

Appendix A

Justification for Modifications to State Recommendations

PM2.5 Nonattainment Areas

State of Georgia

**(included with June 29, 2004, letter
from J.I. Palmer to Sonny Perdue)**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 29 2004

4APT-APB

Honorable Sonny Perdue
Governor of Georgia
203 State Capitol
Atlanta, GA 30334

Dear Governor Perdue:

Fine-particle pollution represents one of the most significant barriers to clean air facing our nation today. These tiny particles – about 1/30th the diameter of a human hair – have been scientifically linked to serious human health problems. Their ability to be suspended in air for long periods of time makes them a public health threat far beyond the source of emissions. An important part of our nation's commitment to clean, healthy air deals with reducing levels of this fine particle or PM2.5 pollution.

In February, your State submitted its recommended boundaries for PM2.5 attainment and nonattainment areas. We have thoroughly reviewed your recommendations and the technical information you have submitted to support your recommendations. We appreciate the effort your State has made to develop this supporting information. Consistent with the Clean Air Act, this letter is to notify you that based on the information contained in your submittal, EPA intends to make modifications to recommended designations and boundaries in your State.

The detailed enclosure contains a description of areas where EPA intends to modify your State recommendations, and the basis for such modification. Should you have additional information that you wish to be considered by EPA in this process, we request that you provide it to us by September 1.

You will hear from us again in November when EPA takes the final step in the PM2.5 designation process and determines those areas that are in attainment and meet the fine particle standards and those areas that do not meet them. For areas in attainment, the challenge will be not only to maintain, but also to continue the progress you have made toward clean air. It is a commitment to no backsliding in your State's clean air status for fine particles. EPA will also issue a proposed fine particle implementation rule prior to final designations, which will allow you to proceed with planning to achieve clean air.

The Bush Administration is addressing fine particle pollution with a comprehensive national clean air strategy. This strategy includes EPA's recent rule to reduce pollution from nonroad diesel engines, and the proposed rule to reduce pollution from power plants in the eastern U.S. These two rules are important components of EPA's efforts to help States and

localities meet the more protective national fine-particle and 8-hour ozone air quality standards. Together these rules will help all areas of the country achieve cleaner air.

Should you or your staff have any questions, I invite you to contact Beverly H. Banister, Director, Air Pesticides and Toxics Management Division, at 404/562-9077, or Kay T. Prince, Chief, Air Planning Branch, at 404/562-9026. We look forward to a continued dialogue with you as we work together to implement the PM2.5 standards.

Sincerely,

A handwritten signature in black ink, appearing to read "J. I. Palmer, Jr.", with a large, stylized initial "J" and a flourish at the end.

J. I. Palmer, Jr.
Regional Administrator

Enclosure

cc: Robert Riley, Governor of Alabama
Phil Bredesen, Governor of Tennessee
Carol Couch, Director, GAEPD
Ron Methier, Chief, APB, GAEPD
Robert W. King, SCDHEC
James Joy, BAQ SCDHEC
Myra Reece, BAQ SCDHEC
Betsy L. Child, TNDEC
Barry R. Stephens, DAPC TNDEC
Ron Gore, ADEM
Daniel E. Shea, Huntsville DAR
James L. Carroll, Jefferson Co. DHEHS



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JUN 29 2004

4APT-APB

Carol A. Couch, PhD, Commissioner
Environmental Protection Division
Georgia Department of Natural Resources
Suite 1152, East Tower
Two Martin Luther King Jr. Drive
Atlanta, GA 30334

Dear Ms. Couch:

Fine-particle pollution represents one of the most significant barriers to clean air facing our nation today. These tiny particles – about 1/30th the diameter of a human hair – have been scientifically linked to serious human health problems. Their ability to be suspended in air for long periods of time makes them a public health threat far beyond the source of emissions. An important part of our nation's commitment to clean, healthy air deals with reducing levels of this fine particle or PM_{2.5} pollution.

In February, your State submitted its recommended boundaries for PM_{2.5} attainment and nonattainment areas. We have thoroughly reviewed your recommendations and the technical information you have submitted to support your recommendations. We appreciate the effort your State has made to develop this supporting information. Consistent with the Clean Air Act, this letter is to notify you that based on the information contained in your submittal, EPA intends to make modifications to recommended designations and boundaries in your State.

Your Governor was sent a letter today notifying him that EPA is modifying the State's recommendation. This letter contains a more detailed enclosure containing a description of areas where EPA intends to modify your State recommendations, and the basis for such modification. Should you have additional information that you wish to be considered by EPA in this process, we request that you provide it to us by September 1, 2004.

You will hear from us again in November when EPA takes the final step in the PM_{2.5} designation process and determines those areas that are in attainment and meet the fine particle standards and those areas that do not meet them. For areas in attainment, the challenge will be not only to maintain, but also to continue the progress you have made toward clean air. It is a commitment to no backsliding in your State's clean air status for fine particles. EPA will also issue a proposed fine particle implementation rule prior to final designations, which will allow you to proceed with planning to achieve clean air.

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national clean air strategy. This strategy includes EPA's recent rule to reduce pollution from nonroad diesel engines, and the proposed rule to reduce pollution from power plants in the eastern U.S. These two rules are important components of EPA's efforts to help States and localities meet the more protective national fine-particle and 8-hour ozone air quality standards. Together these rules will help all areas of the country achieve cleaner air.

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Enclosure for 120 Day Letter
Justification for Modifications to State Recommendations
PM 2.5 Nonattainment Areas
State of Georgia

An Explanation of EPA's 9-Factor Analysis

Factor 1. Emissions in areas potentially included versus excluded from the nonattainment area:

The analysis for factor 1 looks at emissions of carbonaceous particles ("carbon"), inorganic particles ("crustal"), SO₂, and NO_x. EPA computed a composite emission score for each county by multiplying the county's emissions as a fraction of the metropolitan area emissions for each of these pollutants times a corresponding air quality weighting factor. The air quality weighting factors for each area are given below and reflect the percentages of the total estimated "urban excess" value found as, respectively, carbonaceous particles, miscellaneous inorganic particles ("crustal material"), ammonium sulfate, and ammonium nitrate. These scores add to 100 for the metropolitan area counties. Composite scores were also calculated for counties adjacent to the metropolitan area. Tables presented under factor 1 present the emissions of carbonaceous particles, inorganic particles, SO₂, and NO_x and the composite emission scores for the counties in the corresponding metropolitan area and adjacent counties. Metropolitan area counties are in bold. Emissions data indicate the potential for a county to contribute to observed violations, often making the emissions data the most important factor in assessing boundaries of nonattainment areas.

"Urban excess" values are derived by comparing urban monitored component concentrations against rural monitored component concentrations. Concentrations of the four PM_{2.5} components are obtained from local data if available (or, if necessary, from the nearest available urban site), and are compared to available rural concentrations. The monitoring sites used for this purpose are identified below. Although this information is air quality information, it is presented under Factor 1 due to its integration into the analysis of emissions information.

Factor 2. Air quality in potentially included versus excluded areas:

The air quality analysis looks at the annual averaged design value for each area based on data for 2001 to 2003. Counties without monitors are not listed.

Factor 3. Population density and degree of urbanization including commercial development in included versus excluded areas:

Tables presented under factor 3 show the 2003 population for each metropolitan area, as well as the population density for each county in that area. Population data indicate the likelihood of population-based emissions that might contribute to violations.

Factor 4. Traffic and commuting patterns:

The traffic and commuting analysis looks at the number of commuters in each county who drive to another county within the metropolitan area ("Number"), the percent of total commuters in

each county who commute to other counties within the metropolitan area (“percent”), as well as the total Vehicle Miles Traveled (VMT) for each county in thousands of miles. A county with numerous commuters is generally an integral part of the area, and would be an appropriate part of the domain of some mobile source strategies, thus warranting inclusion in the nonattainment area.*

**Note that the percent of commuters traveling to counties within the metropolitan area is based on the total number of commuters from that county. This total includes commuters who may travel outside the metropolitan area from their county of origin.*

Factor 5. Expected growth:

The expected growth analysis looks at the percent growth for counties in each metropolitan area from 1990 to 2000.

Factor 6. Meteorology:

The meteorology analysis looks at wind data gathered over a ten year period by the National Weather Service. Tables presented under factor 6 list the year round average prevailing wind directions by quadrant for each county in the corresponding metropolitan area. These data show that annual average PM2.5 concentrations are influenced by emissions in any direction at various times, but these data may also suggest that emissions in some directions relative to the violation may be more prone to contribute than emissions in other directions.

Factor 7. Geography/topography:

The geography/topography analysis looks at physical features of the land that might have an effect on the airshed, and therefore, the distribution of particulate matter over an area. The State of Georgia has no such features that significantly influenced EPA’s recommended nonattainment areas.

Factor 8. Jurisdictional boundaries:

The analysis of jurisdictional boundaries looks at the planning and organizational structure of an area to determine if the implementation of controls in a potential nonattainment area can be carried out in a cohesive manner.

Factor 9. Level of control of emission sources:

The level of control analysis looks at what controls are currently implemented in each area.

9 Factor Analysis for the Atlanta MSA

The Atlanta MSA contains the counties of: Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Pickens, Rockdale, Spalding, and Walton.

On February 13, 2004, the State of Georgia submitted to EPA their PM 2.5 nonattainment recommendations. Georgia recommended only counties which contained a monitored violation and provided no further justification at that time. On June 17, 2004, the State submitted additional information and revised recommendations. The revision recommended the 20 county ozone nonattainment area, which includes the adjacent county of Hall, plus a partial county recommendation for Heard County adjacent to the Atlanta MSA which contains no monitor, but a power plant with large SO₂ and NO_x emissions. The State also recommended that Floyd County which is adjacent to the Atlanta MSA and has a violating monitor be designated as a separate nonattainment area. The adjacent counties of Hall, Jasper and Putnam have significant emissions with a potential to contribute to the violations in the Atlanta area. Putnam county contains a power plant with large SO₂ and NO_x emissions. We have included in our recommended nonattainment area Putnam County in your state that is contiguous to this CMSA with a violating monitor, that is generally rural in character, and that contains an identifiable large emitting facility or facilities (e.g., power plants) which we believe contributes to the nearby nonattainment problem. We have included this county in our initial recommendations in order to ensure that a sufficient portion of this county, including such large facilities, is included within the boundaries of the nonattainment area as part of the final designations. We invite you to submit to us a recommendation as to what portion of such contiguous county, encompassing the large facility or facilities, should be designated nonattainment. Based on emission levels and the other nine factors, EPA is modifying the Georgia submittal to include Jasper and Putnam counties. EPA agrees with the partial county recommendation for Heard County, and Floyd County as a separate nonattainment area.

Area	EPA Recommendation	State Recommendation
Atlanta, GA	<p>Full counties: Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, Spalding, and Walton</p> <p>Adjacent: Floyd as a separate area; Hall, Heard as a partial, Jasper, Putnam</p>	<p>Full counties: Barrow, Bartow, Carroll, Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, Spalding, and Walton</p> <p>Adjacent: Floyd as a separate area; Hall, Heard as a partial</p>

The following is a brief summary of the 9 criteria for the Atlanta MSA and surrounding counties. These analyses were based on existing available data.

Factor 1: Emissions in areas potentially included versus excluded from the nonattainment area

The following table has the 2001 PM_{2.5}, SO_x, NO_x, VOC, and ammonia emissions in tons and weighted scores for the counties in the Atlanta MSA and some adjacent counties. (MSA counties are in **bold**.)

County	PM	SO _x	NO _x	VOC	Amm	Weighted score	Cumulative Weighted score
Fulton	16,041	11,819	48,166	44,184	1,948	18.7	18.7
Bartow	9,181	154,447	43,326	5,725	1,309	12.5	31.2
Cobb	3,767	26,411	27,948	27,219	969	9.6	40.8
Coweta	3,795	44,839	15,822	5,048	241	9.4	50.2
De Kalb	3,557	1,734	27,204	36,184	1,175	8.6	58.8
Cherokee	3,761	400	6,769	7,334	1,450	7.4	66.2
Clayton	2,727	612	9,808	10,776	437	6.1	72.3
Gwinnett	2,514	1,446	23,075	27,071	992	5.7	78.0
Henry	2,090	392	14,577	6,349	269	3.6	81.6
Forsyth	1,917	288	5,267	5,763	1,990	2.7	84.3
Carroll	1,629	293	5,536	7,224	2,808	2.6	86.9
Paulding	1,415	236	4,393	3,593	449	2.5	89.4
Douglas	822	239	4,565	4,342	163	1.8	91.2
Newton	1,147	226	4,109	5,047	240	1.8	93.0
Fayette	1,122	252	4,531	4,499	173	1.6	94.6
Walton	919	176	2,759	3,952	755	1.4	96.0
Spalding	795	180	3,251	3,839	212	1.1	97.1
Barrow	706	128	2,340	2,738	1,632	1.0	98.1
Rockdale	774	222	3,678	3,820	166	1.0	99.1
Pickens	463	83	1,116	1,769	1,204	0.9	100.0
Jasper	2,835	210	28,144	2,453	360	6.3	
Putnam	3,726	65,560	34,202	1,175	399	6.3	
<i>Floyd</i>	<i>10,057</i>	<i>31,821</i>	<i>22,736</i>	<i>7,139</i>	<i>976</i>	<i>6.1</i>	
Monroe	3,403	75,571	34,069	2,189	644	6.1	
Heard	4,090	75,745	21,714	1,170	634	5.6	

Hall	2,347	1,045	7,714	11,062	3,709	3.0	
Troup	1,194	422	12,277	8,223	382	2.5	
Lee	1,043	1,425	5,125	7,474	333	2.2	
Meriwether	844	190	1,866	3,006	167	1.6	
Gilmer	646	69	1,148	1,273	2,663	1.5	
Walker	856	632	2,798	4,516	958	1.5	
Tallapoosa	679	655	1,993	3,230	263	1.3	
Gordon	872	200	3,645	4,019	2,630	1.3	
Harris	590	104	2,856	1,748	128	1.3	
Jackson	817	151	3,639	2,935	3,584	1.3	
Chambers	579	527	2,350	2,882	124	1.2	
Habersham	651	103	1,757	2,201	3,031	1.1	
Polk	660	142	2,345	3,485	575	1.1	
Jones	455	105	1,537	1,506	230	1.0	
Cherokee	633	222	1,184	2,036	778	0.9	
Randolph	404	223	9,276	1,891	1,294	0.9	
Lumpkin	403	60	905	1,067	1,090	0.9	
Taylor	398	76	966	622	833	0.9	
Upson	476	84	1,568	1,926	286	0.9	
White	449	58	1,000	1,190	1,462	0.9	
Cleburne	331	130	2,057	1,091	1,227	0.8	
Chattooga	450	1,228	1,834	1,634	197	0.8	
Clarke	395	215	3,362	5,223	390	0.8	
Haralson	410	96	1,768	3,071	371	0.8	
Morgan	390	121	2,422	3,176	1,129	0.8	
Talbot	288	70	903	520	74	0.8	
Butts	357	112	1,609	1,438	88	0.7	
Crawford	346	38	645	570	242	0.7	
Dawson	324	58	915	1,246	1,142	0.7	
Oconee	507	111	1,599	2,047	1,050	0.7	
Banks	325	65	1,178	1,127	3,407	0.6	
Pike	314	42	607	823	148	0.5	
Lamar	257	59	812	1,090	491	0.4	

Based on the emissions analysis the adjacent counties of Floyd, Hall, Heard, Jasper, and Putnam have significant emissions indicating potential contribution to the violations in the area. The Agency agrees that Floyd can be designated as a separate PM2.5 nonattainment area and with the partial county recommendation for Heard. The Agency also agrees with the State that Pickens is not contributing based on the low emissions levels. It was not included in the ozone nonattainment area based on noncontribution.

Factor 2: Air quality in potentially included versus excluded areas

County	2001-2003 Design Value
Fulton	18.0
Cobb	16.1
De Kalb	16.1
Clayton	16.1
Gwinnett	15.6
Paulding	14.1
Floyd	15.7
Hall	14.9
Walker	15.6
Clarke	15.6

There are five counties containing violating monitors in the area recommended by the State and one violating in the adjacent county of Floyd recommended as a separate nonattainment area. Hall County contains an attaining monitor but was recommended by the State as contributing.

Factor 3: Population density and degree of urbanization including commercial development in included versus excluded areas

The following table has the populations for the counties in the Atlanta MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 Population	Percent Population of MSA	Population Density
Fulton	825,431	18.8	1,560
Bartow	82,607	1.9	180
Cobb	651,485	14.9	1,916
Coweta	97,771	2.2	221
De Kalb	676,996	15.4	2,526
Cherokee	159,295	3.6	376
Clayton	252,733	5.8	1,767
Gwinnett	650,771	14.8	1,503
Henry	139,699	3.2	433
Forsyth	116,924	2.7	517
Carroll	94,907	2.2	190
Paulding	94,184	2.1	300
Douglas	98,650	2.2	496
Newton	71,594	1.6	259
Fayette	96,611	2.2	490
Walton	67,069	1.5	204
Spalding	59,410	1.4	300
Barrow	51,016	1.2	315
Rockdale	73,558	1.7	562
Pickens	25,619	0.6	110
Jasper	12,283		33
Putnam	19,390		56
<i>Floyd</i>	<i>92,606</i>		<i>181</i>
Monroe	22,675		57
Heard	11,340		38
Hall	152,235		386

Pickens County has the lowest population of any of the MSA counties supporting the noncontributing determination. Although, Heard, Jasper and Putnam counties have small population, they contain sources with large emissions.

Factor 4: Traffic and commuting patterns

Commuting Information:

Fulton County has a total of 385,442 commuters.

- Commuters that remain in Fulton County: 265,870
- Commuters from Fulton County to Cobb County: 24,991
- Commuters from Fulton County to Dekalb County: 41,232
- Commuters from Fulton County to Clayton County: 9,722
- Commuters from Fulton County to Gwinnett County: 21,211

Bartow County has a total of 35,953 commuters.

- Commuters that remain in Bartow County: 20,692
- Commuters from Bartow County to Fulton County: 1,882
- Commuters from Bartow County to Cobb County: 6,936
- Commuters from Bartow County to Dekalb County: 678
- Commuters from Bartow County to Gwinnett County: 392
- Commuters from Bartow County to Floyd County: 986

Cobb County has a total of 325,412 commuters.

- Commuters that remain in Cobb County: 179,750
- Commuters from Cobb County to Fulton County: 92,014
- Commuters from Cobb County to Dekalb County: 18,098
- Commuters from Cobb County to Gwinnett County: 8,723

Coweta County has a total of 43,506 commuters.

- Commuters that remain in Coweta County: 20,735
- Commuters from Coweta County to Fulton County: 8,855
- Commuters from Coweta County to Cobb County: 1,136
- Commuters from Coweta County to Dekalb County: 1,014
- Commuters from Coweta County to Clayton County: 3,097

Dekalb County has a total of 341,110 commuters.

- Commuters that remain in Dekalb County: 149,919
- Commuters from Dekalb County to Fulton County: 121,921
- Commuters from Dekalb County to Cobb County: 13,448
- Commuters from Dekalb County to Clayton County: 5,644
- Commuters from Dekalb County to Gwinnett County: 34,747

Cherokee County has a total of 74,075 commuters.

- Commuters that remain in Cherokee County: 26,239
- Commuters from Cherokee County to Fulton County: 17,494
- Commuters from Cherokee County to Cobb County: 18,911
- Commuters from Cherokee County to Dekalb County: 2,898
- Commuters from Cherokee County to Gwinnett County: 2,037

Clayton County has a total of 112,580 commuters.

- Commuters that remain in Clayton County: 42,924
- Commuters from Clayton County to Fulton County: 40,271
- Commuters from Clayton County to Cobb County: 4,053
- Commuters from Clayton County to Dekalb County: 9,024
- Commuters from Clayton County to Gwinnett County: 2,785

Gwinnett County has a total of 309,797 commuters.

- Commuters that remain in Gwinnett County: 169,000
- Commuters from Gwinnett County to Fulton County: 57,737
- Commuters from Gwinnett County to Cobb County: 8,648
- Commuters from Gwinnett County to Dekalb County: 51,481

Henry County has a total of 60,381 commuters.

- Commuters that remain in Henry County: 18,751
- Commuters from Henry County to Fulton County: 14,157
- Commuters from Henry County to Cobb County: 1,365
- Commuters from Henry County to Dekalb County: 5,597
- Commuters from Henry County to Clayton County: 13,541
- Commuters from Henry County to Gwinnett County: 1,531

Forsyth County has a total of 51,224 commuters.

- Commuters that remain in Forsyth County: 21,039
- Commuters from Forsyth County to Fulton County: 15,251
- Commuters from Forsyth County to Cobb County: 1,790
- Commuters from Forsyth County to Dekalb County: 3,067
- Commuters from Forsyth County to Gwinnett County: 5,663

Carroll County has a total of 39,730 commuters.

- Commuters that remain in Carroll County: 24,611
- Commuters from Carroll County to Fulton County: 3,570
- Commuters from Carroll County to Cobb County: 2,044
- Commuters from Carroll County to Dekalb County: 700
- Commuters from Carroll County to Paulding County: 493

Paulding County has a total of 40,830 commuters.

- Commuters that remain in Paulding County: 10,094
- Commuters from Paulding County to Fulton County: 7,432
- Commuters from Paulding County to Cobb County: 14,850
- Commuters from Paulding County to Dekalb County: 1,288
- Commuters from Paulding County to Clayton County: 440
- Commuters from Paulding County to Gwinnett County: 655

Douglas County has a total of 46,176 commuters.

- Commuters that remain in Douglas County: 16,924
- Commuters from Douglas County to Fulton County: 14,253
- Commuters from Douglas County to Cobb County: 7,450
- Commuters from Douglas County to Dekalb County: 2,211
- Commuters from Douglas County to Clayton County: 1,196
- Commuters from Douglas County to Gwinnett County: 747
- Commuters from Douglas County to Paulding County: 596

Newton County has a total of 28,560 commuters.

- Commuters that remain in Newton County: 11,545
- Commuters from Newton County to Fulton County: 2,399
- Commuters from Newton County to Cobb County: 411
- Commuters from Newton County to Dekalb County: 3,567
- Commuters from Newton County to Clayton County: 480
- Commuters from Newton County to Gwinnett County: 1,320

Fayette County has a total of 45,231 commuters.

- Commuters that remain in Fayette County: 16,977
- Commuters from Fayette County to Fulton County: 14,745
- Commuters from Fayette County to Cobb County: 1,124
- Commuters from Fayette County to Dekalb County: 1,683
- Commuters from Fayette County to Clayton County: 6,048

Walton County has a total of 29,031 commuters.

- Commuters that remain in Walton County: 11,204
- Commuters from Walton County to Fulton County: 1,666
- Commuters from Walton County to Dekalb County: 2,978
- Commuters from Walton County to Gwinnett County: 7,037

Spalding County has a total of 24,931 commuters.

- Commuters that remain in Spalding County: 13,715
- Commuters from Spalding County to Fulton County: 1,917
- Commuters from Spalding County to Cobb County: 273
- Commuters from Spalding County to Dekalb County: 583
- Commuters from Spalding County to Clayton County: 2,113

Barrow County has a total of 22,616 commuters.

- Commuters that remain in Barrow County: 7,751
- Commuters from Barrow County to Fulton County: 959
- Commuters from Barrow County to Dekalb County: 1,177
- Commuters from Barrow County to Gwinnett County: 8,229

Rockdale County has a total of 32,931 commuters.

- Commuters that remain in Rockdale County: 14,378
- Commuters from Rockdale County to Fulton County: 4,792
- Commuters from Rockdale County to Cobb County: 570
- Commuters from Rockdale County to Dekalb County: 6,187
- Commuters from Rockdale County to Clayton County: 804
- Commuters from Rockdale County to Gwinnett County: 1,985

Pickens County has a total of 11,116 commuters.

- Commuters that remain in Pickens County: 5,318
- Commuters from Pickens County to Fulton County: 741
- Commuters from Pickens County to Cobb County: 938
- Commuters from Pickens County to Dekalb County: 250
- Commuters from Pickens County to Gwinnett County: 218

Jasper County has a total of 5,123 commuters.

- Commuters that remain in Jasper County: 1,910
- Commuters from Jasper County to Fulton County: 267
- Commuters from Jasper County to Dekalb County: 238
- Commuters from Jasper County to Clayton County: 105
- Commuters from Jasper County to Gwinnett County: 57

Putnam County has a total of 8,055 commuters.

- Commuters that remain in Putnam County: 4,478
- Commuters from Putnam County to Fulton County: 177
- Commuters from Putnam County to Dekalb County: 129
- Commuters from Putnam County to Gwinnett County: 82

Floyd County has a total of 39,622 commuters.

- Commuters that remain in Floyd County: 32,440
- Commuters from Floyd County to Fulton County: 528
- Commuters from Floyd County to Cobb County: 662

Monroe County has a total of 10,316 commuters.

- Commuters that remain in Monroe County: 4,116
- Commuters from Monroe County to Fulton County: 318
- Commuters from Monroe County to Dekalb County: 140
- Commuters from Monroe County to Clayton County: 233

Heard County has a total of 4,488 commuters.

- Commuters that remain in Heard County: 1,413
- Commuters from Heard County to Fulton County: 308
- Commuters from Heard County to Cobb County: 70

Hall County has a total of 65,402 commuters.

- Commuters that remain in Hall County: 46,680
- Commuters from Hall County to Fulton County: 2,244
- Commuters from Hall County to Dekalb County: 1,716
- Commuters from Hall County to Gwinnett County: 7,189

The following table contains the vehicle miles traveled (thousand miles) for the counties in the Atlanta MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 VMT	2002-2010 VMT Growth
Fulton	11,358	4,592
Bartow	1,322	-285
Cobb	7,015	4,008
Coweta	1,562	-596
De Kalb	9,356	4,119
Cherokee	1,795	222
Clayton	3,148	1,341
Gwinnett	6,736	1,600
Henry	1,744	-508
Forsyth	1,271	-328
Carroll	1,431	-255
Paulding	1,047	-157
Douglas	1,251	465
Newton	1,049	-300
Fayette	1,197	-324
Walton	684	-104
Spalding	796	-59
Barrow	590	-123
Rockdale	924	345
Pickens	237	90
Jasper	112	70
Putnam	179	37
Floyd	948	732
Monroe	572	-283
Heard	146	40
Hall	1,897	-181

Pickens County has a very low VMT and VMT growth thus supporting the attainment/unclassifiable recommendation. Approximately 82 percent of Floyd County commuters stay within the county. This commuting pattern supports Floyd County as a separate nonattainment area. Although Jasper and Putnam have low VMT, they have large emission sources.

Factor 5: Expected growth

The following table has the population and population growth figures for the Atlanta MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 Population	Growth 90-00	Percent Growth
Fulton	825,431	167,055	26
Bartow	82,607	20,108	36
Cobb	651,485	160,006	36
Coweta	97,771	35,362	66
De Kalb	676,996	120,028	22
Cherokee	159,295	51,699	57
Clayton	252,733	54,465	30
Gwinnett	650,771	235,538	67
Henry	139,699	60,600	103
Forsyth	116,924	54,324	123
Carroll	94,907	15,846	22
Paulding	94,184	40,067	96
Douglas	98,650	21,054	30
Newton	71,594	20,193	48
Fayette	96,611	28,848	46
Walton	67,069	22,101	57
Spalding	59,410	3,960	7
Barrow	51,016	16,423	55
Rockdale	73,558	16,020	30
Pickens	25,619	8,551	59
Jasper	12,283	2,973	35
Putnam	19,390	4,675	33
Floyd	92,606	9,314	11
Monroe	22,675	4,644	27
Heard	11,340	2,384	28
Hall	152,235	43,849	46

Pickens County has a high percent growth rate. However, the actual numbers of population growth are low which support it's recommendation as attainment.

Factor 6: Meteorology

This factor did not constitute a significant role in the decision making process.

Factor 7: Geography/topography

This factor did not constitute a significant role in the decision making process.

Factor 8: Jurisdictional boundaries

This factor did not constitute a significant role in the decision making process.

Factor 9: Level of control of emission sources

This factor did not constitute a significant role in the decision making process.

9 Factor Analysis for the Macon MSA

The Macon MSA contains the counties of: Bibb, Houston, Jones, Peach, and Twiggs.

On February 13, 2004, the State of Georgia submitted to EPA their PM 2.5 nonattainment recommendations. Georgia recommended only counties which contained a monitored violation and provided no further justification. On June 17, 2004, the State submitted additional information and revised recommendations. The revision recommended that Bibb County be nonattainment and Monroe County as a partial county nonattainment area. EPA agrees with the State's recommendation.

Area	EPA Recommendation	State Recommendation
Macon, GA	Full counties: Bibb, Monroe as partial	Full counties: Bibb, Monroe as partial

The following is a brief summary of the 9 criteria for the Macon MSA and surrounding counties. These analyses were based on existing available data.

Factor 1: Emissions in areas potentially included versus excluded from the nonattainment area

The following table has the 2001 PM_{2.5}, SO_x, NO_x, VOC, and ammonia emissions in tons and weighted scores for the counties in the Macon MSA and some adjacent counties. (MSA counties are in **bold**.)

County	PM	SO _x	NO _x	VOC	AMM	Weighted score	Cumulative Weighted score
Bibb	2,723	8,521	11,353	10,061	370	46.9	46.9
Houston	1,243	1,666	6,285	5,627	629	18.3	65.2
Twiggs	1,203	198	2,263	1,141	92	18.2	83.4
Jones	455	105	1,537	1,506	230	10.5	93.9
Peach	478	89	2,025	2,261	202	6.1	100.0
Monroe	3,403	75,571	34,069	2,189	644	104.3	
Putnam	3,726	65,560	34,202	1,175	399	100.8	
Jasper	2,835	210	28,144	2,453	360	69.0	
Wilkinson	4,397	170	1,368	821	55	48.3	
Laurens	1,222	2,674	4,717	3,688	444	28.6	
Dooly	1,130	140	2,115	1,442	676	19.8	
Macon	1,124	1,395	2,539	1,248	1,349	15.7	
Upson	476	84	1,568	1,926	286	10.3	
Taylor	398	76	966	622	833	9.7	
Baldwin	451	122	2,007	2,949	203	8.9	
Crawford	346	38	645	570	242	8.1	
Butts	357	112	1,609	1,438	88	7.6	
Pulaski	434	37	452	503	263	6.9	
Bleckley	341	31	505	642	146	6.2	
Lamar	257	59	812	1,090	491	4.9	

Based on this analysis, Monroe County has significant emissions which contribute to the violations at the Bibb County monitor. Although Jasper and Putnam counties also have significant emissions, EPA believes those counties should be included in the Atlanta nonattainment area, rather than the Macon nonattainment area. For the counties in the Macon MSA, there is a natural break in the weighted emission score between Bibb and the remaining counties.

Factor 2: Air quality in potentially included versus excluded areas

County	2001-2003 Design Value
Bibb	15.2
Houston	12.8
Wilkinson	14.9

There are two counties containing monitors in the Macon area. Bibb County contains a violating monitor while Houston County contains an attaining monitor. An adjacent county, Wilkinson, also contains an attaining monitor.

Factor 3: Population density and degree of urbanization including commercial development in included versus excluded areas

The following table has the populations for the counties in the Macon MSA and some adjacent counties. Urban population figures were not available. (MSA counties are in **bold**.)

County	2002 Population	Percent Population of MSA	Population Density
Bibb	154,824	47	619
Houston	116,768	35	310
Twiggs	10,545	3	29
Jones	24,492	7	62
Peach	24,224	7	160
Monroe	22,675		57
Putnam	19,390		56
Jasper	12,283		33
Wilkinson	10,357		23
Laurens	45,890		56
Dooly	11,505		29

Twiggs, Jones, and Peach counties all have low populations with low population densities which support their attainment recommendations. Houston County's population density is approximately half that of Bibb County's which supports its attainment recommendation.

Factor 4: Traffic and commuting patterns

Commuting Information:

Bibb County, the design value county, has a total of 63,229 commuters.

- Commuters who remain in Bibb County: 54, 125

Houston County has a total of 53,089 commuters.

- Commuters that remain in Houston County: 39, 954
- Commuters from Houston County to Bibb County: 8,570

Twiggs County has a total of 4,086 commuters.

- Commuters who remain in Twiggs County: 1,019
- Commuters from Twiggs County to Bibb County: 1,929

Jones County has a total of 10,543 commuters.

- Commuters who remain in Jones County: 2,472
- Commuters from Jones County to Bibb County: 5,988

Peach County has a total of 9,731 commuters.

- Commuters that remain in Peach County: 4,137
- Commuters from Peach County to Bibb County: 2,361

Monroe County, an adjacent county, has a total of 10,316 commuters.

- Commuters that remain in Monroe County: 4,116
- Commuters from Monroe County to Bibb County: 3,262

Putnam County has a total of 8,055 commuters.

- Commuters that remain in Putnam County: 4,479
- Commuters from Putnam County to Bibb County: 329

Jasper County has a total of 5,123 commuters.

- Commuters that remain in Jasper County: 1,910
- Commuters from Jasper County to Bibb County: 112

Wilkinson County has a total of 4,060 commuters.

- Commuters that remain in Wilkinson County: 1,933
- Commuters from Wilkinson County to Bibb County: 538

Laurens County has a total of 18,986 commuters.

- Commuters that remain in Laurens County: 16,046
- Commuters from Laurens County to Bibb County: 501

Dooly County has a total of 4,160 commuters.

- Commuters that remain in Dooly County: 2,399
- Commuters from Dooly County to Bibb County: 75

The commuting patterns support Bibb County as the only MSA county in the nonattainment area.

The following table contains vehicle miles traveled (thousand miles) for the counties in the Macon MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 VMT	VMT Growth 02-10
Bibb	1,653	1,096
Houston	1,068	130
Twiggs	469	-270
Jones	283	129
Peach	496	-210
Monroe	572	-283
Putnam	179	37
Jasper	112	70
Wilkinson	152	68
Laurens	1,037	-527
Dooly	348	-185

Twiggs, Jones, and Peach counties have low VMTs with low VMT growth, or negative growth. Houston County has a low VMT growth. This information supports the attainment recommendations for these counties.

Factor 5: Expected growth

The following table has the population and population growth figures for the Macon MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 Population	Growth 90-00	Percent Growth
Bibb	154,824	3,920	3
Houston	116,768	21,557	24
Twiggs	10,545	784	8
Jones	24,492	2,900	14
Peach	24,224	2,479	12
Monroe	22,675	4,644	27
Putnam	19,390	4,675	33
Jasper	12,283	2,973	35
Wilkinson	10,357	-8	-0
Laurens	45,890	4,886	12
Dooly	11,505	1,624	16

Twiggs, Jones, and Peach counties all have low populations with low growth rates. This supports their recommendations as attainment/unclassifiable.

Factor 6: Meteorology

This factor did not constitute a significant role in the decision making process.

Factor 7: Geography/topography

This factor did not constitute a significant role in the decision making process.

Factor 8: Jurisdictional boundaries

This factor did not constitute a significant role in the decision making process.

Factor 9: Level of control of emission sources

This factor did not constitute a significant role in the decision making process.

9 Factor Analysis for the Athens MSA

The Athens MSA contains the counties of: Clarke, Madison, and Oconee.

On February 13, 2004, the State of Georgia submitted to EPA their PM 2.5 nonattainment recommendations. Georgia recommended only counties which contained a monitored violation and provided no further justification. On June 17, 2004, the State submitted additional information and revised recommendations. The revision recommended that Clarke County be designated as nonattainment and that Oconee and Madison counties be designated as attainment.

Area	EPA Recommendation	State Recommendation
Athens, GA	Full counties: Clarke, Oconee, and Madison	Full counties: Clarke

The following is a brief summary of the 9 criteria for the Athens MSA and surrounding Counties. These analyses were based on existing available data.

Factor 1: Emissions in areas potentially included versus excluded from the nonattainment area

The following table has the 2001 PM_{2.5}, SO_x, NO_x, VOC, and ammonia emissions in tons and weighted scores for the counties in the Athens MSA and some adjacent counties. (MSA counties are in **bold**.)

County	PM	SO ₂	NO _x	VOC	AMM	Weighted score	Cumulative Weighted score
Clarke	395	215	3,362	5,223	390	41.2	41.2
Oconee	507	111	1,599	2,047	1,050	30.5	71.7
Madison	543	70	1,449	1,219	3,013	28.3	100
Walton	919	176	2,759	3,952	755	57.1	
Jackson	817	151	3,639	2,935	3,584	52.2	
Greene	437	161	2,137	1,582	468	42.3	
Barrow	706	128	2,340	2,738	1,632	40.2	
Morgan	390	121	2,422	3,176	1,129	33.1	
Franklin	449	84	2,068	1,813	4,128	27.6	
Elbert	410	71	1,357	1,280	343	27.5	
Wilkes	340	46	507	756	491	26.9	
Oglethorpe	343	40	639	730	1,664	24.7	
Hart	505	63	1,321	1,595	1,516	24.2	
Banks	325	65	1,178	1,127	3,407	22.3	
Taliaferro	131	32	718	355	89	13.1	

Analysis of this factor indicates that Clarke, Oconee, and Madison counties have emissions with potential to contribute to the violation in Clarke County.

Factor 2: Air quality in potentially included versus excluded areas

County	2001-2003 Design Value
Clarke	15.6

There is one violating monitor in Clarke County. Therefore, Clarke County is nonattainment.

Factor 3: Population density and degree of urbanization including commercial development in included versus excluded areas

The following table has the populations for the counties in the Athens MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 Population	Percent Population of MSA	Population Density
Clarke	103,881	66	859
Oconee	27,264	17	147
Madison	26,717	17	94
Walton	67,069		204
Jackson	45,374		133
Greene	15,101		39
Barrow	51,016		315
Morgan	16,301		47
Franklin	20,778		79
Elbert	20,667		56
Wilkes	10,734		23
Ogelthorpe	13,176		30
Hart	23,249		100
Banks	15,123		65
Taliafero	1,977		10

Walton County has appreciable population, but is population that is included in the Atlanta nonattainment area.

Factor 4: Traffic and commuting patterns

Commuting Information:

Jackson County has total of 19,132 commuters.

- Commuters that stay in Jackson County: 7,960
- Commuters that commute to Clarke County: 3,022

Clarke County, the design value county, has a total of 48,241 commuters.

- Commuters that stay in Clarke County: 39,009

Oconee County has a total of 12,903 commuters.

- Commuters that stay in Oconee County: 3,630
- Commuters that commute to Clarke County: 6,696

Madison County has a total of 12,257 commuters.

- Commuters that stay in Madison County: 3,432
- Commuters that commute to Clarke County: 6,048

Greene County has a total of 5,609 commuters.

- Commuters that stay in Greene County: 3,856
- Commuters that commute to Clarke County: 266

Morgan County has a total of 7,278 commuters.

- Commuters that stay in Morgan County: 4,570
- Commuters that commute to Clarke County: 417

Franklin County has a total of 8,844 commuters

- Commuters that stay in Franklin County: 4,766
- Commuters that commute to Clarke County: 461

Elbert County has a total of 8,576 commuters.

- Commuters that stay in Elbert County: 6,238
- Commuters that commute to Clarke County: 417

Hart County has a total of 10,275 commuters.

- Commuters that stay in Hart County: 6,768
- Commuters that commute to Clarke County: 272

Wilkes County has a total of 4,457 commuters.

- Commuters that stay in Wilkes County: 3,464
- Commuters that commute to Clarke County: 181

More than 50 percent of the commuters in Oconee County and almost 50 percent of the commuters in Madison County commute to Clarke County.

The following table contains vehicle miles traveled (thousand miles) for the counties in the Athens MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 VMT	VMT Growth 02-10
Clarke	820	929
Oconee	330	43
Madison	351	96
Jackson	748	-226
Greene	354	-153
Morgan	514	-302
Madison	351	96
Franklin	546	-228
Elbert	259	43
Hart	269	59
Wilkes	95	53

Analysis of this factor indicates that Oconee and Madison counties have commuting patterns and VMT which contribute to the violation in Clarke County.

Factor 5: Expected growth

The following table has the population and population growth figures for the Athens MSA and some adjacent counties with significant emissions. (MSA counties are in **bold**.)

County	2002 Population	Growth 90-00	Percent Growth
Clarke	103,881	13,895	16
Oconee	27,264	8,607	49
Madison	26,717	4,680	22
Jackson	45,374	11,584	39
Greene	15,101	2,613	22
Morgan	16,301	2,574	20
Franklin	20,778	3,635	22
Elbert	20,667	1,562	8
Hart	23,249	3,285	17
Wilkes	10,734	90	1

Analysis of this factor indicates that Oconee and Madison counties contain growth patterns which potentially contribute to the violation in Clarke County.

Factor 6: Meteorology

This factor did not constitute a significant role in the decision making process.

Factor 7: Geography/topography

This factor did not constitute a significant role in the decision making process.

Factor 8: Jurisdictional boundaries

This factor did not constitute a significant role in the decision making process.

Factor 9: Level of control of emission sources

This factor did not constitute a significant role in the decision making process.

9 Factor Analysis for the Chattanooga Area

The Chattanooga MSA contains the following Tennessee counties: Marion and Hamilton; and the following Georgia Counties: Dade, Walker, and Catoosa. Based on air quality data for 2001-2003, the monitor with the highest design value in Hamilton County has a design value of 16.1 and the monitor in Walker County has a design value of 15.6. No other counties in the MSA contain ambient air monitors. The State of Tennessee recommended as nonattainment the county of Hamilton and the State of Georgia recommended as nonattainment the county of Walker. The States have recommended that all other counties be designated attainment. The State of Tennessee submitted some justification for this recommendation, however, they indicated that the detailed emission information would be provided at a later date. EPA is modifying the State of Tennessee's recommendation and will review the additional information during the 120 day period following the notification letter.

EPA has received some information from the State of Tennessee that Marion (MSA) County should be designated attainment for the PM_{2.5} standard and no justification from the State of Georgia indicating that any other counties should be included or excluded from the Chattanooga PM_{2.5} nonattainment area. Adjacent counties with significant emissions include McMinn and Roane Counties which are attached to the Knoxville nonattainment area and Floyd County which is a separate nonattainment area.

Additionally we have included in our recommended nonattainment area Jackson County, AL, that is adjacent to the Chattanooga MSA, that is generally rural in character, and that contains an identifiable large emitting facility or facilities (e.g., power plants) which we believe contribute to the nearby nonattainment problem. We have included this county in our initial recommendations in order to ensure that a sufficient portion of this county, including such large facilities, is included within the boundaries of the nonattainment area as part of the final designations. We invite you to submit to us a recommendation as to what portion of this adjacent county, encompassing the large facility or facilities, should be designated nonattainment. Therefore EPA is modifying the States' recommendations to include all of the counties in the MSA and the adjacent county of Jackson, Alabama.

Area	EPA Recommendation	States Recommendations
Chattanooga	Full counties: Marion, Hamilton, TN; Dade, Walker, Catoosa, GA; Jackson, AL	Full counties: Hamilton and Walker

Factor 1: Emissions in areas potentially included versus excluded from the nonattainment area

The following table contains the 2001 PM_{2.5}, SO_x, NO_x, VOC, and ammonia emissions in tons and weighted emissions scores for the counties in the Chattanooga MSA and some adjacent counties. (MSA counties are in bold.)

County	PM	SO _x	NO _x	VOC	Amm	Weighted Emissions Score	Cumulative Weighted Emissions Score
Hamilton	1,498	5,300	20,048	27,150	1,022	49.5	49.5
Walker	856	632	2,798	4,516	958	17.9	67.4
Marion	679	477	3,156	2,640	501	14.1	81.5
Catoosa	617	167	3,085	3,601	680	11.9	93.4
Dade	302	107	2,415	1,574	285	6.5	99.9
Roane	4967	92331	30865	4300	285	296.9	
Jackson, AL	4389	44333	31502	4742	1494	176.1	
Floyd, GA	10057	31821	22736	7139	976	154.0	
McMinn	3348	10216	10829	5546	1268	73.3	
Whitfield, GA	2732	1747	7283	7386	991	54.2	
Rhea	1405	302	2625	3643	149	31.2	
Loudon	804	4035	5899	5338	360	24.3	
DeKalb, AL	1193	741	4776	5867	5765	21.3	
Bradley	1233	419	4230	7551	1916	21.1	
Warren	1164	1189	1869	3675	446	20.7	
Monroe	743	154	2387	3420	554	16.4	
Gordon, GA	872	200	3645	4019	2630	15.8	
Fannin, GA	614	65	887	1266	283	14.2	
Franklin	644	482	2100	2929	1512	13.4	
Chattooga, GA	450	1228	1834	1634	197	11.7	
Murray, GA	576	130	2067	1700	910	11.4	
Polk	295	2066	900	949	553	11.3	
Cherokee, NC	428	143	921	1753	111	10.6	
Grundy	202	164	1000	1150	1170	4.8	
Bledsoe	203	31	475	528	335	4.5	
Meigs	198	112	885	871	118	4.3	
Sequatchie	140	22	304	591	173	3.4	
Van Buren	118	178	291	320	74	3.3	

Based on the analysis for this factor there appears to be emissions in all MSA counties and the adjacent county of Jackson, AL, which show a potential to contribute. Other adjacent counties with large emissions (McMinn and Roane, TN and Floyd, GA) are included in other nonattainment areas.

Factor 2: Air quality in potentially included versus excluded areas

The following table contains the 2001-2003 PM_{2.5} Design Values for all Chattanooga MSA Counties and adjacent counties. (MSA counties are in bold.)

County	2001-2003 design value
Hamilton	16.1
Walker	15.6
Roane	14.2
Floyd, GA	15.7
McMinn	14.6
Loudon	15.4 *
DeKalb, AL	14.7

* Incomplete data that is not sufficient to determine attainment/nonattainment. Data substitution does not apply.

Based on this factor, Hamilton County, TN and Walker and Floyd Counties in GA are violating the PM_{2.5} standard. Catoosa County, GA is located between violating monitors in Hamilton and Walker Counties.

Factor 3: Population density and degree of urbanization including commercial development in included versus excluded areas

The following table contains the populations for the counties in the Chattanooga MSA and some adjacent counties. Urban population figures were not available. (MSA counties are in bold.)

County	2002 Population	Percent of MSA Population (2002)	2002 Population Density (people/mile ²)
Hamilton	309,321	65.7	570
Walker	61,949	13.2	139
Marion	27,654	5.9	55
Catoosa	56,341	12.0	348
Dade	15,615	3.3	90
Roane	52,316		145
Jackson, AL	54,035		50
Floyd, GA	92,606		181
McMinn	50,051		116
Whitfield, GA	87,037		300

Based on the analysis for this factor, there appears to be population sufficient to indicate a contribution by the following MSA counties: Hamilton, Walker, and Catoosa. The five adjacent counties also have population with a potential to contribute.

Factor 4: Traffic and commuting patterns

Commuting Information:

Hamilton has a working population of 146, 824

–Commuters who remain in Hamilton: 133,644 (91%)

Marion has a working population 11766.

–Commuters who remain in Marion: 5596 (48%)

–Commuters from Marion to Hamilton: 4271

Dade has a working population of 6983.

–Commuters who remain in Dade: 2363

–Commuters from Dade to Hamilton:3091 (44%)

–Commuters from Dade to Walker: 747

Catoosa has a working population of 26710.

–Commuters who remain in Catoosa: 7167

–Commuters from Catoosa to Hamilton: 12320 (46%)

–Commuters from Catoosa to Walker:1937

Walker has a working population of 27223.

- Commuters who remain in Walker: 11244 (41%)
- Commuters from Walker to Hamilton: 9098

Whitfield, GA has a working population of 38,909

- Commuters who remain in Whitfield: 33,796 (87%)
- Remaining commuters do not commute to the Chattanooga MSA

DeKalb, AL has a working population of 7798

- Commuters who remain in DeKalb: 5179 (66%)
- Remaining commuters do not commute to the Chattanooga MSA

The following table contains the vehicle miles traveled (thousand miles) for the counties in the Chattanooga MSA and some adjacent counties with significant weighted emissions scores. (MSA counties are in bold.)

County	2002 VMT (thousand miles/year)
Hamilton	3,743
Walker	742
Marion	654
Catoosa	810
Dade	512
Roane	784
Jackson, AL	786
Floyd, GA	948
McMinn	787
Whitfield, GA	1423

Based on the analysis for this factor the VMT for all MSA counties indicate a potential to contribute. Although Whitfield County has a relatively high VMT, none of the commuters go to the Chattanooga MSA.

Factor 5: Population Growth

The following table has the population and population growth figures for the Chattanooga MSA and some adjacent counties with significant weighted emissions scores. (MSA counties are in bold.)

County	2002 Population	Growth (90-00)	% Growth (90-00)
Hamilton	309,321	22360	8
Walker	61,949	2713	5
Marion	27,654	2916	12
Catoosa	56,341	10818	25
Dade	15,615	2007	15
Roane	52,316	4683	10
Jackson, AL	54,035	6130	13
Floyd, GA	92,606	9314	11
McMinn	50,051	6632	16
Whitfield, GA	87,037	11063	15

Based on the analysis for this factor, there appears to be significant growth on a percentage basis in Catoosa County that indicates a contribution to the air quality in the Chattanooga MSA.

Factor 6: Meteorology

This factor did not constitute a significant role in the decision making process.

Factor 7: Geography/topography

The Chattanooga area does not have any geographical or topographical boundaries limiting its airshed.

This factor did not constitute a significant role in the decision making process.

Factor 8: Jurisdictional boundaries

Hamilton and Meigs Counties, TN and Catoosa County, GA were designated nonattainment for the 8-hour ozone standard on April 15, 2004.

This factor did not constitute a significant role in the decision making process.

Factor 9: Level of control of emission sources

Sources in the Chattanooga area are subject to Prevention of Significant Deterioration (PSD) requirements, Control Technology Guidelines Reasonable Available Control Technology (CTG RACT) - (Hamilton County only), Maximum Achievable Control Technology (MACT) for Hazardous Air Pollutants (HAP), New Source Performance Standards (NSPS), and the NO_x SIP call.

This factor did not constitute a significant role in the decision making process.

9 Factor Analysis for Columbus MSA

The following is the 9 factor analysis for Columbus MSA and surrounding Counties. Alabama's submittal in February 2004, recommended that Russell County be designated nonattainment for the fine particulate matter (PM_{2.5}), based on 2001 - 2003 monitoring data. Georgia's submittal in June 2004, recommended that Harris, Muscogee and Chattahoochee Counties be designated attainment for PM_{2.5}. Based on the following analysis EPA recommends that Lee and Russell counties in Alabama, and Harris, and Muscogee Counties in Georgia, should be included in the PM_{2.5} nonattainment area. Lee County is adjacent to the MSA, has high VMT and a large population. Russell County has a violating monitor and the State recommended it as nonattainment. Harris County has relatively high NO_x and VOC emissions and relatively high VMT. Muscogee County has high NO_x and VOC emissions, high VMT and a large population. Based on the following analysis, EPA agrees with the recommendation that Barbour, Chambers, Montgomery, Elmore and Tallapoosa Counties in Alabama, and Chattahoochee, Troup, Stewart, Meriwether, Sumter Counties in Georgia, should be attainment/unclassifiable for PM_{2.5} based on low emissions, low VMT and low population.

Area	EPA Recommendation	State Recommendation
Columbus, GA	Full counties: Lee and Russell Counties in Alabama and Harris and Muscogee Counties in Georgia	Full counties: Russell County, Alabama

9 Factor Analysis for the Columbus, Georgia MSA

Factor 1: Emissions in areas potentially included versus excluded from the nonattainment area.

The following table has 2001 PM_{2.5}, SO₂, NO_x, VOC, and NH₃ emissions in tons, and weighted emissions scores for the Columbus Area and surrounding counties. The MSA counties are in **bold**.

Columbus MSA and Surrounding Counties Emissions

County	PM	SO ₂	NO _x	VOC	NH ₃	Weighted Emissions Score	Cumulative Weighted Emissions Score
Russell, AL	1,344	2,550	5,718	4,434	179	35.1	35.1
Harris, GA	590	104	2,856	1,748	128	26.8	61.9
Muscogee, GA	513	803	5,965	9,476	323	25.4	87.3
Chattahoochee, GA	208	43	387	482	15	12.7	100
Troup, GA	1,194	422	12,277	8,223	382	48.7	
Montgomery, AL	1,421	6,292	10,454	14,966	973	43.3	
Lee, AL	1,043	1,425	5,125	7,474	333	42.8	
Barbour, AL	874	419	2,208	2,529	497	41.6	
Sumter, GA	2,578	1,725	1,726	2,262	847	40.5	
Meriwether, GA	844	190	1,866	3,006	167	33.7	
Elmore, AL	1,014	517	4,443	4,368	326	30.8	
Tallapoosa, AL	679	655	1,993	3,230	263	26.5	
Chambers, AL	579	527	2,350	2,882	124	23.9	
Stewart, GA	429	32	360	464	189	23.3	
Taylor, GA	398	76	966	622	833	18.3	
Macon, AL	412	223	2,242	1,871	133	17.1	
Talbot, GA	288	70	903	520	74	15.9	
Marion, GA	314	32	328	517	470	15.4	
Bullock, AL	273	93	407	570	214	12.7	
Webster, GA	303	128	358	201	114	12.6	
Schley, GA	192	14	195	290	163	8.4	

Based on the analysis for this factor, there appear to be emissions in Lee County, Alabama, that contribute to the violation in Russell County.

Factor 2: Air quality in potentially included versus excluded areas.**Columbus MSA and Surrounding Counties Design Value (DV)**

County	2001-2003 DV
Russell, AL	15.3
Muscogee, GA	14.7
Montgomery, AL	14.2

Muscogee and Montgomery Counties have monitors that show attainment of the PM2.5 standard while Russell County is violating the standard.

Factor 3: Population density and degree of urbanization including commercial development in included versus excluded areas.

The following table has the populations for the Counties in the Columbus MSA and adjacent Counties.

Columbus MSA and Surrounding Counties Population & Area

County	Population 2002	Percent in MSA	Population Density 2002
Russell, AL	49,415	18	77
Harris, GA	25,092	9	54
Muscogee, GA	185,948	67	861
Chattahoochee, GA	15,440	6	62
Troup, GA	59,767		144
Montgomery, AL	223,346		283
Lee, AL	118,123		194
Barbour, AL	28,826		33
Sumter, GA	33,247		69
Meriwether, GA	22,623		45
Elmore, AL	68,771		111
Tallapoosa, AL	40,946		57
Chambers, AL	36,251		61
Stewart, GA	5,040		11

Lee County is adjacent to Russell County and its population (118,123) is about two and half times that of Russell County (49,415).

Factor 4: Traffic and commuting patterns

Commuting Information:

Russell County, AL has a total of 19,859 commuters.

- Commuters who remain in Russell County 7,051 (36%)

Harris County, GA has a total of 11,811 commuters.

- Commuters from Lee County to Russell County 214 (2%)
- Commuters who remain in Harris County 2,867 (24%)

Muscogee County, GA has a total of 82,977 commuters.

- Commuters from Muscogee County to Russell County 2,479 (3%)
- Commuters who remain in Muscogee County 71,862 (87%)

Chattahoochee County, GA has a total of 8,538 commuters.

- Commuters who remain in Chattahoochee County 5,482 (64%)

Troup County, GA has a total of 26,339 commuters.

- Commuters who remain in Troup County 22,074 (84%)

Montgomery County, AL has a total of 96,943 commuters.

- Commuters who remain in Montgomery County 90,943 (94%)

Lee County, AL has a total of 52,119 commuters.

- Commuters who remain in Lee County 35,549 (68%)
- Commuters from Lee County to Russell County 2,682 (5%)

Barbour County, AL has a total of 10,023 commuters.

- Commuters who remain in Barbour County: 8,370 (84%)
- Commuters from Lee County to Russell County 335 (3%)

Sumter County, GA has a total of 13,963 commuters.

- Commuters who remain in Sumter County 11,652 (83%)

Meriwether County, GA has a total of 8,893 commuters.

- Commuters who remain in Meriwether County 4,114 (46%)

Elmore County, AL has a total of 28,143 commuters.

- Commuters who remain in Elmore County 9,415 (33%)

Tallapoosa County, AL has a total of 17,009 commuters.

- Commuters who remain in Tallapoosa County 12,125 (71%)

Chambers County, AL has a total of 15,480 commuters.

- Commuters who remain in Chambers County 9,281 (60%)

Stewart County, GA has a total of 1, 892 commuters.

- Commuters who remain in Stewart County 965 (51%)

There are no Counties that have significant commuters commuting to Russell County.

Columbus MSA and Surrounding Counties VMT

County	VMT 2002	VMT Growth 02-10
Russell, AL	671	276
Harris, GA	547	-207
Muscogee, GA	1,594	534
Chattahoochee, GA	56	160
Troup, GA	1,454	-839
Montgomery, AL	2,565	642
Lee, AL	1,119	457
Barbour, AL	431	-129
Sumter, GA	405	-62
Meriwether, GA	271	138
Elmore, AL	615	168
Tallapoosa, AL	502	-56
Chambers, AL	378	-44
Stewart, GA	75	47

Over 50% of the VMT in the MSA is in Muscogee County, Georgia. As noted above, none of the adjacent Counties have appreciable commuting into the MSA.

Factor 5: Expected growth

The following table has the population and population growth figures for the Columbus MSA and surrounding Counties.

Columbus MSA and Surrounding Counties Population/Growth

County	Population 2002	Growth 90-00	Percent Growth
Russell, AL	49,415	2,896	6
Harris, GA	25,092	5,907	33
Muscogee, GA	185,948	7,013	4
Chattahoochee, GA	15,440	-2,052	-12
Troup, GA	59,767	3,243	6
Montgomery, AL	223,346	14,425	7
Lee, AL	118,123	27,946	32
Barbour, AL	28,826	3,621	14
Sumter, GA	33,247	2,972	10
Meriwether, GA	22,623	123	1
Elmore, AL	68,771	16,664	34
Tallapoosa, AL	40,946	2,649	7
Chambers, AL	36,251	-293	-1
Stewart, GA	5,040	-402	-7

Harris County, Georgia has large growth on a percentage basis.

Factor 6: Meteorology.

A wind analysis using wind data from the Columbus, Georgia Airport was completed to evaluate the predominant wind direction(s) in Phenix City over the 3-year period on all days. There is a large easterly component to the winds during the 3-year time period., but there is not sufficient information to use meteorology as a deciding factor for an annual average..

Factor 7: Geography/topography

This factor did not constitute a significant role in the decision making process.

Factor 8 Jurisdictional boundaries.

This factor did not constitute a significant role in the decision making process.

Factor 9 Level of control of emission sources.

Reasonable Available Control Technology for VOC has been in place since 1979

Stage 1 Vapor Recovery has been in place since 1990

NOx SIP Call requires large reductions in NOx emissions from major utilities, large industrial boilers, gas turbines and cement kilns (seasonal for Macon, Tallapoosa, Chambers, Elmore and Lee Counties).

Tier II National Fuel Standard (starting 2004)

Analysis for Augusta, GA

On February 13, 2004, the State of Georgia submitted to EPA their PM 2.5 nonattainment recommendations. Georgia recommended only counties which contained a monitored violation and provided no further justification. On June 15, 2004, the State submitted additional information and revised recommendations for the Augusta area. The revision recommended that Richmond County be unclassifiable.

Richmond County has two PM2.5 monitors with air quality data for 2001-2003. The data for one monitor demonstrates attainment and the other monitor has incomplete data for 2001-2003 that was violating. EPA's analysis of all the available monitoring data indicates that the area should be designated as attainment/unclassifiable.