Update on Ozone and PM2.5 NAAQS Implementation

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Midwest Regional Air Quality Workshop
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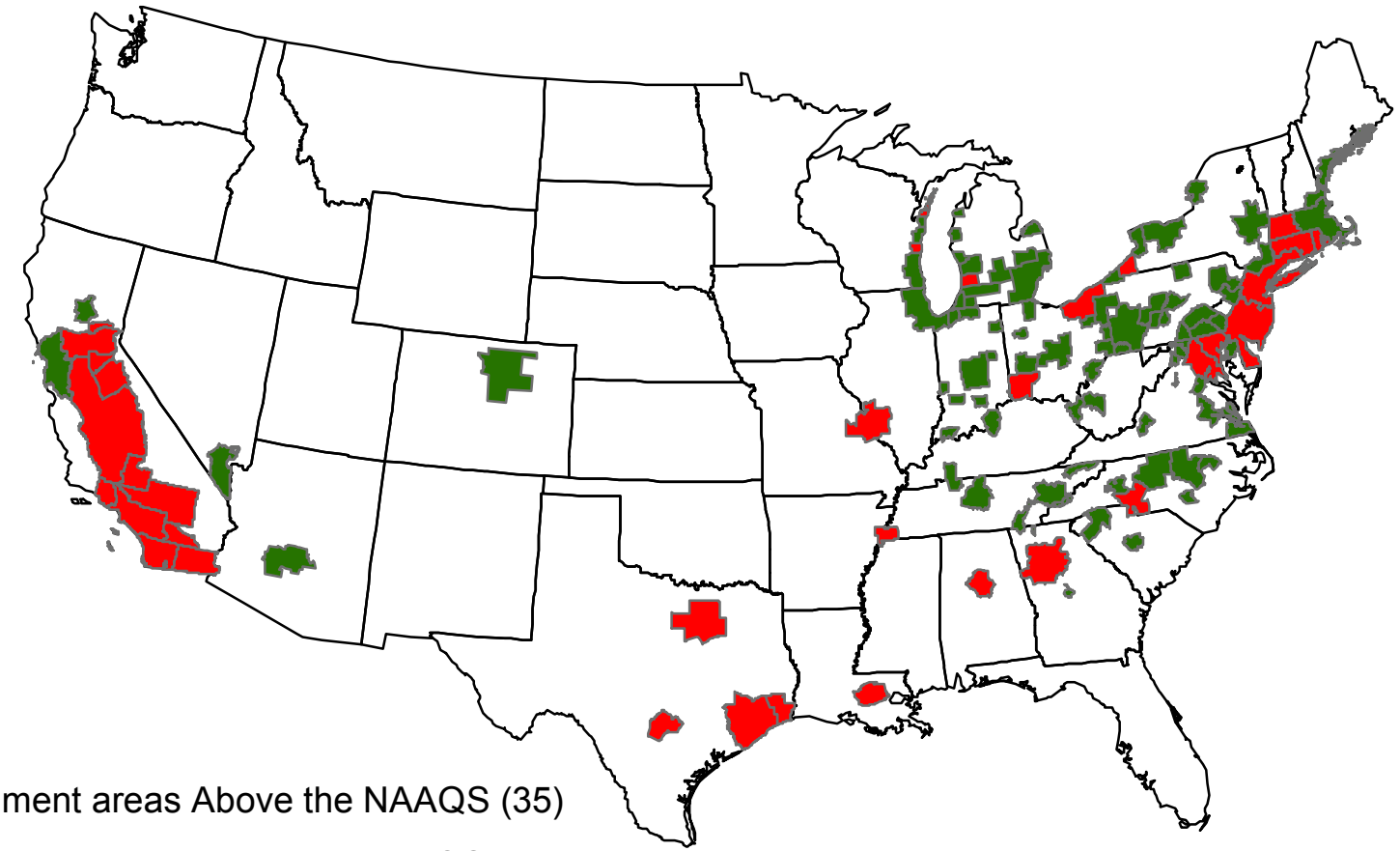
Ozone Design Value Status, 2004-2006

Gregg County, Texas is the only attainment/unclassifiable area above the NAAQS.



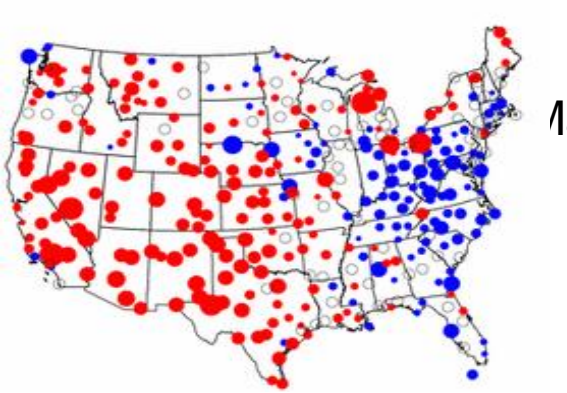
- Nonattainment areas Above the NAAQS (35)
- Nonattainment areas Below the NAAQS (89)
- Nonattainment areas with Incomplete Data (Essex Co (Whiteface Mtn), NY) and Reading, PA)

Temperature Departure

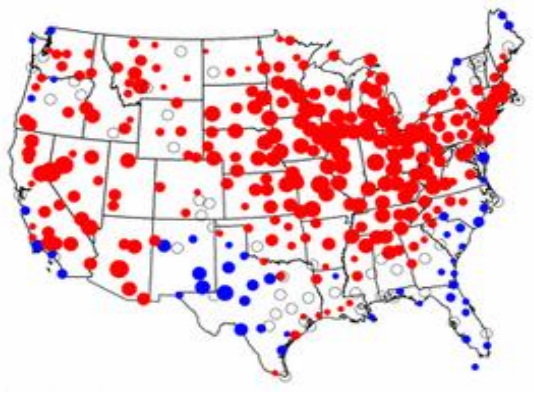
from 20-yr average

2006

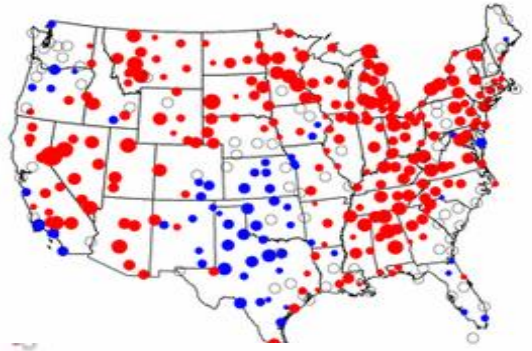
2007

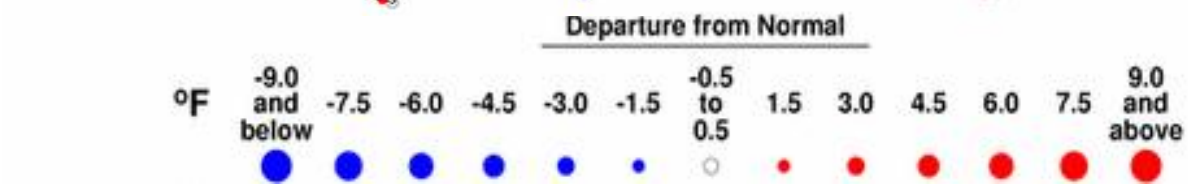


May



June





SUMMARY OF SIP STATUS

- A number of States have submitted final attainment demonstrations, RFP SIPS and RACT SIPS for some of the areas.

- Regional Offices are working with their States for the remaining areas to receive complete and approvable SIPs.

REQUESTED HIGHER RECLASSIFICATIONS

- Only Houston, TX (from moderate to severe)
- Expect all CA areas & a few other NE areas

Next Steps for Ozone SIPs

- Regional Offices and States are currently working together towards approvable SIPs.

- We are working with our Regions to ensure consistency in reviewing and acting on SIPs especially related to use of "weight of evidence."

Proposed Revisions to Primary Ozone Standard

- Current science shows that the current 8-hour ozone standard (effectively 0.084 ppm) is not adequate to protect the public health. EPA proposes that the standard should be revised to reflect the new scientific evidence about ozone and its effects on public health and the environment
- EPA proposes that a standard set within the range of 0.070 to 0.075 ppm would be requisite to protect public health with an adequate margin of safety
- The Agency is requesting comment on a range of alternative levels for the standard, down to 0.060 ppm and up to the level of the current standard
- EPA also proposes to specify the level of the primary standard to the nearest thousandth ppm (also referred to as the "third decimal place")
    - Current monitoring technology can measure ozone at these precise levels.

Proposed Revisions to Secondary Ozone Standard

- EPA is proposing two alternatives for the secondary ozone standard:
  - A new **cumulative, seasonal standard**, or
  - A standard identical to the proposed primary standard
- The proposed new seasonal standard is known as "W126"
  - W126 is a cumulative index form that weights and sums hourly measurements over a given period of time
  - EPA is proposing both a daily and seasonal time period over which to cumulate the weighted hourly measurements during the ozone season:
    - A 12-hour daily period
    - And a seasonal period consisting of the three months with the maximum W126 index value.
  - EPA is proposing to set this standard within a range of 7 to 21 ppm-hrs.
  - EPA is requesting comment on: whether the W126 standard should be calculated annually or averaged over three years

SUM06 versus W126

- A cumulative metric expressing ozone exposure over the growing season is more biologically relevant for a secondary standard to protect vegetation (conclusion of EPA 1997 and current reviews).

SUM06 = sum of all hourly concentrations > 60 ppb

- SUM06 ignores all values below 60 ppb

W126 = sum of all hourly concentrations using weighted function

- W126 focuses on higher hourly average concentrations, while retaining mid and lower-level values

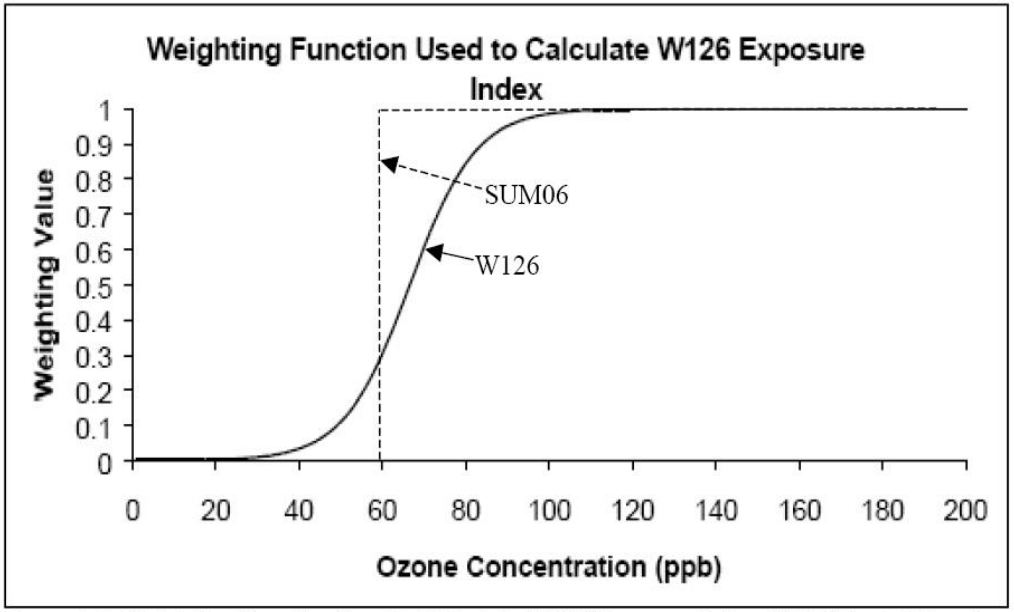


Figure 1-1: Weighting Function Used to Calculate W126 Exposure Index (SUM06 weighting shown in dotted line)[g]

Both SUM06 and W126 would be calculated over the high 3-month period during the growing season.

Example Timeline if Ozone NAAQS are Revised

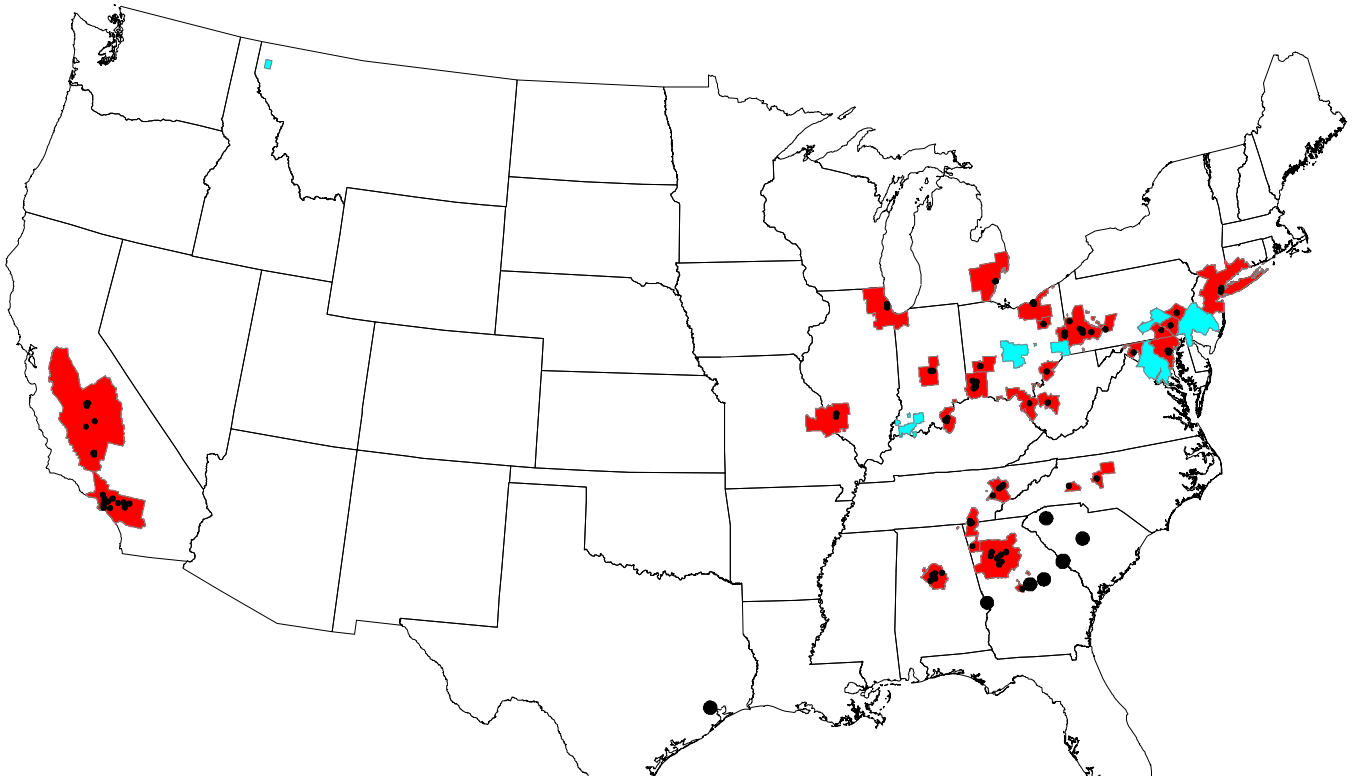
Milestone	Date
Signature—Final Rule	March 2008
Effective Day of Rule **(60 days following publication in Federal Register)**	Approximately June 2008
State Designation Recommendations to EPA	June 2009 (based on 2006-2008 monitoring data)
Final Designations Signature	Approximately June 2010
Effective Date of Designations	Approximately 2010
SIPs Due	Approximately 2013
Attainment Dates	2013-2030 depending on severity of problem

Regional Haze and PM2.5 SIPs

- Regional Haze SIPs due December 2007.
  - Addressing BART and Reasonable Progress
- PM2.5 Attainment SIPs due in April 2008.

Annual $PM_{2.5}$ Design Value Status, 2004-2006

- Current nonattainment area (NAA) violates annual NAAQS [32 areas]
- Current NAA meets annual NAAQS [7 areas]
- Sites in current NAA violate the annual NAAQS (94 sites)
- Sites not in a current NAA violate the annual NAAQS (8 sites)



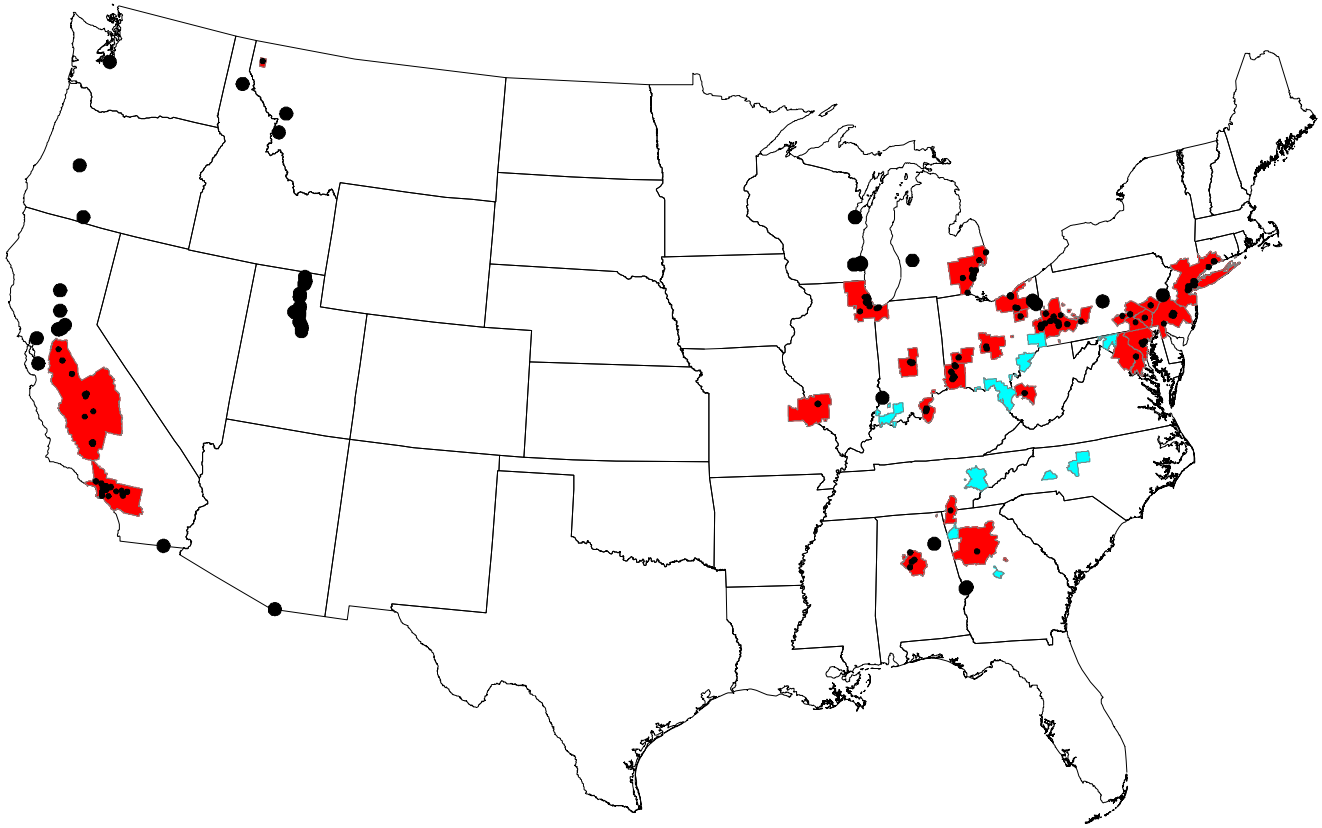
- 7 NAA clean for annual NAAQS: Libby, Columbus (OH), Evansville, Harrisburg, Philadelphia, Washington, Wheeling, but …
  - Philadelphia has designated NA sites that are incomplete.
  - Only Evansville and Wheeling are also clean for the 24-hr NAAQS
- 8 additional violating sites (not in NAA) are located in 7 areas:
  - Greenville, SC (Unclassifiable area); Augusta, GA; Columbia, SC; Columbus, GA; Houston, TX; Washington County, GA; and Wilkinson County, GA

Designation of PM2.5 Areas (2006 24-hour NAAQS)

- Governors' recommendations due in December 2007
- EPA will act on those recommendations in 2008/2009
- Attainment SIPs will be due 3 years from nonattainment designation.

24-Hour $PM_{2.5}$ Design Value Status, 2004-2006

- Current annual nonattainment area (NAA) violates 24-hr NAAQS [29 areas]
- Current annual NAA meets 24-hr NAAQS [10 areas]
- Sites not in a current annual NAA violate the 24-hr NAAQS (48 sites)



- 48 violating sites outside of current NAA are located in 27 areas:
  - 25 CBSAs: Largest are Seattle, Sacramento, San Jose, Milwaukee, Salt Lake City.
  - 2 State-Counties (not part of a CBSA): Shoshone ID; Ravalli MT
- States make initial recommendations for 24-hr designations using 2004-2006 data but 2003-2005 and 2005-2007 also relevant.