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Description:	This Section evaluates the direct, indirect and cumulative impacts the Project may have on mineral resources and identifies any required Applicant-Proposed Measures (APM) and any required Mitigation Measures.
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# 3.12 MINERAL RESOURCES

This section evaluates potential impacts to mineral resources that may result directly or indirectly from the project. The analysis is based on the review of existing resources, and applicable laws, regulations, and guidelines. The analysis is based on a review of existing resources, technical data, and applicable laws, regulations, plans, and policies. Baseline geologic and mineral resources information was collected from the Bureau of Land Management (BLM), U.S. Geological Survey (USGS), California Department of Conservation (CDOC), San Bernardino County, and the proposed plan amendment/final Environmental Impact Statement/Environmental Impact Report that was previously prepared for the project site (BLM and San Bernardino County 2015).

# 3.12.1 Regulatory Setting

#### 3.12.1.1 Federal

#### DESERT RENEWABLE ENERGY CONSERVATION PLAN

In September 2016, BLM adopted the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA) to the California Desert Conservation Area (CDCA) Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. The DRECP LUPA addresses solar, wind, geothermal energy generation, and transmission projects on 10.8 million acres of BLM-administered lands in the desert regions of southern California (BLM 2016).

The BLM DRECP LUPA establishes several land use classifications, including Development Focus Areas (DFAs), Variance Process Lands (VPLs), Recreation Management Areas, General Public Lands, and various conservation land use designations. In DFAs, renewable energy projects are incentivized, and permitting is streamlined. Renewable energy projects may be implemented on VPLs, but they must first be evaluated under a variance process and then approved by BLM to proceed through National Environmental Policy Act (NEPA) environmental review. BLM Conservation Areas include National Landscape Conservation System lands, Areas of Critical Environmental Concern (ACECs), and Wildlife Allocations. Recreation Management Areas are designated for recreation actions. This designation includes Extensive Recreation Management Areas, which entail management specifically to address recreation use and demand, and Special Recreation Management Areas, which are high-priority areas for recreation and have unique value and importance for recreation. General Public Lands are BLM-administered lands that do not have a specific land allocation or designation associated with energy development, conservation, or recreation. These lands are not needed to fulfill the DRECP biological conservation or renewable energy strategy. These areas are available to renewable energy applications but do not benefit from permit review streamlining or other incentives.

The majority of the project site is on DRECP General Public Lands, and the generation-tie line route is within an ACEC. The DRECP LUPA identifies minerals lands as well as existing mining and energy development with currently approved Plans of Operations, Notices, Mine and Reclamation Plans, or Plans of Development, under the authority of 43 Code of Federal Regulations (CFR) 3200, 3500, 3600, and 3802/09, as High Potential Mineral Areas, Existing Mineral/Energy Operations, Existing High Priority Mineral/Energy Operations Exclusion Areas, Access to Existing Operations, and Areas Located Outside Identified Mineral Areas (BLM 2016).

The DRECP LUPA identifies allowable uses and management actions that are anticipated to achieve the goals and objectives of the plan. In the DRECP LUPA, allowable uses and management actions are referred to as Conservation Management Actions (CMAs). For all LUPA land use classifications, the identified CMA for Areas Located Outside Identified Mineral Areas states that areas unable to be characterized due to insufficient data and mineral potential may fluctuate depending on market economy, extraction technology, and other geologic information, which requires periodic updating. Authorizations are subject to LUPA requirements and the governing laws and regulations. The DRECP LUPA does not identify any CMAs specific to General Public Lands; however, if the DRECP LUPA does not provide information for a specific resource, activity, or use, decisions in the CDCA Plan (BLM 1999) would apply. For the DRECP LUPA General Public Lands land use classification, CDCA Multiple-Use Class (MUC) M (Moderate Use) guidelines should be referenced.

CDCA MUC M guidelines state that for leasable minerals development, mitigation and reclamation measures are required to protect and rehabilitate sensitive scenic, ecological, wildlife, vegetative, and cultural values. For locatable minerals, operations on federal mining claims are subject to 43 CFR 3809 (regarding surface management), as well as NEPA. The BLM reviews mining operations plans for potential impacts on sensitive resources within each MUC affected and requires mitigation as appropriate. For salable minerals, new material sales locations, including sand and gravel sites, require compliance with NEPA (BLM 1999).

#### **GEOTHERMAL STEAM ACT OF 1970**

The Geothermal Steam Act of 1970 (30 United States Code [USC] 1001 et seq.) authorizes the Secretary of the Interior to lease geothermal steam and other geothermal resources and sets forth procedures governing how geothermal leasing is to occur. It also permits the Secretary to prescribe rules and regulations, as needed, to carry out leases. The project site is not in a known geothermal resource area.

#### MINERAL MATERIALS ACT OF 1947, AS AMENDED

This act (30 USC 601 et seq.) authorizes BLM to sell mineral materials at fair market value and to grant free-use permits to government agencies and non-profit organizations, provided the disposal (i.e., removal) of such material is not prohibited by law or detrimental to the public interest. The disposition of mineral materials from public lands must comply with the applicable land use plan and all applicable federal laws. Since 1955, common varieties of sand, gravel, stone, pumice, pumicite, and cinders have been removed from the Mining Law and placed under the Materials Act of 1947, as amended. The project site is on and surrounded by land containing geologic deposits consisting of sand and gravel, which are considered mineral materials under this act (BLM and San Bernardino County 2015).

#### FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976

The Federal Land Policy and Management Act of 1976, as amended, establishes public policy and guidelines for the BLM's multiple-use and sustained yield mandate to serve present and future generations. Persons holding existing claims are required to record their claims with BLM, and all new claims and sites are required to be recorded with BLM. The law gives BLM information on the location and number of unpatented mining claims, mill sites, and tunnel sites; helps determine the names and addresses of current owners; and helps remove any cloud of title on abandoned claims.

# NATIONAL MATERIALS AND MINERALS POLICY, RESEARCH, AND DEVELOPMENT ACT OF 1980

National policies concerning materials identification, materials supply and demand management, and materials research and development are described in the National Materials and Minerals Policy, Research, and Development Act of 1980 (30 USC 1601). *Materials* in this policy means substances, including minerals, that are used or could be used in the future to supply the industrial, military, and essential civilian needs of the United States. Materials found on and surrounding the project site could qualify.

#### FEDERAL MINERAL REGULATIONS

Federal regulations govern the management and use of mineral resources, including oil and gas resources (43 CFR 3100), geothermal resources (43 CFR 3200), coal (43 CFR 3400), and solid minerals other than coal and oil shale (43 CFR 3500 and 3800). Leasable and locatable minerals are not known to occur within the project site or surrounding area.

Salable minerals do occur in the vicinity of the project site (BLM 2024a). Regulations in 43 CFR 3600 govern the use of salable minerals (also called mineral materials). The project is proposed in an area designated as MUC M by the CDCA Plan. Lands classified as M are not excluded from disposal of mineral materials. Therefore, mineral materials in the project site could be used by the applicant or disposed of by BLM.

BLM groups minerals on federal lands into three distinct categories: 1) locatable resources, 2) leasable resources, and 3) salable resources (BLM 2024b). Locatable minerals include metallic minerals (gold, silver, lead, copper, zinc, nickel, etc.) and nonmetallic minerals (fluorspar, mica, certain limestones and gypsum, tantalum, heavy minerals in placer form, and gemstones). Leasable minerals include those that are typically found in bedded deposits, such as oil, gas, coal, and geothermal resources, as well as non-energy leasable minerals, including sodium, potassium, and phosphate. Salable minerals include common varieties of materials such as sand, stone, and gravel (BLM 2024b).

# 3.12.1.2 State

#### SURFACE MINING AND RECLAMATION ACT OF 1975

The Surface Mining and Reclamation Act of 1975 (SMARA) (California Public Resources Code 2710 et seq.) was enacted by the California Legislature to address the need for a continuing supply of mineral resources and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. Pursuant to its provisions, the State Mining and Geology Board receives classification information from the State Geologist and then prioritizes and designates lands containing mineral deposits of regional or statewide significance. Areas that are generally given highest priority for classification are those areas within the state that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Mineral lands are mapped according to jurisdictional boundaries (i.e., counties), mapping all mineral commodities at one time in the area, using the California Mineral Land Classification System (CDOC 2024).

No Mineral Resource Zones (MRZs) have been identified within the project site, nor has the project site been mapped or classified with respect to the availability of aggregate resources (CDOC 2019).

### 3.12.1.3 Local

The project is located on federally owned land managed by the BLM. While it is not subject to County of San Bernardino land use plans and ordinances, local plans were reviewed for informational purposes.

#### SAN BERNARDINO COUNTYWIDE PLAN

The San Bernardino Countywide Plan (San Bernardino County 2024a), adopted by the Board of Supervisors in 2020, updates and expands the County's General Plan by addressing the physical, social, and economic issues facing the unincorporated portions of the county. The Countywide Plan consists of the Policy Plan, the Business Plan, and a communities plan. The Policy Plan, based on the former General Plan, consists of 11 elements: Land Use, Housing, Infrastructure and Utilities, Transportation and Mobility, Natural Resources, Renewable Energy and Conservation, Cultural Resources, Hazards, Personal and Property Protection, Economic Development, and Health and Wellness. The Business Plan consists of 35 Community Action Guides that provide a framework for communities to create future character and independent identity through community actions. The following policies identified in the Natural Resources element of the Countywide Plan are relevant to this analysis (San Bernardino County 2024b).

**Goal NR-6 Mineral Resources.** Mineral resource zones that allow extraction industries to continue supporting the regional and national economy while minimizing negative impacts on the public and natural environment.

- **Policy NR-6.1 Mineral resource areas**. We prioritize the conservation of land area with mineral resources by prohibiting or discouraging development of land that would substantially preclude the future development of mining facilities in areas classified as Mineral Resource Zone (MRZ) 2a, 2b, or 3a.
- **Policy NR-6.2 Mining operations and reclamation**. We require and monitor mineral extraction activities to ensure that the operation and reclamation of mined lands is consistent with the State Surface Mining and Reclamation Act of 1975 (SMARA).
- **Policy NR-6.3 Conservation of construction aggregate**. We encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities (consistent with the Policy Plan and other local, state, and federal regulations) to establish aggregate resources that are sufficient to satisfy 50 years of county demand.

# 3.12.2 Environmental Setting

#### 3.12.2.1 Mineral Resource Classification and Designation

Classification is the process of identifying lands containing significant mineral deposits. Designation is the formal recognition by the State Mining and Geology Board of areas containing mineral deposits of regional or statewide significance after consultation with lead agencies and other interested parties (CDOC 2024).

The objective of classification and designation processes is to ensure, through appropriate lead agency policies and procedures, that strategic mineral deposits of statewide or of regional significance are available when needed.

The California Geological Survey Mineral Resources Program 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 minerals, such as boron compounds, rare earth elements, clays, limestone, gypsum, salt, and dimension stone; and construction aggregates, such as sand, gravel, and crushed stone. Building and infrastructure development generally results in a demand for minerals, especially construction aggregates. Urban expansion over prime deposits and conflicts between mining and other incompatible land uses throughout California led to SMARA's guidelines for classification and designation of mineral lands, which require all cities and counties to incorporate mineral resources management policies into their general plans for approval by the State Mining and Geology Board.

The classification process has developed Production-Consumption (P-C) region boundaries based on the identification of active aggregate operations (production) and the market areas served (consumption). The P-C region boundaries are modified to include only the parts of the region that are urbanized, or urbanizing, and are classified for their aggregate resource significance. An aggregate resource appraisal further evaluates the presence or absence of important sand, gravel, and dimension stone deposits that are suitable sources of construction aggregate. The classification and designation of these mineral resources is a joint effort of the state and local governments. It is based on geologic factors and requires that the State Geologist classify a mineral resources area as one of the following MRZs, or as a Scientific Resource Zone or Identified Resource Area, as follows:

- MRZ-1: Areas where adequate geologic information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.
- MRZ-2a: Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present.
- MRZ-2b: Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present.
- MRZ-3a: Areas containing known mineral deposits that may qualify as mineral resources.
- MRZ-3b: Areas containing inferred mineral deposits that may qualify as mineral resources.
- MRZ-4: Areas where geologic information does not rule out either the presence or absence of mineral resources.
- Scientific Resource Zones: Contain unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance.
- Identified Resource Areas: County- or state-identified areas where production and information indicates that significant minerals are present.

As part of the classification and designation processes, site-specific conditions are analyzed to calculate the total volume of aggregates within individually identified resource sectors. Designated resource sectors are MRZ-2 areas judged to contain a significant deposit of construction quality aggregates. Anticipated aggregate demand in the P-C regions for the next 50 years is estimated and compared to the total volume of aggregate reserves identified in the P-C region by the state. Reserves are aggregates that have been determined to be acceptable for commercial use, are in properties owned or leased by aggregate-producing companies, and for which permits have been issued that allow mining and processing of the material.

### 3.12.2.2 Regional and Local Setting

The project site is entirely on federally owned land managed by BLM in unincorporated San Bernadino County, California. It is composed of rural desert land within the BLM's California Desert District (within the jurisdiction of the Barstow Field Office), the planning boundary of the CDCA Plan, and the DRECP.

Neither active mines nor any mineral extraction operations currently occur on the project site. The project site is not within a County-designated MRZ where significant mineral deposits are known to be present (San Bernardino County 2024. BLM does not identify the project site as one with high mineral potential. High-potential mineral areas are lands with existing and/or historic mining activity and a reasonable probability of future mineral resource development. There is not a BLM-designated high-priority mineral or energy operation within the project site. Similarly, the project site is not within BLM-designated (i.e., geothermal, petroleum) or rare earth element areas (BLM 2015).

The vast majority of the project site is underlain by Quaternary age alluvium, primarily composed of alluvial fan deposits (USGS 2017). These deposits consist of loose sedimentary material that has been shed primarily from the Soda Mountains over the course of the Quaternary period (up to 1.6 million years ago). A small portion of the southern part of the project site is underlain by Tertiary age volcanic bedrock. Figure 3.7-1 in Section 3.7 illustrates the geologic units underlying the project site.

Most of the geologic units underlying the project site are potential sources of sand and gravel, which could have value as a mineral resource commodity (BLM and San Bernardino County 2015).

#### LOCATABLE MINERALS

Although there are no identified locatable minerals on the project site, there are mines and/or active mining claims that occur near the project site (BLM and San Bernardino County 2015). However, all identified mines and mining claims are outside of the project site, and the project has been designed to avoid all known mining claims and not preclude access to or interfere with these claims. Based on the geological environment and historical trends, the potential for occurrence of locatable minerals within the project site is very low.

Nonmetallic and metallic mineral deposits occur in proximity to the project site; however, no active mining of locatable minerals was identified within 1,000 feet of the project site (BLM 2024a; CDOC 2022). Metallic deposit mining activity in the Soda Mountains around the project site has included gold, silver, and lead, whereas nonmetallic deposit mines in the surrounding area include quartz and bentonite (BLM and San Bernardino County 2015).

The CalPortland Company operates the Baxter Quarry, an existing privately-owned iron ore mining and processing facility, approximately 12 miles southwest of the project site. A recently approved amendment to the existing Reclamation Plan would cover approximately 263 acres of the quarry (San Bernardino County 2024c).

#### LEASABLE AND SALABLE MINERALS

BLM developed the Mineral & Land Records System (MLRS) to replace the Legacy Rehost System (LR2000). The MLRS is an online platform delivering state-of-the-art mineral and land records transactions, tracking, mapping, and more for BLM customers and staff. MLRS combines many current and legacy BLM systems (i.e., LR2000, land status records) and manual documentation processes to manage resources and cases more intuitively and efficiently across a range of BLM activities. These

include mining claims, fluid minerals, geothermal energy, land tenure, solid minerals, and other case types, as well as land use authorizations and realty billing.

The MLRS did not identify any leasable or salable minerals within the project site. Further, the CDOC indicates there are no oil, gas, or geothermal resources present within the vicinity of the site (CDOC 2001). This is likely due to the lack of sedimentary bedrock formations within the project site and surrounding area. However, sand and gravel deposits are ubiquitous throughout the Quaternary geologic deposits in the vicinity of the project site and the region. Thus, potential nonmetallic deposits in the immediate vicinity of the project site include sand and gravel.

# 3.12.3 Impact Analysis

### 3.12.3.1 Thresholds of Significance

The determinations of significance of project impacts are based on applicable policies, regulations, goals, and guidelines defined by the State California Environmental Quality Act (CEQA) Guidelines, Appendix G. Specifically, the project would be considered to have a significant effect on mineral resources if the effects exceed the significance criteria described below:

- 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.
- 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.

These thresholds are discussed in Section 3.12.3.2, Impact Assessment, below.

#### 3.12.3.2 Impact Assessment

# Impact MR-1: Would the project 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? (No Impact)

The project site is composed of rural desert land. No active mines or mineral extraction operations currently occur on the project site. The project site is not within a County-designated MRZ where significant mineral deposits are known to be present (San Bernardino County 2024. Further, the MLRS did not identify any locatable minerals on the project site, and the presence of locatable minerals within the project site is very unlikely (BLM 2024a).

Furthermore, BLM does not identify the project site as one with high mineral potential. High-potential mineral areas are lands with existing and/or historic mining activity and a reasonable probability of future mineral resource development. Similarly, the project site is not within BLM-designated (i.e., geothermal, petroleum) or rare earth element areas (BLM 2015).

Although the project site may contain sand and gravel materials that may be of value to the region and/or residents of the state, the project would not result in the loss of availability of a mineral resource, because additional sources of such salable materials occur throughout the Quaternary geologic deposits in the region, and these materials would remain available on the site after decommissioning. Therefore, the project would not 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, and **no impact** would occur.

# Impact MR-2: Would the project 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? (No Impact)

As described above, the project site is not located within a County-designated MRZ, and the BLM does not identify the project site as one with high mineral potential. The potential for mineral development in the future, after the use of the site for a solar project, will remain the same as under the existing setting, and the BLM could allow for future development of mining projects if a claim were requested. Therefore, the project would not 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; therefore, **no impact** would occur.

# 3.12.4 Cumulative Impacts

# Impact C-MR-1: Would the impacts of the proposed project, in combination with other past, present, and reasonably foreseeable future projects, contribute to a cumulative impact related to mineral resources? (No Impact)

As the project would not result in impacts related to mineral resources, it would not combine with other cumulative projects to produce cumulatively considerable impacts related to these resources. **No cumulative impacts** related to mineral resources would occur.

# 3.12.5 References Cited

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