ATTACHMENT 1
RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES

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

ATTACHMENT 1
RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES

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

ATTACHMENT 1
RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES

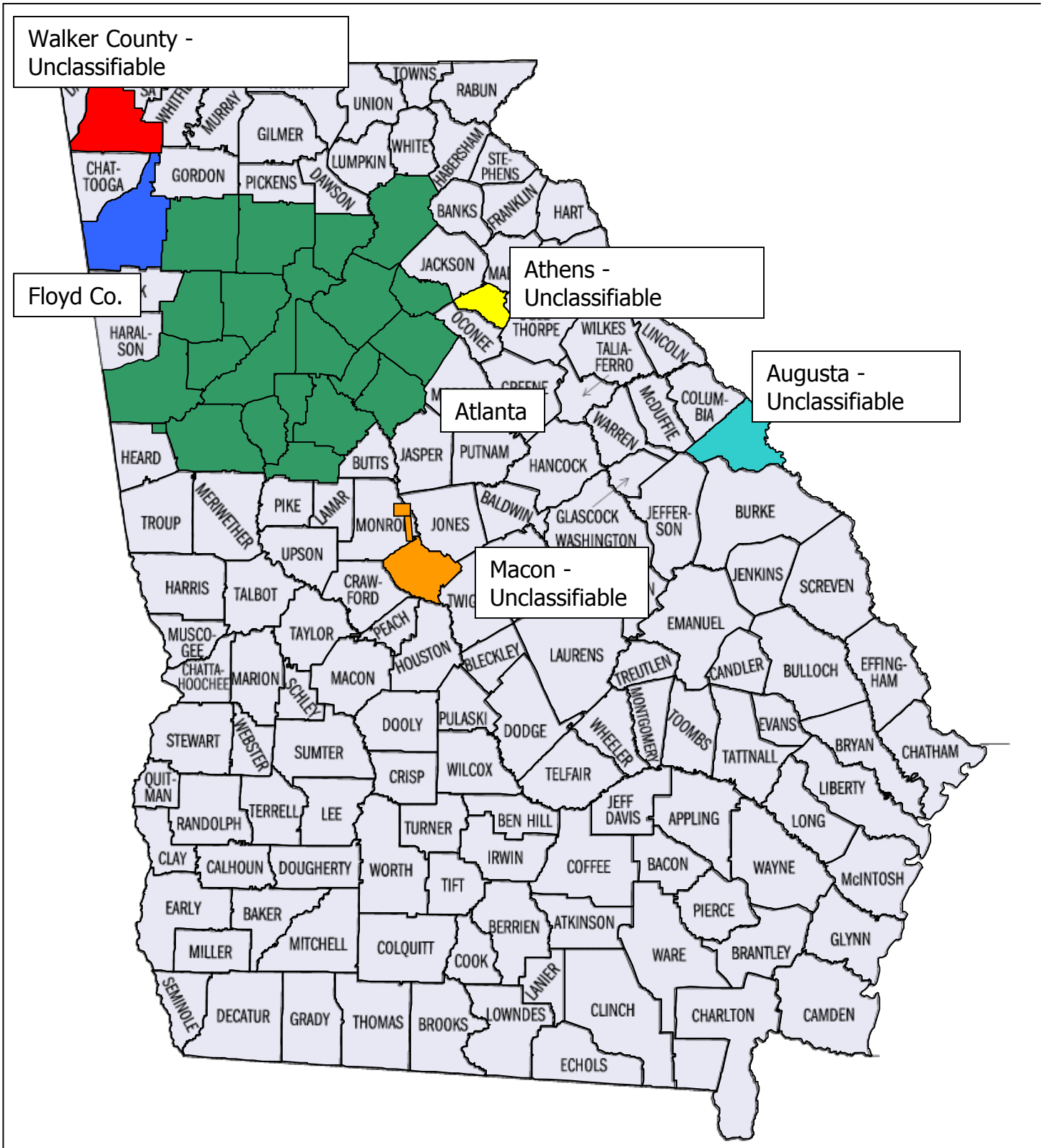
County Name	Designation
Lamar	Attainment
Lanier	Attainment
Laurens	Attainment
Lee	Attainment
Liberty	Attainment
Lincoln	Attainment
Long	Attainment
Lowndes	Attainment
Lumpkin	Attainment
McDuffie	Attainment
McIntosh	Attainment
Macon	Attainment
Madison	Attainment
Marion	Attainment
Meriwether	Attainment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

ATTACHMENT 1
RECOMMENDED DESIGNATION STATUS FOR GEORGIA COUNTIES

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

Attachment 2 - Revised PM2.5 Recommendations

9/1/2004



Attachment 3
PM2.5 Monitoring Trends for Macon, Athens, and Rossville Monitors

	Macon – Allied Chemical	Macon – Forestry	Athens	Rossville
2001 Arithmetic Mean	16.1 ug/m^3	13.8 ug/m^3	17.5 ug/m^3	15.9 ug/m^3
2002 Arithmetic Mean	14.8 ug/m^3	13.2 ug/m^3	15.0 ug/m^3	14.8 ug/m^3
2003 Arithmetic Mean	14.8 ug/m^3	13.0 ug/m^3	14.3 ug/m^3	16.0 ug/m^3
2001-2003 Design Value	15.2 ug/m^3	13.3 ug/m^3	15.6 ug/m^3	15.6 ug/m^3
2004 – 1st Quarter	14.5 ug/m^3	12.4 ug/m^3	13.5 ug/m^3	11.7 ug/m^3
2004 – 2nd Quarter	16.4 ug/m^3	13.7 ug/m^3	15.0 ug/m^3	14.7 ug/m^3
2004 – 1st & 2nd Quarter Arithmetic Mean	15.4 ug/m^3	13.1 ug/m^3	14.2 ug/m^3	13.2 ug/m^3
*2004 Critical Value**	*15.4 ug/m^3*	*18.8 ug/m^3*	*15.7 ug/m^3*	*14.2 ug/m^3*
2002-2004 Design Value using 1st & 2nd Quarter 2004	15.0 ug/m^3	13.1 ug/m^3	14.5 ug/m^3	14.7 ug/m^3

* Critical Value is the minimum 2004 arithmetic mean that would result in a 2002-2004 design value that exceeds the annual PM2.5 standard for each specific monitor.

The data for the Macon-Allied Chemical monitor shows PM2.5 levels that are very close to the critical value so far this year. Attainment of the PM2.5 standard for this monitor will depend on the levels measured for the 3rd and 4th quarter of 2004. Most likely, we will not have a good indication of this monitor's status until after the 4th quarter since PM2.5 levels in the 2nd and 3rd quarters are generally higher than the 1st and 4th quarters. The date for the Macon-Forestry monitor indicates that this monitor will continue to show compliance with the PM2.5 standard. For this reason, EPD recommends that Bibb County and the portion of Monroe County that contains Plant Scherer (specific boundary included in earlier correspondence) be designated "attainment/unclassifiable" for PM2.5.

The 1st & 2nd quarter data for Athens clearly shows a continued downward trend in PM2.5 levels. The 2004 arithmetic mean should easily stay below the critical value of 15.7 ug/m^3, thus achieving attainment of the PM2.5 standard for Athens. For this reason, EPD recommends that Clarke County be designated "attainment/unclassifiable" for PM2.5.

The 1st & 2nd quarter data for the Rossville Monitor shows PM2.5 levels well below historical levels. Should this trend continue, the 2004 arithmetic mean should be well below the critical value of 15.7 ug/m^3. EPD therefore, requests that Walker County be designated as "attainment/unclassifiable." Once the final 2004 data for the Rossville monitor is obtained, EPD can then consult with the Tennessee Department of Environment and Conservation and U.S. EPA concerning the final classification of the Chattanooga area and the nonattainment area boundary should the Chattanooga area eventually be classified as nonattainment for PM2.5.

Attachment 4
Nonattainment Area Designations for Chattanooga under the PM2.5 Standard

This document contains Georgia EPD's analysis of the Georgia counties (including Walker County which contains a violating PM2.5 monitor) which are part of or adjacent to the Chattanooga urbanized area. EPD's analysis of the six other PM2.5 nonattainment areas (Athens, Atlanta, Augusta, Columbus, Macon, and Floyd County) were submitted to EPA on June 17, 2004. The analysis for the Georgia portion of the Chattanooga area is conducted in a similar manner as the other urbanized areas (all of those listed above except Floyd County.)

EMISSIONS AND AIR QUALITY ANALYSIS

The first step in revising Georgia EPA's PM2.5 nonattainment recommendations for Chattanooga was through analysis of the emissions and air quality in the potentially included areas. EPA's April 1, 2003, memo lists emissions and air quality as two of the nine factors to be considered in assessing which areas to include as part of a designated nonattainment area. The emissions and air quality analysis was done through the use of a revised L-Score approach that is described in detail in our June 17, 2004 letter. Georgia EPD's revised L-Score analysis for Chattanooga is described below.

Application of Updated L-Score Equation

The updated L-score equation (Equation 2 of 6/17/04 letter) was used to evaluate which counties in the Chattanooga area should be designated nonattainment. This area has multiple FRM monitors with at least 3 years of data and a STN monitor with speciated PM2.5 data available. The annual average background concentration and the speciated percent contributions to urban excess for Chattanooga were calculated by EPA using measurements at the Cohutta IMPROVE site. Georgia EPD updated emission estimates of SO2, NOx, VOC, and NH3 with the recent 2002 CERR inventory for the counties in Georgia that are currently under consideration for inclusion in the Walker County nonattainment area. The results of applying Equation 2 to Chattanooga are summarized in Table A (attached). This table includes emissions, L-scores, and cumulative L-scores for each county under consideration. Counties in bold text are part of the 1999 CMSA.

Chattanooga Nonattainment Area: The 2003 design value for Chattanooga is 16.1 $\mu g/m^3$ and the urban excess is 5.2 $\mu g/m^3$. According to Table 4-A, the inclusion of Roane (TN), Jackson (AL), Floyd (GA), Hamilton (TN), and McMinn (TN) Counties would account for approximately 55% of the emissions responsible for the area's urban excess. Walker County (GA) has also been added because it is a county where a violating monitor is located. Designating these six counties as nonattainment would account for 57% of the urban excess (3.0 $\mu g/m^3$) in Chattanooga. Emission reductions resulting in a 37.1% reduction in the cumulative L-scores across these six counties should be enough to achieve compliance with the NAAQS. According to this analysis, Catoosa (1.72%) and Dade (0.87%) counties contribute a combined total of only 2.59% to the total urban excess.

Table 4-1: Urban Excess values for Macon, Augusta, Columbus, Athens, Atlanta, and Chattanooga.

	Macon	Augusta	Columbus	Athens	Atlanta	Chatt.
Urban Monitor (U)	15.2 μg/m^3	15.2 μg/m^3	15.3 μg/m^3	15.6 μg/m^3	18.0 μg/m^3	16.1 μg/m^3
Regional Monitor (R)	12.8 μg/m^3	11.7 μg/m^3	14.2 μg/m^3	14.1 μg/m^3	14.1 μg/m^3	N/A
Background Monitor (B)	11.0 μg/m^3	11.0 μg/m^3	11.0 μg/m^3	10.7 μg/m^3	10.7 μg/m^3	10.9 μg/m^3
Urban Excess (U-R)	2.4 μg/m^3	3.5 μg/m^3	2.5 μg/m^3	1.5 μg/m^3	3.9 μg/m^3	N/A
Urban Excess (U-B)	4.2 μg/m^3	4.2 μg/m^3	4.3 μg/m^3	4.9 μg/m^3	7.3 μg/m^3	5.2 μg/m^3
% Sulfate Urban Excess	22.03 %	38.21 %	27.66 %	22.84%	5.96 %	17.0%
% Nitrate Urban Excess	4.28 %	9.81 %	2.03 %	36.90 %	0.00 %	7.0%
% Carbon Urban Excess	36.35 %	31.23 %	58.20 %	15.18 %	86.70 %	66.0%
% Crustal Urban Excess	27.33 %	2.50 %	0.98 %	21.32 %	7.34 %	10.0%
% Amm. Urban Excess	10.00 %	18.25 %	11.13 %	3.77 %	0.00 %	N/A

EPA's Weighted Emissions Score Analysis

On June 29, 2004, U.S. EPA submitted a letter to Governor Sonny Perdue notifying him of EPA's intent to modify Georgia's PM2.5 nonattainment recommendations, including your intentions to include Dade and Catoosa County as part of the Chattanooga PM2.5 nonattainment area. Included with that letter was an attachment with EPA's justification for the inclusion of Dade and Catoosa County. This attachment relies heavily on EPA's Weighted Emissions Score (WES) analysis. This analysis 1) starts with the presumptive boundaries of the Chattanooga MSA, 2) selects a "Cumulative Weighted Emissions Score" from the MSA counties that results in a certain percentage of the urban excess from the MSA counties, then 3) adds counties that are outside the MSA whose WES exceeds that of the MSA county with the lowest WES that was included in step 2.

EPA's June 29th letter does not specify which Cumulative WES threshold was used to determine which counties to include in the Chattanooga PM2.5 nonattainment area. Hamilton, Walker, and Marion counties account for 81.5 percent of the urban excess using EPA's methodology. The addition of Catoosa county brings the urban excess to 93.4%. The addition of Dade County (the remaining county in the Chattanooga MSA) brings the urban excess to 99.9%. EPA's May 5, 2004, presentation to STAPPA/ALAPCO concerning the Weighted Emissions Score analysis states on slide 17 "The cumulative weighted emissions score can be used to identify possible guideline levels for including counties in the CMSA and/or for including adjacent counties" and provides example levels of 80%, 90%, and 95%. Catoosa County would only need to be included if EPA used a 90% level. Dade county would only need to be used to if EPA used a 95% level.

EPA's WES approach and apparent arbitrary WES threshold that exceeds 95% results in counties within the Chattanooga MSA being included in EPA's recommended nonattainment whose contribution to the urban excess is significantly lower than counties that lie just outside the MSA. Of the 28 counties included in EPA's analysis for the Chattanooga PM2.5 nonattainment area, Dade and Catoosa Counties rank 23rd and 18th, respectively. The combined WES for the two counties with violating monitors (Hamilton and Walker) plus Jackson, Roane (which EPA has recommended for part of the Knoxville PM2.5 nonattainment area) and Floyd (which has been recommended by Georgia EPD as a separate Floyd County PM2.5 nonattainment area) is 694.4. The combined WES for Dade and Catoosa Counties is only 18.4.

Both EPD's and EPA's analysis clearly show that neither Dade nor Catoosa County should be included as part of the Chattanooga PM2.5 nonattainment area.

Interstate Emissions
Interstate I-75 travels through Catoosa County. EPD has calculated the PM2.5 direct and precursor emissions for I-75 and compares those figures with total mobile source emissions and total emissions from Catoosa County.

	VOC tpd	NOx tpd	PM tpd	SO2 tpd	NH3 tpd
I-75	6.61	7.08	0.1446	0.2629	0.2057
total mobile	10.53	10.51	0.22	0.40	0.32
% of total	41%	52%	47%	47%	47%

I-75 is a major north-south transportation route; therefore, it can be assumed that the majority of interstate traffic in Catoosa county is through traffic. Since emissions from these vehicles will be controlled through national measures and not state measures, designation of Catoosa as nonattainment and subsequent local control measures would have no effect on these emissions.

ANALYSIS USING OTHER FACTORS

Despite the fact that both EPA's and EPD's emissions and air quality analsyis indicates that neither Dade nor Catoosa County should be included in the Chattanooga PM2.5 nonattainment area, EPD has examined those counties using the seven other factors as described in U.S. EPA's April 1, 2003, memorandum "Designations for the Fine Particle National Ambient Standards":

1. population density and degree of urbanization
2. traffic and commuting patterns
3. expected growth
4. meteorology
5. geography/topography
6. jurisdictional boundaries
7. level of control of emissions

Should this analysis indicate that Dade and/or Catoosa Counties could significantly contribute to PM2.5 levels in the Chattanooga Area (i.e., factors exceed the several of the thresholds described below by significant margins), then that county or counties may need to be considered for inclusion in the nonattainment area.

Page 6 of the April 1, 2003, EPA memorandum, states that 8-hour ozone nonattainment boundaries should be considered when recommending nonattainment boundaries for PM2.5. Catoosa County was initially included in the Chattanooga 8-hr ozone nonattainment area. However, that designation has been stayed due to EPA's approval of the Chattanooga Early Action Compact. Therefore, the Chattanooga 8-hr ozone nonattainment boundary is not as critical in determining boundaries for PM2.5 nonattainment as it is for currently effective 8-hr ozone nonattainment areas.

The following thresholds were used to determine whether or not a county met criteria 1, 2, or 3.

A. Population Density – 139 persons per square mile [Derived from the lowest projected 2002 population density of any county with a monitored violation]
B. Percent Population growth - 20% (minimum percent urbanization considered by the U.S.

Census) and 2713 persons [Derived from lowest increase in population of any county with a monitored violation] for the period 1990-2000. (To meet this criteria, a county would have to meet or exceed both the percent growth and numerical growth thresholds. This takes into account the fact that a county with a low population can experience a high percentage growth rate with only a small increase in actual population.)

C. Percent Urbanization – 35% (minimum percent urbanization considered by U.S. Census Bureau) for 2000

D. In Commutes – At least 8913 vehicles commuting into a core county or a county with a monitored violation. The in-commute into core counties or counties with a monitored violation was only considered for those counties outside a current non-attainment area [Derived from 15% (minimum commute considered by U.S. Census Bureau in MSA determinations) multiplied by 59,418 vehicles]

E. Vehicle Registration – 59,418 vehicles [Derived from the lowest 2003 vehicle registration of any county currently with a monitored violation].

F. Vehicular Miles Traveled (VMT) in county – 1,557,806 miles [derived from lowest 2002 VMT of any county currently with a monitored violation]

The specific values for each of these criteria for the counties analyzed are shown below and are compared to the threshold values.

Meteorology, geography, topography, jurisdictional boundaries, and level of control of emissions are considered on a qualitative basis for each county.

EPA has recommended Dade, Catoosa, and Walker County as part of the Chattanooga Macon Nonattainment Area. Walker county contains one monitor with a design value that exceeds the annual PM2.5 standard, and thus is automatically included in EPD's recommendation for inclusion.

Population Density –

County	Population Density persons/square mile
Catoosa	348
Dade	90
Threshold	**139**

Catoosa County meets the threshold for population density.

Population Growth -

County	Population Growth	
	percent	persons
Catoosa	25%	10,818
Dade	15%	2007
Threshold	**20%**	**2713**

Catoosa County meets both the percent and total persons thresholds for population density.

Percent Urbanization -

County	% Urbanization
Catoosa	56%
Dade	4%
Threshold	**35%**

Catoosa County meets the threshold for percent urbanization.

In Commutes -

County	In-Commutes	
	to Hamilton Co.	to Walker Co.
Catoosa	12,320	1937
Dade	3091	747
Threshold	**8913**	**8913**

Catoosa County meets the threshold for commuting to Hamilton County. Neither county meet the threshold for commuting to Walker County.

Vehicle Registration –

County	vehicle registration
Catoosa	51,799
Dade	15,210
Threshold	**59,418**

Neither County meets the threshold for vehicle registration.

Vehicle Miles Traveled –

County	VMT
Catoosa	2,057,495
Dade	976,918
Threshold	**1,557,806**

Catoosa County meets the threshold for vehicle miles traveled.

Summary of Quantitative Factors – Catoosa County meets five of the six quantitative criteria. However, except for population density, Catoosa County only exceeds each of the criteria by a small margin. Dade County meet none of the criteria.

Meteorology – Wind frequency data was obtained from U.S. EPA's PM2.5 Designation Technical Information web page (www.epa.gov/ttn/naaqs/pm/pm25_tech_info.html) for Hamilton and Walker Counties (the counties where the violating monitors are located). Data from both counties show a strong indication of prevailing winds from the north by northeast and

south by southwest. This is consistent with the topography of the region (discussed further below) being dominated by a series of parallel ridges running along this same direction. Because of the predominating wind directions, emissions from Catoosa County are likely to have an impact on PM2.5 levels in Chattanooga. However, because Lookout Mountain separates Dade County from the remainder of the Chattanooga area, emissions from Dade County are less likely to have an impact on PM2.5 levels in Chattanooga.

Geography - Both Dade and Catoosa Counties are adjacent to the two counties (Walker and Hamilton) that have violating monitors. There are no other geographical factors effecting these counties.

Topography – The topography of the Chattanooga area is dominated by a series of parallel ridges running generally from north by northeast to south by southeast. The primary ridges, running from east to west are: White Mountain, Peavine Ridge, Boynton Ridge, Missionary Ridge, Hawkins Ridge, and Lookout Mountain. Most of these ridges peak at about to 1000 to 1150 feet in elevation from base of around 700 feet, with the tallest being 1300 high White Oak Mountain to the east and the significantly taller 2100 foot Lookout Mountain to the west.

The Dade/Walker county line runs atop or along side Lookout Mountain from the Tennessee boarder all the way to the Alabama/Georgia boarder. Therefore, virtually all of the emissions from Dade County occur west of Lookout Mountain. The two violating PM2.5 monitors in the Chattanooga area are in Rossville, GA, just west of Missionary Ridge, and in East Ridge, TN, between Missionary and Boynton Ridge, both east of Lookout Mountain. Based on EPD's 2002 emissions inventory, the PM2.5 precursor emissions in Dade County are from low-emitting area and mobile sources. There are no major stationary sources of PM2.5 precursor emissions in Dade County. Therefore, PM2.5 precursor emissions from Dade County are less likely to have an impact on the Rossville and East Ridge PM2.5 monitors, particularly during periods of atmospheric inversion which are more likely to be high PM2.5 periods, than emissions east of Lookout Mountain or from tall stacks, such as power plants.

Jurisdictional – Catoosa, Dade, and Walker counties are part of the Chattanooga Metropolitan Statistical Area (MSA). Most of Catoosa, the northeaster portion of Walker County, and a very small portion of Dade County area all part of the Chattanooga MPO. All three Georgia counties fall within the jurisdiction of Georgia EPD, while Hamilton County (which contains the urban core of the Chattanooga area) is under the jurisdiction of a local air pollution control agency, the Chattanooga-Hamilton County Air Pollution Control Bureau. The remaining counties that EPA has recommended for inclusion in the Chattanooga PM2.5 nonattainment county fall within the jurisdiction of the Tennessee Department of Environment and Conservation (Marion County) and Alabama Department of Environmental Management (Jackson County).

Dade County is located between Hamilton County and Jackson County, Alabama, which has a high L-Score. U.S. EPA has suggested to EPD that Dade County would need to be included in the Chattanooga PM2.5 nonattainment area in order to connect Jackson County, which contains a large emitting facility (i.e., a power plant) to the nonattainment area. However, Marion County, Tennessee, is also adjacent to both Hamilton and Jackson Counties. Marion County has a higher Cumulative Weighted Emissions Score as calculated by U.S. EPA and revised L-Score as calculated by Georgia EPD. Therefore, if there is a need to connect Jackson County to the rest of the Chattanooga PM2.5 nonattainment area, it is more logical that this connection be through Marion County and not Dade.

Level of Control of Emissions – None of the Georgia counties recommended by U.S. EPA as part of the Chattanooga PM2.5 nonattainment area are subject to air quality control measures more stringent than elsewhere in the state. However, both Catoosa and Walker Counties have committed to stage I vapor controls and seasonal open burning restrictions as part of the Chattanooga Early Action Plan for complying with the 8-hr ozone standard. These rules are scheduled to be adopted by the Georgia Board of Natural Resources in December, 2004. In addition to these two regulatory measures, Catoosa and Walker Counties will be pursuing local control measures such as truck stop electrification projects, school bus conversions and retrofits, and voluntary smog alert programs.

8-hour Ozone Nonattainment Boundaries – U.S. EPA had originally designated Catoosa County as part of the Chattanooga 8-hour ozone nonattainment area. However this designation was deferred until September 30, 2005, as a result of the approval of the Chattanooga Early Action Compact.

PARTIAL COUNTY ANALYSIS FOR WALKER COUNTY

Since Walker County contains a violating PM2.5 monitor in Rossville, Walker County must be designated as non-attainment for PM2.5. However, this monitor is located in Rossville, which is located in the northeast corner of the county near the Tennessee boarder and Chattanooga. Being close to Chattanooga, the northern portion of Walker County is significantly more urbanized than the southern portion. For this reason, a partial county designation was analyzed for Walker County.

The area analyzed for partial county designation included that portion of Walker County that is part of the Chattanooga MPO. The MPO includes the areas around Rock Springs and Chickamauga and northward, excluding the top and eastern slope of Lookout Mountain, but including the city of Lookout Mountain, Georgia. A more detailed description of this area is below.

Walker county has a total area of 447 square miles. Sixty seven percent of this is forested. The majority of the forested area is in the southern and western part of the county outside the MPO. The forested area includes a portion of Chattahoochee National Forest in the southeastern part of the county and Crawford-Pigeon Mountain Wildlife Management Area in the southwestern part of the county. Three of the four incorporated cities in Walker County are within the MPO (MPO: Chickamauga, Lookout Mountain, Rossville; non-MPO: LaFayette).

Walker County officials have submitted data on the portions of the county within and outside of the Chattanooga MPO.

Population Density –

County Portion	Population Density persons/square mile
MPO	556
non-MPO	78
Threshold	**139**

The MPO portion of the county exceeds the threshold for population density while the non-MPO portion does not.

Population Growth -

County Portion	Population Growth	
	percent	persons
MPO	9%	2515
non-MPO	0.6%	198
Threshold	**20%**	**2713**

Neither the MPO nor non-MPO portion of Walker County exceeds the percent population growth threshold. The total persons threshold was actually based on Walker County. It is clear that the majority of population growth in both percentage and total persons occurred within the MPO portion of the county.

Percent Urbanization -

County Portion	% Urbanization
MPO	78%
non-MPO	27%
Threshold	**35%**

The MPO portion of the county exceeds the percent urbanization threshold while the non-MPO portion does not.

In Commutes -

Walker County officials could not provide data on the number of in-commutes from Walker County to Hamilton County apportioned by MPO and non-MPO, but they did provide data on 1) number of persons within and without the MPO who commute to outside Georgia and 2) the number of persons within Walker County who commute to Hamilton County. The total number of persons who commute to outside Georgia is 9305 and the number of people who commute from Walker to Hamilton is 9098. Thus, the vast majority of the out-of state commutes shown below would be to Hamilton County.

County Portion	Out-of State Commutes
MPO	7643
non-MPO	1662
Threshold	**8913**

Neither portion of Walker county exceeds the in-commute threshold, but the data shows that the majority of in-commutes into Hamilton County are from within the MPO area.

Vehicle Registration –

County Portion	vehicle registration
MPO	29,771
non-MPO	29,747
Threshold	**59,418**

The vehicle registration threshold was based on Walker County. These figures show that the numbers of vehicles registered within and outside the MPO are about the same.

Vehicle Miles Traveled –

County Portion	VMT
MPO	780,045
non-MPO	776,807
Threshold	**1,557,806**

The VMT threshold was based on Walker County and this has no real meaning in this portion of the analysis.

Summary of Quantitative Factors – Of the thresholds that were not based on Walker County itself, the MPO portion of the county meets Catoosa County meets two of the three quantitative criteria and the non-MPO portion meets none. Of the thresholds that were based on Walker County, the data shows that there is much more commuting to Hamilton County from the MPO portion than the non-MPO portion. Vehicle registration and VMT is about the same in both portions of the county.

CONCLUSION

Based on the above factors and the revised L-Scores analysis conducted by EPD, we conclude that the portion of Walker County described below that includes the portion of the county included in the Chattanooga MPO be included in the Chattanooga PM2.5 nonattainment area. By including this portion of Monroe County, the nonattainment area captures the vast majority of PM2.5 emissions and precursors from Walker County. (A map of this area is attached.)

> *From the west Walker County line ¾ of a mile south of Lookout Mtn. city limits, the boundary travels southeast to the 3700 block of Lula Lake Rd. Boundary then travels south intersecting the 2200 block of Nick-a-Jack Rd. and continues south 1 ½ miles. Boundary then travels east to 7600 block of Hwy 193 at N. Cedar Ln. intersection. Boundary then travels east following southern right of way of Walker Hollow Rd. to 1500 block of N. Marbletop Rd. Boundary then travels southeast intersecting 400 block of Childress Hollow Rd. and continuing east to east right of way of McCarty Rd. Boundary then travels south ½ mile. Boundary then travels east to north right of way of Peter Lewis Trl. Boundary then travels southeast to 1100 block of S. Hwy 341 at Garretts Chapel Rd. intersection. Boundary then travels southeast to southern right of way of Hames Rd. and Driftwood Dr. Boundary then travels east to intersect 800 block of Lofton Ln. Boundary then travels northeast to 100 block of Glass Mill Rd. at Old Bethel Rd. intersection. Boundary then travels east along southern right of way of Glass Mill Rd. Boundary then intersects 500 block of Old LaFayette Rd. at Glass Mill Rd. intersection. Boundary continues east intersecting 9900 block of N. Hwy 27, 300 block of*

Arnold Rd., and 500 block of Long Hollow Rd. Boundary continues east to 1200 block of Peaving Rd. at E. Long Hollow Rd. intersection. Boundary continues east along southern right of way of Peavine Rd. to east Walker County line.

We conclude that because of its low Updated L-Score as calculated by Georgia EPD and Weighted Emissions Score as calculated by U.S. EPA, and the fact that it meets none of the "other" factors, that Dade County not be included in the Chattanooga PM2.5 nonattainment area. We conclude that because of its low Updated L-Score as calculated by Georgia EPD and Weighted Emissions Score as calculated by U.S. EPA, and the fact that of the five "other" factors that exceed the threshold, Catoosa County only exceeds the threshold by a small margin, that Catoosa County not be included in the Chattanooga PM2.5 nonattainment area.

Table 4-A: Emissions, L-scores, and cumulative L-scores for Walker County.

County	SO2	NOX	VOC	NH3	Carbon	Crustal	L-score	Cumul. Score
Roane	92,331	30,865	4,300	285	1,230	2,988	15.57	15.57
Jackson	44,333	31,502	4,742	1,494	1,301	2,510	11.74	27.31
Floyd	33,587	16,702	7,042	108	1,298	4,442	11.54	38.85
Hamilton	5,300	20,048	27,150	1,022	872	496	8.84	47.69
Mc Minn	10,216	10,829	5,546	1,268	1,088	1,583	6.94	54.63
Whitfield	4,380	8,910	5,719	142	1,253	1,165	6.80	61.43
Rhea	302	2,625	3,643	149	818	493	3.95	65.37
Bradley	419	4,230	7,551	1,916	442	760	3.36	68.74
De Kalb	741	4,776	5,867	5,765	425	743	3.09	71.82
Loudon	4,035	5,899	5,338	360	310	440	2.75	74.57
Warren	1,189	1,869	3,675	446	414	624	2.57	77.14
Monroe	154	2,387	3,420	554	416	298	2.31	79.46
Walker	1,042	2,426	2,663	56	401	428	2.28	81.74
Gordon	1,129	4,170	2,891	83	348	508	2.24	83.98
Marion	477	3,156	2,640	501	308	341	1.88	85.86
Franklin	482	2,100	2,929	1,512	297	332	1.83	87.69
Fannin	142	1,082	1,122	26	380	222	1.74	89.43
Catoosa	384	3,130	2,635	74	268	339	1.72	91.15
Murray	784	2,332	1,630	41	268	295	1.54	92.69
Cherokee	143	921	1,753	111	281	137	1.42	94.11
Chattooga	2,028	2,138	1,350	29	207	231	1.34	95.45
Polk	2,066	900	949	553	155	130	0.99	96.44
Dade	174	1,954	1,046	34	147	150	0.87	97.31
Grundy	164	1,000	1,150	1,170	113	83	0.69	98.00
Meigs	112	885	871	118	100	91	0.59	98.59
Bledsoe	31	475	528	335	115	84	0.57	99.16
Sequatchie	22	304	591	173	90	46	0.46	99.62
Van Buren	178	291	320	74	79	36	0.38	100.00
CMSA Total	7,377	30,714	36,134	1,687	1,996	1,754		
Area Total	206,345	167,906	109,061	18,399	13,424	19,995		

Table 4-B: 2002 CERR Inventory for Dade County

Pollutant	Area	Mobile	Non-Road	Total
Ammonia (tpy)	0	34.31	0.06	34.6
percent of total	0%	100%	0%	
Nitrogen Oxides (tpy)	46.95	1428.67	478.69	1954.31
percent of total	2%	73%	24%	
Primary PM2.5 (tpy)	9.47	25.44	14.78	49.70
percent of total	19%	51%	30%	
Sulfur Dioxide	96.74	45.96	31.08	173.78
percent of total	56%	26%	18%	
Volatile Organic Compounds	203.19	795.11	47.49	1045.79
percent of total	19%	76%	5%	

Attachment 5
Nonattainment Area Designations for Atlanta under the PM2.5 Standard
Additional Analysis for Jasper and Putnam Counties

U.S. EPA's June 29, 2004 letter added Jasper and Putnam Counties to Georgia EPD's recommendation for the Atlanta PM2.5 nonattainment area. EPA's letter states that Putnam County was included in EPA's recommendation in order to ensure that a sufficient portion of the county that includes identifiable large emitting facilities be included within the boundaries of the nonattainment area. EPA invited Georgia EPD to submit a recommendation of a partial county that will include these large emitting facilities. Based on conversations with U.S. EPA staff, the "large emitting facility" of concern in Putnam County is Georgia Power's Plant Branch. Based on conversations with EPA Region 4 staff, it is also EPD's understanding that U.S. EPA is also amenable to considering a partial county area for Jasper county in order to include large emitting facilities. For Jasper County, the "large emitting facilities" is the Georgia-Pacific complex located in Monticello.

EPD has determined that is not practical to design partial county nonattainment boundaries for Jasper or Putnam Counties which include the Geogia-Pacific complex and Plant Branch that are contiguous to the remainder of the Atlanta PM2.5 nonattainment area. This is because the Georgia-Pacific complex is located in the middle of Jasper County and Plant Branch is located in the southeastern corner of Putnam County.

There are only three major sources of PM2.5 emissions or precursors in Jasper County. All three are part of a Georgia-Pacific Complex southwest of Monticello. These include Georgia-Pacific Corporation – Monticello Plywood Plant, Georgia-Pacific Corporation – Monticello Panelboard Plant, and Georgia-Pacific Corporation – Monticello MDF plant. PM2.5 emissions and precursor emissions as reported in the 2003 CERR (for Panelboard and MDF) and 2002 CERR (for Plywood) are shown below.

Facility	VOC (tons/yr)	NOx (tons/yr)	SO2 (tons/yr)	PM2.5 (tons/yr)	Ammonia (tons/yr)
Plywood	74.7	115.2	0	0	0
Panelboard	178.5	13.4	0.1	0.3	0
MDF	1.5	14.8	1.3	0	0
Total	254.7	143.4	1.4	0.3	0

The Georgia-Pacific complex emits no ammonia and insignificant amounts of sulfur dioxide and PM2.5. The VOC emissions of 254 tons/yr and NOx emissions of 143.4 tons/yr are insignificant to the total VOC emissions of 231,140 tons/yr and NOx emissions of 286,049 tons/yr for EPD's recommended PM2.5 nonattainment area for Atlanta.

The Georgia-Pacific Monticello Complex is approximately 43 miles and Plant Branch is approximately 65 miles from the nearest PM2.5 monitor in the Atlanta area (South DeKalb monitor). Georgia-Pacific Monticello and Plant Branch are closer to other

PM2.5 monitors than they are to the closest Atlanta monitor. Georgia-Pacific is approximately 54 miles NW of the Sandersville monitor, 33 miles NW of the Gordon monitor, and 33 miles N of both Macon monitors. Plant Branch is approximately 32 miles NW of the Sandersville monitor, 21 miles N of the Gordon monitor, and about 36 miles NE of both Macon monitors.

Wind frequency data was obtained from U.S. EPA's PM2.5 Designation Technical Information web page (www.epa.gov/ttn/naaqs/pm/pm25_tech_info.html) for Clayton, DeKalb, and Gwinnett Counties. These three counties contain the PM2.5 monitors in the Atlanta area that are closest to Jasper and Putnam Counties and thus would more likely affected by emissions from those counties than other monitors in the Atlanta area. Review of this data shows that the prevailing winds for all three counties are predominantly from the northwest and secondarily from the east. Both Jasper and Putnam Counties lie southeast of the Atlanta area. While the wind patterns in middle Georgia are fairly evenly dispersed, the most frequent wind direction for all three of these counties is from the WNW.

Because of the distances and wind patterns of these monitors in relation to Georgia-Pacific Monticello and Plant Branch, both of these facilities would have a bigger impact on the Sandersville and Gordon monitors, both of which are in compliance with the PM2.5 standard (14.0 ug/m^3 for Sandersville and 14.9 ug/m^3 for Gordon) than the closest non-complying monitors (15.7 ug/m^3 for the South DeKalb monitor and 15.2 for the Macon-Allied Chemical monitor).

In Georgia EPD's June 17, 2004, submittal, we stated that both Putnam and Jasper Counties met only one of the six "other factor" thresholds as determined by EPD. The June 17 submittal also discusses how both Jasper and Putnam Counties are already subject to VOC and NOx control regulations that are more stringent than other portions of the state.

EPA's April 1, 2003, guidance memo "Designations for the Fine Particulate National Ambient Air Quality Standards" states the following:

> Boundaries used for implementation of the 8-hour ozone standard may also be an important factor in determining boundaries for the $PM_{2.5}$ nonattainment areas. Indeed, there are many areas that violate both the 8-hour ozone and the $PM_{2.5}$ standards, and States and Tribes may wish the nonattainment boundaries for the two pollutants to be identical in order to coordinate air quality planning, control strategy development, and the implementation of the transportation conformity rule.

Thus, keeping the Atlanta PM2.5 nonattainment area as similar as possible to the existing 8-hour ozone nonattainment will ensure more efficient air quality and transportation planning and control strategy development. The only difference between the 8-hour ozone nonattainment area and EPD's recommended PM2.5 nonattainment area for Atlanta is a small portion of northeast Heard County. There are no public roads in this

section of Heard County and only one stationary source of emissions – Georgia Power's Plant Wansley.

All of the above information provides sound evidence that neither Jasper nor Putnam County should be included in the Atlanta PM2.5 nonattainment area. As stated in EPD's June 17th submittal, should EPD find it necessary to require emission reductions from Plant Branch (or any other source not located within a designated nonattainment area) to achieve and maintain attainment of the PM2.5 standard in Atlanta, EPD already has the authority to require such controls under Rule 391-3-1-.03(8)(e).

Attachment 6
Nonattainment Area Designations for Athens under the PM2.5 Standard
Additional Analysis for Oconee and Madison

This document contains Georgia EPD's analysis of Oconee County for possible inclusion in the Athens PM2.5 nonattainment area. EPD has already analyzed Clarke, Madison, Walton, and Jackson County in EPD's June 17, 2004, submittal to EPA. The analysis for Oconee County is conducted in a similar manner as these other Athens area counties. On June 29, 2004, EPA submitted a letter to Governor Perdue indicating EPA's intention to modify Georgia's recommended PM2.5 boundaries including the Athens nonattainment area. EPA's June 29, 2004, letter stated that Madison and Oconee counties should be included in the Athens PM2.5 nonattainment area. Since EPD has already analyzed Madison County, this analysis focuses on Oconee county. This document also analyzes meterological factors for Madison County since such analysis was not conducted as part of EPD's June 17 submittal.

EMISSIONS AND AIR QUALITY ANALYSIS

EPD's Updated L-Score analysis (see Table 6 of EPD's June 17, 2004, submittal) resulted in an L-Score of 5.85 for Oconee County, the 8th highest for the 15 counties analyzed by EPD. U.S. EPA's Weighted Emissions Score for Oconee County is 30.5, the 7th highest of 15 counties analyzed. These datum indicate that the urban excess emissions from Oconee County do not contribute significantly to PM2.5 levels in Athens compared to other area counties.

ANALYSIS USING OTHER FACTORS

EPD has analyzedOconee County using the seven other factors as described in U.S. EPA's April 1, 2003, memorandum "Designations for the Fine Particle National Ambient Standards":

1. population density and degree of urbanization
2. traffic and commuting patterns
3. expected growth
4. meteorology
5. geography/topography
6. jurisdictional boundaries
7. level of control of emissions

Page 6 of the April 1, 2003, EPA memorandum, states that 8-hour ozone nonattainment boundaries should be considered in when recommending nonattainment boundaries for PM2.5. The Athens area was designated as attainment under the 8-hr ozone standard.

The following thresholds were used to determine whether or not a county met criteria 1, 2, or 3.

A. Population Density – 139 persons per square mile [Derived from the lowest projected 2002 population density of any county with a monitored violation]
B. Percent Population growth - 20% (minimum percent urbanization considered by the U.S. Census) and 2713 persons [Derived from lowest increase in population of any county with a monitored violation] for the period 1990-2000. (To meet this criteria, a county would have to meet or exceed both the percent growth and numerical growth thresholds. This takes into account the fact that a county with a low population can experience a high percentage growth rate with only a small increase in actual population.)

C. Percent Urbanization – 35% (minimum percent urbanization considered by U.S. Census Bureau) for 2000
D. In Commutes – At least 8913 vehicles commuting into a core county or a county with a monitored violation. The in-commute into core counties or counties with a monitored violation was only considered for those counties outside a current non-attainment area [Derived from 15% (minimum commute considered by U.S. Census Bureau in MSA determinations) multiplied by 59,418 vehicles]
E. Vehicle Registration – 59,418 vehicles [Derived from the lowest 2003 vehicle registration of any county currently with a monitored violation].
F. Vehicular Miles Traveled (VMT) in county – 742,000 miles [derived from lowest 2002 VMT of any county currently with a monitored violation]

The specific values for each of these criteria for the counties analyzed are shown below and are compared to the threshold values.

Meteorology, geography, topography, jurisdictional boundaries, and level of control of emissions are considered on a qualitative basis for each county.

Population Density –

County	Population Density persons/square mile
Oconee	147
Threshold	**139**

Oconee County exceeds the threshold for population density only slightly.

Population Growth -

County	Population Growth	
	percent	persons
Oconee	49%	8607
Threshold	**20%**	**2713**

Oconee County both the percent and total persons thresholds for population density.

Percent Urbanization -

County	% Urbanization
Oconee	49.7%
Threshold	**35%**

Oconee County meets the threshold for percent urbanization.

In Commutes -

County	In-Commutes to Clarke Co.

Oconee	6696
Threshold	**8913**

Oconee County does not meet the threshold for commuting to Clarke County.

Vehicle Registration –

County	vehicle registration
Oconee	29,863
Threshold	**59,418**

Oconee County does not meet the threshold for vehicle registration.

Vehicle Miles Traveled –

County	VMT
Oconee	1,304,968
Threshold	**1,557,806**

Oconee County does not meet the threshold for vehicle miles traveled.

Summary of Quantitative Factors – Oconee County meets three of the six quantitative criteria, but one of them (population density) only slightly.

Meteorology – Wind frequency data was obtained from U.S. EPA's PM2.5 Designation Technical Information web page (www.epa.gov/ttn/naaqs/pm/pm25_tech_info.html) for Clarke County (the county where the violating monitor is located). The data show a strong indication of prevailing winds from the west. Oconee County is located to the south of Clarke County. Madison County is located northeast of Clarke County.

Geography - Oconee County is adjacent to the county (Clarke) that has a violating monitor. There are no other geographical factors affecting these counties.

T*opography* – There are no topographical issues that affect air quality in the Athens area.

Jurisdictional – Oconee County is part of the Athens Metropolitan Statistical Area (MSA). Oconee County, as well as the rest of the Athens area is under the jurisdiction of Georgia EPD.

Level of Control of Emissions – Oconee County is subject to the following six air quality control measures that are more stringent than elsewhere in the state:

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)(bbb) - Gasoline Marketing
391-3-1-.02(5)(b)2 – Open Burning, Specific County Restrictions

CONCLUSION

Based on the above factors and the revised L-Scores analysis conducted by EPD, we conclude that Oconee County should not be included in the Athens PM2.5 nonattainment area. This analysis also shows that meterological factors do not indicate that Madison County should be included in the Athens PM2.5 nonattainment area.