

## 4.0 ENVIRONMENTAL CONSEQUENCES

This chapter addresses the direct, indirect and cumulative impacts on elements of the human environment from actions proposed in the CDCA Plan Amendment. This chapter is organized by environmental element, followed by a description and comparison of impacts from the relevant plan element alternatives.

Land use plans, such as the CDCA Plan Amendment, developed in accordance with Title 43 Code of Federal Regulations, provide landscape level decisions for managing the BLM-administered public lands. As a result, the impact analysis for land use plans level actions tends to be cumulative by nature.

### 4.3 Soils, Geology, Mineral and Energy Resources

**Wild and Scenic River Eligibility Determinations.** Proposed Plan (Alternatives A, B and C). Subject to valid existing rights, BLM is required to protect the free-flowing characteristics of river segments determined eligible for designation as Wild and Scenic Rivers; protect, and to the degree practicable, enhance the Outstanding Remarkable Values (ORVs) which contribute to the river segment's eligibility; and ensure that its eligibility or tentative classification will not be affected before a determination of its suitability or non-suitability as a Wild and Scenic River can be made. Determinations of eligibility for 20.3 miles of Whitewater Canyon, Mission Creek (main channel and its three forks), and Palm Canyon would not adversely affect soils, geology, mineral and energy resources. Development of mineral and energy resources where permitted in accordance with statute and regulation, subject to valid existing rights, would not be additionally constrained upon implementation of protective management measures pending determinations of suitability or non-suitability (see Appendix B).

No Action Alternative (D). No impacts would result as eligibility determinations for river segments on public lands would not occur at this time.

**Visual Resource Management.** Proposed Plan (Alternatives A, B and C). No impacts to soils, geology, mineral and energy resources would occur under the Proposed Plan. VRM classifications assigned through this CDCA Plan amendment are based on existing land uses, and existing and proposed land use designations (e.g., wilderness, ACECs, conservation areas, and Santa Rosa and San Jacinto Mountains National Monument). Specific impacts to soils, geology, mineral and energy resources cannot be determined until project proposals are submitted to the BLM and a Contrast Rating that measures the degree of contrast between a proposed activity and the existing landscape is prepared. If the proposed project exceeds the allowable contrast, then a BLM decision is made to (1) redesign, (2) abandon or reject, or (3) proceed, but with mitigation measures stipulated to reduce critical impacts.

No Action Alternative (D). Same as described above. Interim VRM classes to be assigned upon projects being proposed on public lands would likely be the same as designated under the Proposed Plan.

**Land Health Standards and Air Quality.** Proposed Plan (Alternatives A, B and C) and No Action (D). Implementing land health standards would help to identify management needs within mining and energy production areas in order to promote healthy landscapes, including improvement of soil conditions. Additional mitigation measures may be required to meet these land health standards within mining and energy production areas. Land health standards may not be used to permanently prohibit allowable uses established by law, regulation or land use plans.

Rangeland health conditions have been assessed for the Whitewater Canyon allotment. No impacts to cattle grazing activities are expected when conducting prescribed treatment of tamarisk infestation in Whitewater Canyon. Exclusion of livestock from treated areas are also not expected to impact grazing activities due to the lack of suitable grazing land in the rocky bottom of Whitewater Canyon.

Existing mineral resource projects in the planning area are already required to comply with the Coachella Valley PM10 State Implementation Plan and all applicable South Coast Air Quality Management District regulations. Any new authorized mineral resource or energy production projects would also be required to be in conformance with the PM10 Plan.

**Multiple-Use Classification.** Proposed Plan (Alternatives B and C), Alternatives A and No Action (D). No impacts to soils, geology, mineral and energy resources would occur under the Proposed Plan or other alternative. The most restrictive Multiple-Use Class “C” only applies to wilderness areas. Mining and energy development is allowed in Multiple-Use Classes “L,” “M” and “I.”

**Habitat Conservation Objectives.** Proposed Plan (Alternatives B and C). Additional mitigation measures may be required to meet the habitat conservation objectives within conservation areas for mining and energy production activities under the Proposed Plan. This would likely result in increased production costs. The amount of increased production costs will depend on the location of the mining and energy production areas relative to sensitive species, multi-species habitat conservation areas, and ecological process areas such as sand transport corridors. For example, sand and gravel mining projects within sand transport corridors would be designed so as to not block sand transport. Mining and energy production would be disallowed in areas with rare species or habitat types.

Alternatives A and No Action (D). If the habitat conservation objectives were not adopted for areas outside conservation areas, mining and energy projects would still have to mitigate for impacts to listed species, cultural and other sensitive resources. Mitigation measures would be assessed a case-by-case basis. Additional mitigation measures related to landscape level habitat management would not likely be imposed.

**Fire Management.** Proposed Plan (Alternatives B and C), Alternative A and No Action (D). No impacts to soils, geology, mineral and energy resources would occur as the fire management categories are based on analyses of existing land uses and vegetation

types, with priority placed on protecting life and property.

**Special Area Designations.** Proposed Plan (Alternative A), Alternatives B, C and No Action (D). No impacts under the Proposed Plan or other alternatives. Designating areas as Wildlife Habitat Management Areas or ACECs does not result in automatic closures to mining and energy production activities. Any closures must be proposed through a separate action, based on protection of sensitive resources and not on special area designations.

**Land Tenure: Exchange and Sale Criteria.** Proposed Plan (Alternatives B and C), Alternatives A and No Action (D). No impacts to soils, geology, mineral and energy resources would occur under the Proposed Plan or other alternatives. BLM would still have the option to retain mining and energy production sites in public ownership.

**Land Tenure: Acquisition Criteria.** Proposed Plan (Alternatives B and C), Alternatives A and No Action (D). No impacts to soils, geology, mineral and energy resources would occur under the Proposed Plan or other alternatives. The acquisition criteria applies to lands that would not be used for mineral or energy resource development.

**Management of Acquired Lands.** Proposed Plan (Alternatives A, B and C). The Proposed Plan would facilitate consistency with surrounding land uses existing at the time.

No Action Alternative (D). If no guidance for managing acquired lands is provided at this time, acquired and formerly withdrawn lands are subject to applicable land and minerals laws when an opening order is issued and published in the Federal Register.

**Communication Sites and Utilities.** Proposed Plan (Alternative B), Alternatives A, C and No Action (D). The Proposed Plan or other alternatives are not expected to significantly impact existing communication sites, wind energy projects or utilities, including electric and natural gas lines and their rights-of-way. It is also not expected to impact soils or create issues of soil erosion, geology, minerals and energy development. The issuance and implementation of new rights-of-way for windpark, communication sites or utilities shall be conditioned and regulated to assure that development and operation is conducted in such a manner as to preclude or adequately mitigate the potential for the loss of soil by wind or water erosion. These include but are not limited to:

1. All on-site access and service roads, including those within operational areas, shall be regularly watered and, as necessary, soil stabilizers shall be applied to assure surface consolidation and minimization of free dust on road surfaces.
2. As necessary, water trucks shall be used to wet down on-site roads or to apply soil stabilizers during periods of activity on-site. No plumes of dust shall be permitted to cross project site boundaries.
3. In areas of on-going activity the operator shall continue to apply water sprays to knockdown and preclude emissions of dust from these areas.

4. All grading and similar site disturbance activity shall cease operations when winds exceed 30 miles per hour.
5. During construction, materials proposed for off-site hauling shall be wet-down prior to leaving the site. Hauled materials shall also be either tarped or a minimum of six inches of freeboard shall be maintained in sand-hauling vehicles.
6. All gasoline and diesel-fueled equipment shall be properly tuned and maintained to limit associated emissions to the greatest extent possible.

Future requests for communication, windpark or utility rights-of-way will be evaluated on a project-specific basis and the potential for soils erosion will be assessed and mitigated. Regulation is not expected to increase production costs inasmuch as these regulations are already integral to similar activities, whether conducted on BLM or private lands.

**Sand and Gravel Mining.** Proposed Plan (Alternative B). The Proposed Plan is not expected to impact soils or create issues of soil erosion. The issuance and implementation of mineral extraction rights-of-way are conditioned and regulated to assure that resource extraction and processing is conducted in such a manner as to preclude or adequately mitigate the potential for wind or water erosion. These include but are not limited to:

1. All on-site hauling roads, including those within mining and processing areas, shall be regularly watered and, as necessary, soil stabilizers shall be applied to assure surface consolidation and minimization of free dust on road surfaces.
2. Water trucks shall continue to operate at and in conjunction with all excavation activities on-site, including those associated with initial excavation and subsequent transfers and handling of materials. No plumes of dust shall be permitted to cross project site boundaries.
3. Crushers, conveyors and other process areas shall continue to apply water sprays to knockdown and preclude emissions of dust from these material process areas and equipment.
4. Excess sand placed in stockpiles shall be watered upon initial deposition to enhance cementation, and shall otherwise remain undisturbed to assure a stable, erosion resistant surface. In areas where sand is removed from stockpiles, these areas shall be re-watered to again establish surface cementation and stabilization.
5. All materials excavation and transfer activities between mining and process areas shall cease operations when winds exceed 30 miles per hour.
6. Sand proposed for off-site hauling shall be wet-down prior to leaving the site. Sand materials shall also be either tarped or a minimum of six inches of freeboard shall be maintained in sand-hauling vehicles.
7. In areas where mining activities have been completed, the reclamation plan shall be implemented, including the final contouring of side slopes and the deposition of stockpiled surficial (in the uppermost layers of soil) seedbed materials. These areas shall remain undisturbed thereafter, thereby further stabilizing previously disturbed areas..
8. All gasoline and diesel-fueled equipment shall be properly tuned and maintained

to limit associated emissions to the greatest extent possible.

Future requests for mineral extraction rights-of-way will be evaluated on a project-specific basis and the potential for soils erosion will be assessed and mitigated. Regulation is not expected to increase production costs inasmuch as these regulations are already integral to mineral extract activities, whether conducted on BLM or private lands.

Mineral resource development projects within conservation areas would be required to meet habitat conservation objectives resulting in higher production and reclamation costs. This may result in situations where these operators may not be as competitive as operators located outside the conservation areas. Also, under the Proposed Plan, mineral resource development would only be allowed within State designated mineral resource zones. This may limit, somewhat, the availability of future mineral resources in the Plan area.

Alternative A. Alternative A would not be as restrictive as the Proposed Plan in the sense that mineral resource development would not be allowed in Areas of Critical Environmental Concern. Mine operators would still be required to comply with habitat conservation objectives, thus increasing their mining and reclamation costs.

Alternative C. Alternative C would not allow any mineral resource development in conservation areas and would severely limit the long term availability of sand and gravel on BLM land in the Plan area.

No Action Alternative (D). The No Action alternative would not impact mineral and energy resources since development of these resources would continue to be evaluated on a case-by-case basis in accordance with current requirements.

**Livestock Grazing.** Proposed Plan (Alternative A), Alternatives B, C and No Action (D). Curtailing or eliminating use on all or a portion of the Whitewater grazing allotment would minimize soil erosion where cattle graze on slopes. If grazing is continued, levels of soil erosion would still be controlled in order to meet the rangeland health assessment standards. Techniques, such as seasonal rest periods would be employed. No impacts to geology, mineral and energy resources would occur.

**Wild Horse and Burro Program.** Proposed Plan (B) and Alternative C. No impacts to soils, geology, mineral and energy resources on public lands would occur upon retirement of the Herd Management Areas. Soil erosion and soil loss would be reduced in areas formerly occupied by these herds.

Alternatives A and No Action (D). Maintaining Horse Management Areas within Palm Canyon would continue the accelerated soil erosion occurring where horses were using steeper slopes, if horses were re-introduced. No impacts geology, mineral and energy resources would occur.

**Motorized Vehicle Area Designations.** Proposed Plan (Alternative B), Alternatives A,

C and No Action (D). The proposed motorized-vehicle area designations are not expected to adversely affect existing or future mineral and energy resources. BLM already addresses compliance with applicable guidelines and regulations of the U.S. Environmental Protection Agency and the South Coast Air Quality Management District (SCAQMD). Because most utilities and communication sites are not designated open in sensitive areas such as wind farms, surface mining areas, or water percolation facilities, no adverse impacts would occur. Should future problems develop, project-level options would include installation of fencing, posting of signage to keep motorized vehicle users on designated routes, and law enforcement.

Proposed Plan (Alternative B). A reduction in open-style OHV use would reduce soil loss by reducing surface disturbance. Surface disturbance inhibits stabilization by vegetation and soil crusts and exposing more fine sediment to wind (Miller, 2002). Each event of vehicle use also produces airborne dust. The combination of improved soil stabilization and reduced vehicle use would produce improvements in air quality to sensitive receptors downwind. In areas where vehicle recreation continues to be a focus, such as Drop 31 and potentially county lands north of Interstate 10 and east of Dillon Road, regulating and monitoring off-highway vehicle use would control and reduce the level of potential impacts. More detailed considerations of erosion potential, on-site and tributary drainage patterns and potential flows, relationships to strong wind areas, and activity areas would be addressed in the Meccacopia Special Recreation Management Area. A variety of management strategies may also be imposed, including the shutdown of activity areas during periods of high winds, installation of “rattle bars” or cattle guards to remove dirt from vehicles leaving an activity area, and on-site use restrictions.

Alternatives A and D (No Action). Soils would continuously be subject to disturbance in the open areas designated by OHV use at the four sites, leading to increases in fine sediments exposed to wind erosion since stabilization by vegetation or soil crusts would not occur (Miller, 2002). There would be an increase in events that produce airborne dust, and the subsequent increases in wind erosion would impact air quality in Palm Springs, Sky Valley, and Indio. At Drop 31 and potentially on county lands north of Interstate 10 and east of Dillon Road, open area use would increase trailing and erosion over time, but subsequent air quality impacts to populations would not occur to the site locations and the prevailing winds.

Alternative C. Soils would be affected beneficially by elimination of open-style use within the planning area, leading to improvements in stabilization by vegetation in parts of the planning area, reductions in events that produce airborne dust, and subsequent reductions in wind erosion and improvements in air quality. The absence of any area where vehicle recreation can legally occur is likely to create de-facto use areas, which may or may not be on public land, where benefits to soil would not be realized.

**Motorized Vehicle Route Designations.** Proposed Plan (Alternative B), Alternatives A, C and No Action (D). Route designations under the Proposed Plan or other alternatives are not expected to significantly affect mineral or energy resources. BLM already addresses compliance with applicable guidelines and regulations of the U.S.

Environmental Protection Agency and the South Coast Air Quality Management District (SCAQMD) when permitting these activities. Because most routes to major utilities and communication sites are not designated open in sensitive areas such as wind farms, surface mining areas, or water percolation facilities, no adverse impacts would occur. Should future problems develop, project-level options would include installation of fencing, posting of signage to keep motorized vehicle users on designated routes, and law enforcement.

Proposed Plan (Alternative B). A reduction of 26 miles of unpaved vehicle routes would lower soil loss by decreasing the area exposed to surface disturbance. Surface disturbance inhibits stabilization by vegetation and soil crusts and exposing more fine sediment to wind (Miller, 2002). Each event of vehicle use also produces airborne dust. The combination of improved soil stabilization and reduced vehicle use would produce improvements in air quality to sensitive receptors downwind. In areas where vehicle recreation continues to be a focus, such as Drop 31, limiting vehicle use to a designated trail system, and monitoring that vehicle use, would control and reduce the level of potential impacts. More detailed considerations of erosion potential, on-site and tributary drainage patterns and potential flows, relationships to strong wind areas, and activity areas would be addressed in the Meccacopia Special Recreation Management Area. A variety of management strategies may also be imposed, including the shutdown of activity areas during periods of high winds, installation of “rattle bars” or cattle guards to remove dirt from vehicles leaving an activity area, and on-site use restrictions.

Alternatives A and D (No Action). Soils would be subject to disturbance along the existing 73-mile system of open, unpaved routes. Increases in rates of wind erosion are expected to parallel increases in average daily rates of travel. With increases in population and rates of travel on the route system, there would be an increase in events that produce airborne dust, and the subsequent increases in wind erosion would impact air quality primarily in Palm Springs and Indio. No change is expected at Drop 31.

Alternative C. Soils would be affected beneficially by closure of the 46 miles of vehicle routes, leading to improvements in stabilization by vegetation in parts of the planning area, reductions in events that produce airborne dust, and the subsequent reductions in wind erosion and improvements in air quality. However, because the additional closed routes beyond those in the proposed plan would have (1) manageability problems (e.g., a portion of a route that crosses other ownerships) and (2) some levels of continued use, additional benefits to soil stability would be limited.

**Special Recreation Management Area.** Proposed Plan (Alternative B), Alternatives A, C and No Action (D). No impacts to soils, geology, mineral and energy resources would occur under the Proposed Plan or other alternatives.

**Stopping, Parking and Vehicle Camping.** Proposed Plan (Alternatives A and B), Alternatives C and No Action (D). Limiting parking distances from a road’s centerline would minimize surface disturbance and soil erosion in those areas. No impacts to

geology, mineral and energy resources would occur under the Proposed Plan or other alternatives.

**Peninsular Ranges Bighorn Sheep Recovery Strategy.** Proposed Plan (Alternative B), Alternatives A, C and No Action (D). No impacts to soils, geology, mineral and energy resources would occur under the Proposed Plan or other alternatives.

**Hiking, Biking and Equestrian Trails.** Proposed Plan (Alternatives A, B and C) and No Action Alternative (D). Under the Proposed Plan, limitations on trail use within Peninsular Ranges bighorn sheep habitat would overall have minimal impact on soils, geology, mineral and energy resources due to the low rainfall. While some soil erosion is associated with trail use and new trail development, the amount of soil erosion is dependent on the new trail design, the level of trail maintenance, weather conditions and other factors. As site specific trail projects are considered, mitigation measures to minimize soil erosion would be addressed.