USDA AAQTF Air Quality Standards Subcommittee

2009-2010

Summary Report

Subcommittee Members

- Roger Isom – Chair
- Kevin Abernathy – Co-chair
- Ben Weinheimer
- Kevin Rogers
- Sagar Krupa
- Bill Norman
- Bryan Shaw
  - Susan O’Neill – NRCS Liaison
  - Brock Faulkner - Contributor

Actions

- PM Monitoring Issue
- PM Research Needs – Whitepaper
- PM Chemical Composition – Whitepaper
- Ozone – Secondary Standard

PM Monitoring Issue

- Meeting w/ EPA at RTP in Jan., 2010
- Good discussion
- Action Items
  - EPA to provide technical information and background
  - Ag researchers to provide outline of experimental protocol for evaluating PM sampling methodologies

PM Research Needs

- More PM research is needed
  - Flux of PM emissions from agricultural production and processing operations
  - Particle size characteristics of PM emissions from agricultural operations
  - Characterization of performance of FRM PM10 and PM2.5 source samplers
  - Fate and deposition of gaseous emissions from ag operations that may form PM2.5
  - Test efficacy of potential mitigation measures

Chemical Composition of PM

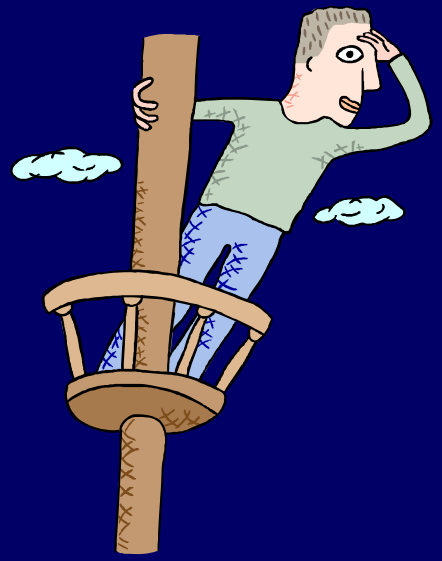
- Recommendations
  - Establish pilot agricultural PM monitoring network
  - Obtain true concentrations of PM2.5 from sufficient number of locations throughout agricultural regions of U.S.
  - Make discreet measurements of the chemical composition of fine and coarse particulate from agricultural operations
  - Understand conditions that govern PM exceedances

Ozone Secondary Standard

- Discussed proposed secondary ozone standard
- New methodology
  - Need to understand impact

Issues on the Horizon

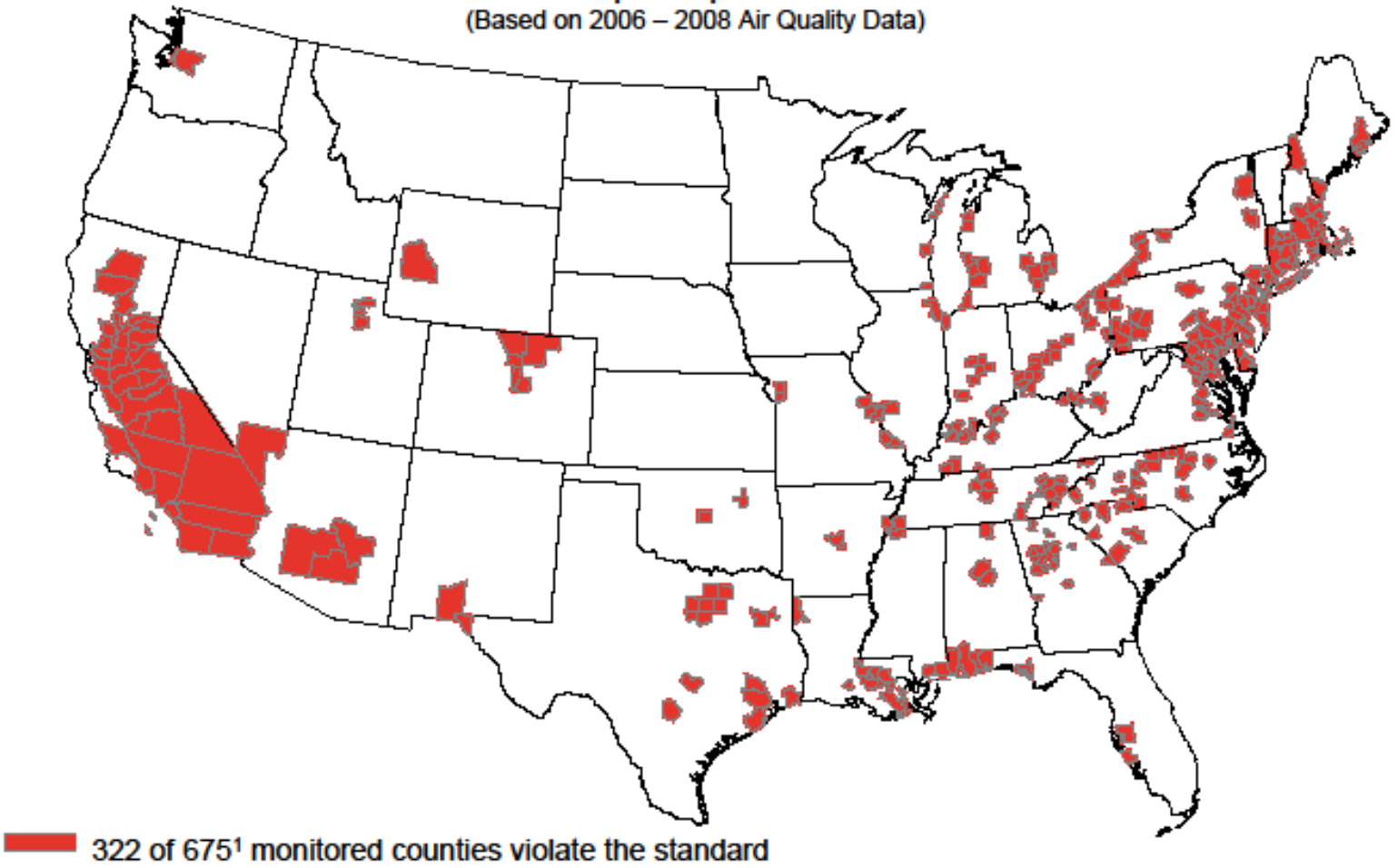
- New Ozone Standard
- New PM Standard
- Ongoing PM Monitoring Issue
- PM Research



Real World Implications for Ag

- Pesticide VOCs
  - Loss of chemicals, controls, reformulation
- Diesel Engine Rules
  - Replace trucks, tractors and pump engines
- Fugitive dust rules
  - FPMPs, CMPs, controls
- Fertilizer restrictions (NH3, N2O)
- ATVs, Gasoline tanks, parts washers

Counties With Monitors Violating the March 2008 Ground-Level Ozone Standards
0.075 parts per million
(Based on 2006 – 2008 Air Quality Data)



322 of 675[1] monitored counties violate the standard

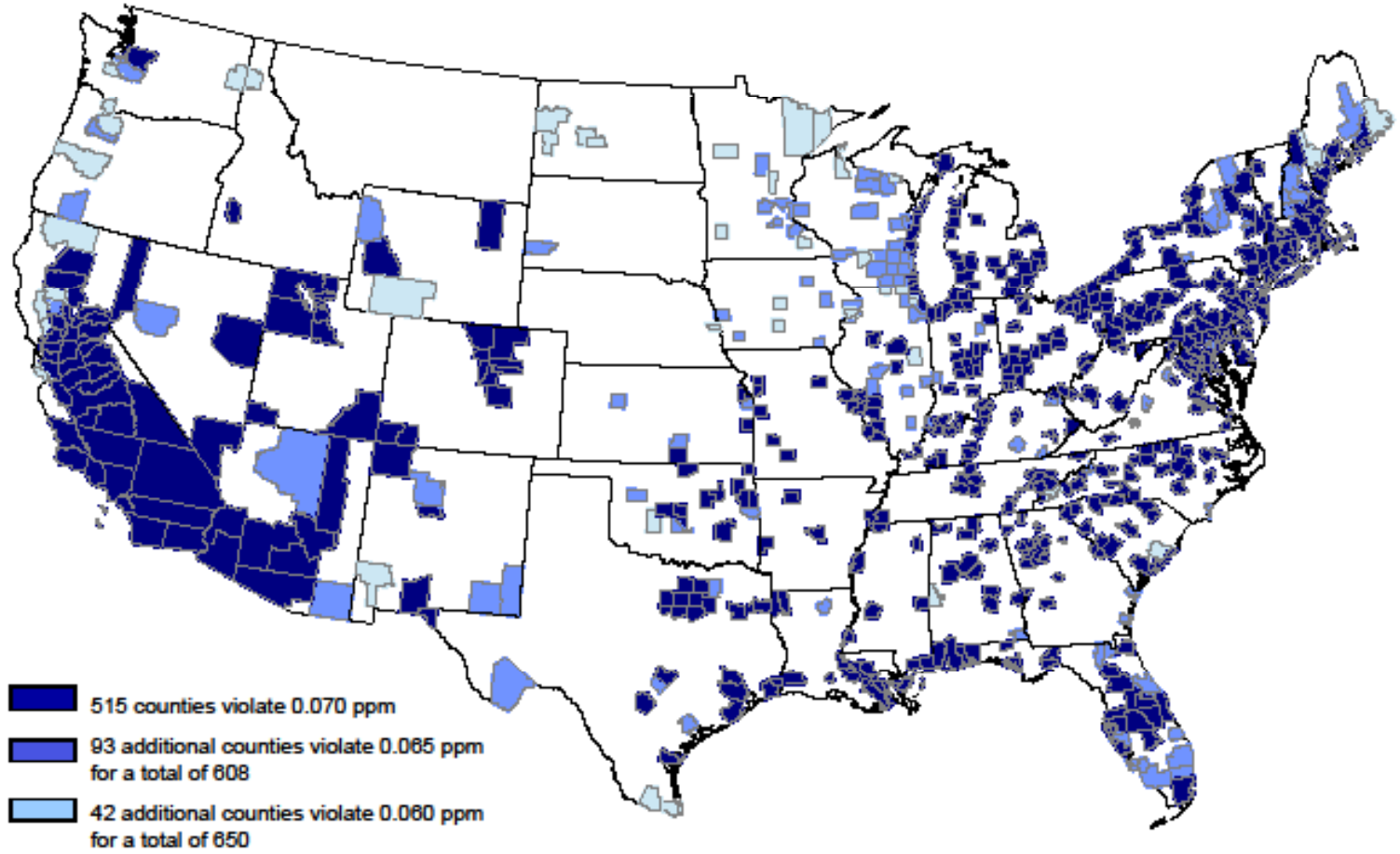
Notes:

1. Counties with at least one monitor with complete data for 2006 – 2008
2. To determine compliance with the March 2008 ozone standards, the 3-year average is truncated to three decimal places.

Counties With Monitors Violating Proposed Primary 8-hour Ground-level Ozone Standards
0.060 - 0.070 parts per million

(Based on 2006 – 2008 Air Quality Data)

EPA **will not** designate areas as nonattainment on these data, but likely on 2008 – 2010 data which are expected to show improved air quality.

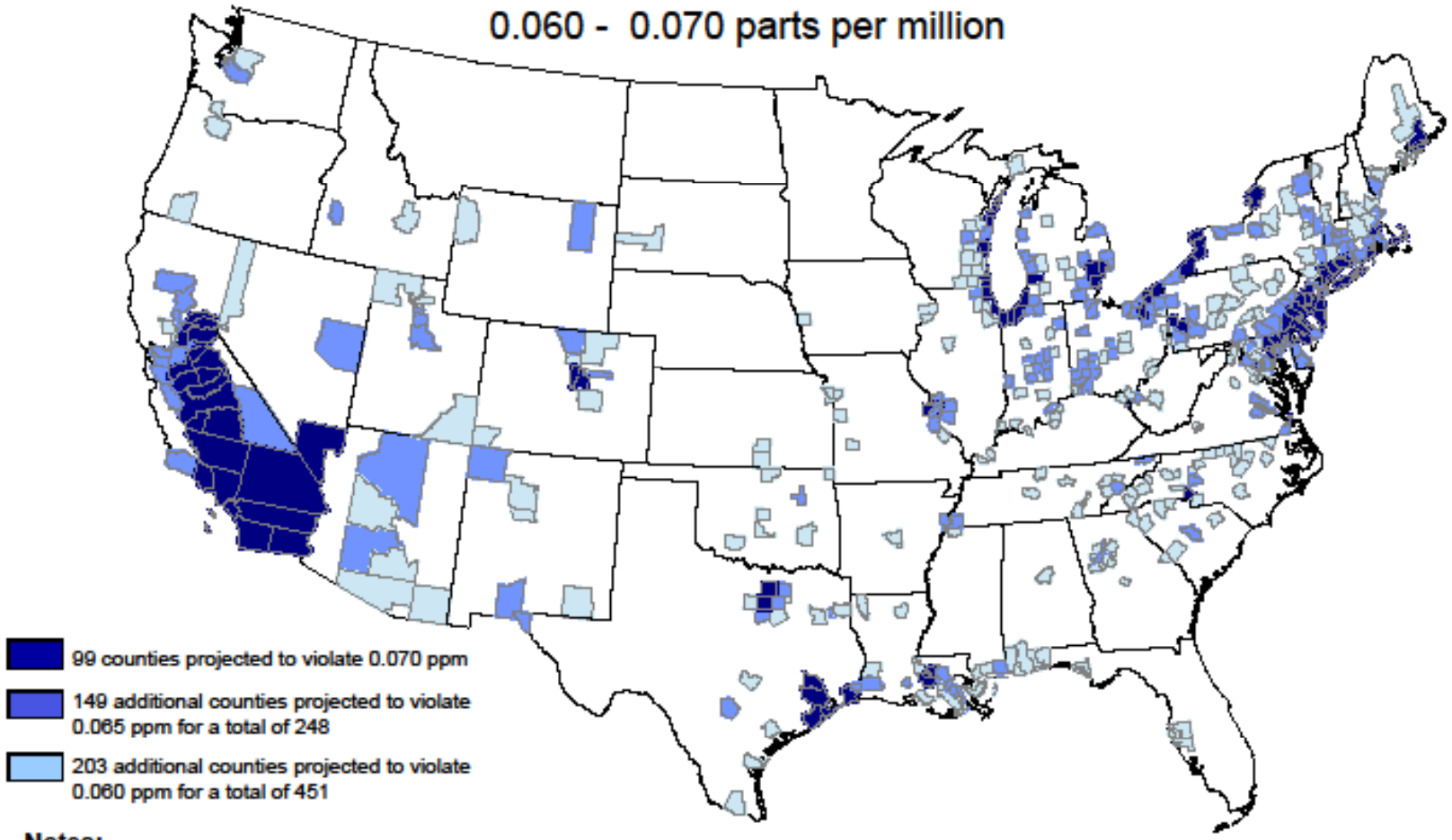


Notes:

1. No monitored counties outside the continental U.S. violate.
2. EPA is proposing to determine compliance with a revised primary ozone standard by rounding the 3-year average to three decimal places.

Counties With Monitors Projected to Violate Proposed Primary 8-hour Ground-Level Ozone Standards in 2020

0.060 - 0.070 parts per million



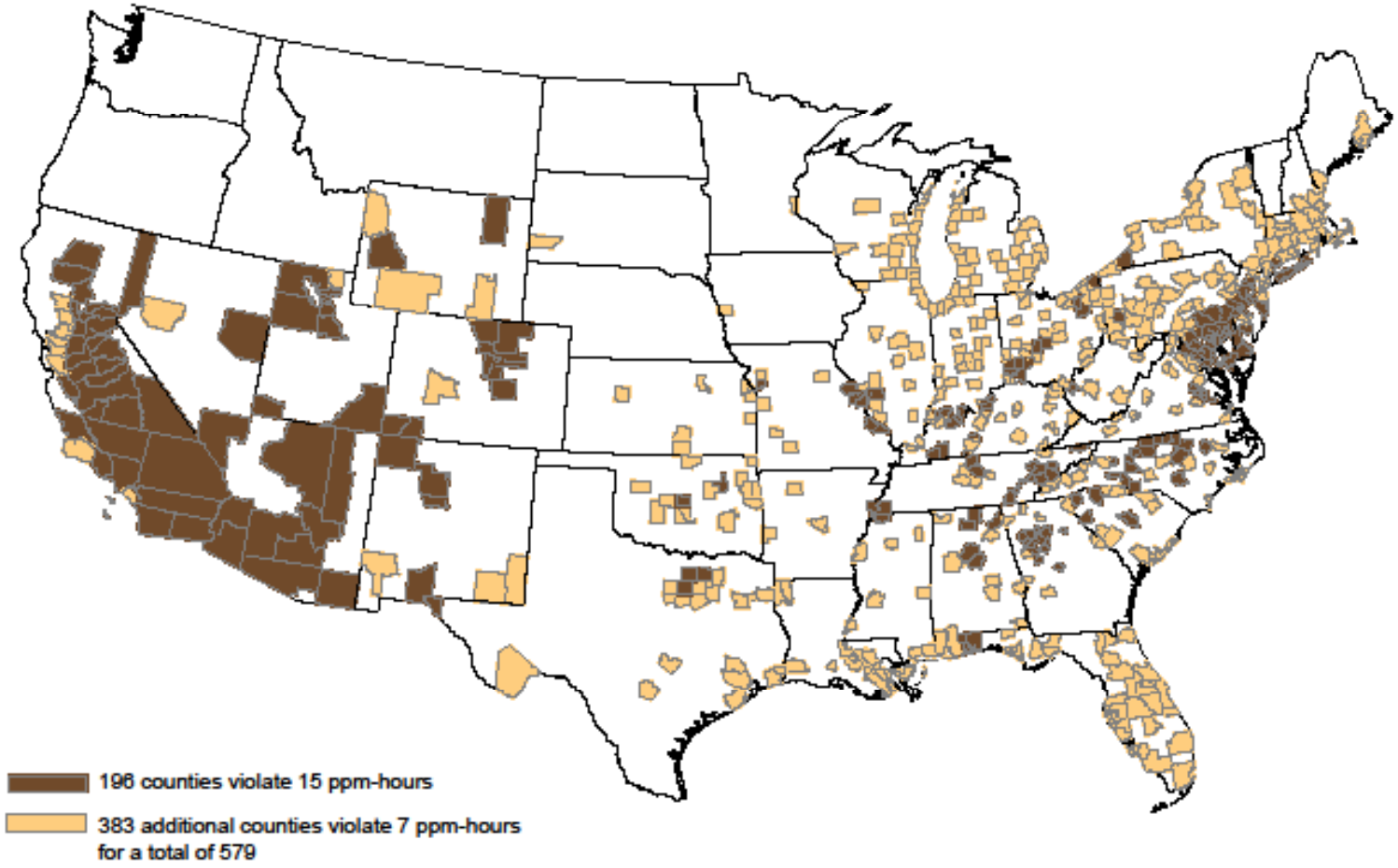
Notes:

1. The modeled emissions in 2020 reflect the expected emissions reductions from federal programs by 2020 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, the proposed rules for Locomotive and Marine Vessels and for Small Spark-Ignition Engines, and an estimate of State-level mobile and stationary source controls that were projected to be needed to attain pre-existing PM 2.5 and ozone standards.
2. Controls applied are illustrative. States may choose to apply different control strategies for implementation.
3. EPA did not model future violations outside the continental U.S.
4. EPA is proposing to determine compliance with a revised primary ozone standard by rounding the 3-year average to three decimal places.

Counties With Monitors Violating Proposed Secondary Seasonal Ground-Level Ozone Standards
7 – 15 parts per million - hours

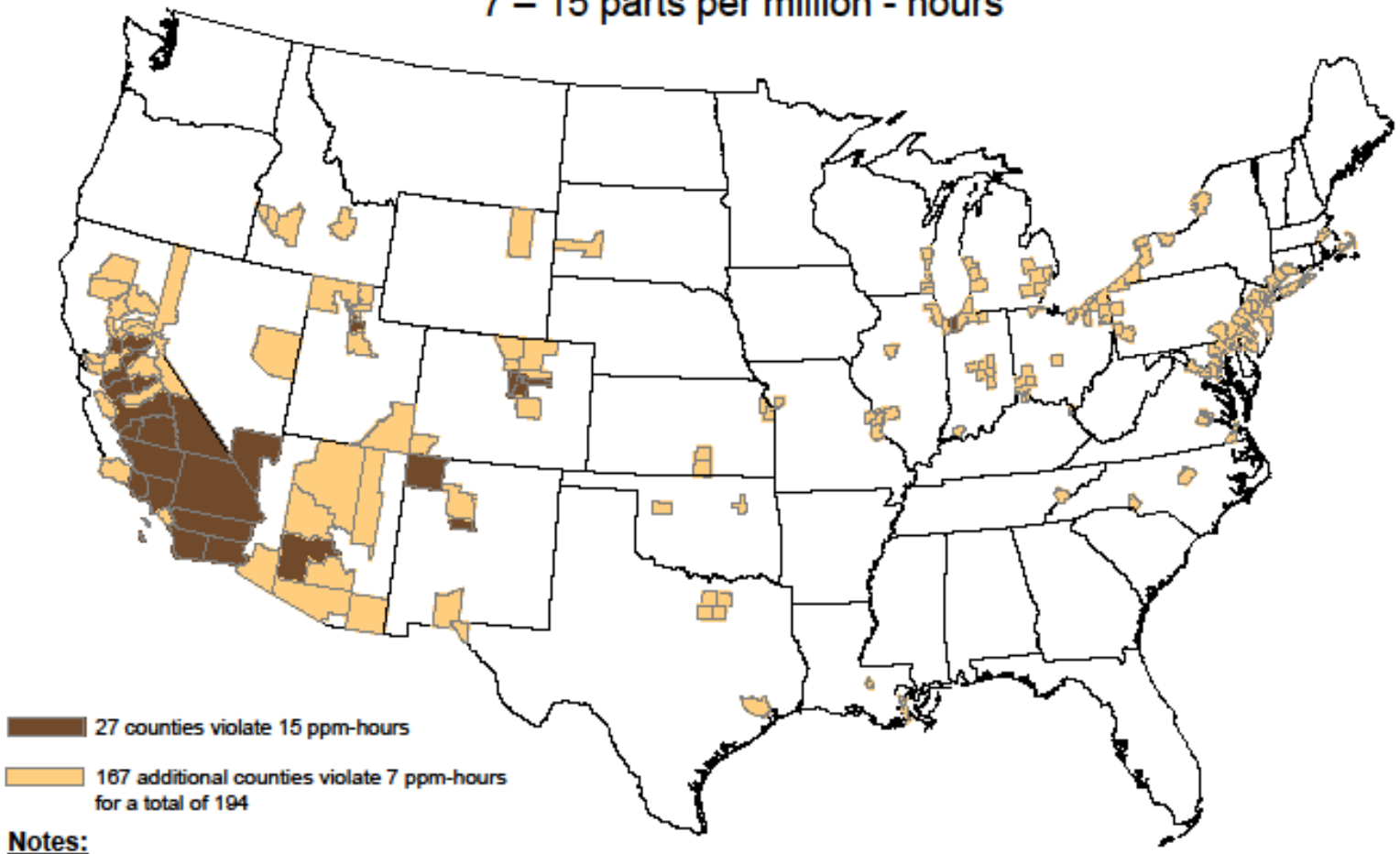
(Based on 2006 – 2008 Air Quality Data)

EPA will not designate areas as nonattainment on these data, but likely on 2008 – 2010 data which are expected to show improved air quality.



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

Counties With Monitors Projected to Violate the Proposed Secondary Seasonal Ground-level Ozone Standards in 2020
7 – 15 parts per million - hours



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Recommendation on Potential Revisions to the PM NAAQS Standard

DATE: 9/30/10

The AAQTF is concerned with the body of evidence used to consider proposed PM standard revisions. The concern is that most of the studies are based in areas where the thoracic coarse particles are largely of urban origin. In the studies in non-urban areas, the data was based on high wind events. The AAQTF is concerned that there is a serious lack of monitoring in agricultural areas that could be used for a basis of health effects.

There are still ongoing issues surrounding the issue of PM sampling bias. An ongoing discussion is underway with EPA and USDA on this issue, where agriculture believes that PM sampling bias may be inaccurately characterizing emissions from agricultural operations. The PM sampling bias issue must be resolved before any change to the NAAQS is implemented.

The AAQTF concurs with EPA staff that uncertainty in health effects studies across different types of environments and limitations in the current monitoring network are reasons to retain the current PM standard.

RECOMMENDATION:

The AAQTF is recommending to the Secretary to communicate with EPA to recommend retaining the current PM NAAQS.