts to nesting birds and raptors would be avoided and minimized through pre-construction nesting avian surveys and avoidance as identified in Mitigation Measure BIO-6.

South Coast Marsh Vole and Southern California Salt Marsh Shrew

Grading to remove portions of the berm during northern area restoration activities exhibits potential for limited impacts on this species; however, given the limited area of impact and the extensive area of suitable habitat

preserved in Steamshovel Slough, potential habitat impacts would not cause this species to drop below self-sustaining levels. Restoration activities would not be expected to result in the direct loss of individuals and the implementation of the project would improve the condition and extent of this species' preferred habitat following completion of the project. Implementation of Mitigation Measure BIO-3 would ensure that these mammals would be unharmed if encountered.

City Property Site

The following species exhibit no potential for occurring on the City Property site and would not be subject to potential project impacts:

- California least tern;
- Light-footed clapper rail;
- Western snowy plover;
- Belding's savannah sparrow;
- Mudflat tiger beetle;
- Sandy beach tiger beetle;
- Senile tiger beetle;
- Western beach tiger beetle; and
- Western tidal-flat tiger beetle.

The species with potential to occur are addressed below.

Wandering Skipper

Installation of the pipeline corridor and removal of the pipelines and other oil field infrastructure could result in injury or mortality of individuals. Implementation of Mitigation Measure BIO-3 would require avoidance or relocation of these invertebrates if encountered during biological monitoring.

American Peregrine Falcon

Installation of the pipeline corridor and removal of the pipelines and other oil field infrastructure would result in a nominal disturbance to potential foraging habitat considering the amount of suitable habitat present in the immediate vicinity.

Burrowing Owl

Potential impacts could occur should a burrowing owl or owls occupy the site prior to construction activities. Potential impacts on burrowing owl would be mitigated through pre-construction surveys and associated avoidance as required under Mitigation Measure BIO-7.

White-Tailed Kite and Northern Harrier (Nesting)

Installation of the pipeline corridor and removal of the pipelines and other oil field infrastructure could result in significant impacts on the white-tailed kite and/or northern harrier if these were found to be nesting on site. Potential nesting impacts would be avoided and minimized through pre-construction nesting avian surveys and avoidance as identified in Mitigation Measure BIO-6.

Nesting Birds and Migratory Bird Treaty Act Considerations

As discussed for the Synergy Oil Field site, potential impacts to nesting birds and raptors would be avoided and minimized through pre-construction nesting avian surveys and avoidance as identified in Mitigation Measure BIO-6.

Pumpkin Patch Site

The species with potential to occur in the northeast lower portion of the site are addressed below.

Wandering Skipper, South Coast Marsh Vole, and Southern California Salt Marsh Shrew

There would be no direct impact to habitat for these species during construction or long-term operations. Implementation of Mitigation Measure BIO-3 would require avoidance or relocation of special-status wildlife if encountered during biological monitoring.

Burrowing Owl

Potential impacts could occur should a burrowing owl or owls occupy the site prior to construction activities. Potential impacts on burrowing owl would be mitigated through pre-construction surveys and associated avoidance as required under Mitigation Measure BIO-7.

Nesting Birds and Migratory Bird Treaty Act Considerations

As discussed for the Synergy Oil Field site, potential impacts to nesting birds and raptors would be avoided and minimized through pre-construction nesting avian surveys and avoidance as identified in Mitigation Measure BIO-6.

LCWA Site

The species with potential to occur on the LCWA site are addressed below.

Burrowing Owl

Potential impacts could occur should a burrowing owl or owls occupy the site prior to construction activities. Potential impacts on burrowing owl would be mitigated through pre-construction surveys and associated avoidance as required under Mitigation Measure BIO-7.

White-Tailed Kite

The LCWA site includes a number of trees that exhibit potential for nesting by the white-tailed kite. While nesting has not been previously observed, there is potential for this species to nest in the future. Direct impacts to nests would be considered significant; however, with implementation of Mitigation Measure BIO-8, any potential nesting impacts to white-tailed kite would be reduced to a level of less than significant.

Nesting Birds and Migratory Bird Treaty Act Considerations

As discussed for the Synergy Oil Field site, potential impacts to nesting birds and raptors would be avoided and minimized through pre-construction nesting avian surveys and avoidance as identified in Mitigation Measure BIO-6.

Operation

Following the completion of project construction activities, well plugging and abandonment or trail maintenance activities (such as the establishment and maintenance of a buffer zone between the trail and upper edge of restored habitats) could result in an adverse indirect impact to nesting avian species. Potential impacts to nesting birds and raptors during project operations would be reduced to a less-than-significant level through implementation of Mitigation Measure BIO-6; therefore, impacts would be less than significant.

In addition, the proposed office building and storage warehouse proposed at the Pumpkin Patch site will have exterior building lights that area illuminated at night that is similar to the adjacent existing office buildings to the north. The parking lot and oil facility areas may also require lighting at night. Without proper placement and/or shielding, light trespass and/or glare may result from the artificial lighting into the avoided 2-acre coastal wetland (and potentially, beyond, into the City Property site) in the northeast portion of the site. Implementation of Mitigation Measure BIO-9 would minimize light spillage to wetland habitats and wildlife.

The proposed project would not be expected to change tide and storm water levels on the project site and in its vicinity based on modeling of sea level rise scenarios; therefore, no impacts would occur to tidal marsh special-status species as a result of the interaction between the project and sea level rise.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

> **Mitigation Measure BIO-3: Biological Monitoring.** All proposed project implementation shall occur under the supervision and direction of a qualified biologist. The biologist shall ensure maximum avoidance and minimization of impacts to wildlife and wetland vegetation during implementation of project activities on the Synergy Oil Field site, Pumpkin Patch site, and City site.
>
> Prior to the daily start of cleanup activities and at the end of the work day, wildlife monitoring by a qualified biologist shall include inspection of any hazardous features (e.g., open trenches) that would trap, displace, injure, or kill wildlife. Prior to the end of daily cleanup activities, the biologist shall ensure all trash is properly disposed of such that it would not be accessible to wildlife.
>
> For areas that contain suitable habitat for special-status wildlife, prior to and during all vegetation and ground-disturbing activities, a qualified biologist shall monitor work areas. If any special-status wildlife species are encountered during biological monitoring or by construction workers, work shall halt until the biologist determines appropriate actions to avoid and minimize harm to the species. California Fully-Protected species shall be avoided. Other actions may include relocation of the species for non-listed wildlife; however, relocation shall not be allowed for any listed species without first obtaining take authorization from USFWS and/or CDFW. To the extent feasible, non-listed wildlife shall be relocated to a CDFW/USFWS-approved relocation site that contains suitable habitat adjacent to the habitat where the species is found.
>
> **Mitigation Measure BIO-4: Belding's Savannah Sparrow Breeding Habitat.** Suitable breeding habitat shall be created on the Synergy Oil Field site at a minimum acreage of 1:1 (created: impacted). Suitable breeding habitat shall consist of areas dominated by pickleweed and Parish's glasswort with a minimum 60 percent cover with a hydrologic regime similar to that currently present in the northern area, with suitable slope, inundation and soil salinity. The re-establishment requirements for Belding's savannah sparrow suitable breeding habitat (dominated by pickleweed and Parish's glasswort) shall be addressed in the Restoration Plan for the Synergy Oil Field site as outlined in Mitigation Measure BIO-5.

Mitigation Measure BIO-5: Re-establish Sensitive Natural Community Vegetation Alliances Subject to Permanent and Temporary Impacts. Sensitive natural communities located on the project site include California cordgrass marsh, Parish's glasswort patches, alkali heath marsh, pickleweed mats, Emory's baccharis thickets, black willow thicket, southern coastal brackish marsh, southern coastal salt marsh, and alkali meadow.

Prior to any vegetation or ground disturbance associated with the Synergy Oil Field or City Property site, comprehensive restoration plans shall be prepared and implemented within 1 year of impacts to sensitive natural communities. The Restoration Plan for the Synergy Oil Field site will be subject to review and approval of the Interagency Review Team (IRT) led by the Corps, and evidence of the IRT's approval shall be submitted to the City prior to initiation of grading activity on the Synergy Oil Field site. The Revegetation Plan for the City Property site shall be reviewed and approved by the CCC. The plans shall include, at a minimum, the following:

- A map showing the areas to be restored following permanent and temporary impacts.
- Identify specific restoration actions (e.g., revegetation requirements, removal of non-native plants) to be implemented during restoration.
- Quantity and quality of vegetation communities to be restored on site. Permanent impacts shall be restored at a minimum of 2:1 and temporary impacts restored at 1:1. The amount and extent of restoration shall be identified and determined based on habitat quality prior to implementation of the Restoration Plan and the initiation of any vegetation or ground disturbance.
- Plant palette for each Sensitive Natural Communities subject to re-establishment.
- Specific measurable performance standards for the areas to be re-established to evaluate habitat development, species composition and ecosystem functions.
- A timeline for implementation (within 1 year of impacts to sensitive natural communities).
- Provide specific protocols for monitoring, including sample design (e.g., number of replicates, locations for sample points, transects, etc.), sampling methods to be implemented, and statistical methods for analyzing the data.
- Maintenance procedures for areas to be re-established.
- Identify contingency plans (i.e., adaptive management procedures) to be implemented if specific performance goals are not met within the timeframe anticipated.
- Performance goals for the restoration that shall focus on habitat development, species composition, and ecosystem functions.
- Reporting requirements.

Mitigation Measure BIO-6: Nesting Bird and Raptor Avoidance. A qualified biologist shall identify areas where nesting habitat for birds and raptors is present. To ensure the avoidance of impacts to native nesting avian species, the following measures shall be implemented pursuant to the MBTA and California Fish and Game Code:

- Construction and maintenance activities during operations within and adjacent to known and potential avian nesting habitat shall be limited to the non-breeding season (September 1 through December 31) to the extent feasible. If construction or maintenance activities will occur during the avian nesting season (generally March 1 through August 31 for passerines and January 1 through August 31 for raptors), a qualified biologist shall conduct pre-construction nesting avian surveys within 5 days of the initiation of construction to determine the presence or absence of active nests. If a lapse in work of 5 days or longer occurs, another survey shall be conducted prior to work being reinitiated. Surveys shall include any potential habitat, including trees,

shrubs, and on the ground, or on nearby structures that might be impacted by construction or maintenance activities that may cause nest destruction or abandonment, such as vegetation or weed removal, earth work, and vector control actions.

- If active nests are observed, an avoidance buffer shall be demarcated with exclusion fencing and shall be maintained until the qualified biologist determines that the young have fledged. Fence stakes designed with bolt holes shall be plugged with bolts or other materials to avoid entrapping birds. The initial avoidance buffer(s) shall extend a minimum of 500 feet in all directions for raptors and listed passerines such as Belding's savannah sparrow and Ridgway's rail, and 300 feet in all directions for all other native passerines. A reduced buffer may be implemented at the discretion of the biologist for non-listed passerines based on such factors as species-tolerance to human presence, location of the nest, and the timing of nest construction, such as whether the nest was constructed after construction is initiated; however, for raptors and listed passerines, the biologist shall obtain approval from USFWS and/or CDFW prior to allowing work to commence within the 500-foot buffer.

Mitigation Measure BIO-7: Habitat Assessment and Pre-Construction Surveys for Burrowing Owl. A qualified biologist shall conduct a pre-construction burrowing owl survey of the project site prior to construction activities. If burrowing owls are detected, a Burrowing Owl Management Plan shall be prepared and approved by CDFW prior to commencement of construction. The Burrowing Owl Management Plan shall be prepared in accordance with the CDFW 2012 Staff Report on Burrowing Owl Mitigation and shall address specific minimization and avoidance measures for burrowing owls, and measures to protect occupied habitat, such as avoidance and revegetation.

Mitigation Measure BIO-8: Avoidance of White-Tailed Kite Nesting. Remove all trees on the site outside the white-tailed kite nesting season (February 1 through June 30). If it is not possible to remove trees during the non-breeding season, a qualified biologist shall conduct a survey no more than 5 days prior to tree removal to document the absence of nests. If active nests are detected, they shall be avoided and a 500-foot no-disturbance buffer established (or reduced as specified in BIO-6). The qualified biologist shall monitor the site weekly until the nestlings have fledged and are no longer dependent on the nest.

Mitigation Measure BIO-9: Minimization of Light Spillage. A Project Lighting Plan shall be designed to minimize light trespass and glare into the avoided wetland habitat in the northeast portion of the site. Artificial lights shall be directed away from or shielded to prevent spillage into the avoided wetland habitat.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR pp. 3.3-66 through 3.3-68. These changes are identified in the form of Mitigation Measures BIO-3, BIO-4, BIO-5, BIO-6, BIO-7, BIO-8, and BIO-9. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

Impact BIO-3: The project would not have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Construction

Synergy Oil Field Site

Northern Area

Sensitive habitats that would be temporarily impacted include alkali heath marsh, California cordgrass marsh, Parish's glasswort patches, and pickleweed mats. All temporary impacts to these sensitive habitats associated with grading, berm installation, overlook terrace fill, berm/road removal, and sidewalk grading total 3.80 acres (5 percent of the entire northern area) and would be considered temporary given that these areas would be restored to coastal salt marsh, transitional wetland, or other native habitat comprising a total of 61.32 acres of coastal salt marsh enhancement, rehabilitation or reestablishment as part of the northern area restoration.

Overall, there would be no net loss of habitat; rather, there would be an increase in sensitive natural communities, including wetland habitats, both in terms of areal extent and function.

Southern Area

Temporary impacts to sensitive natural communities would occur; however, they would occur within primarily disturbed areas; therefore, no permanent impacts to sensitive natural communities would occur. Temporary impacts would be mitigated with implementation of Mitigation Measure BIO-5 through re-establishment of impacted sensitive natural communities.

City Property Site

Removal of oil facilities such as aboveground pipelines and tanks would occur on the City Property site. Based on the method of removal, and the already disturbed areas that would be used to facilitate the removals, no impact to sensitive natural communities are expected; however, in the event that inadvertent and temporary impacts to sensitive natural communities occur, such potentially significant impacts would be reduced to a less-than-significant level with implementation of Mitigation Measure BIO-5.

Once the aboveground pipelines and tank are removed, and as each of the 13 oil wells from the City Property site are removed and abandoned over time, all unvegetated disturbed pads surrounding the pipelines, tank, and oil wells, as well as any area temporarily affected during the removals, will be revegetated with a native upland seed mix. The native shrub cover will enhance the appearance of the oil field, help suppress the invasion of non-native species, and provide erosion control.

Permanent impacts to sensitive natural communities associated with construction of the pipeline corridor, would occur. Permanent and temporary impacts to sensitive natural communities associated with sidewalk construction would also occur. Implementation of Mitigation Measure BIO-5 would reduce impacts to sensitive natural communities to a less-than-significant level.

Pumpkin Patch Site

There would be no direct or indirect impacts to wetland vegetation alliances or sensitive natural communities associated with work on the Pumpkin Patch site.

LCWA Site

The LCWA site does not contain any sensitive natural communities. Construction at the LCWA site would result in direct impacts to disturbed/developed areas, mulefat scrub, annual non-native grassland, and ornamental vegetation. Therefore, no impacts to sensitive natural communities would occur.

Operation

As part of the proposed project, 39 oil wells from the Synergy Oil Field, one well from Pumpkin Patch site, 13 oil wells from the City Property site, and one well from Pumpkin Patch site would be removed and abandoned over a 20- to 40-year period. Based on the guidelines set forth for removal by DOGGR and the already disturbed areas that surround the wells that would be used to facilitate the removals, impacts to sensitive natural communities are not anticipated. Further, on the Pumpkin Patch site, a permanent fence or wall would be installed along the 100-foot setback to prevent indirect impacts to sensitive natural communities (i.e., *Frankenia salina* Herbaceous Alliance [Alkali heath marsh]) from occurring during the operational phase of the project; therefore, impacts would be less than significant.

Mitigation Measure

The following mitigation measure is included in the Draft EIR and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure BIO-5.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.3-74. This change is identified in the form of mitigation measure BIO-5. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact BIO-4: The project would not have a substantial adverse effect on federally or state protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Construction

Direct impacts to jurisdictional waters and wetlands would occur on the Synergy Oil Field site and are described below. On the Pumpkin Patch site, all jurisdictional areas within the northeast area will be avoided and set back by a minimum of 100 feet from the proposed restoration and cleanup areas. The Pumpkin Patch site also includes two seasonal depressions that the jurisdictional delineation did not identify as wetlands under the Clean Water Act or CWA and CCA; however, should this area be determined to be a CCA wetland, prior to any disturbance of this area, compliance with CCA Section 30233 would be required. No impacts to jurisdictional waters or wetlands would occur on the LCWA site since none are present. On the City Property

site, proposed project activities would consist of installation of the sidewalk and the removal of pipelines which would have direct impacts to potential jurisdictional waters and wetlands. Removal of the pipelines and other oil field infrastructure would not impact jurisdictional waters or wetlands as they are located outside of jurisdictional resources. Because the proposed project is a wetland restoration project and would result in long-term restoration and enhancement of waters of the U.S./State, no compensatory mitigation is proposed. Permits and/or approvals from the USACE, RWQCB, CDFW, and the CCC would be required for impacts to resources under their jurisdiction.

Synergy Oil Field Site

Proposed project activities on the Synergy Oil Field site would impact waters of the U.S./State, CDFW jurisdiction, and coastal wetlands subject to CCA jurisdiction during re-establishment of coastal salt marsh habitat within the northern area. All impacts to jurisdictional areas associated with tidal channel grading, seawall berm and overlook terrace installation, berm/road removal, and on-site sidewalk grading are considered to be temporary given that the areas to be disturbed as part of these activities would either be revegetated or be converted from one aquatic resource type to another where post-project functions would remain the same or increase. Sheet pile installation is accounted for as a permanent impact to jurisdiction; however, the amount of jurisdiction to be impacted by this activity is extremely limited, totaling less than one-quarter of 1 percent of the entire northern area and is necessary to account for sea level rise estimations. During construction of the sheet pile wall, the jurisdictional areas would likely be avoided based on in-field placement of the wall to position it over existing disturbed areas. No other project components would impact waters of the U.S./State. Proposed activities in the southern area and off-site areas for sidewalks within the City's right-of-way would not impact jurisdictional waters or wetlands. Impacts to jurisdictional resources would be avoided and minimized through implementation of Mitigation Measure BIO-10.

City Property Site

Construction of the sidewalks within the City right-of-way along 2nd Street would result in permanent and temporary impacts to potential wetland waters of the U.S./State and wetlands as defined by the CCA. Construction of the 40-foot-wide pipeline corridor, including widening of the adjacent access roads, would result in permanent impacts to wetland waters of the U.S./State and wetlands as defined by the CCA. There would be no impacts to potential CDFW jurisdiction associated with these activities. It is possible that some areas within the pipeline corridor could be restored following construction; however, the impacts are assumed to be permanent at this time until a detailed construction plan showing the precise layout of the pipeline is prepared. Any areas that are inadvertently or temporarily disturbed would be revegetated immediately upon completion of work. Impacts to jurisdictional resources would be avoided and minimized through implementation of Mitigation Measure BIO-10.

Operation

Impacts to jurisdictional wetlands or waters are not anticipated as a result of well abandonment and removal; however, in the event that inadvertent and temporary impacts to jurisdictional wetlands or waters occur, implementation of Mitigation Measure BIO-10 would reduce potentially significant impacts to a less-than-significant level. Any loss of wetland habitat function would be a significant impact and Mitigation Measure BIO-11 would require demonstration of no net loss of aquatic resource functions and demonstrate a substantial increase in wetland functions and values throughout the entire site.

By restoring tidal connection to a larger part of the site, the project could impact wetland habitats by allowing rising sea levels to enter and flood the marsh. Sea level rise modeling (M&N 2017) shows that intertidal wetland habitats would initially increase with 2 feet of sea level rise. With 5.5 feet of sea level rise, intertidal wetland habitats would decrease, according to the modeling results; however, there would still be more jurisdictional wetlands than what is currently existing on-site. Additionally, the current state estimates predict that 5.5 feet of sea level rise will not occur until the year 2100 or later.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

> **Mitigation Measure BIO-10: Avoid or Minimize Impacts to Aquatic Habitat.** Temporary disturbance to, and permanent loss of, all aquatic habitat shall be avoided to the maximum extent feasible. All temporary staging areas and access roads, if necessary, shall be located away from aquatic habitats to the extent practicable, and aquatic habitats abutting impacted areas shall be clearly demarcated with fencing, rope, or signage to avoid inadvertent disturbance during restoration activities and operations. As detailed grading plans are prepared, they shall be designed to avoid temporary and permanent impacts to aquatic habitats to the extent practicable.
>
> **Mitigation Measure BIO-11: Post-Restoration Functional Lift Assessments of Wetland Waters of the U.S./State and Coastal Wetlands.** Upon completion of restoration activities, the project shall demonstrate a no net loss of aquatic resource functions and demonstrate a substantial increase in wetland functions and values throughout the entire site. An assessment of habitat functions, such as biotic structure and hydrology, shall be conducted as part of the project's monitoring and reporting program outlined in the Final Restoration Plan for the Upper Los Cerritos Wetlands Mitigation Bank, so that these agencies can verify that the functional values have been achieved and/or provide measures that need to be implemented to meet the appropriate level of functionality.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.3-79. These changes are identified in the form of Mitigation Measures BIO-10 and BIO-11. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.4 Cultural Resources

Impact CUL-1: The project would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.

Construction

ESA evaluated each of the three identified historic architectural resources and two identified historic-period archaeological sites for their individual eligibility for listing in the California Register and recommends that the Bixby Ranch Field Office (P-19-187657) and the Bixby No. 2 Discovery Well (ESA-LCW-2) are eligible.

The project proposes to relocate and rehabilitate the Bixby Ranch Field Office for use as a visitors center. The existing proposed preliminary Relocation and Rehabilitation Plan would not conform to the Secretary of the Interior's Standards for Rehabilitation (Standards). More specifically, under this Plan, the Bixby Ranch Field

Office would be moved from its current location and rotated 180 degrees altering its relationship with its views, spatial relationships and setting within the oil field. The proposed landscaping and addition of a tree at the southwest corner of the building interferes with the historic visual relationships of the building with the oil field. The proposed Los Cerritos Visitors Center sign and ADA ramp also detracts from the south elevation, views of which were clear and unobstructed in the circa 1928 historical photograph of the building. The Plan to rehabilitate the primary (west) elevation and south elevation in a manner consistent with the 1928 historic photograph includes the addition of a ramp, railings, and deck that are not differentiated from the historic materials of the Bixby Ranch Field Office, as the baluster guardrails would match the existing non-contributing porch railings (altered as part of the last renovation). In addition, the building's one-story massing is a character -defining feature; raising the building to protect it from sea level rise would alter the scale of the building and detract from its architectural character and design. Furthermore, without a relocation and rehabilitation plan, the building could be damaged during relocation and/or rehabilitation; a relocation and rehabilitation plan would protect the building from potential adverse impacts during relocation and provide guidelines for rehabilitation in conformance with the Standards. Because the proposed project plans to relocate and rehabilitate the Bixby Ranch Field Office would not conform to the Standards, the project would result in a significant impact to the resource. After project completion and once all the oil facilities are removed (over a 40-year period), the Bixby Ranch Field Office would no longer retain its historical associations with the themes of Los Angeles Basin Oil Industry (1892–1945), Long Beach Oil Industry (1921–1945), and the Petroleum Property Type and property types of Petroleum Property Type and Field Office Property Type since the character-defining features of the Synergy Oil Field would be removed. Mitigation Measures CUL-1, CUL-2, CUL-3, and CUL-4 would reduce impacts to the resource identified as the Bixby Ranch Field Office to a level of less than a significant. These measures ensure that the building is properly documented in compliance with federal guidelines, and that relocation and re-use plans conform to the methodology recommended by the National Park Service (NPS) and Secretary of the Interior's Standards for Treatment of Historic Properties and other federal guidelines.

The Bixby No. 2 Discovery Well, is recommended individually eligible for listing in the California Register and local listing under Criterion 1/A. The resource retains character-defining features of an early oil well associated with the Petroleum Property Type and retains sufficient integrity to convey its historical significance. Because the project, as currently designed, proposes to remove 95 percent of oil production infrastructure, including this well, the proposed project would have significant impact on the Bixby No. 2 Discovery Well because after project completion the resource would no longer retain character-defining features or integrity to convey its historical significance; however, Mitigation Measures CUL-1, CUL-2, and CUL-4, which require retention of the well, documentation, and public interpretation, are included to reduce potential impacts to the resource identified as the Bixby No. 2 Discovery Well to a level of less than significant. After project completion with mitigation incorporated, the impact would be less than significant because the Bixby No. 2 Discovery Well would be preserved.

The project would have no indirect impacts on historical resources within the project vicinity (0.5-mile radius).

No prehistoric archaeological resources were identified, and the technical report prepared for the project (Fulton and Fulton 2017) indicates the area has a low sensitivity for buried prehistoric archaeological sites; however, there is the possibility that buried prehistoric and historic-period resources do exist in the project site and those resources could be impacted by the project. Consultation with the Gabrieleño Band of Mission Indians – Kizh Nation and the Soboba Band of Luiseño Indians, conducted as part of AB 52 and SB 18

requirements (and discussed in Section 3.16, *Tribal Cultural Resources*), indicates that both Tribes consider the area to have a high sensitivity for archaeological resources. Further, both Tribes recommended Native American monitoring of all ground-disturbing activities. If previously undocumented cultural resources are encountered, those resource could be found eligible for listing in the California Register and could be impacted by the project. Implementation of Mitigation Measures CUL-5 through CUL-7 would ensure that impacts to historical resources as defined in Section 15064.5 would be less than significant.

Operation

Once construction is complete, operation of the project is not expected to impact any archaeological resources or built environment resources that could qualify as historical resources; however, if archaeological resources that qualify as historical resources are identified during the course of operations, implementation of Mitigation Measures CUL-5 and CUL-7 would ensure that impacts to historical resources as defined in Section 15064.5 would be less than significant.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

> **Mitigation Measure CUL-1: Recordation.** Prior to the issuance by the City of Long Beach of a grading or building permit for the relocation of the Bixby Ranch Field Office and a grading permit for the wetlands restoration work on the Synergy Oil Field, a recordation document in accordance with the Historic American Landscape Survey (HALS) and the Historic American Buildings Survey (HABS) Level II requirements shall be completed for the Bixby No. 2 Discovery Well and the Bixby Ranch Field Office, both of which are individually eligible. The HABS/HALS document shall be prepared by a qualified architectural historian or historic preservation professional. These documents shall include a historical narrative on the industrial and historical importance of the Synergy Oil Field and Seal Beach Oil Field for background information, in addition to recording the existing appearance of the Bixby Ranch Field Office and the Bixby No. 2 Discovery Well in professional large format HABS/HALS photographs. For HALS, the Bixby No. 2 Discovery Well, the property setting and contextual views shall be documented. For HABS, the exteriors of the Bixby Ranch Field Office, representative interior spaces, character-defining features, as well as the setting and contextual views shall be documented. All documentation shall be completed in accordance with the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation (HABS/HALS standards). Original archivally sound copies of the report shall be submitted to the HABS/HALS collection at the Library of Congress and the archives of the South Central Coastal Information Center, California State University, Fullerton, CA. Non-archival digital copies shall be distributed to the City of Long Beach, City of Long Beach Public Library, and the Long Beach Historical Society. In addition, any existing and available design and/or as-built drawings and pertinent supporting materials such as maps and aerial photographs shall be compiled, reproduced, and incorporated into the recordation document.
>
> **Mitigation Measure CUL-2: Retention of the Bixby No. 2 Discovery Well.** Prior to the issuance of a grading permit for the Synergy Oil Field site by the City of Long Beach, a plan shall be implemented by the Applicant for the retention and preservation of the Bixby No. 2 Discovery Well and sign along with a 5-foot buffer around the furthest point from the concrete pad. The plan shall define the necessary maintenance to the sign that shall be performed (see National Park Service Preservation Brief 25, "The Preservation of Historic Signs," by Michael J. Auer). The plan shall describe a path for pedestrian traffic from the visitors center to the Discovery Well that shall be developed and installed. At the Discovery Well site, a wayside sign shall be installed interpreting the Seal Beach Oil Field and the importance of

the Bixby No. 2 Discovery Well. The interpretation of the Bixby No. 2 Discovery Well shall be overseen and prepared by a qualified architectural historian or historic preservation professional. The ongoing maintenance of the Bixby No. 2 Discovery Well site shall be the responsibility of the owner of this area of the Synergy Oil Field site.

Mitigation Measure CUL-3: Historic Preservation Consultation, Preparation of a Relocation and Rehabilitation Plan, and Construction Monitoring. Prior to the issuance of a grading permit for the Synergy Oil Field site by the City of Long Beach, a Relocation and Rehabilitation Plan and plans for Construction Monitoring shall be submitted by the Applicant for review and approval. The project design for Bixby Ranch Field Office is presently conceptual and detailed architectural drawings showing the proposed rehabilitation have not been prepared. A qualified architectural historian shall provide input to the project architect to revise the design in accordance with the Standards to retain the character-defining features of the exterior and interior of the Bixby Ranch Field Office. Once the design has been finalized, the architectural historian shall prepare a Standards plan review for submittal to the City of Long Beach Planning for a Certificate of Appropriateness.

Following the approval of the Bixby Ranch Field Office project plans, a Relocation and Rehabilitation Plan (Plan) shall be developed by a qualified historic preservation consultant. The Plan shall include relocation and rehabilitation methodology recommended by the National Park Service (NPS), which are outlined in the booklet entitled "Moving Historic Buildings," by John Obed Curtis (1979). The Plan shall include an assessment of the building condition by a qualified engineer, and a shoring plan for relocation and storage, and guidelines for relocation to the final site. If temporary storage is required, the storage conditions should closely follow the recommendations of NPS Preservation Brief 31: Mothballing Historic Buildings with regard to recommendations for structural stabilization, pest control, protection against vandalism, fire, and moisture, adequate ventilation which should be applied to the building at the temporary storage location to ensure the safety of the building during storage. A periodic maintenance and monitoring plan shall also be included in the Plan and implemented during the storage period in accordance with the guidance outlined in NPS Preservation Brief 31. The Plan shall be reviewed and approved by the City prior to issuance by the City of permits to relocate the Bixby Ranch Field Office.

Upon relocation of the Bixby Ranch Field Office, any maintenance, repair, stabilization, rehabilitation, preservation, conservation, or reconstruction work performed in conjunction with the relocation of the building shall be undertaken in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Properties. The relocation and rehabilitation process shall be monitored by a qualified historic preservation consultant at key intervals to ensure conformance with the Standards and NPS guidelines. The preservation consultant shall also be available to provide technical expertise to reduce potential impacts to historical resources from unforeseen circumstances.

Lastly, a permanent metal plaque shall be affixed to the primary elevation or a marker shall be imbedded in the pavement in front of the primary elevation of the relocated Bixby Ranch Field Office, which will briefly explain where the building was originally located (original and second location) and that the building was relocated to a third location. A qualified architectural historian or historic preservation professional shall provide oversight to the design and fabrication of an interpretive plaque/marker.

Mitigation Measure CUL-4: Interpretation. Interpretation about the significant history of the Synergy Oil Field shall be placed within the Bixby Ranch Field Office (the proposed visitors center), and along the proposed walking trails. The interpretation shall use the recommendations from Mitigation Measures CUL-2 (Retention) and CUL-3 (Recordation) to interpret the history of the Los Angeles Basin Oil Industry, Long Beach Oil Industry, Seal Beach Oil Field (including the Bixby and McGrath leases), Rancho Los Alamitos Company, Synergy Oil Field, Marland Oil Company, and Continental Oil

Company. Furthermore, oral histories shall be conducted of previous employees who worked on the Synergy Oil Field or Seal Beach Oil Field, or experts with knowledge of the abovementioned themes to incorporate within the interpretive exhibit. Historical photographs, aerials, topographic maps, and newspapers shall compliment the interpretive exhibit to visually demonstrate the activities that took place on the Synergy Oil Field. A qualified architectural historian or historic preservation professional shall provide oversight to the design and installation of an interpretive program.

Mitigation Measure CUL-5: Retention of Qualified Archaeologist and Worker Training. Prior to the issuance of a grading permit for each of the four individual sites and any off-site improvements by the City of Long Beach, evidence shall be provided to the City that a qualified archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Secretary of the Interior 2008) has been retained by the City to conduct any required training, evaluation, or treatment of archaeological resources that might be encountered during implementation of the project. As part of this, prior to the start of grading, the qualified archaeologist shall conduct cultural resources sensitivity training for all construction personnel. Construction personnel must be informed of the types of archaeological resources that may be encountered (both prehistoric and historical), and of the proper procedures to be enacted in the event of an inadvertent discovery of archaeological resources or human remains. The Applicant must ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance. This document shall be made available to the City upon request.

Mitigation Measure CUL-6: Native American Monitoring. A Native American monitor from the Gabrieleño Band of Mission Indians—Kizh Nation, a consulting party for the project under AB 52, shall be present during all earth-moving construction activities. The Native American monitor shall be given the opportunity to participate in the cultural resources sensitivity training described in Mitigation Measure CUL-5. At least 30 days prior to issuance of grading permits by the City of Long Beach for each of the four individual sites and any off-site improvements, a Native American Monitoring Agreement (Monitoring Agreement) shall be developed between the City and the Gabrieleño Band of Mission Indians—Kizh Nation. The Monitoring Agreement shall pertain to prehistoric archaeological resources and Tribal cultural resources, respectively, and shall identify any monitoring requirements and treatment of cultural resources to meet both the requirements of CEQA and those of the Tribal representative. The Monitoring Agreement shall also address communication protocols in the event of an unanticipated discovery of cultural materials, and the roles, responsibilities, and authorities of the Native American Monitor. The Monitoring Agreement shall also detail the protocols for treatment and final disposition of any Native American cultural resources, sacred sites, and human remains discovered on the site that the Native American Monitor shall implement in consultation and coordination with the Native American Most Likely Descendant, as identified by the NAHC. In accordance with Mitigation Measure CUL-9, discussed below, discovery and treatment of human remains shall comply with State Health and Safety Code Section 7050.5 and PRC Section 5097.98.

Mitigation Measure CUL-7: Archaeological Resource and/or Tribal Cultural Resource Discovery and Treatment. In the event of the unanticipated discovery of archaeological or other cultural resources, whether discovered through Native American monitoring or not, all work activities in the area (within approximately 100 feet of the discovery) shall be halted or redirected until the discovery can be evaluated by a qualified archaeologist. Construction shall not resume until a qualified archaeologist has conferred with the City and, in the case of prehistoric archaeological resources and tribal cultural resources, the Native American monitor, on the significance of the resource. If it is determined that the discovered archaeological resource and/or tribal cultural resource is significant under CEQA, avoidance and preservation in place shall be the preferred manner of mitigation, pursuant to PRC Section 21083.2(b) and Section 21084.3. Preservation in place may be accomplished by, but is not limited to, avoidance, incorporating the resource into open space, capping, or deeding the site into a permanent conservation easement. In the event that preservation in place is demonstrated to be infeasible

and data recovery through excavation is the only feasible mitigation available, a Treatment Plan shall be prepared and implemented by a qualified archaeologist, in consultation with the City, that provides for the adequate recovery of the scientifically consequential information contained in the archaeological resource or cultural information in the event of a tribal cultural resource. The City shall also consult with appropriate Native American representatives in determining treatment for prehistoric or Native American resources to ensure cultural values ascribed to the resources, beyond those that are scientifically important, are considered. Any evaluation and treatment shall be supervised by an individual or individuals that meet the Secretary of the Interior's Professional Qualification Standards.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR pp. 3.4-20 through 3.4-23. These changes are identified in the form of Mitigation Measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6, and CUL-7. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Construction

Two historic-period archaeological resources were identified within the project site, and both would be subject to disturbance as a result of project implementation. Both resources were recommended as ineligible for listing in the California Register, and for the same reason, neither qualifies as a unique archaeological resource pursuant to Section 15064.5. As discussed above, while the potential for buried archaeological resources is considered low, both the Gabrieleño Band of Mission Indians – Kizh Nation and the Soboba Band of Luiseño Indians have indicated that the area may have a high sensitivity for cultural resources. Implementation of Mitigation Measures CUL-5 through CUL-7 during construction activities would ensure than impacts to archaeological resources as defined at Section 15064.5 would be less than significant.

Operation

Once construction is complete, operation of the project is not expected to impact archaeological resources; however, if archaeological resources were identified during the course of operations, implementation of Mitigation Measures CUL-5 through CUL-7 would ensure that impacts to archaeological resources as defined at Section 15064.5 would be less than significant.

Mitigation Measures

The following mitigation measures are included in the Draft EIR and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

Refer to Mitigation Measures CUL-5 through CUL-7.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.4-24. These changes

are identified in the form of Mitigation Measures CUL-5, CUL-6, and CUL-7. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

Impact CUL-3: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Construction

The results of the fossil locality search and field survey conducted during preparation of this report indicate that no paleontological resources have been found within or immediately adjacent to the project site. The project site contains Artificial Fill overlying Young Alluvial Fan and Channel Deposits, Undivided. Artificial Fill reaches a maximum depth of approximately 33 feet in the eastern half of the Pumpkin Patch site; however, the depth of Artificial Fill elsewhere in the project site is unknown. While Artificial Fill has no paleontological sensitivity, the underlying Young Alluvial Fan and Channel Deposits, Undivided have low paleontological sensitivity to a depth of 15 feet and high paleontological sensitivity below that mark. Given the sensitivity of the underlying geological deposits, there is a possibility that excavation could encounter significant paleontological resources. Disturbance of such resources would constitute a significant impact on the environment. Implementation of Mitigation Measure CUL-8 would ensure that impacts to paleontological resources are less than significant.

Operation

Once construction is complete, operation of the project does not have the potential to impact paleontological resources.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure CUL-8: Paleontological Monitoring.** Prior to commencement of any grading or excavation activity on site, the Applicant shall retain a qualified paleontologist, defined as a paleontologist meeting the guidelines of the Society of Vertebrate Paleontology (SVP) (2010) and approved by the City of Long Beach. The qualified paleontologist, or a designated paleontological monitor working under the guidance of the qualified paleontologist, shall attend and participate in any preconstruction meetings and worker training (as discussed in Mitigation Measure CUL-5), and shall be on site during all excavation and other significant ground-disturbing activities that reach a depth of 15 feet or greater below the modern ground surface. This is the minimum depth at which Young Alluvial Fan and Valley Deposits, Undivided may be encountered. These deposits are considered to have low paleontological sensitivity near the top of the geologic unit (which may not necessarily correspond with the modern ground surface), and a high paleontological sensitivity greater than 15 feet below the top of the unit. In the event that paleontological resources (e.g., fossils) are unearthed during ground-disturbing activity, the paleontological monitor shall have the authority to temporarily halt or divert grading activity to allow recovery of paleontological resources. The area of discovery shall be roped off with a 50-foot-radius buffer. Once documentation and collection of the find is completed, the monitor shall allow grading to recommence in the area of the find. Daily field logs shall be prepared during the course of the monitoring, and upon completion of monitoring a final report shall be prepared for submittal to the City of Long Beach.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.4-24. This change is identified in the form of mitigation measure CUL-8. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact CUL-4: The project would not disturb any human remains, including those interred outside of formal cemeteries

Construction

While no known human remains have been identified in the project site as a result of the cultural resources studies, there is a possibility that ground-disturbing activities could encounter previously undocumented human remains. The discovery of human remains would require handling in accordance with PRC Section 5097.98. In the unexpected event that human remains are unearthed during construction activities, impacts would be potentially significant, and as such, mitigation would be required. With implementation of Mitigation Measure CUL-9, impacts to human remains would be less than significant.

Operation

Once construction is complete, operation of the project is not expected to impact human remains; however, if human remains are identified during the course of operations, implementation of Mitigation Measure CUL-9 would ensure that impacts to human remains are less than significant.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure CUL-9: Treatment of Human Remains.** In accordance with California Health and Safety Code Section 7050.5, if human remains are found, the Los Angeles County Coroner shall be immediately notified of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains (100 feet or as determined by the project archaeologist) shall occur until the procedures set forth in this measure have been implemented. If the County Coroner determines that the remains are, or are believed to be, Native American, he or she shall notify the Native American Heritage Commission (NAHC) within 24 hours. In accordance with California PRC Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.4-25. This change is identified in the form of mitigation measure CUL-9. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Cumulative Impacts

Multiple projects, mostly development within an urban setting, are proposed throughout the geographic area addressed in the cumulative analysis. Cumulative impacts to cultural resources could occur if any of these projects, in conjunction with the proposed project would have impacts on resources that, when considered together, would be significant; however, the project would not significantly affect known cultural resources, including archaeological resources, historical-period built resources, or human remains. Potential impacts to the known historical-period resources in the project site would be reduced to a less than significant level with the implementation of Mitigation Measures CUL-1 through CUL-4, which require adherence to the Secretary of the Interior's Standards and the development of appropriate documentation and interpretive materials. Further, while there is the potential for impacts to unknown archaeological resources, such as those that might be discovered during ground-disturbing activities during project construction, Mitigation Measures CUL-5 through CUL-7, which provide for cultural resources sensitivity training, Native American monitoring, and treatment protocols for unanticipated discoveries, would ensure that impacts are reduced to a less than significant level. Taken together, implementation of these mitigation measures would ensure that the project would not have an impact on cultural resources. Therefore, cumulative impacts during construction would not be cumulatively considerable (less than significant).

In the event that human remains are encountered during project implementation, Mitigation Measure CUL-9 would ensure that the remains are treated in accordance with relevant state laws and that impacts would be reduced to a less than significant level. It is assumed that any other projects in the geographic scope of analysis would also follow state law. Therefore, cumulative impacts on human remains during construction would not be cumulatively considerable (less than significant).

Regarding paleontological resources, activities associated with the project do have the potential to impact paleontological resources, and the project, in conjunction with other projects in the area, could contribute to the progressive loss of paleontological resources, as-yet unrecorded fossil sites, associated geological and geographic data, and fossil bearing strata; however, excavation activities during project construction would require compliance with Mitigation Measure CUL-8, which requires monitoring of sensitive geologic deposits, and recovery and appropriate studies in the event of an unanticipated discovery. Adherence to Mitigation Measure CUL-8 would reduce impacts to paleontological resources to a less than significant level. Therefore, cumulative impacts to paleontological resources during construction would not be cumulatively considerable (less than significant).

No impacts to cultural resources are anticipated during project operations. Therefore, cumulative impacts during operations would not be cumulatively considerable (less than significant).

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the project's contribution to the significant cumulative environmental effects, which are identified and described on Draft EIR pp. 3.4-25 to 3.4-26. This change is identified in the form of mitigation measures CUL-1 through CUL-7. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.5 Geology and Soils

Impact GEO-2: The project would not expose people or structures to potential substantial adverse effects as a result of strong seismic ground shaking.

The region will likely experience a large regional earthquake within the operational life of the project. There is a potential for high-intensity groundshaking at the project site that would be associated with such an earthquake. Intense groundshaking and high ground accelerations would affect the entire area around the proposed facilities, wells, and associated infrastructure. The primary and secondary effects of groundshaking could damage structural foundations, distort or break wells or pipelines, and place people at risk of injury or death. The impact from induced seismic activity caused by oil production was analyzed above in Impact GEO-1.

Construction

Workers could be exposed to ground shaking on all four individual sites that comprise the project site; however, the construction period is short term, with most construction workers located outside of any structures.

More importantly, the structural elements of the proposed project (i.e., the structures on the Pumpkin Patch and LCWA sites, and the oil pipeline and utilities from the LCWA site through the City Property site to the Pumpkin Patch site) would be required to undergo appropriate design-level geotechnical evaluations prior to final design and construction. Implementing the regulatory requirements in the CBC and local ordinances, and ensuring that all buildings and structures are constructed in compliance with the law is the responsibility of the project engineers and building officials. In addition, the construction of the oil wells, storage facilities, and pipeline system and utility corridor would be under the permitting, design specifications, and inspection jurisdiction of DOGGR. Similar to the CBC, the registered professionals designing and constructing the wells, pipelines, and associated infrastructure are required to comply with DOGGR regulations. Finally, the proposed project would either remove the landfilled materials at the Pumpkin Patch site and replace those materials with imported fill appropriately placed and compacted to support the proposed structures, or drive piles through the landfill materials that is to reach underlying stable units to support the building foundation. With compliance with the regulatory requirements and the implementation of geotechnical design recommendations as required by Mitigation Measure GEO-1, Implement Geotechnical Recommendations, impacts relative to seismic shaking would be reduced to a less-than-significant level with mitigation for all components of the proposed project.

Operation

Multiple structures would be constructed as part of the proposed project, including an office, warehouse, oil production wells, and associated oil production and storage facilities. Therefore, the proposed project would place people and structures in an area that could experience strong seismic ground shaking.

Non-Oil Production Structures

The project structures (e.g., buildings and associated infrastructure) to be constructed at the Pumpkin Patch and LCWA sites would be designed to withstand seismic ground shaking during their operation in compliance with the CBC and local building code regulations, and recommendations from site-specific geotechnical

investigations, thereby reducing the potential for structural damage and risks to public safety. The parking lot, berms, trail, and restored ecosystem areas would not contain structures that could become irreparably damaged and harmful to persons in the event of strong ground shaking. Finally, although the existing Synergy building to be relocated and repurposed as a visitors center and the building would not be structurally changed, the existing building would be placed on a new foundation constructed using present-day CBC standards that would improve its ability to withstand seismic shaking.

Oil Production Structures

DOGGR regulations include design specifications for the wells, pipelines, storage tanks, and containment facilities, along with routine inspections of the operations of oil and gas wells, storage tanks, pipelines, and associated infrastructure. Wells are required to have conductor casings that protect the inner well casing from seismic damage and seal off shallower depth intervals to prevent oil and produce water from entering shallower non-oil producing zones such as aquifers with beneficial uses such as drinking water. The wells, well heads, and pipelines would be constructed with pressure-sensing equipment and shutoff valves that would automatically shut off and isolate wells and pipelines should a seismic event damage wells or pipelines. The wells and well heads would be constructed in well cellars that would contain oil and produced water in the event of leaks or damage from a seismic event. The storage tanks would be constructed with leak detection equipment and within secondary containment structures. In addition, and as previously discussed, the proposed pipelines, electrical lines, and control cables that would run from the LCWA site across the City Property site and to the Pumpkin Patch site were evaluated for potential displacement or damage in the event of a seismic event. The study identified specific seismic design elements to accommodate the anticipated maximum amount of displacement and minimize the risk of damage. The required design specifications would reduce the risk of damage to the oil production wells, associated infrastructure, workers, and the environment from seismic events to a less-than-significant level.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Mitigation Measure GEO-1 would apply to all project components.

> **Mitigation Measure GEO-1: Implement Geotechnical Recommendations.** As recommended in the preliminary geotechnical studies prepared for project implementation on each project site, at such time the details for the following site specific improvements and their locations are finalized, a design-level geotechnical investigation shall be prepared to develop final site- and development-specific recommendations based upon the potential geologic conditions that are described and evaluated in the geotechnical studies and this EIR. Design-level geotechnical investigation shall be prepared for the following project components and shall be submitted to the City of Long Beach, Building Department and Planning Department:
>
> - Visitors center on the Synergy Oil Field site;
> - Office building and warehouse on the Pumpkin Patch site;
> - All well cellars on the Pumpkin Patch and LCWA sites; and
> - All tank battery and containment areas on the Pumpkin Patch and LCWA sites.

The design-level geotechnical investigations shall provide recommendations as necessary to address the geotechnical issues that were identified for each site in the EIR. In addition to compliance with the CBC, design-level measures shall be provided for the following specific geotechnical issues:

- Risks from seismic shaking of structures such as the building to be constructed on the Pumpkin Patch site shall be reduced by designing the structures to withstand the anticipated maximum level of seismic shaking, and incorporating bracing and anchoring techniques to withstand a Maximum Credible Earthquake of 7.0 magnitude.
- For those project sites that have been identified as susceptible to liquefaction, the design-level geotechnical investigations shall identify the specific measures recommended to address liquefaction potential, which could include driving piles through susceptible materials; conditioning the soils by deep soil mixing, jet or pressure grouting, or dynamic compaction techniques; or by removing the susceptible soils.
- If the landfill on the Pumpkin Patch site is not removed, any structures proposed to be placed on top of the landfill shall be stabilized one of two measures: by driving piles through unstable materials into underlying stable units or by removing the susceptible soils and replacing the materials with properly compacted imported fill.
- For those sites on which structures may be placed in areas of expansive soils, the design-level geotechnical study shall identify whether the expansive soils should be removed and replaced with imported non-expansive fill, or with proper mixing and grading of site materials.
- The Applicant shall provide the design-level geotechnical investigations along with the plans, specifications, grading plans, and building plans to the City for review as a condition of approval to acquire the necessary grading and building permits.
- Implementation by the Applicant of the recommendations in the design-level geotechnical investigations will mitigate geotechnical hazards to a level of less than significant.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described in the Final EIR on pp. 3.5-33 and 3.5-34. This change is identified in the form of mitigation measure GEO-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact GEO-3: The project would not expose people or structures to potential substantial adverse effects as a result of seismic-related ground failure, including liquefaction.

Construction and Operation

All four individual sites that comprise the project site are located in areas that are susceptible to liquefaction; thus, liquefaction could damage structures during construction or operations, and place the safety of workers or the public at risk; however, as discussed above in Impact GEO-2, project structures would be designed to withstand seismic ground shaking and seismic-related ground failures in accordance with the CBC, DOGGR, and local building code regulations and recommendations from site-specific geotechnical investigations, thereby reducing the potential for structural damage and risks to workers and public safety. This would include the new foundation that the existing Synergy office building would be placed on and repurposed as a visitors center. The required geotechnical investigations would provide design recommendations to reduce the risk of damage from seismic-induced liquefaction in accordance with these standards and regulations. The parking

lot, berms, trail, and restored ecosystem areas would not contain structures that could become irreparably damaged and harmful to persons in the event of ground shaking but would also be designed in accordance with regulatory requirements. As discussed above, the geotechnical investigations would include recommendations to address geotechnical issues, including liquefaction. With implementation of standard engineering practices and standard construction methods, compliance with CBC, DOGGR, and local regulations for conducting geotechnical investigations, and the implementation of the design recommendations from the geotechnical investigations as required by Mitigation Measure GEO-1, Implement Geotechnical Recommendations, ground failure impacts such as seismic-induced liquefaction would be reduced to a less-than-significant level with mitigation for all components of the proposed project.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure GEO-1.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.5-35. This change is identified in the form of mitigation measure GEO-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact GEO-6: The project would not 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 on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Construction and Operation

As discussed in Impact GEO-4, there is no identified risk for landslides or lateral spreading within the project area. All project components would be located in relatively flat to gently-sloping topography and would, therefore, have a low to no susceptibility to seismically or non-seismically induced landslides or lateral spreading. Therefore, there would be no impact related to landslides or lateral spreading.

Subsidence is commonly associated with severe, long-term withdrawal of groundwater and/or oil in excess of recharge that eventually leads to overdraft of the aquifer or production zone. This is the reason that oil production operations re-inject the groundwater from oil production back into the production zone to prevent subsidence. The proposed project would continue the current practice of returning the groundwater to the depth levels from which it was extracted, reducing the potential for subsidence (BOMP 2017c).

The geotechnical and environmental studies for the sites concluded that the Pumpkin Patch and LCWA sites would have the potential for significant collapse or subsidence due to the uncertain nature of the landfilled materials buried at the site; however, as discussed above for Impact GEO-2, the proposed structures for the Pumpkin Patch and LCWA sites would be required to comply with the CBC (see Section 3.5.3, CBC regulations), which would require the design to undergo appropriate design-level geotechnical evaluations prior to final design and construction. If necessary, for the Pumpkin Patch site, this may include removing the

landfilled materials and replacing those materials with imported fill appropriately placed and compacted to support the proposed structures as described above. With implementation of standard engineering practices and standard construction methods, compliance with CBC and local regulations for conducting geotechnical investigations, and the implementation of the design recommendations from the geotechnical investigations as required by Mitigation Measure GEO-1, Implement Geotechnical Recommendations, ground failure impacts from unstable geologic units would be reduced to a less-than-significant level with mitigation for all components of the proposed project.

As discussed above for Impact GEO-3, the design of structures would be required to undergo appropriate design-level geotechnical evaluations prior to final design and construction, which would include providing recommendations to address non-seismically induced liquefaction. With compliance with the regulatory requirements, impacts relative to non-seismically induced liquefaction would be less than significant with mitigation.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure GEO-1.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.5-38. This change is identified in the form of mitigation measure GEO-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact GEO-7: The project could be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property.

As previously noted, the CBC, based on the IBC and the now defunct UBC, no longer includes a Table 18-1-B. Instead, CBC Section 1803.5.3 describes the criteria for analyzing expansive soils.

As discussed in the setting, the geotechnical investigation of the alluvial materials on the Pumpkin Patch and LCWA sites concluded the materials are considered to have low to moderate expansion potential. A geotechnical investigation for expansive soils has yet not been conducted for the Synergy Oil Field but would be prepared for the design of the new foundation to which the existing office building would be relocated. A geotechnical investigation for the pipeline that would cross the City Property site was conducted to provide pipeline design criteria to enable the pipeline to accommodate movement due to seismic events.

Construction

The structures proposed under the project could be located on soils with a moderate potential for soil expansion; however, until the structures are complete, the potential for damage from expansive soils during construction would be minimal, if any, largely due to the amount of time required for expansive soils to exhibit damage. Therefore, the potential impact during construction would be considered less than significant.

Operation

The project structures (i.e., buildings, warehouse, oil storage tanks and associated infrastructure on the Pumpkin Patch and LCWA sites, the visitors building on the Synergy Oil Field site, and the oil transmission pipeline and utility corridor on the LCWA, City Owned Property, and Pumpkin Patch sites) could be located on soils with up to a moderate potential for soil expansion, which could damage structures and result in risks to people or structures if not designed appropriately; however, as discussed above for Impact GEO-2, the design of structures would be required to undergo appropriate design-level geotechnical evaluations prior to final design and construction, which would include providing recommendations to address expansive soils, if present. With implementation of standard engineering practices and standard construction methods, compliance with CBC and local regulations for conducting geotechnical investigations, and the implementation of the design recommendations from the geotechnical investigations as required by Mitigation Measure GEO-1, Implement Geotechnical Recommendations, ground failure impacts due to expansive soils would be reduced to a less-than-significant level with mitigation for all components of the proposed project.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure GEO-1.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.5-38. This change is identified in the form of mitigation measure GEO-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Cumulative Impacts

Construction activities have the potential to cause soil erosion and loss of topsoil. If cumulative projects were constructed at the same time, the erosion effects could be cumulatively significant if appropriate measure are not taken; however, the state Construction General Permit and the Long Beach Storm Water Management Program would require each cumulative project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff and prevent erosion for each project. Through compliance with the Construction General Permit, the potential for erosion impacts would be reduced to less than significant levels. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would each be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites, including from erosion. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations below action levels and would not be cumulatively considerable (less than significant). Similarly, the impacts of the proposed project combined with other cumulative projects within the region would not cause a significant

cumulative impact related to soil erosion and the proposed action's contribution to cumulative impacts on soil erosion would not be cumulatively considerable (less than significant).

Until the construction of structures has been completed, there would be no impacts from seismic events (e.g., fault rupture, seismic shaking, seismic-induced ground failures such as liquefaction, lateral spreading, or landslides) or non-seismically induced ground failures (e.g., landslides, lateral spreading, subsidence, liquefaction, collapse, or expansive soil) due largely to the relatively short period that construction would take place and the likelihood of a seismic event occurring at that time. Therefore, the cumulative impacts during construction would not be cumulatively considerable (less than significant).

Impacts from seismic events (e.g., fault rupture, seismic shaking, seismically induced ground failures such as liquefaction, lateral spreading, or landslides) or non-seismically induced ground failures (e.g., landslides, lateral spreading, subsidence, liquefaction, collapse, or expansive soil) tend to be confined to each given site due to varying conditions and distance to epicenter. In addition, each cumulative project would also be required to comply with the requirements of the CBC and local building codes, which would require geotechnical investigations to identify potential geotechnical issues and provide recommendations to reduce or eliminate the risks. Each cumulative project would be required to conduct geotechnical investigations and develop recommendations to address geotechnical hazards. With compliance with applicable regulations and the implementation of mitigation measures such as Mitigation Measure GEO-1, Implement Geotechnical Recommendations, the cumulative impacts would be reduced and would not be cumulatively considerable (less than significant).

Upon completion of the proposed project and any nearby cumulative projects, each project would be required to comply with the Long Beach MS4 Permit, Long Beach LID Manual, and various sections of the LBMC, all of which contain requirements to control surface water runoff and erosion. Similar to the discussion above of how SWPPPs would control runoff and prevent erosion for cumulative construction impacts, because each cumulative project would be required to comply with the same regulations and to the same action levels, the impacts would not be cumulatively considerable (less than significant with mitigation).

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the project's contribution to the significant cumulative environmental effects, which are identified and described on Draft EIR pp. 3.5-39 to 3.5-40. This change is identified in the form of mitigation measure GEO-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

2.4.6 Greenhouse Gas Emissions

Impact GHG-1: The proposed project would generate GHG emissions, either directly or indirectly, but would not result in a significant impact on the environment.

Emissions Calculations

Construction

Construction of the proposed project would generate GHG emissions from a variety of sources. First, GHG emissions would be generated during construction of the proposed projects in the project area. Once fully

operational, the proposed projects' operations would generate direct GHG emissions from mobile sources (i.e., worker commute trips and periodic facility maintenance visits). Indirect source emissions associated with operation of the proposed project would be generated from electrical consumption to power facilities and cars traveling to and from the visitors center on the Synergy Oil Field site.

Operations

For the Pumpkin Patch site emission sources include cars and trucks going to and from the site, natural gas for space heating, a diesel-powered drilling rig, and other miscellaneous sources. The site would not normally consume electricity from the public grid, but rather electricity would be generated by turbines at the LCWA site. Additional drilling rigs would be in operation on a regular basis at both the Pumpkin Patch and LCWA sites, but would be electric (not diesel powered). Also at both the Pumpkin Patch and LCWA sites would be diesel-powered workover drilling rigs. Oil-containing tanks would be permitted through SCAQMD and equipped with BACT (best available control technology). Tanks at both Pumpkin Patch and LCWA sites would be fixed-roof gas blanket design, which eliminates the direct emissions from tanks. At the LCWA site there would be four gas turbine generator sets to convert natural gas from the wells to electricity. Currently, it is envisioned that these generators would provide all of the electricity needed at the Pumpkin Patch and LCWA sites most of the time. Occasionally, additional power would need to be drawn from the Southern California Energy (SCE) grid. At the visitors center on the Synergy Oil Field site, emissions would be generated by electric consumption for lighting and natural gas consumption for space heating. Emissions from motor vehicles would be associated with cars traveling to and from the visitors center. Recurrent painting of the facilities at all of the individual sites would also contribute to the emissions.

Street trees may be removed or trimmed in accordance with the City of Long Beach's Tree Maintenance Policy and with the appropriate permits from the City of Long Beach Department of Public Works. The potential removal of street trees may result in less carbon sequestration on the site if the trees are actively growing and accumulating a net positive biomass; however, a loss of actively growing street trees would be offset by revegetation from implementation of the wetlands habitat restoration project, which would reestablish carbon sinks and the net effect on carbon sequestration would be little to no change (or potentially positive carbon sequestration if there is substantial revegetation of the wetlands that more than offsets the removal of street trees) and would not affect the project's overall GHG emissions inventory.

The turbines would generate the overwhelming majority of the GHG emissions. The total project GHG emissions, inclusive of the GHG emissions from the turbines, would exceed 10,000 $MTCO_2e$/year.

The turbine emissions would be substantially lower than would otherwise be the case if all electricity were to be provided by SCE. If the project did not invest in turbines, the use of turbine fuel (i.e., natural gas) elsewhere, via the regional natural gas grid, could more than double the project's GHG emissions. Also, the investment in cogeneration design/equipment for the turbines. helped to reduce GHG emissions.

Total Emissions

Total project emissions would be reduced over time as the existing oil field operations[3] are gradually phased out. The existing oil field well sites would be phased out over a 40-year period, starting upon the completion and occupation of the new office building and warehouse on the Pumpkin Patch site. The emissions associated

[3] Based on the Greenhouse Gas Assessment by Greve & Associates, existing operations generate 22,211 TCO_2e/year (Greve & Associates 2017).

with the assumed baseline oil operations would be reduced by 75 percent once building permits are obtained for the office building on the Pumpkin Patch site. Over the next 20 years, half of the existing 53 wells would be plugged and abandoned. This represents an 87.5 percent reduction from the assumed baseline emission levels. By year 40, all wells would be plugged and abandoned, which represents a 100 percent reduction of the baseline emissions.

Under CEQA, the GHG emission impact of a project is based on the incremental or net change in emissions compared to the existing physical conditions in the affected area as they exist at the time the notice of preparation is published (refer to *CEQA Guidelines* Section 15126.2). The net total project GHG emissions, inclusive of the GHG emissions from the turbines and the reduction of the existing GHG emissions from the plugging and abandonment of the existing wells would exceed 10,000 $MTCO_2e$/year. As result, impacts would be considered significant.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure GHG-1: Cap-and-Trade Program.** The project shall comply with the Cap-and-Trade Program as administered by CARB for covered sources. In accordance with the Cap-and-Trade Program, the project shall retire GHG allowances or offsets equal to the project's GHG emissions for covered sources. Retiring the GHG allowances or offsets means the project would acquire them through a number of means carefully controlled by CARB, including obtaining allowances and offsets in CARB-controlled auctions with variable and increasing cost, according to projections and decreasing supply. The project shall also comply with all applicable and required reporting requirements and GHG reduction and trading requirements. The project shall also comply with all applicable Cap-and-Trade regulations as they continue to evolve, such as revisions to the Climate Change Scoping Plan, and become adopted by the California Legislature and/or through CARB's rulemaking process.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.6-21. This change is identified in the form of mitigation measure GHG-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact GHG-2: The proposed project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

HSC Division 25.5 established statewide targets for reducing the State's GHG emissions. The implementing tools of the law (e.g., CARB's *Climate Change Scoping Plan*) are clear that the reductions are not expected to occur uniformly from all sources or sectors. CARB has established strategies for reducing emissions from various sectors including transportation, energy, and stationary sources. CARB has outlined a number of potential strategies for achieving the 2030 reduction target of 40 percent below 1990 levels, including continuation of Cap-and-Trade, sourcing 50 percent or more of the state's electricity by 2030, reducing petroleum use in cars and trucks, and reducing the carbon content of transportation fuels. The proposed project would comply with these future regulations, as promulgated by the USEPA, CARB, CEC, or other agency.

Cap-and-Trade

As required per Mitigation Measure GHG-1, the project would be designed to incorporate efficient technologies and would be consistent with strategies to minimize GHG emissions from stationary sources. Compliance with the Cap-and-Trade Program would ensure facility emissions would be reduced as required by CARB and HSC Division 25.5. The project would contribute GHG emissions as an Electricity Self-Generation entity that is subject to the Cap-and-Trade Program. As such, emissions from the project would be reduced on a sector-wide basis in accordance with the GHG reduction targets of HSC Division 25.5 and future updates by CARB to the Climate Change Scoping Plan and the Cap-and-Trade Program. Currently, the California Cap-and-Trade Program is effective through 2020. CARB's 2017 Climate Change Scoping Plan Update details the "Proposed Scoping Plan Scenario" (proposed scenario) recommending the optimal path to meeting the GHG reduction target represented by SB 32 while providing the widest range of environmental and economic benefits. The proposed scenario includes extending the Cap-and-Trade Program beyond 2020. Under the proposed scenario, the project would continue to be subject to a Cap-and-Trade program, and thus would be consistent with CARB's Scoping Plan.

Stationary Source Best Available Control Technology

The project would include cogeneration and comply with BACT standards for the turbines, comply with applicable SCAQMD rules and regulations (refer to Section 3.2, *Air Quality*, for a list of SCAQMD rules and regulations applicable to the project), and include microgrid system and solar photovoltaic modules to provide efficient energy for the facilities including drilling rigs and supporting equipment, pumps, two electric vehicle charging stations, and other equipment, the project would not conflict with applicable regulations to reduce GHG emissions.

Construction and Mobile Source Emissions

The proposed project would utilize construction contractors that would be in compliance with regulations including the USEPA Heavy Duty Vehicle Greenhouse Gas Regulation and the CARB ACTM that limits heavy-duty diesel motor vehicle idling. Furthermore, the project would accelerate the use of cleaner construction equipment as specified in Mitigation Measures AQ-2 and AQ-3, which require the use of equipment certified to the Tier IV emission controls. Implementation of these measures would ensure that fuel-efficient equipment would be used, which would reduce emissions compared to fleet average equipment. Additionally, as the project is an industrial use, GHG emissions associated with mobile sources would only occur from periodic vehicle trips by workers for inspection and maintenance purposes and visitors to the visitors center, which would not generate substantial emissions. Nonetheless, workers and visitors to the site would utilize vehicles that comply with State motor vehicle emissions standards. Therefore, the project would not conflict with applicable regulations to reduce GHG emissions.

Conclusion

CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of less than significant for GHG emissions if a project complies with the California Cap-and-Trade Program or other regulatory schemes to reduce GHG emissions.

Given that the project would generate GHG emissions consistent with applicable reduction plans and policies with implementation of Mitigation Measure GHG-1, and given that GHG emission impacts are cumulative in

nature, the project's incremental contribution to significant GHG emissions would be less than cumulatively considerable with mitigation, and impacts would be less than significant with mitigation.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure GHG-1.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.6-24. This change is identified in the form of mitigation measure GHG-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Cumulative Impacts

Given that the project would generate GHG emissions consistent with applicable reduction plans and policies with implementation of Mitigation Measure GHG-1, and given that GHG emission impacts are cumulative in nature, the project's incremental contribution to significant GHG emissions would be less than cumulatively considerable with mitigation, and impacts would be less than significant with mitigation.

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the project's contribution to the significant cumulative environmental effects, which are identified and described on Draft EIR pp. 3.6-23 to 3.6-24. This change is identified in the form of mitigation measure GHG-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

2.4.7 Hazards and Hazardous Materials

Impact HAZ-3: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.

Construction

All four individual sites are listed on one or more hazardous materials lists for the presence of active, idle, or plugged oil wells; historical releases of petroleum or PCBs, and/or the presence of landfill materials. The construction activities could encounter hazardous materials associated with these issues, exposing workers or the environment to hazardous materials.

Contaminated Soil

Soil disturbance during construction on the Synergy Oil Field, City Property, and LCWA sites could encounter or further disperse residual contamination in soil and expose construction workers and the environment to

hazardous materials. Potential impacts related to soil contamination during demolition and construction on the Synergy Oil Field and City Property sites is analyzed above in Impact HAZ-1. Potential impacts relative to the LCWA site are discussed below.

Based on the results of previous site investigations on the LCWA site, increased concentrations of arsenic, vanadium, lead, and nickel were identified in two locations, and additional soil sampling was conducted at two sites in the central portion of the project site.

Based on the absence of regulatory "actionable" concentrations of arsenic, lead, nickel and vanadium collected from "step-out" samples proximal to prior sample locations, the elevated results from previous investigations are determined to be an anomaly. Additionally, prior soil sampling (AEC 2004) conducted at bracketed depths around the samples exhibiting these anomalous results were within what can be considered normal "background" range. No further investigation and/or remediation is required, and no impacts are anticipated.

Landfill Materials

The Pumpkin Patch site has a buried closed landfill. The landfill materials would be located below the proposed location of the oil processing facility. Depending on the results of ongoing testing for contaminants, the landfill materials may need to be removed. If removed, there is a potential for hazardous materials to be encountered, which could expose workers and the environment to hazardous materials. Such risks could occur during excavation or drilling, stockpiling, handling, or transportation of soils or landfilled materials that have been contaminated by hazardous materials.

Impacts resulting from the potential release of or exposure to hazardous materials in soil, landfilled materials, and/or groundwater would be reduced to a less-than-significant level with implementation of Mitigation Measures HAZ-1, Health and Safety Plan, and HAZ-2, Soil, Landfill Materials, and Groundwater Management Plan. With implementation of Mitigation Measures HAZ-1 and HAZ-2, the potential for harmful exposure to hazardous materials present in soil, landfilled materials, or groundwater during construction would be reduced to a less-than-significant level.

It may be necessary to remove some or all of the buried landfill under the Pumpkin Patch. If determined necessary, this work would consist of the following phases: (1) remove the dry trash from the site and haul to a disposal facility (transfer station or landfill) depending on the acceptance criteria of the transfer station and landfills and (2) using excavation equipment with a dredging bucket, remove wet trash so the water would be allowed to drain within the confines of the excavation. Any residual water brought to the surface would be contained for transfer to an on-site liquid retention Baker-type tank; the collected water would be sampled and subsequently disposed at an approved off-site facility. The wet trash would be allowed to drain on a rack in the excavation pit before being hauled to a disposal site.

Analytical testing of the materials to be removed would characterize the waste as hazardous (Class I), designated (Class II), or nonhazardous (Class III), and identify the appropriate disposal location. Designated and nonhazardous waste would be hauled to a Class II or III disposal facility, and hazardous waste would be hauled to a Class I facility, likely the Kettleman Hills Landfill. It is assumed that approximately 63,000 cubic yards of waste would be exported, and approximately 45,000 cubic yards of clean dirt would be imported. With compliance with regulations, and with implementation of Mitigation Measures HAZ-1 and HAZ-2, the potential for harmful exposure to hazardous materials present in soil, landfilled materials, or groundwater during removal of the landfill would be reduced to a less-than-significant level.

Operation

Once the construction activities have been completed, the hazardous materials sites issues described above would have been addressed. The only remaining potential exposure would be due to accidents involving the oil production activities, previously addressed in Impact HAZ-1.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

Mitigation Measure HAZ-1: Health and Safety Plan. The construction contractor(s) shall prepare and implement site-specific Health and Safety Plans as required by and in accordance with 29 CFR 1910.120 to protect construction workers and the public during all excavation and grading activities. This Plan shall be submitted to the project applicant and the Long Beach Hazardous Materials Division for review prior to commencement of construction. The Health and Safety Plan shall include, but is not limited to, the following elements:

- Designation of a trained, experienced site safety and health supervisor who has the responsibility and authority to develop and implement the site Health and Safety Plan;
- A summary of all potential risks to construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals;
- Specified personal protective equipment and decontamination procedures, if needed;
- Emergency procedures, including route to the nearest hospital; and
- Procedures to be followed in the event that evidence of potential soil or groundwater contamination (such as soil staining, noxious odors, debris or buried storage containers) is encountered. These procedures shall be in accordance with hazardous waste operations regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release, notifying The Long Beach Hazardous Materials Division, the LARWQCB, and DOGGR, as appropriate, and retaining a qualified environmental firm to perform sampling and remediation.

Mitigation Measure HAZ-2: Soil, Landfill Materials, and Groundwater Management Plan. In support of the Health and Safety Plan described in Mitigation Measure HAZ-1, the contractor shall develop and implement a Soil, Landfilled Materials, and Groundwater Management Plan that includes a materials disposal plan specifying how the construction contractor will remove, handle, transport, and dispose of all excavated material in a safe, appropriate, and lawful manner. The Plan must identify protocols for soil and landfilled materials testing and disposal, identify the approved disposal site, and include written documentation that the disposal site can accept the waste. Contract specifications shall mandate full compliance with all applicable local, state, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil or dewatering effluent.

As part of the Soil and Groundwater Management Plan, the contractor shall develop a groundwater dewatering control and disposal plan specifying how groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate and lawful manner. The Plan must identify the locations at which groundwater dewatering is likely to be required, the test methods to analyze groundwater for hazardous materials, the appropriate treatment and/or disposal methods, and approved disposal site(s), including written documentation that the disposal site can accept the waste. The

contractor may also discharge the effluent under an approved permit to a publicly owned treatment works, in accordance with any requirements the treatment works may have.

This Plan shall be submitted to the project applicant and Long Beach Hazardous Materials Division for review and approval prior to commencement of construction.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR pp. 3.7-35 and 3.7-36. These changes are identified in the form of Mitigation Measures HAZ-1 and HAZ-2. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.8 Noise

Impact NOI-1: The project would not result in exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Construction

Project construction would generate noise on site from construction activities and the operation of construction equipment.

Per the City of Long Beach Noise Ordinance Section 8.80.202, Construction Activity, project construction would be required to occur within defined hours. The City's Noise Ordinance does not establish construction noise level limits. Therefore, the project would be constructed in conformance with the City of Long Beach Noise Ordinance.

Operation

Project operation would generate off-site vehicle traffic noise from project vehicle traffic on area roadways in support of site operations, and would generate on-site noise from operating oil wells, as discussed separately below.

The City's Noise Ordinance establishes operational noise criteria of allowable noise levels for percentages of an hour over a given time of day period within a land use district. Greater noise level limits are allowed during the day (7:00 a.m. to 10:00 p.m.) as compared to the more noise-sensitive nighttime period (10:00 p.m. to 7:00 a.m.). The Synergy Oil Field, Pumpkin Patch, and City Property sites are located in land use District 1 (which is generally defined predominantly residential with other land use types also present); the LCWA site is located in District 4 (which is generally defined as predominantly industrial with other land types use also present).

Additionally, the City exempts oil and gas wells from normal well servicing, remedial, or maintenance work performed within an existing well, which does not involve drilling or redrilling and which is restricted to the hours between 7:00 a.m. and 7:00 p.m., exclusive of weekends and holidays, in residential areas.

Off-Site Traffic Noise

The project is not likely to generate a substantial number of vehicle trips; therefore, a detailed traffic study has not been prepared for the project. Assuming a worst-case estimate of approximately 200 vehicle trips per day to the Pumpkin Patch site associated with oil production and drilling activities, would result in a 0.02 Dba increase in traffic noise levels along PCH, which would be imperceptible.

Assuming a worst-case estimate of approximately 500 vehicle trips per day to the Synergy site to the visitors center, would result in a less than a 0.1 dB increase in traffic noise levels along 2nd Street, which would be imperceptible. Off-site traffic noise would not expose people to or generate noise levels in excess of the applicable noise standards.

On-Site Oil Production Operations

The Pumpkin Patch and LCWA sites would be developed with oil production facilities, which would generate noise from operational oil wells. The design for the oil production facilities is in its initial phases; therefore, the specific equipment has not yet been selected. The analysis conducted as part of the Draft EIR does not represent a final noise analysis of the proposed oil production facilities, which would be required prior to construction permits. Rather, the analysis determines whether the project would feasibly comply with the City's Noise Ordinance, as required by CEQA. Prior to the issuance of any grading permits, the City would work with the developer to ensure the proper selection during the final design of equipment and control devices (e.g., mufflers, enclosures, etc.) that meet City requirements would ensure project compliance with City noise regulations.

Pumpkin Patch Site

The Pumpkin Patch site would be developed with 50 operational oil wells, which would include the following components:

- Electric submersible pumps would be incorporated down in the wells.
- Three injection pumps plus a backup would likely be used on site.
- One electric drilling rig would also be located on site, which would utilize a façade as a noise barrier around the drilling rig to reduce drilling noise levels and improve visual impacts.
- A flare and blowdown would be located on site for emergency situations only; therefore, as emergency equipment, it is exempt from the City's Noise Ordinance (Section 8.80.250).
- An 18-foot-high masonry wall would surround the Pumpkin Patch site on three sides, and a 10-foot-high wall along the back of the site would serve as a noise barrier.

The loudness of the equipment, the distance from the site to noise sensitive receptors, and the noise barrier effect of the perimeter wall were accounted for in the calculations.

The results of the calculations indicate that the noise levels projected for oil production would be less than the ambient noise levels and would not exceed the Noise Ordinance criteria. Therefore, the noise impact from oil production operations at the Pumpkin Patch site would result in a less-than-significant impact, based on proper facility design. A mitigation measure is proposed to ensure that the facility is properly designed.

LCWA Site

The LCWA site is proposed to be developed with 70 operating oil wells, including injection pumps, gas turbines, compressor, and a drilling rig, similar to the Pumpkin Patch site. The LCWA site would be surrounded by a 10-foot-high masonry wall, which would serve as a noise barrier.

The site is relatively isolated from residential and commercial development. No sensitive species have been identified on the LCWA site; therefore, no impact to sensitive species from operational noise is anticipated. Noise levels were calculated for the residential and commercial development, including equipment noise, distance to the receptors, and the noise barrier effect of the wall. The results of the calculations

that the projected operational noise levels for the LCWA site's oil production are very low for the two locations, which are much lower than the measured ambient noise levels and noise limits of the City of Long Beach Noise Ordinance. Therefore, the noise impact from oil production operations at LCWA would result in a less-than-significant impact, based on the facility being properly designed, for which a mitigation measure is prescribed to ensure that the facility is properly designed.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure NOI-1:** Prior to issuance of the permits for the drilling and drilling equipment at the Pumpkin Patch and LCWA sites, a detailed noise assessment shall be prepared to demonstrate that the resultant noise levels from oil production activities will meet the City of Long Beach Noise Ordinance limits. The operational noise assessment shall be prepared by a qualified acoustical consultant who is a Registered Engineer in the State of California. The report shall document the specific sources of noise and detail any measures, if any are required, to ensure that operational noise is maintained within the City's standards. These measures will be incorporated into the project plans. The report shall be completed and approved by the City prior to issuance of building permits. Additionally, once the sites are in operation, noise measurements should be conducted within 60 days that demonstrate both oil production sites are in compliance with the City's Noise Ordinance. If any exceedances are detected, the City shall require that noise attenuation measures, such as equipment enclosures, mufflers, etc. are implemented, and require additional noise measurements be taken to demonstrate compliance with the City's Noise Ordinance.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.11-18. This change is identified in the form of mitigation measure NOI-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact NOI-3: The project would not result in substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Operation

As discussed under Impact NOI-1, project operation would generate off-site vehicle traffic noise from project vehicle traffic on area roadways in support of site operations, and would generate on-site noise from operating oil wells and production facilities, as discussed separately below.

Off-Site Traffic Noise

As discussed under Impact NOI-1, the oil production facilities and drilling operations would generate a maximum of approximately 200 trips per day, which would result in a traffic noise increase of approximately 0.02 dBA along PCH. Therefore, the increase would be imperceptible and less than the significance threshold of a 3 dB increase.

The visitors center on the Synergy Oil Field site would attract visitors to the site via 2nd Street, which in the vicinity of the site has ADT volumes of approximately 38,000 vehicles per day. Assuming a worst-case estimate of approximately 500 vehicle trips per day to the visitors center, applicable to both construction and operational activities, would result in a less than a 0.1 dB increase in traffic noise levels along 2nd Street. Therefore, the increase in traffic noise on 2nd Street due to the project would be much less than the significance threshold of a 3 dB increase.

On-Site Oil Production Operations

As discussed under Impact NOI-1, the Pumpkin Patch and LCWA sites would be developed with oil production facilities, which would generate noise from operational oil wells.

Pumpkin Patch Site

As discussed under Impact NOI-1, based on preliminary design, noise levels projected for oil production would be less than the ambient noise levels. Therefore, there would be no increase in noise level at the nearest receptor, which would be less than the significance threshold of a 3 dB increase. Therefore, the noise impact from oil production operations at the site would result in a less-than-significant impact, if the facility is properly designed; however, a mitigation measure is proposed to ensure that the facility is properly designed.

LCWA Site

As discussed under Impact NOI-1, the projected operational noise levels for the LCWA oil production and power generation would be very low at the nearest residential location, and much lower than the measured ambient noise levels. Therefore, there would be no increase in noise level at the nearest receptor, which would be less than the significance threshold of a 3 dB increase. Therefore, the noise impact from oil production operations at the site would result in a less-than-significant impact, if the facility is properly designed; however, a mitigation measure is proposed to ensure that the facility is properly designed.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure NOI-1.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.11-21. This change is identified in the form of mitigation measure NOI-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact NOI-4: The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Construction

As described under Impact NOI-1, project construction would generate noise on site from construction activities and the operation of construction equipment, including drilling rigs, trucks, graders, bulldozers, and concrete mixers. In general, the type of equipment that would be used for construction and demolition would be similar to the equipment used for most construction projects using heavy equipment. Typical construction equipment that would be employed for this project includes graders, scrapers, front loaders, trucks, backhoes, concrete mixers, and concrete pumps. The maximum noise level (L_{max}) for most of the equipment that would be used during the construction ranges from 80 to 95 dBA at 50 feet.

Synergy Oil Field Site

At the Synergy Oil Field site, restoration activities would include grading to clear some berms and establish other berms, and constructing a sheet pile wall approximately 4,730 feet long. The grading and sheet pile driving would last approximately 4 to 6 months and occur outside of the nesting season for bird species utilizing the site. Site restoration activities would use graders, trucks, and a sheet pile driver.

The nearest noise-sensitive receptor is a mobile home park approximately 330 feet north of the nearest grading activity of the site. Restoration activities in the area, nearest to the mobile home park, could last up to 6 months. The predicted maximum and average construction noise levels at the nearest residence would be higher than ambient levels, and potential significant noise impacts would occur. Mitigation measures are proposed.

In addition to site restoration, sheet pile driving would occur as close as approximately 621 feet from the mobile home park over approximately 2 to 6 months to install the 4,730-foot barrier. Sheet pile driving can be either impact or vibratory; the vibratory method is quieter than the impact pile driving. Both methods are explained below.

At the mobile home park, the noise levels associated with vibratory pile driving would have maximum and average noise levels well above ambient conditions and would result in speech interference when the residents are outside. Therefore, vibratory sheet pile driving noise would potentially result in a significant impact. Mitigation measures are prescribed to lessen this impact.

At the mobile home park, the noise levels associated with impact pile driving would have maximum and average noise levels well above ambient conditions and would result in speech interference when the residents

are outside. Therefore, impact sheet pile driving noise would potentially be a significant impact. Mitigation measures are prescribed to lessen this impact. Since vibratory pile driving is now commonly used, and impact pile driving is significantly louder, vibratory pile driving is prescribed to be used.

In addition to mobile home park, the site restoration also considered the potential impact of construction noise on sensitive animal species, specifically special-status bird species during nesting and breeding activity. To avoid noise impacts to sensitive bird species that utilize the site, all grading and sheet pile driving activity would be conducted outside of the nesting season (March 1 to August 15), and a mitigation measure has been recommended to ensure that this is implemented. Outside of the nesting season, birds use the site for foraging mostly in the area of the Steamshovel Slough. As the Slough will not be affected during restoration activities, the birds would still be able to continue to forage on site, and this impact is not considered significant (see Draft EIR Section 3.3, *Biological Resources*, for more details).

In the southern portion of the site, due to the distance to the nearest sensitive receptors and the low level of construction anticipated and occurring during the daytime hours allowable under the City's Noise Ordinance, the construction noise impact would be less than significant for the southern portion of the site.

City Property Site

The western edge of the City Property site abuts a commercial/retail center. Commercial buildings are usually not considered noise sensitive. Well removal has the potential to increase peak noise levels on occasion. The noise impact is considered to be less than significant because the office buildings are not noise sensitive and only four wells would be removed in close proximity to the offices.

The potential impact of noise on sensitive species, specifically sensitive bird species would be similar to those described above for the Synergy site, and the same mitigation would apply (see Draft EIR Section 3.3, *Biological Resources*, for more details).

Pumpkin Patch Site

The nearest noise-sensitive area to the Pumpkin Patch site would be the residential area approximately 830 feet southwest of the site, which is exposed to vehicle traffic noise from PCH. The predicted maximum and average construction noise levels at the nearest residences would be substantially less than ambient noise levels.

LCWA Site

At the LCWA site, the nearest noise-sensitive area is the residential area approximately 1,825 feet southeast of the site, which is exposed to significant levels of traffic noise from 2nd Street and is surrounded by a soundwall. The predicted maximum and average construction noise levels at the nearest residence would be substantially less than ambient noise levels.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

> **Mitigation Measure NOI-2: Staging Areas and Mufflers.** Staging areas for construction shall be located away from existing off-site residences. All construction equipment shall use properly operating mufflers. These requirements shall be included in construction contracts.

Mitigation Measure NOI-3: Limit Grading and Pile Driving. All grading and sheet pile driving activities shall be conducted outside of the nesting season for sensitive bird species. The nesting season has been identified as extending from March 1 to August 15. (Refer to the Biological section of the EIR for more information on potential impacts to bird species and the corresponding mitigation.)

Mitigation Measure NOI-4: Prohibit Impact Sheet Pile Driving. Impact sheet pile driving should be prohibited on the Synergy Oil Field site. Only vibratory sheet pile driving shall be employed.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR pp. 3.11-24 and 3.11-25. These changes are identified in the form of Mitigation Measures NOI-2, NOI-3, and NOI-4. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.9 Public Services

Impact PS-1: The project would not result in the need for new or physically altered facilities in order to maintain acceptable response times for fire protection and emergency medical services.

Construction

Activities associated with demolition and construction requiring electrical power or fuel or handling oil would increase the fire risk on site and subsequent potential need for fire protection services. Construction would increase the number of persons on site, which could increase the need for emergency medical services. Construction of the proposed facilities, particularly oil-related facilities, could result in fire hazards on site. The presence of construction workers on the project site would be temporary, as the construction period for the proposed project would last approximately 4 years (for the most intense construction). Additionally, as part of Mitigation Measure PS-1, fire safety prevention training would be given to construction workers regarding activities that pose a potential fire risk, such as handling of oil and other flammable liquids and welding and cutting. Given the short construction duration and implementation of Mitigation Measure PS-1, it is not anticipated that the proposed project would substantially increase the service demand for fire protection and emergency medical services in the area.

Operation

Introduction of new structures and operations on site could increase the fire hazard potential of the area and the subsequent potential need for fire protection services. Specifically, oil production facilities and microgrid energy systems associated with the oil operations on site could increase fire hazards. More people on site could increase the need for emergency medical services.

Fire would be managed by a separate control system that interfaces with the main unit control system. The detection of combustible gas concentrations above established levels generates an alarm or a package shutdown, as appropriate. The detection of fire or excessive heat results in the immediate shutdown of the package and activation of the fire suppression system using CO_2 as a distinguishing agent.

With respect to the oil production facilities, the potential for fire due to a risk of explosion is mitigated through the use of BOPE systems on all wells. A BOPE system is a safety system used during drilling to prevent uncontrolled release of formation fluids, and allows for the shut off of flow to prevent spills and release of materials. The BOPE system would be designed to handle the maximum possible pressure expected at the wellhead.

BOPE specifications are set by DOGGR.

In addition to the BOPE on the wells, a foam system for fire suppression will be installed on the oil storage tanks to address the potential for fires involving these facilities.

The project facilities would be protected by a firewater loop fed by a Long Beach Water Department (LBWD) water main. The main firewater loop line within the site would be continuously pressurized. The system would supply water to multiple hydrants, firewater monitors and foam monitors located on the project site. Each fire hydrant would be equipped with a fire hose and nozzles. The local LBWD water main can provide adequate flow and pressure to the site with no additional need for firewater storage tank or pumps. The new office building would be provided with a sprinkler system in accordance with City requirements.

Although there will be an increase in the number of employees on site, especially during the drilling stages, the increase is not considered significant with respect to the impact on public services.

Although the proposed visitors center would increase the number of daytime visitors and the employee population on the Synergy Oil Field site, the proposed project would be required to pay the City's Fire Facilities Impact Fee as part of its building fees to compensate for anticipated impacts to fire services from its operation. Each oil barrel produced by the project would also be taxed as part of the City Proposition H, which funds fire protection services components such as salaries, worker benefits and academies. Therefore, it is not expected that the proposed project would result in the need for new or physically altered facilities to maintain acceptable response times for fire protection and emergency medical services.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

> **Mitigation Measure PS-1: Fire Prevention and Protection Training.** Prior to the start of construction activities, the Applicant shall prepare and conduct a fire prevention and protection training for all construction personnel associated with the proposed project. Topics shall include general fire prevention practices such as avoiding smoking on site as well as specific preventative measures pertaining to high-fire-risk activities including handling of oil and welding and cutting. Personal protection measures including the locations of fire extinguishers on the project site and site exit routes should also be disclosed to ensure construction worker safety in the event of a fire. The material for the training shall be obtained in consultation with the Long Beach Fire Department.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.13-8. This change is identified in the form of mitigation measure PS-1. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

2.4.10 Tribal Cultural Resources

Impact TCR-1: The project would not cause a substantial adverse change in the significance of a tribal cultural resource, as defined in CEQA PRC Section 21074(a) or (b).

Construction

The results from the search of the Sacred Lands File (SLF) at the Native American Heritage Commission (NAHC) indicated that potential tribal cultural resources have been recorded within the project area. As required by AB 52, further consultation between the City and the Gabrieleño Band of Mission Indians—Kizh Nation and the Soboba Band of Luiseño Indians—occurred. As a result of this consultation, no tribal cultural resources, as defined in both (a) and (b) of PRC Section 21074, were identified within the project area; however, both Tribes stressed the cultural resources sensitivity of the project site, and the Gabrieleño Band of Mission Indians—Kizh Nation indicated that ancestral village sites are known to have been located in the area. No tribal cultural resources as defined in PRC Section 21074(a)(1), resources determined by the lead agency in its discretion and supported by substantial evidence to be significant as defined in PRC Section 21074(a)(2), or a cultural landscape as defined in PRC Section 21074(b) have been identified as a result of the consultation. Nonetheless, because both Tribes recommended Native American monitoring of all ground-disturbing activities, the City has included Native American monitoring as a mitigation measure in Draft EIR Section 3.4, *Cultural Resources*, for the discovery of archaeological resources, and it is included here as mitigation for tribal cultural resources. With implementation of Mitigation Measures CUL-5 through CUL-7 from Section 3.4, *Cultural Resources*, project impacts to tribal cultural resources as a result of construction would be less than significant with mitigation.

Operations

No tribal cultural resources as defined at PRC Section 21074(a) and (b) have been identified as a result of the consultation conducted for the project. Project impacts as a result of operations would be less than significant.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

Refer to Mitigation Measures CUL-5 and CUL-7.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.16-6. These changes are identified in the form of Mitigation Measures CUL-5 and CUL-7. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

Cumulative Impacts

Since no tribal cultural resources were identified within the project site, there would be no cumulative impacts to known tribal cultural resources; however, the Gabrieleño Band of Mission Indians—Kizh Nation has indicated that the project area is sensitive for archaeological and other resources that might be identified as

tribal cultural resources, and both the Gabrieleño and the Soboba Band of Luiseño Indians have requested Native American monitoring during project construction. While there is the potential for impacts to unknown tribal cultural resources, such as those that might be discovered during ground-disturbing activities during project construction, Mitigation Measures CUL-5 through CUL-7, which provide for cultural resources sensitivity training, Native American monitoring, and treatment protocols for unanticipated discoveries, would ensure that impacts are reduced to a less than significant level. Taken together, implementation of these mitigation measures would ensure that the project would not have an impact on tribal cultural resources. No impacts to tribal cultural resources are anticipated during project operations. Therefore, cumulative impacts during operations would not be cumulatively considerable (less than significant).

Findings

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the project's contribution to the significant cumulative environmental effects, which are identified and described on Draft EIR p. 3.16-7. This change is identified in the form of mitigation measures CUL-5 through CUL-7. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

2.4.11 Energy Consumption

Impact EN-1: The project would not result in the wasteful, inefficient, and unnecessary consumption of energy during construction, operation, and/or maintenance.

Construction

Compliance with the CARB anti-idling regulation and implementation of Mitigation Measure AQ-2 requiring the use of equipment certified to the Tier 4 emissions standards would result in fuel savings in the absence of these regulations and measures. While these regulations were originally adopted to reduce construction emissions, they would also result in energy savings from the use of more fuel-efficient engines. Construction of the project would utilize fuel efficient equipment consistent with state and federal regulations, and would comply with state measures to reduce the inefficient, wasteful, and unnecessary consumption of energy.

Electricity used during construction to provide temporary power for lighting and electronic equipment (e.g., computers, etc.) and to power certain construction equipment would generally not result in a substantial increase in on-site electricity use. Overall, construction activities would require minimal electricity consumption and would not be expected to have any adverse impact on available electricity supplies and infrastructure. Similarly, natural gas is not anticipated to be consumed in any substantial quantities during construction of the project; however, if natural-gas-powered equipment are used, it would offset (i.e., replace) the diesel-fueled equipment assumed in the analysis presented in the Draft EIR and not result in an overall change in the project's energy impacts.

In addition, the project would comply with future applicable regulatory mandates that the State Legislature and/or CARB may adopt in future years to improve heavy-duty construction efficiency and reduce fuel consumption as part of the State's mandate to reduce GHG emissions.

The project would represent a very small fraction of the energy sales from regional providers and state transportation fuel supplies.

Based on the available data, construction would utilize energy for necessary on-site activities and to transport construction materials and demolition debris to and from the site. It is reasonable to conclude that idling restrictions and the use of cleaner equipment would result in less fuel combustion and energy consumption and minimize project construction-related energy use. Therefore, construction of the project would not result in the wasteful and unnecessary consumption of energy.

Operations

Project operations would result in energy demand from worker and visitor trips, truck trips, workover drilling rigs, cranes, forklifts, and the four turbines. The four turbines (4.5 MW each; 18 MW total) with heat recovery steam generators for cogeneration would use natural gas byproduct from the oil wells to provide the majority of power for the Pumpkin Patch and LCWA facilities, which would result in substantial electricity and natural gas energy savings. The turbines would provide electricity for the electric drilling rigs at the Pumpkin Patch and LCWA sites, lighting, pumps and other operational equipment, and electric vehicle charging stations. The project would purchase a limited amount of power from SCE to provide electricity to the visitors center and, when needed to supplement turbine electricity, for the Pumpkin Patch and LCWA sites. SCE is subject to the Renewables Portfolio Standard, requiring utility providers to increase procurement from eligible renewable resources over time to 50 percent by 2030. Therefore, over time, the project's energy use will become cleaner and more efficient as SCE expands its renewables portfolio.

Compliance with the CARB anti-idling regulation and implementation of Mitigation Measure AQ-3 (refer to Section 3.2, *Air Quality*) requiring the use of drilling rigs certified to the Tier 4 emissions standards would result in fuel savings in the absence of these regulations and measures. On-road equipment and vehicles (i.e., trucks, worker vehicles, and visitor vehicles) would also be expected to require less fuel resources as more efficient trucks and vehicles that achieve greater fuel economy compared to current standards replace older model year trucks and vehicles.

The project would represent a very small fraction of the energy sales from regional providers and state transportation fuel supplies.

Mitigation Measure

The following mitigation measure was included in the Draft EIR and the Final EIR, and is applicable to the proposed project. The measure as provided includes any revisions incorporated in the Final EIR.

Refer to Mitigation Measure AQ-3.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.18-14. This change is identified in the form of mitigation measure AQ-3. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

Impact EN-3: The project would be consistent with existing energy standards, policies, and regulations.

Implementation of the project would utilize contractors that demonstrate compliance with applicable regulations governing the accelerated retiring, replacing, repowering, or retrofitting of older, less-efficient engines with newer emission-controlled models. The project would require that construction and operational equipment meet the fuel-efficient Tier 4 emissions standards (refer to Mitigation Measures AQ-2 and AQ-3). In addition, contractors would be required to comply with the anti-idling ATCM that prohibits diesel-fueled commercial vehicles greater than 10,000 pounds from idling for more than 5 minutes at any given time. While intended to reduce construction emissions, compliance with these emissions regulations would also result in efficient use of construction-related energy and the minimization or elimination of wasteful and unnecessary consumption of energy as discussed under Impact EN-1.

The four turbines (4.5 MW each; 18 MW total) would adhere to SCAQMD's BACT standards and stationary source permitting regulations established by the SCAQMD. Additionally, the office building would be subject to applicable regulations outlined by the Title 24 Building Standards Code and the CALGreen Code. The CALGreen Code includes resource, water, and design measures aimed at increasing building energy and water efficiency and decreasing waste. Implementation of such measures would increase energy efficiency at the office building and ensure consistency with building regulations.

Mitigation Measures

The following mitigation measures were included in the Draft EIR and the Final EIR, and are applicable to the proposed project. The measures as provided include any revisions incorporated in the Final EIR.

Refer to Mitigation Measures AQ-2 and AQ-3.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.18-15. This change is identified in the form of Mitigation Measure AQ-2 and AQ-3. The City of Long Beach hereby finds that implementation of this mitigation measure is feasible, and the measure is, therefore, adopted.

2.5 Findings on Significant and Unavoidable Impacts

The following summary describes the unavoidable adverse impact of the proposed project where either mitigation measures were found to be infeasible, or identified mitigation measures would not lessen impacts to a less-than–significant level.

2.5.1 Air Quality

Impact AQ-2a: The project would violate the air quality standard and contribute substantially to an existing or projected air quality violation for construction-related VOC and NOX emissions.

Construction

Construction impacts would be short-term and limited to the period when construction activities are taking place. None of the individual phases of construction would exceed the SCAQMD regional thresholds; however, some of the phases of construction could overlap with other phases of construction. If all phases of construction occurred simultaneously, then the emissions for VOC and NO_X would exceed the thresholds. The emissions for CO, SO_X, PM_{10}, and $PM_{2.5}$ would not be exceeded even if all of the phases of construction occurred at the same time.

The likely worst-case overlap for VOC and NO_X emissions is during a time when five construction phases are underway. The VOC emissions during this period would represent the actual worst case for the project. Mitigation Measure AQ-1 would be recommended to reduce the VOC impacts. Implementation of the VOC mitigation measures would reduce VOC impacts to a less-than-significant level. Implementation of the VOC Mitigation Measure AQ-1 would reduce VOC impacts to a less-than-significant level. The NO_X emissions during this period would total 224.5 pounds per day and represent the actual worst case for the project. Mitigation Measure AQ-2 is recommended to reduce the emissions; however, there are no reasonable and feasible measures that can reduce the emissions to below 100 pounds per day. Therefore, construction of the project would result in a significant and unavoidable regional air quality impact due to regional NO_X emissions. Mitigation measures would also be recommended to reduce the VOC impacts.

Mitigation Measures

Mitigation measures AQ-1 would reduce the short-term emissions of VOC to a level of less than significant. Mitigation Measures AQ-2 and AQ-4 would help reduce NO_X emissions, however, conservatively assuming overlapping construction phases, regional NO_X emissions for construction of the proposed project would remain significant and unavoidable.

Please refer to Mitigation Measures AQ-1, AQ-2, and AQ-4 as set forth in these Findings.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR pp. 3.2-24 and 3.2-25. These changes are identified in the form of Mitigation Measures AQ-1, AQ-2, and AQ-4. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

The City finds that there are no other mitigation measures that are feasible, taking into consideration specific economic, legal, social, technological or other factors, that would mitigate this impact to a less-than-significant level, and, further, that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the alternatives identified in the EIR, as discussed in Section 2.6 of these Findings (Public Resources Code

Sections 21081(a)(1), (3); Guidelines Sections 15091(a)(1), (3)). As described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable because specific overriding economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of the proposed project outweigh its significant effects on the environment.

Impact AQ-3a: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) during construction.

The project area is located within the SCAB, which is considered the cumulative study area for air quality. Because the SCAB is currently classified as nonattainment area for ozone, PM_{10}, and $PM_{2.5}$, cumulative development consisting of the proposed project along with other reasonably foreseeable future projects in the SCAB as a whole could violate an air quality standard or contribute to an existing or projected air quality violation. Based on SCAQMD's cumulative air quality impact methodology, SCAQMD recommends that if an individual project results in air emissions of criteria pollutants (VOC, CO, NO_X, SO_X, PM_{10}, and $PM_{2.5}$) that exceed the SCAQMD's recommended daily thresholds for project-specific impacts, then it would also result in a cumulatively considerable net increase of these criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard.

The proposed project would exceed regional significance thresholds for construction-related VOC and NO_X emission. Implementation of Mitigation Measure AQ-1 would reduce construction-related VOC emissions to a less-than-significant level. Mitigation Measure AQ-2 and AQ-4 would reduce construction-related NO_X emissions; however, the NO_X emissions would still exceed the threshold. Since Mitigation Measures AQ-2 and AQ-4 require the use of construction equipment that meet the most stringent emissions standards, there are no feasible measures to reduce the construction NO_X emissions to less than the threshold. Therefore, the short-term construction NO_X emissions would result in a cumulatively considerable net increase and impacts would be significant and unavoidable.

Mitigation Measures

Mitigation measures AQ-1 would reduce the short-term emissions of VOC to a level of less than significant. Mitigation Measure AQ-2 and AQ-4 would be aimed at reducing NO_X emissions, however, conservatively assuming overlapping construction phases, regional NO_X emissions for construction of the proposed project would be significant and unavoidable.

Refer to Mitigation Measures AQ-1, AQ-2, and AQ-4.

Finding

Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen this significant environmental effect, which is identified and described on Draft EIR p. 3.2-30. These changes are identified in the form of Mitigation Measures AQ-1, AQ-2, and AQ-4. The City of Long Beach hereby finds that implementation of these mitigation measures is feasible, and the measures are, therefore, adopted.

The City finds that there are no other mitigation measures that are feasible, taking into consideration specific economic, legal, social, technological or other factors, that would mitigate this impact to a less-than-significant

level, and, further, that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the alternatives identified in the EIR, as discussed in Section 2.6 of these Findings (Public Resources Code Sections 21081(a)(1), (3); Guidelines Sections 15091(a)(1), (3)). As described in the Statement of Overriding Considerations, the City has determined that this impact is acceptable because specific overriding economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of the proposed project outweigh its significant effects on the environment.

2.6 Findings on Project Alternatives

CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. As discussed above, the only impacts under the project that could not be mitigated below a level of significance are construction impacts to air quality standards and criteria pollutants. The DEIR analyzed five alternatives to the proposed project that could reduce some, if not all, of the impacts. Alternative 1 would have the potential to avoid the proposed project's significant and unavoidable construction air quality impacts.

2.6.1 Alternative 1: No Project (No Build)

CEQA Guidelines Section 15126.6(e) requires that an EIR evaluate and analyze the impacts of the "No-Project" Alternative. Under the No Project (No Build) Alternative (Alternative 1), none of the proposed project components would be constructed and implemented and existing conditions would remain unchanged. The Synergy Oil Field site would continue to operate the existing oil production facilities. The City Property site would continue to operate its existing oil production facilities concentrated in the southwestern portion and northern perimeter of the site. The Pumpkin Patch site would continue to be used seasonally for the sale of pumpkins and Christmas trees and closed to the public for the remainder of the year, and would continue to operate its one active oil well. The LCWA site would remain undeveloped and used on a temporary lease basis for equipment storage and staging under this alternative.

Finding

Under Alternative 1, none of the proposed project components would be constructed and implemented and existing conditions would remain unchanged. Therefore, Alternative 1 would avoid the proposed project's significant and unavoidable construction air quality impacts. Under Alternative 1, there would be no construction of the visitors center, new office buildings, nor the oil production facilities and microgrid with four natural gas co-generation turbines. Thus, this alternative would result in no construction emissions, eliminating the significant and unavoidable construction emission impact associated with the proposed project.

Environmental Impacts

All impacts associated with Alternative 1 would be similar or less than the proposed project because there would be no new construction or development, with the following exceptions: odors, energy consumption, sea level rise and conflicts with an applicable land use plan (SEADIP). Under Alternative 1, the existing, older equipment would continue to be used and continue to age resulting in greater potential for odorous fugitive emissions, resulting in a greater impact. Alternative 1 would not relocate the Bixby Ranch Field Office. Therefore, the threat of fault rupture, strong seismic ground shaking, or ground failure would be greater.

Alternative 1 would not make existing structures and infrastructure less susceptible to sea level rise. In addition, because this alternative fails to address existing non-conformities and land use conflicts in the existing SEADIP ordinance, it would have greater impacts than the proposed project with respect to conflicts with applicable land use plans and policies. The No Project (No Build) Alternative would not install the energy-efficient microgrid system or turbines with cogeneration. Thus, Alternative 1 would not be as energy efficient as the project and would have greater impacts with respect to energy consumption.

Ability to Achieve Project Objectives

No new development would be introduced on the project site under Alternative 1 and existing oil production and office building uses would continue. No new oil production facilities would be installed with energy-efficient technology. No visitors center, new office building, or public access trail would be constructed, and no wetlands habitat restoration would occur. As a result, none of the proposed project objectives would be achieved by Alternative 1.

Finding

Although the majority of the impacts associated with this alternative would be similar or less than the proposed project, this alternative would result in greater impacts with respect to odors, energy consumption, sea level rise, and conflicts with an applicable land use plan. In addition, this alternative would not accomplish any of the project objectives. For these reasons, the City rejects Alternative 1.

2.6.2 No Project/Development Consistent with Existing Zoning

The No Project/Development Consistent with Existing Zoning Alternative (Alternative 2) would involve no change to the existing operations on the Synergy Oil Field and City Property sites. Alternative 2 would involve development consistent with existing City zoning (SEADIP) on the Pumpkin Patch and LCWA sites. This could result in commercial development (business park, office commercial, light industrial, restaurants and hotel) on the Pumpkin Patch site and light industrial development on the LCWA site. Alternative 2 could include the construction of nearly 58,000 sf of retail and service uses (such as grocery stores, general retail, banks, personal services, etc.), along with 295 parking spaces on the Pumpkin Patch site. Under this alternative, the LCWA site could be developed with an approximately 26,900 sf of industrial warehouse/office uses and approximately 123 parking spaces. Bikeway and sidewalk improvements may be implemented adjacent to the Pumpkin Patch and LCWA sites in connection with the proposed development on those sites.

Finding

Alternative 2 would not avoid or substantially lessen the proposed project's significant and unavoidable construction air quality impacts. The following describes differences in impacts between the proposed project and Alternative 2. All other impacts not described below would be similar to the proposed project.

Environmental Impacts

Significant and unavoidable impacts associated with construction-related air quality impacts would be lessened because there would be no development on the Synergy Oil Field or City Property site; however, construction emissions under this alternative could exceed the SCAQMD significance thresholds, even after implementation of mitigation measures. Thus, air quality impacts could still be significant and unavoidable for

regional NO_X emissions even with implementation of mitigation measures, and this alternative would not reduce or avoid a significant impact of the proposed project.

Alternative 2 would not conflict with any local policies or ordinances protecting biological resources on all four sites and would not impact ESHAs on the Synergy Oil Field and City Property sites. Potential historical resources impacts associated with the relocation and rehabilitation of the building and memorialization of the Bixby No. 2 Discovery well would not occur. Alternative 2 would result in GHG emissions that would be less than the project because there would be no natural gas co-generation turbines. Alternative 2 would avoid hazards associated with the relocation of the Bixby Ranch Field Office building which includes asbestos-containing material and lead-based paint. Also, no pipeline and utility corridor would be developed on the City Property site which would avoid potential leaks in the corridor. The industrial and commercial facilities proposed under Alternative 2 could generate less hazardous materials than those associated with operation of the new proposed oil production facilities. Impacts related to land use would be less under Alternative 2 compared to those for the proposed project because development of Alternative 2 would not require an amendment to the SEADIP or oil map and the alternative would be consistent with the LCP and applicable CCA policies. In addition, development of Alternative 2 could result in lesser impacts associated with construction-related temporary noise and groundborne vibration impacts because no sheet pile driving would be required and noise impacts associated with the implementation of oil production facilities would not occur. Alternative 2 would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity because development would not be located near sensitive noise receptors. Because no new ground disturbing work is proposed on the Synergy Oil Field and City Property sites under Alternative 2, construction-related impacts to tribal cultural resources would be less than the proposed project.

Alternative 2 would not provide the aesthetic benefit of removing the existing oil production facilities and infrastructure, and the overall improvement of the Los Cerritos Wetlands complex scenic vista would not be achieved. In addition, Alternative 2 could increase the potential for lighting sources on the Pumpkin Patch and LCWA sites to impacts slightly greater than those identified for the proposed project. Alternative 2 could result in greater impacts because it could result in greater employment growth and greater vehicle trips to and from the site as compared to the project; however, growth consistent with existing land use designations would likely be within SCAG employment projects for the region, which are incorporated into the AQMP. The maximum potential regional operational emissions could be greater than the project depending on number of additional vehicle and truck trips. In addition, there would be no net reduction in operational emissions from eliminating existing site activities and implementing emission controls. Therefore, Alternative 2 could result in potentially greater net localized and TAC emission impacts compared to the project. Alternative 2 could result in greater odor impacts as compared to the project because, existing equipment at the oil production facilities would not be replaced. Under Alternative 2, the existing Bixby Ranch Field Office building would not be relocated, and would continue to operate within the Alquist-Priolo fault zone and would remain exposed to fault rupture. Alternative 2 would not include the construction of the proposed project's berm that would increase the level of flood and sea level rise protection from existing conditions at Steamshovel Slough; therefore, impacts associated with sea level rise would be greater under Alternative 2. Also, the Bixby Ranch Field Office building would not be relocated and raised to reduce impacts from sea level rise. Because Alternative 2 would fail to address existing non-conformities and land use conflicts in the existing SEADIP ordinance on the Synergy Oil Field and City Property sites, it would have greater impacts than the proposed project with respect to conflicts with applicable land use plans and policies. Alternative would limit the potential to fully access the mineral resources in the area, unlike the proposed project would provide greater

access to that area. The operational vehicular traffic associated with Alternative 2 could result in a greater increase in ambient noise levels associated with the proposed project. Development of Alternative 2 also has a greater potential to increase temporary and permanent employment. Due to the proposed commercial and industrial development, Alternative 2 could result in a greater increase in demand for public services. Because the new recreational facilities proposed by the project would not be constructed (i.e., visitors center, overlook terrace, Studebaker Trail, and sidewalk and bikeway improvements), potential visitors would be required to go elsewhere and impacts related to the recreation facilities would be greater.

Alternative 2 would only develop sidewalk and bikeway improvements on the Pumpkin Patch and LCWA sites and could require more construction activities and a longer construction period, which could result greater construction-related traffic than the proposed project. Alternative 2 could also result in greater operational traffic associated with the vehicle trips generated by commercial and industrial uses, and therefore greater impacts to the congestion management program. Due to the increase in operational vehicular trips, Alternative 2 could result in greater impacts to emergency access, transportation congestion, and traffic hazards compared to the proposed project. In addition, Alternative 2 could result in a greater long-term generation of wastewater. The proposed development under Alternative 2 could be expected to increase impervious surfaces and could generate greater amounts of runoff. Additionally, construction of new stormwater drainage facilities could be required. The intensity of commercial and industrial uses proposed under Alternative 2 could be expected to result in a greater water demand than the operation of the proposed project, but it is not anticipated to result in a determination by the wastewater treatment provider of inadequate capacity to serve the development, and greater impacts to landfill capacity. Alternative 2 would not install the energy-efficient microgrid system or turbines with cogeneration. Thus, the existing oil production facility would not be as energy efficient as the project and would have greater impacts relative to the project

Ability to Achieve Project Objectives

Alternative 2 would not change the existing operations on the Synergy Oil Field and City Property sites. Alternative 2 could add commercial development to the Pumpkin Patch site and industrial uses on the LCWA site and would include sidewalk and bikeway improvements adjacent to the Pumpkin Patch and LCWA sites, which would improve pedestrian accessibility, as stated in the Project Objectives. Alternative 2 would not upgrade or modernize oil production facilities and would not relocate oil production facilities off the Synergy Oil Field and City Property sites. Alternative 2 would not include any wetland habitat restoration. Furthermore, Alternative 2 would not include development of public access improvements including the visitors center and trail, additional or relocated oil production facilities, increased oil production efficiency, sustainable energy sources or use reduction, and the clean-up of old landfills would not be realized. Therefore, other than the improved pedestrian accessibility via upgraded sidewalks and bikeways, none of the other proposed project objectives would be achieved by Alternative 2.

Finding

Alternative 2 would not avoid or substantially lessen the project's significant and unavoidable construction air quality impacts. While some of the environmental impacts, such as greenhouse gas emissions, temporary noise increases, and use of hazardous materials may be reduced as compared to the proposed project, many of the other environmental impacts of this alternative would be similar or would be greater than the proposed project. In addition, but for sidewalk and bikeway improvements, this alternative would not accomplish any of the project objectives. For these reasons, the City rejects Alternative 2.

2.6.3 Alternative 3: Reduced Production

Reduced Production (Alternative 3) would develop the project; however, the number of new oil wells installed would be reduced on the Pumpkin Patch and LCWA sites. Given the reduction in oil production on the Pumpkin Patch and LCWA sites, the phasing duration for relocating and plugging and abandoning the existing oil wells on the Synergy Oil Field and City Property sites could be extended beyond 40 years under this alternative. The remaining project components would be implemented as a part of Alternative 3. Given the reduced production, the storage tank heights on both the Pumpkin Patch and LCWA sites would be less than 35 feet to be consistent with the current SEADIP height restrictions. The number of turbines on the LCWA site would also be reduced from four to three. The reduced number of new oil wells on the Pumpkin Patch and LCWA sites would result in the reduction of potential oil production of the project under Alternative 3.

Finding

Alternative 3 would still result in a significant and unavoidable air quality impact during construction, similar to the proposed project. The following describes differences in impacts between the proposed project and Alternative 3. All other impacts not described below would be similar to the proposed project.

Environmental Impacts

Impacts associated with greenhouse gas emissions would be reduced, but both the project and the alternative would reduce their impacts to a less-than-significant level through participation in the Cap and Trade Program.

Alternative 3 would result in less construction and operational emissions than the project given the reduced number of new oil wells; however, construction and operation of this alternative would still require mitigation to reduce emissions to below the SCAQMD significance thresholds. Construction and operational localized and TAC emissions would be less than the project; however, this project would still require mitigation to reduce health risk impacts. Alternative 3 would result in less GHG emissions than the project given that three instead of four turbines would be installed; however, Alternative 3 would be required to implement mitigation to obtain GHG allowances or offsets. Less hazardous materials would be generated than those associated with the project because there would be fewer wells than proposed for the project. Impacts associated with landfill capacity would be slightly reduced from the proposed project because less waste would be generated.

Alternative 3 would not be as energy efficient as the project and would have greater energy impacts because the plugging and abandoning of existing oil wells on the Synergy Oil Field and City Property sites could be extended beyond 40 years under this alternative (although 75 percent of the existing wells would be plugged and abandoned upon issuance of building permits). This older equipment would continue to be used for a longer period of time and continue to age, resulting in greater potential for odorous fugitive emissions. Thus, this alternative would result in slightly greater odor impacts as compared to the project due to the potential for an extended abandonment schedule.

Ability to Achieve Project Objectives

The Reduced Production Alternative would develop a reduced number of new oil wells in comparison to the proposed project and would achieve nearly all of the proposed project objectives, including wetlands habitat restoration, recreational access trails, educational opportunities, reduced oil productions on City-owned property, energy-efficient oil production operations, clean-up of old landfills, relocation of oil production wells, enhanced entry points and pedestrian walkability, reduced reliance on imported oil resources, and

sustainable energy sourcing. However, the Reduced Production Alternative would not accomplish the sixth objective because a reduction in the number of wells and turbines as proposed by this alternative would not optimize oil and gas production from the City's reserves.

Finding

Although the majority of the impacts associated with this alternative would be similar or less than the proposed project, this alternative would still result in a significant and unavoidable air quality impact during construction, similar to the proposed project. Even for those impacts for which this alternative would be less than the proposed project, all of those impacts would be mitigated to less than significant by the project. This alternative would accomplish most, but not all of the project objectives. Because this impact would not avoid or substantially reduce the significant adverse impact of the project with respect to short-term air quality impacts, and would not provide the same degree of oil operations and would therefore not optimize oil and gas production which is needed to help fund the costs of wetlands restoration which will be borne by the project, the City finds that this alternative would be less feasible as that term is defined in Public Resources Code Section 21061.1 and *CEQA Guidelines* Section 15364, than the proposed project.

2.6.4 Alternative 4: SCE Substation

Under the SCE Substation Alternative (Alternative 4), a large Southern California Edison (SCE) substation would be constructed at the LCWA site, rather than the microgrid including the turbine power generation and photovoltaic components of the proposed project. Natural gas produced as byproduct of oil extraction would not be used on site, but instead sold into the regional grid or trucked off site. The Synergy Oil Field Site, City Property, and Pumpkin Patch sites would be developed with the same project components as the proposed project. However, under Alternative 4 transmission lines would be required to provide electricity to the Pumpkin Patch site. It is possible that a second substation on the Pumpkin Patch site may also be required under this alternative. Although the project characteristics at the remaining sites would remain unchanged under this alternative, upgrades to SCE transmission lines connecting to the SCE substation on the LCWA site would be required.

Finding

Alternative 4 would still result in a significant and unavoidable air quality impact during construction, similar to the proposed project. The following describes differences in impacts between the proposed project and Alternative 4. All other impacts not described below would be similar to the proposed project.

Environmental Impacts

Alternative 4 would generate less operational localized and TAC emissions because the electricity would be generated by SCE power plants somewhere other than at the turbines on the project site. The natural gas would not be used on site, but transported elsewhere via pipeline and/or trucks and sold to some other entity to use as fuel, and would ultimately be combusted elsewhere. Therefore, the maximum potential operational localized and TAC emissions would be less than the project because there would be less localized emissions. However, this alternative would likely still require mitigation to reduce health risk impacts to a level that is less than significant.

Alternative 4 would result in greater impacts related to air quality plan, greenhouse gas emissions and energy consumption than the proposed project. Overall operational emissions would be greater under Alternative 4 because the natural gas sold into the regional grid or trucked off site would still be combusted by third parties elsewhere, and additional emissions could be generated by mobile sources if off-site trucking is required. Under Alternative 4, the project would result in greater overall GHG emissions because the natural gas sold into the regional grid or trucked off site would still be combusted by third parties. The GHG impacts of this alternative were discussed in the Greenhouse Gas Mitigation White Paper that was included in the Appendices to the Draft EIR. As described in the White Paper, if the project purchased power from SCE, SCE's generation of power to run the equipment for the project would generate between 40,058 and 53,720 $MTCO_2EQ$/year of GHG emissions. In addition to the emissions generated by SCE's power generation, the natural gas produced by oil production will be shipped offsite (as described above), to generate power elsewhere in the region or state. CalEEMod estimates that 90,255 $MTCO_2EQ$/year of GHG emissions could be generated by space heating. Therefore, if power were generated by SCE through use of the substation alternative instead of the onsite gas turbines, the total GHG emissions that might be generated would be 143,975 $MTCO_2EQ$/year, which would be twice as high as the emissions generated by the project.

In addition, Alternative 4 would result in reduced energy efficiency on site by not making use of the combustion of natural gas collected as part of the oil extraction process. Additional energy could be required from mobile sources if off-site trucking is required to transport the fuel to the regional grid or to a third party. Thus, impacts would be greater than the project.

Ability to Achieve Project Objectives

Alternative 4 would replace the turbine power generation, solar and microgrid components of the proposed project that would improve the project's energy efficiency with electric-generated equipment. Therefore, this alternative would not achieve the proposed project's objectives relating to improving the efficiency of oil production operations (Objective 5), developing locally sourced oil and natural gas resources using energy-efficient technology (Objective 10). This alternative would also fail to achieve the proposed project's objective to reduce energy use environmental impacts, efficiently use project-sourced natural gas, and increase project reliability/safety with a microgrid that integrates multiple on-site energy sources with high efficiency controls on energy using equipment (Objective 11). Otherwise, this alternative would accomplish all other project objectives relating to wetland habitat restoration, recreational public access, educational opportunities, relocation of oil production operations, clean-up of old landfills, and improvement of pedestrian walkability.

Finding

Although the majority of the impacts associated with this alternative would be similar to the proposed project, this alternative would still result in a significant and unavoidable air quality impacts during construction, similar to the proposed project. This alternative would also have greater impacts with respect to operational air quality, greenhouse gas emissions and energy consumption as compared to the proposed project. All other impacts associated with this alternative would be similar or less than the proposed project; however, even for those impacts for which this alternative would be less than the proposed project, all of those impacts would be mitigated to less than significant by the project. This alternative would accomplish most, but not all of the project objectives. Because this impact would not avoid or substantially reduce the significant adverse impact of the project with respect to short-term air quality impacts, and would not provide the same degree of oil operations and would therefore not optimize oil and gas production which is needed to help fund the costs of

wetlands restoration which will be borne by the project, and would be less energy efficient, the City finds that this alternative would be less feasible as that term is defined in Public Resources Code Section 21061.1 and *CEQA Guidelines* Section 15364, than the proposed project.

2.6.5 Alternative 5: Relocated Pipeline

Relocated Pipeline (Alternative 5) would relocate the aboveground pipeline and utility corridor on the City Property site; however, the remaining components of this alternative would remain the same as the proposed project.

Finding

Alternative 5 is similar to the proposed project in every regard except for the relocation of the pipeline on the City Property from the western oil service road to the eastern oil service road. With the exception of fewer impacts to sensitive natural communities and wetlands, as described in greater detail below, all impacts associated with the remaining environmental issues would be similar to impacts associated with the proposed project.

Environmental Impacts

Under Alternative 5, the aboveground pipeline and utility corridor route would result in less disturbance to existing wetlands and sensitive vegetation than identified under the proposed project. The aboveground pipeline and utility corridor route would be relocated to a wider oil service road on the eastern side of the City Property site. The eastern oil service road contains larger areas that have been previously disturbed and is lacking in vegetation as compared to the western oil service road. Relocation to the eastern oil service road would avoid freshwater/brackish wetlands and alkali meadow habitat, which would be impacted under the proposed project. Overall, there would be impacts to fewer acres of wetlands and sensitive natural communities under this alternative.

Ability to Achieve Project Objectives

Similar to the proposed project, Alternative 5 would meet all of the project objectives, in that it contains the same components as the proposed project.

Finding

The City Council finds that even though all of the impacts of the project are the same as Alternative 5, because this alternative would reduce project impacts to biological resources to a greater degree than the project, the City finds that this is the environmentally superior alternative.

CHAPTER 3
Statement of Overriding Considerations

3.1 Introduction

The City is the Lead Agency under CEQA for preparation, review and certification of the Final EIR for the Los Cerritos Wetlands Oil Consolidation and Restoration Project. As the Lead Agency, the City is also responsible for determining the potential environmental impacts of the proposed action and which of those impacts are significant, and which can be mitigated through imposition of mitigation measures to avoid or minimize those impacts to a level of less than significant. CEQA requires the Lead Agency to balance the benefits of a proposed action against its significant unavoidable adverse environmental impacts in determining whether or not to approve the proposed Project. In making this determination the City is guided by *CEQA Guidelines* Section 15093 which provides as follows:

(a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits of a proposal (sic) project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091.

In addition, Public Resources Code Section 21081(b) requires that where a public agency finds that specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in an EIR and thereby leave significant unavoidable effects, the public agency must also find that overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects of the project.

Pursuant to Public Resources Code Section 21081(b) and *CEQA Guidelines* Section 15093, the City has balanced the benefits of the proposed Project against the following unavoidable adverse impacts associated with the proposed Project and has adopted all feasible mitigation measures with respect to these impacts. The City also has examined alternatives to the proposed Project, none of which both meet the Project objectives and is environmentally preferable to the proposed Project for the reasons discussed in the Findings and Facts in Support of Findings.

The City Council of the City of Long Beach, the Lead Agency for this Project, having reviewed the Final EIR, and reviewed all written materials within the City's public record and heard all oral testimony presented at public hearings, adopts this Statement of Overriding Considerations, which has balanced the benefits of the Project against its significant unavoidable adverse environmental impacts in reaching its decision to approve the Project.

3.2 Significant Unavoidable Adverse Environmental Impacts

Although all of the potential long-term Project impacts have been substantially avoided or mitigated, as described in the Findings and Facts in Support of Findings, there remain some short-term Project impacts concerning air quality for which complete mitigation is not feasible. For these impacts, mitigation measures were identified and adopted by the Lead Agency, however, even with implementation of the measures, the City finds that the short-term impacts described below cannot be reduced to a level of less than significant. The impacts and alternatives are described below and were also addressed in the Findings.

The Final EIR identified the following short-term, unavoidable adverse impacts of the proposed Project. All of the impacts identified below are temporary and would occur only during project construction:

- **Impact AQ 2a:** The project would violate the air quality standard and contribute substantially to an existing or projected air quality violation for construction-related VOC and NO_X emissions.
- **Impact AQ 3a:** The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) during construction.
- **Cumulative Air Quality Impacts:** The project would result in cumulative impacts to air quality during construction.

3.3 Overriding Considerations

The City, after balancing the specific economic, legal, social, technological, and other benefits of the proposed Project, has determined that the short-term, unavoidable adverse environmental impacts identified above may be considered acceptable due to the following specific considerations, which outweigh the unavoidable, adverse environmental impacts of the proposed Project, each of which standing alone is sufficient to support approval of the Project, in accordance with CEQA Section 21081(b) and CEQA Guideline Section 15093.

1. **Restoration of approximately 76.5 acres of wetlands and habitat on the Synergy Oil Field site.** The project proposes to restore approximately 76.5 acres of a historic oil field that was historically part of the Los Cerritos Wetlands complex to a self-sustaining coastal wetlands habitat area. The costs of the wetlands restoration will be borne by the project. The project applicant is also in the process of establishing a wetlands mitigation bank, the sale of credits from which would help recover its restoration costs.
2. **Relocation of the Synergy oil operations off of the Synergy Site which will facilitate the cleanup of the Synergy property and accelerate the removal of oil wells off of the Synergy and City Sites.** Currently, there are 53 active and idle oil wells operating on the Synergy Oil Field site and the City Property site. These wells have been on the property since the 1940s and utilize old equipment. Moreover, the wells are scattered throughout the properties making it difficult to provide for a comprehensive restoration of these properties for open space and habitat purposes. The project would

provide for the phase out of all of the existing oil wells and would replace them with new wells on a much smaller footprint. The consolidation of oil production from over 100 acres to two 5-acre sites with far less habitat area than the current oil fields = would provide a tremendous environmental benefit. Additionally, the voluntary reduction of the oil produced on the Synergy and City sites to an amount equal to 25% of the maximum oil production on both of these properties, as defined in the Project EIR, will provide environmental benefits through the reduction in air emissions.

3. **Construct new entry monuments to the City at the northeast corner of the intersection of Pacific Coast Highway and San Gabriel Flood Control Channel.** The project will provide new entry monument signage on the perimeter of the Pumpkin Patch site which is the border between the City of Long Beach and the City of Seal Beach. For many years, the City has desired to improve the gateway to Long Beach but has had limited opportunity to do so. The project provides the opportunity to construct an entrance to the City without the use of public funds.

4. **Relocate and renovate the Bixby Ranch Field Office building and convert it for use as a visitors center for the benefit of the Los Cerritos Wetlands Authority and to provide public access to the Los Cerritos Wetlands.** The Bixby Ranch Field Office building is a historically significant structure and has been determined to be eligible for listing in the California Register of Historic Places as well as the local register. It is currently used as the offices for the Synergy Oil Company. In its current location, the building is located within the Newport-Inglewood Fault zone and at an elevation that could expose it to inundation in the event of sea level rise impacting the site. The project proposes to relocate the building by moving it 427 feet southwest of its current location to an approximately 1.42-acre previously-disturbed area within the oil field site. The proposed relocation will remove the structure from the Newport-Inglewood Fault zone, and its placement on a raised pad will address the potential impacts of sea level rise. The project will also rehabilitate and adapt the building into a visitors center, and will provide landscape, hardscape, and parking lot improvements around the building to support public access use of the site and building. Once relocated and renovated, the building would be conveyed to the Los Cerritos Wetlands Authority and will be available for public use, including providing educational programs for the benefit of the community. The project will provide public access to a key portion of the Los Cerritos Wetlands which has up until now been fenced off from public use due to the oil field operations.

5. **Provide new on-site public access opportunities.** In addition to the new visitors center that would be provided by the project, the project will also provide a new perimeter trail that will extend from the relocated visitors center, along the perimeter of the Synergy Oil Field site adjacent to Studebaker Road, to Steamshovel Slough. Docent-led tours will provide educational opportunities for the public to learn more about and experience the restored wetlands habitat.

6. **The City will receive an increase in tax dollars from the new oil production activities.** Long Beach imposes a tax on oil production which is currently estimated at 40 cents/barrel of oil produced. As a result of this project, the incremental increase in annual tax proceeds from new oil production could, at maximum operating capacity, provide approximately $4 million in tax revenues to the City.

7. **New employment opportunities will be provided.** The proposed project will provide short-term construction jobs and new long-term employment opportunities. It is estimated that during construction activities, up to 160 workers could be present on site. The project could generate approximately 30 new permanent employment positions for the oil operations, in addition to the 15 existing employees. Depending upon the number of workers needed during the drilling phase of the project, a total of 60 workers (inclusive of the 45 described above) workers may be required. The operation of the visitors center and operation and maintenance of the public access trails on the Synergy Oil Field site would also generate 5 additional employees, including 3 full-time employees and 2 volunteers.

8. **Removal of oil field infrastructure from the Synergy Oil Field site and the City Property site to reduce potential site hazards.** The project will result in the removal, abandonment and remediation of

oil facilities from both the Synergy Oil Field and City Property sites that are no longer in use and no longer needed to support the remaining oil operations. While these facilities, such as tanks, pipelines, and wells, remain on these two sites, they pose a potential safety threat due to the potential for leaks, ruptures, and failures. Because these facilities were constructed over 60 to 70 years ago, their placement and elevation did not take into consideration protection from sea level rise and periodic flooding which only serve to underscore the potential safety issues concerning these facilities that will be greatly improved pursuant to the project.**9. Off-site improvements will be provided.** Consistent with and to promote City policy, the project will construct various off-site improvements which are not directly required to support the project, but will provide overall benefits to the City and its residents, specifically in furtherance of public access. All impacts of the off-site improvements, including impacts to biological resources, can be mitigated to less than significant. The project applicant will construct perimeter sidewalk improvements and provide landscaping around the perimeter of the Project Sites as follows:

- **On the Synergy Oil Field Site:** Sidewalks along PCH and 2nd Street and Studebaker; a bike lane along 2nd Street, PCH and Studebaker
- **On the City Property Site:** Install sidewalks along 2nd Street; and install bike lanes along 2nd Street
- **On the Pumpkin Patch Site:** Repair sidewalks along PCH and install new sidewalk along Shopkeeper Road; install bike lanes along Shopkeeper Road and improve the bike lanes along PCH
- **On the LCWA Site:** Install sidewalks along 2nd Street and Studebaker; and improve the existing bike lane

10. New "cleaner" energy efficient design is a Project Design Feature.

The project has a design feature that provides an energy efficient design through incorporation of features such as use of onsite gas turbines that combine heat and power (i.e., cogeneration), microgrid controls, and installation of solar PV modules. The project's use of a cogeneration, microgrid controls, and solar PV modules helps to substantially reduces the GHG emissions from the proposed project, and is consistent with state and federal environmental policies. California's AB 32 Climate Change Scoping Plan includes a range of programs and incentives explicitly supporting GHG reductions from cogeneration. In parallel, the United States Environmental Protection Agency supports federal and state programs and incentives for cogeneration's reduction of GHG and other pollutants via the USEPA Combined Heat and Power Partnership. Similar state and federal initiatives explicitly support expanded use of microgrids and solar PV for energy efficiency and reduction of GHG and other pollutants.

The microgrid's energy source components will include an SCE grid connection, four 4.5 MW gas turbines with heat recovery steam generators for cogeneration and potential generation of 18 MW, and renewable solar photovoltaic with generation potential of 158 kW. The project design will provide production facilities in such a manner that the microgrid can capture energy produced by the oil production operations (i.e., natural gas for cogeneration) and redistribute that energy elsewhere in the system. The microgrid project design feature controls integration of multiple energy sources and uses to maximize efficiency, environmental benefits, cost savings, and reliability. GHG reductions are provided by the microgrid because it allows for the real-time integration of clean and renewable energy sources with energy efficiency controls on energy using equipment. The microgrid can match the cleanest energy sources with the cleanest, most efficient energy uses.

The project will also use cogeneration as another project design feature to minimize GHG emissions. The use of cogeneration represents the utilization of advanced technology to capture/use waste heat from turbines and minimize greenhouse gas emissions. The primary focus of the cogeneration process will be to heat oil and water, and cool gas as part of the oil production/separation process. The water

reclaimed from this process is injected back into the oil production formation, and the gas and oil is sold for use and further processing, respectively. As the oil/water mixture enters the separation chamber it is heated and chemicals may be applied to enhance separation. Gas coming off of this process is cooled to remove water and heavy hydrocarbons. Without cogeneration, natural gas would be combusted in a boiler to heat the oil/water mixture. With cogeneration, waste heat from the turbine exhaust is used to heat the oil/water mixture rather than being exhausted to the atmosphere. Again, without cogeneration, refrigeration units powered by electricity would be utilized. With cogeneration, the steam from the turbines powers the refrigeration units. As calculated in Section 3.6 of the EIR, and the GHG Mitigation White Paper, an additional 21% of GHG emissions would be generated without cogeneration. Therefore, the inclusion of the project design feature will result in greater environmental benefits.

11. **Emission-reducing benefits of turbine selection.** The turbine that is proposed for use by the project reduces GHG emissions by approximately 15% as compared to other equipment options available on the market today. The Project will use turbines that produce low emissions and help reduce EIR-identified emission impacts below levels of significance.

3.4 Conclusion

In conclusion, the City Council has identified and analyzed all potentially significant impacts of the proposed Project and has concluded that only three short-term, construction-related impacts remain unavoidable and adverse after all mitigation measures have been examined. In addition, because these unavoidable impacts are all generated by construction emissions, these impacts would also result from implementation of any of the alternatives that contemplate development. The City Council has identified economic and social benefits and important public policy objectives that will result from implementation of the proposed project. These Project characteristics will provide benefits to not only the City and its residents, but members of the public from surrounding cities and the region. The City Council has sought to balance these substantial economic and social benefits against the significant, short-term, unavoidable adverse environmental effects of the proposed project. Given the substantial social and economic benefits that will accrue to the City and to the region from the implementation of the proposed Project, the City Council finds that the proposed project's identified benefits override the Project's identified significant environmental impacts.

[THIS PAGE INTENTIONALLY LEFT BLANK]


ESA