

RULE 806 CONSERVATION MANAGEMENT PRACTICES
(Adopted 11/08/2005; Revised 10/16/2012)

A. Purpose

The purpose of this regulation is to reduce the amount of coarse Particulate Matter (PM-10) entrained in the ambient air as a result of emissions generated from Agricultural Operation Sites by requiring Conservation Management Practices to prevent, reduce, or mitigate PM-10 emissions.

B. Applicability

This rule applies to Agricultural Operation Sites located within Imperial County. Effective on and after January 1, 2013, an owner/operator shall implement the applicable CMPs selected for each Agricultural Operation Site. The provisions of this rule adopted on November 8, 2005 shall remain in effect until January 1, 2013 at which time the amendments adopted on October 16, 2012 shall take effect.

C. Definitions

In addition to the definitions of terms in Rule 800 (General Requirements for Control of Fine Particulate Matter (PM-10)), the following definitions shall govern the implementation of this rule:

- C.1 AGRICULTURAL OPERATIONS: The growing and harvesting of crops for the primary purpose of earning a living.
- C.2 AGRICULTURAL OPERATION SITE: One or more agricultural parcels that meet the following:
- C.2.a Are under the same or common ownership or operation, or which are owned or operated by entities which are under common control; and
 - C.2.b Are located on one or more contiguous or adjacent properties wholly within Imperial County.
- C.3 AGRICULTURAL PARCEL: A portion of real property used by an owner or operator for carrying out a specific agricultural operation. Roads, vehicle/equipment traffic areas, and facilities, on or adjacent to the cropland are part of the agricultural parcel.
- C.4 ALTERNATIVE TILLING: Till alternative rows for weed management, reducing approximately 50% of field activity related to tilling, in addition to stabilizing soil surface and reducing soil compaction.
- C.5 APPLICATION EFFICIENCIES: Use more efficient application equipment

so as to reduce a minimum of one ground operation. Examples include: compact or low volume spray equipment; aerial applications; micro-heads or infrared spot sprayers; electrostatic sprayers. Reduces soil compaction, passes and chemical usage.

- C.6 **BALING/LARGE BALES:** Reduce a minimum of one pass through the field per acre by using large balers to harvest crops.
- C.7 **BED/ROW SIZE OR SPACING:** Reduce a minimum of one tillage operation by Increasing or decreasing the size of the planting bed area (can be done for field and permanent crops) or adjusting spacing. Spacing adjustments reduce the number of passes and soil disturbance by increasing plant density/canopy through reduction of row width to contain PM within the canopy.
- C.8 **BULK MATERIALS CONTROL:** Minimize visible dust emissions from bulk materials by using dust suppressant or water to form a stabilized surface, or using a tarp to fully cover the pile or truckbed, or using a wind barrier or 3-sided structure to reduce entrainment of fugitive dust.
- C.9 **CHEMIGATION/FERTIGATION:** Reduce a minimum of one ground operation by applying chemicals through an irrigation system. This reduces the need to travel in the field for application purposes, thus reducing operations and soil disturbance while increasing the efficiency of the application.
- C.10 **CHIPS/MULCHES, ORGANIC MATERIALS, POLYMERS, ROAD OIL & SAND:** Application of any nontoxic chemical or organic dust suppressant that meets all specification required by any federal, state, or local water agency and is not prohibited for use by any applicable regulations. Chips/Mulches and organic materials should meet the specifications in the mulches definition below. Polymers, road oil and sand should create a stabilized surface during high traffic times such as harvest.
- C.11 **COMBINED OPERATION:** Combine equipment to perform several operations during one pass, thereby reducing a minimum of one tillage operation. Examples include: use of one-pass till equipment in ground preparation or crop tillage; and cultivation and fertilization of a field crop in a single pass. Other benefits are reduction of soil compaction and time to prepare fields, both of which can be precursors to additional tillage requirements. If a combined operation is accomplished through equipment change/technological improvement, that action is considered one CMP, and either Equipment Changes/Technological Improvements CMP or Combined Operations CMP may be selected in a CMP Plan, but not both.
- C.12 **CONSERVATION IRRIGATION:** Reduce a minimum of one tillage

operation related to weeding by conserving the amount of water used by using either drip, sprinkler, or buried/underground line irrigation. Conserving water reduces weed population, which in turn reduces the need for tillage and reduces soil compaction.

- C.13 CONSERVATION MANAGEMENT PRACTICE (CMP): An activity or procedure that prevents, reduces, or mitigates PM-10 normally emitted by, or associated with, an agricultural activity.
- C.14 CONSERVATION MANAGEMENT PRACTICES PLAN (CMP PLAN): A document prepared by the owner or operator of an Agricultural Operation site that lists the selected CMPs for implementation. The CMP Plan also contains, but is not limited to, contact information for the owner or operator, a description of the Agricultural Operation Site and locations of Agricultural Parcels, and other information describing the extent and duration of CMP implementation.
- C.15 CONSERVATION TILLAGE (e.g.: no tillage, minimum tillage): A tillage system that reduces a minimum of three tillage operations. This system reduces soil and water loss by reducing the number of passes and by leaving crop residue on the field after harvest as well as managing the residue so that it remains intact during the planting season. It reduces the number of passes and amount of soil disturbance. It improves soil because it retains plant residue and increases organic matter.
- C.16 COVER CROPS: Establish cover crops that maintain a minimum of 60 percent ground cover, as determined by the Line Transect Test Method. Native or volunteer vegetation that meets the minimum ground cover requirement is acceptable.
- C.17 CROP RESIDUE MANAGEMENT: Maintain crop residue from previous crops until tilling for the next crop. Crop residues must maintain a minimum of 60 percent ground cover as determined by Line Transect Test Method. Implements such as undercutters or sweeps can maintain crop residues without burying or destroying residues.
- C.18 CROPLAND - OTHER: This CMP category includes CMPs to reduce windblown emissions.
- C.19 CROSS WIND STRIPCROPPING: Establish crops in parallel strips across the prevailing wind erosion direction and arranged so that strips susceptible to wind erosion are alternated with strips having a protective cover that is resistant to wind erosion. The strips with the protective cover should be at least as wide as the strips susceptible to wind erosion.
- C.20 EQUIPMENT CHANGES/TECHNOLOGICAL IMPROVEMENTS: Reduce a

minimum of one tillage operation by modifying equipment or making technological improvements. Examples include flame cultivation or equipment that combines discing, chiseling and ring rolling. If an equipment change/technological improvement is made in order to combine operations, that action is considered one CMP; either Equipment Changes/Technological Improvements CMP or Combined Operations CMP may be selected in the CMP plan, but not both.

- C.21 FALLOW LAND: Temporary or permanent removal from production. Eliminates entire operation/passes or reduces activities.
- C.22 FIELD WINDBREAKS: Plant or maintain a single or multiple row of trees or shrubs adjacent to windward edge of the field as close to perpendicular as practical with the direction of erosive winds. Windbreaks such as trees or shrubs should be established at a right angle to the prevailing wind direction. Sites downwind of the windbreak are considered protected if they fall within an area that is less than or equal to 10 times the height of the windbreak. The windbreak should have a porosity of 50 %.
- C.23 GRAVEL: Placing a layer of Gravel at least 3 inches in depth to minimize dust generated from vehicle movement and to dislodge any excess debris which can become entrained. Gravel should conform to the grading defined in Rule 800.
- C.24 GREEN CHOP: Reduce a minimum of one ground operation by harvesting a forage crop without allowing it to dry in the field. This practice reduces soil disturbance and soil compaction.
- C.25 GRINDING/CHIPPING/SHREDDING: Grinding pruning's and orchard removals instead of burning; incorporate to soil. Reduces PM from burning crop residues.
- C.26 GROUND OPERATION: An agricultural operation that is not a tillage operation that involves equipment passing across the field, such as a chemical spray application. A pass through the field may be a subset of a ground operation.
- C.27 HAND HARVESTING: Reduce a minimum of one ground operation by harvesting a crop by hand. It reduces soil disturbance due to machinery passes.
- C.28 INTEGRATED PEST MANAGEMENT: Reduce a minimum of one ground operation by using a combination of techniques including organic, conventional and biological farming concepts to suppress pest problems. It creates beneficial insect habitat that reduces the use of herbicides/pesticides thereby reducing number of passes for spraying. It

also reduces soil compaction and the need for additional tillage. If integrated pest management CMP uses the same practices described in the Organic Practices CMP, this action is considered one CMP, and either Integrated Pest Management CMP or Organic Practices CMP may be selected in a CMP plan, but not both.

- C.29 IRRIGATION POWER UNITS: Use cleaner burning engines, electric motors (CMP only applicable if engines are cleaner than otherwise required by current local, state and federal requirements).
- C.30 MULCHING: Reducing PM10 emissions and wind erosion and preserving soil moisture by uniformly applying a protective layer of plant residue or other material to a soil surface prior to disturbing the site to reduce soil movement. Mulching material shall be evenly applied, and if necessary, anchored to the soil. Mulch should achieve a minimum 70% cover, and a minimum of 2 inch height above the surface. Inorganic material used for mulching should consist of pieces of .75 to 2 inches in diameter.
- C.31 NIGHT FARMING: Operate at night when moisture levels are higher and winds are lighter. It decreases the concentration of PM emissions during daytime and the increased ambient humidity reduces PM emissions during the night. Night farming should take place between sundown and sunrise.
- C.32 NIGHT HARVESTING: Implementing harvesting practices at night when moisture levels are higher and winds are lighter. It reduces PM by operating when ambient air is moist, thereby reducing PM emissions. Night harvesting should take place between sundown and sunrise.
- C.33 NO BURNING: Switching to a crop/system that would not require waste burning. It reduces emissions associated with burning.
- C.34 NON TILLAGE/CHEMICAL TILLAGE: Reduce a minimum of one tillage operation by, for example, using a flail mower or low volume sprayers. It reduces soil compaction and stabilizes soil.
- C.35 ORGANIC PRACTICES: Reduce a minimum of one ground or tillage operation by using biological control methods or non-chemical control methods. Examples include: organic certification, biological controls, mulches and humus. If an organic practice CMP uses the same practice as described in the integrated pest management CMP, this action is considered one CMP, and either Organic Practices CMP or Integrated Pest Management CMP may be selected in a CMP plan, but not both.
- C.36 PAVING: To pave currently Unpaved Roads.
- C.37 PERMANENT CROPS: Having an established permanent crop that is not

replanted annually.

- C.38 **PRECISION FARMING (GPS):** Reduce a minimum of one pass through the field per acre by using satellite navigation to calculate position in the field, therefore manage/treat the selective area. It reduces overlap and allows operations to occur during inclement weather conditions and at night thereby generating less PM.
- C.39 **PRE-HARVEST SOIL PREPARATION:** Applying a water or stabilizing material to soil prior to harvest to form a visible crust. It reduces PM emissions at harvest.
- C.40 **REDUCED PRUNING:** Reduce a minimum of one ground operation by reducing the frequency of pruning (e.g. one time per year, or every other year).
- C.41 **RESTRICTED ACCESS:** To restrict or eliminate public access to unpaved private roads with signs or physical obstructions. At each access point, install signs or physical barriers such as gates, fencing, posts, signs, shrubs, trees that block or effectively control access to the area. It reduces vehicle traffic and thus reduces associated fugitive dust.
- C.42 **RIDGE ROUGHNESS:** Establish stabilized ridges by normal tillage and planting equipment as close to perpendicular as practical with the direction of erosive winds (not appropriate for unstable soils such as sands or loamy sands). After establishment, ridges shall be maintained through those periods when wind erosion is expected to occur, or until growing crops provide enough cover to protect the soil from wind erosion. Ridge spacing should be no greater than 4 times the ridge height.
- C.43 **ROAD MIX:** A mixture of tank bottoms from crude oil storage tanks, material from crude oil spills, or other crude-oil-containing soil mixed with aggregates and soils, that are used as a base cover materials for roads, parking lots, berms, tank and well locations, or similar applications.
- C.44 **SHED PACKING:** Reducing a minimum of one pass through the field per acre by packing commodities in a covered or closed area, rather than field-pack. It reduces field traffic, thereby reducing PM emissions.
- C.45 **SHUTTLE SYSTEM/LARGE CARRIER:** Reduce a minimum of one pass through the field per acre by hauling multiple or larger trailers/bins per trip.
- C.46 **SOIL AMENDMENTS:** Organic or chemical materials uniformly applied to the soil for improvement (e.g: gypsum, lime, polyacrylamide).
- C.47 **SPEED LIMITS:** Control speed limits to 15 mph on unpaved roads through worker behavior modifications, signage, or any other necessary means.

- C.48 **SULFUR REDUCTION OR ELIMINATION:** Reduce a minimum of one ground operation by reducing or eliminating sulfur dusting, an organic chemical used to control disease in crop, ornamental and home and gardens.
- C.49 **SURFACE ROUGHENING:** Produce and maintain stable clods or aggregates on the land surface by bedding, rough disking, or tillage that leaves the surface covered by stable clods. Soil clods prevent wind erosion because they resist the forces of the wind and because they shelter other erodible materials. This CMP should be implemented consistent with NRCS Code 609 – Surface Roughening.
- C.50 **TILLAGE OPERATION:** An agricultural operation that mechanically manipulates the soil for the enhancement of crop production. Examples include discing, weeding, or bedding. A pass through the field may be a subset of a tillage operation.
- C.51 **TRACK-OUT CONTROL:** Minimize any and all material that adheres to and agglomerates on all vehicle and equipment from unpaved roads and falls onto a paved public road or the paved shoulder of a paved public road. Install one of the following devices: a grizzly, a gravel pad or a wheelwash system at all intersections of unpaved roads and public roads.
- C.52 **TRANSGENIC CROPS:** Use of GMO or Transgenic crops such as “herbicide-ready” to reduce a minimum of one tillage operation. It reduces the need for tillage or cultivation operations, as well as reduces soil disturbance. It can also reduce the number of chemical applications.
- C.53 **WATER APPLICATION:** Application of water to unpaved roads and traffic areas to create a visibly moist surface.
- C.54 **WIND BARRIER:** Reduce wind erosion by planting or maintaining perennial or annual plants established in rows or narrow strips interspersed throughout a crop field as close to perpendicular as practical with the direction of erosive winds. To be effective, the selected plant(s) must create a stand at least three feet tall, with a porosity of 50%.
- D. **Requirements for Agricultural Operation Sites:**
- D.1 All Persons who own or operate an Agricultural Operation Site of forty (40) acres or more in size shall implement in each Agricultural Parcel at least one of the Conservation Management Practices from each of D.1.a through D.1.f. unless they implement the Conservation Tillage CMP. On acres implementing the Conservation Tillage CMP, persons do not need to select additional measures for D.1.a, D.1.b or D.1.e, but do need to implement at

least one CMP each from D.1.c, D.1.d and D.1.f. Persons may choose the same CMP for D.1.c and D.1.d since they apply to different land, but must choose a unique and individual CMP for each of D.1.a, D.1.b, D.1.e and D.1.f (unless using Conservation Tillage CMP) since they apply to the same land.

D.1.a Land preparation and cultivation, CMPs in Section E.1;

D.1.b Harvest activities, CMPs in section E.2;

D.1.c Unpaved Roads, CMPs in Section E.3;

D.1.d Unpaved Traffic Areas, CMPs in Section E.4;

D.1.e Cropland-Other, CMPs in Section E.5; and

D.1.f Windblown Dust Control, CMPs in Section E.6.

- D.2 Agricultural unpaved roads with greater than fifty (50) or more vehicle daily trips (VDT), or twenty (20) or more VDT with three (3) or more axle vehicles, must meet the stabilization and opacity requirements in Section E.3.
- D.3 Agricultural unpaved equipment or traffic areas with fifty (50) or more VDT, or twenty (20) or more VDT with 3 or more axle vehicles, must meet the stabilization and opacity requirements in Section E.4.
- D.4 The owner or operator of an Agricultural Operation Site may implement more than one Conservation Management Practices for one or more of the categories.
- D.5 The owner or operator of an Agricultural Operation Site shall ensure that the implementation of each selected Conservation Management Practices does not violate any other local, state, or federal law.
- D.6 The owner or operator of an Agricultural Operation Site may develop alternative CMPs. The owner or operator shall submit to the APCD a technical evaluation of the alternative CMPs, demonstrating that the alternative CMP achieves PM-10 emission reductions that are at least equivalent to the most effective CMPs available for the applicable operation (e.g., by eliminated equivalent passes or operations). The APCD will review the technical evaluation, and the alternative CMP must receive approval by the APCD before being included in the CMP Plan.
- D.7 The owner or operator shall prepare a CMP Plan for each Agricultural Operation Site. The CMP Plan shall be made available to the APCD upon request. The CMP Plan shall be provided to the APCD within 72 hours of

notice to the owner or operator.

E. Conservation Management Practices for Fugitive Dust (PM-10)

E.1 The owner or operator of an Agricultural Operation Site shall implement at least one of the following CMPs in each Agricultural Parcel to reduce PM10 emissions from land preparation and cultivation (CMP Category D.1.a). If the owner or operator selects "Fallow Land" as its CMP, the owner/operator must comply with section E.6 of this rule.

- E.1.a Alternative Tilling,
- E.1.b Bed/Row Size Spacing,
- E.1.c Chemigation/Fertigation,
- E.1.d Combined Operations,
- E.1.e Conservation Irrigation,
- E.1.f Cover Crops,
- E.1.g Equipment Changes/Technological Improvements,
- E.1.h Fallow Land,
- E.1.i Integrated Pest Control,
- E.1.j Mulching,
- E.1.k Night Farming,
- E.1.l Non Tillage /Chemical Tillage,
- E.1.m Organic Pesticides,
- E.1.n Precision Farming (GPS), or
- E.1.o Transgenic Crops

E.2 The owner or operator of an Agricultural Operation Site shall implement at least one of the following CMPs in each Agricultural Parcel to reduce PM10 emissions from harvest activities (CMP Category D.1.b). If the owner or operator selects "Fallow Land" as its CMP, the owner/operator must comply with Section E.6 of this rule.

- E.2.a Baling /Large Bales
- E.2.b Combined Operations
- E.2.c Equipment Changes/Technological Improvements
- E.2.d Green Chop
- E.2.e Hand Harvesting
- E.2.f Fallow Land
- E.2.g Night Harvesting
- E.2.h No Burning
- E.2.i Pre-Harvesting Soil Preparation
- E.2.j Shed Packing
- E.2.k Shuttle System/Large Carrier

E.3 The owner or operator of an Agricultural Operation Site shall implement at least one of the following CMPs for each unpaved road (CMP Category

D.1.c) to reduce PM10 emissions at all times:

- E.3.a Chips/Mulches, Organic Materials, polymers, road oil and sand,
- E.3.b Gravel
- E.3.c Paving,
- E.3.d Restricted access
- E.3.e Speed limit
- E.3.f Track-out control
- E.3.g Water Application
- E.3.h Field windbreak

On each day that high traffic accounts for 50 or more vehicle daily trips (VDT), or 20 or more VDT with 3 or more axles, on an unpaved road segment, the owner/operator of an Agricultural Operation Site shall comply with the requirements of a stabilized unpaved road and limit VDE to 20% opacity by implementing or maintaining one or more of the following CMPs:

- E.3.i Pave.
- E.3.j Apply Chemical Stabilization as directed by product manufacturer to control dust on Unpaved Roads.
- E.3.k Apply and maintain Gravel, recrushed/recycled asphalt or other material of low Silt (<5%) content to a depth of three or more inches.
- E.3.l Water Application.
- E.3.m Permanent road closure.
- E.3.n Restrict unauthorized vehicle access.

E.4 The owner or operator of an agricultural operation site shall implement at least one of the following CMPs for each unpaved traffic area (CMP Category D.1.d) to reduce PM10 emissions at all times:

- E.4.a Chips/Mulches, Organic Materials, Polymers, Road Oil and Sand,
- E.4.b Gravel
- E.4.c Paving
- E.4.d Restricted Access
- E.4.e Speed Limit
- E.4.f Track-Out Control
- E.4.g Water Application
- E.4.h Field windbreak

On each day that high traffic accounts for 50 or more vehicle daily trips (VDT), or 20 or more VDT with 3 or more axles, on an Unpaved Traffic Area larger than one (1) acre, the owner/operator of an Agricultural Operation Site shall comply with the requirements of a stabilized unpaved road and limit VDE to 20% opacity by implementing or maintaining one or more of the following CMPs:

- E.4.i Pave.
 - E.4.j Apply Chemical Stabilization as directed by product manufacturer to control dust on Unpaved Roads.
 - E.4.k Apply and maintain Gravel, recrushed/recycled asphalt or other material of low Silt (<5%) content to a depth of three or more inches.
 - E.4.l Water Application.
- E.5 The owner or operator of an Agricultural Operation Site shall implement at least one of the following CMPs in each Agricultural Parcel to reduce PM10 emissions from cropland-others (Category D.1.e). If the owner or operator selects "Fallow Land" as its CMP, the owner/operator must comply with Section E.6 of this rule.
- E.5.a Alternate Tilling
 - E.5.b Application Efficiencies
 - E.5.c Bailing/Large Bales
 - E.5.d Bulk Materials Control
 - E.5.e Chemigation/Fertigation
 - E.5.f Conservation Irrigation
 - E.5.g Fallow Land
 - E.5.h Grinding/Chipping/Shredding
 - E.5.i Integrated Pest Management
 - E.5.j Irrigation Power Units
 - E.5.k Mulching
 - E.5.l Night Farming
 - E.5.m No Burning
 - E.5.n Non Tillage/Chemical Tillage
 - E.5.o Organic Practices
 - E.5.p Permanent Crops
 - E.5.q Reduced Pruning
 - E.5.r Soil Amendments
 - E.5.s Soil Incorporation
 - E.5.t Sulfur: Reduction or Elimination of Dusting
 - E.5.u Surface Roughening
 - E.5.v Transgenic Crops
 - E.5.w Wind Barrier
- E.6 For windblown dust control (CMP Category D.1.f), the owner or operator of an agricultural operation site shall implement E.6.1. In addition to following E.6.1, if the owner or operator of an Agricultural Operation Site has fields that are in between crops or more permanently fallow, the owner or operator shall implement at least one of the CMPs in E.6.2.
- E.6.1 When preparing a field for planting, minimize the time that newly tilled soil is smooth and dry by leaving the field surface with large clods for as long as possible and bedding and planting the field as soon as

possible once it no longer has large clods.

E.6.2 For fields that are in between crops or are permanently fallow, the owner shall implement at least one of the CMPs below:

- E.6.2a Cover Crop
- E.6.2b Conservation Tillage
- E.6.2c Crop Residue Management
- E.6.2d Cross Wind Stripcropping
- E.6.2e Field Windbreaks
- E.6.2f Ridge Roughness
- E.6.2g Surface Roughening
- E.6.2h Wind Barrier

F. CMP Plan Preparation

An owner or operator shall prepare a CMP Plan for each Agricultural Operation Site. An owner or operator must maintain a CMP Plan that corresponds to the current crops being grown in the field and the corresponding CMPs for those crops. Each CMP Plan shall include, but is not limited to, the following information:

- F.1 The name, business address, and telephone number of the owner or operator responsible for the preparation and implementation of the CMP Plan.
- F.2 The signature of the owner or operator and the date that the CPM Plan was signed.
- F.3 The location of the Agricultural Operation Site: cross roads; canal and gate number.
- F.4 The crop grown at each location covered by the CMP Plan, total acreage for each crop, the length (miles) of unpaved roads, and the total area (acres or square feet) of the unpaved equipment and traffic areas to be covered by the CMP Plan
- F.5 The CMPs being implemented for each crop, unpaved road, unpaved equipment and traffic area, and windblown dust control. The CMPs implemented should be described to verify that implementation is consistent with the CMP definitions in this rule.
- F.6 Other relevant information as determined by the APCD.

G. Violations

Failure to comply with any provisions of this rule shall constitute a violation of

Regulation VIII. Failure to comply with the provisions of a CMP Plan shall also constitute a violation of Regulation VIII.

H. Record of Control Implementation

Any Person subject to the requirements of this rule shall maintain a copy of the CMP Plan and any supporting documentation necessary to confirm implementation of the CMPs. An owner or operator implementing alternative CMPs shall maintain a copy of technical evaluation for alternative CMPs and documentation of APCD approval of alternative CMPs. Records shall be maintained for two years after the date of each entry and shall be provided to the APCD upon request.