

IV.23 SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

IV.23.1 Approach to Impact Analysis

This chapter provides a programmatic analysis of potential socioeconomic and environmental justice impacts associated with implementing the Bureau of Land Management's (BLM) Land Use Plan Amendment (LUPA) alternatives. While the LUPA only applies to BLM-administered lands within the Desert Renewable Energy Conservation Plan (DRECP) area, potential socioeconomic and environmental justice effects extend outside these areas. Population and socioeconomic attributes primarily occur outside of BLM-administered lands; on BLM-administered lands, population is scarce and established communities do not occur.

This chapter also analyzes potential environmental justice impacts of the proposed DRECP land use designations where minority and low-income areas of concern have been identified throughout the entire DRECP area. This approach is consistent with other existing BLM programmatic environmental analyses for potential future renewable energy project developments.

The Proposed LUPA would designate areas suitable for future renewable energy projects. These designated areas are intended to help streamline environmental review processes, but no specific projects are proposed at this time. Project-specific impacts of future renewable energy development on BLM-administered lands would be assessed during the permitting process and supplemental site-specific National Environmental Policy Acts (NEPA) environmental review documents. Future projects constructed pursuant to LUPA approval would also be reviewed on a case-by-case basis to determine potential socioeconomic and environmental justice impacts.

Appendix R1.23 provides supporting information for this chapter, specifically two maps and one table that support the environmental justice analysis and illustrate key land use designations as they relate to the locations of identified minority and low-income census tracts of concern within the DRECP area.

IV.23.1.1 General Methods

This section defines the social and economic geographic scope of analysis. The social and economic effects from changes on BLM lands feasibly extend beyond the immediate vicinity to nearby populations. Unlike other chapters in this EIS, this chapter programmatically discusses potential socioeconomic and environmental justice effects on private lands (where the affected population is located) within the entire DRECP area and not just the BLM-administered lands affected by the Proposed LUPA. However, as discussed in

Chapter II, the Proposed LUPA and its application is only limited to BLM-administered lands within the DRECP area.

The specific locations of future renewable energy projects within the DRECP area are unknown. This analysis describes at a programmatic level how future development of DRECP Development Focus Areas (DFAs) and related transmission infrastructure may affect socioeconomic conditions of communities within the DRECP area (see Figure IV.1-1). The analysis of LUPA conservation actions primarily focuses on the potential socioeconomic impacts of limiting access to or use of conservation lands.

The environmental justice analysis uses minority population and low-income demographic data provided in Volume III, Chapter III.23 and Appendix R1, as obtained from U.S. Census data. Chapter III.23 and Appendix R1 include the Native American population, as presented in the census, within the total minority and low-income demographic data, and the programmatic discussion of environmental justice includes these populations. Because many concerns are unique to tribes, these concerns are addressed through a government-to-government relationship. See Chapter IV.9, Native American Interests, for additional issues specific to tribes.

IV.23.1.1.1 Specific Methods Utilized

Socioeconomics

This socioeconomic analysis is consistent with BLM and other federal lead agency socioeconomic programmatic-level analyses for renewable energy and transmission interconnection facilities. As discussed in Chapter III.23, the regional study areas for socioeconomic analysis include Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego counties. Localized study areas include incorporated cities and communities within the DRECP area with populations of 10,000 or greater, and the DRECP area is further divided into 10 ecoregion subareas.

The socioeconomic analysis identifies, by alternative, potential impacts to population and to housing availability due to construction and operations workforce needs, changes to existing economic and tax bases, potential impacts to property values, and the social disruption and change that may occur from development of each alternative. This analysis also examines the potentially beneficial fiscal and economic effects of renewable energy development and its infrastructure, including improved local finances from property and sales taxes, the creation of employment and employment revenue, and the purchase of goods and services during project development and operation. While the location of local and larger metropolitan centers outside the DRECP area is important when considering population and housing, this analysis focuses on potential impacts

from workers in-migrating to communities in the region and not the communities from which many workers may come.

This Environmental Impact Statement (EIS) also addresses other issue areas that influence socioeconomics in Chapters IV.11, Land Uses and Policies; IV.12, Agricultural Land and Production; IV.13, BLM Lands and Realty; IV.15, Mineral Resources; IV.16, Livestock Grazing; and IV.18, Outdoor Recreation.

Environmental Justice

Per Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994) this environmental justice methodology and analysis is based on guidance provided in two documents: Environmental Justice Guidance Under the National Environmental Policy Act (Council on Environmental Quality 1997) and Guidance for Incorporating Environmental Justice Concerns in EPA's Compliance Analyses (Environmental Protection Agency [EPA] 1998).

Appendix R1.23 provides a programmatic-level demographic screening to identify low-income and/or minority population groups within the DRECP area. The screening process relies on Year 2008-2012 5-Year U.S. Census American Community Survey (ACS) data to determine the numbers and locations of minority and below poverty-level populations by census tract. ACS estimates come from a sample population therefore a certain level of variability is associated with the estimates. Appendix R1.23, Table R1.23-1, shows that the DRECP area contains all or part of 215 census tracts. These census tracts and their characteristics provide information at a scale considered appropriate for a regional and local-level programmatic analysis.

Upon the identification of minority populations and low-income tracts of concern, the environmental justice analysis seeks to identify if minority populations or low-income tracts of concern would contain disproportionate amounts of DRECP land use designations (primarily DFAs, whereupon future renewable energy projects would be located). The following sections define minority population and provide additional details of each environmental justice population group.

IV.23.1.1.1.1 Minority Population

According to the Council on Environmental Quality's Environmental Justice Guidance Under the National Environmental Policy Act, minority individuals are defined as members of the following groups:

- American Indian or Alaskan Native
- Asian or Pacific Islander

- Black, not of Hispanic origin
- Hispanic, including whites of Hispanic origin

The minority population, for purposes of environmental justice, was calculated by subtracting the number of white, not of Hispanic or Latino origin, from the total population. A minority census tract of concern was identified when the minority population of the census tract was found to be greater than 50%. The following explains the minority population methodology used in this analysis:

- For the purpose of this analysis, census tracts within the DRECP area containing a minority population greater than 50% are analyzed (see Appendix R1.23, Table R1.23-1). Of the 215 census tracts in the DRECP area, 135 census tracts have been identified with a minority population of concern. These tracts are shown in Appendix R1.23, Figure R1.23-1, U.S. Census 2008-2012 ACS-Tracts Containing Greater than 50% Minority Population.

This EIS acknowledges that Proposed LUPA impacts may occur specifically to Native American populations. While Native Americans are one ethnicity identified by both the Council on Environmental Quality (CEQ) and EPA under their environmental justice guidelines for determining the minority population, the environmental justice population includes all ethnicities identified above (of which American Indians are one). While Native Americans are included as part of the total environmental justice population analyzed in this section, for a specific analysis of Proposed LUPA impacts on Native American population, see Chapter IV.9.

IV.23.1.1.1.2 Low-Income (Below Poverty Level) Population

According to the CEQ's Environmental Justice Guidance Under the National Environmental Policy Act, the U.S. Census defines a low-income population as "below poverty level." The U.S. Census poverty status excludes institutionalized people, people in military quarters, people in college dormitories, and unrelated individuals younger than 15. Consistent with both the CEQ and EPA environmental justice guidelines, the term "low-income population" refers to population identified by the U.S. Census as "below poverty level," as presented in Appendix R1.23, Table R1.23-1.

The following explains the low-income population methodology used in this analysis:

- Low-income populations of concern are identified when the percentage of low-income population of the census tract within the DRECP area is equal to or greater than the percentage of low-income of the greater geography (county in which it is located). As shown in Table R1.23-1, of the 215 census tracts in the DRECP area, 110

census tracts have been identified with a low-income population of concern. Appendix R1.23, Figure R1.23-2 shows these tracts.

IV.23.1.1.2 Specific Methods Not Utilized

This is a programmatic analysis, intended to provide an overarching review of land use planning actions associated with the DRECP area, including areas designated for the facilitating and streamlining of future renewable energy projects and transmission infrastructure and designating areas for conservation only. This analysis cannot evaluate site-specific impacts associated with future individual renewable energy projects, as the locations and scale of individual projects is unknown. Instead, the analysis is presented at a broader, programmatic level, regarding the LUPA alternatives. To accurately analyze site- and project-level social impacts, the following information would be required:

- Locations, timing, and scale of future projects
- Specific communities likely to serve future project workforce
- Number of employees (construction and operational) projected for each future project
- Expected number of temporary and permanent worker in-migration projected for each future project
- Numbers of housing and private land purchases

In addition to these items, the following discusses additional methods not utilized and information required to accurately analyze site- and project-level socioeconomic and environmental justice impacts from future renewable energy and necessary transmission projects.

Socioeconomics

Nonmarket Value Analysis. When considering socioeconomic of the DRECP area, the use of nonmarket values was also considered but deemed infeasible due to the size and number of resources in the DRECP area. A nonmarket valuation study seeks to place a quantitative value on a natural resource or amenity's influence. An example could be the affect of a clean and healthy beach on adjacent home values. The use of nonmarket valuation studies is identified within the BLM Land Use Planning Handbook, Appendix D (Table D2), as a means to evaluate economic values within a socioeconomic analysis.

Because BLM administers approximately 10 million acres of land within the DRECP area, the number of natural resources and amenities that would require a nonmarket value determination exceeds the scope of this programmatic analysis. While each LUPA

alternative has assigned DFAs in which the permitting of future renewable energy projects would be streamlined, implementation of any LUPA alternative does not mean all designated lands will be developed with future renewable energy projects. Additionally, because of the overall scale of BLM-administered lands providing nonmarket resources and the local/regional economies within the DRECP area, it was not possible to make reasonable estimates of nonmarket values using typical economic and statistical techniques. There is also extreme difficulty of estimating either nonuse or passive-use nonmarket values for all BLM-administered lands within the DRECP area. Finally, such nonmarket values would attempt to measure the quantitative worth people receive indirectly from desert resources. For example, even those who live elsewhere in the state may receive some value by simply visiting desert resources within the DRECP area or knowing that conservation lands are in place to provide clean air or clean water or habitat for an endangered species.

In summary, while there are many ways to obtain nonmarket values for natural resources, any quantitative economic assessment at this programmatic level would require a thorough accounting of nonmarket values be complete and result in a full estimation of the true values these public resources provide. Such an analysis extends beyond the programmatic scope of this document. While nonmarket value studies are regularly included in BLM project-specific socioeconomic analyses, the economic analysis provided is qualitative and is consistent with recent BLM programmatic socioeconomic analyses for renewable energy development.

Employment and Economic Modeling. Renewable energy project-specific quantitative employment and income parameters may be derived from economic modeling software such as IMPLAN and JEDI. These models estimate project-specific details for each defined economic sector such as number of employees during construction and operations, worker wages and direct spending, local tax-based contributions, and indirect employment and spending.

While this programmatic analysis accounts for these considerations qualitatively, individual project-level details (such as project locations within DFAs, project acreage, megawatt output, technology, and construction timeline) are unknown. To accurately analyze site- and project-level economic impacts, the following should be considered:

- To accurately quantify potential economic impacts in dollars from future project-specific land use conversions is infeasible at a programmatic level, because the financial value of public and private land use types varies significantly throughout the DRECP, and is dynamic over time due to market forces.

- To accurately quantify potential impacts to property values requires project-specific details, primarily site location, as well as before- and after-project market value valuations.
- To accurately quantify expected tax revenue generation, and loss, requires project-specific parameters as not all components of a renewable energy installation are currently tax exempt. Furthermore, current renewable energy facility tax exemptions may expire/change in the future.

Without these specifics, economic modeling and determination of quantitative socioeconomic information is not feasible and would be speculative. However, these types of analyses would be available on a future project-level basis, allowing for an additional economic analysis (see Section IV.23.1.1.3).

Environmental Justice

Common site-specific environmental impacts from facilitating and streamlining renewable energy and transmission projects are considered herein. Because the exact location of future projects within the DRECP area (including on BLM-administered lands) is unknown, the exact location(s) of potential site-specific environmental impacts is unknown (see Section IV.23.2.1). To accurately analyze future site- and project-level environmental justice impacts, the following information would be required:

- Specific types of adverse impacts that could affect population and their level of significance for each project.
- Geographic extent of each adverse environmental impact.

For example, fugitive dust impacts during construction of a renewable energy project could disproportionately impact minority or low-income populations. Because the affected population under this example would be adjacent to the project disturbance area, knowing the location and demographic makeup of such a micro-level population is infeasible at this time. Because the minority and low-income composition of such a micro population is unknown, there is no way to determine if, for example, fugitive dust impacts from a potential renewable energy or transmission project would be disproportionately borne by these groups. Such project-specific impacts of renewable energy development will be assessed in supplemental site-specific NEPA documents.

IV.23.1.1.3 Future Project-Specific Analyses

Upon implementing an alternative, as future renewable energy projects are developed, BLM (when the federal lead agency) will be required to conduct an environmental analysis under NEPA for each individual project (including transmission interconnection). These

future environmental analyses will evaluate potential project and site-specific socioeconomic and environmental justice impacts.

Socioeconomics

Future project-level socioeconomic analyses conducted by BLM would likely include quantitative methods not used within this Final EIS. Future supplemental project-level analyses can quantitatively estimate the number of construction workers necessary, allowing for project-specific and cumulative determinations of temporary worker in-migration. This would better evaluate any potential socioeconomic impacts to small rural communities. Such micro-level analyses are not possible at this time because the exact locations, scale, and cumulative intensity of future renewable energy projects are unknown. However, as individual future projects on BLM-administered lands within the DRECP area are further analyzed under NEPA, an analysis of potential socioeconomic impacts to all affected communities (large and small) will be conducted, as appropriate.

Project-specific quantitative employment and income parameters would be available from economic modeling software such as IMPLAN and JEDI. These models estimate project-specific details for each defined economic sector such as number of employees during construction and operations, worker wages and direct spending, local tax-based contributions, and indirect employment and spending. Project-level temporary or permanent employment needs and direct or indirect employment and economic stimulus can be calculated and analyzed for each future project during NEPA review.

Future project-level socioeconomic analyses may also involve nonmarket value studies and quantifying the values of ecosystem services. When applications for future renewable projects are filed, sites and scale of individual projects are known, and lands and resources directly impacted are identified and can be analyzed, project-level socioeconomic analyses can evaluate the value of these lands and resources. This would include the use of nonmarket value studies to analyze potential impacts to recreation and other open space land values.

Environmental Justice

Future renewable energy projects built within the DRECP area will include supplemental environmental justice analyses that define a smaller geographic extent of potential impacts from an individual project and identify environmental justice populations at smaller scales (such as neighborhoods). When evaluating future renewable energy project applications within the DRECP area, the specific methodology may differ from that used in this Final EIS.

IV.23.2 Typical Impacts Common to All Action Alternatives

IV.23.2.1 Impacts of Renewable Energy and Transmission Development

IV.23.2.1.1 Impacts of Site Characterization

Socioeconomics

While each individual project site may have unique characteristics, the overall characterization of each site with respect to socioeconomics is identical to that described below for construction, operations, and decommissioning. Potential development within a DFA could be streamlined for approval under the Proposed LUPA. This is because socioeconomic traits are typically broader and community-based— not site-specific—at a programmatic level. This would be similar for all renewable energy types and transmission.

Environmental Justice

Unlike socioeconomics, each potential renewable energy project site and transmission route would have unique, site-specific populations within the geographic extent of the project boundaries. The potential for individual project impacts to disproportionately impact small pockets of minority or low-income populations would be site-specific. Therefore, site characterization within DFAs would have no common impacts with respect to environmental justice at a programmatic level. This would be similar for all renewable energy types and transmission.

IV.23.2.1.2 Impacts of Construction and Decommissioning

Socioeconomics

Construction and decommissioning of utility-scale renewable energy projects (of all renewable energy technology types) and transmission line infrastructure would produce direct and indirect socioeconomic impacts. These activities would likely result in the temporary in-migration of workers (and possibly their families) into rural communities proximate to DFAs and project sites within them, which could temporarily affect housing availability and disrupt existing social conditions. Beneficial economic and tax base impacts would occur during construction from expenditures on worker wages and salaries, as well as from procurement of goods and services required for project construction.

Environmental Justice Effects

When discussing potential environmental justice impacts common to construction of renewable energy projects (of all technology types) and transmission development, two things must be considered: the location of minority or low-income populations; and the

types and locations of typical environmental impacts associated with renewable energy project and transmission development.

Figures R1.23-1 and R1.23-2 (Appendix R1.23) identify the census tract locations within the DRECP area containing greater than 50% minority and those tracts where the percent of low-income population is equal to or greater than the county in which the tracts are located.

Typical environmental impacts associated with construction of future renewable energy projects and transmission that could impact populations include:

- Temporary noise and air quality degradation and impacts to public health during the construction of utility-scale renewable energy facilities, transmission line infrastructure, and associated access roads.
- Temporary disturbance to land used for agricultural, recreational, or economic purposes, and land with cultural, tribal, or religious significance.

Beneficial impacts from construction of renewable energy projects and transmission would commonly also occur to those census tracts proximate to DFAs containing greater than 50% minority and identified low-income populations. Such beneficial impacts include:

- Direct and indirect economic benefits to the local community from project construction and worker spending.
- Local hiring programs for the necessary construction workforce.

Decommissioning of renewable energy facilities and transmission line infrastructure would occur in the distant future. The location and distribution of environmental justice populations relative to these facilities and infrastructure is unknown, and any analysis would be speculative.

IV.23.2.1.3 Impacts of Operations and Maintenance

Socioeconomics

Operations and maintenance of renewable energy projects (of all technology types) and transmission are not expected to result in significant in-migration of workers into local communities. These facilities typically require few workers on site to operate and maintain them. However, while future renewable and transmission projects may not individually affect housing availability or increase population, their operation may cumulatively affect local communities. As shown in Volume III, Tables III.23-1 and III.23-2, population growth and vacancy rates in larger communities serving DFAs are expected to readily

accommodate any long-term employment relocations. It should be noted the vacancy rates presented in Chapter III.23 are an overall characterization of vacancy. Recreational and migratory vacancy can account for a sizeable percentage of an area's overall vacancy rate. For example, in eastern Riverside County near the Interstate 10 corridor, there is a large seasonal recreation and migratory worker influx.

As successive renewable energy projects and transmission are built, an overall change is expected in the socioeconomics of small rural communities in and near DFAs. Social conditions and values of these small-community residents may change as local economies become influenced by renewable energy facilities. Renewable energy facilities and transmission infrastructure may be perceived as adversely impacting long-term property values.

Beneficial economic and tax base impacts may occur from expenditures on wages and salaries, procurement of local goods and services, and the collection of state sales and income taxes. It should be noted that renewable projects sited on federal land may not generate property tax benefits to local communities when compared to those proposed under State and local jurisdiction.

Environmental Justice Effects

Development of utility-scale renewable energy facilities on BLM public lands may effectively interrupt, restrict, or limit access by minority or low-income persons to their public lands formerly used for multiple societal benefits, such as no-charge recreational opportunities. Lost recreation opportunities, for example, might entail costs to low-income people who may have to travel farther and pay admission for the same or similar recreation opportunities that were closer to home.

While demographic data change over time, the location of minority and low-income populations are considered to be the same for operations and maintenance, as shown in Figures R1.23-1 and R1.23-2 (Appendix R1.23). Typical environmental impacts associated with operations and maintenance of renewable energy projects and transmission that could impact populations include:

- Potential health effects associated with renewable energy facility and power transmission line operations, including exposure to electric and magnetic fields.
- Restricting access to land used for agricultural, recreational, or economic purposes, and land with cultural, tribal, or religious significance.
- Visual impacts of facilities, including transmission lines.

Beneficial impacts from operations and maintenance of renewable energy projects would also occur to those census tracts within and proximate to DFAs containing greater than 50% minority populations and identified low-income populations. Such beneficial impacts include:

- Direct and indirect economic benefits to the local community from operations and maintenance spending.
- Establishing vocational training programs for the local workforce to promote development of skills required by the renewable energy industry.

IV.23.2.2 Impacts of the Ecological and Cultural Conservation and Recreation Designations

Because the conservation designations would be managed to protect ecological, historic, cultural, scenic, scientific, and recreation resources and values for society, the use of or access to these BLM-administered lands could be restricted/limited. While other land uses are allowed within these areas, they must be compatible with the resources and values that the land designation is intended to protect. Such limitations could affect local economies and populations directly and indirectly, depending on existing and potential use.

Socioeconomics

Generally, conservation lands could result in long-term socioeconomic impacts by limiting access to and development of these lands. Conservation lands could also result in securing long-term resiliency for desert lands to maintain natural ecosystem processes that produce services such as clean air, clean water, wildland recreational opportunity, and conservation of genetic material. Such limitations could affect local economies and populations directly and indirectly, depending on existing and potential use. Conservation actions that relate to socioeconomics are also discussed in Chapters IV.11, Land Use and Policies; IV.12, Agricultural Land and Production; IV.13, BLM Lands and Realty; IV.15, Mineral Resources; IV.16, Livestock Grazing; and IV.18, Outdoor Recreation. The scope and value of benefits stemming from conservation are no less real but are more difficult to price because markets for ecosystem services are usually poorly defined in the absence of financial transactions such as carbon credits for reducing carbon emissions into the atmosphere.

Common impacts resulting from designations of Areas of Critical Environmental Concern (ACECs), National Landscape Conservation System (NLCS) lands, and wildlife allocations would likely be beneficial as these designations may result in increased recreational use in these areas designed to conserve and protect resource values. However, adverse impacts could result from limiting development of uses that could generate income and stimulate economic growth. Such determinations would be speculative at this time due to the

requirement for site-by-site evaluation. Recreation designations, while limiting the development of other uses, would have the potential to add to the BLM's and local jurisdiction economic base through increased usership and tourism, any direct fee payments and indirect spending of recreationists. Adverse impacts from limiting future development would depend upon the extent recreational areas are managed to exclude no surface occupancy renewable energy development and maintain or enhance recreational values of remoteness and naturalness.

Environmental Justice Effects

Common impacts of conservation lands would be beneficial as they would limit disturbance and be managed to protect resources. Any adverse impacts related to conservation actions and recreation designations within the DRECP area are considered to be limiting access to and development of these lands. Such impacts are considered within this environmental justice analysis. The positive benefits of conservation actions to offset environmental disproportionality for minority and low-income populations can be significant, for example, by producing dust-free air, retaining natural soundscapes for human mental health, and remote recreation experiences for stress reduction are more difficult to quantify monetarily. Recreation designations, while limiting the development of other uses, would be open to all recreationists, including minority and low-income populations.

IV.23.2.3 Environmental Justice Populations of Concern Within the DRECP Area

All of the census tracts in the DRECP area have been classified with respect to minority and low-income populations, according to the criteria discussed in Section IV.23.1.1.1. Because each alternative does not modify the overall DRECP area but merely alters the proposed land designations, the following environmental justice analysis is common to all alternatives when comparing minority and low-income populations as follows:

- Minority and low-income census tracts within the entire DRECP area compared with the minority and low-income percentage of California as a whole.
- Minority and low-income census tracts within the DRECP area by county compared with the minority and low-income percentage of the county as a whole.

Minority Population

As shown in Appendix R1.23, Table R1.23-1, the census tracts containing the DRECP area as a whole contain a total minority population of 61.1%. This is similar to the minority population of California, which is 59.9%. Therefore, the DRECP area as a whole does not contain a disproportionate minority population when compared with California as a whole.

However, because the entire DRECP contains a minority population greater than 50%, it is programmatically considered an environmental justice area.

The census tract locations identified with minority population greater than 50% within the DRECP area are shown in Appendix R1.23, Figures R1.23-1 and R1.23-3. As shown in Appendix R1.23, Table R1.23-1, the census tracts containing the DRECP area by county are as follows:

- **Imperial County:** The DRECP area census tracts contain a minority population of 84.0%, which is slightly less than that of Imperial County as a whole (86.2%).
- **Inyo County:** The DRECP area census tract contains a minority population of 25.0%, which is less than that of Inyo County as a whole (33.9%).
- **Kern County:** The DRECP area census tracts contain a minority population of 39.0%, which is less than that of Kern County as a whole (61.4%).
- **Los Angeles County:** The DRECP area census tracts contain a minority population of 68.5%, which is less than that of Los Angeles County as a whole (72.2%).
- **Riverside County:** The DRECP area census tracts contain a minority population of 79.1%, which is greater than that of Riverside County as a whole (60.4%).
- **San Bernardino County:** The DRECP area census tracts contain a minority population of 52.1%, which is less than that of San Bernardino County as a whole (66.8%).
- **San Diego County:** The DRECP area census tracts contain a minority population of 44.0%, which is less than that of San Diego County as a whole (51.5%).

Except for Riverside County, census tracts containing the DRECP area by county are found not to contain a disproportionate minority population when compared with their respective counties. However, all tracts with a minority population percentage exceeding 50% are included as environmental justice populations within this analysis. It should be noted that for Imperial, Kern, Los Angeles, Riverside, and San Bernardino counties, within areas possibly being developed with a disproportionate amount of renewable energy projects, the benefits of the electricity generated by such projects would be delivered to populations outside the DRECP area.

As shown in Appendix R1.23, Table R1.23-1, a number of census tracts inside the DRECP area contain a high percentage minority population. These tracts are evaluated individually within Section IV.23.3 with respect to the location of BLM-administered lands within and location of DFAs under the Proposed LUPA. The location of these tracts is constant across alternatives, as the DRECP area does not change. Due to the presence of minority populations greater than 50% and disproportionate levels of minority population within

the DRECP area, existing BLM plans and policies to reduce adverse environmental justice impacts are discussed.

Low-Income Population

As shown in Appendix R1.23, Table R1.23-1, the census tracts within the DRECP area contain an average total low-income population of 19.6%. This percentage is higher than the low-income population of California, which is 15.3%.

The census tract locations within the DRECP area with identified low-income population greater than that of their respective county are shown in Appendix R1.23, Figure R1.23-2. As shown in Appendix R1.23, Table R1.23-1, the census tracts containing the DRECP area by county are as follows:

- **Imperial County:** The DRECP area census tracts contain an average low-income population of 23.2%, which is slightly greater than that of Imperial County as a whole (23.0%).
- **Inyo County:** The DRECP area census tract contains an average low-income population of 8.6%, which is less than that of Inyo County as a whole (11.3%).
- **Kern County:** The DRECP area census tracts contain an average low-income population of 22.0%, which is slightly less than that of Kern County as a whole (22.5%).
- **Los Angeles County:** The DRECP area census tracts contain an average low-income population of 20.9%, which is greater than that of Los Angeles County as a whole (17.1%).
- **Riverside County:** The DRECP area census tracts contain an average low-income population of 20.9%, which is greater than that of Riverside County as a whole (15.6%).
- **San Bernardino County:** The DRECP area census tracts contain an average low-income population of 21.4%, which is greater than that of San Bernardino County as a whole (17.6%).
- **San Diego County:** The DRECP area census tracts contain an average low-income population of 20.5%, which is greater than that of San Diego County as a whole (13.9%).

Therefore, the average low-income population within the DRECP area by county is often greater than that of the respective county as a whole. In addition, the low-income population of several of the counties, and of the census tracts within them, is higher than the 15.3% for the state of California. As shown in Appendix R1.23, Table R1.23-1, a number of census tracts inside the DRECP area contain an identified low-income population greater than the respective county. Due to the presence of disproportionate levels of low-income

population within the DRECP area, existing BLM plans and policies to reduce adverse environmental justice impacts are discussed.

IV.23.3 Impact Analysis by Alternative

The following sections present impact analysis for the No Action Alternative, the Preferred Alternative, and Alternatives 1 through 4.

IV.23.3.1 No Action Alternative

IV.23.3.1.1 Impacts of Renewable Energy and Transmission Development

The No Action Alternative assumes the state's renewable energy goals would be achieved without the DRECP area and that renewable energy, transmission development, and existing mitigation strategies for projects in the DRECP area would occur on a project-by-project basis, in a pattern consistent with past and ongoing renewable energy and transmission projects.

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Under the No Action Alternative, over 2.8 million acres of land would be available for renewable energy development within the DRECP area. Construction and operation of future utility-scale renewable energy (of all technology types) and transmission projects under the No Action Alternative will bring workers to the communities proximate to and serving individual project locations. Impacts may occur if the influx of workers, both short and long term, exceeds the expected growth of an area and adversely impacts the amount of available housing.

The temporary in-migration of construction workers has the greatest potential impact because construction of utility-scale renewable energy and transmission projects typically requires large numbers of workers, many of whom have specialized skills. These specialized workers may not usually reside proximate to the work site and may choose to temporarily relocate to the area. Under the No Action Alternative, this would be of particular concern in smaller desert communities where the short-term housing supply accommodates seasonal tourist demand during the winter months. Operations and maintenance of renewable energy projects and transmission typically do not require a significant on-site workforce or result in long-term in-migration of workers and their families.

Under the No Action Alternative, renewable energy projects and development of their transmission infrastructure would continue throughout the DRECP area but without the benefit of focusing the siting of these developments within less expansive development

areas. Projects might be located at greater distances from communities that can provide sufficient housing and potential workers. Additionally, under the No Action Alternative, local communities would have less ability to plan for any housing shortages resulting from construction worker in-migration because the location of projects would be dispersed rather than focused in known areas. Uncertainty about the location of future development under the No Action Alternative would increase the potential for short-term housing demand to exceed availability in small rural desert communities if projects are developed more broadly and in more remote parts of the region.

While future projects under the No Action Alternative would bring new population, individual project worker in-migration is not expected to significantly increase long-term population growth and adversely affect housing availability for the area, as shown in Volume III, Tables III.23-1 and III.23-2. While future projects would increase short-term in-migration and housing demand, this impact is not considered adverse in larger communities, as the influx of workers would be small compared with the larger population. However, a large influx of workers into small rural communities has the potential to result in adverse impacts, particularly without being evaluated programmatically or cumulatively.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

Under the No Action Alternative, renewable energy projects (of all technology types) and development of their transmission infrastructure would likely occur throughout the DRECP area. The potential for such future developments to require removal of existing housing would be low because these large-scale projects typically are sited on large tracts of vacant land with few or no structures. Developers and utilities are assumed to seek sites that would require few residential purchases and relocations. It is assumed that any necessary property acquisitions would be completed prior to an application for development, with both parties agreeing to the purchase. Based on these assumptions and the typical housing vacancy rates presented in Volume III, Table III.23-2, it is unlikely that development under the No Action Alternative would displace residents to a level requiring construction of replacement housing.

Impact SE-3: Plan components may affect economic development and government finance.

Construction and operation of future renewable energy and transmission projects under the No Action Alternative will result in regional and local spending for materials and labor and spending by workers. These economic impacts typically are considered beneficial.

Impact SE-4: Plan components may generate social change and social disruption.

Under the No Action Alternative, renewable energy projects (of all technology types) and development of the transmission infrastructure are assumed to continue throughout the DRECP area. The larger geographic area available for development could allow renewable energy developers to site projects in rural areas away from larger communities with greater numbers of available workers and housing. Should this occur, it may increase the likelihood of short-term construction worker in-migration into small desert communities, which can result in social disruption. Under the No Action Alternative, local communities would have less ability to anticipate where projects might locate and to plan for worker in-migration. Therefore, future renewable energy project development under the No Action Alternative would increase the potential for short-term social disruption in small rural desert communities. However, the socioeconomic design features (identified in BLM Programmatic Environmental Impact Statement [Solar PEIS] Appendix W, Section A.4.1.19) are assumed applicable to all solar projects developed under the No Action Alternative. The implementation of these design features would reduce adverse social change and social disruption impacts, but the design features are only applicable for solar projects. Similar measures would be required for other renewable energy technology projects developed under the No Action Alternative to reduce potential socioeconomic impacts.

Impact SE-5: Plan components may affect property values.

The No Action Alternative would have over 2.8 million acres of available land for renewable energy development throughout the DRECP area, potentially resulting in widely scattered projects. This creates the potential for visual and other environmental impacts to occur widely. Large and highly visible projects often are perceived to adversely affect the value of nearby property and residences. Because of the visibility of tall components of wind energy and some solar thermal technologies, these technologies have a greater potential for visual impacts than other solar and geothermal technologies. Transmission also results in potential visual and environmental impacts that may be perceived to impact property values.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Under the No Action Alternative, the development of future renewable energy and transmission projects would be evaluated on an individual project basis. However, the No Action Alternative would continue development of these projects without the benefit of a regional plan encouraging siting these developments within a programmatic development footprint. There are census tracts with high percentages of minority and low-income population within the DRECP area (see Appendix R1, Figures R1.23-1 and R1.23-2). If

future renewable energy and transmission projects under the No Action Alternative were to occur within these tracts, there is a potential for environmental justice impacts. For solar projects within this area, the environmental justice design features (identified in Appendix W, Section A.4.1.19) would apply to all solar projects developed under the No Action Alternative on BLM lands. The implementation of these design features would reduce adverse environmental justice impacts, but are only applicable for solar projects. Similar measures would be required for other renewable energy technology projects developed under the No Action Alternative to reduce potential environmental justice impacts.

Impact Reduction Strategies

Design Features of the Solar PEIS

The following design features from the BLM Solar PEIS would apply under the No Action Alternative within the DRECP area and entire LUPA Decision Area to avoid or reduce potential socioeconomic impacts, depending on site- and project-specific conditions.

- To address impacts on local issues, BLM may include stipulations in the ROW authorization or require solar developers to enter into mitigation agreements with individual local jurisdictions and county agencies, as necessary.
- Project developers should collect and evaluate available information describing the socioeconomic conditions in the vicinity of the proposed project, as needed, to predict potential impacts of the project.
- If the managing agency concluded that the project is likely to have a substantial impact on the economic or social conditions of local communities, project developers should work with state, local and tribal agencies and governments to develop community monitoring programs that would be sufficient to identify and evaluate socioeconomic impacts resulting from solar energy development. Monitoring programs should collect data reflecting the economic, fiscal, and social impacts of development at the state, local, and tribal levels. Parameters to be evaluated could include impacts on local labor and housing markets, local consumer product prices and availability, local public services (police, fire, and public health), and educational services. Programs also could monitor indicators of social disruption (e.g., crime, alcoholism, drug use, and mental health) and the effectiveness of community welfare programs in addressing these problems.
- If the managing agency concludes that the project is likely to have a substantial impact on the economic or social conditions of local communities, the agency may include stipulations in the ROW authorization (if BLM) or require solar developers to enter into mitigation agreements with individual local jurisdictions and county

agencies, as necessary, to address local issues. Also, project developers should work with state, local, and tribal agencies to develop community outreach programs that would help communities adjust to changes triggered by solar energy development. Such programs could include any of the following activities:

- Establishing vocational training programs for the local workforce to promote development of skills required by the solar energy industry.
- Developing instructional materials for use in area schools to educate local communities on the solar energy industry.
- Supporting community health screenings.
- Providing financial support to local libraries for the development of information repositories on solar energy, including materials on the hazards and benefits of commercial development. Electronic repositories established by the operators could also be of great value.

The following design features from the BLM Solar PEIS would apply under the No Action Alternative within the DRECP area and entire LUPA Decision Area to avoid or reduce potential environmental justice impacts, depending on site- and project-specific conditions.

- Focused public information campaigns could be developed and implemented to provide technical and environmental health information directly to low-income and minority groups or to local agencies and representative groups.
- Key information would include the extent of any likely impact on air quality, drinking water supplies, subsistence resources, public services, and the relevant preventive measures that may be taken.
- Community health screenings for low-income and minority groups.
- Financial support to local libraries in low-income and minority communities could be provided for the development of information repositories on solar energy, including materials on the hazards and benefits of commercial development.

In addition to the environmental impacts that may affect low-income and minority populations, various economic impacts may require mitigation, including lack of access to construction and operations employment. Mitigation measures might include the following:

- Vocational training for the local low-income and minority workforce could be established to promote developing skills required by the solar energy industry.
- Instructional materials could be developed for use in area schools to educate the local communities on the solar energy industry.

The likelihood of rapid population growth following the in-migration of workers in communities with low-income and minority populations could lead to overstressing of local community social structures. Beliefs and value systems among the local population and in migrants would likely contrast and, consequently, could lead to various changes in social and community life, including increases in crime, alcoholism, and drug use. In anticipation of these impacts, mitigation measures might include the following:

- Key information could be provided to local governments and directly to low-income and minority populations on the scale and timeline of expected solar projects and on the experience of other low-income and minority communities that have followed the same energy development path. In addition, information on planning activities that may be initiated to provide local infrastructure, public services, education, and housing could be made available.

Other Typical Mitigation Strategies

A number of existing BLM procedures, environmental analyses requirements, BMPs, and other processes are currently in place or being planned to directly and indirectly mitigate the adverse effects of renewable energy and transmission project development. These requirements would apply to all potential projects and would be considered in environmental analyses, where BLM is the federal lead agency, to reduce adverse social, economic, and environmental justice effects. These programs and requirements include, but are not limited to:

- BLM Land Use Planning Handbook, Appendix D: currently available for viewing at http://www.blm.gov/style/medialib/blm/ca/pdf/pa/planning.Par.45838.File.dat/landuse_hb.pdf.
- Mitigation and best management practices identified in BLM's PEIS for utility-scale wind and geothermal energy development apply to all future renewable energy projects on BLM-administered lands. The Geothermal PEIS also covers future geothermal projects developed on U.S. Forest Service lands. The mitigation measures and best management practices included in these documents for socioeconomics and environmental justice are similar to those included earlier under Design Features of the Solar PEIS.
- BLM Approved Resource Management Plan Amendments/Record of Decision for Designation of Energy Corridors on Bureau of Land Management-Administered Lands in the 11 Western States: currently available for viewing at http://corridoreis.anl.gov/documents/docs/Energy_Corridors_final_signed_ROD_1_14_2009.pdf.

Future renewable energy and transmission projects would be subject to applicable project-specific environmental review. Previously adopted mitigation strategies for approved renewable energy and transmission projects within the DRECP area are assumed to represent typical mitigation that would apply in the future for individual projects occurring under the No Action Alternative. Examples of mitigation measures implemented for socioeconomics and environmental justice include requiring:

- Local hiring practices and job training.
- On-site temporary housing provisions for construction workers and/or working with local chambers of commerce to coordinate short-term housing needs.
- Community workshops to discuss the potential social change and disruption from construction of utility-scale renewable energy projects.
- All completed necessary residential property acquisition and relocations to be consistent with any state, local, or other jurisdictional guidelines prior to issuance of building permits.
- Public scoping specifically designed to engage minority and low-income populations.

IV.23.3.1.2 Impacts of Ecological and Cultural Conservation and Recreation Designations

Under the No Action Alternative, existing BLM land management plans and designations within the LUPA Decision Area (California Desert Conservation Area Plan, as amended, Caliente Resource Management Plan, and Bishop Resource Management Plan) would remain unchanged and continue to be implemented on BLM-administered lands.

Existing protected areas and existing BLM conservation designations are assumed to provide ongoing conservation; however, there would be no new conservation designations established to guide preservation of areas to offset the effects of renewable energy or transmission development. Therefore, the conservation generated from renewable energy or transmission development would be solely based on the mitigation requirements imposed on a project-by-project basis.

Under the No Action Alternative, individual renewable energy and related transmission projects occurring on BLM lands inside the DRECP area would require individual assessment under NEPA for both project-level activities and all necessary land use plan amendments. These individual NEPA assessments would evaluate socioeconomic and environmental justice impacts consistent with BLM requirements. There are census tracts with high percentages of minority and low-income populations within the DRECP area (see Appendix R1, Figures R1.23-1 R1.23-2). If BLM were to approve renewable energy development under the No Action Alternative within these tracts, there is a potential for

environmental justice impacts. As discussed earlier, it is assumed that existing environmental justice mitigation strategies apply to renewable energy and transmission projects developed under the No Action Alternative. Similar measures would be implemented or required for other renewable energy technology projects developed under the No Action Alternative to reduce potential project-specific environmental justice impacts.

IV.23.3.1.3 Impacts of Transmission Outside the DRECP Area

Additional transmission lines would be needed to deliver renewable energy to load centers (areas of high demand) Outside the DRECP area. It is assumed that new transmission lines would use existing transmission corridors between the DRECP area and existing substations in the more heavily populated areas of the state. The areas through which new transmission lines might be constructed includes the San Diego, Los Angeles, North Palm Springs–Riverside, and Central Valley areas. These are described in Volume III, Section III.23.9.

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Many construction jobs on transmission lines outside the DRECP would be filled from the regional workforce with workers commuting to job sites. Specialty workers coming from other regions to work on new transmission lines would use temporary housing and return to their homes at the end of construction. Because the transmission corridors outside the DRECP area are in or near large metropolitan centers or, in the Central Valley, within reasonable commute distance of towns and cities, substantial population growth would not occur as a result of transmission projects. Operations and maintenance of transmission facilities would require few new permanent employees.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

New transmission lines would be developed in existing corridors and would not displace substantial numbers of people or existing housing. If lines were to be located outside of existing corridors, lines would be routed to avoid existing housing, as purchasing residences would be extremely expensive.

Impact SE-3: Plan components may affect economic development and government finance.

Purchases made by transmission line owners and construction contractors during transmission line construction and operation and purchases by the workforce would generate sales tax revenue where the purchases occur. Purchases of goods and services by

contractors and workers also would contribute to the regional economy by increasing sales revenues at local and regional businesses. Because transmission line construction is relatively short term, it is not expected to generate new businesses. The need for government services such as police, fire, and emergency response would be similar to any construction project; the need is not expected to be high or to require current services or service levels to expand.

Impact SE-4: Plan components may generate social change and social disruption.

Adding a new transmission line in an existing corridor would not generate social change or disruption. The transmission lines outside the DRECP area would be in or near urbanized areas or, in the Central Valley, would be in open agricultural land. The workforce constructing the line would come from various points throughout the region and commute rather than move near the project. Specialty trade workers temporarily in-migrating to the region would find temporary housing in the metropolitan areas of Southern California or in Central Valley towns, depending on the location of the line.

Impact SE-5: Plan components may affect property values.

Any potential effects on the value of properties near existing transmission corridors outside the DRECP area have already been accounted for due to the presence of existing lines. Often residents in the vicinity of transmission lines believe there is an adverse effect on their property values. Studies of the impact of power lines on property values have produced mixed findings (Bond, Sims, & Dent 2013, Headwaters 2012, Chalmers and Voorvaart 2009, Kinnard and Dickey 1995, Kroll and Priestley 1992, Pacific Consulting Services 1991). Regardless of the methodology, researchers acknowledge the difficulty of segregating the multiple variables affecting decisions. They recognize that the purchase of a residential property is a personal decision to which buyers bring their own mix of expectations, preferences, and biases, including how to weigh other factors in reaching a decision to purchase a property and at what price. Studies also indicate that other property-specific factors such as neighborhood amenities, schools, proximity to work, square footage of house, lot size, current market conditions, housing stock availability, and so on are substantially more likely than the presence of overhead transmission lines to be major determinants of the property sales price.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Under the No Action Alternative, the development of future transmission projects would be evaluated on a case-by-case basis. Due to the presence of environmental justice populations within the transmission corridors (see Chapter III.23, Table III.23-8),

environmental justice analyses and necessary mitigation would be required on an individual project basis should the transmission line traverse BLM-administered lands.

IV.23.3.2 Preferred Alternative

IV.23.3.2.1 Impacts of Renewable Energy and Transmission

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Construction. The facilitating and streamlining of future renewable energy projects within Preferred Alternative DFAs would likely create a significant number of jobs and cause temporary population growth during construction of future renewable energy (of all technology types) and transmission projects. With the exception of several small remote DFAs within the West Mojave and Eastern Slopes and the Owens River Valley ecoregion subareas, DFAs are located fairly proximate to local study area communities in Los Angeles, Kern, Riverside, San Bernardino, and Imperial counties, as identified in Volume III, Section III.23.2, Social and Economic Conditions. It should be noted that varying socioeconomic conditions exist within these localized communities proximate to DFAs.

A portion of the construction workforce for each future renewable energy and transmission line infrastructure project may come from these larger local communities proximate to DFAs. However, the Preferred Alternative DFAs remain large and mostly undeveloped areas that will encourage a number of construction workers to seek temporary housing closer to future project sites. Furthermore, it is anticipated that some specialized workers will be required and may come from outside the regional communities proximate to the DFAs.

Future renewable projects occurring within Preferred Alternative DFAs would not all be constructed at the same time. Therefore, from a programmatic analysis of DFA development, construction workforce demands would fluctuate. This would reduce adverse impacts to the rural short-term housing markets that would serve construction worker demand. Given the existing numbers of available housing units and vacancy rates within the DRECP area (see Volume III, Table III.23-2) and ecoregion subareas (as described in Volume III, Section III.23.5), rental housing is available throughout the DRECP area. However, workers seeking shorter commutes to projects near small rural communities may affect the availability of transient accommodations (hotels, motels, mobile home parks and recreational vehicle parks). The overall number of transient units is expected to be small in rural desert communities compared with that available in larger nearby communities. It is likely that transient housing availability would be further decreased during the winter months when higher demand occurs from tourists seeking

winter lodging within California's desert areas. Housing demands would also increase if multiple projects were built at the same time within any single ecoregion subarea (see Chapter IV.25 for a discussion of cumulative impacts).

Operations. Future renewable energy facilities are not expected to require large numbers of on-site operations and maintenance employees. Geothermal facilities typically require the most on-site employees during operations compared with solar and wind technologies. With a relatively small local labor force needed to operate and maintain renewable energy facilities, minimal long-term in-migration to rural areas near DFAs is expected. While minimal, it is assumed that some permanent in-migration will occur from specialized operations and maintenance workers within rural desert areas.

Such growth is not expected to exceed that already projected for DFAs in the local and regional study areas (see Volume III, Table III.23-1). Given the availability of long-term housing and vacancy rates (see Table III.23-2), any increase in permanent population would not significantly affect the availability of housing within the communities serving the Preferred Alternative DFAs.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

Under the Preferred Alternative, streamlined and facilitated development of renewable energy projects (all technology types) and transmission infrastructure could occur anywhere within DFAs. As individual project sites are considered, developers and utilities are assumed to consistently seek sites with minimal residential purchases and relocations necessary for development. It is also assumed that developers would assess any necessary land acquisitions prior to an application for development, with both parties agreeing to such purchases.

It is possible that some residential purchases would be required for renewable and transmission development under the Preferred Alternative. However, the potential for such future developments to require removal of existing housing would be low, since these large-scale projects typically are sited on large tracts of vacant land with few or no structures on them. Developers and utilities are assumed to seek sites that would require few residential purchases and relocations. As purchase agreements are made and developers secure site control, it is unknown if residents would seek relocation within the same area or seek housing elsewhere. When considering the numbers of available housing units and vacancy rates presented in Volume III, Table III.23-2, it is unlikely that any residential relocations associated with development of DFAs and transmission infrastructure facilitated and streamlined under the Preferred Alternative

would necessitate construction of housing outside of regular growth occurring within the DRECP area.

Impact SE-3: Plan components may affect economic development and government finance.

Under the Preferred Alternative, streamlined and facilitated development of renewable energy projects within DFAs may affect environmental amenities including environmental quality, stable rural community values, and cultural values (BLM 2012a, 2008, 2005). Should the environmental quality of a community be impacted, local communities may have difficulty attracting businesses that are highly sensitive to actual or perceived changes in environmental amenities (BLM 2012a, 2008, 2005). Other factors including cost of living, availability of labor resources, and the prevailing cost of doing business may, however, be more important than environmental amenities to some sectors. A recent study indicates that perceived deterioration of the natural environment and in amenities in particular locations may have an important impact on the ability of communities in adjacent areas to foster sustainable economic growth (BLM 2012a, 2008, 2005). The potential for such impacts is limited to those communities containing and immediately adjacent to Preferred Alternative DFAs. With respect to certain impacts that can directly influence this socioeconomic concern, see Chapters IV.11, Land Use and Policies; IV.12, Agricultural Land and Production; IV.13, BLM Lands and Realty; IV.15, Mineral Resources; IV.16, Livestock Grazing; and IV.18, Outdoor Recreation.

Based on these considerations, the extent to which future renewable energy (all technology types) and transmission infrastructure development may create conflicts with the ability of communities containing and immediately adjacent to Preferred Alternative DFAs to attract future economic growth is speculative. Other economic and demographic factors would have to be either favorable or unfavorable in any given community for additional economic growth or decline to occur. In particular, the economic development potential of infrastructure and human resources in the area and the cost of doing business are relative to those in comparable locations (BLM 2012a; 2008; 2005). Given the overall rural nature of the Preferred Alternative DFAs, it is unlikely that high-amenity values alone would be sufficient to encourage local economic growth or that businesses, once established in a given location, would necessarily relocate because of changes in amenity values.

Beneficial impacts would also occur from future projects constructed within Preferred Alternative DFAs. Workforce wages and spending during the construction and operation of future renewable energy and transmission projects would be an economic stimulator to regional and local governments. Other important public benefits include both short-term and long-term increases in local expenditures, payrolls, and sales tax revenues. These would positively affect the economy at state, regional, and local levels. Such economic benefits

would not be limited to either the DRECP area or California, but would occur at some level to areas where renewable and transmission infrastructure components are manufactured. In addition, much of the renewable energy generated within the DRECP area would benefit larger communities outside of it.

Impact SE-4: Plan components may generate social change and social disruption.

The nature and magnitude of the social impact of renewable energy development projects in small rural communities are still unclear (BLM 2012a, 2008, 2005). While some degree of social disruption is likely to accompany short-term construction worker in-migration (particularly if a number of renewable facilities are built simultaneously within the same localized rural area), there is insufficient evidence to predict the extent to which specific communities are likely to be affected, which population groups within each community are likely to be most affected, and the extent to which social disruption is likely to persist beyond facility construction. As overall in-migration could alter an existing social climate and future growth, this analysis is focused on short-term in-migration of construction workers, which has the greatest potential to initiate social change or disruption.

As discussed for Impact SE-1, in-migration of construction workers (and possibly their families) to rural communities containing and proximate to Preferred Alternative DFAs is expected. Regardless of the pace of population growth within these localized communities, the number of workers and scale of future development is expected to create some demographic and social change. Communities hosting the transient housing needs of construction workers will face some differences in their quality of life such as trending away from a more rural lifestyle in small, isolated, close-knit, homogenous communities with a strong orientation toward personal and family relationships and moving toward a more urban lifestyle with greater cultural and ethnic diversity and dependence on formal social relationships within the community (BLM 2012a, 2008, 2005).

Impact SE-5: Plan components may affect property values.

Public comments on recent utility-scale renewable energy and transmission projects included concerns that such facilities may adversely impact existing property values. Negative imagery could be based on individual perceptions of risk associated with proximity to these facilities or on community-level perceptions that such a facility might adversely affect local economic development prospects (BLM 2012a, 2008, 2005). Typically, public concern is that property values might decline as a result of deterioration of aesthetic quality, real or perceived health effects, or changes to existing land use patterns.

To date, such determinations prove speculative. Many studies show mixed findings regarding the impact traditional electric generation facilities and transmission infrastructure

have on property values (Bond, Sims, & Dent 2013, Headwaters 2012, Chalmers and Voorvaart 2009, Kinnard and Dickey 1995, Kroll and Priestley 1992, Pacific Consulting Services 1991). Furthermore, recent studies show that wind turbines do not have long-term adverse effects on property values (Hinman 2010, Hoen et al. 2009). Recent studies and analyses also indicate that under conditions of moderate population growth and housing demand, property values could increase with expansion in local employment opportunities (BLM 2012a, 2008, 2005). While environmental concerns and public perceptions in some areas may lead a property owner to believe future renewable energy development will have a negative impact on their property values, in other locations property values might increase because of access to employment opportunities associated with renewable energy development.

Regardless of the methodology, researchers acknowledge the difficulty of segregating the multiple variables affecting decisions. They recognize that the purchase of a residential property is a personal decision to which buyers bring their own mix of expectations, preferences, and biases, including how to weigh other factors in reaching a decision to purchase a property and at what price. Studies also indicate that other property-specific factors such as neighborhood amenities, schools, proximity to work, square footage of house, lot size, current market conditions, housing stock availability, and so on are substantially more likely than the presence of proximate renewable energy facilities or overhead transmission lines to be major determinants of the property sales price.

Programmatically, these studies show a trend toward renewable generation and transmission facilities not having adverse impacts to property values. However, more accurate site-specific conclusions would require knowledge of the local real estate market, historic sales trend data, and a long-term regression analysis of the local area. Due to the number of variables involved, any programmatic determination related to future renewable energy and transmission development associated with the LUPA and DRECP would be speculative. However, public concern on this issue is acknowledged.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Census tracts within the DRECP area have been identified as containing high minority and low-income populations (see Appendix R1, Table R1.23-1). Figures R1.23-1 and R1.23-2 in Appendix R1 show the locations of these census tracts, the location of BLM-administered lands, and the locations of DFAs on BLM-administered lands where future renewable energy projects would be streamlined under the Preferred Alternative under the Proposed LUPA. Should future renewable energy projects occur on BLM-administered lands within these tracts, there is a potential for environmental justice impacts.

For solar projects within this area, the environmental justice design features (identified in Appendix W, Section A.4.1.19) would apply to all solar projects developed under the No Action Alternative on BLM lands. The implementation of these design features would reduce adverse environmental justice impacts, but only for solar projects. Similar measures would be required for other renewable energy technology projects developed under the No Action Alternative to reduce potential environmental justice impacts. The PEIS design features identified in Section IV.23.3.1.1, Impacts of Renewable Energy and Transmission Development, would apply to these projects. Additionally, the typical mitigation strategies identified in Section IV.23.3.1.1 would also likely be included in future environmental reviews occurring under NEPA for these projects (see Section IV.23.1.1.3, Future Project-Specific Analyses. It should be noted that much of the electricity generated by such projects would be delivered to population outside of these areas. Also of note, exposure to renewable energy projects means that the environmental justice populations could receive beneficial effects as well.

Impacts on Variance Process Lands

These lands are potentially available for renewable energy development, but projects on Variance Process Lands are not streamlined, nor incentivized, and have a specific set of Conservation and Management Actions (CMAs). Project applicants must demonstrate that a proposed activity on Variance Process Lands will avoid, minimize, and/or mitigate effects on sensitive resources as per the CMAs, will be compatible with any underlying BLM land allocation, and per the CMAs be compatible with and not have an adverse effect on the LUPA components and DRECP strategies. Renewable energy applications in Variance Process Lands will follow the process described in the Solar PEIS Record of Decision, Section B.5. Therefore, socioeconomic and environmental justice impacts on Variance Process Lands would be similar to that described in Section IV.23.3.1 for the No Action Alternative.

Impact Reduction Strategies

Design Features of the Solar PEIS

As described in Section IV.23.3.1 for the No Action Alternative, a number of design features from the BLM Solar PEIS already apply to BLM lands to avoid or reduce potential socioeconomic and environmental justice impacts, depending on site- and project-specific conditions. These Solar PEIS measures, along with the typical mitigation strategies described in Section IV.23.3.1, would apply to the LUPA Preferred Alternative for the DRECP and avoid or reduce potential socioeconomic and environmental justice impacts. No additional measures are warranted.

Conservation and Management Actions

The conservation strategy for the Preferred Alternative (presented in Volume II, Section II.3.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes specific CMAs for the Preferred Alternative. CMAs were developed specifically for BLM lands only under the DRECP.

Socioeconomics. CMAs under the Preferred Alternative could adversely impact local community socioeconomics by limiting or restricting access and use of these lands. Specific actions that limit or restrict future development and use of BLM lands could affect local economies and populations directly and indirectly (such as not allowing mining activities, recreational access, or agricultural access). CMAs could also result in beneficial impacts by enhancing or expanding recreational and other economic opportunities. With respect to quantifying potential economic impacts of CMAs, as discussed in Section IV.23.1.1.2, the use of nonmarket values or other means of providing a quantitative analysis was found infeasible for this programmatic analysis.

CMAs incorporated into the Preferred Alternative have the potential to result in both adverse and beneficial impacts. The specific impact determinations would be assessed during the project permitting process and site-specific NEPA review. In general, the CMAs are meant to guide renewable energy and transmission development toward locations found best to preserve environmental resources and minimize environmental impacts. Socioeconomic impacts from CMAs directly relate to how development on or access to these lands may be restricted or enhanced. See the analysis and inclusion of CMAs in Chapters IV.11, Land Use and Policies; IV.12, Agricultural Land and Production; IV.13, BLM Lands and Realty; IV.15, Mineral Resources; IV.16, Livestock Grazing; and IV.18, Outdoor Recreation. A number of nonbiological CMAs are specified and would apply to these resources, as discussed within the respective chapters.

Environmental Justice. For purposes of this environmental justice analysis, CMAs as a whole under the DRECP are considered the sum of proposed new Areas of Critical Environmental Concern (ACECs), National Landscape Conservation System (NLCS) lands, wildlife allocations, Variance Process Lands, and proposed designations for the entire DRECP within the LUPA Decision Area. While the Preferred Alternative may not include conservation actions on all of these designations, all actions were considered to ensure a conservative analysis has been conducted.

As discussed above and shown in Appendix R1.23, census tracts containing high percentages of minority and low-income population have been identified within the DRECP area. While these tracts of concern have been identified, it's difficult to predict what, if any, disproportionate environmental impacts that Proposed LUPA conservation actions could

have on those populations. As discussed, social impacts from conservation would occur as a result of public access restrictions. Such impacts would affect a greater population than only that residing within the tract area depending on use patterns. Furthermore, conservation of lands within these tracts could be considered a beneficial environmental justice impact that restricts future development of these lands with uses that could create impacts to adjacent population. Therefore, no adverse environmental justice impacts are considered to occur from Preferred Alternative conservation actions.

IV.23.3.2.2 Impacts of Ecological and Cultural Conservation and Recreation Designations

The potential long-term adverse impact from changing existing land use designations would come from restricting access and use of lands. Conservation designations for ecological and cultural conservation could limit the amount of economic-generating activities on these lands by not allowing or encouraging some types of outdoor recreation. However, proposed conservation designations for outdoor recreational use would generate beneficial impacts to BLM by encouraging more recreationists to use the area. Furthermore, increased recreational use of these areas is considered a beneficial social impact to area residents and visitors. In general under the Preferred Alternative, outdoor recreation use—whether limited or increased through LUPA actions—would result in limited potential economic benefits to communities within the DRECP. While individual BLM permits could stimulate some economic and socioeconomic influence (film permits, allowable short-term recreational use, etc.), the overall beneficial effect of these certain activities to the neighboring communities is expected to be negligible.

IV.23.3.2.3 Impacts of Transmission Outside the DRECP Area

The impacts of transmission outside the DRECP area on socioeconomics and environmental justice would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.23.3.1.3. BLM actions may require changing existing land use designations and Visual Resource Management Classes in the DRECP area to account for new utility-scale transmission lines. These actions could limit future use of and access to this land should BLM designate them for these uses.

IV.23.3.2.4 Comparison of the Preferred Alternative With No Action Alternative

Under the No Action Alternative, a LUPA would not be implemented for the LUPA Decision Area. Actions allowing for renewable energy and transmission projects, conservation, or any other actions requiring a LUPA would occur on a case-by-case basis. Potential impacts of those BLM actions under the No Action Alternative are similar or identical to that discussed for the Preferred Alternative (see Section IV.23.3.2.2). However,

any adverse or beneficial socioeconomic impacts from existing LUPA designations under the No Action Alternative would not be managed specifically for resource protection or development, as it would under the Preferred Alternative. Therefore, under the No Action Alternative, the Proposed LUPA (and any potential adverse and beneficial socioeconomic impacts) may occur without allowing for BLM, stakeholders, and other decision makers to have a programmatic approach for guiding such actions.

Construction of utility-scale renewable energy facilities (of all technology types) and transmission line infrastructure would produce direct and indirect socioeconomic impacts, potentially adverse and beneficial. Facilitated and streamlined project construction would result in the temporary in-migration of workers into communities proximate to DFAs, which would in turn temporarily affect housing availability and increase population. Construction worker in-migration could also result in socioeconomic impacts to rural communities near DFAs in the form of changes and disruptions to existing social values and perception of renewable energy projects. Under the No Action Alternative, similar impacts could occur across the entire DRECP area without allowing for agencies, stakeholders, and decision makers to have a programmatic approach for guiding such development.

Beneficial economic and tax base impacts would occur during construction from expenditures on worker wages and salaries and from procurement of goods and services required for project construction. Indirect impacts (also beneficial) would occur through worker spending at local businesses and income tax revenues that would subsequently circulate through the economy. Because these beneficial impacts are typically distributed at a regional level, there would be a nominal difference between the Preferred Alternative and the No Action Alternative, except worker wage spending would be more focused at local communities serving Preferred Alternative DFAs.

Conservation actions of the Preferred Alternative could adversely impact local communities by limiting or restricting access and use of these lands. Conversely, conservation actions could result in beneficial socioeconomic impacts by enhancing local communities dependent upon environmental resource recreation through Preferred Alternative-related conservation actions. Under the No Action Alternative, it is assumed the only conservation actions would result from existing and individual project mitigation requirements. Under this scenario, mitigation lands designated for conservation could occur anywhere and would not be programmatically managed. Therefore, under the No Action Alternative, conservation actions (and potential adverse and beneficial socioeconomic impacts) may occur without allowing for agencies, stakeholders, and decision makers to have a programmatic approach for guiding such actions.

The No Action Alternative evaluates the potential for environmental justice impacts on a project-by-project basis. Being programmatic, the Preferred Alternative also requires

site-specific environmental justice studies be done. However, potential environmental justice impacts would be slightly reduced under the Preferred Alternative when compared to the No Action Alternative due to incorporation of the DRECP and LUPA to guide development and early identification of environmental justice communities, concerns, and mitigation actions.

IV.23.3.3 Alternative 1

IV.23.3.3.1 Impacts of Renewable Energy and Transmission

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Alternative 1 includes a significant decrease in DFA lands compared with the Preferred Alternative. As shown in Volume II, Figure II.4-1, Alternative 1, the reduction in DFA lands occurs somewhat evenly within each ecoregion subarea, with noticeable decreases in the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas. Therefore, any reduction in construction worker in-migration would be focused in the communities proximate to DFAs in these areas. The overall reduction in DFA acreage could reduce potential population in-migration and housing demand impacts compared with the Preferred Alternative. This is due to the assumed reduction in overall renewable energy and transmission projects within Alternative 1 DFAs.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

The reduction in DFA lands under Alternative 1 could reduce the potential for removal of existing housing units as future projects are developed, compared to the Preferred Alternative. This reduction would be most noticeable within the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the reduction in DFA acreage in these ecoregion subareas. However, it is likely some level of residential purchases would be required for the amount of renewable development facilitated and streamlined under Alternative 1. When considering the numbers of available housing units and vacancy rates presented in Volume III, Table III.23-2, it is unlikely that any residential relocations associated with Alternative 1 would necessitate construction of housing outside of regular growth occurring within the DRECP area.

Impact SE-3: Plan components may affect economic development and government finance.

The reduction in overall DFA acreage associated with Alternative 1 could slightly reduce any potential economic development beneficial impacts. It is assumed that beneficial

impacts from taxes and contributions to government revenue would decrease with Alternative 1 due to a reduction in overall DFA acreage. While somewhat evenly distributed within the DRECP area, any reduction would likely occur in the regional and local communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the significant reduction in DFA lands within these ecoregion subareas. While at a slightly decreased level, direct and indirect economic stimulus and revenue from development of future renewable energy and transmission infrastructure facilities within the Alternative 1 DFAs would be similar to those discussed in the Preferred Alternative in Section IV.23.3.2.1.

Impact SE-4: Plan components may generate social change and social disruption.

The reduction in overall DFA acreage associated with Alternative 1 could reduce potential social change and disruption impacts from construction worker in-migration. This reduction would be focused within the communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the significant reduction in DFA lands within these ecoregion subareas. However, overall potential social change and disruption impacts for Alternative 1 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impact SE-5: Plan components may affect property values.

The reduction in overall DFA acreage associated with Alternative 1 could slightly reduce the potential for perceived property value impacts. This reduction would be focused within the communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the significant reduction in DFA lands within these ecoregion subareas. From a programmatic perspective and identical to that presented in Section IV.23.3.2.1 for the Preferred Alternative, potential property value impacts from development of future renewable energy and transmission infrastructure facilities within the Alternative 1 DFAs are speculative at this time and require future analysis during individual project reviews.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Although Alternative 1 results in a decrease in DFA acreage, when the proposed Alternative 1 DFA designations are compared with the census tract locations within the DRECP containing greater than 50% minority and identified low-income populations (see Appendix R1.23), the affected population and potential for future renewable energy projects to occur on DFAs would be similar to that described for the Preferred Alternative. The potential for environmental justice impacts under Alternative 1 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impacts on Variance Process Lands

These lands are potentially available for renewable energy development, but projects on Variance Process Lands are not streamlined, nor incentivized, and have a specific set of CMAs. Project applicants must demonstrate that a proposed activity on Variance Process Lands will avoid, minimize, and/or mitigate impacts to sensitive resources per the CMAs, will be compatible with any underlying BLM land allocation. Renewable energy applications in Variance Process Lands will follow the process described in the Solar PEIS Record of Decision, Section B.5. Therefore, socioeconomic and environmental justice impacts on Variance Process Lands under Alternative 1 would be similar to that described in Section IV.23.3.1 for the No Action Alternative.

Impact Reduction Strategies

Design Features of the Solar PEIS

As described in Section IV.23.3.1 for the No Action Alternative, a number of design features from the BLM Solar PEIS already apply to BLM lands to avoid or reduce potential socioeconomic and environmental justice impacts, depending on site- and project-specific conditions. These Solar PEIS measures, along with the typical mitigation strategies described in Section IV.23.3.1, would be apply to Alternative 1 and avoid or reduce potential socioeconomic and environmental justice impacts. No addition measures are warranted.

Conservation and Management Actions

Conservation designations under Alternative 1 would only be slightly reduced compared with the Preferred Alternative. Similar to the Preferred Alternative, the primary potential socioeconomic impacts would be from possible limited or restricted access and use of BLM lands, which could both adversely and beneficially affect local economies and populations. Therefore, the types of potential socioeconomic and environmental justice impacts associated with CMA land designations would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

IV.23.3.3.2 Impacts of Ecological and Cultural Conservation and Recreation Designations

The impacts of ecological and cultural conservation and recreation designations on socioeconomics and environmental justice within the LUPA Decision Area would be similar or identical for Alternative 1 as that described in Section IV.23.3.2.2 for the Preferred Alternative. Proposed LUPA land designations for ecological and cultural conservation could limit the amount of economic-generating activities on these lands by not allowing or

encouraging some types of outdoor recreation. However, Proposed LUPA land designations for outdoor recreational use would generate beneficial impacts to BLM by encouraging more recreationists to use the area.

IV.23.3.3.3 Impacts of Transmission Outside the DRECP Area

The impacts of transmission outside the DRECP on socioeconomics and environmental justice would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.23.3.1.3. BLM actions may require changing existing land use designations and Visual Resource Management Classes to account for new utility-scale transmission lines. These actions could limit future use of and access to this land should BLM designate them for these uses.

IV.23.3.3.4 Comparison of Alternative 1 With Preferred Alternative

Potential socioeconomic and environmental justice impacts from LUPA actions (those allowing for streamlining of renewable energy and transmission projects) under Alternative 1 would be slightly less compared with the Preferred Alternative due to a decrease in overall DFA acreage.

Potential socioeconomic impacts of Alternative 1 would be similar to those of the Preferred Alternative. However, due to a reduction in DFA acreage in those ecoregion subareas, Alternative 1 may slightly decrease worker in-migration, residential relocation, social disruption impacts, and beneficial economic impacts to the regional and local communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas. Conservation actions of Alternative 1 would be similar or identical to those under the Preferred Alternative, as the amount and locations of conservation land for both alternatives is similar. The affected environmental justice population and potential for disproportionate impacts of Alternative 1 would be similar or identical to that described for the Preferred Alternative.

IV.23.3.4 Alternative 2

IV.23.3.4.1 Impacts of Renewable Energy and Transmission

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Alternative 2 includes an increase in DFA lands compared to the Preferred Alternative. The increase in DFA lands occurs somewhat evenly within each ecoregion subarea. This increase in overall DFA acreage would slightly intensify any potential population in-migration and increased housing demand impacts compared with the Preferred

Alternative due to the assumed increase in overall renewable energy projects and related transmission development.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

The increase in DFA lands under Alternative 2 could slightly increase the potential for removal of existing housing units as future projects are developed. It is likely some level of residential purchases would be required for the amount of renewable energy projects facilitated and streamlined assumed under Alternative 2. When considering the numbers of available housing units and vacancy rates presented in Volume III, Table III.23-2, it is unlikely that any residential relocations associated with development of renewable energy facilities and necessary transmission infrastructure under Alternative 2 would necessitate construction of housing outside of regular growth occurring within the DRECP area.

Impact SE-3: Plan components may affect economic development and government finance.

The increase in overall DFA acreage of Alternative 2 could slightly increase any potential economic development beneficial impacts. It is assumed that beneficial impacts from taxation and contribution to government revenue would increase with Alternative 2 due to more associated development within the overall DFA acreage. This increase in DFA lands occurs somewhat evenly within each ecoregion subarea. While at a somewhat increased level, direct and indirect economic stimulus and revenue from development of future renewable energy and transmission infrastructure facilities within the Alternative 2 DFAs would be similar to those discussed in the Preferred Alternative in Section IV.23.3.2.1.

Impact SE-4: Plan components may generate social change and social disruption.

The increase in overall DFA acreage associated with Alternative 2 could slightly increase potential social change and disruption impacts from construction worker in-migration. This increase would spread evenly across the communities serving the ecoregion subareas. However, overall potential social change and disruption impacts for Alternative 2 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impact SE-5: Plan components may affect property values.

The increase in overall DFA acreage associated with Alternative 2 could slightly increase the potential for perceived property value impacts. This increase would be spread evenly across the communities serving the ecoregion subareas. From a programmatic perspective and identical to that presented in Section IV.23.3.2.1 for the Preferred Alternative, potential property value impacts from development of future renewable energy and transmission

infrastructure facilities within the Alternative 2 DFAs are speculative at this time and require analysis during individual project reviews.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Although Alternative 2 results in an increase in DFA acreage, when the proposed Alternative 2 DFA designations are compared with the census tract locations within the DRECP containing greater than 50% minority and identified low-income populations (see Appendix R1.23), the affected population and potential for future renewable energy projects to occur on DFAs would be similar to that described for the Preferred Alternative. The potential for environmental justice impacts under Alternative 2 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impacts on Variance Process Lands

These lands are potentially available for renewable energy development, but projects on Variance Process Lands are not streamlined, nor incentivized, and have a specific set of CMAs. Project applicants must demonstrate that a proposed activity on Variance Process Lands will avoid, minimize, and/or mitigate effects on sensitive resources in accordance with the CMAs, will be compatible with any underlying BLM land allocation. Renewable energy applications in Variance Process Lands will follow the process described in the Solar PEIS Record of Decision, Section B.5. Therefore, socioeconomic and environmental justice impacts on Variance Process Lands under Alternative 2 would be similar to that described in Section IV.23.3.1 for the No Action Alternative.

Impact Reduction Strategies

Design Features of the Solar PEIS

As described in Section IV.23.3.1 for the No Action Alternative, a number of design features from the BLM Solar PEIS already apply to BLM lands to avoid or reduce potential socioeconomic and environmental justice impacts, depending on site- and project-specific conditions. These Solar PEIS measures, along with typical mitigation strategies described in Section IV.23.3.1, would apply to Alternative 2 and avoid or reduce potential socioeconomic and environmental justice impacts. No addition measures are warranted.

Conservation and Management Actions

LUPA designations for conservation lands under Alternative 2 would only slightly increase compared to the Preferred Alternative. Therefore, the types of potential socioeconomic and

environmental justice impacts associated with CMA land designations would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

IV.23.3.4.2 Impacts of Ecological and Cultural Conservation and Recreation Designations

The impacts of ecological and cultural conservation and recreation designations on socioeconomics and environmental justice within the LUPA Decision Area would be similar or identical for Alternative 2 as that described in Section IV.23.3.2.2 for the Preferred Alternative. LUPA land designations for ecological and cultural conservation could limit the amount of economic-generating activities on these lands by not allowing or encouraging some types of outdoor recreation. However, LUPA land designations for outdoor recreational use would generate beneficial impacts to BLM by encouraging more recreationists to use the area.

IV.23.3.4.3 Impacts of Transmission Outside the DRECP Area

The impacts of transmission outside the DRECP area on socioeconomics and environmental justice would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.23.3.1.3. BLM actions may require changing existing land use designations and Visual Resource Management Classes to account for new utility-scale transmission lines. These actions could limit future use of and access to this land should BLM designate them for these uses.

IV.23.3.4.4 Comparison of Alternative 2 With Preferred Alternative

Potential socioeconomic and environmental justice impacts from Proposed LUPA actions (those allowing for streamlining of renewable energy and transmission projects) under Alternative 2 would be slightly increased compared with the Preferred Alternative due to an increase in overall DFA acreage.

Potential socioeconomic impacts of Alternative 2 would be similar to those of the Preferred Alternative. However, due to a uniform increase in DFA acreage throughout the DRECP area, Alternative 2 may slightly increase potential adverse worker in-migration, residential relocation, social disruption impacts, and beneficial economic impacts to the regional and local communities serving DFAs. Conservation designations for Alternative 2 would be similar to those of the Preferred Alternative, as the amount and locations of conservation land for both alternatives is similar. The affected environmental justice population and potential for disproportionate DRECP acreage of Alternative 2 would be similar or identical to that described for the Preferred Alternative.

IV.23.3.5 Alternative 3

IV.23.3.5.1 Impacts of Renewable Energy and Transmission

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Alternative 3 includes a significant decrease in DFA lands compared to the Preferred Alternative. The reduction in DFA lands occurs somewhat evenly within each ecoregion subarea, with noticeable decreases within the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to a reduction of DFAs near proximate regional and local study area communities within these ecoregion subareas. This reduction in overall DFA acreage could reduce any potential population in-migration and housing demand impacts compared with the Preferred Alternative due to the assumed reduction in overall renewable energy project development and related transmission.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

The reduction in DFA lands under Alternative 3 could reduce the potential for removal of existing housing units located within Alternative 3 DFAs as future projects are developed. This reduction would be most noticeable within the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the reduction in DFA acreage in these ecoregion subareas. However, it is likely some level of residential purchases would be required for the amount of renewable development facilitated and streamlined assumed under Alternative 3. When considering the numbers of available housing units and vacancy rates presented in Volume III, Table III.23-2, it is unlikely that any residential relocations associated with development of renewable energy facilities and transmission infrastructure under Alternative 3 would necessitate construction of housing outside of regular growth occurring within the DRECP area.

Impact SE-3: Plan components may affect economic development and government finance.

The reduction in overall DFA acreage associated with Alternative 3 could slightly reduce any potential economic development beneficial impacts. It is assumed that beneficial impacts from taxation and contribution to government revenue would decrease with Alternative 3 due to a reduction in overall DFA acreage and associated development. While somewhat evenly distributed within the DRECP area, any reduction would likely occur in the regional and local communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the reduction in DFA lands within these ecoregion subareas. While reduced, direct and indirect economic stimulus and revenue

from development of future renewable energy and transmission infrastructure facilities within the Alternative 3 DFAs would be similar to those discussed for the Preferred Alternative in Section IV.23.3.2.1.

Impact SE-4: Plan components may generate social change and social disruption.

The reduction in overall DFA acreage associated with Alternative 3 could reduce potential social change and disruption impacts from construction worker in-migration. This reduction would be focused within the communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the significant reduction in DFA lands within these ecoregion subareas. However, overall potential social change and disruption impacts for Alternative 3 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impact SE-5: Plan components may affect property values.

The reduction in overall DFA acreage associated with Alternative 3 could slightly reduce the potential for perceived property value impacts. This reduction would be focused within the communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas due to the significant reduction in DFA lands within these ecoregion subareas. From a programmatic perspective and identical to that presented in Section IV.23.3.2.1 for the Preferred Alternative, potential property value impacts from development of future renewable energy and transmission infrastructure facilities within the Alternative 3 DFAs are speculative at this time and require future analysis during individual project reviews.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Although Alternative 3 results in a decrease in DFA acreage, when the proposed Alternative 3 DFA designations are compared with the census tract locations within the DRECP containing greater than 50% minority and identified low-income populations (see Appendix R1.23), the affected population and potential for future renewable energy projects to occur on DFAs would be similar to that described for the Preferred Alternative. The potential for environmental justice impacts under Alternative 3 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impacts on Variance Process Lands

These lands are potentially available for renewable energy development, but projects on Variance Process Lands are not streamlined, nor incentivized, and have a specific set of CMAs. Project applicants must demonstrate that a proposed activity on Variance Process

Lands will avoid, minimize, and/or mitigate effects on sensitive resources as per the CMAs, will be compatible with any underlying BLM land allocation. Renewable energy applications in Variance Process Lands will follow the process described in the Solar PEIS Record of Decision, Section B.5. Therefore, socioeconomic and environmental justice impacts on Variance Process Lands under Alternative 3 would be similar to that described in Section IV.23.3.1 for the No Action Alternative.

Impact Reduction Strategies

Design Features of the Solar PEIS

As described in Section IV.23.3.1 for the No Action Alternative, a number of design features from the BLM Solar PEIS already apply to BLM land to avoid or reduce potential socioeconomic and environmental justice impacts, depending on site- and project-specific conditions. These Solar PEIS measures, along with typical mitigation strategies described in Section IV.23.3.1, would apply to Alternative 3 and avoid or reduce potential socioeconomic and environmental justice impacts. No addition measures are warranted.

Conservation and Management Actions

Proposed conservation designations associated with Alternative 3 would be slightly increased when compared to the acreage of CMA land designations under the Preferred Alternative. However, the types of potential socioeconomic and environmental justice analysis impacts associated with CMA land designations would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

IV.23.3.5.2 Impacts of Ecological and Cultural Conservation and Recreation Designations

The impacts of ecological and cultural conservation and recreation designations on socioeconomics and environmental justice within the LUPA Decision Area would be similar or identical for Alternative 3 as that described in Section IV.23.3.2.2 for the Preferred Alternative. Proposed conservation designations for ecological and cultural conservation could limit the amount of economic-generating activities on these lands by not allowing or encouraging some types of outdoor recreation. However, conservation designations for outdoor recreational use would generate beneficial impacts to BLM by encouraging more recreationists to use the area.

IV.23.3.5.3 Impacts of Transmission Outside the DRECP Area

The impacts of transmission outside the DRECP area on socioeconomics and environmental justice would be the same under all alternatives. These impacts are as described for the No

Action Alternative in Section IV.23.3.1.3. BLM actions may require changing existing land use designations and Visual Resource Management Classes to account for new utility-scale transmission lines. These actions could limit future use of and access to this land should BLM designate them for these uses.

IV.23.3.5.4 Comparison of Alternative 3 With Preferred Alternative

Potential socioeconomic and environmental justice impacts from the Proposed LUPA (actions allowing for streamlining of renewable energy and transmission projects) under Alternative 3 would be slightly decreased compared with the Preferred Alternative due to a decrease in overall DFA acreage.

Potential socioeconomic impacts of Alternative 3 would be similar to those of the Preferred Alternative. However, due to a reduction in DFA acreage in those ecoregion subareas, Alternative 3 may slightly decrease potential adverse worker in-migration, residential relocation, social disruption impacts, and beneficial economic impacts to the regional and local communities serving the West Mojave and Eastern Slopes and Imperial Borrego Valley ecoregion subareas. Conservation actions of Alternative 3 would be similar or identical compared with those under the Preferred Alternative, as the amount and locations of conservation land for both alternatives is similar. The affected environmental justice population and potential for disproportionate DRECP acreage of Alternative 3 would be similar to that described for the Preferred Alternative.

IV.23.3.6 Alternative 4

IV.23.3.6.1 Impacts of Renewable Energy and Transmission

Impact SE-1: Plan components may induce substantial population growth, either directly or indirectly.

Alternative 4 includes a decrease in DFA lands compared to the Preferred Alternative. The reduction in DFA lands occurs somewhat evenly within each ecoregion subarea, with a noticeable decrease within the Imperial Borrego Valley ecoregion subarea due to the reduction of DFAs near proximate regional and local study area communities within this ecoregion subarea. This reduction in overall DFA acreage could reduce any potential population in-migration and housing demand compared with the Preferred Alternative.

Impact SE-2: Plan components may displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere.

The reduction in overall DFA acreage under Alternative 4 could slightly reduce the potential for removal of existing housing units within Alternative 4 DFAs as future

projects are developed. This reduction would be most noticeable within the Imperial Borrego Valley ecoregion subarea due to the reduction in DFA acreage in that ecoregion subarea. However, it is likely some level of residential purchases would be required for the amount of renewable development facilitated and streamlined under Alternative 4. When considering the numbers of available housing units and vacancy rates presented in Volume III, Table III.23-2, it is unlikely that any residential relocations associated with development of renewable energy facilities and necessary transmission infrastructure under Alternative 4 would necessitate construction of housing outside of regular growth occurring within the DRECP area.

Impact SE-3: Plan components may affect economic development and government finance.

The reduction in overall DFA acreage associated with Alternative 4 could slightly reduce potentially beneficial economic development impacts. It is assumed that beneficial impacts from taxation and contributions to government revenues would decrease under Alternative 4 due to a reduction in overall DFA acreage and its associated development. While somewhat evenly distributed within the DRECP area, any reduction would likely occur in the regional and local communities serving the Imperial Borrego Valley ecoregion subarea due to the reduction in DFA lands within this ecoregion subarea. While at a decreased level, direct and indirect economic stimulus and revenue from the development of renewable energy and transmission infrastructure facilities within the Alternative 4 DFAs would be similar to those discussed for the Preferred Alternative in Section IV.23.3.2.1.

Impact SE-4: Plan components may generate social change and social disruption.

The reduction in overall DFA acreage associated with Alternative 4 could reduce potential social change and disruption impacts from construction worker in-migration. This reduction would be focused within the communities serving the Imperial Borrego Valley ecoregion subarea due to the reduction in DFA lands within this ecoregion subarea. However, overall potential social change and disruption impacts for Alternative 4 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impact SE-5: Plan components may affect property values.

The reduction in overall DFA acreage associated with Alternative 4 could slightly reduce the potential for perceived property value impacts. This reduction would be focused within the communities serving the Imperial Borrego Valley ecoregion subarea due to the reduction in DFA lands within this ecoregion subarea. From a programmatic perspective and identical to that presented in Section IV.23.3.2.1 for the Preferred Alternative, potential property

value impacts from development of future renewable energy and transmission infrastructure facilities within the Alternative 4 DFAs are speculative at this time and require future analysis during individual project reviews.

Impact SE-6: Plan effects would be disproportionately borne by minority or low-income populations.

Although Alternative 4 results in a decrease in DFA acreage, when the proposed Alternative 4 DFA designations are compared with the census tract locations within the DRECP containing greater than 50% minority and identified low-income populations (see Appendix R1.23) within the DRECP, the affected population and potential for future renewable energy projects to occur on DFAs would be similar to that described for the Preferred Alternative. The potential for environmental justice impacts under Alternative 4 would be similar or identical to those discussed in Section IV.23.3.2.1 for the Preferred Alternative.

Impacts on Variance Process Lands

These lands are potentially available for renewable energy development, but projects on Variance Process Lands are not streamlined, nor incentivized, and have a specific set of CMAs. Project applicants must demonstrate that a proposed activity on Variance Process Lands will avoid, minimize, and/or mitigate effects on sensitive resources as per the CMAs, will be compatible with any underlying BLM land allocation. Renewable energy applications in Variance Process Lands will follow the process described in the Solar PEIS Record of Decision, Section B.5. Therefore, socioeconomic and environmental justice impacts on Variance Process Lands under Alternative 4 would be similar to that described in Section IV.23.3.1 for the No Action Alternative.

Impact Reduction Strategies

Design Features of the Solar PEIS

As described in Section IV.23.3.1 for the No Action Alternative, a number of design features from the BLM Solar PEIS already apply to BLM lands to avoid or reduce potential socioeconomic and environmental justice impacts, depending on site- and project-specific conditions. These Solar PEIS measures, along with typical mitigation strategies described in Section IV.23.3.1, would apply to Alternative 4 and avoid or reduce potential socioeconomic and environmental justice impacts. No addition measures are warranted.

Conservation and Management Actions

Conservation designations associated with Alternative 4 would be reduced compared with the acreage proposed under the Preferred Alternative. However, the types of potential socioeconomic and environmental justice impacts associated with CMA land designations would be similar or identical to those discussed in Section IV.23.3.2.1.

IV.23.3.6.2 Impacts of Ecological and Cultural Conservation and Recreation Designations

The impacts of ecological and cultural conservation and recreation designations on socioeconomics and environmental justice within the LUPA Decision Area would be similar or identical for Alternative 4 as that described in Section IV.23.3.2.2 for the Preferred Alternative. Conservation designations for ecological and cultural conservation could limit the amount of economic-generating activities on these lands by not allowing or encouraging some types of outdoor recreation. However, conservation designations for outdoor recreational use would generate beneficial impacts to BLM by encouraging more recreationists to use the area.

IV.23.3.6.3 Impacts of Transmission Outside the DRECP Area

The impacts of transmission outside the DRECP area on socioeconomics and environmental justice would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.23.3.1.3. BLM actions may require changing existing land use designations and Visual Resource Management Classes to account for new utility-scale transmission lines. These actions could limit future use of and access to this land should BLM designate them for these uses.

IV.23.3.6.4 Comparison of Alternative 4 With Preferred Alternative

Potential socioeconomic and environmental justice impacts from the Proposed LUPA (actions allowing for streamlining of renewable energy and transmission projects) under Alternative 4 would be slightly decreased compared with the Preferred Alternative due to a decrease in overall DFA acreage.

Potential socioeconomic impacts of Alternative 4 would be similar to those of the Preferred Alternative. However, due to a reduction in DFA acreage in this ecoregion subarea, Alternative 4 may slightly decrease potential adverse worker in-migration, residential relocation, social disruption impacts, and beneficial economic impacts to the regional and local communities serving the Imperial Borrego Valley ecoregion subarea. Conservation actions of Alternative 4 would be similar or identical compared with those under the Preferred Alternative, as the amount and locations of conservation land for both

alternatives is similar. The affected environmental justice population and potential for disproportionate acreage of Alternative 4 would be similar or identical to that described for the Preferred Alternative.