

5. Environmental Analysis

5.11 MINERAL RESOURCES

The analysis in this section is based in part on elements of the proposed Project (see Chapter 3, *Project Description*), existing conditions in the Project area (see Chapter 4, *Environmental Setting*), and reports prepared by Synergy Oil and Gas, LLC, related to that company's oil extraction activities in the Project area.

5.11.1 Environmental Setting

Minerals are defined as any naturally occurring chemical elements or compounds, formed from inorganic processes and organic substances. Movable minerals or an "ore deposit" is defined as a deposit of ore or mineral having a value materially in excess of the cost of developing, mining, and processing the mineral and reclaiming the project area.

5.11.1.1 REGULATORY SETTING

State regulations and regulatory agencies pertaining to mineral resources are identified below.

Surface Mining and Reclamation Act: California Public Resources Code Sections 2710 et seq.

The Surface Mining and Reclamation Act of 1975 (SMARA) is the primary regulator of onshore surface mining in the state. It delegates specific regulatory authority to local jurisdictions. The act requires the state geologist (California Geological Survey) to identify all mineral deposits in the state and to classify them based on their significance. Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at particular sites and to incorporate mineral resource management policies into their general plans. A particular concern of state legislators in enacting SMARA was the premature loss of minerals and protection of sites threatened by development practices that might preclude future mineral extraction.

Mineral Resource Classification

The California Geological Survey Mineral Resources Project provides information about California's nonfuel mineral resources. The Mineral Resources Project classifies lands throughout the state that contain regionally significant mineral resources as mandated by SMARA. Nonfuel mineral resources include metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregate, including sand, gravel, and crushed stone. Development generally results in a demand for minerals, especially construction aggregate. Urban preemption of prime deposits and conflicts between mining and other uses throughout California led to passage of the SMARA, which requires all cities and counties to incorporate in their general plans the mapped designations approved by the State Mining and Geology Board.

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The classification process involves the determination of Production-Consumption (P-C) region boundaries, based on identification of active aggregate operations (Production) and the market area served (Consumption). The P-C regional boundaries are modified to include only the portions of the region that are urbanized or urbanizing and are classified for their aggregate content. An aggregate appraisal further evaluates the presence or absence of significant sand, gravel, or stone deposits that are suitable sources of aggregate. The classification of these mineral resources is a joint effort of the state and the local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of the four Mineral Resource Zones (MRZs), Scientific Resource Zones (SZ), or Identified Resource Areas (IRAs), described below.

- **MRZ-1:** A Mineral Resource Zone where adequate information indicates that no significant mineral deposits are present or likely to be present.
- **MRZ-2:** A Mineral Resource Zone where adequate information indicates that significant mineral deposits are present, or a likelihood of their presence and development should be controlled.
- **MRZ-3:** A Mineral Resource Zone where the significance of mineral deposits cannot be determined from the available data.
- **MRZ-4:** A Mineral Resource Zone where there is insufficient data to assign any other MRZ designation.
- **SZ Areas:** Containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
- **IRA Areas:** County or State Division of Mines and Geology Identified Areas where adequate production and information indicates that significant minerals are present.

As part of the classification process, an analysis of site-specific conditions is utilized to calculate the total volume of aggregates within individually identified Resource Sectors. Resource Sectors are MRZ-2 areas identified as having regional or statewide significance. Anticipated aggregate demand in the P-C Regions for the next 50 years is then estimated and compared to the total volume of aggregate reserves identified within the P-C Region.

Department of Conservation, Division of Oil, Gas & Geothermal Resources

The Division of Oil, Gas, and Geothermal Resources (DOGGR) is a subdivision of the California Department of Conservation. DOGGR oversees the drilling, operation, maintenance, and closing of oil, natural gas, and geothermal wells. The division is intended to protect the environment, prevent pollution, and ensure public safety (DOGGR 2013). It functions as an information

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repository but also regulates oil and gas extraction activities consistent with state regulations, which include Section 3000 et seq. of the State Public Resources Code and Title 14, Division 2, Chapter 4 of the California Code of Regulations. These codes include provisions regulating the distribution of oil wells.

5.11.1.2 EXISTING CONDITIONS

Mineral Resource Zones

The MRZ classification areas in Long Beach are shown in the California Geological Survey's mineral resources map, "Generalized Mineral Land Classification Map of Los Angeles County: South Half" (CGS 1994). The Project area falls within the MRZ-3 zone, the significance of mineral deposits cannot be determined from the available data. The closest MRZ-2 zone is on the Palos Verdes Peninsula, approximately 13 miles west of the Project area.

Oil Extraction

Portions of the Project area are located in the Seal Beach Oil Field, where petroleum extraction activities began in the 1920s. Ongoing oil operations by Termo Company, Synergy Oil and Gas (Synergy), and Signal Hill Petroleum currently occur in the wetland areas of the Project area (LCWA 2015). There are approximately 58 wells in the Project area, with two-thirds of which are on the Synergy site discussed below. The area of oil operations is shown on Figure 4-2.

Synergy Wetlands Restoration Project

Synergy¹ operates oil production activities on a 152-acre property—formerly known as the Bixby Oil Field—that is owned by Los Cerritos Wetlands LLC. The property is generally bounded by the Los Cerritos Channel to the north, Studebaker Road to the east, 2nd Street to the south, and Pacific Coast Highway (PCH) to the west. As described in Sections 5.4, *Biological Resources*, and 5.9, *Hydrology and Water Quality*, of this DEIR, Steamshovel Slough is a tributary of the Los Cerritos Channel that traverses the Synergy site (see Figures 3-2 and 3-3).

Synergy is currently planning a wetlands restoration project that would involve the components below. This project will be led by a newly-formed company: Beach Oil Mineral Partners, LLC.

- Remediation and restoration of 72 acres of wetlands on the Synergy site
- Construction of public access improvements, including a parking lot on the Synergy site

¹ Although Beach Oil Mineral Partners, LLC, will oversee the wetland mitigation bank project discussed in this subsection, the 152-acre site discussed above is referred to as "the Synergy property" in this DEIR for consistency with other documents.

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- Conversion of an existing building into a visitor's center on the Synergy site
- Relocation of oil production facilities from the Synergy site to a 7-acre property at 6701 East PCH (the "Pumpkin Patch" site)
- Construction of up to 50 new wells, accessory oil production facilities, a 2-story office building, and parking areas on the Pumpkin Patch site
- Drilling of 70 new oil wells on a 5-acre site owned by the Los Cerritos Wetlands Authority (LCWA) at the northeast corner of Studebaker Road and 2nd Street

Relocation of oil extraction facilities would allow oil production in the Project area to continue while establishing the largest portion of the Synergy site as a wetlands mitigation bank. Discretionary actions required to implement the restoration project would require approvals from the City of Long Beach, California Coastal Commission, LCWA, and the South Coast Air Quality Management District (SCAQMD).

5.11.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- M-1 Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- M-2 Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The Initial Study, included as Appendix A to this DEIR, substantiates that no impacts related to Thresholds M-1 and M-2 would occur from project implementation. However, input received during the public review period for the Notice of Preparation and Initial Study requested that the EIR include additional evaluation of potential impacts to mineral resources. Therefore, both Thresholds M-1 and M-2 are addressed in the following analysis.

5.11.3 Environmental Impacts

The following impact analysis addresses thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact statement.

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Impact 5.11-1: Buildout of the proposed Specific Plan would not result in the loss of availability of a known mineral resource or locally important mineral resource recovery site. [Thresholds M-1 and M-2]

Impact Analysis: As described above under Subsection 5.11.1.2, *Existing Conditions*, there are no locally important mineral resource recovery sites in Long Beach, and the Project area is not located in a MRZ where significant mineral deposits are present or likely to be present. Furthermore, the Project area is not designated as a SZ area or an IRA area.

Oil Extraction

Although the Project area is not designated as having significant mineral deposits—i.e., nonfuel mineral resources—the Project area is known to feature substantial subsurface petroleum deposits. The proposed Project concentrates new development in developed and urbanized areas. New development is not proposed that would encroach onto or result in activities that would impact the existing oil operations. Further, the Specific Plan would allow for the continued oil extraction operation.

Implementation of the proposed Synergy Wetland Restoration Project would potentially alter the geographic area used for extraction of oil in the Project area by shifting the alignment of drilling lines that access existing oil wells. However, existing wells would remain accessible for oil extraction via slant drilling, and future use of the Synergy site as a wetland mitigation bank would not diminish the availability of subsurface petroleum. The restoration project is not part of the proposed Specific Plan contemplated by this DEIR and is undergoing separate environmental review. However, the Specific Plan compliments this project by encouraging the consolidation of wells.

The land use designation identified on the existing oil field in the proposed land use plan (Coastal Habitat, Wetlands & Recreation; see Figure 3-6) would allow the continuation of existing oil production operations. Oil operations within the Specific Plan area would be required comply with Long Beach Municipal Code, Title 12, “Oil and Gas Production,” and Coastal Act, Section 30262, “Oil and Gas Development.” Therefore, implementation of the Specific Plan would not change or impact ongoing oil operations, including oil extraction activities. Future development in accordance with the Specific Plan would not result in the loss of availability of a locally important mineral resource, and impacts relating to mineral resources recovery sites would be less than significant.

5.11.4 Cumulative Impacts

The cumulative study area is the Seal Beach oil field. As described above, implementation of the proposed Project would result in less than significant impacts related to mineral resources. Because the Project would not affect the availability of nonfuel mineral resources (such as industrial metals or construction aggregate), no cumulatively considerable impact would occur related to these

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resources. Because the Specific Plan and modern slant drilling would allow continued oil extraction in the Seal Beach oil field, and because portions of the oil field outside the Project area are generally developed with urbanized land uses, implementation of the proposed Project would not contribute to an overall reduction in availability of subsurface oil deposits. Therefore, cumulative impacts of the proposed Project related to petroleum resources would be less than significant.

5.11.5 Existing Regulations

- Coastal Act, Section 30262, Oil and Gas Development
- Long Beach Municipal Code, Title 12, Oil and Gas Production
- Surface Mining and Reclamation Act of 1975

5.11.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, Impact 5.11-1 would be less than significant.

5.11.7 Mitigation Measures

No significant adverse impacts related to mineral resources were identified and no mitigation is necessary.

5.11.8 Level of Significance After Mitigation

No significant adverse impacts related to mineral resources were identified.

5.11.9 References

Division of Oil, Gas, and Geothermal Resources (DOGGR). 2013. Oil, Gas & Geothermal: About Us. <http://www.conservation.ca.gov/dog/Pages/aboutUs.aspx>.

Los Cerritos Wetlands Authority (LCWA). 2015, August. Los Cerritos Wetlands Final Conceptual Restoration Plan. Prepared by Moffatt & Nichol.