

5.0 ADDITIONAL TOPICS REQUIRED BY NEPA

5.1 SUBSTANTIAL IRREVERSIBLE CHANGES TO THE ENVIRONMENT RESULTING FROM THE PROPOSED HCP

In accordance with NEPA, Section 102 (42 USC 4332), a DEIS must explain which environmental effects of the Proposed Action are irreversible or would result in an irretrievable commitment of resources, such as consumption of fossil fuels.

The Proposed Action would result in a minor irretrievable commitment of groundwater for routine panel cleaning and fossil fuel to construct, operate, decommission, and implement protection measures outlined in Chapter 2.0. Therefore, an irreversible commitment of nonrenewable resources would occur as a result of long term project operations. However, assuming that those commitments occur in accordance with the adopted goals, policies and implementation measures of the Kern County General Plan, as a matter of public policy, those commitments have been determined to be acceptable. Because solar equipment only has a lifespan of up to 25 years, at the end of the project operation term, the project will be decommissioned and deconstructed. As identified in Chapter 2.0, project related structures, access roads, solar facilities, etc. will be removed (except habitat enhancements, which will be preserved) and the land will be restored to conditions equivalent or better than existing conditions. Therefore, the environmental effects of the Proposed Action are reversible and the Proposed Action would not result in a use of irretrievable resources.

5.2 RELATIONSHIP BETWEEN SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

In accordance with NEPA, Section 102 (42 USC 4332), a DEIS must include a discussion of the relationship between the short-term uses of the environment and the maintenance and enhancement of long-term productivity. The Proposed Action is designed to ensure that the long-term preservation and enhancement provided through the Conservation Program (including conservation easements, management plans, habitat enhancement and take minimization measures) would be in place in advance of existing habitat conversion and will continue after project decommissioning. This will be accomplished through the dedication of conservation easements.

The Proposed Action would protect and restore the natural environment in order to foster increases in the populations of the Covered Species.

5.3 SUBSTANTIAL ADVERSE EFFECTS THAT CANNOT BE AVOIDED

The Proposed Action or alternatives would not contribute to cumulative effects in the study area associated with Aesthetics, Agriculture, Cultural Resources, Geology/Soils, Hazards/Hazardous Materials, Land Use/Planning, Mineral Resources, Public Services, Transportation/Traffic, or Environmental Justice.

Future development covered by the Proposed Action or the Reduced Permit Area Alternative would result in substantial cumulative effects associated with Air Quality and Biological Resources. Even with the incorporation of feasible mitigation measures, impacts would remain substantial.

5.4 GROWTH-INDUCING EFFECTS

NEPA requires that an EIS address the indirect effects of a proposed action. Indirect effects may include “growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems” (40 CFR 1500 (1508.8(b))). Growth-inducing effects are indirect effects of a Federal action “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable” (40 CFR 1500 (1508.8(b))). Direct growth-inducing effects occur if a Federal action would foster population growth, including the construction of housing; lead to urbanization of land in a remote area; or lead to substantial economic expansion or growth. Indirect growth inducement may occur where the Federal action removes impediments to growth in an area such as one with a lack of infrastructure. Examples of growth-inducing projects include construction of a road or wastewater treatment facilities.

Growth inducement can be a result of new development that requires an increase in employment, removes barriers to development, or provides resources that lead to secondary growth. With respect to employment, the Proposed Action would not induce substantial growth because it would temporarily employ a number of individuals whom are expected to be based in the nearby areas in and around Bakersfield. Because construction for each site would be temporary over a relatively short period, and overall buildout would extend over a long period of time, it is not likely that construction activities would require substantial numbers of people to relocate residence to Kern County. Therefore, this project would not result in a large increase in employment that would substantially induce growth.

Although the Proposed Action would contribute to energy supply, which supports growth, the development of power infrastructure is a response to increased market demand and is not a factor that induces new growth. Kern County planning documents already permit and anticipate a certain level of growth in the area of the Proposed Action and in the state as a whole, along with

attendant growth in energy demand. It is this anticipated growth that drives energy-production projects, not vice versa.

The project would supply energy to accommodate and support existing demand and projected growth, but it would not foster any new growth. Therefore, any link between the Proposed Action and growth in Kern County would be speculative.

5.5 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

In addition to the Proposed Action, two alternatives were considered: The Reduced Permit Area Alternative and the No Action Alternative.

Under the Reduced Permit Area Alternative, the Permit Area would be reduced from 5,784.3 acres to 3,682 acres by removing from the Project: Sites 4-S/4-M (652.5 acres), 6-S (320.9 acres), 7-S/7-M (481.2 acres) and 17-C (647.7 acres).

The No Action Alternative assumes that the HCP would not be implemented, the proposed Incidental Take Permit (ITP) would not be issued, and the Covered Activities for the Maricopa Sun Solar complex would not occur. The 5,784.3 acres identified as the Permit Area would likely remain undeveloped, the 1,894.4 acres identified as Conservation Sites would not be permanently conserved, and the proposed Conservation Management Plan would not be implemented.

In comparison, the No Action Alternative has the least amount of environmental effects (see Table 5-1). The Proposed Action and the Reduced Permit Area Alternative have similar effects, but because of the reduction in the amount of land, the Reduced Permit Area Alternative has less environmental effects than the Proposed Action. However, the Proposed Action is the preferred alternative because it provides the greatest amount of Conservation Site land and therefore has the most beneficial effect on biological resources as compared to the No Action Alternative and the Reduced Permit Area Alternative.

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Table 5-1
Overall Summary Comparing Environmental Effects of the Alternatives

Topic	Proposed Action / Preferred Alternative	Reduced Permit Area Alternative	No Action Alternative
Aesthetics / Visual Resources	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Agriculture	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Air Quality and Greenhouse Gas	Unavoidable substantial adverse effects (cumulative only).	<i>Less than the Proposed Action.</i> Unavoidable substantial adverse effects (cumulative only).	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Biological Resources	Unavoidable substantial adverse effects (cumulative only).	<i>Less than the Proposed Action.</i> Unavoidable substantial adverse effects (cumulative only).	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Cultural Resources	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Hazards and Hazardous Materials	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Hydrology and Water Resources	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.

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Land Use and Planning	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Mineral Resources	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Public Services	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Traffic and Transportation	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.
Environmental Justice	No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action.</i> No substantial adverse effects, either individually or cumulatively.	<i>Less than the Proposed Action and Reduced Permit Alternative.</i> No substantial adverse effects, either individually or cumulatively.