

US EPA ARCHIVE DOCUMENT

# Georgia Department of Natural Resources

Environmental Protection Division • Air Protection Branch

4244 International Parkway • Suite 120 • Atlanta • Georgia 30354

404/363-7000 • Fax: 404/363-7100

Mark Williams, Commissioner

F. Allen Barnes, Director

OCT 25 2011

Gwendolyn Keyes Fleming  
Regional Administrator  
U.S. EPA, Region 4  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303-3104

Re: Updated Recommended Designations of Ozone Non-Attainment Areas in Georgia

Dear Ms. Fleming:

On March 12, 2008, the United States Environmental Protection Agency (U.S. EPA) promulgated a revised National Ambient Air Quality Standard for ozone. Section 107(d)(1) of the Clean Air Act requires each state to submit to the EPA no later than one year following promulgation of a new or revised NAAQS, its recommended designation of each area of the State as attainment, non-attainment, or unclassifiable under the standard. On March 12, 2009, the Georgia Environmental Protection Division (EPD) developed recommended designations in accordance with U.S. EPA's December 4, 2008 memorandum "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards." Georgia recommended that six areas be designated as nonattainment: Atlanta, Athens, Augusta, Columbus, Macon, and Murray County. These recommendations were based on 2006 to 2008 monitoring data.

The Clean Air Act required that EPA finalize designations by March 12, 2011. However, on September 16, 2009, U.S. EPA announced that it was reconsidering the 2008 ozone standard and proposed revisions on January 6, 2010. On September 22, 2011, EPA issued a memorandum "Implementation of the Ozone National Ambient Air Quality Standard" that stated the 2008 ozone standard would remain at 0.075 ppm and outlined implementation steps for moving forward. These steps include proceeding with the initial area designations under the 2008 standard.

The purpose of the attached revised ozone designation recommendations is to formally go on record as revising Georgia's recommendations prior to EPA moving forward with their initial area designations. This revised recommendation is based on 2009 to 2011 monitoring data. The 2009 and 2010 ozone measurements have been quality-assured and certified and are stored in EPA's Air Quality System (AQS) database. These 2011 ozone measurements will be quality-assured and certified by February 29, 2012 at which time they will be stored in EPA's Air Quality System (AQS) database. A list of 2008-2010 and 2009-2011 8-hour ozone design values for all monitors in Georgia is attached in Table 1 and a spatial plot of the 2009-2011 8-hour ozone design values is attached in Figure 1.

This data shows that all areas in Georgia, except for Atlanta, are now complying with the 2008 ozone standard of 0.075 ppm. Thus, the revised recommendation is to designate only

G. Keyes Fleming  
Page two

certain counties in the metro Atlanta area as nonattainment for ozone. The attached table (Table 2) provides EPD's revised recommendations for the designation status of each county in Georgia. In developing the ozone non-attainment area recommendation, EPD based the boundary recommendation on the nine factors contained in Attachment 2 of EPA's Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards memorandum.

Based on both quantitative and qualitative factor analysis conducted by Georgia EPD, the following four Georgia counties are recommended to be designated nonattainment under the revised 2008 ozone NAAQS: Cobb, DeKalb, Fulton, and Henry. A map with the location of these four counties is contained in Figure 2. Georgia EPD recommends that all other counties be designated as unclassifiable/attainment for the 2008 ozone standard.

If you have any questions or need more information, please contact Jac Capp at (404) 363-7016 or Jimmy Johnston at (404) 363-7014.

Sincerely,

A handwritten signature in blue ink that reads "F. Allen Barnes". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

F. Allen Barnes  
Director

FAB:JJ:jwb

Attachments

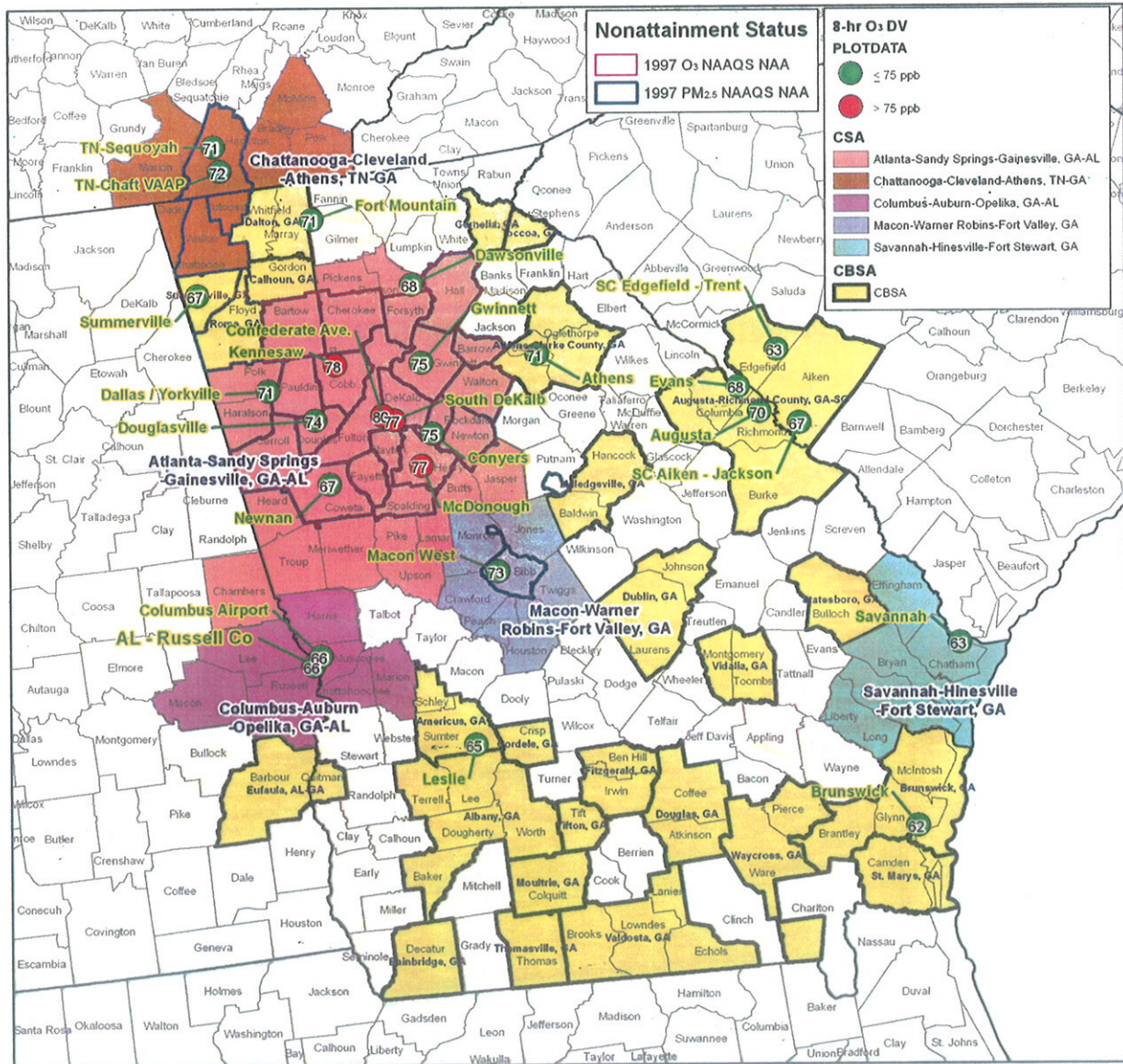
c: Scott Martin, U.S. EPA Region 4  
Jac Capp, Branch Chief, Air Protection Branch  
Jimmy Johnston, Program Manager, Planning & Support

**Table 1. 2008-2010 DVs and 2009-2011 DVs of 8-hour ozone at FRM monitors.**

<b>AIRS_ID</b>	<b>County</b>	<b>Station Name</b>	<b>2008-2010 DV</b>	<b>2009-2011 DV</b>
<b>Atlanta-Sandy Springs-Gainesville, GA-AL</b>				
13-067-0003	Cobb, GA	Kennesaw	<b>0.076</b>	<b>0.078</b>
13-077-0002	Coweta, GA	Newnan	0.068	0.067
13-085-0001	Dawson, GA	Dawsonville	0.071	0.068
13-089-0002	DeKalb, GA	South DeKalb	<b>0.079</b>	<b>0.077</b>
13-097-0004	Douglas, GA	Douglasville	0.075	0.074
13-121-0055	Fulton, GA	Confederate Ave.	<b>0.080</b>	<b>0.080</b>
13-135-0002	Gwinnett, GA	Gwinnett	0.074	0.075
13-151-0002	Henry, GA	McDonough	<b>0.079</b>	<b>0.077</b>
13-223-0003	Paulding, GA	Dallas / Yorkville	0.070	0.071
13-247-0001	Rockdale, GA	Conyers	<b>0.078</b>	0.075
<b>Athens-Clarke County, GA</b>				
13-059-0002	Clarke, GA	Athens	0.072	0.071
<b>Augusta-Richmond County, GA-SC</b>				
13-245-0091	Richmond, GA	Augusta	0.071	0.070
13-073-0001	Columbia, GA	Evans	0.069	0.068
45-003-0003	Aiken, SC	SC Aiken - Jackson	0.069	0.067
45-037-0001	Edgefield, SC	SC Edgefield - Trenton	0.065	0.063
<b>Chattanooga-Cleveland-Athens, TN-GA</b>				
47-065-4003	Hamilton, TN	TN-Chatt VAAP	0.075	0.072
47-065-1011	Hamilton, TN	TN-Sequoyah	0.072	0.071
<b>Columbus-Auburn-Opelika, GA-AL</b>				
13-215-0008	Muscogee, GA	Columbus Airport	0.068	0.066
01-113-0001	Russell, AL	AL - Russell Co	0.067	0.066
<b>Macon-Warner Robins-Fort Valley, GA</b>				
13-021-0013	Bibb, GA	Macon West	0.073	0.073
<b>Dalton, GA</b>				
13-213-0003	Murray, GA	Fort Mountain	0.073	0.071
<b>Other area</b>				
13-055-0001	Chattooga, GA	Summerville	0.066	0.067
13-261-1001	Sumter, GA	Leslie	0.065	0.065
13-127-0006	Glynn, GA	Brunswick	0.063	0.062
13-051-0021	Chatham, GA	Savannah	0.064	0.063



# 2008 Ozone NAAQS NAA Designation Reference Map



**Figure 1.** Ozone monitors and CSA/CBSA boundaries associated with potential nonattainment areas in Georgia under the 2008 ozone NAAQS. Ozone design values are based on 2009-2011 ozone data. Nonattainment area boundaries under the 1997 ozone NAAQS are outlined in red, and nonattainment area boundaries under the 1997 PM<sub>2.5</sub> NAAQS are outlined in blue.



**Figure 2:** Map of Atlanta nonattainment area recommendations for the revised 2008 ozone NAAQS.

**Table 2. RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES**

<b>County Name</b>	<b>Designation Recommendation</b>
Appling	Attainment/Unclassifiable
Atkinson	Attainment/Unclassifiable
Bacon	Attainment/Unclassifiable
Baker	Attainment/Unclassifiable
Baldwin	Attainment/Unclassifiable
Banks	Attainment/Unclassifiable
Barrow	Attainment/Unclassifiable
Bartow	Attainment/Unclassifiable
Ben Hill	Attainment/Unclassifiable
Berrien	Attainment/Unclassifiable
Bibb	Attainment/Unclassifiable
Bleckley	Attainment/Unclassifiable
Brantley	Attainment/Unclassifiable
Brooks	Attainment/Unclassifiable
Bryan	Attainment/Unclassifiable
Bulloch	Attainment/Unclassifiable
Burke	Attainment/Unclassifiable
Butts	Attainment/Unclassifiable
Calhoun	Attainment/Unclassifiable
Camden	Attainment/Unclassifiable
Candler	Attainment/Unclassifiable
Carroll	Attainment/Unclassifiable
Catoosa	Attainment/Unclassifiable
Charlton	Attainment/Unclassifiable
Chatham	Attainment/Unclassifiable
Chattahoochee	Attainment/Unclassifiable
Chattooga	Attainment/Unclassifiable
Cherokee	Attainment/Unclassifiable
Clarke	Attainment/Unclassifiable
Clay	Attainment/Unclassifiable
Clayton	Attainment/Unclassifiable
Clinch	Attainment/Unclassifiable
Cobb	<b>Nonattainment</b>
Coffee	Attainment/Unclassifiable
Colquitt	Attainment/Unclassifiable
Columbia	Attainment/Unclassifiable
Cook	Attainment/Unclassifiable
Coweta	Attainment/Unclassifiable
Crawford	Attainment/Unclassifiable
Crisp	Attainment/Unclassifiable
Dade	Attainment/Unclassifiable
Dawson	Attainment/Unclassifiable



**Table 2. RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES**

<b>County Name</b>	<b>Designation Recommendation</b>
Decatur	Attainment/Unclassifiable
DeKalb	<b>Nonattainment</b>
Dodge	Attainment/Unclassifiable
Dooly	Attainment/Unclassifiable
Dougherty	Attainment/Unclassifiable
Douglas	Attainment/Unclassifiable
Early	Attainment/Unclassifiable
Echols	Attainment/Unclassifiable
Effingham	Attainment/Unclassifiable
Elbert	Attainment/Unclassifiable
Emanuel	Attainment/Unclassifiable
Evans	Attainment/Unclassifiable
Fannin	Attainment/Unclassifiable
Fayette	Attainment/Unclassifiable
Floyd	Attainment/Unclassifiable
Forsyth	Attainment/Unclassifiable
Franklin	Attainment/Unclassifiable
Fulton	<b>Nonattainment</b>
Gilmer	Attainment/Unclassifiable
Glascok	Attainment/Unclassifiable
Glynn	Attainment/Unclassifiable
Gordon	Attainment/Unclassifiable
Grady	Attainment/Unclassifiable
Greene	Attainment/Unclassifiable
Gwinnett	Attainment/Unclassifiable
Habersham	Attainment/Unclassifiable
Hall	Attainment/Unclassifiable
Hancock	Attainment/Unclassifiable
Haralson	Attainment/Unclassifiable
Harris	Attainment/Unclassifiable
Hart	Attainment/Unclassifiable
Heard	Attainment/Unclassifiable
Henry	<b>Nonattainment</b>
Houston	Attainment/Unclassifiable
Irwin	Attainment/Unclassifiable
Jackson	Attainment/Unclassifiable
Jasper	Attainment/Unclassifiable
Jeff Davis	Attainment/Unclassifiable
Jefferson	Attainment/Unclassifiable
Jenkins	Attainment/Unclassifiable
Johnson	Attainment/Unclassifiable
Jones	Attainment/Unclassifiable



Table 2. RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES

County Name	Designation Recommendation
Lamar	Attainment/Unclassifiable
Lanier	Attainment/Unclassifiable
Laurens	Attainment/Unclassifiable
Lee	Attainment/Unclassifiable
Liberty	Attainment/Unclassifiable
Lincoln	Attainment/Unclassifiable
Long	Attainment/Unclassifiable
Lowndes	Attainment/Unclassifiable
Lumpkin	Attainment/Unclassifiable
McDuffie	Attainment/Unclassifiable
McIntosh	Attainment/Unclassifiable
Macon	Attainment/Unclassifiable
Madison	Attainment/Unclassifiable
Marion	Attainment/Unclassifiable
Meriwether	Attainment/Unclassifiable
Miller	Attainment/Unclassifiable
Mitchell	Attainment/Unclassifiable
Monroe	Attainment/Unclassifiable
Montgomery	Attainment/Unclassifiable
Morgan	Attainment/Unclassifiable
Murray	Attainment/Unclassifiable
Muscogee	Attainment/Unclassifiable
Newton	Attainment/Unclassifiable
Oconee	Attainment/Unclassifiable
Oglethorpe	Attainment/Unclassifiable
Paulding	Attainment/Unclassifiable
Peach	Attainment/Unclassifiable
Pickens	Attainment/Unclassifiable
Pierce	Attainment/Unclassifiable
Pike	Attainment/Unclassifiable
Polk	Attainment/Unclassifiable
Pulaski	Attainment/Unclassifiable
Putnam	Attainment/Unclassifiable
Quitman	Attainment/Unclassifiable
Rabun	Attainment/Unclassifiable
Randolph	Attainment/Unclassifiable
Richmond	Attainment/Unclassifiable
Rockdale	Attainment/Unclassifiable
Schley	Attainment/Unclassifiable
Screven	Attainment/Unclassifiable
Seminole	Attainment/Unclassifiable
Spalding	Attainment/Unclassifiable

**Table 2. RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES**

County Name	Designation Recommendation
Stephens	Attainment/Unclassifiable
Stewart	Attainment/Unclassifiable
Sumter	Attainment/Unclassifiable
Talbot	Attainment/Unclassifiable
Taliaferro	Attainment/Unclassifiable
Tattnall	Attainment/Unclassifiable
Taylor	Attainment/Unclassifiable
Telfair	Attainment/Unclassifiable
Terrell	Attainment/Unclassifiable
Thomas	Attainment/Unclassifiable
Tift	Attainment/Unclassifiable
Toombs	Attainment/Unclassifiable
Towns	Attainment/Unclassifiable
Treutlen	Attainment/Unclassifiable
Troup	Attainment/Unclassifiable
Turner	Attainment/Unclassifiable
Twiggs	Attainment/Unclassifiable
Union	Attainment/Unclassifiable
Upson	Attainment/Unclassifiable
Walker	Attainment/Unclassifiable
Walton	Attainment/Unclassifiable
Ware	Attainment/Unclassifiable
Warren	Attainment/Unclassifiable
Washington	Attainment/Unclassifiable
Wayne	Attainment/Unclassifiable
Webster	Attainment/Unclassifiable
Wheeler	Attainment/Unclassifiable
White	Attainment/Unclassifiable
Whitfield	Attainment/Unclassifiable
Wilcox	Attainment/Unclassifiable
Wilkes	Attainment/Unclassifiable
Wilkinson	Attainment/Unclassifiable
Worth	Attainment/Unclassifiable

# **Nonattainment Area Designations for Georgia Under the 2008 Revised 8-Hour Ozone National Ambient Air Quality Standard UPDATED 2011 Technical Analysis**

This document contains the Georgia Environmental Protection Division's (EPD) technical analysis for designating nonattainment areas in Georgia under the 2008 revised primary and secondary ozone National Ambient Air Quality Standards (NAAQS). This analysis has been conducted in accordance with U.S. EPA's December 4, 2008, memorandum "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards" and U.S. EPA's September 22, 2011, memorandum "Implementation of the Ozone National Ambient Air Quality Standard." The 159 counties in Georgia have been evaluated and identified as attainment, nonattainment, or unclassifiable on the basis of available information.

## **Air Quality Data and Potential Nonattainment Areas**

Federal Reference Method (FRM) measurements of ozone concentrations in Georgia, during the most recent three consecutive years (2009-2011), were analyzed and used to identify sites currently violating the revised 2008 ozone NAAQS. The 2009 and 2010 ozone measurements have been quality-assured and certified and are stored in EPA's Air Quality System (AQS) database. These 2011 ozone measurements will be quality-assured and certified by February 29, 2012 at which time they will be stored in EPA's Air Quality System (AQS) database. Design values (DV) were calculated for each monitor (Table 1 and Figure 1) by averaging the fourth-highest daily maximum 8-hour average ozone concentrations for three consecutive years. If the 2009-2011 DV for a monitor is greater than 0.075 ppm, the monitor is violating the NAAQS. Among the 20 ozone monitors in Georgia, there are 4 violating monitors, which are located within the Atlanta-Sandy Springs-Gainesville, GA-AL Combined Statistical Area (CSA).

The U.S. EPA's December 4, 2008 memorandum "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards" recommends that:

*--- "...the Core Based Statistical Area (CBSA) or Combined Statistical Area (which includes 2 or more adjacent CBSA's) associated with the violating monitor(s) serve as the starting point or "presumptive" boundary for evaluating the geographic boundaries of an ozone nonattainment area. CBSA is a collective term that refers to both metropolitan and micropolitan statistical areas, which are distinguished based on population size. Each CBSA consists of a county or counties containing at least one urban core plus adjacent counties that have a high degree of social and economic integration with the urban core as measured by commuting ties. EPA recommends starting with this presumption because the factors used to establish the CBSAs and CSAs are similar to the factors EPA plans to consider in determining whether a nearby area is contributing to the violation(s) of the standard."*

**Table 1. 2008-2010 DVs and 2009-2011 DVs of 8-hour ozone at FRM monitors.**

<b>AIRS_ID</b>	<b>County</b>	<b>Station Name</b>	<b>2008-2010 DV</b>	<b>2009-2011 DV</b>
<b>Atlanta-Sandy Springs-Gainesville, GA-AL</b>				
13-067-0003	Cobb, GA	Kennesaw	<b>0.076</b>	<b>0.078</b>
13-077-0002	Coweta, GA	Newnan	0.068	0.067
13-085-0001	Dawson, GA	Dawsonville	0.071	0.068
13-089-0002	DeKalb, GA	South DeKalb	<b>0.079</b>	<b>0.077</b>
13-097-0004	Douglas, GA	Douglasville	0.075	0.074
13-121-0055	Fulton, GA	Confederate Ave.	<b>0.080</b>	<b>0.080</b>
13-135-0002	Gwinnett, GA	Gwinnett	0.074	0.075
13-151-0002	Henry, GA	McDonough	<b>0.079</b>	<b>0.077</b>
13-223-0003	Paulding, GA	Dallas / Yorkville	0.070	0.071
13-247-0001	Rockdale, GA	Conyers	<b>0.078</b>	0.075
<b>Athens-Clarke County, GA</b>				
13-059-0002	Clarke, GA	Athens	0.072	0.071
<b>Augusta-Richmond County, GA-SC</b>				
13-245-0091	Richmond, GA	Augusta	0.071	0.070
13-073-0001	Columbia, GA	Evans	0.069	0.068
45-003-0003	Aiken, SC	SC Aiken - Jackson	0.069	0.067
45-037-0001	Edgefield, SC	SC Edgefield - Trenton	0.065	0.063
<b>Chattanooga-Cleveland-Athens, TN-GA</b>				
47-065-4003	Hamilton, TN	TN-Chatt VAAP	0.075	0.072
47-065-1011	Hamilton, TN	TN-Sequoyah	0.072	0.071
<b>Columbus-Auburn-Opelika, GA-AL</b>				
13-215-0008	Muscogee, GA	Columbus Airport	0.068	0.066
01-113-0001	Russell, AL	AL - Russell Co	0.067	0.066
<b>Macon-Warner Robins-Fort Valley, GA</b>				
13-021-0013	Bibb, GA	Macon West	0.073	0.073
<b>Dalton, GA</b>				
13-213-0003	Murray, GA	Fort Mountain	0.073	0.071
<b>Other area</b>				
13-055-0001	Chattooga, GA	Summerville	0.066	0.067
13-261-1001	Sumter, GA	Leslie	0.065	0.065
13-127-0006	Glynn, GA	Brunswick	0.063	0.062
13-051-0021	Chatham, GA	Savannah	0.064	0.063



Since the Atlanta-Sandy Springs-Gainesville, GA-AL CSA<sup>1</sup> contains violating monitors, all counties in this CSA will be evaluated as potential nonattainment areas. Counties with violating monitors are identified separately from other counties in the CSA.

**Atlanta-Sandy Springs-Gainesville, GA-AL (CSA, includes 33 counties)**

Counties with violating monitors: *Cobb, DeKalb, Fulton, Henry*

Other Counties: *Barrow, Bartow, Butts, Carroll, Chambers (AL), Cherokee, Clayton, Coweta, Dawson, Douglas, Fayette, Forsyth, Gwinnett, Hall, Haralson, Heard, Jasper, Lamar, Meriwether, Newton, Paulding, Pickens, Pike, Polk, Rockdale, Spalding, Troup, Upson, Walton*

## **Nine-Factor Analysis for Nonattainment Area Boundaries**

The nonattainment area boundaries are evaluated using nine factors, as described in U.S. EPA's December 4, 2008 memorandum "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards."

- 1) Air quality data;
- 2) Emissions data (location of sources and contribution to ozone concentrations);
- 3) Population density and degree of urbanization (including commercial development);
- 4) Traffic and commuting patterns;
- 5) Growth rates and patterns;
- 6) Meteorology (weather/transport patterns);
- 7) Geography/topography (mountain ranges or other air basin boundaries);
- 8) Jurisdictional boundaries [e.g., counties, air districts, existing nonattainment areas, reservations, metropolitan planning organizations (MPOs)]; and
- 9) Level of control of emission sources,

The following quantitative data were used to evaluate Factors 1, 2, 3, 4, and 5.

- 1) Ambient Ozone Measurements: The most recent three year 8-hour ozone design values were calculated based on 2009-2011 ozone measurements at each monitor.
- 2) Emission data: 2008 National Emissions Inventory (NEI) data for counties in Georgia. NOx emissions for large EGU point source were updated with the 2009 NEI data to reflect recent controls.
- 3) Population Density: Population density for 2000 from U.S. Census Bureau.  
Downloaded from  
[http://factfinder.census.gov/servlet/DatasetMainPageServlet?\\_program=DEC&\\_submenuId=people\\_1&\\_lang=en&\\_ts=](http://factfinder.census.gov/servlet/DatasetMainPageServlet?_program=DEC&_submenuId=people_1&_lang=en&_ts=)
- 4) Percent Urbanization: Percent urbanization for 2000 from U.S. Census Bureau.  
Downloaded from  
[http://factfinder.census.gov/servlet/DatasetTableListServlet?\\_ds\\_name=DEC\\_2000\\_SF2\\_U&\\_type=table&\\_program=DEC&\\_lang=en&\\_ts=247507573134](http://factfinder.census.gov/servlet/DatasetTableListServlet?_ds_name=DEC_2000_SF2_U&_type=table&_program=DEC&_lang=en&_ts=247507573134)
- 5) Percent Population Growth: Estimated population growth (absolute) from 2000 to 2007.

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<sup>1</sup> CSAs and CBSAs were obtained from the most recent update on statistical area definitions issued by the federal Office of Management and Budget, OMB Bulletin No. 08-01 issued November 20, 2007.

Population estimates for 2000 and 2007 are from the U.S. Census Bureau. Downloaded from [http://www.census.gov/popest/counties/CO-EST2007-popchg2000\\_2007.html](http://www.census.gov/popest/counties/CO-EST2007-popchg2000_2007.html).

- 6) Traffic: 2007 Daily Vehicular Miles Traveled (VMT) by county based on HPMS data are provided by states.

A screening threshold value was assigned to each factor (Table 2). Detailed data for each county in the potential nonattainment area is listed in Table 3.

**Table 2:** Factors that were considered as part of the quantitative analysis and their associated screening thresholds.

Category	Threshold
Emission NOx (tpy)	5,000
Emission VOC (tpy)	5,000
Population Density (Person/miles <sup>2</sup> )	1,000
Urbanization (%)	90%
Absolute Population Growth	50,000
VMT (miles/day)	5,000,000
Ozone > 75 ppb	Yes/No

If county values are equal to or higher than the screening criteria, a score of one is assigned to that factor. The “Ozone > 75 ppb” category was treated differently due to the importance of this category. If the 2009-2011 ozone DV is greater than 75 ppb (violation of NAAQS), it was assigned a score of 2.0. If the 2009-2011 ozone DV is less than or equal to 75 ppb (no violation of NAAQS), it was assigned a score of -2.0. If the county did not have an ozone monitor, it was assigned a score of 0.0. If the total score of these factors for a county is greater than 5.0, the county may be recommended as a nonattainment county after consideration of other factors, such as meteorology, geography, jurisdictional boundaries, and level of control of emissions, on a qualitative basis.

**Atlanta-Sandy Springs-Gainesville, GA-AL**

*Quantitative Criteria* – Scores of quantitative factors by county are listed in Table 4. Scores are calculated for 33 counties in this area. The scores for these counties range from -2 to +8. Four counties had a score above 5.0: Cobb, DeKalb, Fulton, and Henry.

*Meteorology* – There are no meteorology factors identified that affect the area.

*Geography/topography* – There are no geographical factors identified that affect the area.

*Jurisdictional* – All counties in Atlanta-Sandy Springs-Gainesville, GA-AL CSA except Chambers County, Alabama, are within Georgia and fall within the jurisdiction of Georgia EPD.

*Level of Control of Emissions* – With the exception Chambers County, Alabama, all of the counties listed are either part of the Atlanta nonattainment area for the 1997 ozone standard or have been designated as part of an area that contributes to the level of ozone in the Atlanta nonattainment area for the 1997 ozone standard in accordance with Georgia Air Quality Control Rule 391-3-1-.03(8)(e). Therefore, NOx and VOC emissions controls have already been established in these counties. Table 5 is a list of specific NOx and VOC control measures currently implemented in the Georgia counties that make up Atlanta CSA. These control

measures were specifically developed to reduce ozone levels in the metro Atlanta area. In addition, VOC and NOx RACT are required in the 20 counties that make up the Atlanta nonattainment area for the 1997 ozone standard. Other than the measures indicated in Table 5, VOC control measures were not extended beyond what is required by section 182(b)(2) of the Clean Air Act because EPD has demonstrated that the Atlanta area is strongly NOx limited as presented in the Atlanta 8-hr Ozone Attainment Demonstration submitted to EPA on October 21, 2009. Because NOx and VOC control measures have already been adopted throughout the entire Georgia portion of the CSA, a designation of nonattainment for the 2008 ozone standard would result in little to no additional controls effective at reducing ozone levels. In addition Georgia Power's Plants Bowen, Branch, Hammond, McDonough, Scherer, Wansley, and Yates contain affected units under the Cross State Air Pollution Rule (CSAPR) and the Georgia Multipollutant Rule.

*Conclusion* – Based on both quantitative and qualitative factor analysis conducted by Georgia EPD, the following four Georgia counties are recommended to be designated nonattainment under the revised 2008 ozone NAAQS: Cobb, DeKalb, Fulton, and Henry.

## RECOMMENDATIONS

Georgia EPD recommends the following areas in Georgia be designated nonattainment under the revised 2008 ozone standard:

- Atlanta Ozone Nonattainment Area (4 counties): Cobb, DeKalb, Fulton, and Henry.

## References

U.S. EPA (2008), "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards", December 4, 2008 memorandum.

U.S. EPA (2011), "Implementation of the Ozone National Ambient Air Quality Standard", September 22, 2011, memorandum.



# 2008 Ozone NAAQS NAA Designation Reference Map

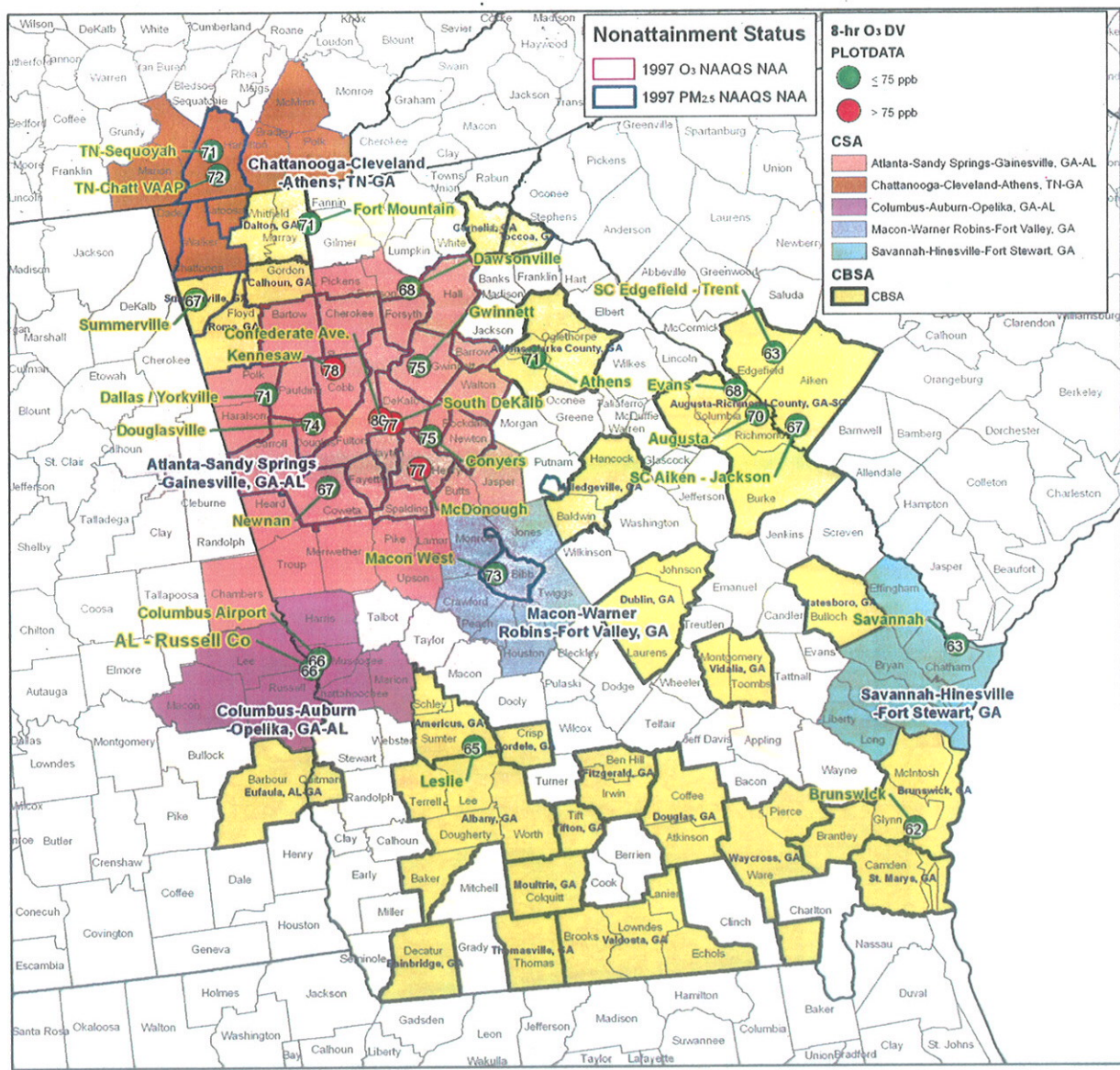


Figure 1. Ozone monitors and CSA/CBSA boundaries associated with potential nonattainment areas in Georgia under the 2008 ozone NAAQS. Ozone design values are based on 2009-2011 ozone data. Nonattainment area boundaries under the 1997 ozone NAAQS are outlined in red, and nonattainment area boundaries under the 1997 PM<sub>2.5</sub> NAAQS are outlined in blue.

**Table 3. Quantitative factors for all counties in the Atlanta-Sandy Springs-Gainesville  
CSA.**

FIPS	County	Ozone > 75 ppb (Y/N)	Emission NOX (tpy)	Emission VOC (tpy)	Population Density (Person/miles <sup>2</sup> )	Urbanization (%)	Absolute Population Growth	VMT (miles/day)
13013	Barrow	N/A	1,724.5	2,232.7	284.5	47	20,572	1,851,387
13015	Bartow	N/A	13,669.1	5,922.9	165.5	58	16,133	4,901,274
13035	Butts	N/A	1,231.1	1,199.8	104.6	21	4,030	982,899
13045	Carroll	N/A	3,732.7	4,426.6	174.9	48	23,947	3,426,503
13057	Cherokee	N/A	4,801.9	5,749.8	334.9	75	60,608	5,235,049
13063	Clayton	N/A	15,992.6	9,112.6	1,658.40	99	33,825	7,294,490
13067	Cobb	YES	34,514.6	22,145.9	1,786.70	99	79,173	17,869,685
13077	Coweta	NO	57,654.0	3,633.2	201.6	54	28,781	3,895,843
13085	Dawson	NO	626.3	1,058.0	75.8	0	5,184	656,417
13089	DeKalb	YES	17,260.9	22,084.2	2,482.70	100	68,136	20,381,808
13097	Douglas	NO	3,316.1	3,847.7	462.5	80	31,796	4,191,150
13113	Fayette	N/A	2,676.0	3,382.6	463.1	78	14,058	2,848,500
13117	Forsyth	N/A	3,687.7	5,392.6	435.8	65	58,398	3,968,912
13121	Fulton	YES	28,338.5	31,581.8	1,543.50	98	174,887	31,292,202
13135	Gwinnett	NO	18,569.0	24,483.0	1,359.90	97	179,945	18,766,956
13139	Hall	N/A	5,619.8	8,393.3	353.8	67	39,262	4,868,071
13143	Haralson	N/A	1,117.5	1,688.6	91.1	17	2,882	1,126,045
13149	Heard	N/A	2,981.4	1,181.9	37.2	0	300	373,826
13151	Henry	YES	5,415.3	5,635.6	369.8	73	64,453	6,221,939
13159	Jasper	N/A	478.8	757.5	30.8	0	2,172	487,126
13171	Lamar	N/A	656.6	859.2	86.1	42	991	761,968
13199	Meriwether	N/A	1,388.7	1,301.2	44.8	16	219	930,936
13217	Newton	N/A	3,291.9	3,917.2	224.3	56	33,135	2,906,994
13223	Paulding	NO	2,782.1	3,040.0	260.6	60	44,900	3,081,957
13227	Pickens	N/A	888.3	1,365.8	99	22	7,128	1,021,360
13231	Pike	N/A	413.0	663.2	62.7	0	3,404	516,717
13233	Polk	N/A	1,432.5	1,975.8	122.5	48	3,211	1,157,612
13247	Rockdale	NO	2,481.0	2,887.2	536.7	85	11,485	2,759,090
13255	Spalding	N/A	1,813.6	2,832.2	295.1	59	4,337	1,874,590
13285	Troup	N/A	2,955.6	4,113.0	142	56	4,609	2,684,391
13293	Upson	N/A	794.1	1,738.4	84.8	56	-53	758,642
13297	Walton	N/A	2,214.8	3,042.4	184.4	41	21,584	2,178,455
1017	AL-Chambers	N/A	1,855	3,134	61.3	50	-1,799	1,277,477



**Table 4. Evaluation of quantitative factors for Atlanta-Sandy Springs-Gainesville CSA.**  
**Values in red have a total quantitative criteria score that exceeds 5.0.**

FIPS	County	Ozone > 75 ppb	Emission NOX (tpy)	Emission VOC (tpy)	Population Density (Person/miles <sup>2</sup> )	Urbanization (%)	Absolute Population Growth	VMT (miles/day)	TOTAL
13013	Barrow	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13015	Bartow	0.0	1.0	1.0	0.0	0.0	0.0	0.0	2.0
13035	Butts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13045	Carroll	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13057	Cherokee	0.0	0.0	1.0	0.0	0.0	1.0	1.0	3.0
13063	Clayton	0.0	1.0	1.0	1.0	1.0	0.0	1.0	5.0
13067	Cobb	2.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0
13077	Coweta	-2.0	1.0	0.0	0.0	0.0	0.0	0.0	-1.0
13085	Dawson	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0
13089	DeKalb	2.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0
13097	Douglas	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0
13113	Fayette	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13117	Forsyth	0.0	0.0	1.0	0.0	0.0	1.0	0.0	2.0
13121	Fulton	2.0	1.0	1.0	1.0	1.0	1.0	1.0	8.0
13135	Gwinnett	-2.0	1.0	1.0	1.0	1.0	1.0	1.0	4.0
13139	Hall	0.0	1.0	1.0	0.0	0.0	0.0	0.0	2.0
13143	Haralson	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13149	Heard	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13151	Henry	2.0	1.0	1.0	0.0	0.0	1.0	1.0	6.0
13159	Jasper	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13171	Lamar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13199	Meriwether	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13217	Newton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13223	Paulding	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0
13227	Pickens	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13231	Pike	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13233	Polk	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13247	Rockdale	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	-2.0
13255	Spalding	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13285	Troup	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13293	Upson	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13297	Walton	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1017	AL-Chambers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 5. NOx Control Measures**

The following is a list of the NOx control measures that are required in the Georgia counties contained in this technical analysis and are not required state-wide.

FIPS	County	391-3-1-.02(2)(yy) – Emissions of Nitrogen Oxides from Major Sources	391-3-1-.02(2)(bbb) – Gasoline Marketing	391-3-1-.02(2)(jjj) – NOx Emissions from Electric Utility Steam Generating Units	391-3-1-.02(2)(lll) – NOx Emissions from Fuel-burning Equipment	391-3-1-.02(2)(mmm) – NOx Emissions from Stationary Gas Turbines and Stationary Engines used to Generate Electricity	391-3-1-.02(2)(nnn) – NOx Emissions from Large Stationary Gas Turbines	391-3-1-.02(2)(rrr) – NOx Emissions from Small Fuel-Burning Equipment	391-3-1-.02(2)(sss) – Multipollutant Control for Electric Utility Steam Generating Units	391-3-1-.02(5)(b)1 & 2 – Open Burning (May-Sept. restrictions)	391-3-1-.03(8) – Permit Requirements (Nonattainment NSR and additional – Additional Requirements for Electrical Generating Units ...)
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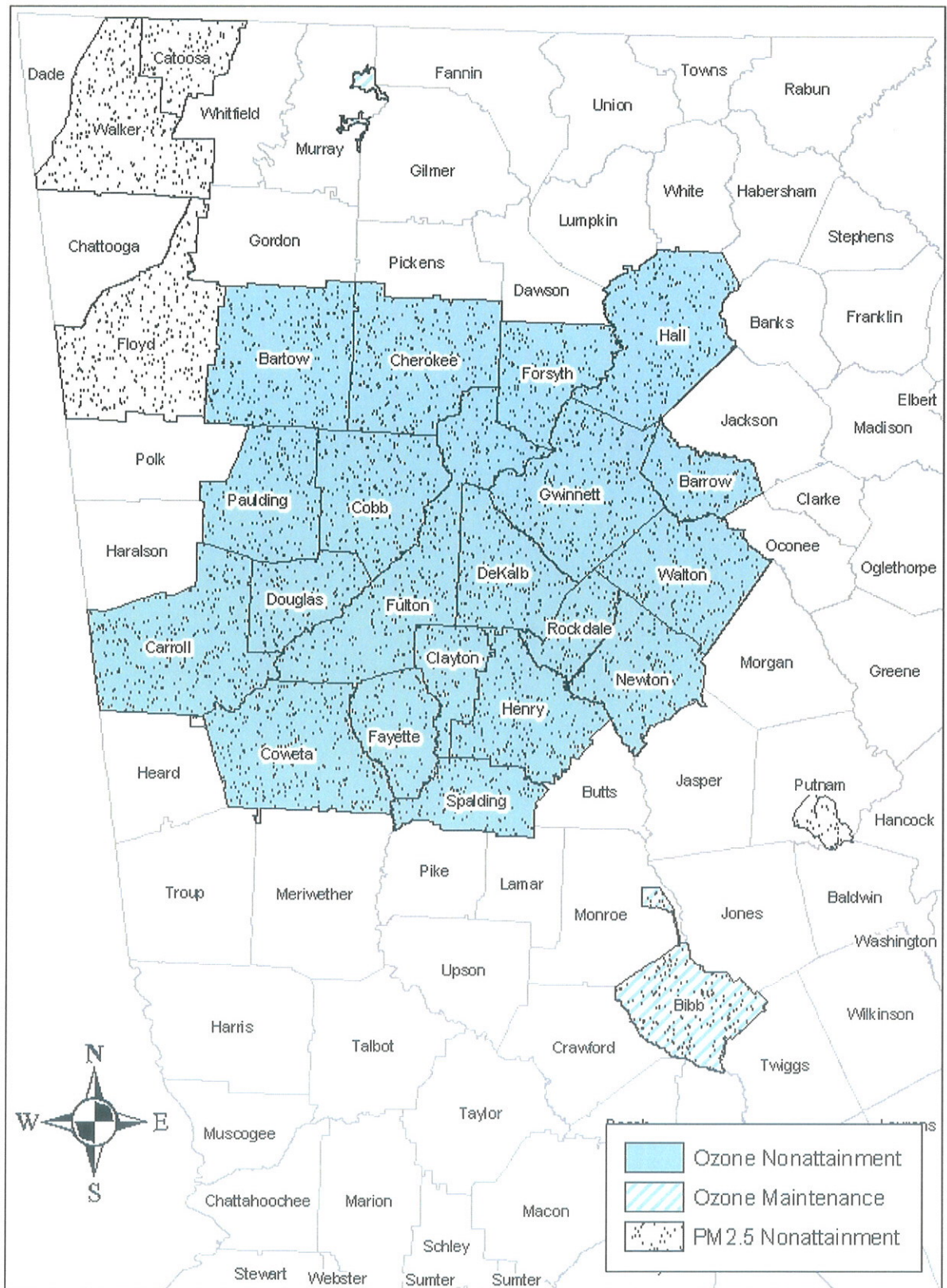
**Atlanta-Sandy Springs-Gainesville, GA-AL CSA**

13013	Barrow	X	X		X	X	X	X		X	X
13015	Bartow	X	X	X	X	X	X	X	X	X	X
13035	Butts		X		X	X	X			X	X
13045	Carroll	X	X		X	X	X	X		X	X
13057	Cherokee	X	X	X	X	X	X	X		X	X
13063	Clayton	X	X	X	X	X	X	X		X	X
13067	Cobb	X	X	X	X	X	X	X	X	X	X
13077	Coweta	X	X	X	X	X	X	X	X	X	X
13085	Dawson		X		X	X	X			X	X
13089	DeKalb	X	X	X	X	X	X	X		X	X
13097	Douglas	X	X	X	X	X	X	X		X	X
13113	Fayette	X	X	X	X	X	X	X		X	X
13117	Forsyth	X	X	X	X	X	X	X		X	X
13121	Fulton	X	X	X	X	X	X	X		X	X
13135	Gwinnett	X	X	X	X	X	X	X		X	X
13139	Hall	X	X		X	X	X	X		X	X
13143	Haralson		X		X	X	X			X	X
13149	Heard		X	X	X	X	X		X	X	X
13151	Henry	X	X	X	X	X	X	X		X	X
13159	Jasper		X		X	X	X			X	X
13171	Lamar		X		X	X	X			X	X
13199	Meriwether		X		X	X	X			X	X
13217	Newton	X	X		X	X	X	X		X	X
13223	Paulding	X	X	X	X	X	X	X		X	X
13227	Pickens		X		X	X	X			X	X
13231	Pike		X		X	X	X			X	X
13233	Polk		X		X	X	X			X	X
13247	Rockdale	X	X	X	X	X	X	X		X	X
13255	Spalding	X	X		X	X	X	X		X	X
13285	Troup		X		X	X	X			X	X
13293	Upson		X		X	X	X			X	X
13297	Walton	X	X		X	X	X	X		X	X





**Figure 2:** Map of Atlanta nonattainment area recommendations for the revised 2008 ozone NAAQS.



**Figure 3:** Map of Existing Nonattainment Boundaries.