

CURRENT SMOKE MANAGEMENT PROGRAM



New Mexico Environment Department
Air Quality Bureau
Thursday/April 15, 2010



Open Burning vs. Smoke Management Regulations

Amount burned per day determines which regulation applies:

- Open Burning: 10 acres or less (if piles, 1,000 cu. ft. or less of pile volume)
- Smoke Management: more than 10 acres or 1,000 cu. ft. OR if burner opts
 - SMP has 2 levels: smaller vs. larger amount burned per day



OPEN BURNING REGULATION

- Burning up to 10 acres or 1,000 cubic feet piled material per day of **vegetation**
 - Must be 300' from nearest occupied residence
 - Burn only 1 hour after sunrise to 1 hour before sunset
 - Fire extinguished by 1 hour before sunset
 - Notification to local fire authority & if >1 acre or 100 cu ft., notify households w/in ¼ mile of burn
 - Must be in attendance at all times
 - Material must be as dry as is practical
 - Burner must consider alternatives to burning
 - Must be in compliance with 20.9.1 NMAC (Solid Waste Management)



SMP Thresholds: SMP I

- More than Open Burning AND less than 1 ton of emissions per day
- From 1000 to 4999 cubic feet of total pile volume per day



SMP I Applies if you burn this much per day:

- Field Crops
 - Shrub Land
 - Forest
 - Grass
 - Piled Material
- 11-64 acres
 - 11-33 acres
 - 11-22 acres
 - 11-99 acres
 - 1001-4999 cubic ft.



SMP Thresholds: SMP II

- Emissions equal to or greater than 1 ton per day
- Pile volume equal to or greater than 5000 cubic feet per day



SMP II Applies if you burn this much or more per day:

- Field Crops
- Shrub Land
- Forest
- Grass
- Piled Material
- 65 acres
- 34 acres
- 23 acres
- 100 acres
- 5000 cubic ft.



SMP I & II Requirements

- Burn registration, notification & tracking
- Consideration of alternatives to fire and use of emission reduction techniques
- Use of weather to promote smoke dispersion
- Visual monitoring of smoke
- Notification of the public of some burns
- Smoke Management Education

Registration



- Permit-by-Rule: Burn okay if within SMP requirements
- Burner submits Registration Form beginning of year (and a minimum of two weeks in advance of the burn for SMP II, one day prior for SMP I)
- Simple form that captures information most burners already have
- State coordinates burns within airsheds to ensure smoke is not excessive
- Burners coordinate through Zone Smoke Management Plans

Notification (SMP II only)



- Burner submits notification information at least 1 day prior to burn project
 - Burn project name
 - Burn project ID number (issued by the AQB)
 - Date of planned burn
 - The maximum acres, or pile volume, to be burned on that day
- Burner must notify AQB of each day of burning

Tracking



- All burners (both SMP I & II) submit tracking form no later than 2 weeks after the burn project is complete for the year
- Provides basis for Emissions Inventory, which will inform the SMP evaluation process and drive revisions
- Enables the development of an annual emission goal

Alternatives to Fire



- Any method of removing or reducing fuels by mechanical, biological or chemical treatments. Would take the place of fire for at least 3 years
- SMP I: voluntary consideration of alternatives
- For SMP II: document and explain non-use of alternatives

Public Notification



- Any method that communicates burn information to the burn community, to air regulators and to the general public
- SMP I: Public Notification if within 1 mile of population; notify local fire department
- SMP II: Public Notification if within 15 miles of population; notify local fire department

Public Notification



EXAMPLES:

- One-on-one contacts
- Phone calls
- Press releases & use of media outlets
- Signs in neighborhoods that could be affected
- Mailings
- Flyers with information
- Door hangers
- Public meetings
- Home Owner Associations
- Website, E-mail, NM Fire Information
(www.nmfireinfo.com)

Emission Reduction Techniques

- Any burning techniques that reduce the actual amount of emissions produced from fire
- SMP I: Voluntary consideration of emission reduction techniques
- SMP II: Document and explain use of emission reduction techniques. One required unless waiver is obtained
- Examples include:
 - Burn in late winter before green up
 - Burn when target materials are dry
 - Remove some materials for other uses; e.g., firewood/chip or shred for mulch
 - Burn piles instead of broadcast
 - Rapid mop-up
 - Mass ignition/Aerial ignition



Smoke Dispersion

- Using meteorological conditions to assess the ability to minimize smoke impacts
- SMP I: Ignition only between sunrise and sunset (or follow SMP II)
- SMP II: Determine ventilation index using National Weather Service fire weather forecast – burn only in “Good” to “Excellent” conditions.

VENTILATION ISSUES



VENTILATION ADJECTIVE RATING	KNOT FEET
EXCELLENT	>150,000
VERY GOOD	100,000 – 149, 999
GOOD	60,000 – 99,999
FAIR	40,000 – 59,999
POOR	< 39,999

Ventilation Index: Product of the mixing depth and transport wind speed, a measure of the potential of the atmosphere to disperse airborne pollutants from a stationary source.

VENTILATION ISSUES



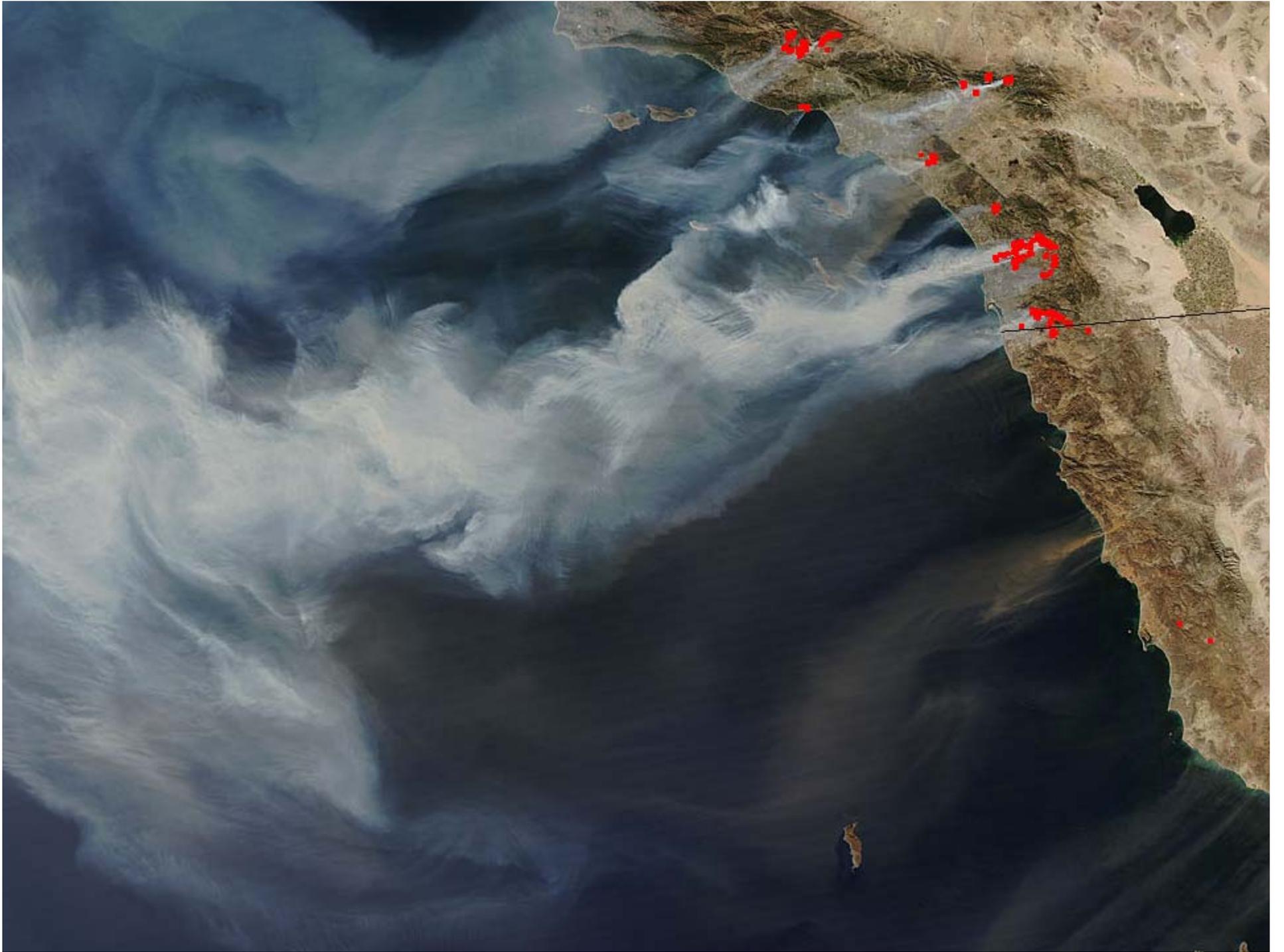
Dispersion is a combination of vertical mixing and horizontal transport. Vertical mixing is a function of atmospheric stability. A stable airmass is characterized by poor vertical mixing; an unstable airmass is characterized by good vertical mixing. Horizontal transport is a function of wind speed: the stronger the wind, the better the horizontal transport.



East Fork Fire
April 17, 2004

Smoke Management

- Completion of the burn earlier in the day, allows more time for smoke dissipation, takes advantage of better mixing heights and transport winds.



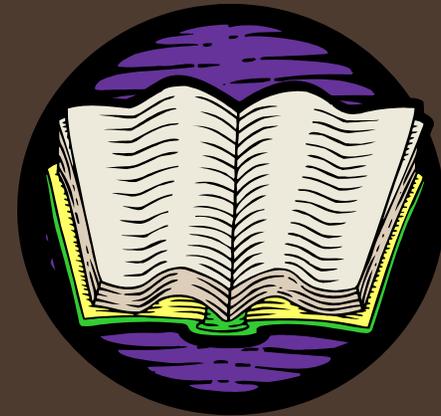
Visual Monitoring



- Observations and/or equipment that enable an assessment of air quality impacts of smoke from fires.
- SMP I: Voluntarily conduct visual monitoring; if less than 1 mile to smoke sensitive receptor, conduct visual monitoring and document
- SMP II: Conduct visual monitoring and document
- Visual monitoring forms on smoke web page

Smoke Management Education

- AQB provides educational materials for burners review
 - Smoke impacts on air quality
 - Emission reduction techniques
 - Alternatives to fire
 - Visual monitoring
 - Training on using the SMP
- Brochures and web accessible
- Other training may be used to meet this requirement, for example Rx-410, Smoke Management Techniques



Statewide Waivers

- Statewide Waivers for burning under less than Good ventilation are in effect
- Burners must follow all requirements in the waivers for less than Good ventilation
- Includes:
 - Reporting, Ventilation Tracking, Visual Monitoring & may include instrument monitoring
 - Waiver from the Statewide waiver: Can only be approved by AQB

THANK YOU FOR YOUR TIME



Contact Information

- Claudia Standish, Smoke Management Specialist
- Direct smoke desk number: (505) 476-4330
- Website:
<http://www.nmenv.state.nm.us/aqb>; follow link to smoke management program
- Smoke related Email address:
NMENV.smoke@state.nm.us

