

Georgia Department of Natural Resources

Environmental Protection Division • Air Protection Branch

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Judson H. Turner, Director

March 16, 2015

U.S. Environmental Protection Agency, EPA Docket Center
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460
VIA Electronic Submission at <http://www.regulations.gov>

Attention: Docket ID No. EPA-HQ-OAR-2008-0699

Subject: EPA's Proposed National Ambient Air Quality Standards for Ozone
Georgia Environmental Protection Division Comments

Dear Docket Coordinator:

The Georgia Environmental Protection Division (GEPD) appreciates the opportunity to provide the following comments on the U.S. Environmental Protection Agency's (EPA) Proposed National Ambient Air Quality Standards (NAAQS) for Ozone. The proposal was published in the *Federal Register* on December 17, 2014 (79 Federal Register (FR) 75234).

Executive Summary

EPA proposes lowering the primary ozone standard from the current 75 ppb level to within the range of 65 to 70 ppb. EPA proposes to retain the current averaging time of 8 hours, and the current form of the standard (3-year average of the 4th highest maximum daily 8-hour averages). EPA is also accepting comment on lowering the standard to 60 ppb, and retaining the current standard of 75 ppb.

Air quality in Georgia is better than it has ever been and is projected to continue improving. The air quality in the Atlanta metropolitan area currently exceeds the 2008 ozone standard but is projected to achieve that standard over the next few years.

Lowering the ozone standard will have a significant impact on the number of nonattainment areas in Georgia. If the ozone standard is lowered to 65 ppb, in addition to Atlanta, it is likely that Macon, Chattanooga, and Dalton would be designated as nonattainment areas. Augusta, Athens, Rome (Summerville), Columbus, and Americus (Leslie) might also be added to the list of nonattainment areas at 65 ppb, depending on meteorological conditions during future ozone seasons.

GEPD continues to work with EPA, other Georgia agencies, and the citizens of Georgia to improve air quality. We are working on multiple fronts, as we develop and implement the plans necessary to meet the current 8-hour ozone standard, the current fine particulate matter standard,

the 1-hour sulfur dioxide standard, and the Cross State Air Pollution Rule. Implementation of Georgia's Multipollutant Rule (sss) is nearly complete. The compliance deadlines for the Mercury and Air Toxics Standards Rule and the National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial and Institutional Boilers (Boiler MACT) are in 2015 and 2016, respectively. EPA's new Tier 3 tailpipe emission and evaporative emission standards for cars and trucks will be implemented beginning in 2017, along with a more stringent sulfur standard for gasoline. Additional federal regulation in the form of the proposed Clean Power Plan, which will likely further reduce emissions from coal-fired power plants, are forthcoming. All of these measures will result in ongoing improvements in air quality.

Oxides of nitrogen (NO_x) emissions in Georgia are projected to decrease by approximately 50% from 2008 to 2018 as a result of the control measures currently in our state implementation plan (SIP), and additional controls that will be implemented by 2018. Volatile organic compounds (VOC) control measures have minimal impact on ozone levels in Georgia. Despite this acknowledged fact, the Clean Air Act requires additional control of VOCs in new nonattainment areas. The VOC control measures that would be required in a State Implementation Plan (SIP) for a new nonattainment area would be ineffective, potentially costly and a waste of state and federal resources.

Any future reductions in measured ozone concentrations will come from federal control measures that reduce NO_x emissions from on-road mobile sources, off-road mobile sources, locomotives, aircrafts, and shipping. There are no effective control measures left available to the state, beyond those already identified and being implemented, to reduce ozone levels in the Atlanta nonattainment area.

The health studies cited in the proposal are uncertain, and there is no new research since the 2008 ozone standard was finalized that indicates adverse health impacts below 75 ppb.

For these reasons, ***EPA should retain the current ozone standard*** and allow time for the control measures listed in the Georgia Rules for Air Quality Control and our SIP to be fully implemented.

In addition, GAEPD comments on several implementation issues presented in the proposed rule:

- EPA has demonstrated that the primary standard (ppm) would be more stringent than the secondary W126 standard (ppm-hrs). Therefore, keeping the primary and secondary standards identical would be a conservative approach and will make implementation and model attainment demonstrations much more efficient.
- While GEPD agrees that a set schedule for exceptional events submissions is beneficial, the proposed schedule is unclear and confusing. GEPD strongly urges EPA to provide additional clarification and guidance for submittal of exceptional event documentation.

- GEPD supports the PAMS network design revisions as proposed. These revisions will provide states the flexibility to use their resources effectively.
- GEPD agrees that the AQI level of 100 should correspond to the primary standard for consistency and clear understanding of what the AQI levels indicate.
- GEPD requests that EPA's proposed implementation guidance be issued as soon as possible.
- States should be able to take credit for federal control measures in their SIPs, regardless of the specific pollutant or NAAQS they were primarily designed to address.

1 COMMENTS RELATED TO THE PRIMARY OZONE STANDARD PROPOSAL

1.1. EPA's Proposal to Revise the Existing Ozone NAAQS

The Clean Air Act requires EPA to periodically review the existing NAAQS, to ensure that the existing standards are protective of human health with an adequate margin of safety. The current primary ozone standard was set in 2008 at 0.075 ppm (75 ppb). The form of the current primary ozone standard is a 3-year average of the 4th highest maximum daily 8-hour average.

EPA proposes lowering the primary ozone standard from the current 75 ppb level to within the range of 65 to 70 ppb. EPA proposes to retain the current averaging time of 8 hours, and the current form of the standard (3-year average of the 4th highest maximum daily 8-hour averages). EPA is also accepting comment on lowering the standard to 60 ppb, and retaining the current standard of 75 ppb.

Given the uncertainty with the health studies cited in the proposal, and the lack of new research indicating adverse health impacts below 75 ppb, ***EPA should retain the current ozone standard*** and allow time for the control measures listed in the Georgia Rules for Air Quality Control and our SIP to be fully implemented.

1.2. If EPA Chooses to Lower the Ozone Standard, the Impact on Georgia will be Significant

Lowering the ozone standard will have a significant impact on the number of nonattainment areas in Georgia. Figure 1 contains a map of the maximum 2014 ozone design values (based on 2012-2014 data) for each core based statistical area (CBSA) in Georgia. Currently, Atlanta exceeds the 2008 ozone NAAQS with a 2014 ozone design value of 77 ppb. This means that the Atlanta nonattainment area will be reclassified from "marginal" to "moderate" nonattainment later this year for the 2008 ozone standard. Both GEPD's and EPA's modeling projections indicate that the Atlanta nonattainment area will attain the current (75 ppb) ozone standard in 2018.

Designations for the new ozone standard are likely to be based on 2015-2017 ozone measurements and would have the following impacts:

- If the ozone standard is lowered to 70 ppb, it is likely that Atlanta will continue to remain in nonattainment past 2018.
- If the ozone standard is lowered to 65 ppb, it is likely that the Macon, Chattanooga, and Dalton areas would be added to the nonattainment list. Augusta, Athens, Rome (Summerville), Columbus, and Americus (Leslie) might be added to the list of nonattainment areas at 65 ppb, depending on meteorological conditions during future ozone seasons.
- If the ozone standard is lowered to 60 ppb, it is likely that Augusta, Athens, Rome (Summerville), Columbus, and Americus (Leslie) would be added to the nonattainment list. Savannah and Brunswick might be added to the list of nonattainment areas, depending on meteorological conditions during future ozone seasons. If this occurs, **every** CBSA in Georgia would be designated nonattainment.

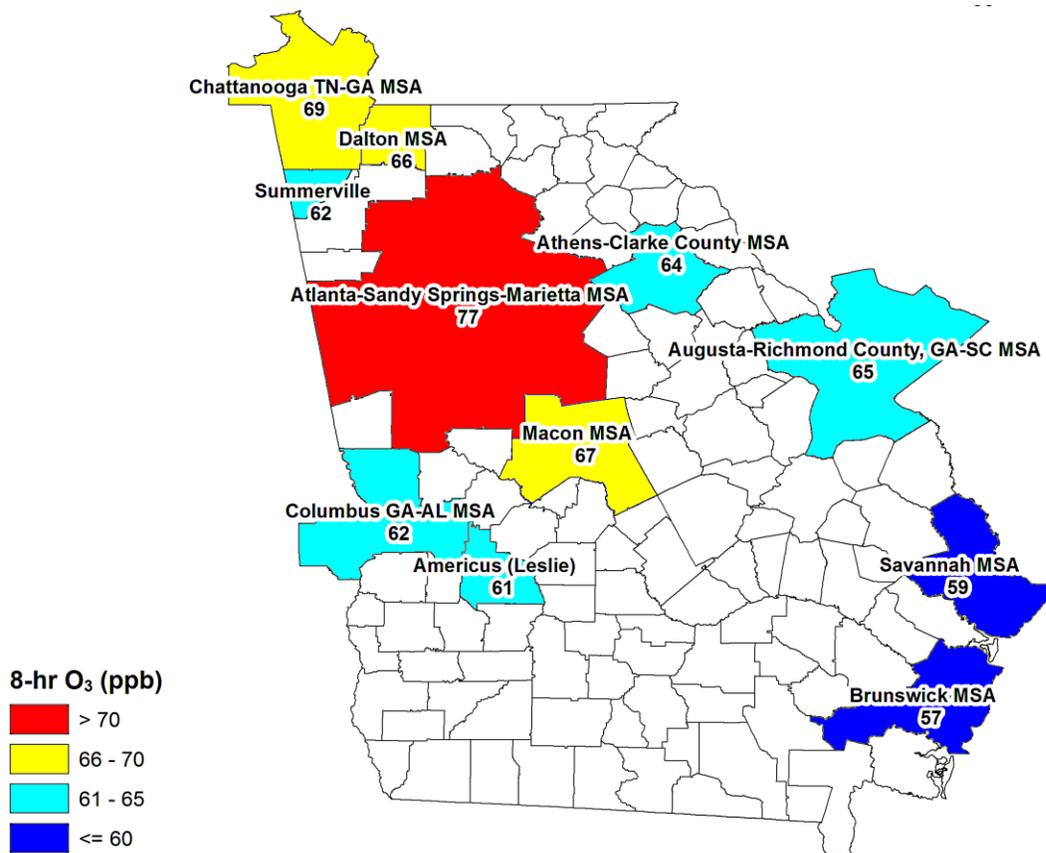


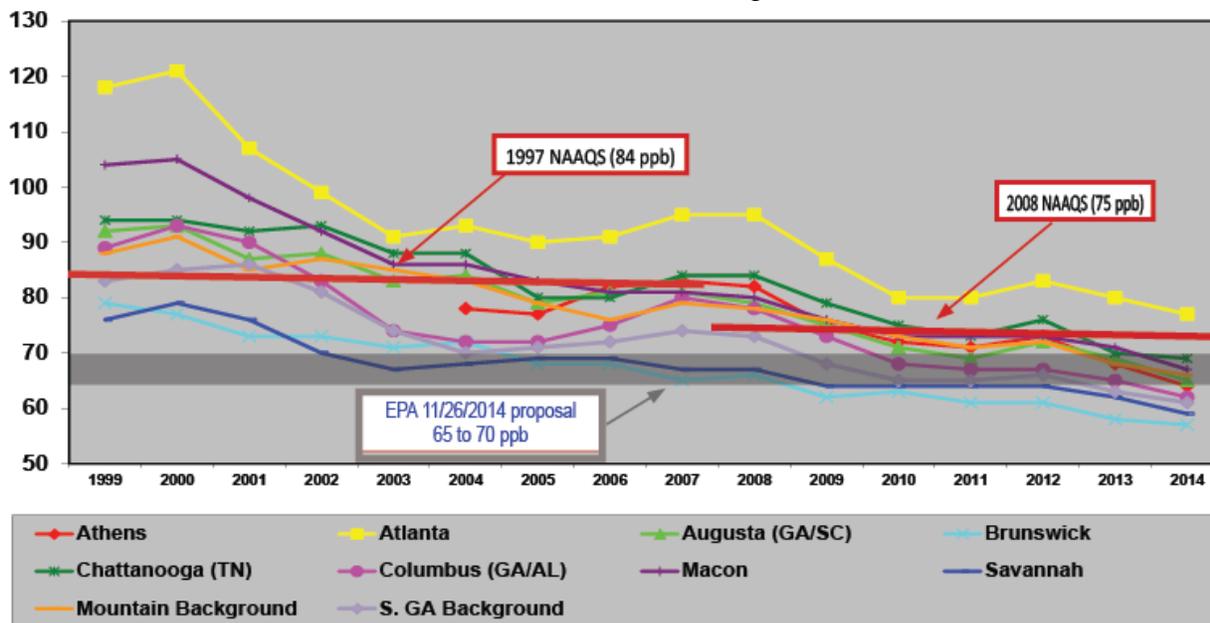
Figure 1. Map of the maximum 2014 ozone design value (Based on 2012-2014 measurements) for each CBSA in Georgia.

1.3 The Air Quality in Georgia Continues to Improve

GEPD has a long history of working with EPA, other Georgia agencies, and the citizens of Georgia to address air quality issues in the state and is proud of the improvements made in air quality. The air quality in Georgia is better now than it has been since GEPD began measuring ozone concentrations in 1974. We are working on multiple fronts, as we develop and implement the plans necessary to meet the current 8-hour ozone standard, the current fine particulate matter standard, the 1-hour sulfur dioxide standard, and the Cross State Air Pollution Rule. Implementation of Georgia’s Multipollutant Rule (sss) is nearly complete. The compliance deadlines for the Mercury and Air Toxics Standards Rule and the National Emission Standards for Hazardous Air Pollutants: Commercial, Industrial and Institutional Boilers (Boiler MACT) are in 2015 and 2016, respectively. EPA’s new Tier 3 tailpipe emission and evaporative emission standards for cars and trucks will be implemented beginning in 2017, along with a more stringent sulfur standard for gasoline. Additional federal regulation in the form of the proposed Clean Power Plan, which will likely further reduce emissions from coal-fired power plants, are forthcoming.

Chart 1 shows the improvement in ozone concentration levels throughout Georgia. Despite significant investment in improving the air quality in Georgia, the Atlanta area continues to exceed the 2008 ozone standard.

Chart 1: Ozone – 3 Year Design Value



1.4 Control Measures Available to the States are Already in Place

Multiple NOx and VOC control measures are included in the Georgia Rules for Air Quality Control and the Georgia SIP for the Atlanta Ozone Nonattainment Area. These control measures

are listed in Attachment 1 to this letter. Figure 2 shows the NO_x emission trends in Georgia for 2008, 2011, and 2018 (projected). NO_x emissions will decrease by **approximately 50%** from 2008 to 2018 as a result of the NO_x control measures that have been implemented, or will be implemented, by 2018.

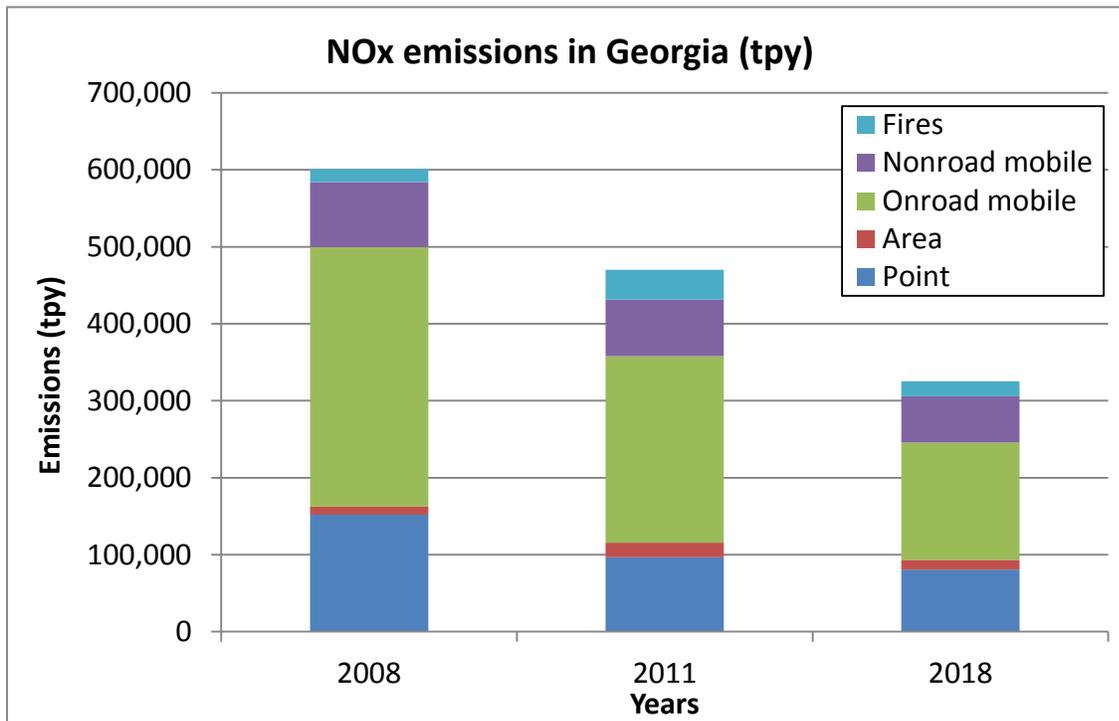


Figure 2. NO_x emission trends in Georgia and 2018 NO_x projections (NEI2008v3, NEI2011v1, SEMAP2018)

Most of the reductions listed in Figure 2 are coming from the point source and on-road mobile sectors. No significant *additional* NO_x control measures are available to Georgia for the Atlanta nonattainment area. Any future reduction in NO_x emissions will come from *federal* control measures for on-road mobile sources, off-road mobile sources, locomotives, aircrafts, and shipping.

The Clean Air Act requires states to adopt VOC control measures as part of an ozone attainment strategy. Unfortunately, additional VOC control will not reduce ozone levels in Georgia¹. Additional VOC controls would strain state resources, and add regulatory burden and increase

¹ Odman M.T.; Hu Y.; Russell A.G.; Hanedar A.; Boylan J.W.; Brewer P.F. 2009. "Quantifying the sources of ozone, fine particulate matter, and regional haze in the Southeastern United States", *Journal of Environmental Management*, 90, 3155–3168.

costs for industry located in new nonattainment areas **with no significant impact on ozone concentrations.**

1.5 EPA Should Retain the Current Standard

GEPD realizes that the Clean Air Act requires a periodic review on the protectiveness of existing NAAQS. We also realize that the standard setting process is health-based and does not consider economic costs; however, EPA does have a great deal of discretion with which to determine whether revision of the standard is appropriate following such review.

Many peer reviewed publications show no adverse health impacts below 75 ppb [e.g., Keets (2015)², Goodman (2014)³, Adams (2006)⁴]. The majority of the studies that do show health impacts below 75 ppb have a high level of uncertainty associated with them. In addition, there has not been any significant new research published since the 2008 ozone NAAQS was promulgated that would justify lowering the ozone standard by an additional 5 to 10 ppb.

The EPA Administrator acknowledges the uncertainty of the science in the proposal. Beginning on 79 FR 75304, EPA states that "...The Administrator has *decreasing confidence* that adverse effects will occur following exposures to O₃ concentrations below 72 ppb..." [Emphasis added].

Given the uncertainty with the health studies cited in the proposal, and the lack of new research indicating adverse health impacts below 75 ppb, ***EPA should retain the current ozone standard*** for this review cycle and allow time for the laundry list of control measures listed in Attachment 1 to this letter to be fully implemented.

2 COMMENTS RELATED TO THE SECONDARY OZONE STANDARD

2.1 The Secondary Ozone Standard Should Be in the Form of the Primary Standard

On 79 FR 75312, EPA presents the rationale for the Administrator's proposed decision on revising the secondary ozone NAAQS:

² Keet, et al. 2015. "Neighborhood poverty, urban residence, race/ethnicity, and asthma: Rethinking the inner-city asthma epidemic", Journal of Allergy and Clinical Immunology, in press.

³ Goodman, JE; Prueitt, RL; Chandalia, J; Sax, SN. 2013. "Evaluation of adverse human lung function effects in controlled ozone exposure studies." J. Appl. Toxicol. 34(5):516-524.

⁴ Adams WC. 2006. "Comparison of chamber 6.6 h exposures to 0.04-0.08 ppm ozone via square wave and triangular profiles on pulmonary responses." Inhal Toxicol. 18(2): 127-136

“...Based on her consideration of the full body of welfare effects evidence and related analyses, the Administrator proposes to conclude that ambient O₃ concentrations in terms of a W126 index value, averaged across three consecutive years, within the range from 13 ppm-hrs to 17 ppm-hrs would provide the requisite protection against known or anticipated adverse effects to the public welfare. In considering policy options for achieving that level of air quality, the Administrator has further considered the full body of information, including air quality analyses that relate ambient O₃ concentrations in terms of a three-year average W-126-based metric and in terms of the form and averaging time for the current standard. Based on this consideration, the Administrator proposes to revise the level of the current secondary standard to within the range of 0.065 to 0.070 ppm to achieve the appropriate air quality...”

The secondary ozone standard should remain at the current level of 75 ppb because of the uncertainties regarding the evidence used as a basis for the proposal. The agricultural and forestry data collected is insufficient to justify such a drastic departure from the current form, averaging time, and level of the secondary standard.

GEPD recommends that the secondary standard remain in concentration units (ppm or ppb) instead of using the W126 index value (ppm-hrs). The W126 format is confusing, and states have very little experience with calculating W126 values. Most states have never calculated current or historical W126. Areas designated nonattainment for the W126 metric will be required to use photochemical grid models to demonstrate future attainment. However, very little modeling has been performed to evaluate the ability of photochemical grid models to properly simulate the W126 values and the W126 response to emission control strategies. In fact, it has been demonstrated that the photochemical grid model performance for W126 is poor, compared to traditional 1-hour daily maximum and 8-hour daily maximum ozone performance metrics. This is due to the inclusion of morning and evening hours where the photochemical grid models typically do not perform well (Boylan, 2005)⁵.

EPA has demonstrated that the primary standard (ppm) would be more stringent than the secondary W126 standard (ppm-hrs). Therefore, keeping the primary and secondary standards identical would be a conservative approach and will make implementation and model attainment demonstrations much more efficient. Furthermore, if the primary and secondary standards are different, there may be transportation conformity, general conformity, and permitting implications that will require separate assessments at a significant resource cost.

⁵ Boylan J.W.; Odman M.T.; Wilkinson J.G.; Russell A.G.; Doty K.G.; Norris W.B.; Richard T. McNider R.T. 2005 “Integrated Assessment Modeling of Atmospheric Pollutants in the Southern Appalachian Mountains. Part I: Hourly and Seasonal Ozone”, J. Air & Waste Manage. Assoc. 55:1019–1030.

3 COMMENTS RELATED TO THE IMPLEMENTATION OF THE OZONE STANDARD

3.1 Exceptional Event Language Should Be Clarified

Starting on 79 FR 75354 (V. Appendix U: Interpretation of the Primary and Secondary NAAQS for O₃, E. Exceptional Events Information Submission Schedule), EPA requests comments on proposed revisions to the flagging and data submission schedule in 40 CFR 50.14. EPA proposes to modify the schedule for data flagging and submission of demonstrations for exceptional events data considered for initial area designations by replacing the deadlines and information in Table 1 in 40 CFR 50.14 with the deadlines and information presented in Table 9 of the proposal [79 FR 75355]. EPA also provided Table 10 [79 FR 75355] to illustrate how the proposed schedule might apply to the designation process for the revised ozone NAAQS (expected to be promulgated in October 2015), or to the designation process for any future new or revised NAAQS.

While GEPD agrees that a set schedule for exceptional events submissions is beneficial, the proposed schedule is unclear and confusing. GEPD strongly urges EPA to provide additional clarification and guidance for submittal of exceptional event documentation.

3.2 The PAMS Network

On 79 FR 75361, EPA states that:

“Based on the findings of the PAMS evaluation and the consultations with the CASAC AMMS and NACAA MSC, the EPA is proposing to revise several aspects of the PAMS monitoring requirements including changes in 1) network design, 2) VOC sampling, 3) carbonyl sampling, 4) nitrogen oxides sampling, and 5) upper air meteorology measurements.”

and

“The EPA is proposing changes to the network design requirements that we believe will better serve both national and local objectives. The EPA is proposing a two part network design. The first part of the design includes a network of fixed sites (required PAMS sites) intended to support O₃ model development and the tracking of trends of important O₃ precursor concentrations. The second part of the network design includes monitoring agency directed Enhanced Monitoring Plans which allow monitoring agencies the needed flexibility to implement additional monitoring capabilities to suit the needs of their area.”

GEPD supports the network design revisions as proposed. Currently, our monitoring network includes three PAMS sites, one of which is also the NCore site for Georgia. The proposed network revision will provide states the flexibility to use their resources effectively. As equipment ages and becomes in need of repair or replacement, this approach will allow states to

implement monitoring that best suits their needs. EPA is also proposing to require hourly speciated VOCs using an automated Gas Chromatograph (GC) at each PAMS site. GEPD is in support of this revision as the Enhanced Monitoring Plan provision will allow for use of the canisters to collect speciated VOCs at additional sites as best suits the needs of our network. As for the requirement to include carbonyl data at PAMS sites, GEPD is already measuring carbonyls at the NCore site and supports this requirement.

3.3 Proposed Changes to the Air Quality Index Breakpoints

On 79 FR 75311, EPA proposes to revise the AQI for ozone by setting an AQI value of 100 equal to the level of the revised ozone standard (65-70 ppb). The EPA is also proposing to revise the breakpoints as shown in Table 6 – Proposed AQI Breakpoints on 79 FR 75311.

GEPD agrees that the AQI level of 100 should correspond to the primary standard for consistency and clear understanding of what the AQI levels indicate. We encourage EPA to provide public outreach on the change in the AQI levels, so that the public understands that the AQI levels are being adjusted consistent with the revised standard (if the standard is revised) and are not an increase in the concentration of the ozone levels in the ambient air as compared to the previous AQI levels.

On 79 FR 75311, EPA proposes to revise the basis for when an agency is required to report to the general public on a daily basis the AQI from the most recent decennial US census population to the “latest available census figures”. We concur with this approach as this change is consistent with the analyses used to evaluate the monitoring network.

3.4 Implementation Guidance

On 79 FR 75370, EPA states that it:

“... intends to propose additional regulations and issue additional guidance, as necessary, related to the implementation requirements for any revised O₃ NAAQS resulting from this proposal. The EPA intends to take these actions on a schedule that provides timely assistance to air agencies...”

GEPD requests that EPA’s proposed implementation guidance be issued as soon as possible. At a minimum, GEPD urges EPA to propose the implementation guidance at the same time the final standard is issued and complete the final implementation guidance no later than six months afterwards. Timely implementation guidance would allow states sufficient time to meet their regulatory obligations.

3.5 Federal Control Measures

Emission reductions from federal control measures are very important for source categories that states have no authority to regulate, such as on-road mobile sources, off-road mobile sources, locomotives, aircrafts, and shipping. States should be able to take credit for federal control

measures in their SIPs, regardless of the specific pollutant or NAAQS they were primarily designed to address.

3.6 Adequate Funding

Whether or not EPA elects to revise the ozone standard at this time, GEPD requests that EPA provide sufficient funding for state and local clean air agencies and work in close partnership and with state and local agencies in order to achieve the ultimate goal of protection of public health and the environment.

Conclusion

Given the uncertainty with the health studies cited in the proposal, and the lack of new research indicating adverse health impacts below 75 ppb, ***EPA should retain the current ozone standard*** and allow time for the laundry list of state and federal ozone control measures currently adopted into the Georgia Rules for Air Quality Control and the Georgia SIP to be fully implemented.

Thank you for the opportunity to provide input on this important issue. Please contact me at 404-363-7016 or keith.bentley@dnr.state.ga.us if you have any questions or wish to discuss these comments.

Sincerely,

A handwritten signature in cursive script that reads "Keith M Bentley".

Keith Bentley
Chief, Air Protection Branch
Georgia Environmental Protection Division

Attachment: Attachment 1- Ozone Control Measures In Georgia

Attachment 1 Ozone Control Measures In Georgia

Current state measures and those that will be implemented by 2018:

- Enhanced I/M
- VOC/NO_x RACT
- Open Burning Ban
- Stage I Vapor Recovery
- Georgia Rule (yy) – Emissions of Nitrogen Oxides (RACT) - Case by case RACT
- Georgia Rule (lll) - NO_x from Fuel Burning Equipment - Limits NO_x emissions to 30ppm at 3% oxygen on a dry basis
- Georgia Rule (rrr) - NO_x from Small Fuel Burning Equipment - Requires annual tune-ups, natural gas or propane and recordkeeping
- Georgia Rule (jjj) - NO_x from EGUs - Limits NO_x to an average of 0.34lbs/MMBTU heat input over all affected units
- Power plant controls due to Georgia Rule (sss) - Multipollutant Rule (2011 - 2015) and PSC filing by Georgia Power
 - Georgia Power Plant Bowen (Bartow County) - Unit 1-4 controlled by SCR
 - Georgia Power Plant McDonough (Cobb County) – Units 1-2 converted to natural gas with SCR, Catalytic Oxidation, Dry Low NO_x Combustion, and Water Injection
 - Georgia Power Plant Yates (Coweta County) – Unit 1-5 Shutdown, Unit 6-7 converted to natural gas
 - Georgia Power Plant Branch (Putnam County) - Unit 1-4 Shutdown
 - Georgia Power Plant Scherer (Monroe County) – Units 1-4 controlled by SCR
- Additional Measures
 - Locomotive Retrofits and Replacements
 - School Bus Retrofits

Current federal control measures and those that will be implemented by 2018:

VOCs

Federal measures that targeted reduction of VOCs from stationary point sources include New Source Performance Standards (NSPS), National Emissions Standards for Hazardous Air Pollutants (NESHAPs), and Reasonably Available Control Technology (RACT).

NO_x

Federal measures that targeted reduction of these emissions between nonattainment designation and the clean data period are as follows:

- Cross-State Air Pollution Rule (CSAPR)
- 40 CFR Part 63, Subpart UUUUU, Mercury and Air Toxics Standards (MATS) rule
- 40 CFR Part 63, Subpart DDDDD, Boiler MACT
- Regional Haze Rule

- Tier 2 Vehicle Standards (2004 -2007)
- 40 CFR Part 60 IIII, Performance Standards for Stationary Compression Ignition Internal Combustion Engines
- 40 CFR Part 60 KKKK, Performance Standards for Stationary Combustion Turbines
- 40 CFR Part 60 JJJJ, Performance Standards for Stationary Spark Ignition Internal Combustion Engines
- 40 CFR Part 60 LLLL, Performance Standards for Sewage Sludge Incinerators
- Heavy-duty Gasoline and Diesel Highway Vehicles Standards & Ultra Low-Sulfur Diesel Rule(2007)
- Large Nonroad Diesel Engines Rule & Ultra Low-Sulfur Diesel Rule (2008)
- Non-Road Large Spark Ignition Engines and Recreational Engines Standard(2007); and
- Marine Spark – Ignition Engines (Phased in 1998-2006).
- Marine Diesel Engines (Adopted 2003)
- Railroad Engines – (Phased in 2002-2005, also applies to locomotives as old as 1973 when they are rebuilt).
- Aircraft (2005)
- NOx SIP Call