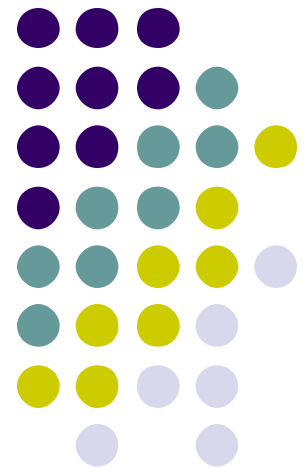


Ozone NAAQS Review

June 22, 2007

PAG Southwest Air Quality
Forum

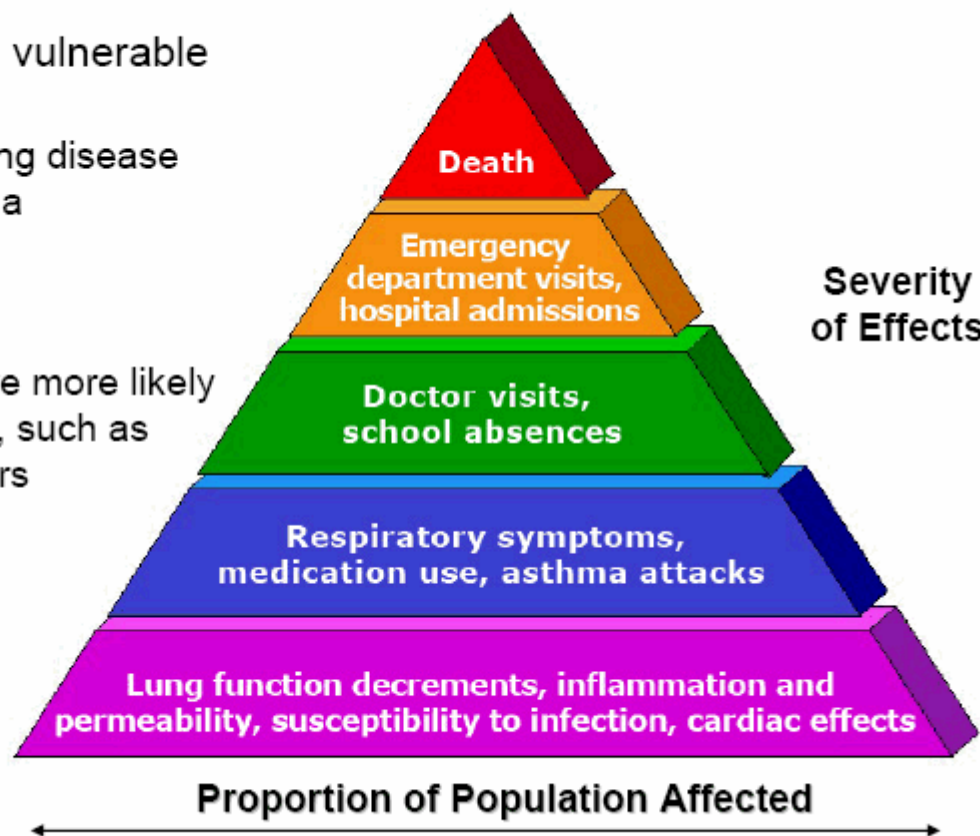




Ozone Health Impacts: “Pyramid of Effects”

- Susceptible and vulnerable groups include:

- People with lung disease such as asthma
- Children
- Older adults
- People who are more likely to be exposed, such as outdoor workers





Ozone NAAQS Review

- Every 5 years EPA is required to review the air quality standards
- Our criteria document was issued on 2/28/06
- Our final staff report was issued on 1/31/07
- Per a consent decree, EPA is required to propose the revised 8-hour ozone NAAQS by 6/20/07 and issue the final NAAQS by 3/12/08.

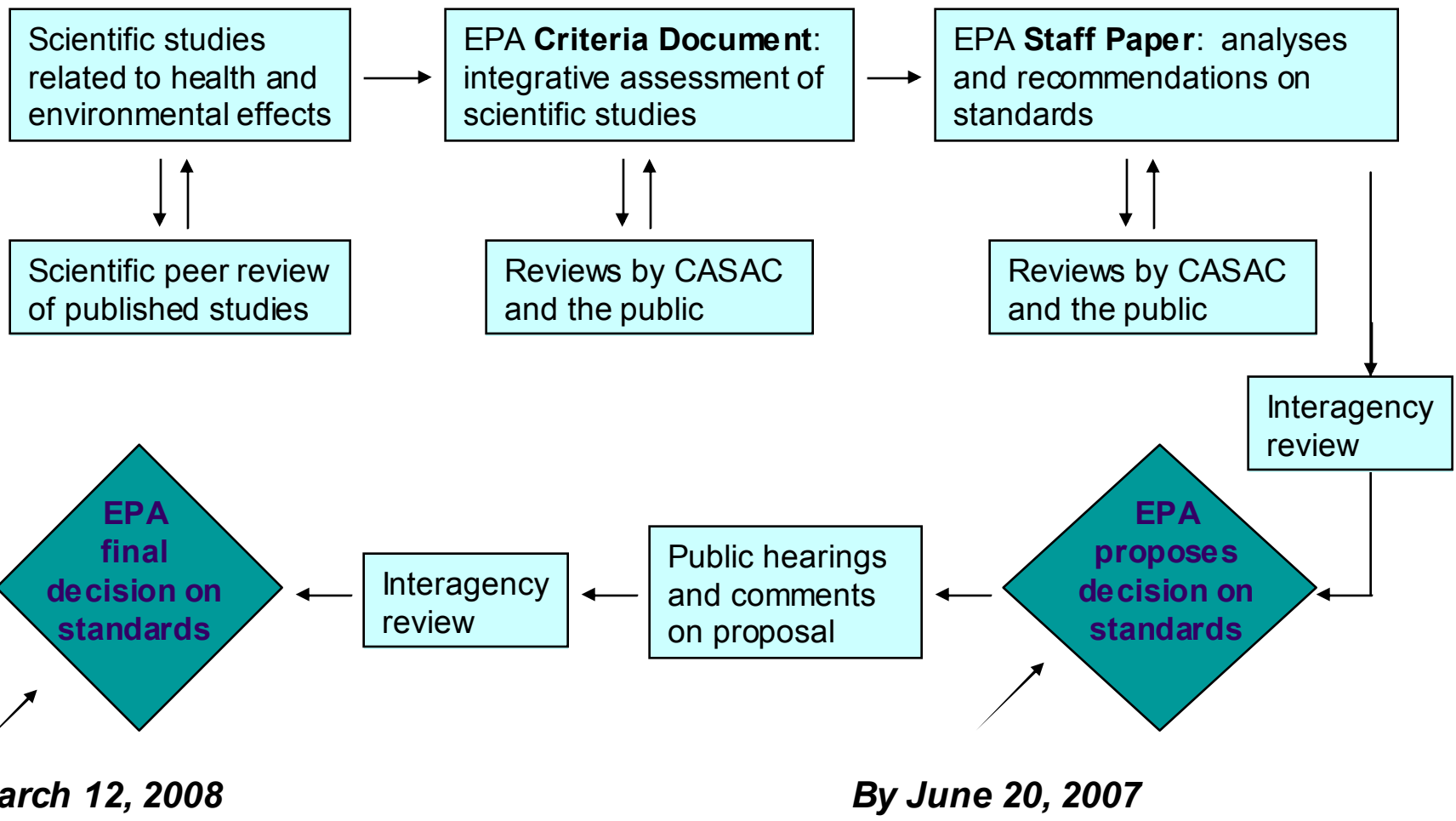
Ozone NAAQS Review



- Staff paper translates the science into terms that can be used for making policy decisions.
- Includes recommendations to the EPA Administrator about any revisions to the standards needed to protect public health and the environment.



O3 NAAQS Review Process – Extensive Peer Review and Public Input



History of June 20, 2007 proposal – Primary Standard



- CASAC unanimously recommended the NAAQS be revised to fall between 0.060 ppm to 0.070 ppm.
- EPA staff recommended that the NAAQS be revised to fall between 0.060 to "somewhat below" 0.080 ppm.

New Health Evidence in this Review



- Clinical studies show evidence of adverse effects in healthy adults from exposure to ozone at a level of 0.080 ppm
- Very limited new evidence at 0.060 ppm
- Large number of new epidemiological studies, including new multicity studies, strengthen EPA's confidence in the links between ozone exposure and health effects.
- New studies link ozone exposure to important new health effects, including mortality, increased asthma medication use, school absenteeism, and cardiac-related effects
- Studies report effects at ozone levels well below the current standard
- Studies of people with asthma indicate that they experience larger and more serious responses to ozone that take longer to resolve

EPA's Human Health Exposure and Risk Assessments



- Estimated the magnitude of the public health risk from ozone and the extent to which alternative ozone standards might reduce adverse health effects
- Focused on 12 urban areas: Atlanta, Boston, Chicago, Cleveland, Detroit, Houston, Los Angeles, New York City, Philadelphia, Sacramento, St. Louis, Washington D.C.
- Exposure/risk assessments do not capture national scale public health impacts or quantify the full range of ozone-related adverse health effects
- Results indicate no sharp breakpoint: gradual reductions in exposure and risk under alternative standards

June 20, 2007 Proposal – Primary Standard



- EPA believes current standard is not protective of public health
- EPA has proposed that the primary ozone NAAQS be set at 0.070 - 0.075 ppm.
- EPA is taking comment on everything from 0.060 - 0.080 ppm.
- 90-day public comment period beginning upon publication.
- Four public hearings on August 30th (Philadelphia and Los Angeles) and Sept. 5th (Chicago and Houston)

June 20th 2007 Proposal - Secondary Standard



- EPA is proposing two options for secondary standard:
 - W126, or new form of standard that is more protective of plants during the growing season.
 - Same as primary
- EPA proposing W126 standard of 7 to 21 ppm-hrs.
- CASAC prefers second approach and value of 7 -15 ppm-hrs.

June 20th 2007 Proposal – Secondary Standard



- 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 sum the weighted hourly measurements during the ozone season:
 - a 12-hour daily period
 - a seasonal period consisting of the three months with the maximum W126 index value.
- EPA is requesting comment on: whether the W126 standard should be calculated annually or averaged over three years

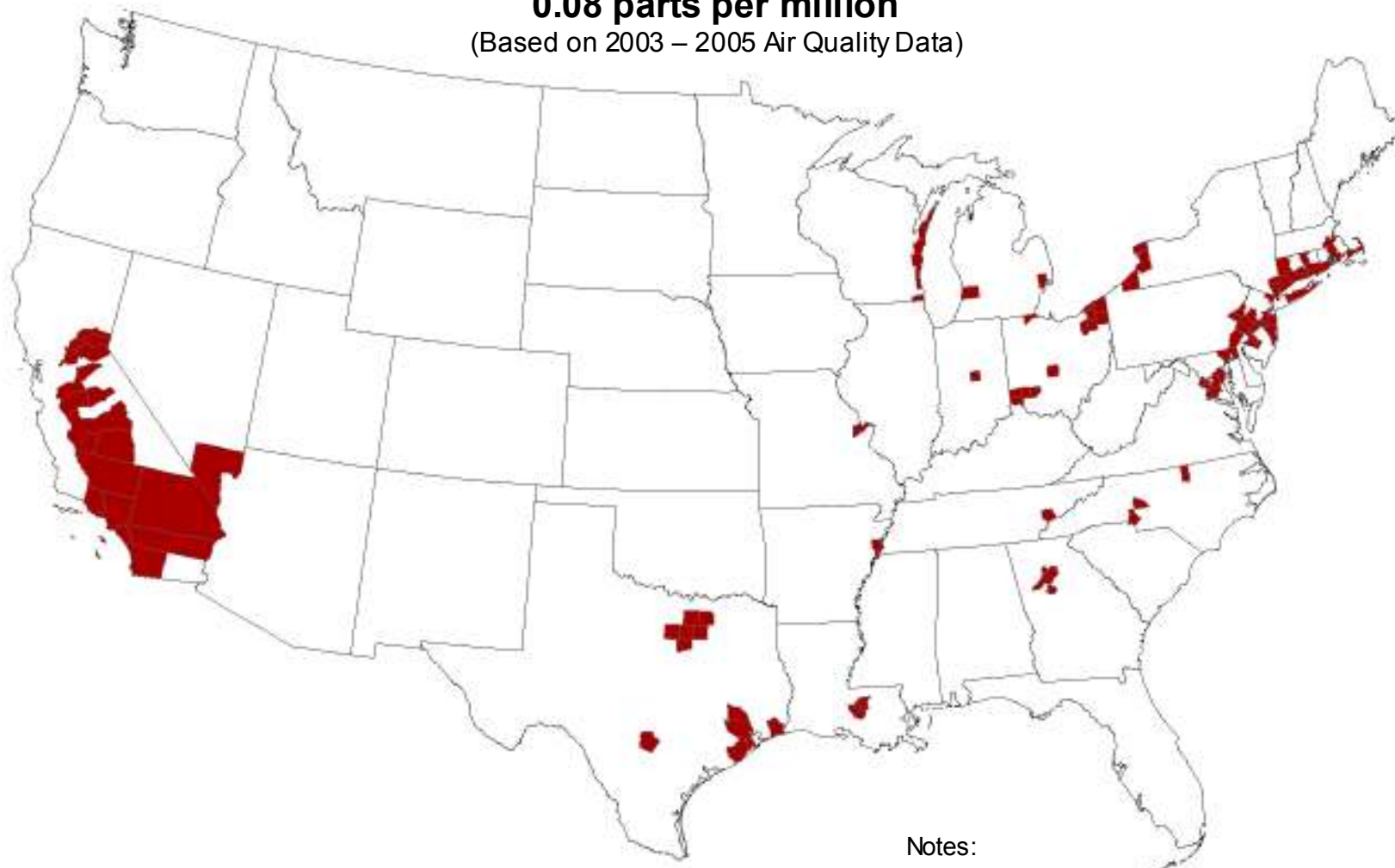
What Does This Mean in AZ?



- Maricopa County is currently the only 8-hour ozone nonattainment area in the State
- At the proposed levels, 2 to 3 more counties could be designated as nonattainment in AZ
- .075 - Maricopa, Pinal, Pima, Gila and Yuma
- .070 - Maricopa, Pinal, Pima, Gila, Yuma, plus Coconino, Cochise and Yavapai
- This is using 2003 – 2005 data



Counties With Monitors Violating the Current Primary 8-hour Ozone Standard 0.08 parts per million (Based on 2003 – 2005 Air Quality Data)



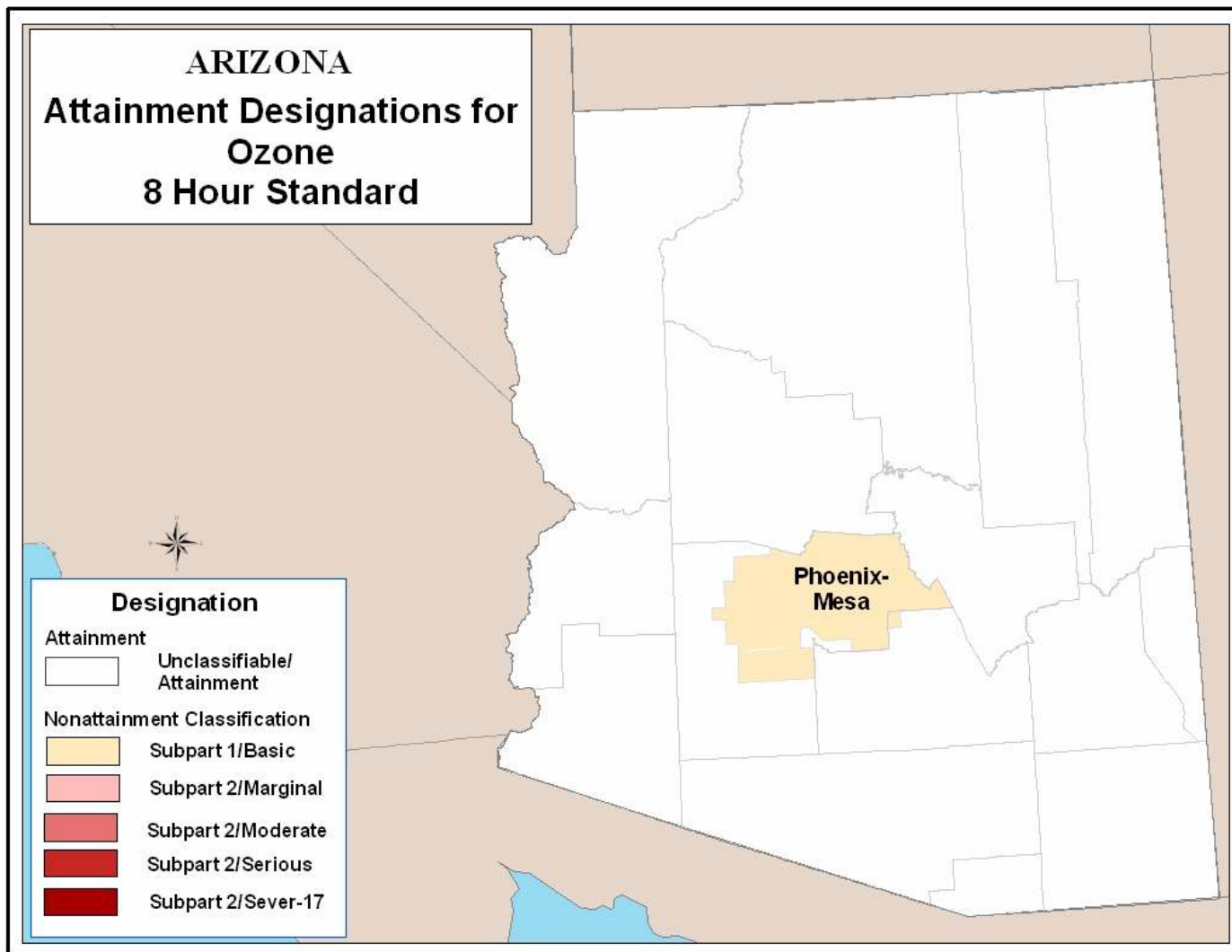
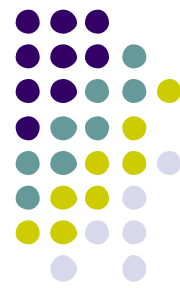
Notes:

¹ 104 of 639 monitored counties violate.

² No monitored counties outside the continental U.S. violate.

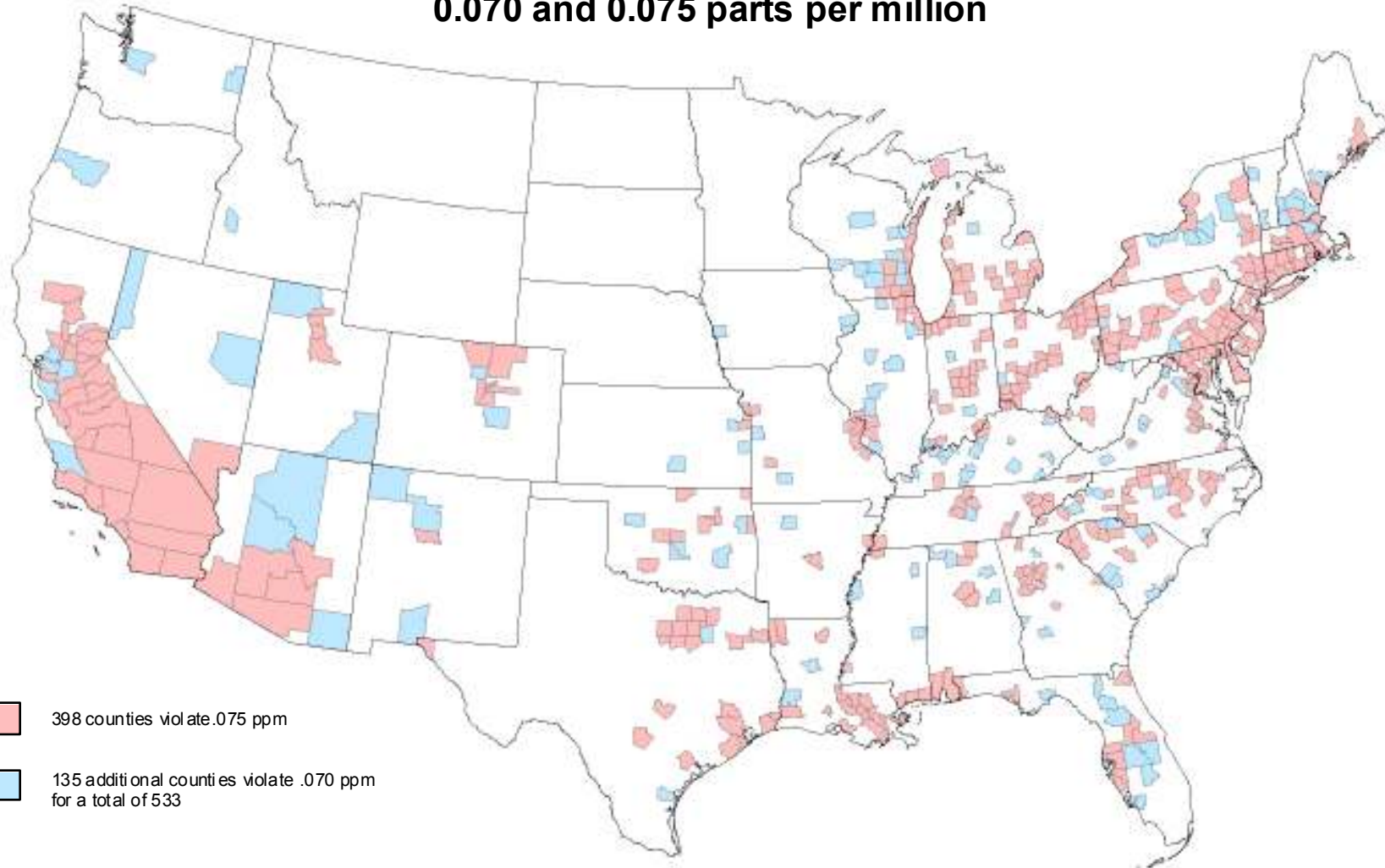
³ Monitored data can be obtained from the AQS system at <http://www.epa.gov/ttn/airs/airsaqs/>



⁴ The current standard of 0.08 ppm is effectively expressed as 0.084 ppm when rounding conventions are applied.



Estimates are based on the most recent data (2003 – 2005). EPA will not designate areas as nonattainment on these data, but likely on 2006 - 2008 data which we expect to show improved air quality.

Counties With Monitors Violating Alternate 8-hour Ozone Standards 0.070 and 0.075 parts per million



-  398 counties violate .075 ppm
-  135 additional counties violate .070 ppm for a total of 533

Notes:

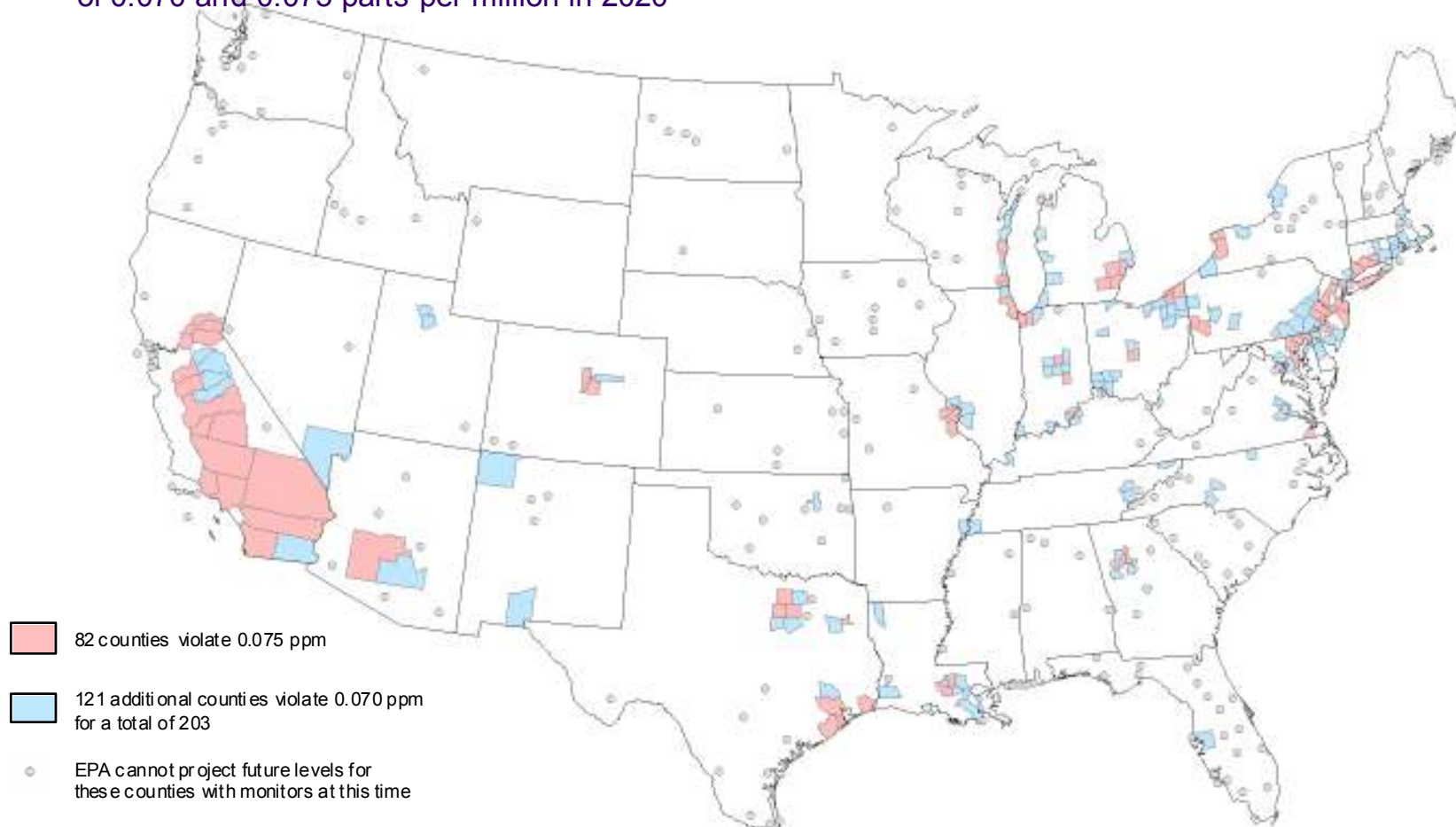
¹ 398 of 639 monitored counties violate 0.075, 533 of 639 monitored counties violate 0.070.

² No monitored counties outside the continental U.S. violate.

³ Monitored data can be obtained from the AQS system at <http://www.epa.gov/ttn/airs/airsaqs/>



Counties With Monitors Projected to Violate Alternate 8-hour Ozone Standards of 0.070 and 0.075 parts per million in 2020



Notes:

¹ Modeled emissions reflect the expected reductions from federal programs including the Clean Air Interstate Rule, the Clean Air Mercury Rule, the Clean Air Visibility Rule, the Clean Air Nonroad Diesel Rule, the Light-Duty Vehicle Tier 2 Rule, the Heavy Duty Diesel Rule, proposed rules for Locomotive and Marine Vessels and for Small Spark-Ignition Engines, and state and local level mobile and stationary source controls identified for additional reductions in emissions for the purpose of attaining the current PM 2.5 and Ozone standards.

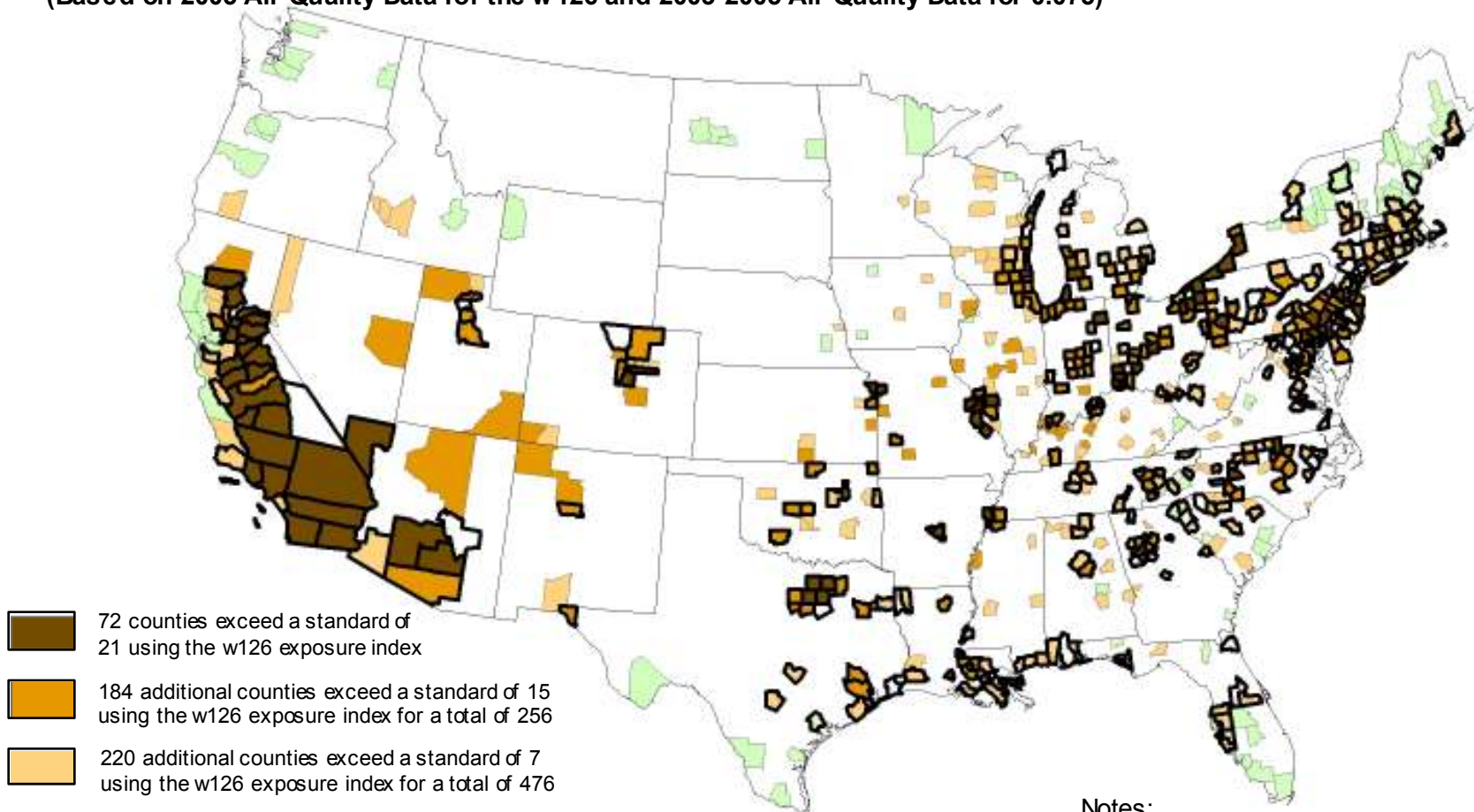
² Controls applied are illustrative. States may choose to apply different control strategies for implementation.






³ Modeled design values in ppm are only interpreted up to 3 decimal places.

⁴ Consistent with current modeling guidance, EPA did not project 2020 concentrations for counties where 2001 base year concentrations were less than recommended criterion. Such projections may not represent expected future levels. These counties are shown on the map with a grey dot.



Status of Counties with Monitors – Proposed Alternative w126 Index Secondary Standard and 8-hour 0.075 Ozone Primary Standard
 (Based on 2005 Air Quality Data for the w126 and 2003-2005 Air Quality Data for 0.075)



-  72 counties exceed a standard of 21 using the w126 exposure index
 -  184 additional counties exceed a standard of 15 using the w126 exposure index for a total of 256
 -  220 additional counties exceed a standard of 7 using the w126 exposure index for a total of 476
-
-  79 counties meet a standard of 7 using the w126 exposure index for a total of 555
 -  Outlined in heavy black are the 398 counties that exceed the 0.075 alternate 8-hr primary standard

Notes:

¹ w126 is out of 555 monitored counties in 2005

² No monitored counties outside the continental U.S. violate

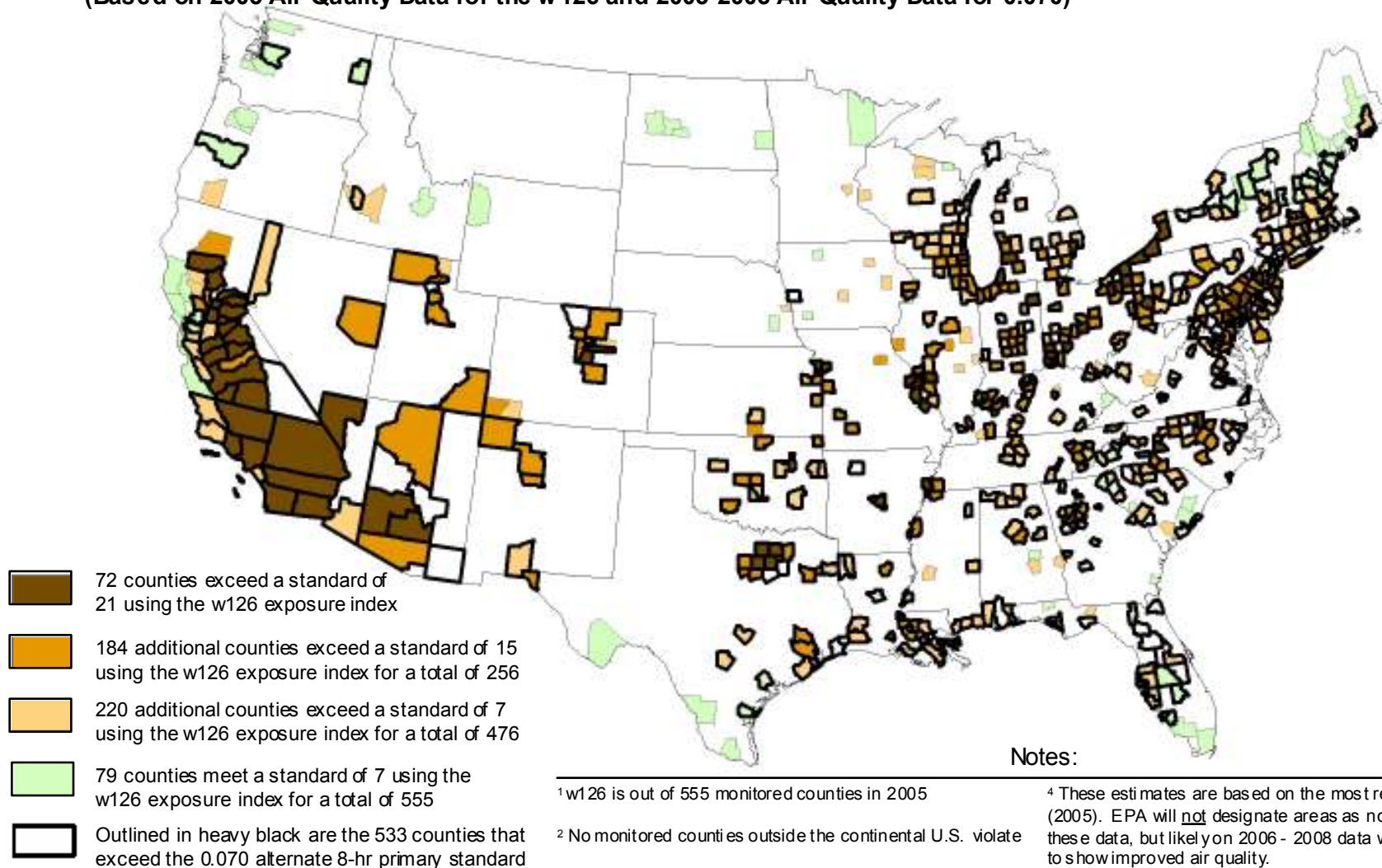
³ Monitored data can be obtained from the AQS system at <http://www.epa.gov/ttn/airs/airsaqs/>

⁴ These estimates are based on the most recent data (2005). EPA will not designate areas as nonattainment on these data, but likely on 2006 - 2008 data which we expect to show improved air quality.



Counties With Monitors Violating Alternative w126 Exposure Index Secondary Standard and 8-hour 0.070 Ozone Primary Standard

(Based on 2005 Air Quality Data for the w126 and 2003-2005 Air Quality Data for 0.070)



Notes:

¹ w126 is out of 555 monitored counties in 2005

² No monitored counties outside the continental U.S. violate

³ Monitored data can be obtained from the AQS system at <http://www.epa.gov/ttn/airs/airsaqs/>

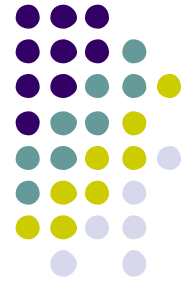
⁴ These estimates are based on the most recent data (2005). EPA will not designate areas as nonattainment on these data, but likely on 2006 - 2008 data which we expect to show improved air quality.

What happens when the rule is finalized?



- EPA will notify Governors that they must submit recommended designations by June 2009.
- EPA will then issue final designations within 1 year from the recommendations or 2010
- SIPs will be due 3 years later in 2013
- Attainment dates will range from 2013 to 2030

DC Circuit decision/clarification



- On 12/22/06, the DC Circuit Court of Appeals vacated aspects of Phase I of our ozone implementation rule, on designations and classifications and anti-backsliding provisions.
- We asked the court to reconsider its decision, and we got the Court's decision on 6/8/07.
- Bob Meyer memo of 6/15/07 (handout) clarifies the implications for Subpart I and II areas.

Additional Court Decisions and Challenges to EPA Rulemakings



- April 2, 2007 - Supreme Court Decision in Mass. vs. USEPA where court ruled that CO₂ can be regulated under the CAA
- May 21, 2007 - Petition of Reconsideration from NRDC on the Exceptional Events Rule



Other Recent EPA Actions

- **Federal Register May 2, 2007: Proposed Rule on Transportation Conformity Amendments in SAFETEA-LU.**
<http://www.epa.gov/fedrgstr/EPA-AIR/2007/May/Day-02/a7770.htm>.
- **EPA Releases Demonstration Version of MOVES Model.**
<http://www.epa.gov/otaq/ngm.htm>.



Other Recent EPA Actions

- **EPA Releases Final Ozone/PM2.5/Regional Haze Modeling Guidance.**
http://www.epa.gov/ttn/scram/guidance_sip.htm.
- **EPA Proposes New Guidelines for HOV Exemptions.** <http://www.epa.gov/otaq/ld-hwy.htm>.



Other Recent EPA Actions

- Miami SO₂ Redesignation published on 1/24/07
- VEI SIP NFR published 3/30/07
- Hayden-Miami Boundary Change and Clean Data Finding for Miami published 3/29/07
- Four Corners FIP published on 5/7/07
- Final Finding of Failure to Attain PM-10 standard for Phoenix published on 6/6/07
- CARB diesel proposed rule published 6/8/07
- Yuma budget adequacy published 6/12/07