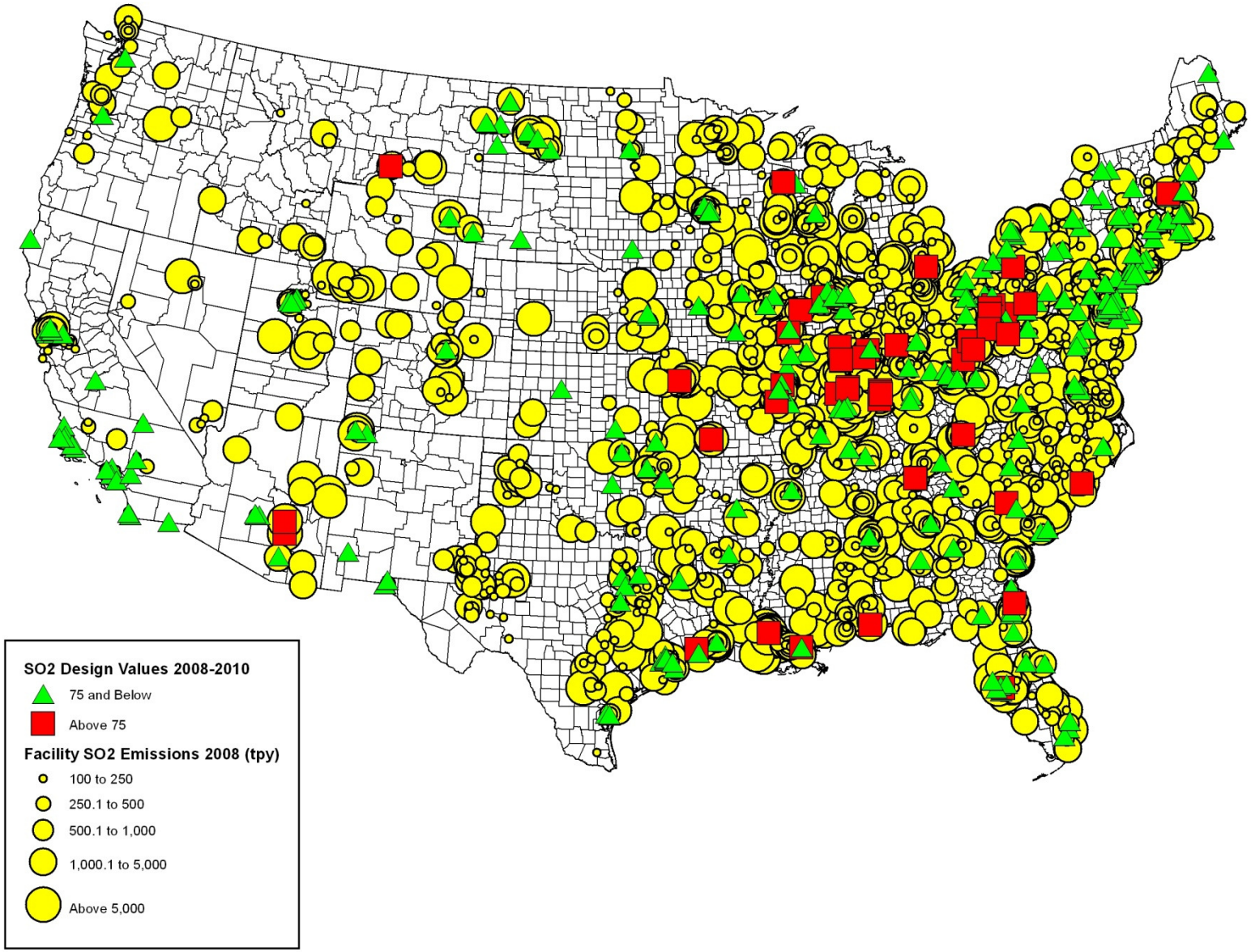
Sulfur Dioxide 1-Hour NAAQS Implementation

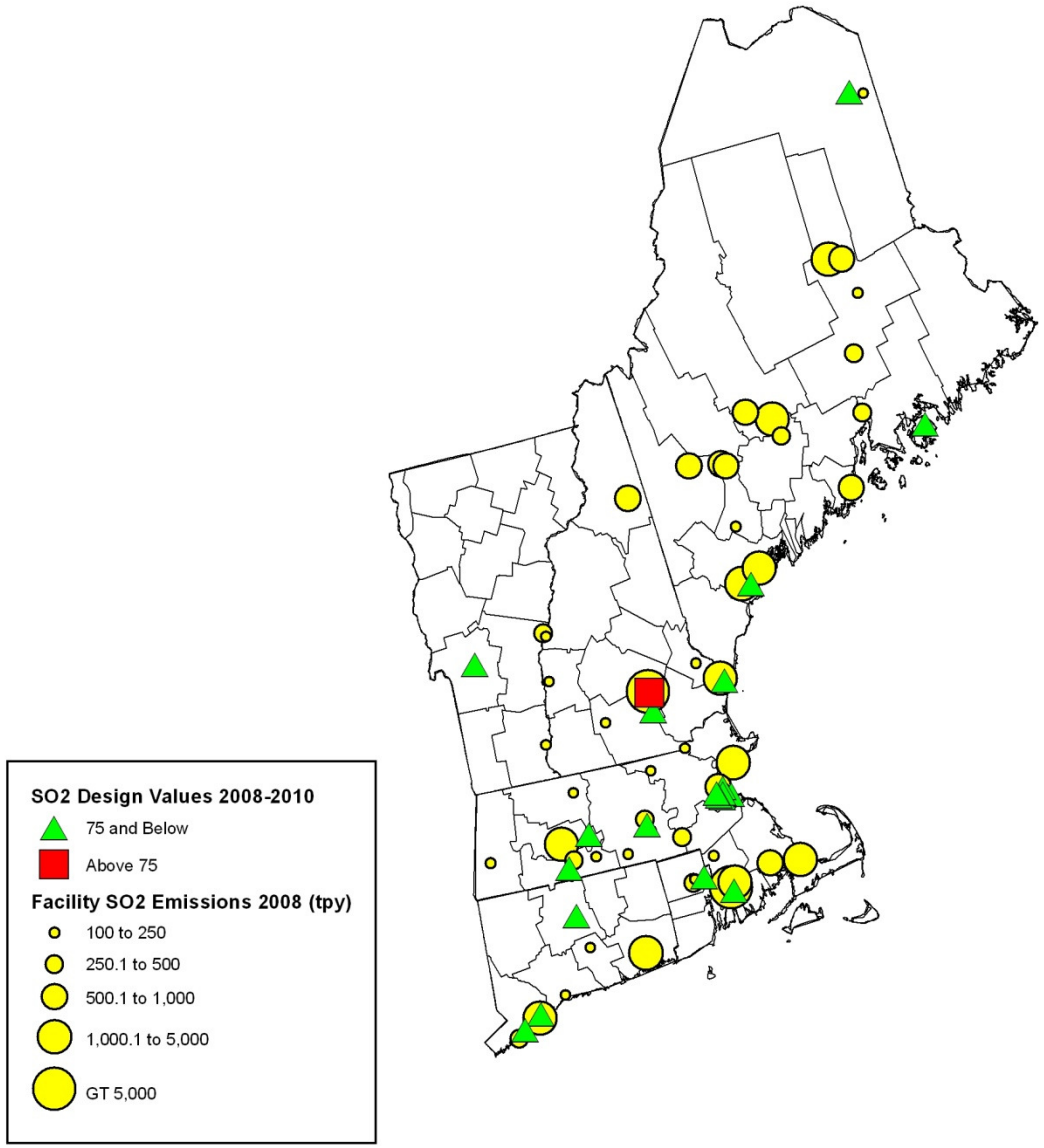
EPA Discussion Questions for
2012 NACAA Spring Meeting

May 7, 2012
Denver, CO

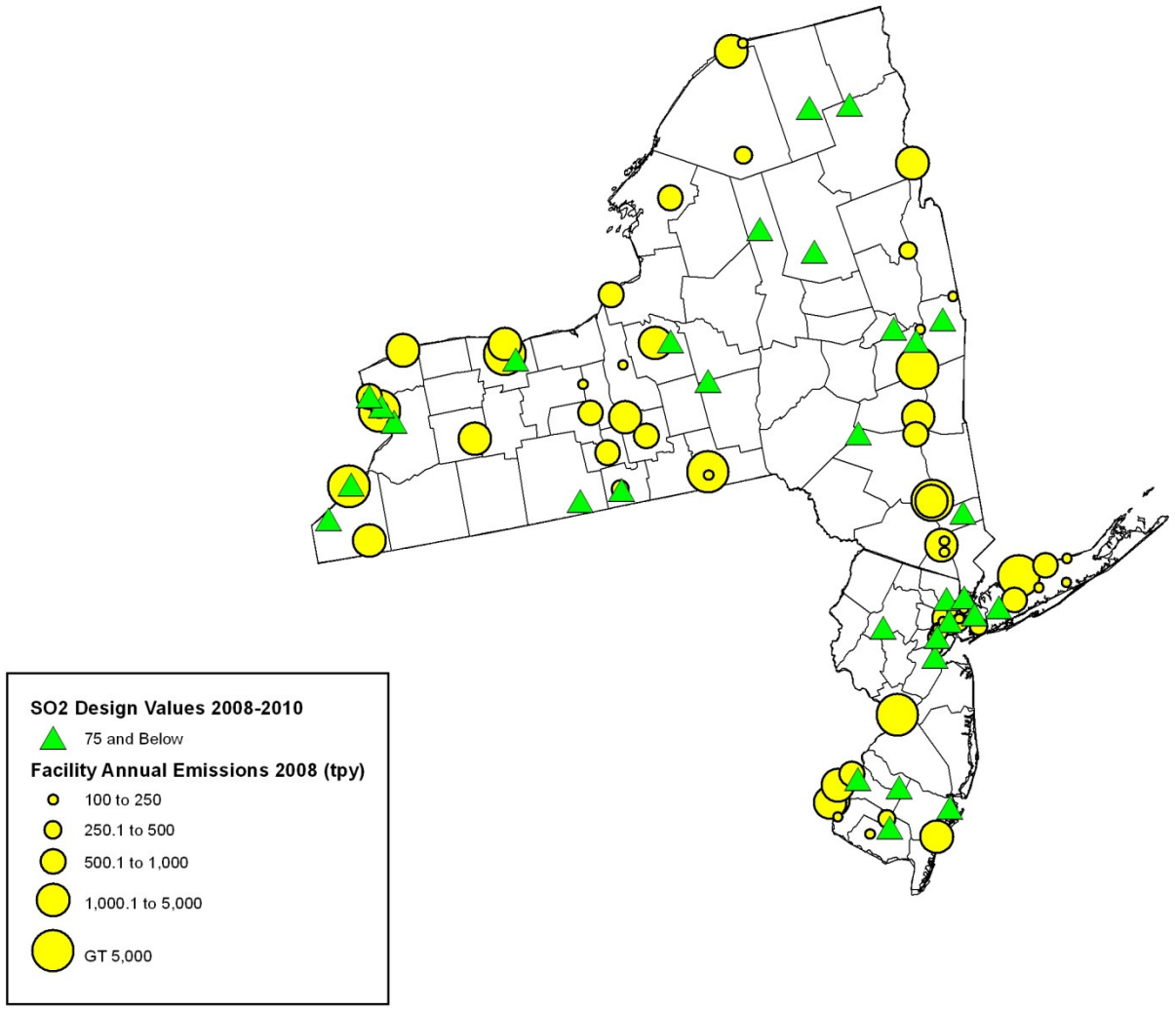
SO2 Monitors and Facility Emissions



Region 1
SO2 Monitors and Facility Emissions



Region 2
SO2 Monitors and Facility Emissions



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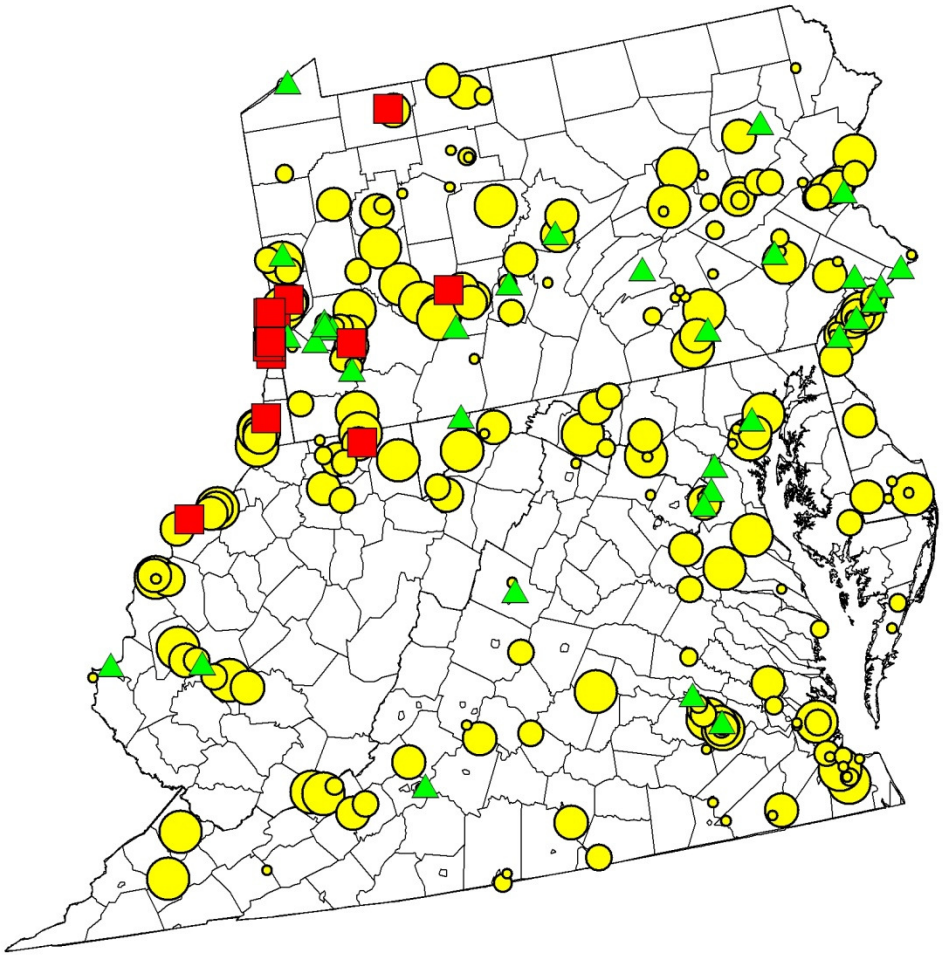
SO2 Monitors and Facility Emissions



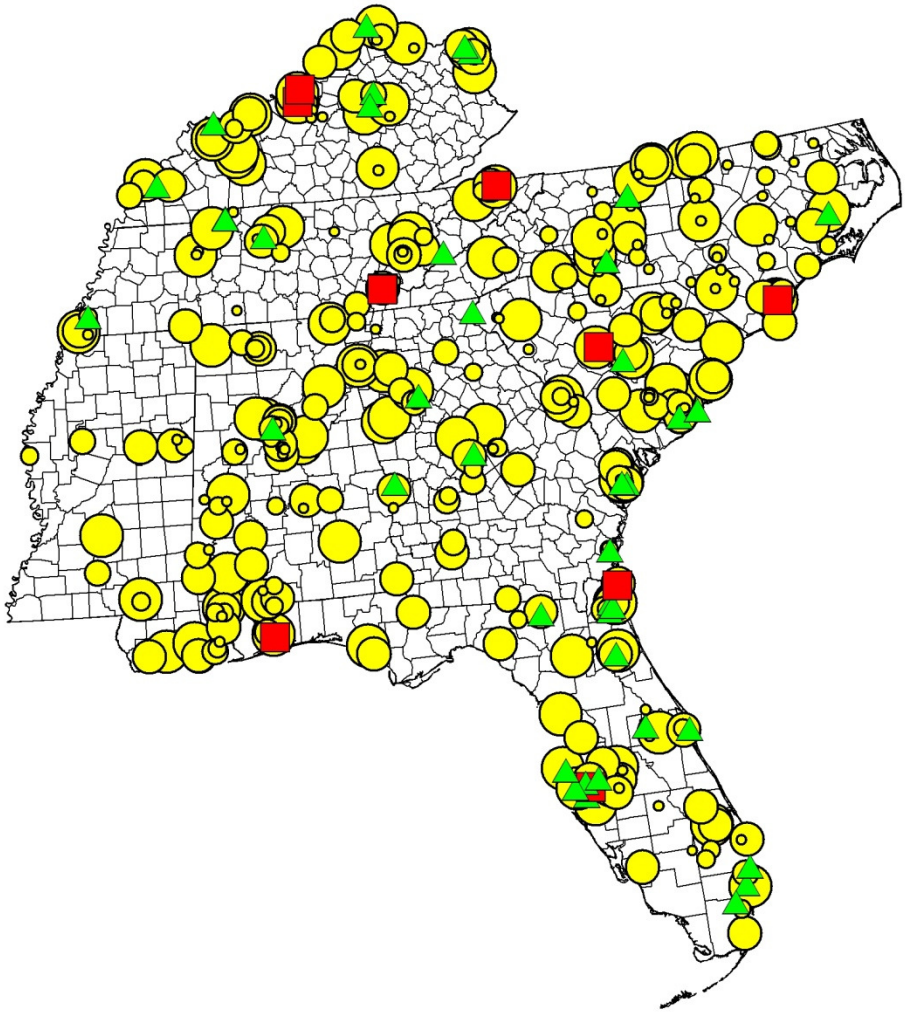
SO2 Design Values 2008-2010

- 75 and Below
- Above 75

Facility SO2 Emissions 2008 (tpy)

- 100 to 250
- 250.1 to 500
- 500.1 to 1,000
- 1,000.1 to 5,000
- GT 5,000

Region 4
SO2 Monitors and Facility Emissions



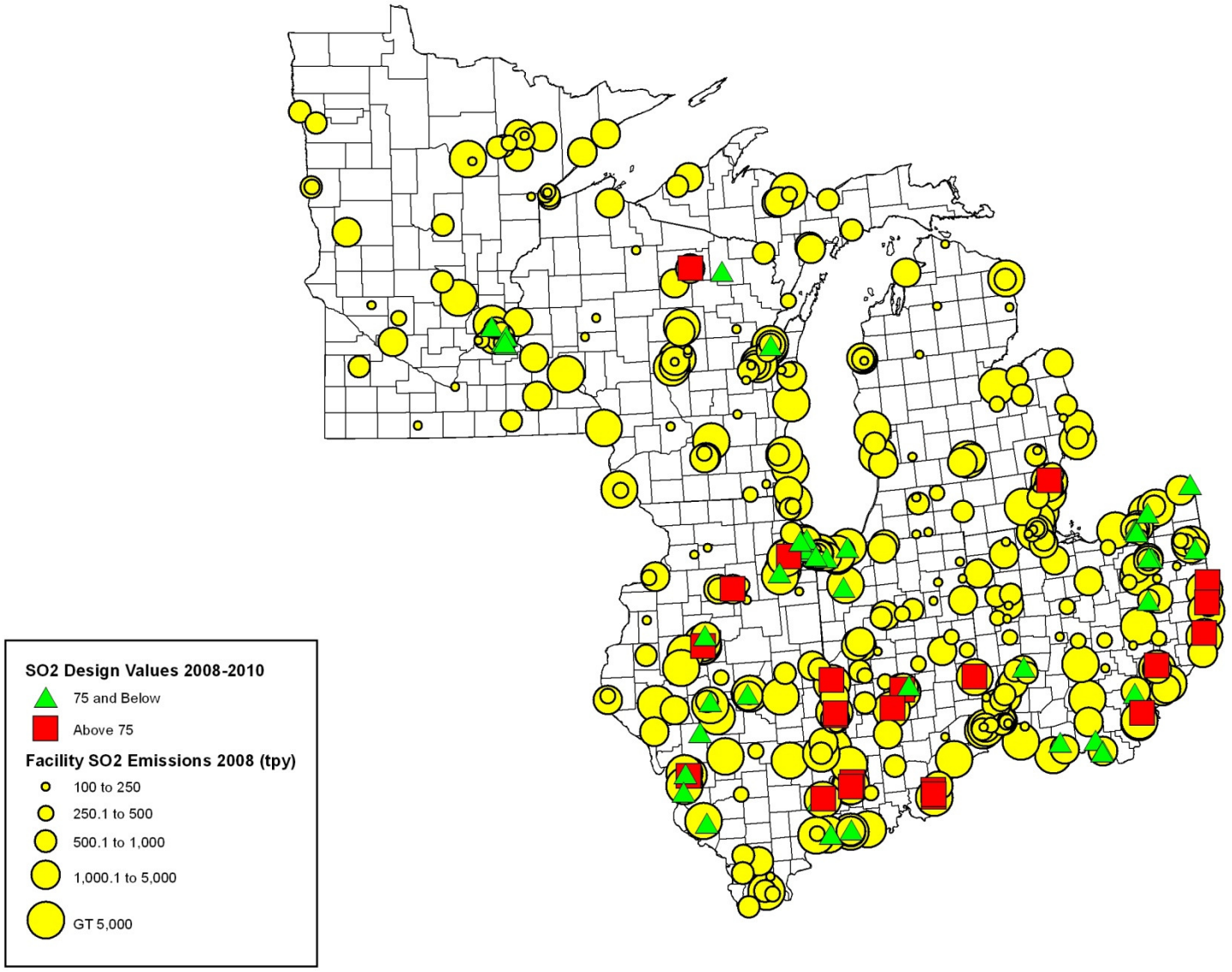
SO2 Design Values 2008-2010

- 75 and Below
- Above 75

Facility Annual SO2 Emissions (tpy)

- 100 to 250
- 250.1 to 500
- 500.1 to 1,000
- 1,000.1 to 5,000
- GT 5,000

Region 5
SO2 Monitors and Facility Emissions



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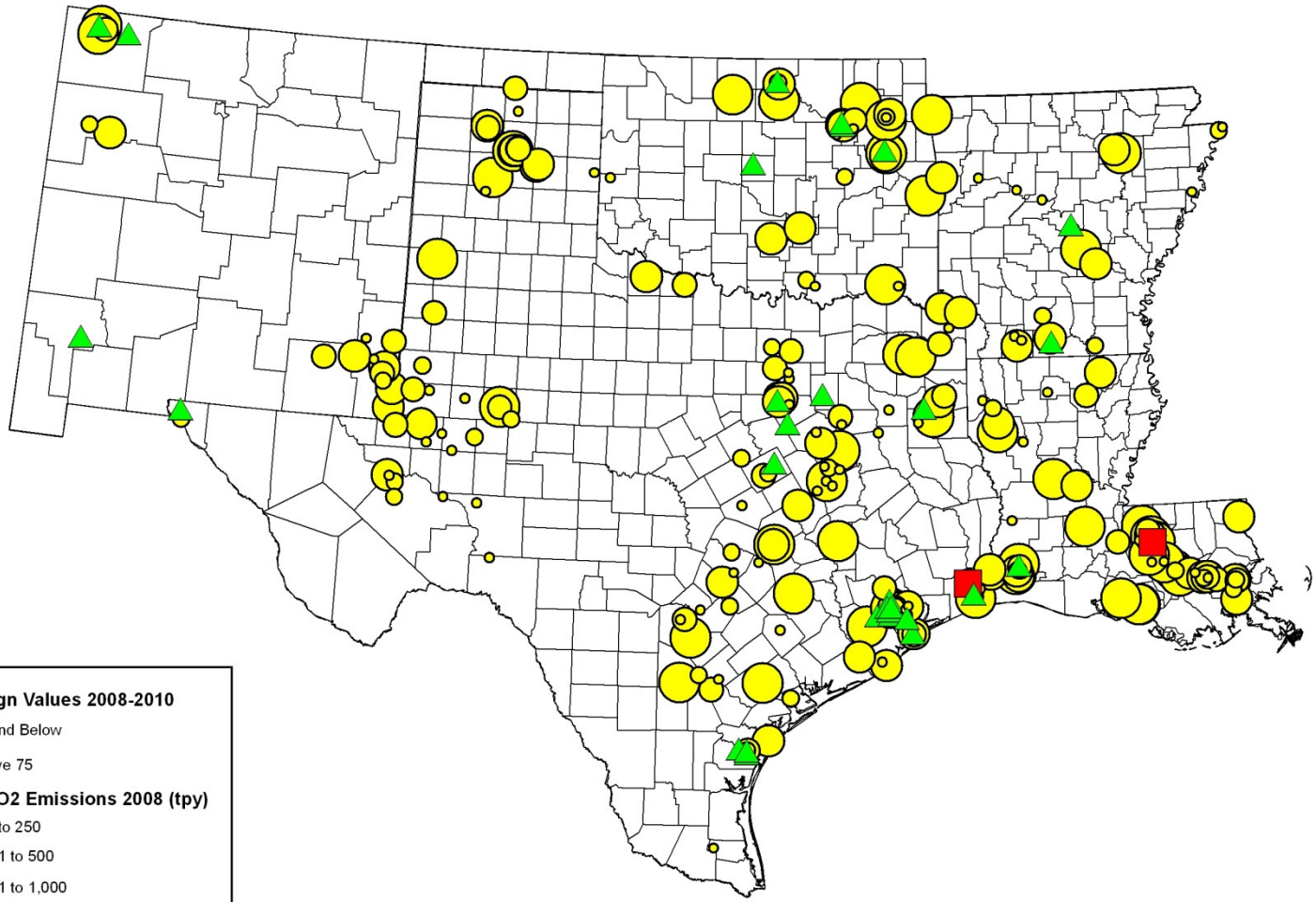
SO2 Monitors and Facility Emissions



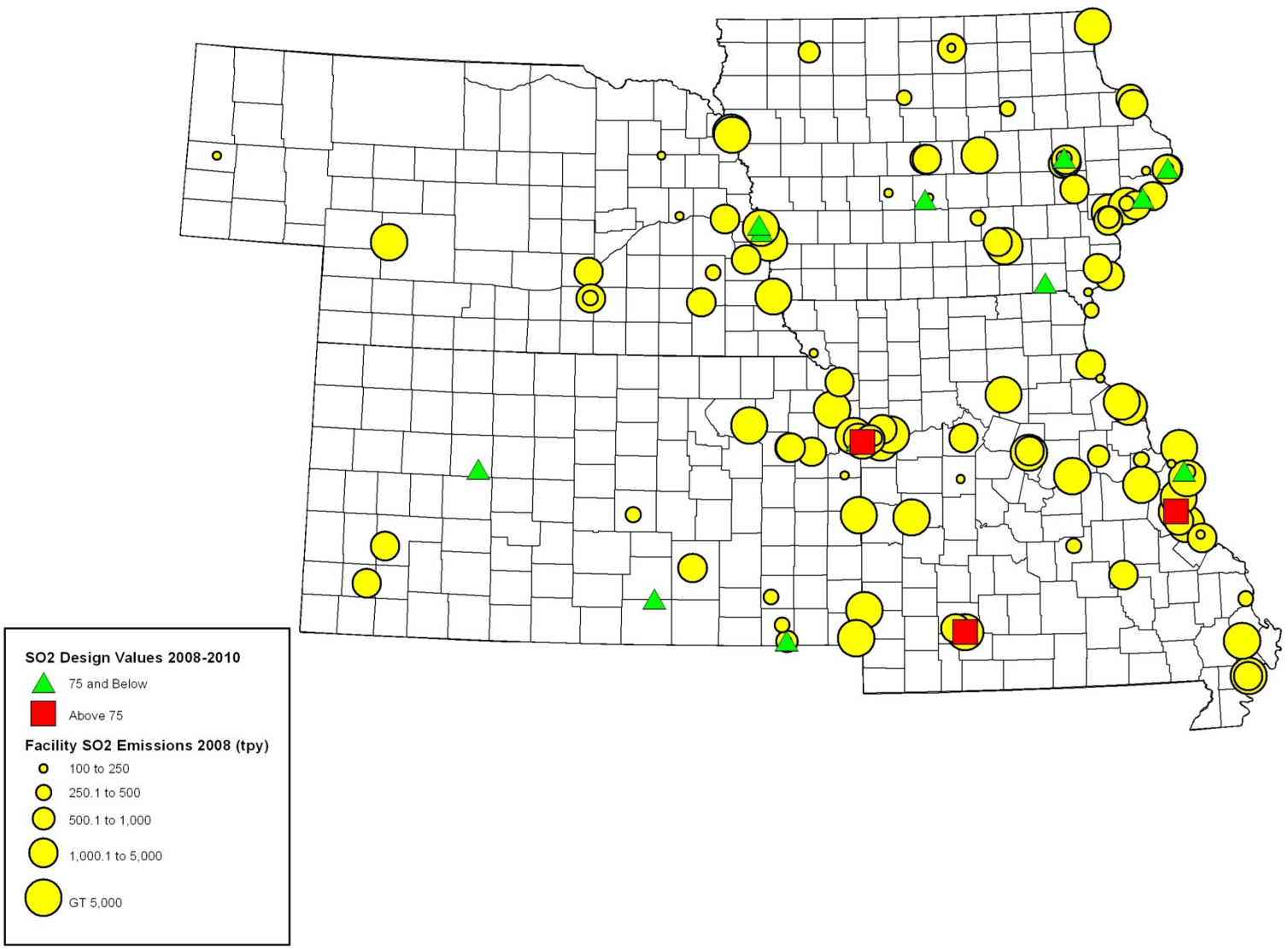
SO2 Design Values 2008-2010

- 75 and Below
- Above 75

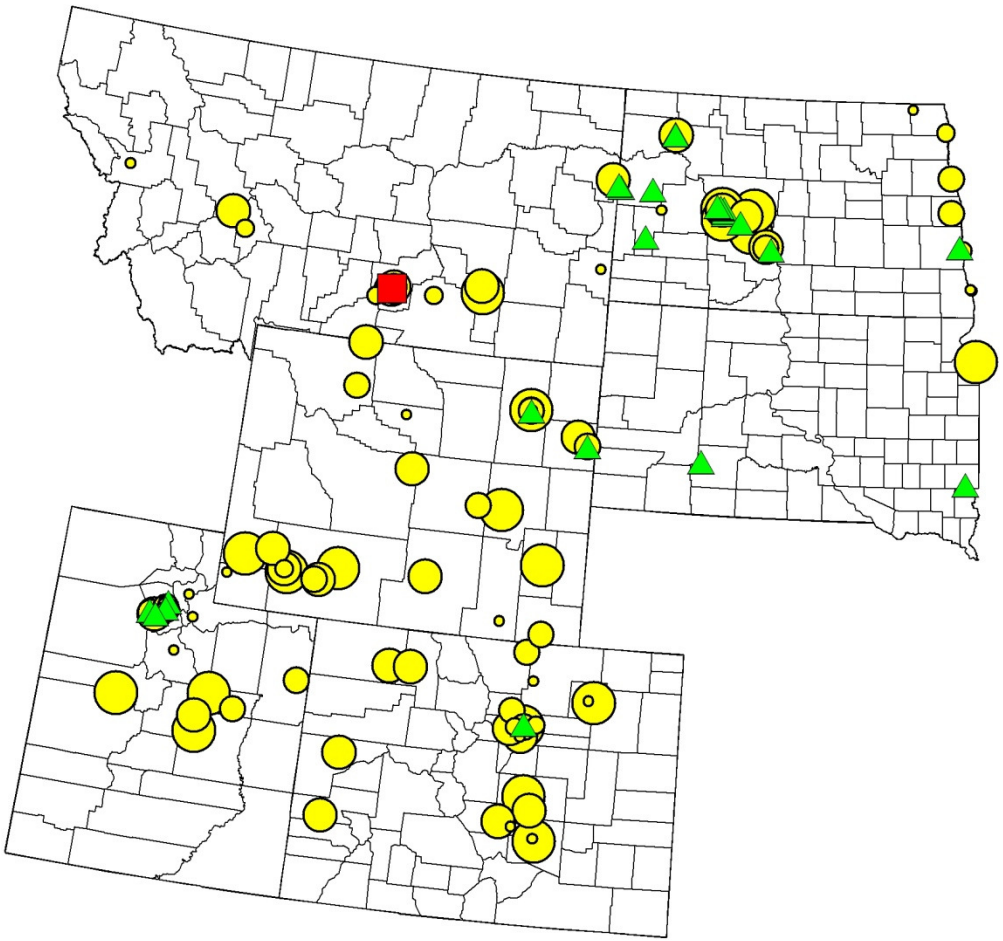
Facility SO2 Emissions 2008 (tpy)

- 100 to 250
- 250.1 to 500
- 500.1 to 1,000
- 1,000.1 to 5,000
- GT 5,000

Region 7
SO2 Monitors and Facility Emissions



Region 8
SO2 Monitors and Facility Emissions



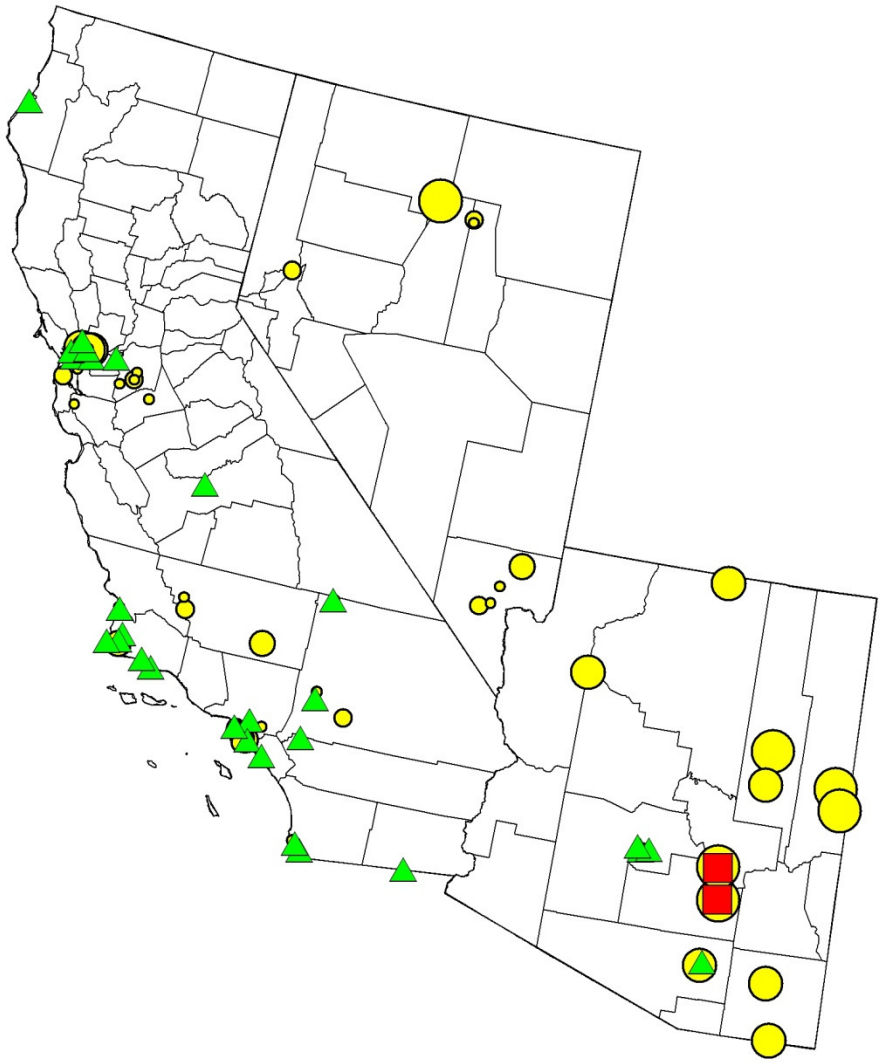
SO2 Design Values 2008-2010

- 75 and Below
- Above 75

Facility SO2 Emissions 2008 (tpy)

- 100 to 250
- 250.1 to 500
- 500.1 to 1,000
- 1,000.1 to 5,000
- GT 5,000

Region 9
SO2 Monitors and Facility Emissions



SO2 Design Values 2008-2010

- 75 and Below
- Above 75

Facility SO2 Emissions 2008 (tpy)

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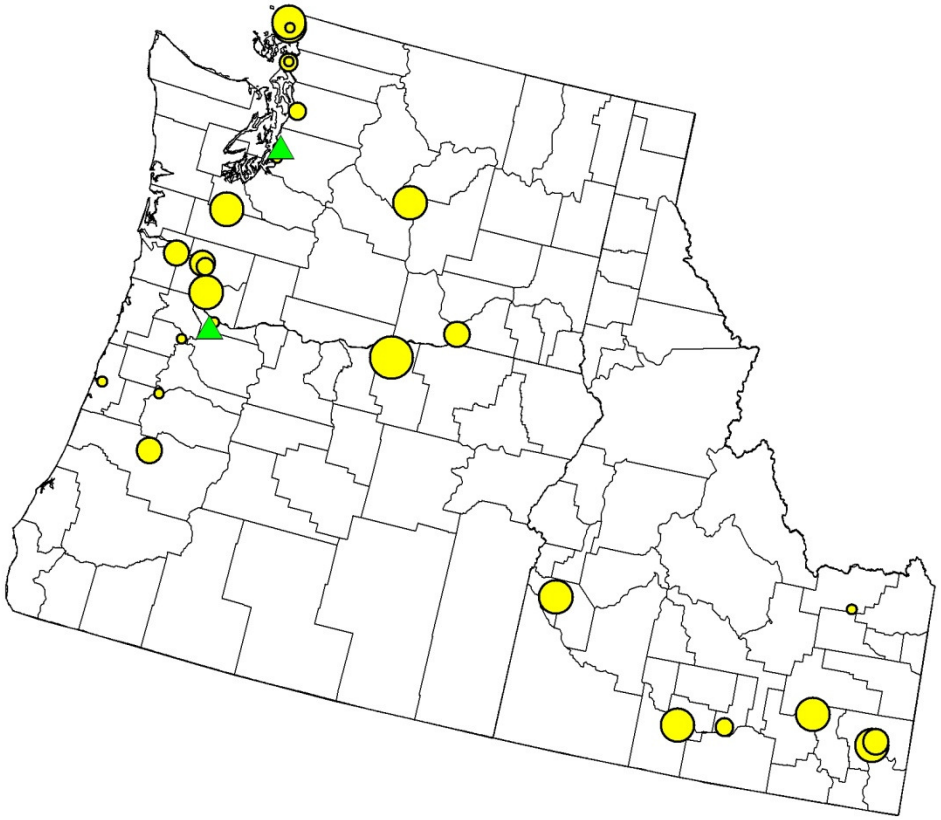
- 250.1 to 500
- 500.1 to 1,000
- 1,000.1 to 5,000
- GT 5,000

Region 10
SO2 Monitors and Facility Emissions



SO2 Design Values 2008-2010

75 and Below

Facility SO2 Emissions 2008 (tpy)

100 to 250

250.1 to 500

500.1 to 1,000

1,000.1 to 5,000

GT 5,000

Key Questions - Monitoring

- Are there monitoring network approaches are sufficient to protect public health without the need for additional modeling?
  - If not, then what enhancements should be made to the existing network?
  - In what situations should meteorological data collection also be required?
- What is an appropriate number of monitors to site around a source to assess air quality?
- Is it reasonable for states to consider relocating monitors within their states?
  - What are potential barriers to relocation (e.g. , cost, agreement with local community)?
  - Is it reasonable for states to consider transferring their monitors to other states?
- What kind of modeling (or other analyses) would be necessary to identify the location of maximum impact?
  - What information and resources are necessary to complete such modeling?
  - What is a reasonable schedule for completing this modeling?
- What options exist for paying for the expanded SO_2 monitoring network?
  - Would stakeholders be willing to conduct monitoring at new locations, or provide funding to assist states in conducting such monitoring?
  - If so, what type of agreement would be needed between states and stakeholders to insure the monitoring would be done?
- For potential stakeholder operated monitors, what kind of oversight would the states need to perform?
  - Would EPA perform additional oversight?
  - Would someone audit these facility monitoring programs and associated monitors?
  - What type of agreement would be needed between the states and stakeholders to insure the monitoring was carried out?

Key Questions - Modeling

- Should some criteria (e.g., the PWEI concept) be used to identify priority sources to be modeled in an area where there is no nearby monitor?
- How should the modeling be performed – i.e., what changes to the March 24, 2011 guidance should be made, such as the use of size cut-offs and use of actual emissions?
- Are there situations where modeling is preferable to monitoring (and vice-versa)?
  - If so, then in what situations?
  - Are there situations where it is appropriate for a state to only model SO_2 emissions and not operate any monitors?
- What options exist for paying for the new modeling analyses?
  - Would stakeholders be willing to conduct, or provide funding to assist states in conducting, any new modeling?
  - If so, what type of agreement would be needed between states and stakeholders to insure modeling would be done?

Key Questions - Implementation

- In what form should EPA set forth the revised approach?
  - Would rules need to be revised? Which ones? How should states adopt the new approach, and how much time is needed for this?
- What can be done to initiate monitoring as quickly as possible to collect sufficient data to make attainment/nonattainment determinations? What is a reasonable schedule for:
  - designing a sufficient monitoring network; and
  - deploying a new monitor or moving a monitor from an existing location?
- By what date should the modeling be completed and submitted to EPA?
- Once the modeling/monitoring data are in, how should states and EPA use these data to address violations in unclassifiable areas?
  - Is redesignating the most workable approach? What should be the timing for these redesignations? Is the timing of the next SO_2 NAAQS revision a consideration?
- Is it possible to develop an attainment determination approach that provides reasonable assurance that sources of concern that are causing violations will be identified and addressed?
- How should EPA address unclassifiable areas with no emissions or shown to have no monitored or modeled violations? What requirements, if any, are appropriate to support designating these areas as attainment?

Reminder: Stakeholder Focus Groups

- Schedule for stakeholder discussions
  - Session 1: Environmental and Public Health Organization Representatives
    May 30, 2012, Washington, DC
  - **Session 2: State and Tribal Representatives**
    May 31, 2012, Research Triangle Park, NC
  - Session 3: Industry Representatives
    June 1, 2012, Research Triangle Park, NC
  - For more information about these meetings, please contact Carolyn Childers at (919) 541-5604.
- Discussions will be structured around White Paper
  - We would like NACAA feedback , and will take comments on this version of the White Paper through this Friday May 11
  - New version will be posted at least a week before Session 1
- A summary of key comments from the stakeholder meetings will provided on EPA's Website following the conclusion of all three meetings.
  - http://www.epa.gov/air/sulfurdioxide/implement.html

Appendix

	Number of Sources	Total Emissions	Percent
All SO_2 Sources in 2008 NEI emitting 1 ton or more	8740	10,733,126	100%
SO_2 sources > 100 tons	1685	9,371,000	99%
SO_2 sources > 1000 tons	780	9,040,000	96%
SO_2 sources > 2000 tons	585	8,766,000	93%
SO_2 sources > ~2750 tons	~500	8,545,000	90%

Pollutant	Number of Monitored Sites (as of end of 2011)
Carbon Monoxide	330
Lead	198 (for TSP in local conditions)
Nitrogen Dioxide	397
Ozone	1291
PM2.5	868
PM10	684
SO_2	441

SO_2 Ambient Monitoring Network

Current number of monitors nationally: 441

Number of monitors in 1980: 1500

Current minimum monitoring requirements: 129 monitors required in 104 CBSAs

SO_2 Ambient Monitoring Data

Based on ambient monitoring data from 2008-2010, there were about 70 monitors located in 60 areas with 1-hour SO_2 concentrations exceeding the level of the standard.