



# Ambient Air Quality Standards

Jimmy Johnston

Georgia Environmental Protection Division

March 11, 2010



# Topics

- Ozone
  - Proposed Revision
- Lead
  - Revised
- Nitrogen Dioxide
  - Revised
- Sulfur Dioxide
  - Proposed Revision
- Schedule for Future Revisions



# Revised Ozone

- Standard Lowered from 0.08 ppm to 0.075 ppm on March, 12, 2008.
- On September 16, 2009, EPA announced that it would reconsider the 2008 standard.
- Proposal signed January 6, 2010
- Proposed primary standard 0.060 to 0.070 ppm
- Current ozone levels in Augusta-Aiken area (2007-2009 averages)
  - Augusta GA: 0.075 ppm
  - Evans GA: 0.071 ppm
  - Jackson SC: 0.075 ppm
  - Trenton SC: 0.071 ppm

## *Proposed Accelerated Implementation Timeline*

<b>Milestone</b>	<b>Date</b>
<b>Signature—Final Rule</b>	August 31, 2010
<b>State Designation Recommendations to EPA</b>	January 2011
<b>Final Designations</b>	Effective no later than August 2011
<b>Attainment Demonstration SIPs Due</b>	December 2013
<b>Attainment Dates</b>	2014-2031 (depends on severity of problem)

- EPA is planning to propose an implementation rule in spring 2010 and issue a final rule as quickly as possible after the final ozone NAAQS.



# Proposed Secondary Ozone Standard

- *Secondary standard* to protect public welfare and the environment, including sensitive vegetation and ecosystems.
- EPA is proposing to establish a separate cumulative *secondary* standard within a range of 7-15 ppm-hours.



# Revised Lead Standard

- Signed October 15, 2008
- Lowered Standard from 1.5 ug/m<sup>3</sup> to 0.15 ug/m<sup>3</sup>
- Majority of Lead Emissions from
  - Metals Industries
  - General Aviation Fuel
- New Monitoring Requirements
  - Near Sources that Emit 1+ tons/year of Lead
    - One Source in Bartow County
    - **Proposal** to Lower Threshold to 0.5 tons/yr
      - EPD Investigating 12 Sources, 1 in Augusta
  - Urban areas with population of 500,000 or more
    - Atlanta & Augusta
    - **Proposal** to Change this Requirement to Existing “Ncore” Sites Only
      - Atlanta

## *Timeline For Implementing Revised Lead NAAQS*

<b>Milestone</b>	<b>Date</b>
<b>Signature—Final Rule</b>	Oct. 15, 2008
<b>State Designation Recommendations to EPA</b>	No later than October 2009 (based on existing network data)
<b>Monitoring Network</b>	At least half of required sites operational by Jan. 1, 2010 (additional required sites operational by Jan. 1, 2011)
<b>Final Designations</b>	No later than effective date Jan. 1, 2012* *Based on one-year deadline extension due to insufficient information; some areas may be designated earlier based on existing data.
<b>Transitional Strategy (Antibacksliding)</b>	Revoke 1978 Pb NAAQS in pre-2009 attainment areas no later than Jan. 1, 2012
<b>Attainment Demonstration SIPs Due</b>	No later than June 2013 (18 month maximum)
<b>Attainment Date</b>	No later than January 2017 (5 year maximum)



# Revised Nitrogen Dioxide (NO<sub>2</sub>) Standard

- Signed January 22, 2010
- Added 1-hour Standard at 100 parts per billion (ppb)
- Retained annual standard at 53 ppb
- Revised standard will “limit short-term exposures to peak NO<sub>2</sub> concentrations, which often occur near major roads and could worsen asthma symptoms”



# New Monitoring Requirements

- Near Road Monitors
  - At least one monitor located near a major road in any urban area with population  $\geq 500,000$
  - Second monitor located near a major road in areas with either:
    - Population  $\geq 2,500,000$
    - One or more road segments with annual average daily traffic count  $\geq 250,000$  vehicles
  - One Near Road Monitor Required for Augusta
- Community-Wide Monitors
  - Urban areas with population  $\geq 1,000,000$  to assess community-wide concentrations
  - Atlanta Only
- Susceptible and Vulnerable Communities
  - U.S. EPA will site at least 40 additional monitors to help protect communities that are susceptible and vulnerable to  $\text{NO}_2$ -related health effects

## Implementation Schedule

Milestone	Date
State Designation Recommendations to EPA	January 2011: One year following promulgation (Based on existing network data)
Designations	January 2012: EPA designates all/most areas as "unclassifiable" (because near road monitors not in place)
New NO <sub>2</sub> Monitoring Network	January 1, 2013: All monitors operating
Next NO <sub>2</sub> NAAQS Review Completed	January 2015: Anticipated time frame
Nonattainment Re- Designations (discretionary)	January 2016/2017 (depending on date that sites become operational)
Attainment Date	January 2021/2022 (5 years after date of nonattainment designations)



# Proposed SO<sub>2</sub> Standard

- Proposed November 16, 2009
- Replaces existing 24-hour and annual standard with new 1-hour standard
- Proposed 1-hour standard
  - 50 to 100 parts per billion (ppb)
  - 3-year average of 99<sup>th</sup> percent



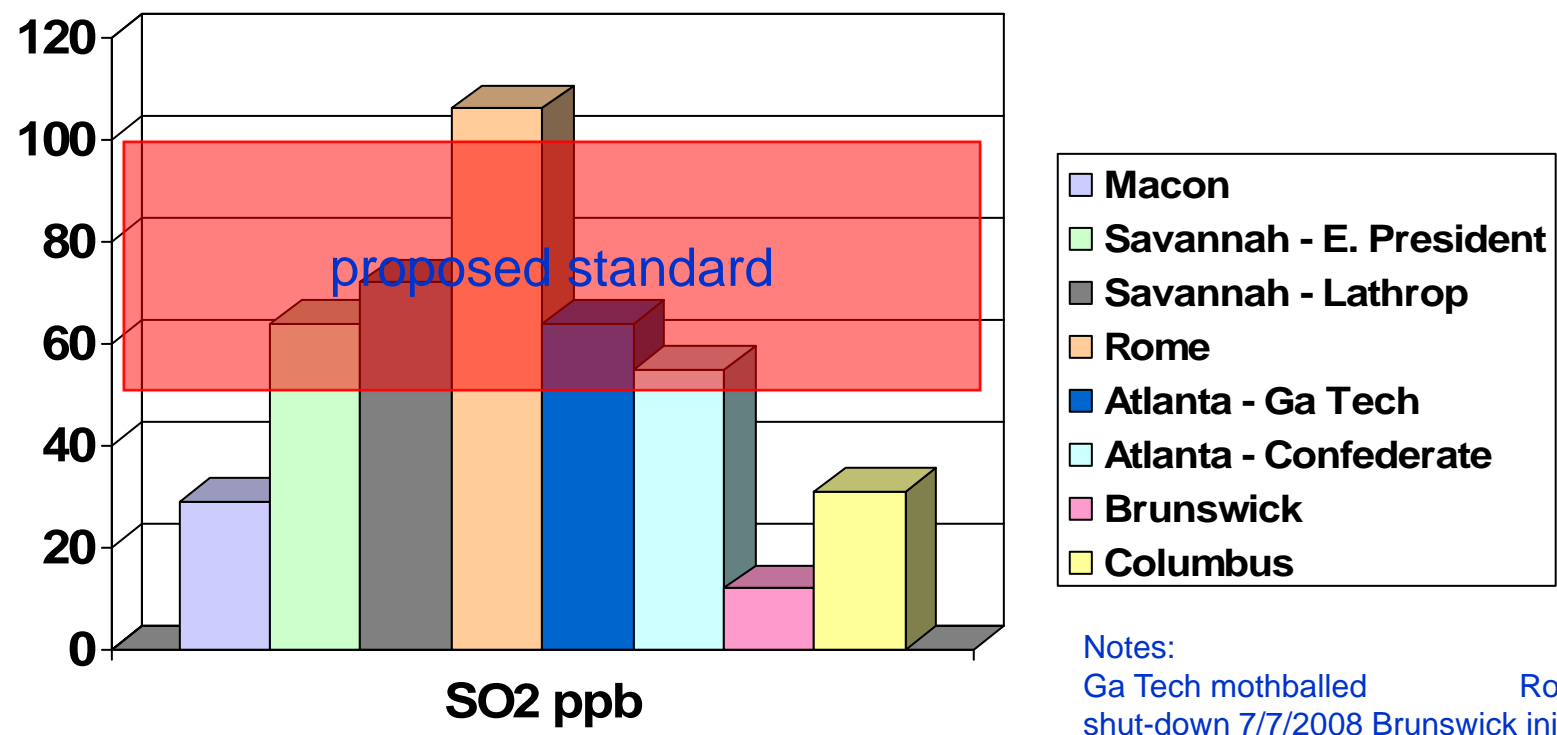
# Monitoring Requirements

- In certain Core Based Statistical Areas (CBSAs) based on combination of population and SO<sub>2</sub> emissions (Population Weighted Emissions Index – PWEI)
  - Requires one new monitor in Augusta
- Additional monitors based on state's contribution to national SO<sub>2</sub> emissions
  - Located at high concentration areas identified through modeling.



# Existing SO<sub>2</sub> Data

- “Unofficial” data (i.e., calculations done by Jimmy Johnston from unofficial data from EPD’s website)
- 99<sup>th</sup> percentile of daily maximum values
- 2006-2008 averages



Notes:  
Ga Tech mothballed  
Rome shut-down 7/7/2008  
Brunswick initial startup – 2007  
Columbus initial startup – 2/6/2008

# SO<sub>2</sub> NAAQS Implementation Timeline

<u>Milestone</u>	<u>Date</u>
Signature - Final Rule	June 2, 2010
State Designation Recommendations to EPA	June 2011
Final Designations	June 2012
SIPs Due	Winter 2014
Attainment Date	Summer 2017



# Schedule for Future Revisions

Pollutant	Proposed	Final
Carbon Monoxide	10/28/2010	5/13/2011
Particulate Matter (Fine Particulate Matter & Coarse Particulate Matter)	November, 2010	May, 2011
Secondary SO <sub>2</sub> /NO <sub>2</sub> Standard	7/12/2011	3/20/2012



# Further Information

- Particulate Matter: <http://www.epa.gov/air/particlepollution>
- Ozone: <http://www.epa.gov/air/ozonepollution>
- Lead: <http://www.epa.gov/air/lead>
- Nitrogen Dioxide: <http://www.epa.gov/air/nitrogenoxides>
- Sulfur Dioxide: <http://www.epa.gov/air/sulfurdioxide>
- Secondary SO<sub>2</sub> and NO<sub>2</sub> Standards:  
<http://www.epa.gov/ttn/naaqs/standards/no2so2sec>
- Carbon Monoxide:  
[http://www.epa.gov/ttn/naaqs/standards/co/s\\_co\\_index.html](http://www.epa.gov/ttn/naaqs/standards/co/s_co_index.html)



# Contact Information

Jimmy Johnston

404-363-7014

[jimmy.johnston@gaepd.org](mailto:jimmy.johnston@gaepd.org)

[www.georgiaair.org](http://www.georgiaair.org)