

Appendix C: Air Quality

I. AIR QUALITY MANAGEMENT STRATEGY

In accordance with the Clean Air Act as Amended (1990), the U.S. Environmental Protection Agency has developed National Ambient Air Quality Standards which are used to classify areas as to whether they are in attainment or not of the air quality standards. Areas that are classified as non-attainment areas, such as the Coachella Valley, are required to prepare and implement a State Implementation Plan that identifies and quantifies sources of emissions and provides a strategy to reduce emissions. In the Coachella Valley, there are a variety of natural and man-made fugitive dust sources that generate PM10 emissions.

In 2002, a State Implementation Plan for the Coachella Valley has been prepared which identifies sources of PM10, including revised construction-related emissions data from year 2000, and control measures to reduce emissions. There also are a set of rules (400 series) designed to limit area and point source particulate emissions and fugitive dust in the Coachella Valley. Under the Clean Air Act conformity rules (CAA 176(c) and 40 CFR part 51 subpart W), activities on BLM-managed lands in a non-attainment area must conform to the applicable State Implementation Plan. The BLM proposes to implement the following air quality management strategy to do its part in facilitating compliance with the 2002 Coachella Valley PM10 State Implementation Plan.

A. Reduce the unpaved route network.

The BLM strategy includes a reduction in the extent of the unpaved routes of travel network. This will be accomplished through the closure of routes which are redundant with other routes in a given area. Existing routes which are in conflict with the conservation goals and strategies of the Coachella Valley Multiple Species Habitat Conservation Plan (MSHCP) will also be closed or subject to seasonal closure.

B. Direct off-highway vehicle use away from sensitive receptors.

This management strategy consists of two related parts. One is to provide opportunities for off-highway vehicle use downwind of sensitive receptors in the Coachella Valley. Towards that end, the BLM is proposing Drop 31 as an area “open” to off-highway vehicles, located in the south east end of the Coachella Valley. The prevailing winds are from the northwest. The BLM would also like to collaborate with the appropriate state agencies to purchase private lands and establish a second off-highway vehicle use area east of Dillon Road and north of Interstate-10.

The second part of this management strategy addresses unauthorized off-highway vehicle use in closed areas, notably those upwind of sensitive receptors. BLM would post signs and enforce the closures. BLM would also seek to develop a volunteer patrol program to provide more on-the ground presence, and to report off-highway vehicle intrusions in closed areas to BLM law enforcement rangers.

C. Install Sand Fencing.

The BLM would install sand fencing where fencing can assist in reducing PM10 emissions upwind of sensitive receptors and maintain habitat for sand dependent species.

D. Authorized uses comply with State Implementation Plan.

All authorized uses with the potential to generate fugitive dust and PM10 shall be conditioned through the application of terms and conditions developed based on mitigation, management and control measures set forth in the State Implementation Program for PM10 in effect at the time of approval. Proposed projects with the potential to exceed National Ambient Air Quality Standards shall include in the environmental analysis, a dust control plan prepared in coordination with the South Coast Air Quality Management District.

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II. COACHELLA VALLEY PM10 STATE IMPLEMENTATION PLAN

The South Coast Air Quality Management District (SCAQMD) has developed a revised and updated set of PM10 control measures designed to bring the Coachella Valley into compliance with federal PM10 standards. These proposed control measures are embodied in the draft 2002 Coachella Valley PM10 State Implementation Plan (SIP) and are summarized below.

Changes to the proposed control measures cited in the 2002 Coachella Valley PM10 SIP, may occur as a result of the most stringent measures (MSM) analyses, but are not expected to substantially change the conclusions regarding the environmental impacts analyzed. The draft 2002 Coachella Valley PM10 SIP also identifies specific enforceable SIP commitments. The control measures are proposed to be adopted as expeditiously as possible, but no later than the adoption dates outlined in the following table.

Table B-1: Summary of 2002 Coachella Valley PM10 SIP Control Measures

Control Measure	Source Category	Implementing Agency	Adoption Schedule
CV BACM 1	Construction	Local Jurisdictions	Prior to October 1, 2003
		AQMD Regulations	Prior to January 1, 2004
CV BACM 2	Disturbed Vacant Lands	Local Jurisdictions BLM	Prior to October 1, 2003
CV BACM 3	Unpaved Roads	Local Jurisdictions BLM	Prior to October 1, 2003
	Unpaved Parking Lots	Local Jurisdictions	Prior to October 1, 2003
CV BACM 4	Paved Roads	Local Jurisdictions	Prior to October 1, 2003
		AQMD Regulations	Prior to January 1, 2004
CV BACM 5	Agriculture	AQMD Regulations	Prior to January 1, 2004

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A. CV BACM 1 – Further Control of Emissions from Construction Activities

CONTROL MEASURE SUMMARY	
Source Category:	Construction Activities
Control Methods:	Watering, chemical stabilization, wind fencing, re-vegetation, track-out control
Implementing Agency:	Local governments/ AQMD

1. **Description of Source Category**

Background. Construction activities are a fugitive dust source that may have a substantial temporary impact on local air quality. Emission sources during construction activities include land clearing, drilling and blasting, ground excavation, cut and fill activities, and windblown emissions from disturbed surfaces. Vehicular travel on disturbed surfaces and material tracked from unpaved surfaces onto paved public roads can also contribute to construction activity emissions. Construction activity fugitive dust emissions can vary significantly from day to day depending on the level/type of activity and wind conditions.¹

Regulatory History. In the Coachella Valley, construction projects are subject to dust control ordinances that require applicants to obtain local jurisdiction approval of a dust control plan (plan) prior to issuance of a grading permit. The ordinance requires that the plan must include sufficient detail to demonstrate compliance with AQMD Rule 403. In addition, AQMD Rules 403/403.1 serve as backstop regulations for Coachella Valley construction activity emissions. A summary of local jurisdiction dust control ordinance and AQMD Rule 403/403.1 requirements for construction activities is included in Chapter 4.

2. **Proposed Method of Control**

Local Jurisdiction Dust Control Ordinances. In order to facilitate enforcement activities at construction sites under local jurisdiction control, a revised model ordinance is proposed to be adopted by all Coachella Valley local jurisdictions. In addition to the dust control plan submittal requirements, the revised dust control ordinance is proposed to include the following upgrades to enhance construction site compliance determinations.

- All fugitive dust sources will be required to implement Coachella Valley Best Available Control Measures (CV BACM).
- Dust control plans required prior to issuance of building permits for projects with more than 5,000 square feet of disturbed soils unless a dust control plan has already been issued to the builder/developer through a grading permit. The plan must have the required elements described in the Coachella Valley Dust Control Handbook (which will be developed concurrently with the revised dust control ordinance).
- Site-specific dust mitigation plan required for construction activities greater than or equal to 10 acres (must be forwarded to AQMD after local approval). AQMD staff will compile this information for compliance purposes and not issue a separate approval.
- Construction activities greater than or equal to 10 acres must notify local jurisdiction/AQMD at least 24-hours prior to initiating earth-movement activities.

¹ U.S. Environmental Protection Agency, Compilation of Emission Factors (AP-42), Chapter 13 - Miscellaneous Sources, January 1995.

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- Construction activities greater than or equal to 10 acres must notify local jurisdiction/AQMD within 10 days of project completion.
- Construction site signage required for projects requiring issuance of grading permit or building permit for a site with greater than or equal to 5,000 square feet (approximately 0.1 acre) of disturbed soils, activities that import or export more than 100 cubic yards of material, or trenching activities greater than 100 feet in length. AQMD staff proposes to scale the signage requirements based on project site acreage (i.e., smaller/fewer signs required for sites with between 5,000 square feet to five acres with larger signage required for sites with more than five acres). Based on guidance contained in Clark County and Maricopa County regulations, sites with more than ten acres would be required to install four-foot by eight-foot signs with the following information provided in three-inch lettering: project name, permittee name, phone number of person(s) responsible for dust control, AQMD phone number, dust control permit (plan) number, and project acreage.
- Dust control monitor (responsible person) required for sites with greater than or equal to 50 acres of actively disturbed soils. Monitor(s) must be hired by property owner or developer, have dust control as primary responsibility, and have the authority to initiate dust control measures.

Work Practice Requirements. Under existing dust control ordinance requirements, activities that submit a dust control plan are required to provide sufficient detail to demonstrate compliance with AQMD Rule 403. In order to provide more direct guidance, the AQMD proposes that specific work practices be incorporated into the revised dust control ordinance. These work practice requirements are based on the most stringent requirements contained in Clark and Maricopa County regulations and are intended to ensure a baseline level of control regardless if a plan has been submitted. Specific dust control work practices include the following.

- Earth-moving operations on sites with greater than one acre of disturbed surfaces are required to operate a water application system (i.e., water truck) while conducting earth-moving operations if watering is the selected control measure.
- Short-term stabilization (maintaining soils in a damp condition, surface crust, or chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months) required for after-hours/weekends.
- Long-term stabilization techniques required within 10 days for areas where construction activities are not scheduled for 30 days.
- Track-out control device (washed gravel pad at least 30 feet wide, 50 feet long, and six inches deep, paving starting from the point of intersection with a paved public roadway and extending for a centerline distance of at least 100 feet and a width of at least 20 feet, grizzly or wheel wash system) required for construction projects greater than or equal to five acres or those that import/export greater than or equal to 100 cubic yards per day. Regardless of project size or track-out control device selected, material tracked-out onto a paved public road must be removed at anytime it extends more than 50 feet from a site entrance and at the conclusion of the work day.

Local Government/AQMD Agreements. To ensure a uniform approach to development and approval of dust control plans, all jurisdictions are proposed to be required to adopt the Coachella Valley Dust Control Handbook in conjunction with the revised dust control ordinance. The Coachella Valley Dust Control Handbook will be an enforceable upgrade to the Coachella Valley Dust Control Plan Review Guidance document approved by the Coachella Valley

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Association of Governments (CVAG) in March of 2001. The intent of the Coachella Valley Dust Control Handbook is to specify the procedures for preparation and approval of a dust control plan, similar to the Handbooks prepared by Maricopa and Clark Counties. Elements of the Coachella Valley Dust Control Handbook are to include:

- Project applicant forms
- Project description forms (acreage, phasing, water sources)
- Requirements for site mapping (site location/boundaries and all access points)
- Forms for notifying local jurisdictions/AQMD of project initiation/completion
- Standards (dimensions, lettering, location, etc.) for construction site signage
- List of Coachella Valley Best Available Control Measures (CV BACM) for fugitive dust sources
- Forms to describe the CV BACM to be implemented on-site (routine dust control measures in sufficient detail to facilitate compliance determinations and a description of the contingency control measures to be implemented if the routine measures are ineffective)
- Estimates of daily throughput
- Detailed description of track-out control system (gravel pad, wheel washer, etc.) and procedures for removal of material that extends more than 50 feet from any site access point
- Identification of dust control monitor (responsible person) for sites with greater than or equal to 50 acres of actively disturbed soils.
- Checklist for local government plan reviewers
- Sample recordkeeping form

Finally, the AQMD is proposing to enter into a Memorandum of Understanding (MOU) with either CVAG or each local jurisdiction to specify responsibilities and commitments (permitting fees, enforcement staffing, penalty procedures, etc.) associated with the revised dust control ordinance provisions.

AQMD Regulations. Construction/earth-movement activities that are not required to obtain grading/building permits from local jurisdictions (School Districts, Flood Control Maintenance, Caltrans, etc.) are currently subject to AQMD Rules 403/403.1. Under the planned dust control program upgrades, the AQMD proposes to revise these regulations to require:

- Implementation of CV BACM instead of Reasonably Available Control Measures (RACM) that are currently required. These CV BACM would be required of all Coachella Valley fugitive dust sources.
- An AQMD-approved dust control plan (plan) for any source not under local jurisdiction control with greater than or equal to one acre of disturbed surfaces, or those that import/export greater than or equal to 100 cubic yards per day, or trenching activities greater than 100 feet in length.
- An AQMD-approved plan must follow the Coachella Valley Dust Control Handbook procedures summarized above. For routine maintenance activities (i.e., road shoulder/flood control channel maintenance), one AQMD-approved plan can be developed and approved for multiple sites provided that sufficient information is provided to describe dust control efforts.

3. Emission Reductions

All of the control options listed above represent existing technologies that are presently available to construction site managers. For more traditional air pollution sources, such as point sources, emissions reductions are calculated by multiplying the baseline emissions by the effectiveness of a given control technology (e.g., selective catalytic reduction). For non-traditional air pollution sources, such as fugitive dust, emissions reductions calculations are more difficult because the

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level of control necessary to comply will vary greatly due to site-specific conditions. For example, a construction site in a wind-protected cove area of the desert may need to apply less water to a grading project when compared to a site located in the Coachella Valley blowsand zone. Moreover, many of the proposed rule requirements allow various control options. Accordingly, it is not possible to quantify precise emissions reductions from implementation of the proposed revised dust control ordinance/AQMD rule requirements. A study conducted by the Midwest Research Institute that monitored PM10 emissions both with and without an extensive watering program, however, determined that an effective watering program can reduce PM10 emissions by 60 to 90 percent.²

4. Rule Compliance /Test Methods/ Record keeping

The following test methods/performance standards are proposed for the locally-adopted dust control ordinances and AQMD regulations: visible plume length limit (e.g., 100 - 300 feet), 20 percent opacity for active operations, silt loading not to exceed 0.33 ounces/square foot or silt content not to exceed 6 percent for haul roads, and drop ball/threshold friction velocity for disturbed surface areas. Self-inspection records (daily inspection of damp or crusted soils, track-out conditions, water usage) must be prepared and retained for three years after project completion and must be made available to the local jurisdiction/AQMD upon request. The Coachella Valley Dust Control Handbook will contain sample recordkeeping forms. Activities that use chemical dust suppressants will be required to maintain records indicating type of product applied, vendor name, and the method, frequency, concentration, and quantity of application.

5. Cost Effectiveness

In 1997, AQMD adopted amendments to Rule 403.³ Among other requirements, these amendments upgraded the existing Reasonable Available Control Measure implementation requirement to require Best Available Control Measures implementation for all fugitive dust sources in the South Coast Air Basin. The cost-effectiveness of these upgrades were estimated at \$197 per ton of PM10 reduced.

6. Implementing Agency

Local jurisdictions have the authority to require and enforce conditions of approval (i.e., plan conditions) prior to issuance of building/grading permits. Additionally, Health and Safety Code Section 40449 states that there are no limitations on cities or counties to adopt any ordinance that is more stringent than and not in conflict with AQMD regulations. Under this Health and Safety Code Section, AQMD also has the authority to enforce locally-adopted ordinance provisions and conditions of approval placed on construction projects. The AQMD has the authority to adopt and enforce rules and regulations to achieve and maintain the National Ambient Air Quality Standards under Health and Safety Code Section 40413.

² Midwest Research Institute, Improvement of Specific Emission Factors, March 29, 1996

³ South Coast Air Quality Management District, Revised Final Staff Report for Proposed Amended Rule 403 (Fugitive Dust) and Proposed Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations), February 14, 1997.

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B. CV BACM 2 – Disturbed Vacant Lands

CONTROL MEASURE SUMMARY	
Source Category:	Disturbed Vacant Lands
Control Methods:	Chemical stabilization, wind fencing, access restriction, re-vegetation
Implementing Agency:	Local governments/ AQMD / BLM

1. **Description of Source Category**

Background. Fugitive dust emissions can be generated by wind erosion of vacant lands and areas that have been disturbed by man-made activities. In the Coachella Valley, a unique situation exists where approximately 20,000 acres of vacant land have been preserved to protect the federally threatened Coachella Valley fringe-toed lizard. These animals rely on sand migration for foraging and habitat and thus, the control of fugitive dust from wind erosion is prohibited in these areas. Accordingly, the proposed disturbed vacant land controls target areas subject to man-made disturbances (i.e., off-road vehicle use, inactive construction sites, etc.). As mentioned in Chapter 2, exclusion of certain air quality data is allowed under the U.S. EPA Natural Events Policy if it can be documented that emissions are attributable to a natural source such as the Coachella Valley preserve.

Regulatory History. The dust control ordinance currently requires owners of unimproved property to discourage off-road motor vehicle use through signage and/or fencing as deemed necessary by local jurisdiction. In addition, AQMD Rules 403/403.1 serve as backstop regulations for the dust control ordinance.

2. **Proposed Method of Control**

In order to facilitate enforcement activities on disturbed vacant lands, a revised dust control ordinance is proposed for adoption by all Coachella Valley local jurisdictions. The revised dust control ordinance is proposed to include the following upgrades to further reduce emissions from disturbed surface areas.

- Owners/operators of vacant lands greater than or equal to 5,000 square feet that have a cumulative area of more than or equal to 500 square feet that are disturbed by motor vehicles and/or off-road motor vehicles are required to prevent trespass by installing barriers. If access restriction is not feasible, owners/operators may choose to uniformly apply and maintain washed gravel or chemical/organic dust suppressants to all disturbed areas at a level sufficient to prevent wind driven fugitive dust. These treatments shall be required within 30 days of initial discovery by either the local jurisdiction or the AQMD and must be maintained in a condition that to meet the applicable performance standards.
- Owners/operators of disturbed vacant lands greater than or equal to 0.5 acre are required to establish vegetative ground cover, stabilize with chemical dust suppressants or washed gravel, or implement and maintain an alternative U.S. EPA-approved control measure at a level sufficient to prevent wind driven fugitive dust. These treatments shall be required within 30 days of initial discovery by either the local jurisdiction or the AQMD and must be maintained in a condition to meet the applicable performance standards.
- Owner/operators of vacant lands where weed abatement is conducted by disking or blading shall be required to apply water before and during weed abatement activities and

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stabilize the site with vegetative ground cover, chemical dust suppressants, washed gravel, or implement and maintain an alternative U.S. EPA-approved control measure at a level sufficient to prevent wind driven fugitive dust.

3. Emission Reductions

All of the control options listed above represent existing technologies that are presently available to owner/operators of disturbed vacant lands. As with the proposed controls for construction activities, there are a range of compliance options for reducing PM10 emissions from disturbed vacant lands. Accordingly, it is difficult to estimate the percent reduction from this source category. For reference, the AQMD 1990 Coachella Valley PM10 State Implementation Plan (1990 CV SIP) estimated that vacant land control measures (vegetative cover, chemical stabilization, and wind fencing) would reduce emissions by 28 percent.⁴

4. Rule Compliance/ Test Methods/ Record keeping

The following test methods/performance standards are proposed for the locally-adopted dust control ordinances: wind driven fugitive dust (defined as visible emissions from any disturbed surface area generated from wind action alone), drop ball, vegetative cover, rock test and/or threshold friction velocity.

To proactively address potential wind erosion emissions from disturbed vacant lands, owners of disturbed vacant lands that are subject to the revised dust control ordinance provisions are required to notify the City (County) of the location of subject vacant lands and owner contact information within 90 days of ordinance adoption.

Owner/operators of disturbed vacant lands will be required to compile records of evidence that documents compliance with the ordinance requirements. Said records of evidence may include, but shall not be limited to, name and contact person of all firms contracted with for dust suppression, listing of all dust control implements used on-site, and proof (invoices from dust suppressant and dust control implement vendors) of dust suppressant application. The records must be retained for three years and made available to the City (County) and AQMD upon request.

5. Cost Effectiveness

Cost-effectiveness calculations for controlling emissions from disturbed vacant lands were calculated in the 1990 CV SIP as follows: stabilizing blowsand areas with chemical stabilizers - \$810/ton PM10 reduced, snow fence windbreaks - \$281/ton PM10 reduced, tree wind breaks - \$409/ton PM10 reduced, and vegetative planting \$532/ton PM10 reduced.

6. Implementing Agency

Under general police powers, local jurisdictions have the authority to impose requirements and enforce ordinance requirements on owners of disturbed vacant lands. Additionally, Health and Safety Code Section 40449 states that there are no limitations on cities or counties to adopt any ordinance that is more stringent than and not in conflict with AQMD regulations. This Health and Safety Code Section also provides the AQMD with the authority to enforce locally-adopted ordinance provisions and conditions of approval placed on construction projects.

⁴ South Coast Air Quality Management District, State Implementation Plan for PM10 in the Coachella Valley, November 1990.

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C. CV BACM 3 – Unpaved Roads and Unpaved Parking Lots

CONTROL MEASURE SUMMARY	
Source Category:	Unpaved Roads and Unpaved Parking Lots
Control Methods:	Paving, chemical stabilization, access restriction, re-vegetation
Implementing Agency:	Local governments/ AQMD / BLM

1. **Description of Source Category**

Background. Continued growth and development in the Coachella Valley has resulted in conversion of many unpaved surfaces to paved areas. Additionally, unpaved roads and unpaved parking lots are typically not permitted in new land use developments. In spite of this, existing vehicular travel on and windblown emissions from unpaved roads and unpaved parking lots continue to generate significant amounts of fugitive dust and the accompanying PM10 emissions.

Regulatory History. The existing model ordinance requires that owners of public or private unpaved roads with between 20 and 150 average daily traffic (ADT) levels must take measures (signage or speed control devices) to reduce vehicular speeds to 15 miles per hour. Owners of public or private unpaved roads with more than 150 ADT are required to pave the roadway or submit a Fugitive Dust Mitigation Plan that specifies the method(s) to reduce fugitive dust emissions within six months of ordinance adoption. In addition, AQMD Rule 403 serves as a backstop regulation for the dust control ordinance.

2. **Proposed Method of Control**

In order to improve enforcement determinations for unpaved roads and parking lots, a revised model ordinance is proposed to be adopted by all Coachella Valley local jurisdictions. The revised dust control ordinance is proposed to include the following upgrades to further reduce emissions from unpaved roads and unpaved parking lots.

Unpaved Roads.

- Upon dust control ordinance adoption, new unpaved roads or alleys are prohibited as public thoroughfares after July 1, 2002 unless chemical dust suppressants are applied and maintained according to the applicable standards/test methods.
- Owner/operators of public or private unpaved roads with between 20 and 150 average daily traffic (ADT) levels must take measures (signage or speed control devices) to reduce vehicular speeds to 15 miles per hour (*existing model ordinance requirement*).
- Owner/operators of public or private unpaved public roads, including alleys, constructed prior to July 1, 2002, that have ADT levels of 150 or more, are required to pave, apply and maintain chemical dust suppressants according to the applicable rule standards/test methods in accordance with the following schedule--- 1/3 of qualifying unpaved roads within one year of ordinance adoption with the remainder treated within two years of ordinance adoption.

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Unpaved Parking Lots. Upon dust control ordinance adoption, new unpaved parking lots are prohibited unless treated with chemical dust suppressants or stabilized with chemical dust suppressants in travel lanes and two inches of uniformly applied washed gravel in parking areas and maintained in accordance with the applicable standards/test methods. Owners/operators of an existing unpaved parking lot larger than 5,000 square feet are required to pave, apply chemical dust suppressants, or apply washed gravel, according to the applicable rule standards/test methods within six months of ordinance adoption. Owners/operators of unpaved parking lots that are used no more than 35 days a year are required to implement control measures [apply dust suppressants or apply washed gravel] according to the applicable rule standards/test methods on days when more than 10 vehicles enter and park.

3. Emission Reductions

All of the control options listed above represent existing technologies that are presently available to owner/operators of unpaved roads and unpaved parking lots. Because the proposed control measure allows the implementation of a variety of control options it is difficult to estimate the accompanying emission reductions. The 1997 AQMD staff report for Rule 1186 (applicable to unpaved roads within the South Coast Air Basin) included the following emission reduction percentages for the various control options paving unpaved roads - 94 percent reduction, chemical stabilization - 75 percent reduction, and 15 mile per hour speed limits - 50 percent reduction.⁵

4. Rule Compliance/ Test Methods/ Record keeping

The following test methods/performance standards are proposed for the locally-adopted dust control ordinances: visible plume length limit of 100 - 300 feet, 20 percent opacity standard, a 6 percent silt content standard and a 0.33 ounces per square foot silt loading standard (for unpaved roads), an eight percent silt content standard and a 0.33 ounces per square foot silt loading standard (for unpaved parking lots), and/or gravel applied uniformly and maintained to a depth of two inches.

To proactively address potential emissions from unpaved roads and unpaved parking lots owner/operators must report unpaved road locations and ADT estimates and parking lot size to the applicable jurisdiction within six months of ordinance adoption. Local jurisdictions will then be required to prepare annual reports that describe the total unpaved road miles within their jurisdictional boundaries and the miles paved or treated in compliance with the revised dust control ordinance requirements until all applicable roads are in compliance. The annual reports must also include an inventory of unpaved parking lots within the jurisdiction and describe the control actions implemented to demonstrate compliance with the ordinance requirements. If chemical dust suppressants are used as an alternative to paving, then the annual report shall include the date, amount and proposed frequency of chemical dust suppressant application, and the manufacturer's dust suppressant product information sheet that identifies the name of the dust suppressant and application instructions. These records must be retained for three years and made available to the local jurisdiction/AQMD upon request.

⁵ South Coast Air Quality Management District, Revised Final Staff Report for Proposed Amended Rule 403 (Fugitive Dust) and Proposed Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations), February 14, 1997.

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5. Cost Effectiveness

Costs for unpaved road treatments were estimated in the 1997 AQMD Rule 1186 staff report as follows: paving - \$350,000 per mile, chemical stabilization - \$16,107 per mile, and speed limit reduction: \$200 per sign with four signs required per mile for a total of \$800 per mile. The overall cost-effectiveness of AQMD Rule 1186 unpaved road treatment requirements was estimated at \$958 per ton of PM10 reduced.⁶

6. Implementing Agency

Under general police powers, local jurisdictions have the authority to impose dust control ordinance requirements on owner/operators of unpaved roads and parking lots and enforce the accompanying dust control ordinance provisions. Additionally, Health and Safety Code Section 40449 states that there are no limitations on cities or counties to adopt any ordinance that is more stringent than and not in conflict with AQMD regulations. This Health and Safety Code Section also provides AQMD with the authority to enforce locally-adopted ordinance provisions.

⁶ South Coast Air Quality Management District, Revised Final Staff Report for Proposed Amended Rule 403 (Fugitive Dust) and Proposed Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations), February 14, 1997.

III. AIR QUALITY CONFORMITY ANALYSIS

INTRODUCTION

The Coachella Valley and Western Morongo Basin portions of the CDCA planning area are in “non-attainment” for PM₁₀ (particulate matter 10 microns or smaller) and ozone. Section 176 (c) of the Clean Air Act (CAA), as amended (42 U.S.C. 7401 *et seq.*) and regulations under 40 CFR part 51 subpart W requires federal agencies to make a determination that a proposed action is or will be in conformity with applicable implementation plans meant to bring an area into compliance. The exceedances for ozone are primarily due to ozone's production and importation outside the plan area and, therefore, efforts to control ozone in those areas in conjunction with existing industrial rules will reduce ozone in the planning area. Within the plan area, however, PM₁₀ is primarily associated with local conditions and activities. Two separate State Implementation Plans (SIPs) have been adopted, which direct actions to be taken to bring the respective areas into compliance with federal PM₁₀ standards.

MORONGO BASIN PM₁₀ PLAN CONFORMITY ANALYSIS

PM₁₀ violations throughout the Mojave Desert Air Basin are primarily attributed to heavy fugitive dust sources in and around urbanized areas and dust generated from large-scale high wind events.⁷ Major dust sources in urbanized areas include unpaved road travel, off-highway vehicle use, wind erosion of unpaved roads and disturbed soils, and construction and demolition activity. In an effort to bring the region into compliance with federal PM₁₀ standards, the MDAQMD adopted a “Federal Particulate Matter Attainment Plan” in 1995, which sets forth a control strategy plan for the entire District. The strategy is aimed at reducing fugitive dust emissions from unpaved road travel, construction/demolition activities, disturbed areas, and industrial activities. All development in the District must comply with the provisions of this Plan and other applicable MDAQMD emissions requirements.

With the implementation of the “air quality management strategy” and appropriate mitigation for any emission producing projects, in the preferred alternative of the Coachella Valley CDCA Plan Amendment, there will be an overall reduction in air emissions within the Western Morongo Basin subarea from BLM managed lands. Therefore, cumulatively, activities on the BLM lands will be in conformance with the current Morongo Desert Air Basin's “Federal Particulate Matter Attainment Plan”.

COACHELLA VALLEY PM₁₀ PLAN CONFORMITY ANALYSIS

The air quality conformity analysis is a process that evaluates a variety of criteria, including special and jurisdictional applicability, current SIP and its status and rules and provisions, and other issues. Each of these steps is described and addressed below. The South Coast Air Quality Management District has drafted the 2002 CVSIP, which details the control measures necessary to attain the PM₁₀ standards again. This analysis addresses conformance of the CDCA Plan Amendment with the 2002 CVSIP and its more stringent standards.

⁷ “Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan,” Mojave Desert Air Quality Management Plan, July 31, 1995.

1. Spatial and Jurisdictional Applicability

The Coachella Valley encompasses approximately 2,500 square miles and is located in the central portion of Riverside County known as the Salton Sea Air Basin (SSAB). The 2002 CVSIP focuses on the Coachella Valley as defined by Banning Pass to the north, by the Riverside/Imperial county boundary lines to the south, by the San Jacinto Mountains to the west, and by the San Bernardino Mountains to the east. Elevation ranges from 500 feet above sea level to 150 feet below sea level. On private and state-regulated lands, the South Coast Air Quality management District (SCAQMD) has responsibility for assuring compliance with applicable state and federal air quality regulations. The US EPA is directly involved in assuring that SCAQMD and affected jurisdictions take appropriate actions to "attain" federal standards. Lands under federal control are required to demonstrate compliance with applicable attainment plans, including the Coachella Valley SIP.

2. Coachella Valley 2002 State Implementation Plan

In November 1990, areas in the United States that were previously designated as federal nonattainment areas for PM₁₀, including the Coachella Valley, were initially designated as "moderate" PM₁₀ nonattainment areas. The Coachella Valley PM₁₀ SIP (CVSIP) was adopted in November, 1990 and incorporated "reasonably available control measures" (RACM). The 90-CVSIP identified candidate control measures and demonstrated attainment of the NAAQS for PM₁₀ by the year 1995, one year after the statutory limit for moderate nonattainment areas. Unable to meet regulatory standards, the Coachella Valley was redesignated as "serious" effective February 8, 1993. In response, the SCAQMD prepared a SIP revision (94-CVSIP) that identified candidate Best Available Control Measures (BACM) for implementation prior to February 8, 1997. Compliance seemed to have been achieved in the period from 1993 through 1995. The 1996 CVSIP demonstrated attainment of the PM₁₀ standards. From 1999 through 2001, PM₁₀ dust levels rose sufficiently to exceed the annual average PM₁₀ standard. Based upon the exceedances during this period, coupled with very low rainfall, the Coachella Valley was determined to be on non-attainment of federal PM₁₀ standards.

Under Title I of the CAA, EPA sets limits on how much of a particular pollutant can be present in the air for any given location within the United States. EPA, states, and local governments are required under the CAA to implement measures to prevent and control air pollution, with significant responsibility resting with the states. The major mechanism used to attain the standards in individual areas is a SIP.

The 2002 Coachella Valley State Implementation Plan (CVSIP) updates the previous Coachella Valley plans to address the recent rise in PM₁₀ levels above the standard and forestall a notice of failure to attain. Its elements include the following:

- ▶ Air quality summary from 1997-2001, including natural events;
- ▶ Emissions inventory update;
- ▶ Most Stringent Measures (MSM) analysis and Proposed Control Strategy;
- ▶ Attainment demonstration;
- ▶ Natural Events Action Plan status and update; and
- ▶ Request for Extension of 2001 PM₁₀ attainment deadline.

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The following table is a summary of the control strategies in the 2002 CVSIP.

Summary of 2002 CVSIP Control Strategies

CONTROL MEASURE	TITLE	CONTROL METHOD
BACM-1	Construction Activities	watering, chemical stabilization, wind fencing, revegetation, track-out
BACM-2	Disturbed Vacant Lands	chemical stabilization, wind fencing, access restriction, revegetation
BACM-3	Unpaved Roads and Unpaved Parking Lots	paving, chemical stabilization, access restriction, revegetation
BACM-4	Paved Road Dust	minimal track-out, stabilization of unpaved road shoulders, clean streets management
BACM-5	Control of Emissions from Agricultural Activities	requirements to implement agricultural handbook conservation practices

3. Air Quality Impact Analysis for the Proposed CDCA Plan Amendment

The preferred alternative of the Coachella Valley CDCA Plan Amendment addresses a variety of plan elements, including an Air Quality Management Strategy, Land Health Standards, Visual Resource Management Classification, Fire Management, Habitat Conservation Objectives, Multiple Use Classification, Wild and Scenic River Eligibility, Special Area Designations, Land Tenure Exchange & Sale Criteria, Land Tenure Acquisition Criteria, Management of Acquired Lands, Communication Sites & Utilities, Sand and Gravel Mining, Livestock Grazing, Wild Horse and Burro Program, Motorized vehicle Area Designations, Motorized vehicle Route Designations, Special Recreation Management Area designation, Stopping/Parking/Vehicle Camping, Bighorn Sheep Recovery Strategy, and Hiking/Biking/Equestrian Trails.

Air Quality Management Strategy. The preferred alternative for the Coachella Valley CDCA Plan Amendment includes an air quality management strategy designed to reduce PM10 emissions from the BLM-managed public lands, especially upwind of sensitive receptors. The motorized-vehicle route network would be reduced by 20%, closing redundant routes and closing all informal off-highway vehicle “free-play” areas, upwind of sensitive receptors (i.e. residents of the Coachella Valley). Installation of new communication sites, wind parks, and sand and gravel mining operations would be restricted to designated areas. Where feasible, BLM would install sand fencing to reduce the amount of sand flow and PM10 emissions off of the public lands.

Of the various plan elements set forth above, those with the potential to exceed National Ambient Air Quality Standards include: 1) Communication Sites and Utilities, 2) Sand and Gravel Mining, 3) Motorized Vehicle Area Designations, and 4) Motorized Vehicle Access Route designations. Potential impacts associated with these plan elements, how potential impacts are mitigated and how BLM actions comply with CVSIP provisions and rules are discussed for each plan element below.

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Communication Sites and Utilities, Sand and Gravel Mining: Potential PM₁₀ generation associated with proposed amendments to these CDCA Plan elements are limited. The issuance of new or renewed rights of way for windparks, communication sites and utilities would be required to be consistent with the BLM's habitat conservation objectives, land health standards and air quality management strategy, as well as the National Ambient Air Quality Standards and current State Implementation Plan. Most potentially viable windpark lands in the Plan area have already been developed. Any requests for new communication towers would be restricted to existing communication sites.

Existing sand and gravel operations of BLM lands within the CDCA planning area are already subject to a variety of requirements to control blowing sand and the emission of fugitive dust. Under the preferred alternative for the Coachella Valley CDCA Plan Amendment, saleable mineral materials would be restricted to those identified by the California Division of Mines and Geology as mineral resource zones (MRZs). Proposed new sand and gravel mines would be required to demonstrate compatibility with BLM's habitat conservation objectives, land health standards and air quality management strategy, as well as the National Ambient Air Quality Standards and current State Implementation Plan, before new rights-of-way would be issued.

Potential areas of PM₁₀ impact include the construction, maintenance and use of roads, initial site disturbance for facilities (turbines, powerlines, substations, antennas, etc.). New construction activities would be required to comply with the 2002 CVSIP rules and provisions, including the following:

- All fugitive dust sources will be required to implement Coachella Valley Best Available Control Measures (CV BACM).
- Dust control plans required prior to issuance of building permits for projects with more than 5,000 square feet of disturbed soils unless a dust control plan has already been issued to the builder/developer through a grading permit. The plan must have the required elements described in the Coachella Valley Dust Control Handbook (which will be developed concurrently with the BLM's revised dust control ordinance).
- Site-specific dust mitigation plan required for construction activities greater than or equal to 10 acres (must be forwarded to AQMD after local approval). AQMD staff will compile this information for compliance purposes and not issue a separate approval.
- Project on BLM lands would be required to obtain an AQMD approved dust control plan.
- Construction activities greater than or equal to 10 acres must notify local jurisdiction/AQMD within 10 days of project completion.
- Construction site signage required for projects with greater than or equal to 5,000 square feet (approximately 0.1 acre) of disturbed soils, activities that import or export more than 100 cubic yards of material, or trenching activities greater than 100 feet in length. Sites with more than ten acres would be required to install four-foot by eight-foot signs with the following information provided in three-inch lettering: project name, permittee name, phone number of person(s) responsible for dust control, AQMD phone number, dust control permit (plan) number, and project acreage.
- Dust control monitor (responsible person) required for sites with greater than or equal to 50 acres of actively disturbed soils. Monitor(s) must be hired by property owner or developer, have dust control as primary responsibility, and have the authority to initiate dust control measures.

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Under existing dust control ordinance requirements, activities that submit a dust control plan are required to provide sufficient detail to demonstrate compliance with AQMD Rule 403. Specific dust control work practices include the following.

- Earth-moving operations on sites with greater than one acre of disturbed surfaces are required to operate a water application system (i.e., water truck) while conducting earth-moving operations if watering is the selected control measure.
- Short-term stabilization (maintaining soils in a damp condition, surface crust, or chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months) required for after-hours/weekends.
- Long-term stabilization techniques required within 10 days for areas where construction activities are not scheduled for 30 days.

Track-out control device (washed gravel pad at least 30 feet wide, 50 feet long, and six inches deep, paving starting from the point of intersection with a paved public roadway and extending for a centerline distance of at least 100 feet and a width of at least 20 feet, grizzly or wheel wash system) required for construction projects greater than or equal to five acres or those that import/export greater than or equal to 100 cubic yards per day. Regardless of project size or track-out control device selected, material tracked-out onto a paved public road must be removed at anytime it extends more than 25 feet from a site entrance and at the conclusion of the work day.

Motorized Vehicle Access Route Designations: Potential PM10 emissions associated with the preferred alternative for routes of travel are limited by the air quality management strategy incorporated into the Coachella Valley CDCA Plan amendment. Under the preferred alternative, the route existing network would be reduced by 20%, by closing redundant routes upwind of sensitive receptors. The relative amount of PM10 emissions generated by motorized vehicles on the remaining 45 miles of routes would depend on the average daily trips, the velocity of the vehicles and prevailing wind speeds.

Many of these routes occur within wash areas on canyons and alluvial fans comprised of coarse sands and gravels, and are mostly outside areas with high levels of soil silt and fines. Nonetheless, the ongoing use of these areas has the potential to emit or create conditions for fugitive dust. The average level of use on these routes of travel have been estimated for high and low-activity periods: 5 average daily trips (ADT) on weekdays and during all days in the summer; and 25 ADT on weekends and during hunting season. Based upon current knowledge and understanding of this use and its potential to contribute to PM10 emissions, the preferred alternative CDCA Plan Amendment would not result in significant PM10 air quality impacts, and would result in an overall reduction of PM10 emissions from the public lands. In an effort to help the Coachella Valley reach “attainment” status for PM10, route management would include provisions to comply with the approved PM10 State Implementation Plan, such as 1) signage, 2) establishing cattle guards to reduce “track out” onto paved roads, 3) 15 mile per hour speed limits on unpaved roads with 20 to 150 average daily traffic levels, and 4) temporary closures on high wind days (as defined by the South Coast Air Quality Management District).

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Motorized Vehicle Area Designations: Potential PM10 emissions associated with the preferred alternative for motorized vehicle area designations are limited by the air quality management strategy incorporated into the Coachella Valley CDCA Plan amendment. Under the preferred alternative, all historically used “open” areas upwind of sensitive receptors would be closed (2,360 acres) to off-highway vehicles. Only the 1,040 acre Drop 31 area, which is located downwind of sensitive receptors, would be available for “open” off-highway vehicle use. Any valley-wide reductions in PM10 emissions upwind of sensitive receptors, will depend on the extent to which displaced off-highway vehicle enthusiasts use non-federal land instead of public land, or travel farther to other “open” public land areas, such as Drop 31.

The off-highway vehicle users themselves would be exposed to PM10 emissions at the Drop 31 site, the relative amount depending on the velocity of the vehicle and prevailing wind speeds. As part of the overall management strategy for the Drop 31 area, mitigation measures will be included to reduce PM10 emissions, such as temporary closure of the Drop 31 area on high wind days (as defined by the South Coast Air Quality Management District), setting speed limits, establishing cattle guards to reduce “track out” onto paved roads, install fencing and signs to discourage trespass into wilderness and onto private lands, setting a carrying capacity if the place becomes enormously popular, and assuring compliance with the approved PM10 State Implementation Plan. Based upon current knowledge and understanding of motorized vehicle use and its potential to contribute to PM10 emissions, the preferred alternative CDCA Plan amendment will result in reduced PM10 emissions from the public lands, especially for sensitive receptors in the Coachella Valley.

DRAFT CONFORMITY DETERMINATION

The BLM's preferred alternative for the Coachella Valley CDCA Plan and alternatives have been analyzed under Section 176 of the Clean Air Act, as required by 40 CFR 93.158. The preferred alternative incorporates an air quality management strategy which applies measures to reduce PM10 emissions from the public lands upwind of sensitive receptors, and contributes to the goals set forth in the 2002 Coachella Valley PM10 State Implementation Plan. The proposed CDCA Plan Amendment has been determined to be in conformance with the applicable State Implementation Plans for the purpose of attaining the National Ambient Air Quality Standards.