# IV.19 TRANSPORTATION AND PUBLIC ACCESS

## IV.19.1 Approach to Impact Analysis

The analysis in this chapter addresses the potential impacts on transportation and public access from implementation of the Desert Renewable Energy Conservation Plan (DRECP) 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 DRECP ecoregion subareas that may be affected by these alternatives.

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

Although it is not possible to predict exactly where individual renewable energy development projects (i.e., solar, wind, geothermal, and supporting transmission) may be developed, existing roads, railways, and airports in the Land Use Plan Amendment (LUPA) Decision Area would provide the necessary access to development sites. Potential impacts of project development depend on several factors including project location and 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 designation 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 nonthrough access in current touring areas. Because the extent of these changes will depend on future development, changes among alternatives can be only qualitatively assessed. Project-specific changes will undergo 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 and recreation designations.

3. Changes to the transportation and public access network from the conservation strategy of the DRECP.

This analysis addresses the effects on the recreational use of Bureau of Land Management (BLM) travel routes in the LUPA Decision Area, including nonmotorized facilities. 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 must 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

This section describes 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 federal, state, and local 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 service of local roads around renewable energy facilities from increased traffic volumes during construction, particularly with solar and wind energy facilities. Additional impacts could affect bridges or other facilities that roadways cross such as canals and drainages.

The proximity of renewable energy projects to major roads in part determines traffic congestion problems anticipated from commuting construction workers. Some 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 [MW]) 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, solar facility development 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 that test a potential site's viability. Pre-construction activities involve site testing, geotechnical borings, and assessing the renewable energy resource or other environmental conditions. Each of these involves 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 (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, and 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 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 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) remains 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 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 on 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 operation would be substantially less than construction activities. Operations and maintenance requires commuting workers, material shipments to and from a facility, and on-site work and travel. Large solar energy facilities could employ up to 100 workers, though during daytime hours 10 to 50 workers may 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 DRECP area. This aspect of renewable energy development generally enhances the transportation network and relieves 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 Ecological and Cultural Conservation and Recreation Designations

Because the BLM LUPA ecological and cultural conservation 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.

Conservation and recreation designations and 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 DRECP 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 conservation designations 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.18.2.2).

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 depends 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 particular recreation assets 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.19.3 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 DRECP area occurs 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 of Renewable Energy and Transmission Development*

***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 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.

The potential for adverse impacts within the DRECP area would primarily be where available development areas intersect with BLM routes of travel. It is not possible to exactly where the projects would be located within a DFA and therefore whether they would overlap with BLM routes of travel. However, in order to calculate impact, the GIS analysis calculated the overlap of approximately 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) boundary. Adverse impacts could also extend beyond available development areas.

Traffic generated by solar projects within available development areas would be highest in the eastern Riverside region. The West Mojave area 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.

Table R2.19-1 in Appendix R2.19 shows 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.

Mitigation for degradation of reduced performance of the local road networks in the DRECP 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 may 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 may 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 DRECP 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 LUPA Decision 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 DRECP 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 on federal, state, and local roadways. This impact depends on the location and size of

the 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 LUPA Decision 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 approximately 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.*

Renewable energy project and transmission development would require slow-moving heavy-duty trucks that would obstruct traffic. 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, but in some instances such upgrades could be required. 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 is 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 Chapter III.19. Note that because this EIS addresses amendments to BLM's land use plans, these plans are addressed separately and are not included in this chapter. The requirements of relevant regulations 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.

- All applicable encroachment permits and oversize or overweight vehicle permits must be obtained from the California Department of Transportation (Caltrans), CHP, and local transportation and road management agencies.

### *Design Features of the Solar PEIS*

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).

### *Typical Mitigation Measures*

While there would be no new CMAs in the No Action Alternative, mitigation measures would be applied to specific projects. 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.

<u>Typical Mitigation Measures for Impacts to the Road Network</u>

- 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 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.19.3.1.2 Impacts of Ecological and Cultural Conservation and Recreation Designations*

Under the No Action Alternative there would be continued protection of existing Legislatively and Legally Protected Areas (LLPAs) such as wilderness. In addition, renewable energy projects would continue to be evaluated and approved with project-specific mitigation requirements. 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.

Under the No Action Alternative, the existing land management plans within the DRECP 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.

### *IV.19.3.1.3 Impacts of Transmission Outside the DRECP Area*

Outside the DRECP 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 DRECP area would use existing transmission corridors between the DRECP area and existing substations in the more populated coastal areas of the state. Areas outside the DRECP area through which new transmission lines might be constructed are San Diego, Los Angeles, North Palm Springs–Riverside, and Central Valley. The affected environment in these areas is described in the Existing Setting (see Section III.19.6, Transportation Outside the DRECP Area).

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

Transportation impacts associated with 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 DRECP 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 DRECP 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 DRECP 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 DRECP 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 repairs to 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.19.3.2 Preferred Alternative

### *IV.19.3.2.1 Impacts of Renewable Energy and Transmission*

***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 on 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.

Adverse impacts within the DRECP area would occur primarily where development focus areas intersect with BLM routes of travel. It is not possible to exactly where the projects would be located within a DFA and therefore whether they would overlap with BLM routes

of travel. However, in order to calculate impact, the GIS analysis calculated the overlap of approximately 70 miles for solar energy development, 6 miles for wind energy development, 6 miles for geothermal energy development, and 15 miles for renewable energy transmission development under the Preferred Alternative. The majority of these impacts would be within the CDCA. Adverse impacts could also 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 Preferred Alternative include I-8, I-10, I-40, and state routes 58, 14, 138, 18, 247, 111, 86, 115, and 98.

Traffic generated by solar and wind development within DFAs would be highest in eastern Riverside County and by geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea.

Table R2.19-5 in Appendix R2.19 shows 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.

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

Development of renewable energy projects under the Preferred Alternative may disrupt accessibility to lands along local roads or restrict public access to lands surrounding renewable energy project sites. Closure of large areas for development or conservation would decrease the number of BLM-designated routes and impede travel. Transmission development associated with the renewable energy projects may establish new corridors and access roads for transmission lines. Transmission facilities may provide valuable new backbone routes through the DRECP area, which would somewhat offset the impact of route 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 DRECP area. The renewable energy and transmission projects under the Preferred Alternative would affect the transportation infrastructure of the DRECP 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 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.*

Development of renewable energy and transmission projects would require use of slow-moving heavy-duty trucks that would obstruct traffic. 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 repairs to roadways damaged during construction would be subject to supervision 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 on Variance Process Lands

Variance Process Lands are neither conservation lands nor DFAs; they are a subset of the variance lands identified in the Solar PEIS ROD and additional lands that, based on current information, have moderate to low ecological value and ambiguous value for renewable energy. If renewable energy development occurs on Variance Process Lands, a BLM LUPA would not be required so the environmental review process would be somewhat simpler than if the location were left undesignated. Variance Process Lands for each alternative are included and located as shown in Table IV.1-2 and Figure II.3-1 for the Preferred Alternative in Volume II. Development of the Variance Process Lands would impact transportation and public access as it would within DFAs.

### *Conservation and Management Actions*

Implementing the LUPA would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. The impacts of the renewable energy development and conservation elements would be lessened in several ways. First, the LUPA incorporates CMAs for each alternative, including specific biological components and LUPA components. Also, the implementation of existing laws, orders, regulations, and standards would reduce the impacts of project development.

The conservation strategy for the Preferred Alternative (presented in Volume II, Section II.3.4) defines specific actions that would reduce the impacts of this alternative. The conservation strategy defines the conservation designations and specific CMAs for the Preferred Alternative.

LUPA-Wide Conservation and Management Actions for Comprehensive Trails and Travel Management

**LUPA-CTTM-1:** Maintaining and manage adequate Road, Primitive Road, and Trail Access to and within SRMAs, ERMAs, OHV Open Areas, and Level 1, 2, and 3 Recreation Facilities.

**LUPA-CTTM-2:** Avoid activities that would have a significant adverse impact on use and enjoyment within 0.5 mile from centerline of tier 2 Roads/Primitive Roads, and 300 feet 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.

**LUPA-CTTM-3:** 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 activities that would have a significant adverse impact on use and enjoyment within 0.5 mile (from centerline) of such linear features.

**LUPA-CTTM-4:** 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 activities, commensurate compensation in the form of enhanced recreation operations, access, recreation facilities or opportunities will be required.

**LUPA-CTTM-5:** 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.

**LUPA-CTTM-6:** Manage Back Country Byways as a component of BLM Recreation and Travel and Transportation Management program**.**

**LUPA-CTTM-7:** Manage Recreation Facilities consistent with the objectives for the recreation management areas and facilities.

Ecological and Cultural Conservation

The following CMAs apply to all National Conservation Lands, ACECs, and wildlife allocations. All LUPA-wide CMAs also apply to these areas.

**CONS-CTTM-1:** Refer to the individual National Conservation Lands and 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 Trails and Travel Management Plans (TTMPs) or Resource Management Plans (RMPs).

NLCS

**NLCS-CTTM-1: Comprehensive Trails and Travel Management –** Trails and Travel Management in National Conservation Lands would be in accordance with the applicable Transportation and Travel Management Plan. Future Transportation and Travel Management Plans for National Conservation Lands would be developed in accordance to the appropriate BLM guidance and policy. National Conservation Land designation would be addressed in those subsequent plans with an emphasis on routes that provide for the conservation, protection, and restoration, as well as recreational use and enjoyment of the National Conservation Lands that is compatible with the values for which the areas were designated.

SRMA

The CMAs in this section apply to all SRMAs within the LUPA. All LUPA-wide (LUPA) also apply to SRMAs.

**SRMA-CTTM-1:** Refer to the individual SRMA Special Unit Management Plans (Appendix L) 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.

DFA and Variance Process Lands

The following CMAs are to be implemented in the DFAs, VPLs, or both, depending on the prefixes used, in addition to the LUPA-wide CMAs.

**DFA-VPL-CTTM-1:** Avoid Tier 1, Tier 2, Tier 3 roads/primitive roads/trails, Backcountry Byways, and other significant linear features (as defined in the LUPA-wide CMAs). 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.

**DFA-VPL-CTTM-2:** 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.

Unallocated Lands

These lands would be managed in the same manner as DFAs (see Volume II, Section II.3.3.3.3).

***Laws and Regulations***

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of DRECP implementation. Relevant regulations are presented in the Regulatory Setting in Chapter III.19. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.1.

### *IV.19.3.2.2 Impacts of Ecological and Cultural Conservation and Recreation Designations*

Impacts within the DRECP area would occur primarily where BLM conservation land designations intersect with BLM-designated routes of travel, which would be 4,857 miles for National Landscape Conservation System (NLCS) lands, 2,754 miles for ACECs, 19 miles for wildlife allocations, 920 miles for SRMAs, 530 miles for lands with wilderness characteristics, and 1,210 miles for trail management corridors under the Preferred Alternative. The majority of these impacts would be within the CDCA.

Under the Preferred Alternative there is a potential adverse impact on transportation and public access. Conservation designations would result in additional limitations on access and are likely to affect the overall transportation network. In DFAs, impacts would be generally temporary and route-specific and would include compensation, where appropriate, as well as route bypasses on a project-specific basis. In conservation areas, route closures would likely occur 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. 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 remote areas, may also put additional pressure on the remaining remote routes both within and outside the DRECP area. Proposed SRMAs would somewhat offset this impact and provide beneficial improvements to transportation and access to 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 Transmission Outside the DRECP Area*

The impacts of transmission outside the DRECP area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.3, Impacts of Transmission Outside the DRECP Area.

#### *IV.19.3.2.4 Comparison of the Preferred Alternative With No Action Alternative*

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 (6 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 less 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 DRECP area would be greater under the Preferred Alternative than under the No Action Alternative, which has no proposed designations.

### IV.19.3.3 Alternative 1

#### *IV.19.3.3.1 Impacts of Renewable Energy and Transmission Development*

***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 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 on 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.

The potential for adverse impacts within the DRECP 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 could also extend beyond the DFAs, however, because of increased construction traffic.

Roads most likely to see an increase in 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 energy development within DFAs would be highest in eastern Riverside County and Imperial Borrego Valley ecoregion subarea, and geothermal energy development within DFAs would be highest in the Imperial Borrego Valley. The West Mojave would see the most impacts on transportation and public access.

Table R2.19-11 in Appendix R2.19 shows 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.

***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 may disrupt accessibility to lands along local roads or restrict public access to lands surrounding renewable energy project sites. Closure of large areas for development or conservation would decrease the number of BLM-designated routes and limit travel. Transmission development may somewhat offset the impact of route closures by establishing new corridors and access roads for transmission lines through the DRECP 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, development 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.*

Development of renewable energy projects and transmission would require use of slow-moving heavy-duty trucks that would obstruct traffic. 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 to 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 on Variance Process Lands

Variance Process Lands are neither conservation lands nor DFAs; they are a subset of the variance lands identified in the Solar PEIS ROD and additional lands that, based on current information, have moderate to low ecological value and ambiguous value for renewable energy. If renewable energy development occurs on Variance Process Lands, a BLM LUPA would not be required so the environmental review process would be somewhat simpler than if the location were left undesignated. Variance Process Lands for each alternative are included and located as shown in Table IV.1-2 and Figure II.3-1 for the Preferred Alternative in Volume II.

### *Conservation and Management Actions*

Implementing the DRECP would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. The impacts of the renewable energy development and conservation elements would be lessened in several ways. First, DRECP incorporates CMAs for each alternative, including specific biological components and LUPA components. Also, the implementation of existing laws, orders, regulations, and standards would reduce the impacts of project development.

The conservation strategy for Alternative 1 (presented in Volume II, Section II.4.4) defines specific actions that would reduce the impacts of this alternative. The CMAs would be the same as for the Preferred Alternative. The following CMAs apply only to Alternative 1.

<u>NCLS</u>

**Comprehensive Trails and Travel Management.** National Conservation Lands would be designated in accordance to the appropriate Trails and Travel Management Plan (TTMP)/ RMP, and future travel management will put the emphasis of travel allowed on designated routes that provide for enjoyment of values, or necessary administrative access to conserve, protect, and restore area values.

### *Laws and Regulations*

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of DRECP implementation. Relevant regulations are presented in the Regulatory Setting in Chapter III.19. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.

## *IV.19.3.3.2 Impacts of Ecological and Cultural Conservation and Recreation Designations*

The potential for impacts within the DRECP area would occur primarily where BLM conservation land designations intersect with BLM-designated 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, there is a potential adverse impact on transportation and public access. 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 or 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).

## *IV.19.3.3.3 Impacts of Transmission Outside the DRECP Area*

The impacts of transmission outside the DRECP area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.3, Impacts of Transmission Outside the DRECP Area.

## *IV.19.3.3.4 Comparison of Alternative 1 With Preferred Alternative*

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 solar, wind, and geothermal energy development, but greater under Alternative 1 for 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 DRECP area would be less under Alternative 1 than under the Preferred Alternative for NLCS lands (1,747 miles) and trail management corridors (125 miles). Potential impacts would be more 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.19.3.4 Alternative 2

### *IV.19.3.4.1 Impacts of Renewable Energy and Transmission*

***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 on 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.

The potential for adverse impacts within the DRECP 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 could also extend beyond the available development areas, however, because of 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 state routes 202, 58, 14, 138, 18, 247, 136, 111, 86, 115, and 98.

Traffic generated by solar energy development within DFAs would be highest in eastern Riverside and Imperial Borrego Valley, and geothermal and wind energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea.

Table R2.19-17 in Appendix R2.19 shows 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.

### *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 may disrupt accessibility to lands along local roads or restrict public access to lands surrounding renewable energy project sites. Closure of large areas for development or conservation would decrease the number of BLM-designated routes and impede travel. Transmission development may somewhat offset the impact of route closures by establishing new corridors and access roads for transmission lines through the DRECP 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, development 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.*

Development of renewable energy projects and transmission would require use of slow-moving heavy-duty trucks that would obstruct traffic. 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 on Variance Process Lands

Variance Process Lands are neither conservation lands nor DFAs; they are a subset of the variance lands identified in the Solar PEIS ROD and additional lands that, based on current information, have moderate to low ecological value and ambiguous value for renewable energy. If renewable energy development occurs on Variance Process Lands, a BLM LUPA would not be required so the environmental review process would be somewhat simpler than if the location were left undesignated. Variance Process Lands for each alternative are included and located as shown in Table IV.1-2 and Figure II.3-1 for the Preferred Alternative in Volume II.

### *Conservation and Management Actions*

Implementing the LUPA would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. The impacts of the renewable energy development and conservation elements would be lessened in several ways. First, the DRECP incorporates CMAs for each alternative, including specific biological components and LUPA components. Also, implementing existing laws, orders, regulations, and standards would reduce the impacts of project development.

The conservation strategy for Alternative 2 (presented in Volume II, Section II.5.4) defines specific actions that would reduce the impacts of this alternative. The CMAs would be the same as for the Preferred Alternative. The following CMAs apply only to Alternative 2.

NLCS

**Comprehensive Trails and Travel Management.** National Conservation Lands would be designated in accordance to the appropriate Trails and Travel Management Plan (TTMP)/Resource Management Plan (RMP), and future travel management planning will put the emphasis of travel allowed on designated routes that provide for enjoyment of values, or necessary administrative access to conserve, protect, and restore area values

### *Laws and Regulations*

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of DRECP implementation. Relevant regulations are presented in the Regulatory Setting in Chapter III.19. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.1.

### *IV.19.3.4.2 Impacts of Ecological and Cultural Conservation and Recreation Designation*

The potential for impacts within the DRECP area would occur primarily where the BLM conservation land designations intersect with BLM-designated 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, there is a potential adverse impact on transportation and public access. 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 or 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).

### *IV.19.3.4.3 Impacts of Transmission Outside the DRECP Area*

The impacts of transmission outside the DRECP area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.3, Impacts of Transmission Outside the DRECP Area.

### *IV.19.3.4.4 Comparison of Alternative 2 With Preferred Alternative*

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), geothermal energy development (9 miles) and transmission development (28 miles). 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 DRECP 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). Potential impacts would be 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.19.3.5 Alternative 3

### *IV.19.3.5.1 Impacts of Renewable Energy and Transmission Development*

#### *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 on 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.

The potential for adverse impacts within the DRECP 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 could also extend beyond the available development areas, however, because of increases in construction traffic.

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

Traffic generated by solar energy development would be highest in eastern Riverside County, Imperial Borrego Valley, and West Mojave; traffic generated by wind energy development would be highest in eastern Riverside County and Imperial Borrego Valley, and traffic generated by geothermal energy development within DFAs would be highest in the Imperial Borrego Valley ecoregion subarea.

Table R2.19-23 in Appendix R2.19 shows 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.

### *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 may disrupt accessibility along local roads or restrict public access to lands surrounding project sites. Closure of large areas for development or conservation would decrease the number of BLM-designated routes and inhibit travel. Transmission development may somewhat offset the impact of route closures by establishing new corridors and access roads through the DRECP 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, development 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.*

Development of renewable energy projects and transmission would require use of slow-moving heavy-duty trucks that would obstruct traffic. 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 repairs to potential roadway damage 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 on Variance Process Lands

Variance Process Lands are neither conservation lands nor DFAs; they are a subset of the variance lands identified in the Solar PEIS ROD and additional lands that, based on current information, have moderate to low ecological value and ambiguous value for renewable energy. If renewable energy development occurs on Variance Process Lands, a BLM LUPA would not be required so the environmental review process would be somewhat simpler than if the location were left undesignated. Variance Process Lands for each alternative are

included and located as shown in Table IV.1-2 and Figure II.3-1 for the Preferred Alternative in Volume II.

### *Conservation and Management Actions*

Implementing the DRECP would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. The impacts of the renewable energy development and conservation elements would be lessened in several ways. First, the DRECP incorporates CMAs for each alternative, including specific biological components and LUPA components. Also, implementing existing laws, orders, regulations, and standards would reduce the impacts of project development.

The conservation strategy for Alternative 3 (presented in Volume II, Section II.6.4) defines specific actions that would reduce the impacts of this alternative. The CMAs would be the same as for the Preferred Alternative. The following CMAs apply only to Alternative 3 and replace the corresponding ones for the Preferred Alternative.

NLCS

**Comprehensive Trails and Travel Management.** National Conservation Lands would be designated in accordance to the appropriate Trails and Travel Management Plan (TTMP)/ Resource Management Plan (RMP) future travel management planning will put the emphasis of travel allowed on designated routes that provide for enjoyment of values, or necessary administrative access to conserve, protect, and restore area values.

### *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.

## *IV.19.3.5.2 Impacts of the Ecological and Cultural Conservation and Recreation Designations*

The potential for impacts within the DRECP area would occur primarily where the BLM conservation land designations intersect with BLM-designated 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, there is a potential adverse impact on transportation and public access. 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 or 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 Transmission Outside the DRECP Area*

The impacts of transmission outside the DRECP area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.3, Impacts of Transmission Outside the DRECP Area.

#### *IV.19.3.5.4 Comparison of Alternative 3 With Preferred Alternative*

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) and wind energy development (3 miles). Potential impacts would be greater under Alternative 3 for geothermal energy development (8 miles) and 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 DRECP 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 NLCS lands (5,464 miles). Potential impacts would be less under Alternative 3 than under the Preferred Alternative for lands with wilderness characteristics (279 miles) and wildlife allocations (15 miles).

### IV.19.3.6 Alternative 4

#### *IV.19.3.6.1 Impacts of Renewable Energy and Transmission Development*

***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 on 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.

The potential for adverse impacts within the DRECP 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 could also extend beyond the available development areas, however, because of increases in construction traffic.

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

Traffic generated by solar and wind energy development within DFAs would be highest in eastern Riverside, 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.

Table R2.19-29 in Appendix R2.19 shows 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.

### *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 may disrupt accessibility along local roads or restrict public access to lands surrounding the renewable energy project sites. Closure of large areas for development or conservation would decrease the number of BLM-designated routes and inhibit travel. Transmission development may somewhat offset the impact of route closures by establishing new

corridors and access roads through the DRECP 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 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.*

Development of renewable energy and transmission projects would require use of slow-moving heavy-duty trucks that would obstruct traffic. 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 roadway damage would be supervised by local jurisdictions to ensure that the 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 on Variance Process Lands

Variance Process Lands are neither conservation lands nor DFAs; they are a subset of the variance lands identified in the Solar PEIS ROD and additional lands that, based on current information, have moderate to low ecological value and ambiguous value for renewable energy. If renewable energy development occurs on Variance Process Lands, a BLM LUPA would not be required so the environmental review process would be somewhat simpler than if the location were left undesignated. Variance Process Lands for each alternative are included and located as shown in Table IV.1-2 and Figure II.3-1 for the Preferred Alternative in Volume II.

### *Conservation and Management Actions*

Implementing the DRECP would result in conservation of some desert lands as well as the development of renewable energy generation and transmission facilities on other lands. The impacts of the renewable energy development and conservation elements would be lessened in several ways. First, the DRECP incorporates CMAs for each alternative, including specific

biological components and LUPA components. Also, implementing existing laws, orders, regulations, and standards would reduce the impacts of project development.

The conservation strategy for Alternative 4 (presented in Volume II, Section II.7.4) defines specific actions that would reduce the impacts of this alternative. The CMAs would be the same as for the Preferred Alternative. The following CMAs apply to Alternative 4 and replace the corresponding ones for the Preferred Alternative.

NCLS

**Comprehensive Trails and Travel Management.** National Conservation Lands would be designated in accordance to the appropriate Trails and Travel Management Plan (TTMP)/Resource Management Plan (RMP), and future travel management planning will put the emphasis of travel allowed on designated routes that provide for enjoyment of values, or necessary administrative access to conserve, protect, and restore area values.

### *Laws and Regulations*

Similar to the No Action Alternative, existing laws and regulations would reduce certain impacts of DRECP implementation. Relevant regulations are presented in the Regulatory Setting in Chapter III.19. The requirements of relevant laws and regulations are summarized for the No Action Alternative in Section IV.19.3.1.1.

## *IV.19.3.6.2 Impacts of the Ecological and Cultural Conservation and Recreation Designations*

The potential for impacts within the DRECP area would occur primarily where BLM conservation land designations intersect with BLM-designated 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, there is a potential adverse impact on transportation and public access. 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 or 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).

### *IV.19.3.6.3 Impacts of Transmission Outside the DRECP Area*

The impacts of transmission outside the DRECP area on transportation would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.19.3.1.3, Impacts of Transmission Outside the DRECP Area.

### *IV.19.3.6.4 Comparison of Alternative 4 With Preferred Alternative*

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 the same for 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 DRECP area would be greater under Alternative 4 than under the Preferred Alternative for ACECs (3,572 miles), wildlife allocations (244 miles), and SRMAs (1,142 miles). Potential impacts would be less under Alternative 4 than under the Preferred Alternative for NLCS lands (3,852 miles), trail management corridors (321 miles), and lands with wilderness characteristics (201 miles).

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