

IV.22 PUBLIC HEALTH, SAFETY, AND SERVICES

This chapter analyzes impacts on public health, safety, and services as they relate to implementation of the Desert Renewable Energy Conservation Plan (DRECP or Plan) alternatives. Impacts are determined under the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). NEPA mandates an analysis of hazardous materials and wastes, occupational health and safety, public safety and services, and safety related to natural, sabotage, or terrorism events. CEQA requires an analysis of hazardous materials and sites, airport safety hazards, emergency response, and wildland fire hazards to determine if the project will create a significant hazard to the public or to the environment. This chapter also addresses public services as they relate to fire and police protection.

Tables R1.22-1 to R1.22-5, which appear in Appendix R1.22-1, support this analysis. These tables identify the airports, fire stations, police stations, schools, and landfills within or near the Plan Area.

IV.22.1 Approach to Impact Analysis

IV.22.1.1 General Methods

This analysis discusses typical impacts on public health, safety, and services associated with renewable energy facilities (i.e., solar, wind, and geothermal) and their required transmission infrastructure both within and outside the Plan Area. Also analyzed are Bureau of Land Management (BLM) Land Use Plan Amendment (LUPA) actions that relate to public health, safety, and services. Impacts are analyzed in general terms because most issues concerning public health, safety, and services are similar across all renewable technologies and the Plan Area geography. However, there are some differences in impacts among the renewable energy technologies covered in the Plan alternatives. These include the following:

- Hazardous material use tends to be greater in solar energy facilities.
- Wind development can increase fire risk.
- Greater dispersal of development, along with more acres of development, can increase the interface of wildland and development and increase fire risk.
- More airports within Development Focus Areas (DFAs) can potentially increase airport safety risk.

IV.22.1.2 California Environmental Quality Act Standards of Significance

IV.22.1.2.1 Hazardous Materials

Under CEQA, impacts on public health, safety, and services would be significant if the project would do any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.

IV.22.1.2.2 Airport Safety Hazards

Under CEQA, impacts on public health, safety, and services would be significant if the project would do any of the following:

- 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.
- Create a safety hazard for people residing or working in a project area for projects located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.
- For a project within the vicinity of a private airstrip, create a safety hazard for people residing or working in the project area.

IV.22.1.2.3 Wildland Fire Hazards

Under CEQA, impacts on public health, safety, and services would be significant if the project would do any of the following:

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

IV.22.1.2.4 Public Services

Under CEQA, impacts on public health, safety, and services would be significant if the project would do any of the following:

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the construction of which could cause significant environmental impacts. In order to maintain acceptable service ratios, response times or other performance objectives must be met for any of the following public services:
 - Fire protection.
 - Police protection.
 - Schools.

Although renewable energy development would not likely alter the demand for or displace schools, some individual projects could strain existing school facilities. When projects are in remote locations with sparse population, a large influx of operations workers and their families could strain local school resources. Construction workers do not typically move with their families when working on large energy projects. Analysis and possible mitigation would be conducted at the project level. Construction or reconstruction of chargeable covered and enclosed space on nonfederal land is assessed, and school impact fees are based on the total gross square footage of that space (California Education Code Section 17620-17626 et seq.) (California Government Code Section 65995-65998 et seq.). This one-time fee, payable by the project applicant or owner to the local school district, is based on the project site and applicable school district boundaries. The Plan does not analyze these impacts further since payment of those mandated fees (Senate Bill [SB] 50) would be less than significant (California Government Code Section 65995 [b]).

IV.22.1.2.5 Landfills

Under CEQA, impacts on public health, safety, and services would be significant if the project would do any of the following:

- Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.

IV.22.1.2.6 Public Health and Safety

While there is not a separate public safety category in CEQA's Appendix G Checklist, public safety is addressed for informational purposes. This chapter discloses to the public that large energy projects can have issues such as occupational and public health hazards (e.g., Valley Fever and Legionnaires' disease); accidents, sabotage, and terrorism; and natural events. Geologic and seismic hazards are addressed in Chapter IV.4, Geology and Soils.

IV.22.2 Typical Impacts Common to All Action Alternatives

DRECP alternatives would generate future renewable energy development applications within identified DFAs; their impacts would vary depending on the technology proposed, location within the Plan Area, the time and degree of disturbance resulting from development, and the size and complexity of the facilities. Short-term impacts occur for only a short time during and after the proposed actions (e.g., construction noise during development). Long-term impacts occur for an extended period after development or construction of the proposed actions is complete. All ground disturbances are considered to be long-term impacts.

IV.22.2.1 Impacts of Renewable Energy and Transmission Development

Renewable energy and transmission development could create impacts related to hazardous materials, airport safety hazards, emergency plans, wildland fire hazards, public services, and public safety during site characterization, construction, operation, maintenance, and decommissioning activities.

IV.22.2.1.1 Impacts of Site Characterization

As detailed in Volume II, Chapter II.3, Section II.3.1.4, Overview Description of Covered Activities, site characterization activities may include the use or construction of access roads, meteorological stations, site reconnaissance, and geotechnical borings. The typical impacts of these activities are described here.

Hazardous Materials

The construction of access roads or meteorological stations could introduce limited hazardous materials into a site or disturb existing hazardous materials. Geotechnical study borings could also disturb existing hazardous materials. These activities, as well as site reconnaissance activities, could introduce people into a site where hazardous materials are present.

Airport Safety Hazards

The nature and limited activity associated with site characterization activities would not create airport safety issues.

Wildland Fire Hazards

Site characterization activities could increase wildland fire hazard risks by clearing vegetation with a line trimmer or other equipment, building access roads, and operating vehicles and equipment within areas of dry vegetation.

Public Services

Site characterization activities would not affect emergency plans. The limited number of individuals in one area would not affect evacuation routes or the emergency system in general.

The activities associated with site characterization would neither increase demand for police or fire services nor affect existing or planned public services. Law enforcement and fire station facilities within the Plan Area or within 20 miles outside the Plan Area are shown in Volume III, Figure III.22-3, Fire Protection Facilities in the Plan Area, in Volume III, Figure III.22-4, Law Enforcement Facilities in the Plan Area, and in Appendix R1, Tables R1.22-2 and R1.22-3.

Landfills

Construction activities associated with site characterization could generate small amounts of solid waste that would require disposal. It is anticipated that there would be adequate disposal capacity in landfills within 20 miles of the Plan Area boundaries, as shown in Volume III, Figure III.22-5, Landfills in the Plan Area, and listed in Appendix R1, Table R1.22-5.

Public Health and Safety

The construction of access roads or meteorological stations, as well as geotechnical study borings, could disturb soils containing Valley Fever fungal spores. Dust control measures and worker safety precautions could help limit exposure.

IV.22.2.1.2 Impacts of Construction and Decommissioning

Hazardous Materials

For purposes of this discussion, hazardous materials are defined as those chemicals listed in the Environmental Protection Agency Consolidated List of Chemicals Subject to Reporting, under Title III of the Superfund Amendments and Reauthorization Act of 1986. Extremely hazardous materials are defined by federal regulation (40 Code of Federal Regulations [CFR] Part 355). Some construction and decommissioning-related waste may qualify as characteristic hazardous waste or state- or federal-listed hazardous waste. Also, hazardous materials, including unexploded ordnance, may be present on sites from previous military or mining activities.

Construction and decommissioning of renewable energy facilities would require the use of hazardous materials, including:

- Various fluids from on-site maintenance of construction vehicles and equipment (e.g., gasoline, diesel fuel, lubricating oils, hydraulic fluids, glycol-based coolants, and spent lead-acid storage batteries).
- Incidental chemical wastes from the maintenance of equipment and the application of corrosion-control protective coatings (e.g., solvents, paints, and coatings).
- Construction-related debris (e.g., dimension lumber, stone, and brick).
- Dunnage and packaging materials (primarily wood and paper).

In addition to the typical wastes mentioned here, construction and decommissioning of certain types of solar facilities may involve spent heat transfer fluids (HTF), dielectric fluids, thermal energy storage (TES) salts, and steam amendment chemicals. Much of this volume of waste will have recycling options, but subsequent flushing (with water or appropriate organic solvents) and cleaning of the systems will generate wastes that require disposal. The HTFs most commonly used are Therminol and Dowtherm. Therminol is an ethylated benzene compound with relatively low volatility at ambient temperatures. It has a low oral and inhalation toxicity (Solutia Inc. 2006) but is irritating to the skin. Dowtherm is primarily ethylene glycol, a common antifreeze. It also has a low volatility at ambient temperatures, low inhalation toxicity, and moderate oral toxicity; brief skin contact is nonirritating (Dow Chemical Inc. 2004).

HTFs are stored in tanks or circulated through the solar field in pipes, so the potential for exposure is low when workers follow applicable handling instructions. Impacts during facility dismantlement and draining could include spills, leaks, and releases to the environment from the improper temporary on-site storage of recovered fluids.

Cadmium telluride (CdTe) may be present in photovoltaic solar panels used for solar energy projects. CdTe is considered toxic if ingested or inhaled via dust particles. Human exposure of CdTe would occur only if a module, sealed in glass, generated flake or dust particles. The potential for CdTe release could only occur from severe pitting of the panel surface. In addition, some high-performance solar photovoltaic cells contain small amounts of selenium and arsenic, which could be emitted if solar cells were broken during construction or decommissioning. For photovoltaic facilities using high-performance solar cells, special handling of solar panels containing toxic metals would be required to prevent accidental breakage that would also preclude recycling of the solar cell materials at off-site facilities.

Wind. Construction and decommissioning of wind facilities would generate both solid and industrial wastes. Fluids used and drained from turbine drivetrain components (e.g., lubricating oils, hydraulic fluids, coolants) require disposal. Tower segments, turbine components (emptied of their fluids), and broken concrete would not pose a hazardous materials risk and could be recycled or reused. Electrical transformers can be removed from the site and used elsewhere (in most cases, without the need to remove dielectric fluids like transformer oil). Miscellaneous materials without salvage value are expected to be nonhazardous and would be sent to permitted disposal facilities.

Geothermal. The use, storage, and disposal of hazardous materials and waste associated with geothermal energy development could expose individuals to petroleum, oil, lubricants, paints, solvents, and herbicides.

Airport Safety Hazards

Solar power towers, which may exceed 500 feet in height, and electric transmission lines, with heights up to about 150 feet, could pose hazards to low-flying aircraft. The installation of these facilities would therefore need to consider civil and military aeronautical operations to avoid runway approach patterns, low-altitude flight corridors, and military exercise areas. The potential for electrical interference of transmission lines or solar array control systems with aircraft operations is remote, but should still be evaluated for new installations. Interactions with low-altitude aircraft avionics or communications could occur if corona discharges from the transmission lines are not minimized to avoid specific electric frequencies.

Glare from solar energy facilities (i.e., the sun's reflection off mirrors or photovoltaic [PV], panels) could interfere with pilot vision as was reported in 2013 by two flight crews in the vicinity of the Ivanpah solar facility. In the case of heavily traveled air routes (e.g., airport approach routes), solar array patterns may be adjusted to minimize interference.

The Federal Aviation Administration requires a notice of proposed construction for a project in order to determine whether it would adversely affect commercial, military, or personal air navigation safety (FAA 2000 as cited in BLM 2005). One of the triggering criteria is whether the project would be located within 20,000 feet of an existing public or military airport. Another Federal Aviation Administration criterion triggering this notice of proposed construction is construction or alteration of any structure higher than 200 feet. This criterion applies regardless of a project's distance from an airport (FAA 2000 as cited in BLM 2005). Because a wind or solar energy development project would have to meet appropriate Federal Aviation Administration criteria, no adverse impacts to aviation would be expected.

Wildland Fire Hazards

Construction equipment and flammable materials, combined with adding people in remote areas with vegetation, could increase wildland fire hazards. Much of the Plan Area experiences high winds and dry conditions, so the risk is high for rapidly spreading fire. See Volume III, Section III.22.2.3, for more information about past fires and current fire risk conditions.

Public Services

Construction and decommissioning activities would not interfere with either evacuation routes or general emergency systems, or affect emergency plans.

Project security personnel, security lighting, and facility fencing would all limit vandalism calls to local police and fire departments. However, given the large number of construction personnel required at renewable energy facilities, accidents are likely to happen, so there would be a need for emergency medical services. Construction traffic can also dramatically increase baseline traffic levels on local roadways, which in turn can also increase the need for police or highway patrol and emergency response to traffic accidents. There could therefore be a need for short-term expansion of police or emergency response services, but not for additional law enforcement stations.

Landfills

Construction and decommissioning activities would generate large quantities of solid waste requiring disposal that could affect landfill capacities; landfills within 20 miles of the DRECP boundaries are shown in Volume III, Figure III.22-5, and listed in Appendix R1, Table R1.22-5.

Public Health and Safety

Renewable energy construction and decommissioning could produce occupational hazards, health concerns, and general public safety concerns. The following sections describe these concerns.

Occupational health and safety considerations related to constructing and decommissioning energy development projects include the following:

- Physical hazards.
- Risks of injuries and fatalities to workers during the construction of facilities and their associated transmission lines.
- Risks resulting from exposure to weather extremes (e.g., heat stress or stroke, frostbite).
- Risk of harmful interactions with plants and animals (e.g., soil-based pathogens, especially Valley Fever [*Coccidioidomycosis*]).
- Risks associated with working at extreme heights.
- Fire hazards.
- Exposure to hazardous substances used at or emitted from the facilities, including *Legionella* bacteria, as well as diesel particulate matter emitted from construction vehicles.
- Risk of electrical shock.

The fungus that causes Valley Fever is present in soils within the Plan Area, particularly in the West Mojave area. Disturbance of these soils during construction and decommissioning could release dust contaminated with Valley Fever spores that could be inhaled by workers and others in the area, resulting in illness or, in severe cases, death.

Construction and decommissioning pose the general risk of wildfires and vehicle accidents. Some of the occupational hazards associated with construction of renewable energy projects are similar to those associated with heavy construction in the electric power industry, while others are unique to the type of project (e.g., working at extreme heights, working in areas of high wind, and working near rotating or spinning equipment). In particular, the hazards of installing and repairing turbines are similar to those of building and maintaining bridges and other tall structures (Sørensen 1995, as cited in BLM 2005). Gipe (1995, as cited in BLM 2005) and Sørensen report multiple fatalities and serious injuries in wind energy project construction. Solar power tower construction may result in similar occupational hazards. Geothermal exploration and drilling could expose individuals to (1) drilling

mud and geothermal fluid or steam during drilling; (2) hydrogen sulfide contained in geothermal fluids or steam; (3) hazardous materials such as petroleum, oils, and lubricants; and (4) a variety of potential accidents inherent in drilling operations.

IV.22.2.1.3 Impacts of Operation and Maintenance

Hazardous Materials

The operation and maintenance of renewable energy projects would involve the use of hazardous materials similar to those required during construction and decommissioning (see Section IV.22.2.1.2). In addition to the technology-specific impacts described here, the maintenance of transmission lines and substations could result in electric shocks and falls. Operation and maintenance activities could also cause electrical fires, wildfires, and vehicular accidents from increased traffic on local roads.

Solar. Wastes common to all solar technologies include domestic solid wastes and sanitary wastewaters from workforce support and industrial solid and liquid wastes from routine cleaning and equipment maintenance and repair. Volumes of domestic solid wastes and sanitary wastewaters would be limited given the relatively small size of the operating workforce. Various options will be available for the management and disposal of domestic solid and sanitary waste. In all instances, solid wastes can accumulate on site for short periods until they are delivered to permitted off-site disposal facilities, typically by commercial waste disposal services. Options for sanitary wastewaters range from on-site disposal in septic systems, when circumstances allow, to off-site treatment and disposal in publicly owned treatment works. Some industrial wastes (e.g., spent cleaning solvents) may be hazardous, but well-established procedures exist for their management, disposal, and recycling. Wastes from herbicide applications could include empty containers and possibly some herbicide rinsing solutions.

Risks from public exposure to hazardous substances through air emissions from solar facilities are generally low because the few substances stored and used at the facilities in large quantities have low volatility and inhalation toxicity. Small quantities of combustion-related hazardous substances may be emitted from steam boilers using natural gas as an energy source at certain times.

Potential worker exposure to hazardous materials, wastes and contamination could result from spills or leaks of hazardous materials, improper waste management techniques, or from the use of herbicides to manage vegetation and control weed growth. Solar parabolic troughs could use substantial quantities of HTFs in pipes throughout the solar field and in connections between the solar field and the power block facility. Although these materials

would likely remain in their respective systems throughout the facility's operating life, contamination could result from spills or leaks in the HTF system.

Parabolic trough and power tower facilities would use hazardous chemicals to treat water used in the steam cycle, and the handling and transfer of these chemicals could cause spills or leaks. The maintenance of steam systems and wet-cooling systems would produce blowdown wastes, some of which would be generated in high volumes (e.g., lubricating oils, compressor oils, and hydraulic fluids); however, recycling options are likely to be available. Other wastes may need to be managed as hazardous wastes. Cooling towers could also provide an environment for the growth of the *Legionella* bacteria, which causes Legionnaires' disease.

Wind. Some of the occupational hazards associated with the construction of wind energy projects are similar to those of the heavy construction and electric power industries, while others are unique to wind energy projects (e.g., working at extreme heights, high winds, working near rotating or spinning equipment). In particular, the hazards of installing and repairing turbines are similar to those of building and maintaining bridges and other tall structures (Sørensen 1995). Gipe (1995) and Sørensen report multiple fatalities and serious injuries from construction of wind energy projects.

Currently molten salt (a mixture of sodium nitrate and potassium nitrate) is used as a TES medium in solar power plant facilities, although other substances are being investigated. Nitrate salts, which are used at extremely high temperatures, are highly reactive oxidizers that can accelerate and exacerbate fires and may react with reducing agents to cause fires. These substances can cause severe irritation through inhalation, ingestion, or dermal contact (LabChem 2009 and 2013).

The presence of highly reflective surfaces at parabolic trough plants could increase exposures to reflected sunlight of damaging intensity. Although the mirrors are relatively inaccessible to the general public, there is some potential for individuals to view intense reflected light from a project's fence line, depending on the distance. The highest risk of such exposures will occur when mirrors are being rotated from stowed to tracking position (Ho et al. 2009). There is also some risk of exposure to intense reflected light from power tower heliostats, again particularly when they are moved from stowed to tracking position or vice versa. An additional consideration is exposure to light reflected from the tower receiver. Although the height of the towers may reduce the risk of retinal damage at ground level, pilots have reported impacts.

Photovoltaic solar facilities do not require potentially hazardous liquids and gases during operations; however, photovoltaic panels do contain potentially hazardous metals in solid form. These metals are contained within the panels, but could be released to the environ-

ment on a small scale if one or several panels were broken, or on a larger scale if the solar field caught fire. Solar panels for utility-scale facilities in the United States typically use nonhazardous, silicon-based semiconductor material; however, semiconductors containing cadmium, copper, gallium, indium, and/or arsenic compounds, could be used as well. Of these, cadmium has the highest potential for use in utility-scale systems, and it has high toxicity. Substantial quantities of cadmium or other semiconductor metals may be present at utility-scale photovoltaic facilities. The release of cadmium and other heavy metals from broken modules or during fires would result in a negligible potential for human exposures (Electric Power Research Institute and Public Interest Energy Research 2003; Fthenakis and Zweible 2003).

Wind. The variety and amount of hazardous materials present during operation and maintenance of a wind facility would be minimal. Types of hazardous materials that may be used include those previously discussed for construction and decommissioning. Operation of wind facilities would generate small amounts of transmission and lubricating fluids requiring disposal. Solvents and cleaning agents used to maintain facilities would require disposal. The operation of wind facilities could potentially result in “shadow flicker,” due to alternating changes in light intensity that occur when rotating blades cast moving shadows. Additionally, the vibration and noise of rotating blades may cause illness in certain individuals. Dr. Nina Pierpont has called this Wind Turbine Syndrome (Pierpont 2009); however, more research is needed to determine whether there is a cause-and-effect relationship.

Geothermal. Potential health and safety impacts during operations could include exposure to geothermal fluid or steam during system failures, maintenance activities, or well blowouts. Additionally, exposure to hydrogen sulfide contained in steam emissions could occur. Similar to wind and solar, the use hazardous materials such as petroleum, oils, lubricants, paints, solvents, and herbicides could result in exposure. Cooling tower operations could also result in the growth of *Legionella* bacteria.

Airport Safety Hazards

Airports within the Plan Area and within 20 miles outside of the DRECP boundaries are shown in Volume III, Figure III.22-2 and listed in Appendix R1, Table R1.22-1. Though extremely bright receivers on top of solar power towers could pose a distraction hazard to aircraft pilots, the risk of retinal damage to plane occupants would be low. Steam from solar thermal and geothermal operations could interfere with pilot and air traffic controller visibility if a facility is located next to an airport. Tall stacks, towers and turbines could interfere with airplane takeoff and landing. High-velocity plumes emitted from solar thermal facilities using air-cooled condensers could affect low-flying aircraft. Potential effects on military operations are addressed in Chapter IV.24, Department of Defense Lands and Operations. Electromagnetic transmissions can occur when a large wind turbine is

placed between a radio, television, or microwave transmitter and receiver (Manwell et al. 2002). Disruptions of public safety communication systems (e.g., radio traffic related to emergency response activities) may be a public safety concern.

Wildland Fire Hazards

Operation of renewable energy facilities and their associated vegetation clearing activities could potentially cause fires. The high density of solar panels and the lack of space within the solar fields make fires within solar fields difficult to extinguish. Fires within solar fields also pose a potential health risk from inhalation of burning cadmium telluride, gallium arsenide, phosphorus, and battery acid.

Wind turbines can catch fire from excessive braking system friction, lightning strikes, electrical malfunctions, and flammable components. Fires at the top of the turbines are difficult to extinguish since fire truck ladders are too short to reach them. This can cause fires to spread to adjacent areas.

Transmission line operations can also cause wildfires due to conductors fallen in storms or because of arcing (or creating sparks). Proper maintenance can reduce the likelihood of these events. High-voltage transmission lines can also inhibit firefighting activities since firefighters cannot work near energized transmission lines.

Public Services

Renewable energy facility operations would not alter major access points or existing evacuation routes.

Operation of new renewable energy facilities would result in additional police and fire service calls; impacts to responding agencies or organizations would therefore occur. Renewable facilities in remote locations could require the expansion of existing police or fire facilities to serve these locations in reasonable response times.

Landfills

Operations and maintenance activities would generate small amounts of solid waste requiring either recycling or disposal.

Public Health and Safety

Unauthorized or illegal access by the public trying to climb towers or open electrical panels could lead to injuries. Dry vegetation and high winds may also create a fire hazard around facilities. Natural events such as tornadoes, earthquakes, severe storms, and fires could

cause injuries, loss of life, and the release of hazardous materials. HTFs used at solar facilities could pose an inhalation hazard in the case of fire. The risk of injury from wind turbine blade breakage as a result of rotor overspeed or material failure is low (Hau 2000).

Although there is the potential for intentional destructive acts that could affect human health and the environment, it is not possible to estimate the probability of sabotage, terrorism, or their impacts, so this issue is not further discussed.

Federal and state regulations define project developers' responsibilities for protecting critical infrastructure. They include prescribed actions and system performance requirements designed to protect the public and the environment from the adverse consequences of disruptions or failures, and to provide for system reliability and resiliency. Some protective measures and activities are obvious (e.g., fencing around electric substations and switchyards, routine surveillance and inspections), while others must remain confidential to maintain their effectiveness.

IV.22.2.2 Impacts of the Reserve Design

Conservation actions would have an overall positive effect on public services, wildland fire hazards, and emergency plans since renewable energy facilities and technologies would be concentrated in DFAs and restricted in conservation areas. Designation of reserve lands would restrict uses and reduce urban sprawl, which would concentrate calls for service in a more localized area. This promotes quicker response times and reduces the need for additional remote stations. The reserve design would reduce the likelihood and size of wildland fires by preserving large contiguous areas in existing conditions and reducing the interface between wildlands and development. The reserve of large areas of open space would ultimately result in less complicated and more effective emergency plans.

IV.22.2.3 Impacts of Bureau of Land Management Land Use Plan Decisions

IV.22.2.3.1 Impacts of Renewable Energy Development and Transmission on Bureau of Land Management 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.22.2.1. However, BLM is responsible for public services and safety on BLM lands, and would continue these responsibilities for future renewable energy development, as follows:

- BLM is responsible for hazardous materials and safety issues on BLM land. BLM has its Hazard Management and Resource Restoration Program, commonly known as Hazardous Materials Management. Any development on BLM land will be subject to this program in addition to the state and federal regulations described in Section III.22.1.

- BLM considers renewable energy development and transmission in its emergency planning.
- BLM provides law enforcement services to renewable energy and transmission facilities and conservation areas through enforcement rangers and special agents.
- BLM provides fire protection services and oversees wildland fire management through its fire management programs.

IV.22.2.3.2 Impacts of Bureau of Land Management Land Designations and Management Actions

The BLM LUPA does not include measures directly relating to public health, safety, and services. Because the BLM LUPA land designations would be managed to protect ecological, historic, cultural, scenic scientific, and recreation resources and values, development may be restricted or limited. This could affect the pattern of development, which may indirectly affect public services, wildland fire hazards, and emergency plans. For example, development may be scattered to avoid historic resources, sited in remote areas to avoid visual impacts and recreational resources, or focused in less remote areas to protect biological resource corridors and habitats. Contiguous development in more easily accessible areas would generally be beneficial for public services, wildland fire hazards, and emergency plans. Thus, the BLM land designations and management actions could have an adverse or beneficial impact on public services, wildland fire hazards, and emergency plans issues.

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 Special Recreation Management Area (SRMA) are presented in the LUPA worksheets in Appendix H.

IV.22.2.4 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, and would be applicable to the entire Plan Area. The General Conservation Plan (GCP) will 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.22.2.4.1 Natural Community Conservation Plan

The impacts of renewable energy development permitted under the NCCP would be the same as those defined for the Plan-wide impacts, including the typical impacts described in Section IV.22.2, and for each alternative described in Section IV.22.3.

IV.22.2.4.2 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.22.2. The locations where these impacts would occur will vary by alternative. Any differences in these impacts resulting from locational differences are described for each alternative.

IV.22.3 Impact Analysis by Alternative

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

IV.22.3.1 No Action Alternative

Under the No Action Alternative, the analysis of public health, safety, and services is based on foreseeable impacts associated with renewable energy development under current regulatory conditions. Renewable energy development would be authorized on a project-by-project basis. Under the No Action Alternative, solar energy development is far greater than any other technology (approximately 14,000 megawatts [MW], compared with 6,000 MW of wind and 300 MW of geothermal). An estimate of the potential development for each renewable energy technology under the No Action Alternative can be correlated to the estimate of permanent ground conversion impacts from projected renewable energy projects, as presented in Tables II.6-12 through II.6-17.

Under the No Action Alternative, the state's renewable energy goals would still be achieved absent the Plan. Renewable energy and transmission development, and mitigation for 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, and would continue to be dispersed throughout the Plan Area.

Under the No Action Alternative, renewable energy projects would occur within the available development areas shown in Figure II.2-1. The No Action Alternative includes approximately 9,788,000 acres of available land for renewable energy development, compared with 2,024,000 acres for renewable energy and transmission development associated with the Preferred Alternative (See Table II.3-1).

IV.22.3.1.1 Impacts in the Plan Area Under the No Action Alternative

IV.22.3.1.1.1 Impacts and Mitigation for Renewable Energy and Transmission Development in the No Action Alternative

This section presents the impact titles for each impact that would occur from renewable energy and transmission development.

Impact Assessment

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

As discussed in Section IV.22.2, all phases of renewable energy development would involve the transport, use, storage, and disposal of hazardous materials, as well as, to a limited extent, the operation of transmission lines. Hazardous materials include fuels, lubricating oils, hydraulic fluids, glycol-based coolants, lead-acid batteries, solvents, paints, cleaning agents, coatings, and herbicides. In addition to the typical wastes mentioned here, the development of solar facilities could involve the use of HTF, dielectric fluids, TES salts (sodium and potassium nitrates), and steam amendment chemicals.

In addition to the hazardous materials introduced into the site by renewable energy facilities and transmission components, sites may have existing contamination that could pose a risk to workers and the environment during site characterization, construction, operations, and decommissioning. Refer to Section IV.22.2.1, and Volume III, Table III.22-1.

Solar facility development would pose a greater risk for hazardous materials impacts due to the larger quantity and number of hazardous materials compared with wind or geothermal facilities. The risk would be greatest within the Cadiz Valley and Chocolate Mountains ecoregion subarea, which would have the largest amount of solar development in the No Action Alternative.

Construction, operation, and decommission activities would involve movement of soil materials. If soil containing the Valley Fever fungus is disturbed by construction, natural disasters, or wind, the fungal spores can be released into the air and spread. Cooling water associated with solar thermal and geothermal facilities may become contaminated with bacterial growth and potentially contain *Legionella* bacteria. In addition, operation of diesel-fueled equipment during construction, operation, and decommission activities would result in diesel particulate matter emissions.

Construction and operation of renewable energy facilities could lead to hazardous materials impacts from improper handling of existing hazardous waste conditions or improper

transport, use, storage, and disposal of hazardous materials. Potential hazardous material impacts that could occur under the No Action Alternative include increased fire risk, human health impacts, and environmental contamination, which could lead to environmental impacts to biological resources, surface water, groundwater, air quality, agriculture, grazing, and recreation.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

Airport safety hazards for the No Action Alternative would be similar to the typical impacts described in Section IV.22.2. Airport safety issues include the operation of tall structures such as solar power towers and cooling towers for geothermal and solar thermal, and turbines for wind facilities. Solar panels and mirrors could produce glare, and solar thermal and geothermal facilities could produce steam and high-velocity plumes that might interfere with aircraft safety. Airport safety hazard impacts are greatest where facilities would be within 2 miles of an airport or within an airport influence area as designated in a county's Airport Land Use Compatibility Plan.

Impact PS-3: Plan components would create an increased risk of wildland fire.

The No Action Alternative would allow renewable energy development to occur anywhere on desert land not protected by either legislation or other legal measures. Construction activities and expanded areas of development would increase the interface of wildlands and development. In addition, certain conditions increase the potential for spreading wildland fires, including clearing vegetation; the difficulty of extinguishing fires in solar panel fields and at the tops of wind turbines; wind turbine fire risks; hazardous materials fire risks; transmission line operations; and the introduction of people, equipment, and vehicles into remote areas.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

The large area of development under the No Action Alternative would mean a greater likelihood of renewable energy project development farther from police and fire stations. Additional police and fire service facilities or support may therefore be needed.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Construction, operations, maintenance, and decommissioning activities would generate solid waste. The demand for landfill space or recycling would be especially intense during decommissioning, when thousands of acres of industrial materials (e.g., steel, polycarbonate, wiring, pipes) would be removed.

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 Section III.22.1, Regulatory Setting. Because this Environmental Impact Report/Environmental Impact Statement (EIR/EIS) addresses amendments to BLM's land use plans, these plans are discussed separately in Volume III, Chapter 14 and are not included in this section.

Following is a summary of the requirements of the most relevant regulations that will reduce impacts on public health, safety, and services:

- Federal and state laws require prevention and cleanup of hazardous substance releases to air, water, and land.
- Federal and state laws govern hazardous waste identification, classification, generation, management, and disposal.
- Federal and state laws define worker safety standards and require the proper handling of hazardous materials and preparation of risk management plans.
- Counties require that businesses disclose the handling of hazardous materials and develop emergency response plans.
- California Fire Code requirements include design measures for solar photovoltaic power systems to reduce fire hazards (Section 605.11) as well as other general building, emergency access, and brush management requirements that reduce fire hazards.
- California law requires that local jurisdictions meet waste diversion goals and create waste management plans to meet specified waste diversion goals.
- Airport land use compatibility plans address potential land use compatibility issues between airports and their surrounding areas.
- Federal Aviation Administration regulations lay out requirements for air safety.
- Federal laws assign responsibilities for protecting critical infrastructure through a variety of prescribed actions and system performance requirements.

In addition, the Solar Programmatic EIS (Solar PEIS) Design Features and other existing land use plan requirements would apply. The following summarized Solar PEIS Design Features apply to all BLM-managed Solar Energy Zone (SEZ) lands:

- **HMW1-1:** Conduct site characterization, construction, operation, and decommissioning in compliance with applicable federal and state regulations; develop a Haz-

ardous Materials and Waste Management Plan that addresses the selection, transport, storage, and use of all hazardous materials.

- **HMW2-1:** Minimize hazardous materials and waste management design elements; provide reports of reportable releases or spills; implement “just in time” ordering procedures; survey project sites for unexploded ordnance; designate hazardous waste storage areas and facilities.
- **HMW3-1:** Comply with terms and conditions for hazardous materials and waste management; install sensors to monitor system integrity; implement robust site inspection and repair procedures.
- **HMW4-1:** Maintain emergency response capabilities throughout the reclamation and decommissioning periods.
- **HMW4-2:** Apply design features used in construction during reclamation and decommissioning.
- **MCA1-1:** Coordinate with BLM, military personnel, and civilian airspace managers early in the project planning process to identify and minimize impacts to airport and airspace use; comply with FAA regulations and Airport Land Use Compatibility Plans; consult with the U.S. Department of Defense to minimize or eliminate impacts to military operations.
- **WF-1-1:** Coordinate with BLM and other appropriate fire organizations to determine fire risk and methods to minimize risk; incorporate fire management measures in worker training; incorporate inspection and monitoring measures.
- **WF-2-1:** Site and design facilities to minimize fire risk; provide sufficient room for fire management; integrate vegetation management to minimize wildland fire risk
- **ER-1:** Develop measures to minimize the potential for a human or facility-caused fire to affect ecological resources.
- **WR2-1:** Develop measures to avoid, minimize, and mitigate impacts to surface and groundwater resources from hazardous spills, runoff, sediment buildup, and pesticides or fertilizers.
- **HS1-1:** Implement training and awareness measures for workers and the general public to minimize and address standard practices for the safe use of explosives and blasting agents and for fire safety and evacuation procedures.

Mitigation

Mitigation for any projects developed under the No Action Alternative would be similar to mitigation adopted by agencies for renewable energy projects that have been approved and constructed. Typical mitigation measures include the following:

- Conduct a database search and site characterization to determine if the site is contaminated and remediate as required.
- Develop a Hazardous Materials and Waste Management Plan, Spill Prevention and Emergency Response Plan, and a Health and Safety Plan to address hazardous materials safety issues.
- Implement strict dust control measures (speed limits, spraying water on unpaved roads) to avoid the spread of Valley Fever spores.
- Provide operational controls to avoid bacterial growth, including *Legionella*, in cooling towers.
- Develop Fire Management and Protection Plans to minimize wildland fire risks, including risks related to transmission line de-energization.
- Coordinate with Fire-Rescue Department/Emergency Medical Service responders to ensure adequate equipment and personnel for responses to emergency calls.
- Prepare Waste Management Plans to identify recycling, reuse, and other landfill diversion methods.

IV.22.3.1.1.2 Impacts from Reserve Design in the No Action Alternative

The No Action Alternative has no reserve design, but protection of existing Legislatively and Legally Protected Areas, such as wilderness, would continue. In addition, renewable energy projects would continue to be evaluated and approved with project-specific mitigation requirements. The continued protection of those areas would have no effect on public health, safety, and services since there would be no changes to protected areas or development patterns.

IV.22.3.1.2 Impacts on Bureau of Land Management Lands of Existing Bureau of Land Management Land Use Plans: No Action Alternative

Under the No Action Alternative, existing BLM land management plans within the Plan Area (California Desert Conservation Area [CDCA] Plan as amended, Bishop Resource Management Plan [RMP], and Bakersfield RMP) would continue to be implemented on BLM lands. BLM's management of public health, safety, and services under the laws, regulations, and policies listed in Volume II, Section II.3.2, would continue.

IV.22.3.1.3 Impacts of the Natural Community Conservation Plan: 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.22.3.1.1.

IV.22.3.1.4 Impacts of General Conservation Plan: 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. 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.22.3.1.1, but would be specific to nonfederal lands.

IV.22.3.1.5 Impacts Outside the Plan Area: No Action Alternative

IV.22.3.1.5.1 Impacts of Transmission Outside the Plan Area

Delivery of renewable energy from the Plan Area to load centers would require construction of new transmission lines in existing transmission corridors outside the Plan Area. These would be in the San Diego, Los Angeles, North Palm Springs–Riverside, and Central Valley areas. The impacts on public health, safety, and services are as follows.

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

Construction of transmission lines would involve the use of hazardous materials such as fuels, lubricating oils, hydraulic fluids, glycol-based coolants, lead-acid batteries, solvents, paints, cleaning agents, coatings, and herbicides. In addition to the hazardous materials introduced to the site by renewable energy facilities and transmission components, sites may have existing contamination that could pose a risk to workers and the environment during site construction. Construction would involve excavation and grading. Certain public health conditions could arise as well. Valley Fever fungus is endemic in some desert soils; if soil containing the fungus is disturbed, fungal spores could be released and inhaled.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

The presence of transmission towers and conductors where aircraft are likely to fly would be an air traffic safety concern. Airport safety hazard impacts are greatest where towers and lines would be located within 2 miles of an airport or within an Airport Land Use Compatibility Plan area. Flight safety hazards occur in situations where towers are 200 feet above ground surface and where conductors are strung in areas where aircraft are liable to fly, such as in valleys or canyons. The Federal Aviation Administration determines if the

location of a transmission line would pose a hazard and determines which towers and conductor spans require safety beacons and marker balls.

Impact PS-3: Plan components would create an increased risk of wildland fire.

Certain activities would increase the potential for wildland fire, including clearing of vegetation, transmission line operation, and introduction of people, equipment, and vehicles into remote areas. Portions of the transmission corridors outside the Plan Area are in highly urbanized areas where the risk of wildland fires is minimal because of the built-up nature of the surroundings. Where the corridors are in open vegetated landscapes, there is a higher risk. High-voltage transmission line rights-of-way (ROWs) are under the jurisdiction of the California Public Utilities Commission (CPUC), which has rules for line clearances relative to vegetation, structures, and the ground. In addition, jurisdictions such as the National Forest Service have specific fire safety requirements regarding clearances and ROW maintenance during construction, including prohibitions on work under certain high-risk conditions and during operation.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

During construction of transmission lines in high hazard areas, crews are required by the CPUC to have adequate fire suppression and to follow specific fire safety protocols, such as not parking in grass, keeping within approved work areas, and wetting areas before welding. Depending on the location and season, a fire monitor may be required to accompany crews. Because new lines are expected to be in existing corridors with existing lines, the same police, fire, and emergency services would serve the new line and there would be no need for additional service facilities.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Construction of transmission lines is temporary work and, once built, the lines require minimal staff to operate and maintain. Therefore, transmission outside the Plan Area would not be expected to generate solid waste.

IV.22.3.1.5.2 Impacts of Existing Bureau of Land Management Land Use Plans Outside the Plan Area

Under the No Action Alternative, the existing BLM CDCA Plan would continue to be implemented and renewable energy projects would still be developed through BLM's existing policies. Impacts on public health, safety, and services would be of the types described in Section IV.22.2, with similar mitigation measures included on a case-by-case basis.

Existing land designations—such as protected areas, ACECs, and National Scenic and Historic Trails—would continue to be managed to protect their associated values and resources. The protection of such resources would have no effect on public health, safety, and services since there would be no changes to either development patterns or development locations.

IV.22.3.1.6 California Environmental Quality Act Significance Determination: No Action Alternative

PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment. Renewable energy projects would involve the use of hazardous materials during all project phases (site characterization, construction, operations, maintenance, and decommissioning) and could cause hazards to the public or to the environment. In addition, renewable energy projects could be located on sites with existing hazardous material issues where construction and operations would increase that exposure to the public and the environment. Regulations and mitigation measures include site investigation and remediation of hazardous materials, and development of Hazardous Materials and Waste Management, Spill Prevention and Emergency Response, and Health and Safety plans that address hazardous materials safety issues. Construction and operational measures to avoid Legionnaires' disease and Valley Fever may be required. Because these measures would minimize the potential health and safety risks due to hazardous materials and risk of exposure to Legionnaires' disease and Valley Fever, impacts related to hazardous materials would be less than significant.

PS-2: Plan components could result in an airport or air traffic safety hazard. Renewable energy projects would include features such as tall cooling towers and plumes for solar thermal and geothermal plants, tall wind turbines, solar power towers, solar field mirrors and arrays, and large cranes during construction; all may interfere with airport safety. Regulations include coordination with airport managers and compliance with Airport Land Use Compatibility Plans and Federal Aviation Administration regulations. The required coordination would ensure that impacts remain less than significant by avoiding development of height, visual, or glare hazards.

PS-3: Plan components would create an increased risk of wildland fire. Certain aspects of renewable energy and transmission facility development would either increase the potential for wildland fire hazards or inhibit firefighting. Concerns include clearing of vegetation, the difficulty of extinguishing fires in solar panel fields and at the tops of the wind turbines, wind turbine fire risks, hazardous materials fire risks, and introduction of people, equipment and vehicles into remote areas. Typical mitigation measures include preparing and implementing Fire Management and Protection Plans. These measures would reduce

impacts to less than significant levels by both reducing the potential to start fires and ensuring effective emergency response plans.

PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities. Renewable energy development under the No Action Alternative would be located throughout the Plan Area and could be far from local police, fire, and emergency service facilities. Typical mitigation measures include coordinating with fire and emergency service providers to identify and supply additional support such as personnel or fire equipment. These measures would reduce the impact to less than significant levels by ensuring that service providers have adequate personnel and equipment to meet both their existing responsibilities and new responsibilities created by renewable energy projects.

PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills. The construction, operation, maintenance, and decommissioning of renewable energy facilities under the No Action Alternative would generate a large amount of waste that may result in the need for additional or expanded landfills. Typical mitigation measures include completing and adhering to a waste management plan. The plan and its measures would reduce impacts to less than significant levels by ensuring that recycling, reuse, and landfill diversion methods limit waste creation and therefore ensure adequate landfill capacities.

IV.22.3.2 Preferred Alternative

IV.22.3.2.1 Plan-wide Impacts of Implementing the Desert Renewable Energy Conservation Plan: Preferred Alternative

IV.22.3.2.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

As discussed under Section IV.22.2, all phases of renewable energy projects under the Preferred Alternative would involve the transport, use, storage, and disposal of hazardous materials. Hazardous materials include fuels, lubricating oils, hydraulic fluids, glycol-based coolants, lead-acid batteries, solvents, paints, cleaning agents, coatings, and herbicides. Additionally, solar facilities may involve the use of HTF, dielectric fluids, TES salts (sodium and potassium nitrates), and steam amendment chemicals.

In addition to the hazardous materials associated with renewable energy facilities and transmission components, sites may have existing contamination that could pose a risk to workers and the environment during site characterization, construction, operations, and decommissioning. Refer to Volume III, Section III.22.2.1 and Table III.22-1.

Solar facilities would create greater risks from hazardous materials due to the larger quantity and nature of these materials, as compared with wind or geothermal facilities. Solar thermal and geothermal facilities use cooling towers that provide breeding grounds for *Legionella* bacteria.

Renewable energy facility site characterization, construction, operations, maintenance, and decommissioning could lead to hazardous materials impacts from improper handling of existing hazardous wastes or improper transport, use, storage, or disposal of hazardous materials. Extensive movement of soil could lead to airborne transmission of Valley Fever spores. Additional hazardous material impacts that could occur under the Preferred Alternative would be increased risk of fires, human health impacts, and environmental contamination. This could lead to environmental impacts related to biological resources, surface water, groundwater, air quality, agriculture, grazing, and recreation.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

Airport safety hazards for the Preferred Alternative would be similar to the typical impacts discussed in Section IV.22.2. Airport safety issues include the construction and operation of tall structures such as focusing towers for solar facilities, steam stacks for geothermal facilities, and turbines for wind facilities. In addition, solar facilities can produce glare and both solar thermal and geothermal facilities produce steam that could interfere with airport safety. Solar thermal projects using air-cooled condensers emit high-velocity plumes that affect low-flying aircraft. The potential for projects to create airport safety hazards is greatest where facilities would be located within 2 miles of an airport or within an Airport Land Use Compatibility Plan area. There are 12 airports within Plan DFAs.

Impact PS-3: Plan components would create an increased risk of wildland fire.

Renewable energy facilities could increase the potential for wildland fire hazards through clearing of vegetation, the use of hazardous materials, and the introduction of people, equipment, and vehicles into remote areas. The difficulty of extinguishing fires in solar panel fields and at the tops of the wind turbines could spread fires more quickly. The Preferred Alternative would include 2,024,000 acres of DFAs, which is considerably less acreage than in the No Action Alternative, with comparably less interface of wildlands and renewable energy development.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

As described in Section IV.22.2, renewable energy projects would generate additional calls to local police and fire services. The Preferred Action would concentrate the majority of development to 2,024,000 acres. Much of the development would be near existing fire stations (Volume III, Figure III.22-3) and existing police stations (Volume III, Figure III.22-4), and could affect the ability of responders to handle additional calls. Responders may need additional personnel or equipment.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Construction, operation, maintenance, and decommissioning activities would generate solid waste. The demand for landfill space or recycling would be especially intense during decommissioning, when thousands of acres of industrial materials (steel, polycarbonate, wiring, pipes) would be removed. This could lead to a need for new or expanded solid waste facilities.

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 FAAs, a LUPA would not be required. FAAs for each alternative are shown in Table IV.1-2 and Figure II.3-1 for the Preferred Alternative 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, though additional assessment would be needed.

Because most of the FAAs are presented as “undesigned areas” in the action alternatives, there would be no difference between 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 potentially create impacts, as described in Impacts PS-1 to PS-5.

Special Analysis Areas. There are two areas defined as SAAs, representing areas that are subject to ongoing analysis. These areas are located in the Silurian Valley and just west of

Highway 395 in Kern County, in rural areas. The SAAs 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. Siting facilities at these SAA areas has the potential for impacts as described as PS-1 to PS-5.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands as screened for the DRECP and EIR/EIS 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 potentially result in public safety and service impacts as described as PS-1 to PS-5.

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 covered by the Plan would be lessened. The Plan incorporates Conservation and Management Actions (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 (Volume II, Section II.3.1.1) 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. No CMA elements are relevant to public health, safety, and services.

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.22.3.1.1.1.

Mitigation Measures

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

Mitigation Measures for Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

PS-1a **Implement hazardous material and waste minimization measures.** The developer shall implement the following requirements:

- a) Conduct a database search to determine past site activities. Complete a Phase I Environmental Site Assessment to determine the presence or absence of hazardous materials, including unexploded ordnance, and conduct remediation if necessary.
- b) Provide dust suppression measures as defined in air quality measures (see Chapter IV.2, Air Quality) to lessen potential exposure to Valley Fever spores.
- c) Develop and implement a Cooling Water Management Plan (if applicable) to reduce the potential for bacterial growth in cooling towers.

Mitigation Measures for Impact PS-2: Plan components could result in an airport or air traffic safety hazard. No mitigation is required because existing regulation requires coordination with the FAA and other agencies.

Mitigation Measures for Impact PS-3: Plan components would create an increased risk of wildland fire.

PS-3a **Prepare a Fire Management and Protection Plan.** The developer shall prepare a plan to address fire hazard risks and identify fire management and protection measures to reduce that risk. Specific measures may include, but are not limited to, brush management, building design measures, siting considerations, emergency access, adequate fire-fighting water supply and pressure, and evacuation routes.

Mitigation Measures for Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency response services or facilities.

PS-4a **Coordinate with Emergency Response Agencies.** The developer shall coordinate with police and fire response organizations and agencies to determine

ability of responders to provide adequate response and provide support (personnel or equipment) to facilitate response.

Mitigation Measures for Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

PS-5a Complete a Waste Management Plan for construction and decommissioning. The Waste Management Plan shall identify the projected waste generated by the activity and feasible methods to divert a minimum of 75% of waste from landfills, such as sorting and recycling of materials, reuse of materials, and waste reduction measures.

IV.22.3.2.1.2 Impacts of the Reserve Design

The Preferred Alternative would include 6,177,000 acres of BLM LUPA Conservation Designations, and 1,142,000 acres of Conservation Planning Areas. As described in Section IV.22.3.1.1.2 for the No Action Alternative, existing conservation and conservation of Reserve Design Lands would not create new impacts with respect to public health, safety, and services. On conserved lands, there would also be no impacts related to energy development. For the Preferred Alternative, less land than under the No Action Alternative would be available for development; therefore the interface of developed and undeveloped areas would decrease, reducing potential fire risk. Similar to the No Action Alternative, other impacts such as occupational hazards, airport hazards, hazardous materials, and other related impacts would not occur on conserved lands as these impacts are directly linked to renewable energy development.

IV.22.3.2.2 Impacts of Desert Renewable Energy Conservation Plan Land Use Plan Amendment on Bureau of Land Management 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.22.3.2.2.1 Impacts from Renewable Energy and Transmission Development on Bureau of Land Management Land

The typical impacts from the various renewable energy and transmission technologies on BLM lands will be the same as those described in the Plan-wide analysis in Section IV.22.3.2.1.1. LUPA decisions would determine the specific locations where renewable energy and transmission development would be allowed, which may encourage or restrict development in some areas. Also, BLM would be responsible for public services and safety on

BLM lands as described in Section IV.22.3.1. Public health, safety, and service impacts would be largely limited to DFAs and would be similar to those described in Section IV.22.3.2.1.1.

IV.22.3.2.2.2 Impacts of Changes to Bureau of Land Management Land Designations

The Preferred Alternative does not include changes to existing BLM guidance on public health, safety, and services but would change the pattern of development. Under this alternative, the focus of preservation on habitat connectivity and cultural-botanical resource locations concentrates on development near existing public service facilities. These changes would not affect hazardous materials, airport hazards, and landfill issues.

IV.22.3.2.3 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 conservation and management actions under the NCCP is therefore equivalent to the Plan-wide analysis of the interagency alternatives, as described in Section IV.22.3.2.1.

IV.22.3.2.4 Impacts of General Conservation Plan

The impacts of the GCP for the Preferred Alternative would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

IV.22.3.2.5 Impacts Outside the Plan Area

IV.22.3.2.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on public health, safety, and services would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.2.3.1.5.1).

IV.22.3.2.5.2 Impacts of Bureau of Land Management Land Use Plan Amendment Decisions Outside the Plan Area

Under the proposed BLM LUPA, the only changes outside the Plan Area would be the designation of National Landscape Conservation System (NLCS) lands, ACECs, National Scenic and Historic Trails management corridors, Visual Resource Management (VRM) classes,

and new land allocations to replace multiple use classes on CDCA lands. These changes emphasize habitat connectivity and cultural botanical resource locations and are similar to those described in Section IV.22.3.2.2.2. BLM LUPA decisions outside the Plan Area would have no effect on fire risk and response, hazardous materials, airport safety, or landfills.

IV.22.3.2.6 California Environmental Quality Act Significance Determination for the Preferred Alternative

PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment. Project development may encounter existing site contamination. Hazardous materials used during all project phases could injure workers or the public if mishandled, released, or disposed of improperly. Soil disturbance could release Valley Fever spores. Cooling towers associated with solar thermal and geothermal facilities could provide a breeding ground for *Legionella* bacteria. Implementation of existing laws and regulations and Mitigation Measure PS-1a would reduce the impact to a less than significant level since potential hazards would be minimized.

PS-2: Plan components could result in an airport or air traffic safety hazard. Renewable energy and transmission line projects would include tall features and other components that may interfere with airport safety and military operations. Future facilities would be required to comply with existing laws and regulations. These laws and regulations require coordination with BLM, military, and fire organizations and include applicable Airport Land Use Compatibility Plans, Federal Aviation Administration regulations, and associated Federal Aviation Administration review requirements. Overall, compliance with existing laws and regulations would ensure that future development would not create air traffic safety hazards.

PS-3: Plan components would create an increased risk of wildland fire. Clearing of vegetation, use of hazardous materials, and the general introduction of people, equipment, and vehicles into remote areas could increase the potential for wildland fire hazards. The difficulty of extinguishing fires in solar panel fields and at the tops of the wind turbines could increase the spread of fires. Requiring a specific design and fire protection and response measures would reduce impacts to a less than significant level. Implementation of PS-3a, which requires a Fire Management and Protection Plan, would reduce fire risk to less than significant levels.

PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities. Fires resulting from renewable energy and transmission line development could strain the ability of fire, police and emergency service providers to respond adequately. Construction traffic can cause dramatic increases in baseline traffic on local roadways, resulting in a greater need for police or highway patrol and emergency

response to traffic accidents. There could be a need for short-term expansion of police or emergency response services but not for law enforcement stations. Renewable facilities proposed in remote locations could require expansion of existing facilities or additional substations to serve these locations at reasonable response rates. Implementation of Mitigation Measure PS-4a would ensure that impacts are less than significant by requiring that project developers coordinate with police, fire, and emergency service providers.

PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills. Project development and decommissioning would generate waste that could exceed the capacity of local landfills. Mitigation Measure PS-5a would reduce the impact to a less than significant level by requiring diversion of waste from landfills.

IV.22.3.2.7 Comparison of the Preferred Alternative With the 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.22.3.2.7.1 Preferred Alternative Compared With No Action Alternative for Plan-wide Desert Renewable Energy Conservation Plan

The Preferred Alternative concentrates renewable energy development in areas closer to fire and emergency service facilities relative to the No Action Alternative. The reduction in acreage available for development compared with the No Action Alternative reduces the wildland fire hazard interface and potential fire risk. Impacts to hazardous waste, airport safety, and landfill impacts would be similar to the No Action Alternative.

IV.22.3.2.7.2 Preferred Alternative Compared With the No Action Alternative for the Bureau of Land Management Land Use Plan Amendment

The BLM LUPA would not affect existing BLM guidance on public health, safety, and services but would change the pattern of development. The Preferred Action Alternative includes BLM LUPA that designate 367,000 acres of DFAs. Compared with the No Action Alternative, which allows development on 2,817,000 acres, the Preferred Alternative would result in a more concentrated development on BLM lands, which would reduce fire risk and may improve the provision of BLM public health, safety, and services as described in Section IV.22.2.3.1.

IV.22.3.2.7.3 Preferred Alternative Compared With the No Action Alternative for Natural Community Conservation Plan

The impacts of the NCCP for the Preferred Alternative are the same as those defined in Section IV.22.3.2.1 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.22.3.2.7.4 Preferred Alternative Compared With the No Action Alternative for the General Conservation Plan

The public health, safety, and services impacts of the GCP for the Preferred Alternative would be similar to those defined for the No Action Alternative, except that they would occur on nonfederal lands only.

IV.22.3.3 Alternative 1

IV.22.3.3.1 Plan-wide Impacts of Implementing the Desert Renewable Energy Conservation Plan: Alternative 1

IV.22.3.3.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

Impacts of Alternative 1 would be generally similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1. Alternative 1 has the most solar development (15,000 MW) of any alternative; as discussed previously, hazardous material risk is higher for solar technologies.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

Impacts of Alternative 1 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1. However, fewer airports (10 versus 12 in Preferred Alternative) are within DFAs in Alternative 1, thus reducing impacts. Alternative 1 has the least amount of wind development (400 MW), reducing airport safety conflicts and communication interference from wind turbines.

Impact PS-3: Plan components would create an increased risk of wildland fire.

Impacts of Alternative 1 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1. However, Alternative 1 would include 1,070,000 acres of DFA areas clustered in fewer locations, which would reduce the interface of wildlands and development to about half the area of Preferred Alternative DFAs and thus reduce fire risk.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

Impacts of Alternative 1 would be similar to impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Impacts of Alternative 1 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Study Area Lands

Future Assessment Areas. There are no FAAs in Alternative 1.

Special Analysis Areas. SAAs in this alternative would be conservation lands. Designating the SAAs as conservation would have no impact on public health, safety, and services. Impacts would be the same as those explained for the Plan-wide reserve design in the Section IV.22.3.3.1.2, Impacts of the Reserve Design.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands as screened for the DRECP and EIR/EIS 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 potentially result in public safety and service impacts as described in PS-1 to PS-5. Although there are an additional 6 airports within 5 miles of these Variance Lands, regulatory requirements and BLM land use plans would limit their impacts.

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 covered by the Plan would be lessened. 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.3.1.1) 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. There are no CMAs that apply specifically to Alternative 1 for public health, safety, and services.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will 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.22.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures will be applied to further reduce some of the DRECP's adverse impacts. The mitigation measures for Alternative 1 include Mitigation Measures PS-1a, PS-4a, and PS-5a as described for the Preferred Alternative in Section IV.22.3.2.1.1.

IV.22.3.3.1.2 Impacts from Reserve Design

Reserve Design Lands for Alternative 1 include 15,039,000 acres of existing conservation, BLM LUPA Conservation Designations, and Conservation Planning Areas. The Reserve Design Lands would result in minimal impacts to public health, safety, and services and would therefore not either generate new need for public services or result in new safety issues.

IV.22.3.3.2 Impacts of Desert Renewable Energy Conservation Plan Land Use Plan Amendment on Bureau of Land Management 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.22.3.3.2.1 Impacts from Renewable Energy and Transmission Development on Bureau Land Management Land

The typical public health, safety, and services impacts from the various renewable energy and transmission technologies on BLM lands would be the same as those described in Section IV.22.3.3.1. BLM would be responsible for public health, safety, and services on BLM lands as described in Section IV.22.3.1.

IV.22.3.3.2.2 Impacts of Changes to Bureau of Land Management Land Designations

Alternative 1 would not alter BLM public health, safety, and services regulations but would change the pattern of development. This would focus development closer to existing public service facilities. BLM land designation changes would have no effect on hazardous materials, airport hazards, or landfill issues.

IV.22.3.3.3 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.22.3.2.1 for the Plan-wide analysis.

IV.22.3.3.4 Impacts of General Conservation Plan: Alternative 1

The impacts of the GCP for Alternative 1 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

IV.22.3.3.5 Impacts Outside the Plan Area: Alternative 1

IV.22.3.3.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on public health, safety, and services would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.22.3.1.5.1, Impacts of Transmission Outside the Plan Area in No Action Alternative.

IV.22.3.3.5.2 Impacts of Bureau of Land Management Land Use Plan Amendment Decisions Outside the Plan Area

Under the proposed BLM LUPA, the only changes outside the Plan Area would be the designation of NLCS lands, ACECs, National Scenic and Historic Trails management corridors, VRM classes, and new land allocations to replace multiple-use classes on CDCA lands. BLM LUPA decisions outside the Plan Area would have no effect on fire risk and response, hazardous materials, airport safety, or landfills.

IV.22.3.3.6 California Environmental Quality Act Significance Determination for Alternative 1

PS-1: Plan components or conditions that could result in a hazard to the public or environment. Hazardous material impacts of Alternative 1 would be the same as the Preferred Alternative. In addition to existing regulations, Mitigation Measure PS-1a would be required to ensure that impacts are less than significant. Refer to Section IV.22.3.2.6.

PS-2: Plan components could result in an airport or air traffic safety hazard. Airport safety hazard impacts of Alternative 1 would be slightly less due to the avoidance of DFAs near 2 of the 12 airports in the DRECP, but the significance of the impacts would be the same as for the Preferred Alternative. Implementation of existing regulatory requirements would ensure that impacts are less than significant. Refer to Section IV.22.3.2.6.

PS-3: Plan components would create an increased risk of wildland fire. The severity of wildland fire impacts would be slightly less than the Preferred Alternative due to reduced wind development and a decrease in wildland interface. No mitigation is recommended because implementation of PS-3a, requiring preparation of a Fire Management and Protection Plan, would ensure that impacts would be less than significant. Refer to Section IV.22.3.2.6.

PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities. Alternative 1 would have similar police, fire, and emergency service facility impacts as the Preferred Alternative. Implementation of Mitigation Measure PS-4a would ensure that impacts are less than significant. Refer to Section IV.22.3.2.6.

PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills. The Alternative 1 landfill facility impact would be the same as for the Preferred Alternative. Implementation of Mitigation Measure PS-5a would reduce this impact to a less than significant level by reducing waste deposited into landfills. Refer to Section IV.22.3.2.6.

IV.22.3.3.7 Comparison of Alternative 1 With the 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.22.3.3.7.1 Alternative 1 Compared With the Preferred Alternative for Plan-wide Desert Renewable Energy Conservation Plan

Alternative 1 impacts would be generally similar to the Preferred Alternative (see Sections IV.22.3.2.1.1 and IV.22.3.3.6). While hazardous material and landfill impacts of Alternative 1 would be similar, impacts to airport safety and communication interference would be slightly less due to the reduced amount of wind development and the fewer number of airports within DFAs. Fire risk and emergency response needs would be less than for the Preferred Alternative given the geographically confined nature of the DFAs.

IV.22.3.3.7.2 Alternative 1 Compared With the Preferred Alternative for the Bureau of Land Management Land Use Plan Amendment

Neither the Preferred Alternative nor Alternative 1 would affect existing BLM guidance on public health, safety, and services.

IV.22.3.3.7.3 Alternative 1 Compared With the 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.22.3.2.1 for the Plan-wide analysis. Alternative 1 impacts would be generally similar to impacts from the Preferred Alternative (see Sections IV.22.3.2.1.1 and IV.22.3.3.6). While hazardous material and landfill impacts of Alternative 1 would be similar, impacts to airport safety and communication interference would be slightly less due to the reduced amount of wind development and fewer airports within DFAs. Fire risk and emergency response needs would be less than for the Preferred Alternative given the geographically confined nature of the DFAs.

IV.22.3.3.7.4 Alternative 1 Compared With the Preferred Alternative for the General Conservation Plan

Impacts from development on nonfederal lands under Alternative 1 would be generally similar to impacts under the Preferred Alternative, but they would occur on nonfederal lands only.

IV.22.3.4 Alternative 2

IV.22.3.4.1 Plan-wide Impacts of Implementing the Desert Renewable Energy Conservation Plan: Alternative 2

IV.22.3.4.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

Impacts of Alternative 2 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

Impacts of Alternative 2 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1. This alternative has 13 airports within DFAs, as compared with 12 airports for the Preferred Alternative.

Impact PS-3: Plan components would create an increased risk of wildland fire.

Alternative 2 has the most DFA acres (2,473,000) and the largest amount of wind development (6,000 MW) as compared with the other action alternatives. These features, combined with the geographically dispersed locations of the DFAs, increase the potential for wildland fire risk.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

Impacts of Alternative 2 would be similar to the impacts described in Section IV.22.3.2.1.1 for the Preferred Alternative.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Impacts of Alternative 2 would be similar to the impacts described in Section IV.22.3.2.1.1 for the Preferred Alternative.

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 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. Development of the FAAs would result in impacts similar to those identified for the DFAs for Plan-wide impacts. Although there are an additional 3 airports within 5 miles of these FAAs, regulatory requirements and BLM land use plans would limit their impacts.

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

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands as screened for the DRECP and EIR/EIS based on BLM screening criteria. Conservation or development of the DRECP Variance Lands would not alter public health, safety, and services.

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 covered by the Plan would be lessened. The Plan incorporates CMAs for each alternative, including specific biological reserve design components and LUPA components. Also, implementing 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.3.1.1) 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. No CMAs are specific to public health, safety, and services for Alternative 2.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will 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.22.3.1.1.1. In addition, other existing Land Use Plan requirements identified for the No Action Alternative would apply.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures will be applied to further reduce some of the DRECP's adverse impacts. The mitigation measures for Alternative 2 include Mitigation Measures PS-1a, PS-4a, and PS-5a as described for the Preferred Alternative in Section IV.22.3.2.1.1.

IV.22.3.4.1.2 Impacts from Reserve Design

Reserve Design Lands for Alternative 2 include 15,087,000 acres of existing conservation, BLM LUPA Conservation Designations, and Conservation Planning Areas. The Reserve Design Lands would result in minimal impacts with respect to public health, safety, and services since they would not either generate a new need for public services or create new health or safety issues.

IV.22.3.4.2 Impacts of the Desert Renewable Energy Conservation Plan Land Use Plan Amendment on Bureau of Land Management 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.22.3.4.2.1 Impacts from Renewable Energy and Transmission Development on Bureau of Land Management Land

The typical public health, safety, and services impacts from the various renewable energy and transmission technologies on BLM lands would be the same as those described in Section IV.22.3.3.1. BLM would be responsible for public health, safety, and services on BLM lands as described in Section IV.22.3.1.

IV.22.3.4.2.2 Impacts of Changes to Bureau of Land Management Land Designations

Alternative 2 does not include changes to BLM guidance related to public health, safety, and services.

IV.22.3.4.3 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.22.3.2.1 for the Plan-wide analysis.

IV.22.3.4.4 Impacts of General Conservation Plan: Alternative 2

The impacts of the GCP for Alternative 2 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

IV.22.3.4.5 Impacts Outside the Plan Area: Alternative 2

IV.22.3.4.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on public health, safety, and services would be the same under all alternatives. These impacts are as described for the No Action Alternative in Section IV.22.3.1.5.1, Impacts of Transmission Outside the Plan Area in No Action Alternative.

IV.22.3.4.5.2 Impacts of Bureau of Land Management Land Use Plan Amendment Decisions Outside the Plan Area

Under the proposed BLM LUPA, the only changes outside the Plan Area would be the designation of NLCS lands, ACECs, National Scenic and Historic Trails management corridors, VRM classes and new land allocations to replace multiple-use classes on CDCA lands. BLM LUPA decisions outside the Plan Area would have no effect on fire risk and response, hazardous materials, airport safety, or landfills.

IV.22.3.4.6 California Environmental Quality Act Significance Determination for Alternative 2

PS-1: Plan components or conditions that could result in a hazard to the public or environment. The hazardous material impacts of Alternative 2 would be the same as for the Preferred Alternative. Implementation of Mitigation Measure PS-1a would reduce impacts to a less than significant level. Refer to Section IV.22.3.2.6.

PS-2: Plan components could result in an airport or air traffic safety hazard. Airport safety hazard impacts of Alternative 2 would be slightly increased compared with the Pre-

ferred Alternative due to the additional airport within a DFA. Implementation of CMAs and existing regulations would ensure that impacts are not significant. Refer to Section IV.22.3.2.6.

PS-3: Plan components would create an increased risk of wildland fire. While the severity of the wildland fire impact would be slightly increased for Alternative 2 due to an increase in wildland interface, implementation of CMAs and Fire Management and Protection Plans (Mitigation Measure PS-3a) would ensure that wildland fire hazard impacts would be less than significant. Refer to Section IV.22.3.2.6.

PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities. Alternative 2 would have similar police, fire, and emergency service facility impacts as for the Preferred Alternative. Mitigation Measure PS-4a would reduce impacts to a less than significant level. Refer to Section IV.22.3.2.6.

PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills. Alternative 2 landfill facility impacts would be the same as the Preferred Alternative. Implementation of CMAs and Mitigation Measure PS-5a would reduce this impact to a less than significant level. Refer to Section IV.22.3.2.6.

IV.22.3.4.7 Comparison of Alternative 2 With the 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.22.3.4.7.1 Alternative 2 Compared With the Preferred Alternative for Plan-wide Desert Renewable Energy Conservation Plan

Alternative 2 impacts would be similar to the Preferred Alternative (see Sections IV.22.3.2.1.1 and IV.22.3.4.6). However, airport safety and wildland fire impacts would be increased due to one additional airport within DFAs, the greater amount of DFA acres, geographic dispersal of DFAs within the Plan Area, and greater wind development.

IV.22.3.4.7.2 Alternative 2 Compared With the Preferred Alternative for the Bureau of Land Management Land Use Plan Amendment

Neither the Preferred Alternative nor Alternative 2 would affect existing BLM guidance related to public health, safety, and services.

IV.22.3.4.7.3 Alternative 2 Compared With the Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 2 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis. However, airport safety and wildland fire impacts would be increased due to one additional airport within DFAs, the greater amount of DFA acres, geographic dispersal of DFAs within the Plan Area, and greater wind development.

IV.22.3.4.7.4 Alternative 2 Compared With the Preferred Alternative for the General Conservation Plan

Impacts from development on nonfederal land under Alternative 2 would be generally similar to impacts under the Preferred Alternative but would occur on nonfederal land only.

IV.22.3.5 Alternative 3

IV.22.3.5.1 Plan-wide Impacts of Implementing the Desert Renewable Energy Conservation Plan: Alternative 3

IV.22.3.5.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

Impacts of Alternative 3 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

Impacts of Alternative 3 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Impact PS-3: Plan components would create an increased risk of wildland fire.

Alternative 3 would include 1,406,000 acres of DFA areas, less than the Preferred Alternative. This, coupled with the location of DFAs closer to existing development, would reduce the interface of wildlands and development and slightly reduce fire hazard risk.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

Impacts of Alternative 3 would be similar to the impacts described in Section IV.22.3.2.1.1 for the Preferred Alternative.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Impacts of Alternative 3 would be similar to the impacts described in Section IV.22.3.2.1.1 for the Preferred Alternative.

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 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. Fewer FAA acres are included in Alternative 3; impacts from development of the FFAs would be similar in nature, but at a reduced level, to impacts identified for the Preferred Alternative.

Special Analysis Areas. Alternative 3 includes the SAAs as conservation areas. Designating the SAAs as conservation would have no impact on public health, safety and services. Impacts would be the same as those explained for the Plan-wide reserve design in Section IV.22.3.5.1.2, Impacts of the Reserve Design.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands as screened for the DRECP and EIR/EIS 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 or conservation of the DRECP Variance Lands would not alter public health, safety, and services since adequate measures to guide facility siting to avoid such impacts are incorporated into the Plan. There are no DRECP Variance Lands in Alternative 3.

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 covered by the Plan would be lessened. 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.3.1.1) 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 also be applied to nonfederal lands. There are no specific CMAs relevant to public health, safety, and services for Alternative 3.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will 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.22.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures will be applied to further reduce some of the DRECP's adverse impacts. The mitigation Measures for Alternative 3 include Mitigation Measures PS-1a, PS-4a, and PS-5a as described for the Preferred Alternative in Section IV.22.3.2.1.1.

IV.22.3.5.1.2 Impacts from Reserve Design

Reserve Design Lands for Alternative 3 include 15,161,000 acres of existing conservation, BLM LUPA Conservation Designations, and Conservation Planning Areas. The Reserve Design Lands would result in minimal impacts to public health, safety, and services and would not either generate a new need for public services or result in new safety issues.

IV.22.3.5.2 Impacts of the Desert Renewable Energy Conservation Plan Land Use Plan Amendment on Bureau of Land Management 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.22.3.5.2.1 Impacts from Renewable Energy and Transmission Development on Bureau of Land Management Land

The typical public health, safety, and services impacts from the various renewable energy and transmission technologies on BLM lands would be the same as those described in Section IV.22.3.3.1. BLM would be responsible for public health, safety, and services on BLM lands as described in Section IV.22.3.1.

IV.22.3.5.2.2 Impacts of Changes to Bureau of Land Management Land Designations

Alternative 3 does not include changes to existing BLM guidance related to public health, safety, and services.

IV.22.3.5.3 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.22.3.2.1 for the Plan-wide analysis.

IV.22.3.5.4 Impacts of General Conservation Plan: Alternative 3

The impacts of the GCP for Alternative 3 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis, but would occur on nonfederal lands only.

IV.22.3.5.5 Impacts Outside the Plan Area: Alternative 3

IV.22.3.5.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on public health, safety, and services would be the same under all alternatives. These impacts are described for the No Action Alternative in Section IV.22.3.1.5.1.

IV.22.3.5.5.2 Impacts of Bureau of Land Management Land Use Plan Amendment Decisions Outside the Plan Area

Under the proposed BLM LUPA, the only changes outside the Plan Area would be the designation of NLCS lands, ACECs, National Scenic and Historic Trails management corridors, VRM classes, and new land allocations to replace multiple-use classes on CDCA lands. BLM LUPA decisions outside the Plan Area would have no effect on fire risk and response, hazardous materials, airport safety, or landfills.

IV.22.3.5.6 California Environmental Quality Act Significance Determination for Alternative 3

PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment. Hazardous material impacts of Alternative 3 would be the same as for the Preferred Alternative. Implementation of CMAs and Mitigation Measure PS-1a would reduce impacts to a less than significant level. Refer to Section IV.22.3.2.6.

PS-2: Plan components could result in an airport or air traffic safety hazard. Airport safety impacts of Alternative 3 would be the same as for the Preferred Alternative. Existing regulations and implementation of CMAs would ensure that impacts are not significant. Refer to Section IV.22.3.2.6 for additional discussion.

PS-3: Plan components would create an increased risk of wildland fire. The wildland fire impacts would be similar but slightly reduced compared with the Preferred Alternative due to a decrease in wildland interface. Implementation of Fire Management and Protection Plans (Mitigation Measure PS-3a) would ensure that impacts would be less than significant. Refer to Section IV.22.3.2.6.

PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities. Alternative 3 would have similar police, fire, and emergency service facility impacts as the Preferred Alternative. Mitigation Measure PS-4a would reduce impacts to a less than significant level. Refer to Section IV.22.3.2.6 for additional discussion.

PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills. Alternative 3 landfill facility impacts would be the same as for the Preferred Alternative. Implementation of CMAs and Mitigation Measure PS-5a would reduce this impact to a less than significant level. Refer to Section IV.22.3.2.6 for additional discussion.

IV.22.3.5.7 Comparison of Alternative 3 With the 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.22.3.5.7.1 Alternative 3 Compared With the Preferred Alternative for the Plan-wide Desert Renewable Energy Conservation Plan

Alternative 3 impacts would be similar to the Preferred Alternative (see Section IV.22.3.5.6). However, wildland fire risk would be slightly lower under Alternative 3 due to reduced DA acres and wildland interface.

IV.22.3.5.7.2 Alternative 3 Compared With the Preferred Alternative for the Bureau of Land Management Land Use Plan Amendment

Neither the Preferred Alternative nor Alternative 3 would affect existing BLM guidance on public health, safety, and services.

IV.22.3.5.7.3 Alternative 3 Compared With the Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 3 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis, with the exception that wildland fire risk would be slightly lower.

IV.22.3.5.7.4 Alternative 3 Compared With the Preferred Alternative for the General Conservation Plan

Impacts from development on nonfederal land under Alternative 3 would be generally similar to impacts under the Preferred Alternative but would occur on nonfederal land only.

IV.22.3.6 Alternative 4

IV.22.3.6.1 Plan-wide Impacts of Implementing the Desert Renewable Energy Conservation Plan: Alternative 4

IV.22.3.6.1.1 Plan-wide Impacts and Mitigation Measures from Renewable Energy and Transmission Development

Impact Assessment

Impact PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment.

Impacts of Alternative 4 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Impact PS-2: Plan components could result in an airport or air traffic safety hazard.

Impacts of Alternative 4 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1. There are 13 airports within the DFAs (one more than the Preferred Alternative).

Impact PS-3: Plan components would create an increased risk of wildland fire.

Impacts of Alternative 4 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1. Alternative 4 has fewer DFA acres, but they are more dispersed within the Plan Area. The reduced number of airports would reduce wildland fire risk, but the greater dispersal would increase risk.

Impact PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities.

Impacts of Alternative 4 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Impact PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills.

Impacts of Alternative 4 would be similar to the impacts described for the Preferred Alternative in Section IV.22.3.2.1.1.

Study Area Lands

Future Assessment Areas. Alternative 4 does not include FAAs.

Special Analysis Areas. The majority of SAAs would be conservation lands. Designating the SAAs as conservation would have no impact on public health, safety and services. Impacts would be the same as those explained for the Plan-wide reserve design in Section IV.22.3.6.1.2, Impacts of the Reserve Design.

DRECP Variance Lands. DRECP Variance Lands represent the BLM Solar PEIS Variance Lands as screened for the DRECP and EIR/EIS 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 or conservation of the DRECP Variance Lands would affect public health, safety, and services, as described for the Preferred Alternative. There are an additional 11 airports within 5 miles of these DRECP Variance Lands; however, regulatory requirements and BLM land use plans would limit impacts.

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 covered by the Plan would be lessened. 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.3.1.1) 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 also be applied to nonfederal lands. No CMAs specific to Alternative 4 are relevant to public health, safety, and services.

Laws and Regulations

Similar to the No Action Alternative, existing laws and regulations will 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.22.3.1.1.1.

Mitigation Measures

After implementation of the CMAs and existing laws and regulations, mitigation measures will be applied to further reduce some of the DRECP's adverse impacts. The mitigation measures required for Alternative 4 include Mitigation Measures PS-1a, PS-4a, and PS-5a as described for the Preferred Alternative in Section IV.22.3.2.1.1.

IV.22.3.6.1.2 Impacts from Reserve Design

Reserve Design Lands for Alternative 4 include 14,478,000 acres of existing conservation, BLM LUPA Conservation Designations, and Conservation Planning Areas. The Reserve Design Lands would result in minimal impacts to public health, safety, and services because they would not generate new need for public services or result in new safety issues.

IV.22.3.6.2 Impacts of the Desert Renewable Energy Conservation Plan Land Use Plan Amendment on Bureau of Land Management 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.22.3.6.2.1 Impacts from Renewable Energy and Transmission Development on Bureau of Land Management Land

The typical public health, safety, and services impacts from the various renewable energy and transmission technologies on BLM lands would be the same as those described in Section IV.22.3.3.1. BLM would be responsible for public health, safety, and services on BLM lands as described in Section IV.22.3.1.

IV.22.3.6.2.2 Impacts of Changes to Bureau of Land Management Land Designations

Alternative 4 BLM land designations would not affect existing BLM guidance on public health, safety, and services.

IV.22.3.6.3 Impacts of Natural Community Conservation Plan: Alternative 4

The impacts of the NCCP for Alternative 4 would be the same as defined in Section IV.22.3.2.1 for the Plan-wide analysis.

IV.22.3.6.4 Impacts of General Conservation Plan: Alternative 4

The impacts of the GCP for Alternative 4 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis, but they would occur on nonfederal lands only.

IV.22.3.6.5 Impacts Outside the Plan Area: Alternative 4

IV.22.3.6.5.1 Impacts of Transmission Outside the Plan Area

The impacts of transmission outside the Plan Area on public health, safety, and services would be the same under all alternatives. These impacts are described for the No Action Alternative in Section IV.22.3.1.5.1, Impacts of Transmission Outside the Plan Area in No Action Alternative.

IV.22.3.6.5.2 Impacts of Bureau of Land Management Land Use Plan Amendment Decisions Outside the Plan Area

Under the proposed BLM LUPA, the only changes outside the Plan Area would be the designation of NLCS lands, ACECs, National Scenic and Historic Trails management corridors, VRM classes and new land allocations to replace multiple-use classes on CDCA lands. BLM LUPA decisions outside the Plan Area would have no effect on fire risk and response, hazardous materials, airport safety, and landfills.

IV.22.3.6.6 California Environmental Quality Act Significance Determination for Alternative 4

PS-1: Plan components would involve hazardous materials or conditions that could result in a hazard to the public or environment. Hazardous material impacts of Alternative 4 would be the same as the Preferred Alternative. Implementation of Mitigation Measure PS-1a would reduce impacts to a less than significant level. Refer to Section IV.22.3.2.6 for additional discussion.

PS-2: Plan components could result in an airport or air traffic safety hazard. Airport safety hazard impacts of Alternative 4 would be slightly increased compared with the Preferred Alternative. Alternative 4 would have one more airport within DFAs than the Preferred Alternative. Existing laws would ensure that impacts are not significant. Refer to Section IV.22.3.2.6 for additional discussion.

PS-3: Plan components would create an increased risk of wildland fire. Alternative 4 would have a similar wildland fire risk impact and significance conclusion as the Preferred Alternative. Implementation of Mitigation Measures PS-3a and compliance with the California Fire Code would ensure that impacts would remain less than significant. Refer to Section IV.22.3.2.6 for additional discussion.

PS-4: Plan components would create a demand for new or expanded police, fire, and emergency service facilities. Alternative 4 would have similar police, fire, and emergency service facility impacts as the Preferred Alternative. Mitigation Measure PS-4a would reduce impacts to a less than significant level. Refer to Section IV.22.3.2.6 for additional discussion.

PS-5: Plan components would generate solid waste and result in a need for new or expanded landfills. Alternative 4 landfill facility impacts would be similar to the Preferred Alternative. Implementation of Mitigation Measure PS-5a would reduce this impact to a less than significant level. Refer to Section IV.22.3.2.6 for additional discussion.

IV.22.3.6.7 Comparison of Alternative 4 With the 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.22.3.6.7.1 Alternative 4 Compared With the Preferred Alternative for Plan-wide Desert Renewable Energy Conservation Plan

Alternative 4 impacts would be similar to the Preferred Alternative. Airport safety and fire risk would be slightly increased due to an additional airport within DFAs and a potential increase in wildland interface (see Sections IV.22.3.2.1.1 and IV.22.3.6.6).

IV.22.3.6.7.2 Alternative 4 Compared With the Preferred Alternative for the Bureau of Land Management Land Use Plan Amendment

Neither the Preferred Alternative nor Alternative 4 would affect existing BLM guidance related to public health, safety, and services.

IV.22.3.6.7.3 Alternative 4 Compared With the Preferred Alternative for the Natural Community Conservation Plan

The impacts of the NCCP for Alternative 4 would be similar to those defined in Section IV.22.3.2.1 for the Plan-wide analysis but with slightly greater airport safety and wildland fire risk.

IV.22.3.6.7.4 Alternative 4 Compared With the Preferred Alternative for the General Conservation Plan

Impacts from development on nonfederal land under Alternative 4 would be generally similar to impacts under the Preferred Alternative but would occur on nonfederal land only.