

3.10 Mineral Resources

3.10.1 Introduction

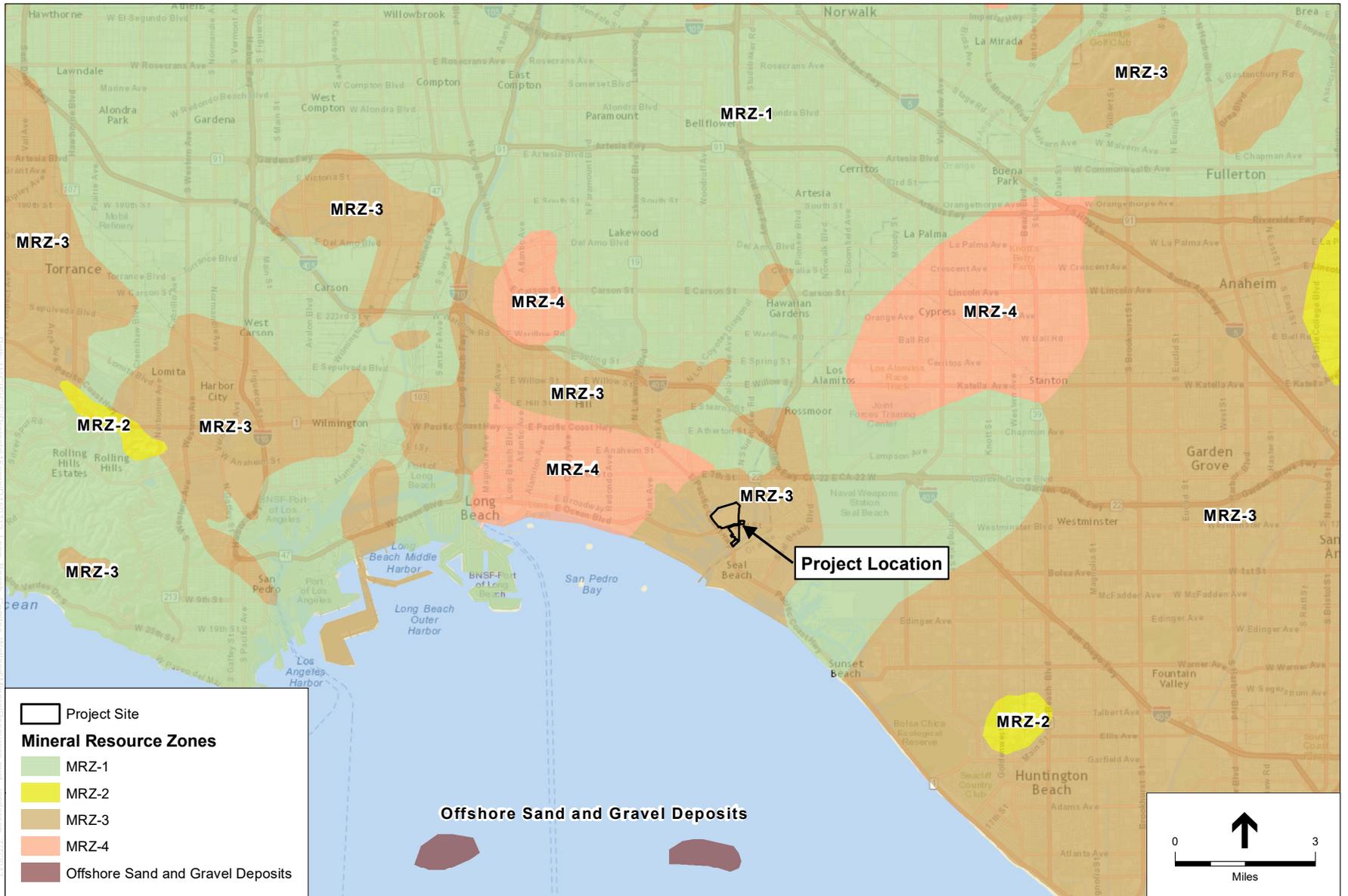
This section evaluates the potential for the proposed project to result in adverse impacts related to mineral resources. The analysis is based on review of available reports and maps of the project site and vicinity, the proposed project, and relevant regulations. This section analyzes the potential for both project-level and cumulative environmental impacts.

Data used in this section includes information obtained from the California Division of Mines and Geology (CDMG 1982), the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) (DOGGR 2017), and the *Los Angeles County General Plan* (2014). All information sources used are included as citations within the text; sources are listed in Section 3.10.5, References.

3.10.2 Environmental Setting

Portions of the Los Cerritos Wetlands complex have been used for oil production for nearly 100 years. In 1921, oil was discovered in the Long Beach Oil Field and soon after in the Seal Beach Oil Field. All four individual sites comprised in the project have been or currently have oil- and natural-gas-producing wells (see Figure 2-3, Existing Oil Wells on the Project Site). The current statuses of active, idle, and plugged wells are summarized in Chapter 2, *Project Description*, Table 2-1, Oil Wells by Site, and the locations shown in Figure 2-3. The active oil fields contain a network of roads, pipelines, and other oil-field-associated infrastructure mainly on the Synergy Oil Field and City Property sites. Oil production wells, aboveground oil pipelines, a wastewater disposal and vapor recovery area, two tank battery areas, two sheds, and numerous transformers are located on the Synergy Oil Field site. Two clusters of tank farms (one active and one inactive) are also located near the southern portion of the Synergy Oil Field site near the existing field office building. The City Property site also has active oil production wells and associated infrastructure, including pipelines and tanks. Two oil storage drums are located in the southwestern portion of the City Property site with aboveground pipelines and dirt access roads also traverse the site. The Pumpkin Patch site has one active oil well on the eastern part of the site.

Regarding non-fuel mineral resources, the project site is located within Mineral Resource Zone (MRZ) 3 (MRZ-3) (CDMG 1982) (see **Figure 3.10-1, Mineral Resource Zones**), which is defined as an area containing mineral deposits that have an undetermined significance.



SOURCE: ESRI; California Division of Mines and Geology 1982

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Figure 3.10-1
Mineral Resource Zones

3.10.3 Regulatory Framework

3.10.3.1 State

Division of Oil, Gas, and Geothermal Resources

All California oil and gas wells on state and private lands are permitted, drilled, operated, maintained, plugged, and abandoned under requirements and procedures administered by DOGGR. Regulated facilities include development and prospect wells, enhanced-recovery wells, water-disposal wells, service wells (i.e., structure, observation, temperature observation wells), core-holes, and gas-storage wells. The requirements are applicable to both onshore and offshore wells, with offshore wells being defined as well facilities located within 3 nautical miles of the coastline.

Regulations pertaining to oil and natural gas production are summarized in DOGGR Publication No. PRC10, *California Statutes and Regulations for Conservation of Oil, Gas, & Geothermal Resources*, dated January 2017 (DOGGR 2017). Regulations for the installation and abandonment of oil and natural gas wells are codified in 14 CCR Sections 1712 through 1724.10. Environmental protection regulations for oil and natural gas well installations, operations, and abandonments are codified in 14 CCR Sections 1750 through 1789.

California Geological Survey Mineral Land Classification

For non-fuel mineral resources, the California Geological Survey (CGS) produces mineral land classification maps and reports based on economic and geologic expertise. CGS-identified MRZs are defined as follows:

- **MRZ-1:** Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.
- **MRZ-2:** Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood exists for their presence.
- **MRZ-3:** Areas containing mineral deposits; the significance of which cannot be evaluated from available data.
- **MRZ-4:** Areas where available information is inadequate for assignment to any other MRZ.

3.10.3.2 Local

Long Beach Gas & Oil Department

Oil and gas extraction activities in the City of Long Beach are regulated by the Long Beach Gas & Oil Department. This department manages the City's oil interests and subsidence control measures. The City maintains an Oil Map, which designates those areas in which oil and gas extraction and production activities are authorized and requires that oil permits and oil well permits be obtained for construction of new oil wells. The southeastern portion of the Oil Map is provided as **Figure 3.10-2, Oil Code Map**. As shown on the Oil Map, the Pumpkin Patch and Los Cerritos Wetlands Authority (LCWA) sites are not currently located in designated oil production areas. Consequently, the project has submitted a request to amend the Oil Map to designate the Pumpkin Patch and LCWA sites as oil production areas, along with oil well permits.



SOURCE: ESA, 2017

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Figure 3.10-2
Oil Code Map

3.10.4 Analysis of Impacts

This section describes the impact analysis relating to mineral resources for the proposed project. It describes the methods and applicable thresholds used to determine the impacts of the proposed project.

3.10.4.1 Significance Criteria

CEQA Guidelines Appendix G provides that a project would have a significant mineral resources impact if it would:

- 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 state or is delineated on a local General Plan, Specific Plan, or other land use plan.

3.10.4.2 Methodology

This impact section assesses potential impacts related to mineral resources based on the potential for the project to impact the accessibility or availability of mineral resources, using existing site conditions as a baseline for comparison. The potential for impacts to mineral resources is analyzed using available data from the CGS and the proposed project that would include the plugging and abandonment of existing wells and the installation and consolidation of oil wells on the Pumpkin Patch and LCWA sites, as described in Chapter 2, *Project Description*. In addition, the severity and significance of mineral resources impacts are analyzed in the context of existing mineral resource regulations and policies.

For purposes of this analysis, construction and operational activities are analyzed together and would include the plugging and abandonment of existing wells, drilling new wells, and the operational phases of the oil production facilities.

As noted earlier in Section 3.10.2, Environmental Setting, pursuant to CGS maps, the project site is located within MRZ-3, which is defined as an area containing mineral deposits that have an undetermined significance. As no other mineral resource extraction activities have been conducted on any of the four individual sites that comprise the project site, and no mineral resources other than petroleum hydrocarbon resources have been identified or encountered over the long history of oil production activities on these individual sites, non-fuel mineral resources are not analyzed further.

As stated in Chapter 1, *Introduction*, on April 28, 2016, the City sent an NOP to responsible, trustee, and federal agencies, as well as to organizations and individuals potentially interested in the project to identify the relevant environmental issues that should be addressed in the Environmental Impact Report. No issues related to minerals were identified.

3.10.4.3 Impact Evaluation

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. (No Impact)

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 occurs:

- 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 the 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. Therefore, there would be no impact.

Mitigation Measures: None required.

Significance Determination: No Impact.

3.10.4.4 Cumulative Impacts

As discussed above, 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.

3.10.5 References

- California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR). 2017. *California Statutes and Regulations for Conservation of Oil, Gas, & Geothermal Resources*. Publication No. PRC10, January. Available at <ftp://ftp.consrv.ca.gov/pub/oil/laws/PRC10.pdf>.
- California Division of Mines and Geology (CDMG). 1982. *Mineral Land Classification of the Greater Los Angeles Area, Part IV: Classification of Sand and Gravel Resource Areas, San Gabriel Valley and Production-Consumption Region*. Special Report 143, Part IV.
- Los Angeles County. 2014. *Los Angeles County General Plan*. Mineral Resources: Figure 9.6, May. Available at http://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-6_mineral_resources.pdf, accessed on February 7, 2017.