IV.19 TRANSPORTATION AND PUBLIC ACCESS

IV.19.1 Approach to Impact Analysis

IV.19.1.1 General Methods

The analysis in this chapter addresses the potential impacts on transportation and public access from implementation of the Desert Renewable Energy Conservation Plan (DRECP or Plan) alternatives (See Volume II, Description of Alternatives). Existing conditions for transportation and public access are described in Volume III, Chapter III.19.

Appendix R2.19 contains tables that support this chapter. The tables feature data that quantify the linear miles of federal routes, state routes, and railways within the Plan eco-region subareas that may be affected by these alternatives.

This Environmental Impact Report/Environmental Impact Statement (EIR/EIS) is a programmatic analysis that does not evaluate site-specific impacts associated with any one particular project. Project-specific impacts would be assessed both during proposed project permitting processes and in future separate California Environmental Quality Act/ National Environmental Policy Act (CEQA/NEPA) documents.

Although it is impossible to predict exactly where renewable energy development projects (i.e., solar, wind, geothermal, and supporting transmission) may be developed, existing roads, railways, and airports in the Plan Area would provide the necessary access to development sites. Potential impacts of project development depend on several factors: project location; project size; the delivery of equipment, materials, and supplies; and the daily commute for workers. Adverse changes to nearby roadways may also result from the conservation actions and compensation measures designed to offset impacts.

Most conservation reserve areas do not include site-specific access parameters, but instead include goals and objectives calling for reduced access into these areas to meet conservation goals. Prohibiting disturbances adjacent to routes may limit support facilities for camping, day visits, and parking, thereby changing access patterns and discouraging non-through access in current touring areas. Because the extent of these changes will depend on future development, changes among alternatives can by only qualitatively assessed. Project-specific changes will undergo CEQA and NEPA documentation and consistency review with comprehensive transportation and travel management or resource management plans.

The key metrics used for this analysis are:

1. Transportation and public access facilities that intersect with renewable energy DFAs.

2. Transportation and public access facilities that intersect with existing and proposed conservation lands.
3. Changes to the transportation and public access network from the conservation strategy of the DRECP.

IV.19.1.2 CEQA Standards of Significance

CEQA has established the following questions for assessing impacts relating to transportation or traffic (CEQA Guidelines, Appendix G). Would the project:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The first and last bullets raise the issues of public transit, mass transit, and nonmotorized modes of travel, namely pedestrian and bicycle paths. The programmatic nature of this analysis means that site-specific local roadway analysis would be outside the scope since specific development sites are not known at this time. The circulation network in the Plan Area includes both mass transit and pedestrian and bicycle paths. The mass transit, pedestrian, and bicycle portions of local circulation systems tend to be predominantly in urban areas. Because of the rural nature of the DFAs, pedestrian and bicycle paths and mass transit are not likely to be affected by renewable energy and transmission development; there would therefore be no potential conflicts with applicable plans, ordinances, or policies related to public transit, bicycle, or pedestrian facilities. No additional discussion is necessary regarding potential impacts related to public transit, bicycle or pedestrian facilities.

Plan-wide effects on the recreational use of Bureau of Land Management (BLM) travel routes, including nonmotorized facilities, are addressed in this analysis. Issues related to recreational use of routes and off-highway vehicle (OHV) use are addressed in Chapter IV.18, Outdoor Recreation.

Renewable energy and transmission development would not result in a notable change in air traffic patterns since each renewable energy project would have to meet Federal Aviation Administration criteria related to obstructions to aircraft operations and air navigation. Aircraft operations and air navigation hazards are addressed in Chapter IV.22, Public Safety.

IV.19.2 Typical Impacts Common to All Action Alternatives

IV.19.2.1 Impacts of Renewable Energy and Transmission Development

The following general description assesses typical impacts on transportation from renewable energy development. These impacts would likely be similar for solar and wind energy development. Because of their relatively smaller footprints, impacts from geothermal energy development and transmission lines would be less than solar or wind.

Primary impacts on transportation would be increased traffic on nearby roads. These impacts would be mostly during project construction, but would affect transportation during all project development and decommissioning phases. The primary impact is the degradation of the level of service of local roads around renewable energy facilities from increased traffic volumes during construction, particularly with solar and wind energy facilities.

The proximity of renewable energy projects to major roads in part determines traffic congestion problems anticipated from commuting construction workers. Some of the best solar energy sites, for example, are in remote areas that may be served by a single major two-way road, while other locations may have multiple access routes. Limited access typically leads to greater traffic delays from inclement weather, road maintenance, construction, high vehicle volumes, or traffic accidents.

In addition, the area typically covered by large renewable energy facilities (i.e., greater than 200 megawatts [MWs]) may disrupt access to lands along local roads, or preclude public access to lands surrounding renewable energy project sites. Large facilities could hinder travel either to or from off-site locations if the project site becomes inaccessible. Facilities that occupy hundreds or thousands of acres could preclude travel from one side of the facility to destinations on the other side. This impact depends on both site-specific conditions and technology. For example, a solar facility would generally require site closure, but wind and geothermal facilities could be developed in a way to allow some level of public

access through the site. Additional travel time and added traffic congestion around the perimeter of the site could result.

Specific access routes for larger commercial or competitive BLM Special Recreation Permit (SRP) sites may be eliminated if the site property becomes off limits. This may lead to increased traffic on alternative routes to SRP sites to keep traffic outside the renewable energy leasing areas. Specific affected routes have not yet been identified.

IV.19.2.1.1 Impacts of Site Characterization

Site characterization typically involves surveys by small crews that test a potential site's viability. Pre-construction activities involve site testing, geotechnical borings, and assessment of the resource or other environmental conditions. Each of these involves small crews of a few individuals per crew and a limited number of vehicles. For example, traffic for site monitoring and pre-construction meteorological and geotechnical testing for wind energy facilities is typically limited to a few heavy-duty all-wheel-drive pickup trucks, medium-duty trucks, or personal vehicles. Existing access roads would be sufficient, and impacts would be minimal.

IV.19.2.1.2 Impacts of Construction and Decommissioning

During construction of renewable energy facilities, workers commute to the project site over local roads, and shipments to and from the facilities are usually by truck. Rail transport to the closest intermodal facility for materials could also be used.

In general, the heavy equipment and materials needed for renewable energy development are typical of road construction projects and do not pose unique transportation challenges. Local road improvements may be necessary if access routes are not built to support heavy truck traffic up to the federal limit of 80,000 pounds gross vehicle weight for the National Network (Title 23 Code of Federal Regulations [CFR] Part 658). In addition, a small number of one-time oversized and overweight shipments may be required for larger earthmoving equipment used in site preparation. In previously disturbed areas, demolition of existing structures might be necessary before grading and project construction. Resulting debris would be shipped, as required, off site to an appropriate disposal facility.

Depending upon the design, some wind turbine components, like blades, are extremely long, while some, like the nacelle containing all drivetrain components except the rotor, are extremely heavy. Transporting these components typically requires permitting as oversized loads. In addition, the main cranes required for tower and turbine assembly typically also require a number of oversized or overweight shipments. Similar equipment and materials would also require transport during site decommissioning.

Shipments of overweight or oversized loads can cause temporary disruptions on secondary and primary roads. Local roads might require fortification of bridges and removal of obstructions to accommodate overweight or oversized shipments. This need would have to be determined on a site-specific, case-by-case basis. Renewable energy facility access roads must also be constructed to accommodate these shipments. For example, because of the anticipated weight of the turbine components and electrical transformers that would be brought to a project site, maximum grade also becomes a critical road design parameter.

Overweight and oversized loads typically require tractor-trailer combinations with multiple axles, special local/county/state permits, advance and trailing warning vehicles, and possible police escorts. Travel during off-peak hours and temporary road closures may be necessary. Most of the construction equipment (e.g., heavy earthmoving equipment, cranes) would remain at the site for the duration of construction. One-time oversize shipments would be necessary for the delivery of steam turbine generators and the main transformers used for solar trough and power tower technologies. This equipment is typically shipped by rail to the nearest intermodal facility, where transfer to specially designed tractor trailers would be the final leg in its journey to a project site. Because such construction equipment may be routinely moved on roads and the number of one-time shipments would be limited, minimal impact is expected from these movements to and from the construction site.

The movement of other equipment and materials to the site during construction would cause a small decrease in the level of service on local roadways. The impact to local primary and secondary road networks from shipments of materials (e.g., gravel, concrete, water, and facility components) would likely be minimal.

For larger projects occupying several hundred acres, the average number of deliveries would cause a notable increase in local traffic during construction. Deliveries are most likely to be made during morning work hours, but could be made anytime during the day. Assuming that deliveries are generally made during the morning between 8:00 A.M. and noon, the traffic volume on local roads may be limited to an increase of about 20 vehicles per hour for deliveries made in that time frame. Because this increase would not be enough to change the level of service on local roads, the impact would be minimal. On the other hand, much greater impacts could arise from workers commuting to larger project construction sites. The workforce for projects over 200 MW could involve a few hundred workers or more, each driving individually to a project site during peak construction periods. Depending on the size of the workforce and the phasing of construction, peak-phase construction traffic could increase up to about 700 or more additional vehicles during the peak commute hours between 7:00 A.M. and 9:00 A.M. This level of construction traffic could severely degrade the level of service on access roads.

Certain project sites are accessible by rail, and some utility-scale renewable energy projects may be able to use rail transport for large deliveries. Nearby railroads could experience limited impacts from increased traffic at railroad crossings. Potential conflicts could arise if there are rail crossings near roads with heavy project site traffic, especially during the construction period. An increased risk of collisions between trains and vehicles, most notably by drivers trying to beat trains at crossings out of frustration with site-related traffic congestion, could also occur.

IV.19.2.1.3 Impacts of Operations and Maintenance

Transportation activities during renewable energy production include commuting workers, material shipments to and from a facility, and on-site work and travel. Large solar energy facilities could employ more than 150 workers, though during daytime hours 10 to 50 workers would more typically be on site, with minimal crews working at night. At wind energy operations, even larger sites may be attended during business hours by a small maintenance crew of as few as 6 individuals. With some facility sites spanning several miles, on-site operations would include travel within the site and across the region for repairs and maintenance. If on-site water is not available for dust suppression or solar panel cleaning operations, shipments of water to the facility location would also be required.

Consequently, transportation activities during renewable energy production and operation would be limited to, at the most, a small number of daily trips by personal vehicles and a few truck shipments. Large components may be required for equipment replacement in the event of major equipment malfunctions, but this would be infrequent. Impacts on local transportation networks during renewable energy production and operations would be minimal.

With some exceptions, transportation activities during site decommissioning and reclamation would be similar to those during site development and construction. Heavy equipment and cranes would be required for dismantling project components, breaking foundations, and regrading and recontouring the site to the original grade. Aside from construction equipment, oversized and overweight shipments are not expected during decommissioning since major components can be disassembled, segmented, or reduced before being shipped. Potential disruptions to local traffic during decommissioning would likely be fewer than during construction.

Developing additional transmission facilities outside of existing transportation corridors may improve both public access to federal lands and movement along transmission corridors, which would in turn benefit the transportation network. Access roads for transmission facilities are normally sited to minimize environmental impacts. Once in place, they may provide additional, well-maintained routes through the planning area. This aspect of renewable energy development would generally enhance the transportation network and

relieve pressure from routes in more sensitive locations. Transmission line access roads may concentrate land use along these routes.

IV.19.2.2 Impacts of the Reserve Design

Conservation Designations and conservation actions would likely result in additional limitations on public access and some route closures or changes to meet identified goals and objectives in specific conservation areas. Limitations could include seasonal closures and route reductions to support strategies for habitat and species conservation. General ingress and egress routes to and from conservation areas may also be limited to support conservation goals. Particular route closures have not yet been identified, and access parameters will generally be identified in comprehensive transportation and travel management and resource management plans.

Closures may affect motorized access to historically available destinations and areas and reduce new access to individual, commercial, and motor-dependent recreational destinations. They may also have long-term effects on the overall transportation network. Additional limitations to access in conservation areas may cause more traffic and increase resource pressure on areas outside the conservation areas. Demand for motorized access, particularly in backcountry areas, may put additional pressure on the remaining backcountry areas both within and outside the Plan Area to meet that demand. It may also result in changes to the character of motorized backcountry travel due to increased use. Although some conservation strategies may make additional lands available, for example for recreational use, any beneficial impacts of the reserve design on transportation or public access would likely be negligible.

The actual level of these changes is difficult to anticipate at this time. Adverse impacts to nonmotorized users would be negligible, but specific motor-dependent activities with nonmotorized components may be adversely affected (see Section IV.18.2.3.2).

IV.19.2.3 Impacts of BLM Land Use Plan Decisions

IV.19.2.3.1 Impacts of Renewable Energy Development and Transmission on BLM Lands

The typical impacts from the various renewable energy and transmission technologies on BLM lands would be the same as those described in Section IV.19.2.1. However, the specific locations in which energy and transmission development would be allowed would be driven by LUPA decisions, which may encourage or restrict development in some areas.

IV.19.2.3.2 Impacts of BLM Land Designations and Management Actions

Because the BLM LUPA land designations would be managed to protect ecological, historic, cultural, scenic scientific, and recreation resources and values, the BLM LUPA land designations are not likely to provide general protection for transportation and public access. Land designations that protect recreation resources (Special Recreation Management Areas [SRMAs] and Extensive Recreation Management Areas [ERMAs]) would provide some general protection for transportation and public access, but if the protection of these values conflicts, resource conservation values would generally prevail.

Current and proposed recreational management areas or zones must necessarily consider access because most access in the California Desert is dependent on motor vehicles, and one of the recreational assets is the transportation and access network used for recreational touring. While other land uses are allowed within these areas, other uses must be compatible with the resources and values that the land designation is intended to protect, namely the recreation assets themselves and access to them.

Details on allowable uses and management within National Conservation Lands are presented in the proposed LUPA description in Volume II. Details on the goals, objectives, allowable uses, and management actions for each Area of Critical Environmental Concern (ACEC) and SRMA are presented in the LUPA worksheets in Appendix L. General impacts in these areas are discussed in Section IV.19.2.2.

IV.19.2.4 Impacts of Natural Community Conservation Plan and General Conservation Plan

The Natural Community Conservation Plan (NCCP) would be administered by the California Department of Fish and Wildlife (CDFW), and would be applicable to the entire Plan Area. The General Conservation Plan (GCP) would be administered by the U.S. Fish and Wildlife Service (USFWS), and would be applicable to nonfederal lands, a subset of the entire Plan Area.

IV.19.2.4.1 Natural Community Conservation Plan

The impacts of renewable energy development permitted under the NCCP would be the same as those defined for Plan-wide impacts, including the typical impacts described in Section IV.19.2 and for each alternative.

IV.19.2.4.2 General Conservation Plan

The types of impacts resulting from renewable energy development permitted under the GCP would be the same as those defined for the Plan-wide impacts, including the typical

impacts described in Section IV.19.2. However, the locations where these impacts would occur would vary by alternative. Any differences in these impacts that result from the locational differences are described for each alternative.

IV.19.3 Impact Analysis by Alternative

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

IV.19.3.1 No Action Alternative

The No Action Alternative assumes the state's renewable energy goals would be achieved absent the DRECP and that renewable energy, transmission development, and mitigation for such projects in the Plan Area would occur on a project-by-project basis in a pattern consistent with past and ongoing renewable energy and transmission projects.

No DFAs would be created. Current renewable energy development patterns are assumed to continue. BLM would not implement new or modified LUPA Conservation Designations. Conservation areas would be contained in existing protected lands and areas managed by BLM for conservation of resource values.

IV.19.3.1.1 Impacts within the Entire Plan Area in No Action Alternative

IV.19.3.1.1.1 Impacts and Mitigation for Renewable Energy and Transmission Development in No Action Alternative

Impact Assessment

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

Development of renewable energy projects and transmission facilities under the No Action Alternative would result in short-term construction and long-term operational traffic from trips generated by workers and deliveries to project sites. Predominant effects would be during construction, but would also be likely during development and decommissioning. The distance of the projects from major roads will to some extent determine the potential for traffic to change local circulation patterns or degrade local roads and cause congestion problems, especially from heavy-duty trucks. Commuting construction workers and equipment and materials deliveries to each site during construction would also cause a small decrease in the level of service of roadways and highways during the construction phase.

Traffic would increase during renewable energy facility operations from commuting workers, material shipments to and from facilities, and on-site work and travel. Impacts to local transportation networks from project-generated traffic during operations would be less than during construction because many fewer trips would be made. With some exceptions, impacts to transportation during site decommissioning would be similar to those during site development and construction.

Linear transportation features within available development areas under the No Action Alternative would experience this impact. Adverse impacts would extend beyond available development areas from increases in construction traffic traveling to and from project sites.

Roads most likely to see increases in traffic under the No Action Alternative include Interstate 8 (I-8), I-10, I-40, U.S. Route 395 (U.S. 395), State Route 202 (SR-202), and State Routes 58, 14, 138, 18, 247, 177, 111, 86, 115, and 98.

Traffic generated by solar projects within available development areas would be highest in the Imperial Borrego Valley ecoregion subarea. The West Mojave and Eastern Slopes ecoregion subarea would see the most adverse impacts on transportation and public access from wind energy development. Overall, adverse impacts to transportation and public access would be negligible from geothermal development under the No Action Alternative.

The linear miles of transportation and public access facilities within available areas of solar, wind, geothermal, and transmission development for all ecoregion subareas under the No Action Alternative are shown in Table R2.19-1 in Appendix R2.19.

Mitigation for degradation of reduced performance of the local road networks in the Plan Area under the No Action Alternative would be identified on a project-by-project basis in patterns consistent with past and ongoing renewable energy and transmission projects. Ride sharing, staggered work schedules, and traffic control for turns and cross-road traffic could help address any identified problems.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Development of renewable energy projects under the No Action Alternative would disrupt access to places along local roads or eliminate public access to lands surrounding project sites. Site closure is typically necessary for site development, which limits travel to and from off-site locations. Depending on their specific locations, solar facilities generally require site closure, while wind and geothermal facilities may be configured to allow some public access through the site. Project-specific resource conservation measures may also include establishing new restrictions on resource conservation sites. The adverse effects of development and conservation sites include decreasing accessibility to surrounding lands;

this would be offset somewhat by establishing new corridors and access roads for transmission lines. Developing additional transmission facilities outside of existing transportation corridors generally improves transportation and access. Access roads ease movement along transmission corridors, and facilities may provide valuable new backbone routes through the planning area. Depending on the location of a project, project-specific conservation strategies, and project-related transmission, BLM travel routes may be altered. Renewable energy project developers would be required to provide alternate replacement routes to ensure continued access to previously accessible public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Congestion management programs cover principal roads, highways, and interstate highways in the Plan Area. A local Congestion Management Plan links land use, transportation, and air quality planning to promote reasonable growth management in a manner that alleviates traffic congestion and its related impacts, including air quality.

Renewable energy projects and transmission in the Plan Area would affect the transportation infrastructure of areas generally outside of urban environments. During construction, equipment, materials, and workers would generate traffic to and from project sites. This impact depends on the location and size of project, workforce, and phasing of construction, with construction adding up to about 700 additional vehicles per peak hour on roads immediately surrounding large projects. Although this could substantially increase traffic, this increase would almost always be easily accommodated by roadways within the Plan Area. Construction-phase traffic volumes would not be substantial when compared to the available capacity of the road network. Once operational, renewable energy projects would not be notable sources of employee-related traffic, and would typically be on the order of 10 to 50 commuting workers during daytime hours. Projects would not substantially affect designated principal roads or highways segments in a congestion management plan.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Renewable energy project and transmission development would require slow-moving heavy-duty trucks that would obstruct traffic and inhibit emergency response temporarily during construction. Heavy construction traffic using emergency routes could adversely affect emergency service response times.

Development of renewable energy projects would not typically require major transportation infrastructure improvements such as upgrades or repairs to existing bridges or new

highway interchanges. Site access for construction vehicles would be supervised by local jurisdictions to ensure that site entries and exits do not cause unsafe vehicle movement.

Construction truck traffic may increase hazards along travel routes by damaging roadway surfaces or causing deterioration of existing pavement or road surfaces. During construction, various materials would be transported to and from the construction areas in load-bearing trucks. Damage caused by project-related traffic would be subject to repair requirements established by the California Vehicle Code and local jurisdictions.

Movement of oversized loads requires California Highway Patrol (CHP) permits. Where warranted, CHP may impose time-of-day restrictions on deliveries. Traffic controls and guide vehicles would be employed as needed. Implementing those traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid adverse effects from this impact.

Laws and Regulations

Existing laws and regulations would reduce the impacts of renewable energy development projects in the absence of the DRECP. Relevant regulations are presented in the Regulatory Setting in Volume III. Note that because this EIR/EIS addresses amendments to BLM's land use plans, these plans are addressed separately and are not included in this section. The requirements of relevant regulations would reduce impacts through the following mechanisms:

- The California Vehicle Code contains regulations applicable to roadway damage, licensing, size, weight, vehicle loads on highways, and safe vehicle operation
- Encroachment permits and oversize or overweight vehicle permits must be obtained from the California Department of Transportation (Caltrans), the CHP, and local transportation and road management agencies.
- The Solar Programmatic EIS (Solar PEIS) has numerous design features (Appendix X) to avoid transportation impacts from solar energy development on BLM lands. These design features include: performing traffic impact or other studies to assess the capacity of existing and proposed new roads to physically handle the added wear and tear from increased construction traffic; incorporating site access under the supervision of the pertinent local, county, state, and federal agencies; preserving public roadway corridors through a site; implementing local road improvements, providing multiple site access locations and routes, staggering work schedules, and implementing a ride-sharing or shuttle program; implementing traffic control measures to reduce hazards for incoming and outgoing traffic; and

incorporating inspection and monitoring to respond to transportation issues as they arise (Appendix X measure T2-1).

Mitigation

Traffic mitigation already adopted for approved renewable energy and transmission development projects is likely to be the same as future mitigation that would be applied under the No Action Alternative. Typical mitigation measures include establishing ride-sharing programs, staggering work schedules to minimize traffic, and implementing traffic management plans or temporary traffic control measures to improve the performance of impacted roadways.

Typical Mitigation Measures for Impacts to the Road Network

- To mitigate impacts related to the daily commutes of construction workers, the operator may be required to implement local road improvements, provide multiple site access locations and routes, stagger work schedules for different work functions (e.g., site preparation, array foundation installation, array assembly, and electrical connections), shift work hours to facilitate off-peak commuting times to minimize impact on local commuters, or implement a rideshare or shuttle program.
- To reduce hazards for incoming and outgoing traffic, as well as to expedite traffic flow, the operator may be required to implement traffic control measures, such as intersection realignment coupled with speed limit reduction; the installation of traffic lights and/or other signage; and the addition of acceleration, deceleration, and turn lanes on routes with site entrances. These types of measures can be considered during the siting and design phase through development of a transportation plan and a traffic management plan.

Typical Mitigation Measures for Impacts to BLM Routes of Travel

- Easements could be required for public roadway corridors through a site to maintain proper traffic flows and retain more direct routing for the local population.
- Existing BLM standards regarding road design, construction, and maintenance are described in BLM Manual 9113 (BLM 1985). An access road siting and management plan should be prepared incorporating these standards, as appropriate. Generally, roads should be required to follow natural contours; be constructed in accordance with standards described in BLM Manual 9113; and be reclaimed to BLM standards. As described in BLM Manual 9113, BLM roads should be designed to appropriate standards no higher than necessary to accommodate their intended functions.

- Existing roads should be used to the maximum extent possible, but only if in safe and environmentally sound locations. If new access roads are necessary, they should be designed and constructed to the appropriate standard no higher than necessary to accommodate their intended functions (e.g., traffic volume and weight of vehicles). Abandoned roads and roads that are no longer needed should be recontoured and revegetated.

Typical Mitigation Measures for Other Impacts to Roads

- Additional best management practices specific to roads from the Renewable Energy Action Team's Best Management Practices and Guidance Manual: Desert Renewable Energy Projects (2010) may also be required for renewable energy projects.

IV.19.3.1.1.2 Impacts from Reserve Design in the No Action Alternative

The No Action Alternative has no reserve design, but without approval of an action alternative, there would be continued protection of existing Legislatively and Legally Protected Areas (LLPAs) such as wilderness. In addition, under the No Action Alternative, renewable energy projects would continue to be evaluated and approved with project-specific mitigation requirements.

The potential for adverse impacts within the Plan Area would occur primarily where the existing protected areas (159 miles) and BLM conservation areas (277 miles) intersect with transportation and public access facilities. New conservation strategies established by project-specific mitigation requirements under the No Action Alternative would be likely to result in additional limitations on public access to existing protected lands or areas managed by BLM for conservation, depending on the goals and objectives of specific mitigation strategies.

IV.19.3.1.2 Impacts on BLM Lands of Existing BLM Land Use Plans in No Action Alternative

Under the No Action Alternative, the existing land management plans within the Plan Area would continue to be implemented on BLM lands.

Existing ACECs and wildlife allocations would result in some adverse impacts to transportation from seasonal limitations and closures. Existing recreational facilities would facilitate transportation and access to locations, depending upon allowable uses and management within specific areas.

The potential for adverse impacts within the Plan Area would primarily be where available development areas intersect with BLM routes of travel, which would be 98 miles for solar

energy development, 5 miles for wind energy development, less than 1 mile for geothermal energy development, and 20 miles for transmission development under the No Action Alternative. The majority of these impacts would be within the California Desert Conservation Area (CDCA) Plan boundary. Adverse impacts would also extend beyond available development areas. Under the No Action Alternative, BLM's management of transportation and public access under the laws, regulations and policies listed in Volume II, Section II.3.2 would reduce the impacts of renewable energy construction.

IV.19.3.1.3 Impacts of Natural Community Conservation Plan in No Action Alternative

The NCCP would apply to all lands within the Plan Area. In the absence of Plan implementation, the NCCP would not be approved and no incidental take permits would be issued under the NCCP. Projects would continue to be considered by the appropriate lead agency on an individual basis. The impacts that would occur in the absence of the NCCP would be the same as those described in Section IV.19.3.1.1.1 (Plan-wide analysis).

IV.19.3.1.4 Impacts of General Conservation Plan in No Action Alternative

As described in Appendix M, the GCP would apply to nonfederal lands in the Plan Area. In the absence of Plan implementation, the GCP would not be approved and no incidental take permits would be issued under the GCP. Projects would continue to be considered by the appropriate lead agency on an individual basis. The impacts that would occur in the absence of the GCP would be the same as those described in Section IV.19.3.1.1.1 (Plan-wide analysis), but would be specific to nonfederal lands.

IV.19.3.1.5 Impacts Outside the Plan Area in No Action Alternative

Outside the Plan Area, additional transmission lines would be needed to deliver additional renewable energy to load centers (areas of high demand). It is assumed that new transmission lines outside the Plan Area would use existing transmission corridors between the Plan Area and existing substations in the more populated coastal areas of the state. Areas outside the Plan Area through which new transmission lines might be constructed are San Diego, Los Angeles, North Palm Springs–Riverside, and Central Valley. These areas are described in the Existing Setting (see Section III.19.6, Transportation Outside the Plan Area).

IV.19.3.1.5.1 Impacts of Transmission Outside the Plan Area

To deliver electricity from projects in the Plan Area to load centers, additional transmission lines would be required outside the Plan Area. These would be in existing transmission corridors in San Diego, Los Angeles, North Palm Springs–Riverside, and the Central Valley.

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

Transportation impacts associated with Outside the Plan Area transmission lines would occur mostly during construction. The proximity of lines under construction to major roads will determine to some extent the traffic congestion problems anticipated from commuting construction workers. However, transmission towers are widely spaced and built in phases, so no single site would have a high number of workers at any one time. The movement of equipment and materials to sites during construction could cause a small short-term decrease in the level of service of local roadways during construction. Impacts to local primary and secondary road networks from deliveries of materials would be minimal. Traffic generated by the ongoing operation and maintenance of transmission lines would also be minimal. Transportation activities during site decommissioning and reclamation would be similar to those during site development and construction.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Additional transmission facilities outside of existing transportation corridors generally benefit transportation and access by introducing new roads that expand public access and ease movement along transmission corridors. Access roads built for transmission outside the Plan Area may provide additional, well-maintained backbone routes. Because transmission lines generally do not require closure of large sites or existing travel routes, development of the transmission outside the Plan Area would not adversely affect the availability of existing BLM roads or access to public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Traffic from transmission development outside the Plan Area would likely be near urban environments that are the usual focus of congestion management programs. Transmission construction crews would normally be spread over many miles of transmission corridors, and the small number of crews working on project construction would not cause substantial levels of traffic when compared to roadway capacities.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Developing transmission outside the Plan Area would create traffic that could inhibit emergency response during construction. New road hazards could also happen at construction equipment accessing sites, or by inadvertently damaging roadway surfaces. Road improvements for site access, or to repair potential roadway damage, would be subject to

supervision by local jurisdictions to minimize the possibility of accidents from the unsafe movement of vehicles. Implementing traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid this impact.

IV.19.3.1.5.2 Impacts of Existing BLM Land Use Plans Outside the Plan Area

Under the No Action Alternative, the existing BLM CDCA plan would continue to be implemented on CDCA lands. Under the No Action Alternative, renewable energy projects would still be developed through BLM's existing policies. Impacts on transportation and public access would be as those described in Section IV.19.2.1, with similar mitigation measures included on a case-by-case basis.

The existing land designations, such as existing protected areas, ACECs, and National Scenic and Historic Trails, would continue to be managed to protect their associated values and resources.

IV.19.3.1.6 CEQA Significance Determination: No Action Alternative

TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network. Renewable energy facility development under the No Action Alternative would result in short-term transportation disruptions. The movement of commuting construction workers and other equipment and materials deliveries to each site would cause a small decrease in the level of service of roadways and highways during construction. Typical mitigations include ride sharing, staggered work schedules, and traffic controls for turns and cross-road traffic where public roads connect with access roads. Impact would be less than significant with the typical mitigation measures identified in Section IV.19.3.1.1.1.

TR-2: Plan components would alter the availability or accessibility of BLM routes of travel. Closure of large development sites or project-specific conservation lands would disrupt access to lands along local roads or restrict public access to lands surrounding the project sites and conservation lands. This impact would decrease the availability of BLM routes of travel, although this impact would be somewhat offset by establishing new corridors and access roads for transmission lines, which would provide beneficial improvements to both transportation and access. Typical mitigation is available for the use and maintenance of existing BLM roads and to provide alternate replacement routes to previously accessible public lands. The resulting impact would be less than significant with the typical mitigation measures identified in Section IV.19.3.1.1.1.

TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP). Renewable energy facility development would generate traffic to and from project sites. However, traffic

levels would not be substantial when compared to the road network's capacity, and project-related traffic would generally occur outside the urban environments that are the focus of congestion management programs. Accordingly, this impact would be less than significant and require no additional mitigation.

TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response. Slow-moving heavy-duty trucks and other traffic would obstruct traffic in a manner that could inhibit emergency response and adversely affect emergency service response times. Additionally, construction activity could damage roadway surfaces or cause deterioration of the existing pavement. Typical mitigation would include implementing traffic controls to avoid degrading emergency response and measures to avoid or repair wear and tear from construction traffic. By avoiding these hazards, the resulting impact would be less than significant with the typical mitigation measures identified in Section IV.19.3.1.1.1.

IV.19.3.2 Preferred Alternative

IV.19.3.2.1 Plan-wide Impacts of Implementing the DRECP: Preferred Alternative

IV.19.3.2.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

The impacts would mostly likely occur during project construction and decommissioning. The proximity of a renewable energy facility to major roads will to some extent determine traffic congestion problems from commuting construction workers. The movement of other equipment and materials to the site during construction would cause a small decrease in the level of service of local roadways. The impact to local primary and secondary road networks from shipments of materials would be minimal. Transportation activities during renewable energy production would involve commuting workers, material shipments to and from the facility, and on-site work and travel. The impact on the local transportation network from transportation activities during operations and maintenance would be minimal. With some exceptions, transportation activities during site decommissioning and reclamation would be similar to those during site development and construction.

Linear transportation features within the DFAs under the Preferred Alternative include 37 miles for solar energy development, 2 miles for wind energy development, 7 miles for geo-

thermal energy development, and 20 miles for renewable energy transmission development. Adverse impacts would extend beyond the DFAs, however, due to increases in construction traffic. Roads most likely to see an increase in traffic related to renewable energy development under the Preferred Alternative include I-8, I-10, I-40, and SRs 58, 14, 138, 18, 247, 111, 86, 115, and 98.

Traffic generated by solar and geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea. The West Mojave and Eastern Slopes ecoregion subarea would see the highest impacts on transportation and public access from renewable energy and related transmission development. Overall, adverse impacts on transportation and public access from wind energy development would be negligible under the Preferred Alternative.

The linear miles of transportation and public access facilities within available areas of solar, wind, and geothermal energy and transmission development for all ecoregion subareas under the Preferred Alternative are shown in Table R2.19-5 in Appendix R2.19.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Development of renewable energy projects and implementing the proposed conservation strategies under the Preferred Alternative would disrupt accessibility to lands along local roads or restrict public access to lands surrounding renewable energy project sites. Closure of large sites for development or conservation would decrease the availability of BLM routes of travel and impede travel to or from off-site locations. Transmission development associated with the renewable energy projects would establish new corridors and access roads for transmission lines. Transmission facilities may provide valuable new backbone routes through the planning area, which would somewhat offset the impact of closures for renewable energy development and conservation sites. This impact depends on the location of each project, the conservation lands, and transmission; however, typical mitigation is available to support the use and maintenance of existing BLM roads, and to provide alternate replacement routes that ensure continued access to previously accessible public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Congestion management programs include the principal roads, highways, and interstate highways in the Plan Area. The renewable energy projects and transmission under the Preferred Alternative would affect the transportation infrastructure of the Plan Area, which is generally outside of urban environments that are the general focus of congestion management programs. Renewable energy facility development would generate traffic to and from

project sites, and, depending upon the location and size of each development project, workforce, and phasing of construction, construction-related traffic could add up to about 700 additional vehicles per peak hour. Although this could be a substantial increase in traffic, it would almost always be easily accommodated by the existing Plan Area road network. Operation-related activities would cause much lower levels of traffic that would not be substantial when compared to the road network's capacity. Accordingly, development under the Preferred Alternative would not substantially affect any principal roads or highways segments designated as part of a Congestion Management Plan.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Development of renewable energy projects and transmission would require use of slow-moving heavy-duty trucks that would obstruct traffic and temporarily inhibit emergency response during construction. Heavy construction traffic using emergency routes could adversely affect emergency service response times. New road hazards could also be introduced by creating new site entries and exits, or by inadvertently causing damage to roadway surfaces. The effects of road improvements to ensure site access or reduce potential damage to roadways would be subject to supervision by local jurisdictions. Implementing traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid the adverse effects of this impact.

Impacts in Study Area Lands

Study Area Lands refer to three categories of lands shown on alternative maps: Future Assessment Areas (FAAs), Special Analysis Areas (SAAs) and DRECP Variance Lands.

Future Assessment Areas. Lands within FAAs are neither reserve lands nor DFAs; they are simply areas that are deferred for future assessment. The future assessment will determine their suitability for renewable energy development or for ecological conservation. If renewable energy development occurs on FAA lands, a Land Use Plan Amendment would not be required. FAAs for each alternative are included and located as shown in Table IV.1-2 and Figure II.3-1 in Volume II. The FAAs represent areas where renewable energy development or inclusion to the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed.

Because most of the FAAs are presented as "undesignated areas" in the action alternatives, there would be no difference between the FAAs in the Preferred Alternative except that renewable development in an FAA would not require a BLM Land Use Plan Amendment so the environmental review process would be somewhat simpler than if the location were

left undesignated. Development of the FAAs would impact transportation and public access as it would within DFAs.

Special Analysis Areas. There are two areas defined as SAAs, representing areas subject to ongoing analysis. These areas (located in the Silurian Valley and just west of U.S. 395 in Kern County) have high value for renewable energy development, and also high value for ecological and cultural conservation and recreation. SAA lands are expected to be designated in the Final EIR/EIS as either DFAs or included in the Reserve Design/Conservation Designation.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands screened for the DRECP and based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on Variance Lands would not require a BLM Land Use Plan Amendment so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the DRECP Variance Lands would impact transportation and public access as it would within DFAs.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development and conservation elements covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for the Preferred Alternative (presented in Volume II, Section II.3.1.2) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definition of the reserve design and specific CMAs for the Preferred Alternative. While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would be applied also to nonfederal lands.

The Comprehensive Trails and Travel Management (CTTM) CMAs for the entire planning area would minimize impacts through specific actions, such as:

- Maintaining and manage adequate Road, Primitive Road, and Trail Access to and within SRMAs, ERMAs, OHV Open Areas, and Level 1, 2, and 3.

- Avoid large-scale disturbance within ½ mile from centerline of tier 2 Roads/Primitive Roads, and 300' from centerline of tier 3 primitive roads/trails. If avoidance of Tier 2 and 3 roads, primitive roads and trails is not practicable, relocate access to the same or higher standard and maintain the setting characteristics and access to recreation activities, facilities, destinations.
- Manage other significant linear features such as Mojave Road, Bradshaw Trail, or other recognized linear features to protect their important recreation activities, experiences and benefits. Prohibit large-scale disturbance within ½ mile (from centerline) of such linear features.
    - If residual impacts to Tier 1 and Tier 2 roads/primitive roads, Back Country Byways, or significant linear features occur from adjacent DFAs or other large-scale disturbance, commensurate compensation in the form of enhanced recreation operations, access, recreation facilities or opportunities will be required.
- Manage OHV as per the appropriate Transportation and Travel Management Plan/RMP and/or the SRMA Objectives as outlined in Appendix L as Open, Limited or Closed.
- Manage Back Country Byways as a component of BLM Recreation and Travel and Transportation Management program.

The CTTM CMAs for DFAs and DRECP Variance Lands, Future Assessment Areas (FAAs), and Special Analysis Areas (SAAs) would minimize impacts through specific actions, such as:

- Avoid Tier 1, Tier 2, Tier 3 roads/primitive roads/trails, Backcountry Byways, and other significant linear features. If avoidance is not practicable, relocate access to the same or higher standard and maintain the recreation setting characteristics and access to recreation activities, facilities, and destination.
- If residual impacts to Tier 1 and Tier 2 roads/primitive roads/trails, Backcountry Byways, or other significant linear features cannot be protected and maintained, commensurate compensation in the form of an enhanced recreation operations, recreation facilities or opportunities will be required.

The CTTM CMAs for National Conservation Lands, ACECs, and wildlife allocations include:

- Refer to the individual National Conservation Lands/ACEC Special Unit Management Plans in Appendix L for specific objectives, management actions and allowable uses. Manage roads/trails consistent with National Conservation Lands/ACEC goals and objectives and as designated in TTMP (Trails and Travel Management Plans) or RMPs (Resource Management Plans).

The CTTM CMAs for SRMAs include:

- Refer to the individual SRMA documents for SRMA/Recreation Management Zone specific objectives, management actions, and allowable uses. Protect SRMAs for their unique/special recreation values. Manage roads/primitive roads/trails consistent with SRMA objectives and as designated in Transportation and Travel Management Plan/RMPs.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures would be applied to further reduce some of the DRECP's adverse impacts.

Mitigation Measures for Impact TR-1: Plan Components Would Modify Local Circulation Patterns or Degrade the Performance of the Local Road Network.

TR-1a **Implement a transportation plan.** Prepare a transportation plan for implementation during all phases of the project. Address methods for reducing construction worker traffic volumes and project-related equipment and materials transport. Implement the following strategies: (1) provide a construction worker rideshare program; (2) schedule shift changes and deliveries to avoid conflict with peak-hour traffic patterns; (3) establish traffic controls for transport of facility hazardous and non-hazardous materials, components, main assembly cranes, and other large pieces of equipment; and (4) evaluate alternative transportation approaches depending on specific object sizes, weights, origin, destination, peak-hour traffic, and unique handling requirements.

TR-1b **Coordinate road improvements with local authorities.** Consult with local planning authorities regarding increased traffic during the construction phase. Conduct project-specific assessment of the vehicle numbers per day, their size, and type to determine design for implementing local road improvements and multiple-site access locations.

TR-1c **Implement traffic control measures.** Prepare and implement traffic control measures, such as intersection realignment coupled with speed limit reduction; the installation of traffic lights and/or other signage; and the addition of acceleration, deceleration, and turn lanes on routes with site entrances.

TR-1d **Ensure proper signage and travel management.** Ensure signs are placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local commuters, consideration should be given to limiting construction vehicles traveling on public roadways during the morning and late afternoon commute times.

Mitigation Measures for Impact TR-2: Plan Components Would Alter the Availability or Accessibility of BLM Routes of Travel.

TR-2a **Adhere to road construction standards.** For road construction and maintenance on BLM lands, follow established policy and guidelines within BLM *Manual 9113 – Roads*. For road construction and maintenance on other lands, consult with and follow state, local, and/or other appropriate transportation agency policies and guidelines.

TR-2b **Provide access through large sites.** Provide easements for public roadway corridors through a site to maintain proper traffic flows and facilitate direct routing for the local population. Ensure that vehicular traffic is confined to existing routes of travel to and from the project site, and prohibit cross country vehicle and equipment use outside of approved designated work areas. If new access roads are necessary, they should be designed and constructed to the appropriate standard no higher than necessary to accommodate their intended functions (e.g., traffic volume, and weight of vehicles).

TR-2c **Restore unneeded roads.** Abandon, recontour, and restore roads that are no longer needed for the project or for other uses in a manner consistent with BLM, USFWS, and/or CDFW recommendations.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

No mitigation measures are recommended for Impact TR-3.

Mitigation Measures for Impact TR-4: Plan Components Would Increase Hazards and the Risk for a Traffic Incident or Inhibit Emergency Response.

TR-4a **Provide on-site laydown and staging.** Ensure the proposed facility site contains adequate area for construction laydown and staging, parking for construction and operation worker vehicles, and site traffic circulation aisles.

TR-4b **Control site access.** Restrict traffic to the roads specified for the project. Use of other unimproved roads should be restricted to emergency situations involving potential injury or loss of life.

TR-4c **Repair project-related damage.** Repair or reconstruct to pre-project conditions project-related access roads that are damaged by project construction.

IV.19.3.2.1.2 Impacts of the Reserve Design

The potential for adverse impacts within the Plan Area would occur primarily where the existing protected areas (159 miles), BLM conservation areas (715 miles), and Conservation Planning Areas (126 miles) intersect with transportation and public access facilities.

IV.19.3.2.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Preferred Alternative

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.19.3.2.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

Adverse impacts within the Plan Area would occur primarily where available development areas intersect with BLM routes of travel, which would be 70 miles for solar energy development, 6 miles for wind energy development, 9 miles for geothermal energy development, and 24 miles for renewable energy transmission development under the Preferred Alternative. The majority of these impacts would be within the CDCA. Adverse impacts would also extend beyond the DFAs, however, because of increases in construction traffic on BLM lands.

Under the Preferred Alternative, BLM's management of transportation and public access under the laws, regulations, and policies listed in Volume II, Section II.3.2 would reduce the impacts of renewable energy construction.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending upon underlying factors

particular to each technology. The area of long-term disturbance for each technology is summarized in Volume II, Table II.3-12. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

IV.19.3.2.2.2 Impacts of Changes to BLM Land Designations

Impacts within the Plan Area would occur primarily where BLM conservation land designations intersect with BLM routes of travel, which would be 5,745 miles for National Landscape Conservation System (NLCS) lands, 2,984 miles for ACECs, 19 miles for wildlife allocations, 1,073 miles for SRMAs, 240 miles for lands with wilderness characteristics, and 1,420 miles for trail management corridors under the Preferred Alternative. The majority of these impacts would be within the CDCA.

Under the Preferred Alternative, potential adverse impacts would be to transportation and access under BLM conservation land designations. Designations would result in additional limitations on access and some route closures and are likely to affect the overall transportation network. In DFAs, impacts would be generally temporary and route-specific and would include both compensation, where appropriate, as well as route by-passes on a project-specific basis. In conservation areas, route closures would likely result in additional limitations to access and some route closures or changes; these would be made to meet identified goals and objectives in specific conservation areas, including seasonal closures and route reductions to support habitats and species. These closures may affect the larger transportation network in some areas.

They may also affect motorized access to historically available destinations and areas, as well as new access and associated facilities that support individual, commercial and motor-dependent recreational needs. Additional limitations to access in conservation areas would result in more traffic and greater resource pressure on areas outside of conservation areas. Demand for motorized access, particularly in backcountry areas, may also put additional pressure on the remaining backcountry areas both within and outside the Plan Area. Proposed SRMAs would somewhat offset this impact and provide beneficial improvements to transportation and access for locations, depending upon allowable uses within the SRMAs. The actual level of these changes is difficult to anticipate at this time. Adverse impacts to nonmotorized users would be negligible, but specific motor-dependent activities with nonmotorized components may be adversely affected (see Section IV.18.2.3.2).

IV.19.3.2.3 Impacts of Natural Community Conservation Plan: Preferred Alternative

The analysis of Covered Activities under the NCCP is equivalent to the Plan-wide analysis of the interagency alternatives. Reserve design features and other conservation actions under

the NCCP alternatives represent more detailed categories of the reserve design under the interagency Plan-wide alternatives. These NCCP differences in reserve design features do not affect nonbiological resources analyzed in this document, and the analysis of reserve design and CMAs under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.19.3.2.1.

IV.19.3.2.4 Impacts of General Conservation Plan: Preferred Alternative

The impacts of the GCP for the Preferred Alternative would be similar to those defined in Section IV.19.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The area of long-term disturbance for each technology is summarized in Volume II, Table II.3-12. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

The potential for adverse impacts for the GCP within the Plan Area would occur primarily where DFAs intersect with transportation and public access, which would be 32 miles for solar energy development, 2 miles for wind energy development, 6 miles for geothermal energy development, and 13 miles for renewable energy transmission development under the Preferred Alternative. Adverse impacts would also extend beyond the DFAs, however, due to increases in construction traffic.

The potential for adverse impacts for the GCP in the Preferred Alternative would occur primarily where existing conservation areas (4 miles) and Conservation Planning Areas (123 miles) intersect with transportation and public access facilities. Approximately 5% of transportation and public access facilities in the Plan Area would intersect with GCP conservation lands.

IV.19.3.2.5 Impacts Outside the Plan Area

IV.19.3.2.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.5, Impacts of Transmission Outside the Plan Area in No Action Alternative.

IV.19.3.2.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

The potential for adverse impacts outside the Plan Area would occur where National Conservation Lands and ACECs intersect with transportation and public access facilities. Impacts to traffic and transportation would be limited.

IV.19.3.2.6 CEQA Significance Determination for the Preferred Alternative

TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network. Renewable energy facility development under the Preferred Alternative would generate traffic that could cause short-term transportation disruptions. The movement of commuting construction workers and equipment and materials deliveries to each site would cause a small decrease in the level of service of roadways and highways during construction. Existing regulations that require permits for travel and encroachment on road networks would reduce this impact. Mitigation Measures TR-1a, TR-1b, TR-1c, and TR-1d would reduce the impact to a less than significant level by implementing transportation planning strategies and traffic control measures that would manage vehicle trips and provide necessary improvements to the road network.

TR-2: Plan components would alter the availability or accessibility of BLM routes of travel. Closure of large development sites and establishment of additional conservation lands under the Preferred Alternative would disrupt access to lands along local roads or restrict public access to lands near the sites. This impact would decrease the availability of BLM travel routes. This impact would be somewhat offset by establishing new corridors and access roads for transmission lines, which would provide beneficial improvements to transportation and access. Existing regulations and CMAs that ensure implementation of CTTM CMAs for BLM land would reduce the impact of site closures. Mitigation Measures TR-2a, TR-2b, and TR-2c would reduce the impact to a less than significant level by preserving access and ensuring proper construction or restoration of travel routes.

TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP). Renewable energy facility development would generate traffic to and from project sites. However, traffic levels would not be substantial when compared to the road network's capacity, and project-related traffic would occur generally outside the urban environments that are the primary focus of congestion management programs. Existing regulations would ensure that this impact remains less than significant, so no mitigation is required.

TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response. Traffic related to renewable energy development could inhibit emergency response and adversely affect emergency service response times. Addi-

tionally, construction activity could inadvertently cause damage to roadway surfaces or deterioration of the existing pavement. Mitigation Measures TR-4a, TR-4b, and TR-4c would reduce the impact to a less than significant level by ensuring on-site laydown and staging, providing controlled access to sites, and repairing wear and tear.

IV.19.3.2.7 Comparison of the Preferred Alternative with No Action Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of the Preferred Alternative with the No Action Alternative.

IV.19.3.2.7.1 Preferred Alternative Compared with No Action Alternative for the Plan-wide DRECP

Total potential adverse impacts on transportation and public access from renewable energy development would be 37 miles for solar energy development, 7 miles for geothermal energy development, and 20 miles for renewable energy transmission development, which would be fewer than under the No Action Alternative. Total potential impacts on transportation and public access in DFAs would be 2 miles for wind energy-related development, which would be roughly the same as for the No Action Alternative.

Potential impacts from proposed DFAs under the Preferred Alternative would be reduced overall when compared with the No Action Alternative for solar energy development, geothermal energy development, and renewable energy-related transmission development; impacts would be the same for wind energy development.

Total potential adverse impacts on transportation and public access from proposed conservation within the Plan Area would be more extensive under the Preferred Alternative than under the No Action Alternative. With 715 miles in BLM conservation areas and 126 miles in Conservation Planning Areas, transportation and public access facilities in the Plan Area would intersect with Reserve Design Lands. This would likely result in greater levels of restrictions and limitations on transportation and public access than under the No Action Alternative.

IV.19.3.2.7.2 Preferred Alternative Compared with No Action Alternative for the BLM Land Use Plan Amendment

Total potential adverse impacts on BLM routes of travel from renewable energy development would be greater under the No Action Alternative for solar energy development (98 miles) and renewable energy transmission development (20 miles), but greater under the Preferred Alternative for wind (6 miles) and geothermal (7 miles) energy development. Potential impacts from proposed DFAs under the Preferred Alternative would be greater overall

when compared with the No Action Alternative for wind energy development and geothermal energy development, but lesser overall for solar energy and transmission development. Transmission development may also have beneficial effects to offset the impacts of development on BLM routes.

Total potential adverse impacts on BLM travel routes from proposed BLM conservation land designations within the Plan Area would be greater under the Preferred Alternative than under the No Action Alternative, which has no proposed designations.

IV.19.3.2.7.3 Preferred Alternative Compared with No Action Alternative for the NCCP

The impacts of the NCCP for the Preferred Alternative are the same as those defined in Section IV.19.3.2.1 for the Plan-wide analysis. As a result, the comparison of the Preferred Alternative with the No Action Alternative for the NCCP is the same as described for Plan-wide DRECP.

IV.19.3.2.7.4 Preferred Alternative Compared with No Action Alternative for the GCP

Total potential adverse impacts on BLM routes of travel from proposed DFAs and conservation for the GCP would be greater under the Preferred Alternative than under the No Action Alternative, which has no proposed GCP. The No Action Alternative assumes that renewable energy and transmission development and mitigation for such projects in the Plan Area would occur on a project-by-project basis in a pattern consistent with past and ongoing renewable energy and transmission projects.

IV.19.3.3 Alternative 1

IV.19.3.3.1 Plan-wide Impacts of Implementing the DRECP: Alternative 1

IV.19.3.3.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

The impacts would occur mostly during construction of renewable energy facilities, but would also likely to occur during development and decommissioning. The proximity of a renewable energy facility to major roads will to some extent determine the traffic congestion problems anticipated from commuting construction workers. The movement of other equipment and materials to the site during construction would cause a small decrease in

the level of service of local roadways. The impact to local primary and secondary road networks from shipments of materials would likely be minimal. Transportation activities during renewable energy production would involve commuting workers, material shipments to and from the facility, and on-site work and travel. Impacts to local transportation networks from transportation activities during operation and maintenance would be minimal. With some exceptions, transportation activities during site decommissioning and reclamation would be similar to those during site development and construction.

Linear transportation features within the DFAs under Alternative 1 include 52 miles for solar energy development, less than 1 mile for wind energy development, 6 miles for geothermal energy development, and 22 miles for transmission development. Adverse impacts would extend beyond the DFAs, however, due to increases in construction traffic.

Roads most likely to see a traffic under Alternative 1 include I-8, I-10, I-40, and SRs 58, 14, 138, 18, 111, 86, 115, and 98.

Traffic generated by solar and geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea. The West Mojave and Eastern Slopes ecoregion subarea would see the most impacts on transportation and public access.

The linear miles of transportation and public access facilities within available areas of solar, wind, and geothermal energy and transmission development for all ecoregion subareas under Alternative 1 are shown in Table R2.19-11 in Appendix R2.19.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Development of renewable energy projects and implementation of conservation strategies would disrupt accessibility to lands along local roads or restrict public access to lands surrounding renewable energy project sites. Closure of large sites for development or conservation would decrease the availability of BLM travel routes and limit travel to or from off-site locations. Transmission development would somewhat offset the impact of closures by establishing new corridors and access roads for transmission lines through the Plan Area. This impact depends on the location of each project, the conservation lands, and transmission; however, typical mitigation is available to support the use and maintenance of existing BLM roads and provide alternate replacement routes that ensure continued access to previously accessible public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Renewable energy facility development would generate traffic to and from project sites, but the traffic levels would not be substantial when compared to the road network's capacity. As described for the Preferred Alternative in Section IV.19.3.2.1.1, development under the Preferred Alternative would not substantially affect any principal roads or highway segments included in a Congestion Management Plan.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Development of renewable energy projects and transmission would increase traffic that could temporarily inhibit emergency response during construction or adversely affect emergency service response times. New road hazards could also be introduced through creating new site entries and exits, or by inadvertently damaging roadway surfaces. Road improvements to ensure site access or repairs for roadway damage would be supervised by local jurisdictions to ensure traffic safety. Implementing traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid the adverse effects of this impact.

Impacts in Study Area Lands

Future Assessment Areas. The FAAs represent areas where renewable energy development or inclusion to the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed. FAAs do not apply to Alternative 1.

Special Analysis Areas. Designating the SAAs as conservation would have no impact to this resource. Impacts would be the same as those explained for the Plan-wide reserve design.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands screened for the DRECP and based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on Variance Lands would not require a BLM Land Use Plan Amendment so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the DRECP Variance Lands would impact transportation and public access as it would within DFAs.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development and conservation elements covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 1 (presented in Volume II, Section II.4.1.2) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definition of the reserve design and specific CMAs for the Preferred Alternative (see Section IV.19.3.2.1.1). While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would be applied also to nonfederal lands.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures would be applied to further reduce some of the DRECP's adverse impacts. The complete list of mitigation measures appears in the analysis for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.3.1.2 Impacts from Reserve Design

The potential for adverse impacts within the Plan Area would occur primarily where existing protected areas (159 miles), BLM conservation areas (630 miles), and Conservation Planning Areas (169 miles) intersect with transportation and public access facilities.

IV.19.3.3.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 1

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.19.3.3.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

The potential for adverse impacts within the Plan Area would occur primarily where available development areas intersect with BLM routes of travel, which would be 39 miles for solar energy development, less than 1 mile for wind energy development, 2 miles for geothermal energy development, and 24 miles for renewable energy transmission development under Alternative 1. The majority of these impacts would be within the CDCA. Adverse impacts would also extend beyond the DFAs, however, because of increased construction traffic on BLM lands.

Under Alternative 1, BLM's management of transportation and public access under the laws, regulations and policies listed in Volume II, Section II.3.2 would reduce the impacts of renewable energy construction.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different renewable energy technologies varies depending on underlying factors particular to each technology. The total area of long-term disturbance for each technology under Alternative 1 is summarized in Volume II, Table II.4-7. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

IV.19.3.3.2.2 Impacts of Changes to BLM Land Designations

The potential for impacts within the Plan Area would occur primarily where BLM conservation land designations intersect with BLM routes of travel, which would be 1,765 miles for NLCS lands, 5,843 miles for ACECs, 813 miles for wildlife allocations, 1,350 miles for SRMAs, and 125 miles for trail management corridors under Alternative 1. There would be no proposed lands with wilderness characteristics under Alternative 1. The majority of these impacts would occur within the CDCA.

Under Alternative 1, potential adverse impacts would occur to transportation and access under these BLM land designations. Proposed ACEC and NLCS designations could cause adverse impacts on transportation by establishing disturbance caps to conserve and protect resource values and by requiring conservation area-specific seasonal or year-round closures. Development in NLCS lands would be limited to 1% of total authorized disturbance, or to the level allowed by collocated ACEC/wildlife allocations, whichever is more

restrictive. Proposed SRMAs would somewhat offset this impact and provide beneficial improvements to transportation and access for locations, depending on the allowable uses within the SRMAs. The CTTM CMAs for BLM land would minimize impacts through specific actions, as outlined for the Preferred Alternative (see Section IV.19.3.2.1.1).

IV.19.3.3.3 Impacts of Natural Community Conservation Plan: Alternative 1

The impacts of the NCCP for Alternative 1 would be the same as those defined in Section IV.19.3.3.1 for the Plan-wide analysis.

IV.19.3.3.4 Impacts of General Conservation Plan: Alternative 1

The impacts of the GCP for Alternative 1 would be similar to those defined in Section IV.19.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The area of long-term disturbance for each technology is summarized in Volume II, Table II.3-12. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

The potential for adverse impacts for the GCP within the Plan Area would occur primarily where DFAs intersect with transportation and public access, which would be 47 miles for solar energy development, less than 1 mile for wind energy development, 6 miles for geothermal energy development, and 15 miles for renewable energy transmission development under Alternative 1. Adverse impacts would also extend beyond the DFAs, however, because of increases in construction traffic.

The potential for adverse impacts for the GCP under Alternative 1 would occur primarily where existing conservation areas (4 miles) and Conservation Planning Areas (165 miles) intersect with transportation and public access facilities.

IV.19.3.3.5 Impacts Outside the Plan Area

IV.19.3.3.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.5, Impacts of Transmission Outside the Plan Area in No Action Alternative.

IV.19.3.3.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

There would be no renewable energy impacts to transportation on BLM lands outside the Plan Area. The potential for adverse impacts outside the Plan Area would occur where National Conservation Lands and ACECs intersect with transportation and public access facilities. Impacts to traffic and transportation would be limited.

IV.19.3.3.6 CEQA Significance Determination for Alternative 1

TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network. Renewable energy facility development would increase traffic that could cause short-term transportation disruptions. The movement of commuting construction workers and equipment and materials deliveries to each site would cause a small decrease in the level of service of roadways and highways during construction. Existing regulations requiring permits for travel and encroachment on the road network would reduce this impact. Mitigation Measures TR-1a, TR-1b, TR-1c, and TR-1d identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by implementing transportation planning strategies and traffic control measures that would manage vehicle trips and provide necessary improvements to the road network.

TR-2: Plan components would alter the availability or accessibility of BLM routes of travel. Closure of large development sites and establishment of additional conservation lands would disrupt access to lands along local roads or restrict public access to lands near the sites. This impact would decrease the availability of BLM travel routes. This impact would be somewhat offset by establishing new corridors and access roads for transmission lines, which would provide improvements to transportation and access. Existing regulations and CMAs to ensure implementation of CTTM for BLM land would reduce the impact of site closures. Mitigation Measures TR-2a, TR-2b, and TR-2c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by preserving access and ensuring proper construction or restoration of travel routes.

TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP). Renewable energy facility development would generate traffic to and from project sites. However, traffic levels would not be substantial when compared to the road network's capacity, and project-related traffic would generally be outside the urban environments that are the primary focus of congestion management programs. Existing regulations would ensure that this impact remains less than significant, so no mitigation is required.

TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response. Traffic related to renewable energy development could inhibit emergency response and adversely affect emergency service response times. Additionally, construction activity could inadvertently cause damage to roadway surfaces or deterioration of existing pavement. Mitigation Measures TR-4a, TR-4b, and TR-4c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by ensuring on-site laydown and staging, providing controlled access to sites, and repairing wear and tear.

IV.19.3.3.7 Comparison of Alternative 1 with Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 1 with the Preferred Alternative.

IV.19.3.3.7.1 Alternative 1 Compared with Preferred Alternative for the Plan-wide DRECP

Total potential adverse impacts on transportation and public access from renewable energy development under Alternative 1 would be 52 miles for solar energy development and 22 miles for renewable energy transmission development, which would be greater than under the Preferred Alternative. Total potential adverse impacts on transportation and public access would be less than 1 mile for wind energy development and 6 miles for geothermal energy development, which would be less than under the Preferred Alternative.

Total potential adverse impacts on transportation and public access from proposed BLM conservation areas (630 miles) and Conservation Planning Areas (169 miles) would be less extensive under Alternative 1 than under the Preferred Alternative.

IV.19.3.3.7.2 Alternative 1 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

Total potential adverse impacts on BLM routes of travel from renewable energy development would be less under Alternative 1 than under the Preferred Alternative for wind energy development and geothermal energy development, but greater under Alternative 1 for solar energy development and renewable energy transmission development. Transmission development may also have beneficial effects that offset the impacts of development on BLM routes.

Total potential adverse impacts on BLM routes of travel from proposed BLM conservation land designations within the Plan Area would be greater under Alternative 1 than under the Preferred Alternative for NLCS lands (1,747 miles) and trail management corridors (125 miles), but less under Alternative 1 than under the Preferred Alternative for ACECs

(5,843 miles), wildlife allocations (813 miles), and SRMAs (1,350 miles). There would be no proposed lands with wilderness characteristics under Alternative 1.

IV.19.3.3.7.3 Alternative 1 Compared With Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 1 are the same as those defined in Section IV.19.3.3.1 for the Plan-wide analysis. As a result, the comparison of Alternative 1 with the No Action Alternative for the NCCP is the same as described for Plan-wide DRECP.

IV.19.3.3.7.4 Alternative 1 Compared with Preferred Alternative for the General Conservation Plan

Total potential adverse impacts on BLM travel routes from proposed DFAs and conservation for the GCP would be greater under Alternative 1 than under the Preferred Alternative for solar energy development (48 miles) and renewable energy transmission development (15 miles), roughly the same for geothermal energy development (6 miles), and less for wind energy development (less than 1 mile).

Total potential adverse impacts for the GCP on transportation and public access from proposed Conservation Planning Areas (169 miles) would be greater under Alternative 1 than under the Preferred Alternative.

IV.19.3.4 Alternative 2

IV.19.3.4.1 Plan-wide Impacts of Implementing the DRECP: Alternative 2

IV.19.3.4.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

These impacts would occur mostly during project construction, but would also likely occur during development and decommissioning. The proximity of a renewable energy facility to major roads will determine to some extent the traffic congestion problems anticipated from commuting construction workers. The movement of equipment and materials to sites during construction would cause a small decrease in the level of service of local roadways. The impact to local primary and secondary road networks from shipments of materials would likely be minimal. Transportation activities during renewable energy production

would involve commuting workers, material shipments to and from the facility, and on-site work and travel. The impact on the local transportation network from the level of transportation activity during renewable energy production and operation would be minimal. With some exceptions, transportation activities during site decommissioning and reclamation would be similar to those during site development and construction.

Linear transportation features within the DFAs under Alternative 2 include 28 miles for solar energy development, 3 miles for wind energy development, 7 miles for geothermal energy development, and 23 miles for transmission development. Adverse impacts would extend beyond the DFAs, however, due to increases in construction traffic.

Roads most likely to see an increase in traffic related to renewable energy development under Alternative 2 include I-8, I-10, I-40, U.S. 395, and SRs 202, 58, 14, 138, 18, 247, 136, 111, 86, 115, and 98.

Traffic generated by solar energy and geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea. The West Mojave and Eastern Slopes ecoregion subarea would see the highest impacts on transportation and public access.

The linear miles of transportation and public access facilities within available areas of solar, wind, and geothermal energy and transmission development for all ecoregion subareas under Alternative 2 are shown in Table R2.19-17 in Appendix R2.19.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Development of renewable energy projects and implementing conservation strategies would disrupt accessibility to lands along local roads or restrict public access to lands surrounding renewable energy project sites. Closure of large sites for development or conservation would decrease availability of BLM travel routes and impede travel to or from off-site locations. Transmission development would somewhat offset the impact of closures by establishing new corridors and access roads for transmission lines through the Plan Area. This impact depends on the location of each project, the conservation lands, and transmission; however, typical mitigation would support the use and maintenance of existing BLM roads and provide alternate replacement routes that ensure continued access to previously accessible public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Renewable energy facility development would generate traffic to and from project sites, but the traffic levels would not be substantial when compared to the road network's capacity. As described for the Preferred Alternative, in Section IV.19.3.2.1.1, development under the Preferred Alternative would not substantially affect any principal roads or highway segments included in a Congestion Management Plan.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Development of renewable energy projects and transmission would create traffic that could temporarily inhibit emergency response during construction or adversely affect emergency service response times. New road hazards could also be introduced by creating new site entries and exits or by inadvertently causing damage to roadway surfaces. Road improvements or repairs to roadways would be supervised by local jurisdictions to ensure traffic safety. Implementing traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid the adverse effects of this impact.

Impacts in Study Area Lands

Future Assessment Areas. Lands within FAAs are neither reserve lands nor DFAs; they are simply areas that are deferred for future assessment. The future assessment will determine their suitability for renewable energy development or for ecological conservation. If renewable energy development occurs on FAA lands, a Land Use Plan Amendment would not be required. FAAs for each alternative are shown in Table IV.1-2 and Figure II.5-1 for Alternative 2 in Volume II. The FAAs represent areas where renewable energy development or inclusion to the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed.

Because most of the FAAs are presented as "undesignated areas" in the action alternatives, there would be no difference between the FAAs in the Preferred Alternative except that renewable development in an FAA would not require a BLM Land Use Plan Amendment so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the FAAs would impact transportation and public access as it would within DFAs.

Special Analysis Areas. Designating the SAAs as development would result in impacts similar to those identified for the DFAs for the Plan-wide Impacts.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands screened for the DRECP and based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on Variance Lands would not require a BLM Land Use Plan Amendment so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the DRECP Variance Lands would impact transportation and public access as it would within DFAs.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development and conservation elements covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 2 (presented in Volume II, Section II.5.1.2) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definition of the reserve design and specific CMAs for the Preferred Alternative (see Section IV.19.3.2.1.1). While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would be applied also to nonfederal lands.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.19.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures would be applied to further reduce some of the DRECP's adverse impacts. The complete list of mitigation measures appears in the analysis for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.4.1.2 Impacts from Reserve Design

The potential for adverse impacts within the Plan Area would occur primarily where existing protected areas (159 miles), BLM conservation areas (762 miles), and Conservation Planning Areas (152 miles) intersect with transportation and public access facilities. Approximately 45% of transportation and public access facilities in the Plan Area would intersect with the Reserve Design Lands in Alternative 2.

IV.19.3.4.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 2

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.19.3.4.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

The potential for adverse impacts within the Plan Area would occur primarily where available development areas intersect with BLM routes of travel, which would be 80 miles for solar energy development, 15 miles for wind energy development, 9 miles for geothermal energy development, and 28 miles for transmission development under Alternative 2. The majority of these impacts would be within the CDCA. Adverse impacts would also extend beyond the available development areas, however, because of increases in construction traffic on BLM lands.

Under Alternative 2, BLM's management of transportation and public access under the laws, regulations and policies listed in Volume II, Section II.3.2 would reduce the impacts of renewable energy construction.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The total area of long-term disturbance for each technology under Alternative 2 is summarized in Volume II, Table II.5-7. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2. CMAs are listed in Volume II, Section II.3.2.

IV.19.3.4.2.2 Impacts of Changes to BLM Land Designations

The potential for impacts within the Plan Area would occur primarily where the BLM conservation land designations intersect with BLM routes of travel, which would be 9,409 miles for NLCS lands, 581 miles for ACECs, less than 1 mile for wildlife allocations, 758 miles for SRMAs, 236 miles for lands with wilderness characteristics, and 2,903 miles for

trail management corridors under Alternative 2. The majority of these impacts would be within the CDCA.

Under Alternative 2, potential adverse impacts would occur to transportation and access under these BLM land designations. Proposed ACEC and NLCS designations could cause adverse impacts by establishing disturbance caps to conserve and protect resource values and by requiring seasonal or year-round route closures in specific conservation areas. Development in NLCS lands would be limited to 0.25% of total authorized disturbance, or to the level allowed by collocated ACEC/wildlife allocations, whichever is more restrictive. Proposed SRMAs would somewhat offset this impact and provide beneficial improvements to transportation and access for locations, depending on allowable uses within the SRMAs. The CTTM CMAs for BLM land would minimize impacts through specific actions, as outlined for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.4.3 Impacts of Natural Community Conservation Plan: Alternative 2

The impacts of the NCCP for Alternative 2 would be the same as those defined in Section IV.19.3.4.1 for the Plan-wide analysis.

IV.19.3.4.4 Impacts of General Conservation Plan: Alternative 2

The impacts of the GCP for Alternative 2 would be similar to those defined in Section IV.19.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The area of long-term disturbance for each technology is summarized in Volume II, Table II.3-12. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

The potential for adverse impacts for the GCP within the Plan Area would occur primarily where DFAs intersect with transportation and public access, which would be 24 miles for solar energy development, 2 miles for wind energy development, 6 miles for geothermal energy development, and 15 miles for transmission development under Alternative 2. Adverse impacts would also extend beyond the DFAs because of increases in construction traffic.

The potential for adverse impacts for the GCP under Alternative 2 would occur primarily where the existing conservation areas (4 miles) and Conservation Planning Areas (149 miles) intersect with transportation and public access facilities.

IV.19.3.4.5 Impacts Outside the Plan Area

IV.19.3.4.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.5, Impacts of Transmission Outside the Plan Area in No Action Alternative.

IV.19.3.4.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

The potential for adverse impacts outside the Plan Area would occur where National Conservation Lands and ACECs intersect with transportation and public access facilities Impacts to traffic and transportation would be limited.

IV.19.3.4.6 CEQA Significance Determination for Alternative 2

TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network. Renewable energy facility development would generate traffic that could cause short-term transportation disruptions. The movement of commuting construction workers and equipment and materials deliveries to each site would cause a small decrease in the level of service of roadways and highways during construction. Existing regulations that require permits for travel and encroachment on the road network would reduce this impact. Mitigation Measures TR-1a, TR-1b, TR-1c, and TR-1d identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by implementing transportation planning strategies and traffic control measures that would manage vehicle trips and provide necessary improvements to the road network.

TR-2: Plan components would alter the availability or accessibility of BLM routes of travel. Closure of large development sites and establishment of additional conservation lands would disrupt access to lands along local roads or restrict public access to lands near project sites. This impact would decrease availability of BLM travel routes. This impact would be somewhat offset by establishing new corridors and access roads for transmission lines, which would provide improvements to transportation and access. Existing regulations and CMAs that ensure implementation of CTTM for BLM land would reduce the impact of site closures. Mitigation Measures TR-2a, TR-2b, and TR-2c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by preserving access and ensuring proper construction or restoration of travel routes.

TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP). Renewable energy facility development would generate traffic to and from project sites. However, traffic

levels would not be substantial when compared to the road network's capacity, and project-related traffic would generally be outside the urban environments that are the primary focus of congestion management programs. Existing regulations would ensure that this impact remains less than significant, so no mitigation is required.

TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response. Traffic from renewable energy development could inhibit emergency response and adversely affect emergency service response times. Additionally, construction activity could inadvertently cause damage to roadway surfaces or deterioration of the existing pavement. Mitigation Measures TR-4a, TR-4b, and TR-4c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by ensuring on-site laydown and staging, providing controlled access to sites, and repairing wear and tear.

IV.19.3.4.7 Comparison of Alternative 2 With Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 2 with the Preferred Alternative.

IV.19.3.4.7.1 Alternative 2 Compared With Preferred Alternative for the Plan-wide DRECP

Total potential adverse impacts on transportation and public access from renewable energy development under Alternative 2 would be 28 miles for solar energy development, which would be less than under the Preferred Alternative. Total potential adverse impacts on transportation and public access would be 3 miles for wind energy development and 7 miles for geothermal energy development, which would be greater under Alternative 2 than under the Preferred Alternative. Impacts from geothermal energy development would be the same for Alternative 2 and the Preferred Alternative.

Total potential adverse impacts on transportation and public access from proposed BLM conservation areas (762 miles) and Conservation Planning Areas (152 miles) would be more extensive under Alternative 2 than under the Preferred Alternative.

IV.19.3.4.7.2 Alternative 2 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

Total potential adverse impacts on BLM travel routes would be greater under Alternative 2 than under the Preferred Alternative for solar energy development (80 miles), wind energy development (15 miles), and transmission development (28 miles), but would be the same as under the Preferred Alternative for geothermal energy development (9 miles). Trans-

mission development may also have beneficial effects that offset the impacts of development on BLM routes.

Total potential adverse impacts on BLM routes of travel from proposed BLM conservation land designations within the Plan Area would be greater under Alternative 2 than under the Preferred Alternative for NLCS lands (9,409 miles) and trail management corridors (2,903 miles), but less under Alternative 2 than under the Preferred Alternative for ACECs (581 miles), wildlife allocations (less than 1 mile), and SRMAs (758 miles). Lands with wilderness characteristics would be the same for both Alternative 2 and the Preferred Alternative.

IV.19.3.4.7.3 Alternative 2 Compared With Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 2 are the same as those defined in Section IV.19.3.4.1 for the Plan-wide analysis. As a result, the comparison of Alternative 2 with the Preferred Alternative for the NCCP is the same as described for Plan-wide DRECP.

IV.19.3.4.7.4 Alternative 2 Compared With Preferred Alternative for the General Conservation Plan

Total potential adverse impacts on BLM routes of travel from proposed DFAs and conservation for the GCP would be less under the Alternative 2 than under the Preferred Alternative for solar energy development (24 miles), greater for transmission development (15 miles) and roughly the same for wind energy development (2 miles), and geothermal energy development (6 miles).

Total potential adverse impacts on transportation and public access for the GCP from proposed Conservation Planning Areas (149 miles) would be greater under Alternative 2 than under the Preferred Alternative.

IV.19.3.5 Alternative 3

IV.19.3.5.1 Plan-wide Impacts of Implementing the DRECP: Alternative 3

IV.19.3.5.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

The impacts would occur mostly during project construction, but would also likely occur during development and decommissioning. The proximity of a renewable energy facility to major roads will determine to some extent traffic congestion problems anticipated from commuting construction workers. The movement of other equipment and materials to the site during construction would cause a small decrease in the level of service of local roadways. The impact to local primary and secondary road networks from shipments of materials would likely be minimal. Transportation activities during renewable energy production would include commuting workers, material shipments to and from the facility, and on-site work and travel. The impact on local transportation networks would be minimal. With some exceptions, transportation activities during site decommissioning and reclamation would be similar to those during site development and construction.

Linear transportation features within DFAs under Alternative 3 include 42 miles for solar energy development, 1 mile for wind energy development, 6 miles for geothermal energy development, and 20 miles for transmission development. Adverse impacts would extend beyond the DFAs, however, due to the increases in construction traffic.

Roads most likely to see an increase in traffic under Alternative 3 include I-8, I-10, I-40, and SRs 58, 14, 138, 18, 247, 111, 86, 115, and 98.

Traffic generated by solar energy and geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea. The West Mojave and Eastern Slopes ecoregion subarea would see the highest impacts to transportation and public access from transmission projects.

The linear miles of transportation and public access facilities within available areas of solar, wind, and geothermal energy and transmission development for all ecoregion subareas under Alternative 3 are shown in Table R2.19-23 in Appendix R2.19.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Development of renewable energy projects and implementing conservation strategies would disrupt accessibility along local roads or restrict public access to lands surrounding project sites. Closure of large sites for development or conservation would decrease the availability of BLM travel routes and inhibit travel to or from off-site locations. Transmission development would somewhat offset the impact of closures by establishing new corridors and access roads through the Plan Area. This impact depends on the location of each project, the conservation lands, and transmission; however, typical mitigation is available to support the use and maintenance of existing BLM roads and provide alternate replacement routes that ensure continued access to previously accessible public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Renewable energy facility development would generate traffic to and from project sites, but the traffic levels would not be substantial when compared to the road network's capacity. As described for the Preferred Alternative, in Section IV.19.3.2.1.1, development under the Preferred Alternative would not substantially affect any principal roads or highway segments included in a Congestion Management Plan.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Development of renewable energy projects and transmission would create traffic that could temporarily inhibit emergency response during project construction. New road hazards could also be introduced by creating new site entries and exits or by inadvertently causing damage to roadway surfaces. Road improvements to ensure site access or potential damage to roadways would be supervised by local jurisdictions to ensure that the site does not affect traffic safety. Implementing traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid the adverse effects of this impact.

Impacts in Study Area Lands

Future Assessment Areas. Lands within FAAs are neither reserve lands nor DFAs; they are simply areas that are deferred for future assessment. The future assessment will determine their suitability for renewable energy development or for ecological conservation. If renewable energy development occurs on FAA lands, a Land Use Plan Amendment would not be required. FAAs for each alternative are included and located as shown in Table IV.1-2 and Figure II.6-1 for Alternative 3 in Volume II. The FAAs represent areas where

renewable energy development or inclusion to the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed.

Because most of the FAAs are presented as "undesignated areas" in the action alternatives, there would be no difference between the FAAs in the Preferred Alternative except that renewable development in an FAA would not require a BLM Land Use Plan Amendment so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the FAAs would impact transportation and public access as it would within DFAs.

Special Analysis Areas. Designating the SAAs as conservation would have no impact to this resource. Impacts would be the same as those explained for the Plan-wide reserve design.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands screened for the DRECP and based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on Variance Lands would not require a BLM Land Use Plan Amendment, so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the DRECP Variance Lands would impact transportation and public access as it would within DFAs.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development and conservation elements covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 3 (presented in Volume II, Section II.6.1.2) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definition of the reserve design and specific CMAs for the Preferred Alternative (see Section IV.19.3.2.1.1). While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would be applied also to nonfederal lands.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures would be applied to further reduce some of the DRECP's adverse impacts. The complete list of mitigation measures appears in the analysis for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.5.1.2 Impacts from Reserve Design

The potential for adverse impacts within the Plan Area would occur primarily where existing protected areas (159 miles), BLM conservation areas (711 miles), and Conservation Planning Areas (144 miles) intersect with transportation and public access facilities.

IV.19.3.5.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 3

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.19.3.5.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

The potential for adverse impacts within the Plan Area would occur primarily where available development areas intersect with BLM routes of travel, which would be 65 miles for solar energy development, 3 miles for wind energy development, 8 miles for geothermal energy development, and 22 miles for transmission development under Alternative 3. The majority of these impacts would occur within the CDCA. Adverse impacts would also extend beyond the available development areas, however, because of increases in construction traffic on BLM lands.

Under Alternative 3, BLM's management of transportation and public access under the laws, regulations and policies listed in Volume II, Section II.3.2 would reduce the impacts of renewable energy construction.

Renewable energy–related activities would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The total area of long-term disturbance for each technology under Alternative 3 is summarized in Volume II, Table II.6-7. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

IV.19.3.5.2.2 Impacts of Changes to BLM Land Designations

The potential for impacts within the Plan Area would occur primarily where the BLM conservation land designations intersect with BLM routes of travel, which would be 5,464 miles for NLCS lands, 3,350 miles for ACECs, 15 miles for wildlife allocations, 1,126 miles for SRMAs, 279 miles for lands with wilderness characteristics, and 2,903 miles for trail management corridors under Alternative 3. The majority of these impacts would occur within the CDCA.

Under Alternative 3, potential adverse impacts would occur to transportation and access under these BLM land designations. Proposed ACEC and NLCS designations could cause adverse impacts to transportation by establishing disturbance caps that conserve and protect the resource values and by requiring seasonal or year-round route closures in specific conservation areas. Development in NLCS lands would be limited to 0.25% of total authorized disturbance, or to the level allowed by collocated ACEC/wildlife allocations, whichever is more restrictive. Proposed SRMAs would somewhat offset this impact and provide improvements to transportation and access for locations depending on the allowable uses within the SRMAs. The CTTM CMAs for BLM lands would minimize impacts through specific actions, as outlined for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.5.3 Impacts of Natural Community Conservation Plan: Alternative 3

The impacts of the NCCP for Alternative 3 would be the same as those defined in Section IV.19.3.5.1 for the Plan-wide analysis.

IV.19.3.5.4 Impacts of General Conservation Plan: Alternative 3

The impacts of the GCP for Alternative 3 would be similar to those defined in Section IV.19.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The area of long-term disturbance for each technology is summarized in Volume II, Table II.3-12. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

The potential for adverse impacts for the GCP within the Plan Area would occur primarily where DFAs intersect with transportation and public access, which would be 37 miles for solar energy development, 1 mile for wind energy development, 5 miles for geothermal energy development, and 14 miles for transmission development under Alternative 3. Adverse impacts would also extend beyond the DFAs, however, because of increases in construction traffic.

The potential for adverse impacts for the GCP under Alternative 3 would occur primarily where existing conservation areas (4 miles) and Conservation Planning Areas (141 miles) intersect with transportation and public access facilities.

IV.19.3.5.5 Impacts Outside the Plan Area

IV.19.3.5.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.5 (Impacts of Transmission Outside the Plan Area in No Action Alternative).

IV.19.3.5.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

There would be no renewable energy impacts to transportation on BLM lands outside the Plan Area. The potential for adverse impacts outside the Plan Area would occur where National Conservation Lands and ACECs intersect with transportation and public access facilities. Impacts to traffic and transportation would be minimal.

IV.19.3.5.6 CEQA Significance Determination for Alternative 3

TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network. Renewable energy facility development would generate traffic that could cause short-term transportation disruptions. The movement of commuting construction workers and equipment and materials deliveries to each site would cause a small decrease in the level of service of roadways and highways during construction. Existing regulations that require permits for travel and encroachment on the road network would reduce this impact. Mitigation Measures TR-1a, TR-1b, TR-1c, and TR-1d identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by implementing transportation planning strategies and traffic control measures that would manage vehicle trips and provide necessary improvements to the road network.

TR-2: Plan components would alter the availability or accessibility of BLM routes of travel. Closure of large development sites and establishment of additional conservation

lands would disrupt access to lands along local roads or restrict public access to lands near the sites. This impact would decrease availability of BLM travel routes. This impact would be somewhat offset by establishing new corridors and access roads for transmission lines, which would provide improvements to transportation and access. Existing regulations and CMAs to ensure implementation of CTTM for BLM land would reduce the impact of site closures. Mitigation Measures TR-2a, TR-2b, and TR-2c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by preserving access and ensuring proper construction or restoration of travel routes.

TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP). Renewable energy facility development would generate traffic to and from project sites. However, traffic levels would not be substantial when compared to the road network's capacity, and project-related traffic would occur generally outside the urban environments that are the primary focus of congestion management programs. Existing regulations would ensure that this impact remains less than significant, so no mitigation is required.

TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response. Traffic related to renewable energy development could inhibit emergency response and increase emergency service response times. Additionally, construction activity could inadvertently cause damage to roadway surfaces or a deterioration of the existing pavement. Mitigation Measures TR-4a, TR-4b, and TR-4c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by ensuring on-site laydown and staging, providing controlled access to sites, and repairing wear and tear.

IV.19.3.5.7 Comparison of Alternative 3 With Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 3 with the Preferred Alternative.

IV.19.3.5.7.1 Alternative 3 Compared With Preferred Alternative for the Plan-wide DRECP

Total potential adverse impacts on transportation and public access under Alternative 3 would be 42 miles for solar energy development would be less than under the Preferred Alternative. Total potential adverse impacts on transportation and public access would be 1 mile for wind energy development, which would be less than under the Preferred Alternative. Potential adverse impacts related to geothermal energy development (6 miles) and transmission development (20 miles) would be the same for both Alternative 3 and the Preferred Alternative.

Total potential adverse impacts on transportation and public access from proposed BLM conservation areas (711 miles) and Conservation Planning Areas (144 miles) would be as extensive under Alternative 3 as with the Preferred Alternative.

IV.19.3.5.7.2 Alternative 3 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

Total potential adverse impacts on BLM routes of travel from renewable energy development would be less under Alternative 3 than under the Preferred Alternative for solar energy development (66 miles), wind energy development (3 miles), and geothermal energy development (8 miles), but greater under Alternative 3 for transmission development (22 miles). Transmission development may also have beneficial effects to offset the impacts of development on BLM routes.

Total potential adverse impacts on BLM travel routes from proposed BLM conservation land designations within the Plan Area would be greater under Alternative 3 than under the Preferred Alternative for ACECs (3,350), SRMAs (1,126), trail management corridors (2,903 miles), and lands with wilderness characteristics (279 miles), but less under Alternative 3 than under the Preferred Alternative for NLCS lands (5,464 miles) and wildlife allocations (15 miles).

IV.19.3.5.7.3 Alternative 3 Compared With Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 3 are the same as those defined in Section IV.19.3.5.1 for the Plan-wide analysis. As a result, the comparison of Alternative 3 with the Preferred Alternative for the NCCP is the same as described above for Plan-wide DRECP.

IV.19.3.5.7.4 Alternative 3 Compared With Preferred Alternative for the General Conservation Plan

Total potential adverse impacts on BLM routes of travel from proposed DFAs and conservation for the GCP would be greater under the Alternative 3 than under the Preferred Alternative for solar energy development (37 miles) and renewable energy transmission development (14 miles) and less for wind energy development (1 mile) and geothermal energy development (5 miles).

Total potential adverse impacts for the GCP on transportation and public access from proposed Conservation Planning Areas (141 miles) would be greater under Alternative 3 than under the Preferred Alternative. Approximately 6% of transportation and public access facilities would intersect with the GCP conservation lands under Alternative 3, which is also greater than under the Preferred Alternative.

IV.19.3.6 Alternative 4

IV.19.3.6.1 Plan-wide Impacts of Implementing the DRECP: Alternative 4

IV.19.3.6.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network.

The impacts would occur mostly during the construction of renewable energy facilities, but would also likely occur during development and decommissioning. The proximity of a renewable energy facility to major roads will determine to some extent traffic congestion problems anticipated from commuting construction workers. The movement of equipment and materials to the site during construction would cause a small decrease in the level of service of local roadways. The impact to local primary and secondary road networks from shipments of materials would likely be minimal. Transportation activities during renewable energy production would include commuting workers, material shipments to and from the facility, and on-site work and travel. The impact on the local transportation network would be minimal. With some exceptions, transportation activities during site decommissioning and reclamation would be similar to those during site development and construction.

Linear transportation features within DFAs under Alternative 4 include 36 miles for solar energy development, 2 miles for wind energy development, 6 miles for geothermal energy development, and 19 miles for transmission development. Adverse impacts would extend beyond the DFAs, however, because of increases in construction traffic.

Roads most likely to see an increase in traffic related to renewable energy development under the Alternative 4 include I-8, I-10, I-40, U.S. 395, and SRs 202, 58, 14, 138, 18, 111, 86, 115, and 98.

Traffic generated by solar energy and geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea. The West Mojave and Eastern Slopes ecoregion subarea would see the highest impacts on transportation and public access from transmission development.

The linear miles of transportation and public access facilities within available areas of solar, wind, and geothermal energy and transmission development for all ecoregion subareas under Alternative 4 are shown in Table R2.19-29 in Appendix R2.19.

Impact TR-2: Plan components would alter the availability or accessibility of BLM routes of travel.

Development of renewable energy projects and implementation of conservation strategies would disrupt accessibility along local roads or restrict public access to lands surrounding the renewable energy project sites. Closure of large sites for development or conservation would decrease the availability of BLM travel routes and inhibit travel to or from off-site locations. Transmission development would somewhat offset the impact of closures by establishing new corridors and access roads through the planning area. This impact depends on the location of each project, the conservation lands, and transmission; however, typical mitigation is available to support the use and maintenance of existing BLM roads and provide alternate replacement routes to ensure continued access to previously accessible public lands.

Impact TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP).

Renewable energy facility development would generate traffic to and from project sites, but the traffic levels would not be substantial when compared to the road network's capacity. As described for the Preferred Alternative, in Section IV.19.3.2.1.1, development under the Preferred Alternative would not substantially affect any principal roads or highway segments designated as part of a Congestion Management Plan.

Impact TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response.

Development of renewable energy projects and transmission would create traffic that could temporarily inhibit emergency response during construction or increase emergency service response times. New road hazards could also be introduced from creating new site entries and exits or by inadvertently causing damage to roadway surfaces. Road improvements that ensure site access or repairs to potential damage to roadways would be supervised by local jurisdictions to ensure that site does not impact traffic safety. Implementing traffic controls and measures to avoid or repair wear and tear from construction traffic would avoid the adverse effects of this impact.

Impacts in Study Area Lands

Future Assessment Areas. FAAs represent areas where renewable energy development or inclusion to the reserve design could be implemented through an amendment to the DRECP, but additional assessment would be needed. FAAs do not apply to Alternative 4.

Special Analysis Areas. Designating the SAAs as conservation would have no impact to this resource. Impacts would be the same as those explained for the Plan-wide reserve design.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands screened for the DRECP and based on BLM screening criteria. Covered Activities could be permitted for NCCP purposes only through an NCCP plan amendment. However, development of renewable energy on Variance Lands would not require a BLM Land Use Plan Amendment, so the environmental review process would be somewhat simpler than if the location were left undesignated. Development of the DRECP Variance Lands would impact transportation and public access as it would within DFAs.

Impact Reduction Strategies and Mitigation

The implementation of the Plan would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. There are several ways in which the impacts of the renewable energy development and conservation elements covered by the Plan would be lessened. First, the Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, the implementation of existing laws, orders, regulations and standards would reduce the impacts of project development. If significant impacts would still result after implementation of CMAs and compliance with applicable laws and regulations, then specific mitigation measures are recommended in this section.

Conservation and Management Actions

The conservation strategy for Alternative 4 (presented in Volume II, Section II.7.1.2) defines specific actions that would reduce the impacts of this alternative. The conservation strategy includes definition of the reserve design and specific CMAs for the Preferred Alternative (see Section IV.19.3.2.1.1). While the CMAs were developed for BLM lands only, this analysis assumes that all CMAs would be applied also to nonfederal lands.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of Plan implementation. Relevant regulations are presented in the Regulatory Setting in Volume III. The requirements of relevant laws and regulations are summarized above for the No Action Alternative in Section IV.19.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures would be applied to further reduce some of the DRECP's adverse impacts. The complete list of mitigation measures appears in the analysis for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.6.1.2 Impacts from Reserve Design

The potential for adverse impacts within the Plan Area would occur primarily where existing protected areas (159 miles), BLM conservation areas (605 miles), and Conservation Planning Areas (156 miles) intersect with transportation and public access facilities.

IV.19.3.6.2 Impacts of DRECP Land Use Plan Amendment on BLM Land: Alternative 4

This section addresses two components of effects of the BLM LUPA: the streamlined development of renewable energy and transmission on BLM land under the LUPA, and the impacts of the amended land use plans themselves.

IV.19.3.6.2.1 Impacts from Renewable Energy and Transmission Development on BLM Land

The potential for adverse impacts within the Plan Area would occur primarily where available development areas intersect with BLM routes of travel, which would be 47 miles for solar energy development, 4 miles for wind energy development, 6 miles for geothermal energy development, and 26 miles for transmission development under Alternative 4. The majority of these impacts would occur within the CDCA. Adverse impacts would also extend beyond the available development areas, however, because of increases in construction traffic on BLM lands.

Under Alternative 4, BLM's management of transportation and public access under the laws, regulations and policies listed in Volume II, Section II.3.2 would reduce the impacts of renewable energy construction.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The total area of long-term disturbance for each technology under Alternative 4 is summarized in Volume II, Table II.7-7. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

IV.19.3.6.2.2 Impacts of Changes to BLM Land Designations

The potential for impacts within the Plan Area would occur primarily where BLM conservation land designations intersect with BLM routes of travel, which would be 3,852 miles for NLCS lands, 3,572 miles for ACECs, 244 miles for wildlife allocations, 1,142 miles for SRMAs, 201 miles for lands with wilderness characteristics, and 321 miles for trail management corridors under Alternative 4. The majority of these impacts would occur within the CDCA.

Under Alternative 4, potential adverse impacts would occur to transportation and access under these BLM land designations. Proposed ACEC and NLCS designations could cause adverse impacts on transportation by establishing disturbance caps that conserve and protect the resource values and by requiring seasonal or year-round route closures in specific conservation areas. Development in NLCS lands would be limited to 1% of total authorized disturbance, or to the level allowed by collocated ACEC/wildlife allocations, whichever is more restrictive. Proposed SRMAs would somewhat offset this impact and provide improvements to transportation and access for locations depending on the allowable uses within the SRMAs. The CTTM CMAs for BLM land would minimize impacts through specific actions, as outlined for the Preferred Alternative (Section IV.19.3.2.1.1).

IV.19.3.6.3 Impacts of Natural Community Conservation Plan: Alternative 4

The impacts of the NCCP for Alternative 4 would be the same as those defined in Section IV.19.3.6.1 for the Plan-wide analysis.

IV.19.3.6.4 Impacts of General Conservation Plan: Alternative 4

The impacts of the GCP for Alternative 4 would be similar to those defined in Section IV.19.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

Renewable energy–related activities covered by the DRECP would be confined to DFAs. The distribution of different generation technologies varies depending on underlying factors particular to each technology. The area of long-term disturbance for each technology is summarized in Volume II, Table II.3-12. Typical impacts resulting from Covered Activities are discussed in Section IV.19.2.

The potential for adverse impacts for the GCP within the Plan Area would occur primarily where DFAs intersect with transportation and public access, which would be 33 miles for solar energy development, 1 mile for wind energy development, 6 miles for geothermal energy development, and 10 miles for renewable energy transmission development under Alternative 4. Adverse impacts would also extend beyond the DFAs, however, because of traffic increases during construction.

The potential for adverse impacts for the GCP under Alternative 4 would occur primarily where the existing conservation areas (4 miles) and Conservation Planning Areas (152 miles) intersect with transportation and public access facilities.

IV.19.3.6.5 Impacts Outside the Plan Area

IV.19.3.6.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.5 (Impacts of Transmission Outside the Plan Area in No Action Alternative).

IV.19.3.6.5.2 Impacts of BLM LUPA Decisions Outside the Plan Area

There would be no renewable energy impacts to transportation on BLM lands outside the Plan Area. The potential for adverse impacts outside the Plan Area would occur where National Conservation Lands and ACECs intersect with transportation and public access facilities. Impacts to traffic and transportation would be minimal.

IV.19.3.6.6 CEQA Significance Determination for Alternative 4

TR-1: Plan components would modify local circulation patterns or degrade the performance of the local road network. Renewable energy facility development would generate traffic that could cause short-term transportation disruptions. The movement of commuting construction workers and equipment and materials deliveries to each site would cause a small decrease in the level of service of roadways and highways during construction. Existing regulations that require permits for travel and encroachment on the road network would reduce this impact. Mitigation Measures TR-1a, TR-1b, TR-1c, and TR-1d identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by implementing transportation planning strategies and traffic control measures that would manage vehicle trips and provide necessary improvements to the road network.

TR-2: Plan components would alter the availability or accessibility of BLM routes of travel. Closure of large development sites and establishing additional conservation lands would disrupt access along local roads or restrict public access to lands near the sites. This impact would decrease the availability of BLM travel routes. This impact would be somewhat offset by establishing new corridors and access roads for transmission lines, which would provide improvements to transportation and access. Existing regulations and CMAs to ensure implementation of CTTM for BLM land would reduce the impact of site closures. Mitigation Measures TR-2a, TR-2b, and TR-2c identified for the Preferred Alternative

in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by preserving access and ensuring proper construction or restoration of travel routes.

TR-3: Plan components would result in substantial traffic volumes on highway segments designated as part of a Congestion Management Plan (CMP). Renewable energy facility development would generate traffic to and from project sites. However, traffic levels would not be substantial when compared to the road network's capacity, and project-related traffic would occur generally outside the urban environments that are the primary focus of congestion management programs. Existing regulations would ensure that this impact remains less than significant, so no mitigation is required.

TR-4: Plan components would increase hazards and the risk for a traffic incident or inhibit emergency response. Traffic related to renewable energy development could inhibit emergency response and increase emergency service response times. Additionally, construction activity could inadvertently cause damage to roadway surfaces or a deterioration of the existing pavement. Mitigation Measures TR-4a, TR-4b, and TR-4c identified for the Preferred Alternative in Section IV.19.3.2.1.1 would reduce the impact to a less than significant level by ensuring on-site laydown and staging, providing controlled access to sites, and repairing wear and tear.

IV.19.3.6.7 Comparison of Alternative 4 With Preferred Alternative

Chapter IV.27 presents a comparison of all action alternatives and the No Action Alternative across all disciplines. This section summarizes the comparison of Alternative 4 with the Preferred Alternative.

IV.19.3.6.7.1 Alternative 4 Compared With Preferred Alternative for the Plan-wide DRECP

Total potential adverse impacts on transportation and public access from renewable energy development under Alternative 4 would be 36 miles for solar energy development, 6 miles for geothermal energy development, and 19 miles for transmission development, which would be less than under the Preferred Alternative. Total potential adverse impacts on transportation and public access would be 2 miles for wind energy development, which would be equivalent to the Preferred Alternative.

Total potential adverse impacts on transportation and public access from proposed BLM conservation areas (605 miles), which would be less extensive under Alternative 4 than with the Preferred Alternative and Conservation Planning Areas (156 miles), which would be more extensive under Alternative 4 than with the Preferred Alternative.

IV.19.3.6.7.2 Alternative 4 Compared With Preferred Alternative for the BLM Land Use Plan Amendment

Total potential adverse impacts on BLM routes of travel from renewable energy development would be less under Alternative 4 than under the Preferred Alternative for solar energy development (47 miles), wind energy development (4 miles), and geothermal energy development (6 miles), but greater under Alternative 4 for transmission development (26 miles). Transmission development may also have beneficial effects that offset the impacts of development on BLM routes.

Total potential adverse impacts on BLM travel routes from proposed BLM conservation land designations within the Plan Area would be greater under Alternative 4 than under the Preferred Alternative for ACECs (3,572 miles), wildlife allocations (244 miles), SRMAs (1,142 miles). and trail management corridors (321 miles), but less under Alternative 4 than under the Preferred Alternative for NLCS lands (3,852 miles) lands with wilderness characteristics (201 miles).

IV.19.3.6.7.3 Alternative 4 Compared With Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 4 are the same as those defined in Section IV.19.3.6.1 for the Plan-wide analysis. As a result, the comparison of Alternative 4 with the Preferred Alternative for the NCCP is the same as described for Plan-wide DRECP.

IV.19.3.6.7.4 Alternative 4 Compared With Preferred Alternative for the General Conservation Plan

Total potential adverse impacts on BLM routes of travel from proposed DFAs and conservation for the GCP would be greater under Alternative 4 than under the Preferred Alternative for solar energy development (33 miles) and renewable energy transmission development (10 miles), and less for wind energy development (1 mile). Total potential adverse impacts on BLM routes of travel would be equivalent under the Alternative 4 than the Preferred Alternative for geothermal energy development (6 miles).

Total potential adverse impacts for the GCP on transportation and public access from proposed Conservation Planning Areas (153 miles) would be greater under Alternative 4 than under the Preferred Alternative.