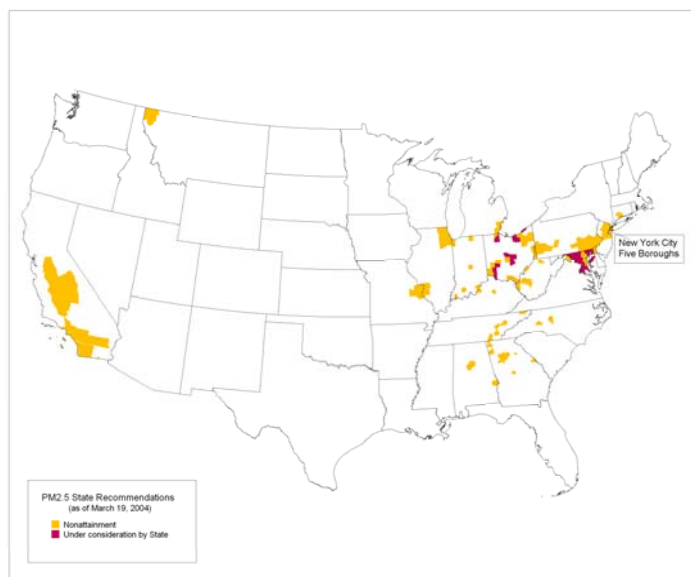




# Update on PM<sub>2.5</sub> Designations



June 9, 2004

# What is a “nonattainment area?”

*Section 107(d)(1)(A)(I):*

*“...any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.”*

- Includes areas with violating monitors  
AND areas contributing to the problem

# PM2.5 Designations Guidance

- Issued 4/1/03
- Regional problem similar to ozone
- Presumption: nonattainment area should be the metropolitan area based on OMB definitions
- Final designations to be based on most recent 3 years of complete data (e.g. 2001-2003)
- Strive for coordination between 8-hour ozone and PM2.5 boundaries to the extent possible

# PM2.5 Designations – 9 Factors

- Emissions in areas potentially included versus excluded from the nonattainment area
- Air quality in potentially included versus excluded areas
- Population density and degree of urbanization including commercial development in included versus excluded areas
- Traffic and commuting patterns
- Expected growth (including extent, pattern and rate of growth)
- Meteorology (weather/transport patterns)
- Geography/topography (mountain ranges or other air basin boundaries)
- Jurisdictional boundaries (e.g., counties, air districts, Reservations, etc.)
- Level of control of emission sources

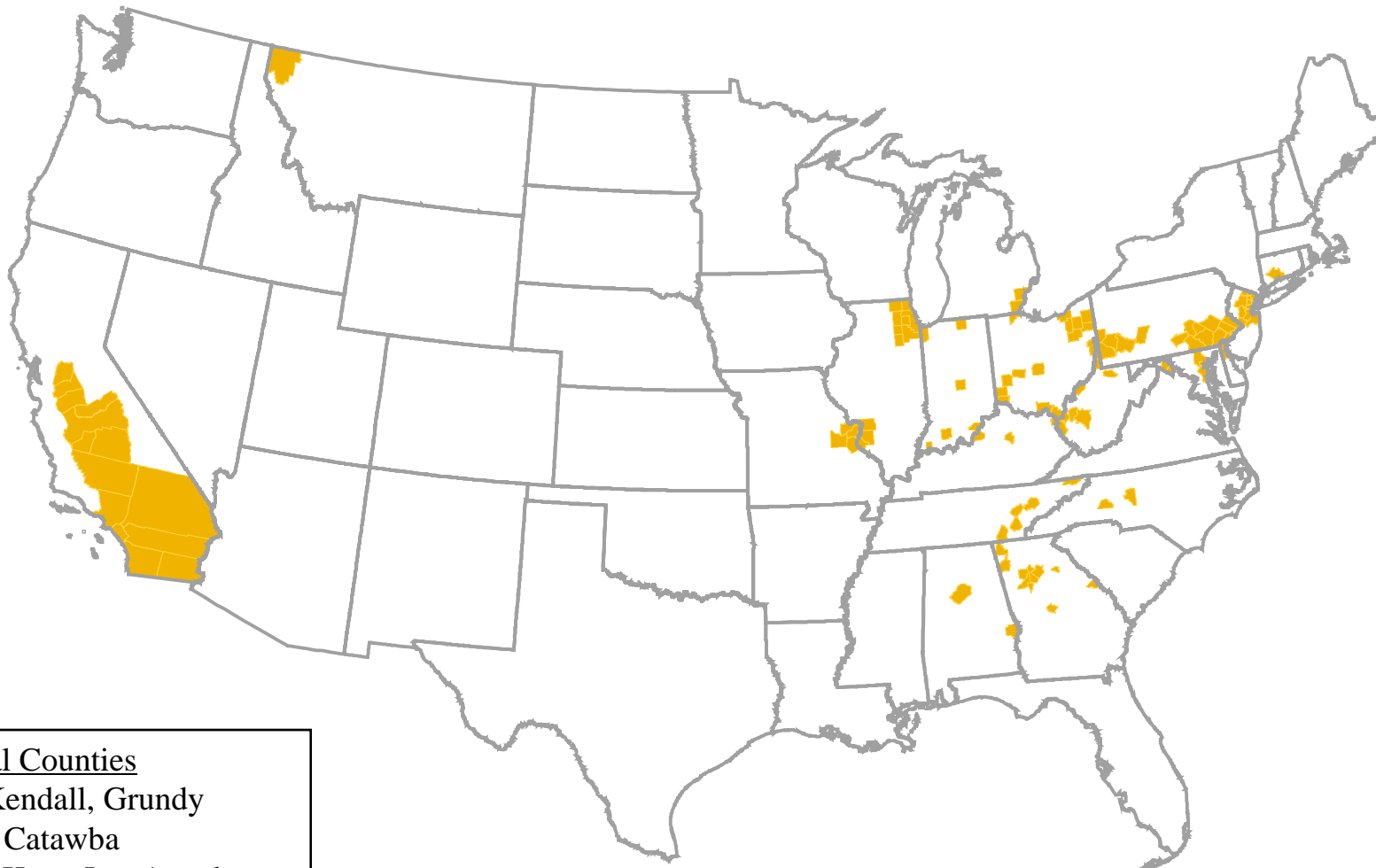
# PM2.5 Designations – Differences from Ozone Guidance

- Five main pollutants: direct PM (carbon, crustal material), SO<sub>2</sub>, and ammonia in addition to NO<sub>x</sub> and VOC
- PM2.5 is a year-round standard. Thus, contributions to nonattainment occur in all seasons and from many directions, not necessarily under one predominant wind direction.
- PM2.5 guidance did not include a factor taking specifically identifying future regional emissions reduction strategies
- Possible use of source apportionment studies using speciated data, or interpolated air quality data

# State Recommendations for PM<sub>2.5</sub> Designations

- Summary
  - 116 NA counties
  - 8 partial NA counties
  - 10 counties in OH under consideration
  - Total population of these counties = 79 million
  - Presumptive metro areas associated with these counties
    - ~300 counties with 105 million population
- Website: [www.epa.gov/pmdesignations](http://www.epa.gov/pmdesignations)

# State Recommendations for Fine Particles National Ambient Air Quality Standards



## Partial Counties

IL - Kendall, Grundy

NC - Catawba

CA - Kern, Los Angeles,  
San Bernardino, Riverside,  
Imperial

Nonattainment (full county): 116  
Nonattainment (partial county): 8

# Overall Approach to Evaluating Potential Nonattainment Counties

- We will consider all 9 PM2.5 factors in our analysis
- Initial focus on air quality and emissions
  - We have developed a weighted emissions score to take multiple PM2.5 pollutants into account
- Then a review of the other 7 factors will be taken into account



# PM2.5 Factors

## Other Issues to Consider

- Emissions and air quality are primary factors, but EPA decision is based on overall evidence for all 9 factors.
- A county with a non-violating monitor can still contribute emissions to another county with a violating monitor.
- Extra consideration is given to designating a county as NA if it is between counties with violating monitors or would provide for a contiguous NA area (i.e. avoid “donut holes”).

# PM2.5 Factors

## Other Issues to Consider

- Meteorology: contributions to annual average will be from multiple directions, not just a predominant summer direction as with ozone
- Geography - mountainous terrain will be an important factor for a limited number of areas, primarily in California
- No mountain top NA's for PM2.5 as there are for ozone

# Areas Not Violating for Ozone

- Athens, GA
- Columbus, GA-AL
- Lexington, KY
- Lincoln county, MT
- Marion county, WV