

Georgia Department of Natural Resources
Environmental Protection Division

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NOTICE OF THE OPPORTUNITY FOR PUBLIC COMMENT
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
AIR PROTECTION BRANCH

STATE OF GEORGIA

NOTICE OF ADDENDUM TO 2015 AMBIENT AIR MONITORING PLAN – November 2015

To All Interested Parties:

The Georgia Environmental Protection Division (EPD) announces its intent to issue an Addendum to the 2015 Ambient Air Monitoring Plan to the U.S. Environmental Protection Agency in December 2015.

The Georgia EPD is required to produce this annual plan as part of EPA's amended ambient air monitoring regulations established October 17, 2006.

Georgia EPD's 2015 Ambient Air Monitoring Plan will show how the state agency plans to meet EPA regulations for monitoring air quality in the state by assessing monitoring objectives, site appropriateness for air quality characterization, spatial scale represented by each monitor and appropriate new technologies.

Georgia EPD's air monitoring network consists of a number of stations located throughout the state. EPD uses the air monitoring data to track if air quality standards are being met, to assist in enforcement actions, to determine the improvement or decline of air quality, to trace the extent of allowable industrial expansion and to provide air pollution information to the public.

The Addendum to the 2015 Ambient Air Monitoring Plan is available for review at the office of the Air Protection Branch, 4244 International Parkway, Atlanta Tradeport - Suite 120, Atlanta, Georgia 30354. Anyone interested in reviewing the addendum may also visit the following EPD Regional Offices from 8:30 a.m. – 4:00 p.m.: Coastal District (Brunswick), One Conversation Way, Brunswick, GA 31520 – 912-264-7284; East Central District (Augusta), 3525 Walton Way Extension, Augusta, GA 30909 – 706-667-4343; Mountain District (Cartersville), 16 Center Road, Cartersville, GA 30120 – 770-387-4900; Northeast District (Athens), 745 Gaines School Road, Athens, GA 30605; Southwest District (Albany), 2024 Newton Road, Albany, GA 31701 – 229-430-4259; West Central District (Macon), 2640 Shurling Drive, Macon, GA 31211 – 478-751-6612. Columbus area residents can review the Addendum to the 2015 Ambient Air Monitoring Plan at the Columbus Public Library, 3000 Macon Road, Columbus, Georgia 31906 – 706-243-2669. Savannah area residents can review the Addendum to the 2015 Ambient Air Monitoring Plan at the Bull Street Library, 2002 Bull Street, Savannah, GA 31401 – 912-652-3600. Lowndes County residents can review the Addendum to the 2015 Ambient Air Monitoring Plan at the South Georgia Regional Library, 300 Woodrow Wilson Drive, Valdosta, GA 31602 – 229-333-0086.

The Addendum to the 2015 Ambient Air Monitoring Plan will be available on the Georgia EPD Air Protection Branch internet site: <http://epd.georgia.gov/air>. (Please note that the internet is generally accessible from most public libraries in Georgia and at the Air Protection Branch office listed above.)

If copies of the Addendum to the 2015 Ambient Air Monitoring Plan are desired, each page is \$0.10 per copy. A copying machine for public use is provided by GA EPD at the Atlanta Air Protection Branch office only and is available on a first-come, first-served basis. Office hours are 8:30 a.m. to 4:00 p.m., Monday – Friday, excluding holidays.

Persons wishing to comment on the Addendum to the 2015 Ambient Air Monitoring Plan are required to submit their comments, in writing, to GA EPD at the following address:

**Air Protection Branch
Attn: Annual Air Monitoring Plan Comments
4244 International Parkway, Suite 120
Atlanta, Georgia 30354**

In addition, public comments can be submitted in writing to DeAnna Oser, Program Manager of the Ambient Monitoring Program, at DeAnna.Oser@dnr.ga.gov

Comments must be received by GA EPD no later than 30 days after the date on which this document is published on <http://epd.georgia.gov/air>. (Should the comment period end on a weekend or holiday, comments will be accepted until close of business on the next working day.) GA EPD, in soliciting comments for the final draft before submittal to EPA as required by 40CFR58, will consider all comments received on or prior to that date.

After the comment period has expired, GA EPD's responses to comments and any other relevant information will then be made available for public review during normal business hours at the office of the Air Protection Branch.

For additional information, contact the manager of the Ambient Air Monitoring Program, DeAnna Oser at the Atlanta address, or by phone at 404-363-7000. Please refer to this notice when requesting information.



GEORGIA DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Protection Branch

Ambient Monitoring Program

Addendum to 2015 Ambient Air Monitoring Plan

Since the publication of the 2015 Ambient Air Monitoring Plan in June 2015, the Georgia Environmental Protection Division (GA EPD) is proposing to make changes to the ambient air monitoring network. The Photochemical Assessment Monitoring Station (PAMS) and Air Toxic Network (ATN) will undergo these changes. The following sections address these proposed changes.

1.0 Photochemical Assessment Monitoring Stations (PAMS)

Ozone is the most prevalent photochemical oxidant and an important contributor to smog. The understanding of the chemical processes in ozone formation and the specific understanding of the atmospheric mixture in various nonattainment areas nationwide was considered essential by EPA for solving the ozone nonattainment problems and developing a suitable strategy for solving those problems. As such, the 1990 Amendments to the Clean Air Act included additional requirements for monitoring of ozone precursors in areas declared in serious, severe, or extreme nonattainment of the ambient ozone standard. In February 1993, due in part to the Clean Air Act Amendments of 1990, the Photochemical Assessment Monitoring Stations (PAMS) network was created as a method for obtaining more comprehensive ozone data. Along with ozone, the PAMS network monitors for oxides of nitrogen (NO_x), reactive oxides of nitrogen (NO_y), carbon monoxide (CO), volatile organic compounds (VOCs), selected carbonyl compounds, and meteorological parameters. Stated in Title 40, Part 58 of the Code of Federal Regulations (40 CFR Part 58), the increased monitoring of ozone and its precursor concentrations allows for the characterization of precursor emissions within the area, transport of ozone and its precursors, and the photochemical processes leading to nonattainment. By expanding on the study of ozone formation, PAMS monitoring sites better serve as a means to study trends and spatial and diurnal variability.

On November 6, 1991, the Atlanta nonattainment area was classified as serious, with the 1-hour ozone standard (56FR56694). By 2003, the area was labeled in severe nonattainment of the 1-hour ozone standard (68FR55469) effective January 1, 2004, but by June 14, 2005, was listed as maintenance/attainment (70FR34660). With the 8-hour ozone standard, the Atlanta nonattainment area was classified as marginal, effective June 15, 2004 (69FR23857) and then as moderate nonattainment effective April 7, 2008 (73FR12013). On June 23, 2011, EPA promulgated its determination [76 FR 36873] that the metro Atlanta nonattainment area had attained the 1997 8-hour ozone NAAQS. EPA published the redesignation in the federal register as a final rule on December 2, 2013 (78 FR 72040). On May 21, 2012, EPA published a final rule in the federal register designating a new 15-county Atlanta area marginal nonattainment for the 2008 8-hour ozone NAAQS.

Due to the Atlanta area's nonattainment status for the ozone standard, GA EPD began establishing the PAMS network in 1993. Initially, the GA PAMS network consisted of three sites; Yorkville (13-223-0003), South DeKalb (13-089-0002), and Conyers (13-247-0001). Yorkville is a Type 1 site. This site characterizes the upwind background, transported ozone, and precursor concentrations entering the Atlanta area. The site is located in the predominant morning upwind direction approximately 40 miles from the Atlanta urban fringe area in Paulding County, and should not be influenced by local VOC and NO_x emissions. The site provides urban scale measurements. Data from the Yorkville site is used for the future development and evaluation of control strategies, identification of incoming pollutants, corroboration of NO_x and VOC emission inventories, establishment of boundary conditions for future photochemical grid modeling and mid-course control strategy changes, development of incoming pollutant trends, and determination of attainment with NAAQS for O₃, PM_{2.5}, CO, and NO₂. South DeKalb is a Type 2 site. This site monitors the magnitude and type of precursor emissions and is located immediately downwind of the area of maximum precursor emissions receiving the predominant

morning downwind wind. This site is located in DeKalb County in order to provide neighborhood scale measurements in the area that the precursors have the greatest impact. The data measurements generated at South DeKalb are used principally for development and evaluation of imminent and future control strategies, corroboration of NO_x and VOC emission inventories, verification of photochemical grid model performance, characterization of ozone and toxics air pollutant exposures, development of pollutant trends (particularly toxic air pollutants and annual ambient speciated VOC trends to compare with trends in annual VOC emission estimates), and determination of attainment with NAAQS for O₃, PM_{2.5}, CO, and NO₂. Conyers acts as the Type 3 site. This site monitors the maximum ozone concentrations occurring downwind from the area of maximum precursor emissions, in Rockdale County. The site is an urban scale location based on the afternoon winds occurring between 1:00 PM and 4:00 PM, when titration of the precursors has occurred and the ozone is at its highest concentration. The data measurements are used in determination of attainment with the NAAQS for O₃ and NO₂, evaluation of future photochemical grid modeling applications, future development and evaluation of control strategies, development of pollutant trends, and characterization of ozone pollutant exposures.

The PAMS VOCs were collected and analyzed with a Gas Chromatograph/Flame Ionization Detector (GC/FID) at the Yorkville (13-223-0003), Conyers (13-247-0001), and South DeKalb (13-089-0002) sites. Throughout the year, a 24-hour VOC sample was collected every 6 days at all three PAMS sites. During June, July, and August, an hourly VOCs sample was also collected at the all three sites. During June, July, and August, four integrated 3-hour carbonyls samples are taken every third day at the South DeKalb (13-089-0002) site. A 24-hour integrated carbonyls sample is also taken every 6 days throughout the year at the South DeKalb (13-089-0002) site.

Then with revisions to the PAMS requirements on October 17, 2006 (71 FR 61236), the EPA only required two sites per PAMS area. According to Table D-6 of Appendix D to part 58 of 40CFR, two sites were required per area, with one site being a Type 2 site (40CFR58, Vol. 71, No. 200, page 61323). With the revision, EPA intended for states to have more flexibility to use resources to address other data collection needs or for other areas of monitoring that might be useful. Showing that GA EPD's PAMS data closely compared for the Conyers and South DeKalb sites, GA EPD shut down the hourly gas chromatography unit with a Flame Ionization Detector (FID) that collects samples in June, July, and August at the Conyers site on 8/31/13. GA EPD continued to collect the 24-hour integrated 56 hydrocarbon samples taken every sixth day throughout the year at the Conyers site. In addition, GA EPD continued to collect hourly data and the 24-hour canisters at the Yorkville and South DeKalb sites.

On October 26, 2015, EPA made revisions to the ozone standard, and with those changes, also further revamped the regulations for the supporting PAMS stations (Federal Register, Vol.80, No. 206, page 65467). EPA is requiring that PAMS measurements be collected at NCore sites only. The South DeKalb site is GA EPD's NCore site. Therefore, GA EPD will continue the collection of PAMS hourly gas chromatogram samples in June, July, and August, as well as collect the 24-hour integrated 56 hydrocarbon samples taken every sixth day throughout the year at the South DeKalb site. Since EPA is no longer requiring multiple PAMS sites and to make more efficient use of our resources, GA EPD has evaluated the current PAMS network and is proposing to shut down the following monitors that are no longer required by EPA:

1. Hourly gas chromatography unit with a Flame Ionization Detector (FID) that collects samples in June, July, and August at the Yorkville site
2. Twenty-four hour integrated 56 hydrocarbon samples taken every sixth day throughout the year at the Yorkville and Conyers sites
3. NO/NO₂/NO_x at the Yorkville and Conyers sites
4. CO at the Yorkville site

2.0 Air Toxics

In addition to its required monitoring duties, Georgia EPD measures more compounds in ambient air than are required by the Federal Clean Air Act. Toxic air pollutants, also known as Hazardous Air Pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental effects. Air toxic compounds are released from many different sources, including mobile sources (such as vehicles), stationary industrial sources, small area sources, indoor sources (such as cleaning materials), and other environmental sources (such as wildfires). The lifetime, transportation, and make-up of these pollutants are affected by weather (rain and wind) and landscape (mountains and valleys). They can be transported far away from the original source, or be caught in rain and brought down to waterways or land.

GA EPD monitors for these toxic air pollutants at six sites across the state: Macon-Forestry (13-021-0012), Savannah-E. President's St. (13-051-0021), Dawsonville (13-085-0001), South DeKalb (13-089-0002), Yorkville (13-223-0003), and General Coffee (13-069-0002). All six sites monitor for metals, semi-volatile organic compounds (SVOCs), and volatile organic compounds (VOCs). In addition, three of the Air Toxics sites monitor for carbonyls: Dawsonville, Savannah-E. President's St., and South DeKalb.

GA EPD has examined its current Air Toxics Network, and has determined it would be more efficient to move the carbonyls sampler from the Dawsonville site to the Yorkville site. In addition, the other air toxics monitors (metals, SVOCs, and VOCs) at the Dawsonville site would be shut down. Since the carbonyls sampler would be moved to the Yorkville site, a comparison of the other monitored air toxics compounds was evaluated for similarity between the sites' data. The setting for both of the sites is a rural environment, and the data collected at these two sites would be expected to be similar. The following graphs show annual averages of representative metals, volatile organic compounds, and semi-volatile organic compounds at both the Dawsonville and Yorkville sites. Through the timespan of collected data, the annual averages overall are comparable, especially for lead, dichlorodifluoromethane, chloromethane, and trichlorofluoromethane. Therefore, the Yorkville site will provide sufficient coverage of the rural, background air toxics monitoring.







