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# Ozone and PM Implementation and Exceptional Events

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STAPPA/ALAPCO Spring Meeting

May 1, 2006

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# Topics Addressed

- Timelines
- PM2.5 Implementation
- 8-hour Ozone Implementation and Litigation
- PM NAAQS Advance Notice of Proposed Rulemaking on Transition Issues
- Exceptional Events Proposed Rule

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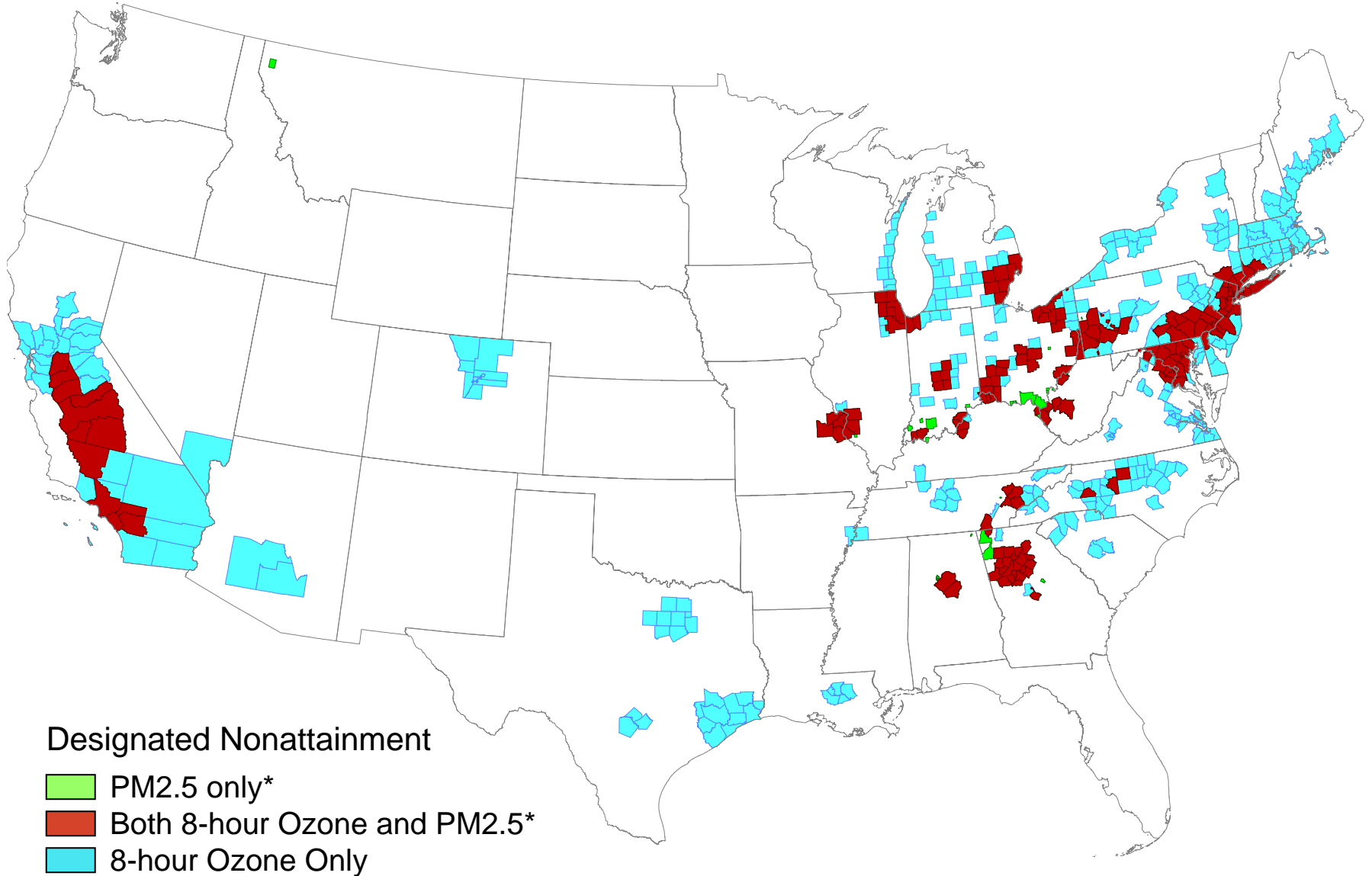
# Status of 8-Hour Ozone and PM2.5 Implementation

- 126 Ozone areas designated N/A effective June 2004
  - Ozone implementation rules issued June 2004 (Phase 1) and January 2005 (Phase 2)
  
  - 39 PM2.5 areas designated N/A effective April 2005
  - PM2.5 implementation rule proposed in November 2005
  
  - Implementation rules set minimum requirements for State plans
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# Implementation Timeline for Current PM and Ozone Standards

Milestone	1997 PM <sub>2.5</sub> Primary NAAQS	1997 8-Hour O <sub>3</sub> NAAQS
Effective date of Standard	September 1997	September 1997
Monitoring Data Used for State Recommendations	2001-2003	2001-2003
State Recommendations to EPA for Designations	Feb. 2004	July 2003
Signature of Final Designations/ Effective Date of Designations	Dec. 2004/ April 2005	April 2004/June 2004
SIPs Due	April 2008 PM <sub>2.5</sub> Sept 2006 CAIR Dec 2007 Reg. Haze	June 2007 Ozone Sept 2006 CAIR
Attainment Date	April 2010/2015 (based on 2007-2009 data)	June 2007 up to June 2024 (depending on area's classification)

# 8-hour Ozone and PM2.5 Nonattainment Areas



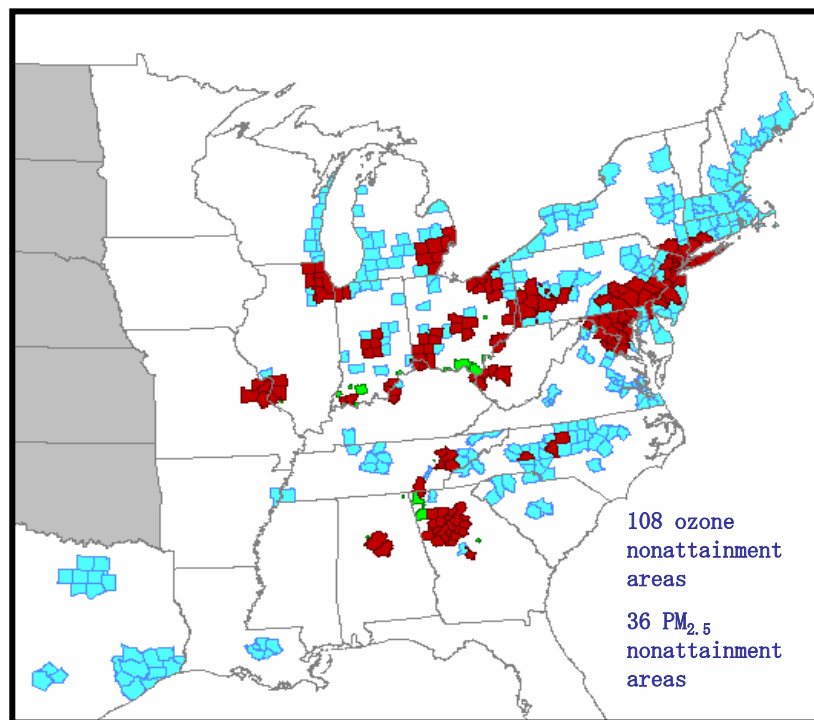
## Designated Nonattainment

- PM2.5 only\*
- Both 8-hour Ozone and PM2.5\*
- 8-hour Ozone Only

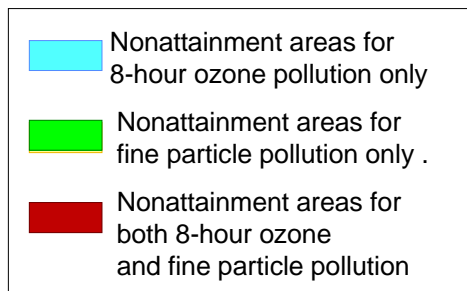
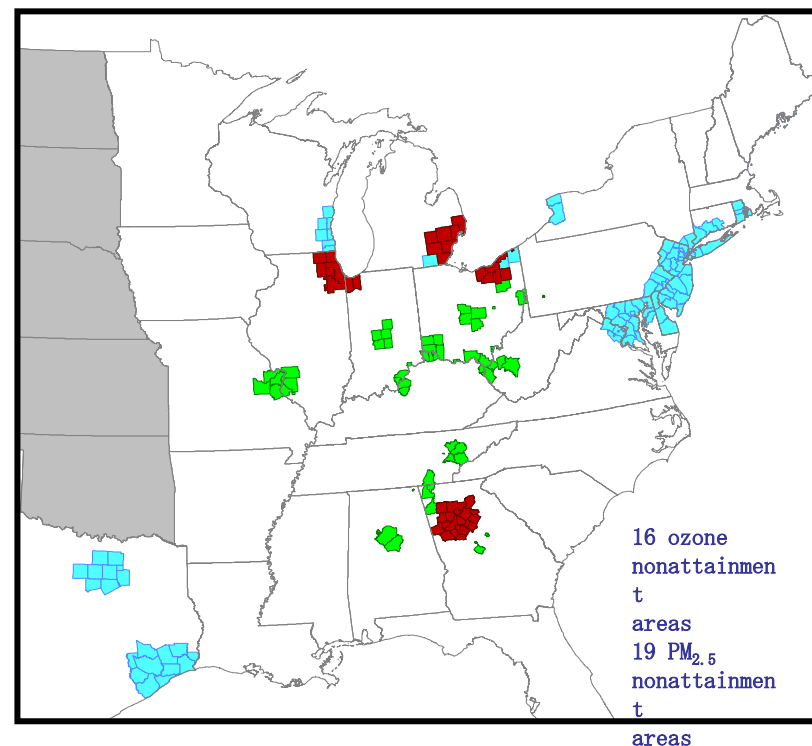
\* For PM2.5, the designated partial county areas are shown as actual boundaries designated.

# Ozone and Particle Pollution: CAIR, together with other Clean Air Programs, Will Bring Cleaner Air to Areas in the East – 2010

## Ozone and Fine Particle Nonattainment Areas (April 2005)



## Projected Nonattainment Areas in 2010 after Reductions from CAIR and Existing Clean Air Act Programs



Projections concerning future levels of air pollution in specific geographic locations were estimated using the best scientific models available. They are estimations, however, and should be characterized as such in any description. Actual results may vary significantly if any of the factors that influence air quality differ from the assumed values used in the projections shown here.

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# PM2.5 Implementation

- Significant air quality improvement is expected from regional/national rules (e.g. CAIR, nonroad diesel rule) and State rules on the books
  - 2010: 17 of 39 PM2.5 areas projected to attain
  - 2015: 22 of 39 areas projected to attain
- State plans also need local measures to ensure expeditious attainment
- Key issues raised in comments on proposed rule
  - Opposition to CAIR=RACT policy by states and non-EGUs
  - Most States support no classification system for nonattainment areas
  - Some suggest precursor policy should presume inclusion of VOC and ammonia

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# Ozone Petitions for Reconsideration & Litigation on Phase I

- Granted and denied reconsideration of several issues
- Outstanding issue: (NPRA/NAM and API)
  - Petitioners want EPA to revise classification scheme because some areas will not meet their attainment date (e.g., Houston)
  - We did not grant reconsideration of these petitions but settlement discussions are continuing as the litigation moves forward
  - CAA has provisions for allowing more time to attain
- Litigation: Final Briefs due 5/26/06



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# Ozone Petition for Reconsideration & Litigation of Phase 2

- 1 Petition for Reconsideration (Earthjustice) objects to:
  - Determination that CAIR satisfies NOx RACT
  - Allowing sources to use emission reduction credits from pre-2002 shutdowns for offsets.
  - Waiving nonattainment major NSR requirements for some source categories.
- Litigation: Statements of Intent from NRDC and New Jersey (Includes CAIR satisfies RACT)

# Implementation Timeline for New PM Standards

Milestone	2006 PM <sub>2.5</sub> Primary NAAQS	2006 PM <sub>10-2.5</sub> NAAQS
Effective date of Standard	December 2006	December 2006
Monitoring Data Used for State Recommendations	2004-2006	2009-2011
State Recommendations to EPA for Designations	December 2007	July 2012
Signature of Final Designations/ Effective Date of Designations	December 2009/ April 2010	May 2013/July 2013
SIPs Due	<b>April 2013</b>	<b>July 2016</b>
Attainment Date	<b>April 2015/2020</b> (based on 2012-2014 data)	<b>Up to July 2018/2023</b> (based on 2015-2017 data)

# ANPR: Transition to New or Revised PM NAAQS

- Published Feb 9, 2006 – Comment period extended to July 10, 2006
- Proposed timelines for implementation of any new PM<sub>2.5</sub> and PM<sub>10-2.5</sub> NAAQS
- Options for transitioning from 1997 PM<sub>2.5</sub> NAAQS to any new PM<sub>2.5</sub> NAAQS
- Transition from the PM<sub>10</sub> NAAQS to any new PM<sub>10-2.5</sub> NAAQS
  - Revocation of PM<sub>10</sub> and implications until any new PM<sub>10-2.5</sub> NAAQS in place
- Emission inventory requirements for PM<sub>2.5</sub> and PM<sub>10-2.5</sub> NAAQS

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# Exceptional Events

- Proposed Rule – March 10, 2006
  - Final rule by March 10, 2007 (required by SAFETEA-LU 2005)
  - Examples of exceptional events:
    - Chemical Spills, Structural Fires and Industrial Accidents
    - Exceedances due to Transported Pollution
    - Exceedances due to a Terrorist Attack
    - Natural Events:
      - Volcanic & Seismic Activities
      - Natural Disasters & Associated Clean-up Activities
      - High Wind Events
      - Unwanted Fires
      - Stratospheric Ozone Intrusions
  - Related issue: treatment of fireworks
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# Outline of the Proposed Rule

- Definitions and examples– what is an exceptional event?
  - Rule follows SAFETEA-LU definition & gives examples
  - New section 319 defines exceptional event as an event that:
    - Affects air quality;
    - Is not reasonably controllable or preventable;
    - Is an event that is caused by human activity that is unlikely to recur at a particular location, or is a natural event; and
    - Is determined by the Administrator through the process established in the rule to be an exceptional event.
  - The rule recognizes natural events as a subset of exceptional events “in which human activity has no substantial or direct causal connection,” and also recognizes that natural events are likely to recur.

# Exceptional Events Rule: Key Components

- Goal: keep areas from being designated nonattainment due to exceptional or natural events beyond their control.
- Proposed rule outlines the basic steps through which a State can request and EPA can grant exclusion from regulatory consideration of air quality data that is affected by an “exceptional event.”
- State must submit a demonstration.
- Rule also takes comment on what States should be required to do to protect public health during or following an exceptional event.

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# Process for Identifying “Exceptional” Events

- Proposed rule outlines the basic steps through which an event is determined to be “exceptional”:
  - State must flag the data in the Air Quality System (AQS) database as being influenced by an exceptional event.
  - State must submit documentation and demonstration showing a “clear causal relationship” between the affected data and the event to EPA for concurrence related to the event.
  - EPA must concur on the flag for the data to be excluded from regulatory decisions.

# When Does an Event to “Affect” Air Quality?

- EPA is taking comment on 3 options:
  - OPTION 1: To be eligible for concurrence, flagged values must be above 95<sup>th</sup> percentile of non-event days for the calendar quarter, based on previous 3-5 years.
    - Appropriate documentation would still be required, but it should be easier to show these days are “exceptional” because they fall 2 standard deviations above the mean (simple statistical test)
    - This would include approximately 85% of the days that have earned EPA concurrence in the past.
  - OPTION 2: 95<sup>th</sup>/75<sup>th</sup> percentile tiered approach
    - Days between the 75<sup>th</sup> and 95<sup>th</sup> percentile would also be eligible for exclusion, pending more substantial demonstration.
  - OPTION 3: General case-by-case evaluation without threshold criteria.
- In addition, daily value is only eligible for exclusion if State shows that an exceedance of the applicable air quality standard would not have occurred “but for” the influence of exceptional events.



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# Timelines for Flagging Data & Submitting Demonstrations

- Rule proposes 3 options for comment:
  - OPTION 1: Early Flagging by States (within 90 days after end of calendar quarter in which event occurred) & Demonstration Submission (within 90 days after flagging)
  - OPTION 2: Early Flagging (90 days) & Delayed Demonstration Submission (3 years)
  - OPTION 3: Delayed Flagging and Demonstration Submission (no later than 6 months prior to regulatory determination)
- All options: EPA must concur or not concur within 30 days after submission of documentation, with possibility of 30-day extension for more complex demonstrations

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# Public Health Protection

- Rule also takes comment on what, if anything, States should be required to do to protect public health during or following an exceptional event
  - Preferred Option:
    - Prompt public notification that an event is occurring or is expected to occur
    - Public education on how to reduce individual exposures to air pollution due to an event
    - Implementation of reasonable measures to protect public health
      - (This could include mitigation of significant contributing anthropogenic sources, if present, or otherwise minimizing or abating public health impacts.)
  - Other Options for Comment:
    - Mitigation Plan with more specific control requirements (e.g. RACM on contributing anthropogenic sources) developed in advance as part of section 110 SIP.
    - Mitigation Plan developed after the occurrence of a natural event that we expect will recur, but not submitted as part of SIP. This may also include RACM requirements on contributing anthropogenic sources.
    - No specific requirements for public health protection or mitigation of events—let States design the approach they think best
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# Fireworks

- Fireworks are not explicitly covered by section 319 or this rulemaking.
- However, EPA proposes as a policy matter to treat certain types of fireworks events in a manner similar to exceptional events.
- Specifically, where States can show that the use of fireworks displays is integral to significant traditional national, ethnic, or other cultural events (e.g., 4<sup>th</sup> of July celebrations, Chinese New Year), EPA is proposing that air quality data associated with such events could be excluded from regulatory determinations.
- For such events, public health protection efforts may be appropriate.
- EPA requests comment on the treatment of fireworks and any requirements that should apply.