



Photos taken in vicinity of  
Cahuilla Ranger Station

## Chapter 5 Cumulative Impacts



## CHAPTER 5.0

# CUMULATIVE EFFECTS

### 5.1 INTRODUCTION

This section addresses potential cumulative impacts to the environment associated with implementation of the project alternatives in concert with one or more other past, present, and reasonably foreseeable future actions and projects. This section was prepared in accordance with NEPA requirements. The Council on Environmental Quality's (CEQ) regulations for implementing NEPA define a "cumulative impact" as follows:

*Cumulative impact is the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR §1508.7).*

Cumulative effects are the total effects on a given resource or ecosystem of all actions taken. Individual effects from similar or disparate activities may add up or interact to cause cumulative effects that are not apparent when evaluating effects individually. Therefore, effects contributed by actions unrelated to the proposed action must be included in the analysis of cumulative effects (CEQ, 1997).

Actions and projects assessed for their potential to result in cumulative impacts were identified by contacting agencies in the desert Southwest, including the BLM and Imperial County Planning Department, to determine which past, present, and reasonably foreseeable actions were either similar to the actions proposed by the project alternatives or could affect the same resources as the project alternatives presented in this DEIS. The type, geographic scope, and impacts of each project were considered.

Section 5.2 describes projects considered in this cumulative impact analysis that affect OHV use of the California desert and immediately adjacent areas. The environmental review status and anticipated impacts of each project that could contribute to a cumulative impact are discussed. In addition, Section 5.2 also describes the potential cumulative impacts of projects by resource area.

Section 5.3 describes the projects considered in this cumulative impact analysis that are different from the project alternatives, but might nonetheless result in cumulative effects. The environmental review status and anticipated impacts of each project that could contribute to a cumulative impact are

discussed. Section 5.3 also describes potential cumulative impacts by resource area.

## **5.2 POTENTIAL CUMULATIVE IMPACTS FROM SIMILAR ACTIONS AND PROJECTS**

This section describes other actions and projects that are similar in type and geographic location to the project alternatives which could, if implemented in conjunction with any of the project alternatives, result in individually minor but collectively significant actions over a period of time. A description of the similar projects assessed for cumulative impacts, the potential environmental impacts that relate to the impacts of the project alternatives, and the status of the environmental review process for each project are included below.

### **5.2.1 Northern and Eastern Colorado Desert Coordinated Management Plan**

NECO is intended to protect and conserve natural resources, providing in particular for the recovery of the desert tortoise, while simultaneously balancing human uses of the Colorado portion of the Sonoran Desert ecosystem. The planning area for NECO comprises more than 5.5 million acres and is bordered along the southwest by the ISDRA. The land affected includes the northern and eastern Colorado Desert and the eastern half of Joshua Tree National Park.

BLM is the lead agency for plan development, with cooperation from NPS, the US Marine Corps (USMC), USGS, USFWS, CDFG, Imperial County, and Riverside County. The management plan would become a binding plan for BLM, NPS, and the CMAGR. BLM released a DEIS for the draft NECO Plan and alternatives in February 2001.

Implementation of NECO would amend the CDCA Plan and would result in beneficial impacts to biological resources in the desert Southwest. Depending on the alternative selected, NECO could result in reduced motorized vehicle access within its planning area, as well as the closing of some desert washes in the western part of Riverside County and two small OHV areas. Few people currently visit the OHV areas proposed to be closed (Ford Dry Lake, which is 1,134 acres, and Rice Valley Dunes, which is 2,790 acres) (Crowe, 2002).

### **5.2.2 West Mojave Habitat Conservation Plan**

The purpose of the West Mojave Habitat Conservation Plan (West Mojave Plan) is to conserve and protect the desert tortoise and nearly 100 other sensitive plants and animals, as well as the ecosystems on which they depend. The 9.4 million-acre planning area encompasses most of California's western Mojave Desert. It extends from Olancho in Inyo County on the north to the San Gabriel and San Bernardino Mountains on the south, and from the Antelope Valley on the west to the Mojave National Preserve on the east. About one third of the planning area is private land, approximately one third is within military reservations, and the remainder consists of public lands managed by BLM.

BLM is the lead agency for preparation of a DEIS for the draft West Mojave Plan. The DEIS is anticipated to be released in mid-2003.

Implementation of the West Mojave Plan would result in beneficial impacts to biological resources in the western Mojave Desert. Depending on the alternative selected, the West Mojave Plan could result in reduced motorized vehicle access within its planning area and increased management of existing OHV areas (Pilmer, 2002).

**5.2.3  
Northern and  
Eastern  
Mojave  
Planning  
Effort**

The draft Northern and Eastern Mojave Plan (NEMO Plan) includes management actions to protect threatened, endangered, and sensitive species and habitats on federal lands administered by the BLM in the eastern Mojave Desert. The NEMO Plan will amend the CDCA Plan. The NEMO Plan area encompasses about 2.4 million acres of public lands in eastern San Bernardino and Inyo Counties of California.

BLM is the lead agency for preparation of a DEIS for the draft NEMO Plan and consequent CDCA Plan Amendments, which was released to the public in April 2001. The DEIS analyzes potential impacts from the implementation of the proposed MUCs for the lands released from wilderness consideration by enactment of the CDPA, route designation in some areas, a proposed strategy to accomplish route designation in the remainder of the planning area, and proposed MUC changes to eliminate landfills on public lands.

Implementation of the NEMO Plan would result in beneficial impacts to biological resources in the NEMO planning area. Depending on the alternative selected, the NEMO Plan could result in reduced motorized vehicle access within its planning area and increased management of existing OHV areas (BLM, 2002). The NEMO Plan, however, does not propose increased management of Dumont Dunes, which offers a similar Semi-Primitive motorized OHV experience as the ISDRA (although Dumont Dunes is significantly smaller than the ISDRA) (Aarons, 2002). Dumont Dunes is located approximately 30 miles north of Baker on SR-127, off Dumont Dunes Road. It is approximately 275 miles northeast of the ISDRA.

**5.2.4  
Cumulative  
Impacts to  
Affected  
Resource  
Areas**

This section discusses the potential cumulative impacts to specific environmental resources. If the project alternatives would not result in an incremental impact to a particular resource, or if the projects described above do not have impacts in common with the project alternatives, no adverse cumulative impact would occur to that resource.

**5.2.4.1  
Recreation  
Resources**

The management actions proposed under the project alternatives are intended to reduce conflicts among ISDRA user groups and preserve natural and cultural resources. As stated in Section 4.1 of this DEIS (Recreation Resources), implementation of the project alternatives will change the available acreage in the ISDRA for OHV use and the allowable intensity of such use. The intensity of the indirect effects of OHV-use limitations varies by alternative and includes: (1) increase in OHV-user demand for a unique Semi-Primitive Motorized experience; and (2) increase in OHV-user demand

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for public lands that are accessible to motorized vehicles. These indirect effects could result in the increased use of other dune areas in the desert Southwest, thereby potentially affecting the existing ROS classifications in these areas.

All of the management plans listed above will limit OHV use of dune areas as well as motorized vehicular access to public lands to a greater or lesser extent, depending on the alternative selected under each plan. Such restrictions are consistent with an apparent trend over the last several decades to limit motorized recreation in ways that would minimize the potential for damage to natural and cultural resource values and decrease the incidence of law enforcement violations. None of these plans, however, propose to restrict access to dune areas of similar quality and size as the ISDRA. Therefore, no cumulative impact would result from an increase in OHV-user demand for a unique, Semi-Primitive Motorized experience.

Implementation of the project alternatives and the management plans would not concurrently affect OHV-accessible dune areas of the same quality or size as the ISDRA. The proposed limitations on motorized recreation, (especially Alternative 3), concurrently with the limitations planned under the management plans, would increase demand of OHV opportunities on public lands and the potential for overcrowding at other OHV-accessible public areas across the desert Southwest.

### **5.2.4.2 Biological Resources**

Implementation of all of the management plans would result in beneficial impacts to biological resources throughout the CDCA. An important focus of the plans is the management and conservation of the desert tortoise. While tortoises are present in the Plan Area, the dune habitats are generally unsuitable for tortoises. However, this is the only sensitive biological resource that the Plan Area has in common with other management plans

### **5.2.4.3 Law Enforcement and Public Safety**

Implementation of the project alternatives would decrease the incidence of law enforcement violations and increase the level of public safety within ISDRA. Although to a lesser extent, the management plans would create a similar, beneficial impact. Therefore, no adverse cumulative impacts to law enforcement and public safety would occur.

### **5.2.4.4 Socio- economics**

Implementation of the project alternatives would result in a reduction in the number of visitors (and visitor spending) at the ISDRA, thereby adversely affecting the regional economy in the CDCA. If the habitat management plans were implemented, the regional economy in the CDCA would also be adversely affected because these plans would further decrease the number of visitors to the CDCA.

### **5.2.4.5 Land Use and Land Ownership**

For the most part, the project alternatives would be consistent with applicable land use plans and policies and would not result in incompatible land uses. (Only Alternatives 3 and 4 would be inconsistent with the CDCA Plan; however, mitigation measures and management actions incorporated into the all of the action alternatives would avoid adverse land use compatibility impacts.)

Although final environmental documentation for the management plans has not been released to the public at this time, it is anticipated that the management plans would be consistent with applicable land use plans and policies and would not result in incompatible land uses. Therefore, because the management plans do not have land use impacts in common with the project alternatives, cumulative land use impacts would occur.

**5.2.4.6 Visual Resources**

The project alternatives and the habitat management plans would not adversely affect visual resources. Therefore, no cumulative visual resources impacts would occur in the CDCA.

**5.2.4.7 Water Resources**

The project alternatives and the habitat management plans would not adversely affect water resources in the CDCA. Therefore, no cumulative water resources impacts would occur.

**5.2.4.8 Cultural and Paleontological Resources**

Ground disturbing activities associated with the project alternatives could result in potential impacts to cultural and paleontological resources. Impacts will vary based on the anticipated area of disturbance of the project alternatives. Under the 1997 BLM NPA and State Protocol Agreement (see Section 3.8 and 4.8, Cultural Resources), BLM will meet NHPA requirements for addressing effects to historic properties.

The habitat management plans also have the potential to impact cultural resources in the CDCA as a result of proposed activities, such as constructing right-of-ways and tortoise fencing along major highways. However, it is anticipated that the management plans would implement avoidance strategies during construction and operation phases to prevent significant impacts. Therefore, no cumulative impacts to cultural resources are expected to occur.

**5.2.4.9 Transportation and Traffic**

None of the habitat management plans would result in transportation or traffic-related impacts. Therefore, no cumulative transportation or traffic-related impacts would occur.

**5.2.4.10 Noise**

Implementation of the project alternatives would result in negligible, if any, elevated noise levels at sensitive receptor locations due to attenuation over distance. Similarly, the habitat management plans would result in extremely minimal noise impacts and are located far enough from each other and from the ISDRA that additive noise impacts to sensitive receptors are not anticipated. No cumulative impacts would occur.

**5.2.4.11 Air Quality**

Under Alternative 1, increase in visitors and recreational OHV use of the ISDRA are predicted to continue to occur until constrained by the capacity of the area to handle recreational activities. Substantial increases in air pollutant emissions are estimated to occur under this project alternative and the air quality criteria established by ICAPCD would be exceeded during major holiday weekends. Implementation of Alternative 4 would also add pollutants to the SSAB, especially CO, NO<sub>x</sub>, ROG, and PM<sub>10</sub>, from increased OHV use.

With respect to PM<sub>10</sub>, there is a potential for a number of projects located in the same air basin to generate excessive fugitive dust, resulting in visual and

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health hazards. The principal source of fugitive dust during recreational activities is entrained dust from vehicles over unpaved surfaces. Fugitive dust would also be generated on a short-term basis during construction activities. Such emissions potentially could occur concurrently with the generation of similar pollutants during implementation of the any of the project alternatives (although to a lesser extent under Alternatives 2 and 3) in conjunction with the habitat management plans. Any additional construction and recreational OHV activities occurring in the vicinity of ISDRA would increase the PM<sub>10</sub> emissions beyond already significant levels. However, it is anticipated that the development projects will include strategies to avoid and/or minimize air quality impacts during construction activities. Therefore, no cumulative air quality impacts are expected to occur.

### 5.2.4.12 Hazardous Materials

Potential hazardous materials impacts are related to accidental releases of fuels, oil, and grease from camping and OHV-related activities. None of the other projects considered in the cumulative impacts analysis involve increased camping or OHV uses; therefore, no cumulative hazardous materials-related impacts would occur.

### 5.2.4.13 Geology and Soils

The project alternatives and the habitat management plans would not adversely affect geology or soils, or result in geologic hazards in the CDCA. Therefore, no cumulative geology and soils-related impacts would occur.

## 5.3 CUMULATIVE IMPACTS FROM OTHER ACTIONS AND PROJECTS

Analyzing cumulative effects requires focusing on the resource, ecosystem, and human community that may be affected and developing an adequate understanding of how these resources are susceptible to effects (CEQ, 1997). This section describes disparate actions and projects, which could, if implemented in conjunction with any of the project alternatives, result in individually minor but collectively significant actions over a period of time. A description of the projects assessed for cumulative impacts, the potential environmental impacts that relate to the impacts of the project alternatives, and the status of the environmental review process for each project are included in the discussion. Cumulative effects by resource area are also discussed at the end of the section.

### 5.3.1 Gateway of the Americas Specific Plan Area

The Gateway of the Americas Specific Plan Area (Gateway) is a 1,775-acre master-planned industrial and commercial complex owned by private parties and federal, state, and local agencies. Retail shopping, business offices, and lodging would be developed in response to the traffic from the Port of Entry. Secondary impacts from the Gateway project include short-term air quality impacts in the SSAB as a result of construction activities associated with the development of industrial, commercial, and transportation-related services.

Imperial County prepared the Final EIR for the Gateway Specific Plan in 1997 (Imperial County Planning Department, 1997). The project is in various stages

of development in the initial construction phase (Phase 1). Phase 2 is expected to continue for 20 to 40 years (IID and BOR, 2002).

### **5.3.2 North Baja Pipeline**

North Baja Pipeline, LLC proposes to build and operate a new natural-gas pipeline system that would transport 500 million cubic feet per day of natural gas from a proposed interconnect with an existing El Paso Natural Gas Company pipeline in Ehrenberg, Arizona, to the U.S. and Mexico border. The North Baja Pipeline Project includes construction of roughly 80 miles of pipe, a compressor station, two new meter stations, and other ancillary facilities.

Secondary impacts from the North Baja Pipeline project include short-term air quality impacts in the SSAB as a result of construction activities. The Federal Energy Regulatory Commission (FERC), the CSLC, and the BLM jointly prepared a DEIS/EIR for the proposed project in July 2001. A Final EIS/EIR is anticipated to be released in the summer of 2002. It is anticipated that the Final EIS/EIR, once completed, will include mitigation measures to reduce and/or avoid air quality impacts.

### **5.3.3 Coachella Valley Water Management Plan**

The Coachella Valley Water District (CVWD) prepared the Coachella Valley Water Management Plan to provide an overall program for managing its surface and groundwater resources in the future (CVWD, 2000). Implementation of the Water Management Plan would involve construction of various facilities for treatment of water and development of additional policies to implement increased conservation. The potential environmental impacts of the Water Management Plan have not been fully assessed at this time, but short-term air quality impacts in the SSAB as a result of construction activities are anticipated.

The draft CVWD Water Management EIR is being prepared by CVWD. A Notice of Preparation (NOP) was originally filed with the State Clearinghouse in November 1995. A revised NOP was issued in March 2000. The Draft CVWD Water Management EIR is planned for release in 2002. It is anticipated that the Draft EIR, once completed, will include mitigation measures to reduce and/or avoid air quality impacts.

### **5.3.4 IID Water Conservation and Transfer Project and HCP**

The Imperial Irrigation District (IID) Water Conservation and Transfer Project and Habitat Conservation Plan (Water Conservation and Transfer Project and HCP) consists of the conservation by IID of up to 300,000 acre-feet of Colorado River water per year, and the subsequent transfer of all or a portion of the conserved water to San Diego County Water Authority (SDCWA), CVWD, and/or the Metropolitan Water District of Southern California (Metropolitan). The water conservation program includes the voluntary participation of Imperial Valley landowners and tenants to implement on-farm conservation methods that could include alternative water management techniques, water delivery system alternatives, conveyance facility lining, or other measures.

IID and BOR are the lead agencies for the preparation of a Draft EIR/EIS for the IID Water Conservation and Transfer Project and HCP, which was

released to the public in January 2002. A final EIR/EIS is anticipated to be completed in June 2002.

As a result of the water conservation program, implementation of the Water Conservation and Transfer Project is anticipated to result in short-term and long-term impacts to air quality in the SSAB. The Draft EIR/EIS includes mitigation measures to reduce and/or avoid air quality impacts from construction activities in the Imperial Valley. However, other indirect air quality impacts in the SSAB are considered significant and unavoidable. Biological resources impacts to desert species, such as the flat-tailed horned lizard, Peirson's milk-vetch, and desert tortoise also would occur. However, the proposed HCP covers incidental take of these species through avoidance strategies and mitigation measures. In addition, depending on the alternative selected, the project could result in adverse socioeconomic impacts in Imperial County. Mitigation measures to avoid such impacts are anticipated to be implemented if the alternative that would result in adverse socioeconomic impacts were selected as the preferred alternative.

### **5.3.5 Salton Sea Restoration Project**

The Salton Sea Restoration Project includes actions to stabilize the elevation and reduce the salinity of the Salton Sea, pursuant to the Salton Sea Reclamation Act of 1998 [Public Law (PL) 105-372]. To implement this directive, the Salton Sea Authority, as the California lead agency under CEQA, and BOR, as the federal lead agency under NEPA, released a Draft EIS/EIR in January 2000 that evaluated proposed Salton Sea Restoration Project alternatives. A revised Draft EIS/EIR, including different alternatives and revised modeling and impact analysis, is currently being prepared.

Although environmental documentation has not been completed on the Salton Sea Restoration Project, it is anticipated that short-term air quality impacts in the SSAB would occur as a result of construction activities associated with project implementation. It is also anticipated that the Draft EIS/EIR, once completed, will include mitigation measures to reduce and/or avoid air quality impacts.

### **5.3.6 Coachella Canal Lining Project**

This project involves the lining of the remaining 33.4 miles of the Coachella Canal, which currently loses approximately 32,350 acre-feet per year through seepage. This canal lining project will adversely affect biological resources by loss of riparian and wetland habitat in Salt Creek and adjacent to the canal, which are supported by canal leakage. Affected desert species include the desert tortoise. The canal lining project will also have short-term air quality impacts in the SSAB associated with construction within the right-of-way of the Coachella Canal.

A revised and updated Draft EIS/EIR for the Coachella Canal Lining Project was circulated for public review by Reclamation and CVWD in September 2000. A Final EIS/EIR was released in April 2001, which was certified by CVWD in May 2001. A ROD is pending. The EIR/EIS includes mitigation measures to avoid and/or compensate for air quality and biological resources impacts.

### **5.3.7 All American Canal Lining Project**

This project involves lining the 23-mile reach of the existing, unlined canal. The canal lining project will have temporary air quality impacts in the SSAB associated with construction within the proposed right-of-way of the All American Canal. Temporary and permanent impacts to desert scrub and sand dune habitat would result from construction activities. Special-status species known to inhabit or likely to inhabit these desert habitats are flat-tailed horned lizard, Colorado Desert fringe-toed lizard, giant Spanish needles, Peirson's milk-vetch, Wiggin's croton, sand food, and Andrew's dune scarab beetle.

A Final EIS/EIR for the All American Canal Lining Project was released in March 1994. The All American Canal Lining Project EIR/EIS includes mitigation measures to avoid and/or compensate for air quality and biological resources-related impacts to riparian and marsh vegetation, fish in the canal, desert habitat, and special-status species associated with desert habitats.

### **5.3.8 Future Growth and Development**

As Southern California's population continues to grow (over the next 25 years, another 6 million people are expected to be added to Southern California region), municipal, industrial, commercial, and recreational development projects will be permitted and constructed. Local, regional, and state processes are in place to manage and accommodate planned growth, including General Plans, zoning regulations, and the HCP and CEQA processes, to ensure that sensitive natural and human communities are protected. However, it is expected that even with growth plans in place, additional long term impacts to air quality and sensitive habitats will occur over time.

### **5.3.9 Cumulative Impacts to Affected Resource Areas**

This section discusses the cumulative impacts to specific environmental resources. If the project alternatives would not result in an incremental impact to a particular resource, or if the projects described above do not have impacts in common with the project alternatives, no adverse cumulative impact to that resource would occur.

#### **5.3.9.1 Recreation Resources**

The management actions proposed under the project alternatives are intended to reduce conflicts among ISDRA user groups as well as focus on the preservation of natural and cultural resources. As stated in Section 4.1 of this DEIS, Recreation Resources, implementation of the project alternatives will change the available acreage in the ISDRA for OHV use and the allowable intensity of such use. The indirect effects of OHV-use limitations vary in intensity by alternative and include: (1) increase in OHV-user demand for a unique Semi-Primitive Motorized experience; and (2) increase in OHV-user demand for public lands that are accessible to motorized vehicles. These indirect effects could result in the increased use of other dune areas in the desert Southwest, thereby potentially affecting the existing ROS classifications in these areas.

Implementation of the projects listed in Section 5.3 are not likely to adversely affect recreation resources in the same manner as the project alternatives. Specifically, miscellaneous development projects could increase demand for other recreation opportunities and overcrowd remaining areas. Because the

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proposed alternatives would affect the different recreational uses, no recreation-related cumulative impacts would occur.

### **5.3.9.2 Biological Resources**

Some projects listed in Section 5.3 would affect some biological resources in ways similar to the proposed alternatives. These resources include desert habitats supporting desert tortoise, flat-tailed horned lizard, Colorado Desert fringe-toed lizard, giant Spanish needles, Peirson's milk-vetch, Wiggins' croton, sand food, and Andrew's dune scarab beetle. Given the committed mitigation for these projects, and relatively small area of impact, negligible adverse cumulative impacts to biological resources would occur. With regard to the miscellaneous development projects, several habitat conservation plans across the desert Southwest are being developed to protect sensitive species, including plans in San Diego, Coachella Valley, Imperial Valley, and the Colorado River watershed. Therefore, cumulative impacts to desert species would not in conjunction with implementation of the project alternatives.

### **5.3.9.3 Law Enforcement and Public Safety**

Neither the project alternatives nor the projects listed in Section 5.3 would adversely affect law enforcement nor public safety. Therefore, no adverse cumulative impacts would occur.

### **5.3.9.4 Socio- economics**

Implementation of the project alternatives would reduce the number of visitors (and visitor spending) at the ISDRA, thereby adversely affecting the regional economy in the CDCA. With the exception of the IID Water Conservation and Transfer Project and HCP, none of the projects listed in Section 5.3 would adversely impact the regional economy. Mitigation measures to avoid socioeconomic impacts are anticipated to be implemented by IID to avoid adverse socioeconomic impacts as a result of the IID Water Conservation and Transfer Project and HCP. Future development would likely result in beneficial socioeconomic impacts. No adverse, cumulative socioeconomic impacts would occur.

### **5.3.9.5 Land Use and Land Ownership**

For the most part, the project alternatives would be consistent with applicable land use plans and policies and would not result in incompatible land uses. (Only Alternatives 3 and 4 would be inconsistent with the CDCA Plan; however, mitigation measures and management actions incorporated into the all of the action alternatives would avoid adverse land use impacts in terms of land use compatibility issues.)

Although environmental documentation for all of the projects listed in Section 5.3 has not been finalized, it is anticipated that the projects would either: (1) be consistent with applicable land use plans and policies and would not result in incompatible land uses; or (2) implement measures to avoid actions that result in incompatible land uses. Therefore, because the management plans do not have land use impacts in common with the project alternatives, cumulative land use impacts would not occur.

### **5.3.9.6 Visual Resources**

Implementation of the project alternatives would not adversely affect visual resources. No cumulative visual resources impacts would occur.

**5.3.9.7 Water Resources**

Implementation of the project alternatives would not adversely affect water resources. Therefore, no cumulative water resources impacts would occur.

**5.3.9.8 Cultural and Paleontological Resources**

Despite a number of studies having been conducted, most of the ISDRA has not been inventoried for cultural resources. However, given the known cultural resources present in the ISDRA, all project alternatives have the potential to affect resources that may qualify for the CRHR and NRHP. Impacts will vary based on the anticipated area of disturbance of a project alternative. Under the 1997 BLM NPA and State Protocol Agreement (see Section 3.8 and 4.8, Cultural Resources), BLM will meet NHPA requirements for addressing effects to historic properties.

Implementation of the projects listed in Section 5.3 could result in impacts to cultural resources although it is anticipated that each project would implement avoidance strategies during construction and operation phases to prevent significant impacts. Therefore, no cumulative impacts to cultural resources are expected to occur.

**5.3.9.9 Transportation and Traffic**

Implementation of the project alternatives would result in short-term traffic impacts. However, such impacts would be localized and, therefore, would not result in cumulative transportation or traffic-related impacts in conjunction with implementation of the projects listed in Section 5.3.

**5.3.9.10 Noise**

Implementation of the project alternatives would not significantly impact sensitive receptors due to attenuation over distance. Similarly, the projects listed in Section 5.3 would result in short-term, construction-related noise impacts; however, they are located far enough from each other and from the ISDRA that additive noise impacts to sensitive receptors are not anticipated. No cumulative impacts would occur.

**5.3.9.11 Air Quality**

Under Alternative 1, increase in visitors and recreational OHV use of the ISDRA are predicted to continue to occur until constrained by the capacity of the area to handle recreational activities. Substantial increases in air pollutant emissions are estimated to occur under this project alternative, and the air quality criteria established by ICAPCD would be exceeded during major holiday weekends. Implementation of Alternative 4 would also add pollutants to the SSAB, especially CO, NO<sub>x</sub>, ROG, and PM<sub>10</sub>, from increased OHV use.

With respect to PM<sub>10</sub>, there is a potential for a number of projects located in the same air basin to generate excessive fugitive dust, resulting in visual and health hazards. The principal source of fugitive dust during recreational activities is entrained dust from vehicles over unpaved surfaces. Fugitive dust would also be generated on a short-term basis during construction activities. Such emissions could potentially occur concurrently with the generation of similar pollutants during implementation of any of the project alternatives (although to a lesser extent under Alternatives 2 and 3) in conjunction with the projects listed in Section 5.3. Any additional construction and recreational OHV activities occurring in the vicinity of ISDRA would increase the PM<sub>10</sub> emissions beyond already significant levels. However, it is anticipated that the

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development projects will include strategies to avoid and/or minimize air quality impacts during construction activities. Therefore, no cumulative air quality impacts are expected to occur.

### **5.3.9.12 Hazardous Materials**

Potential hazardous materials impacts are related to accidental releases of fuels, oil, and grease from camping and OHV-related activities. None of the other projects considered in the cumulative impacts analysis involve increased camping or OHV uses; therefore, no cumulative hazardous materials-related impacts would occur.

### **5.3.9.13 Geology and Soils**

The project alternatives would not adversely affect geology or soils, or result in geologic hazards. Therefore, no contribution to cumulative geology and soils-related impacts would occur.