

Appendix C

U. S. EPA Guidance and Correspondence

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC - 4 2008

OFFICE OF
AIR AND RADIATION

MEMORANDUM

SUBJECT: Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards

FROM: Robert J. Meyers 
Principal Deputy Assistant Administrator

TO: Regional Administrators, Regions I-X

This memorandum provides information on the timeline for designating areas for the purpose of implementing the 2008 revised primary and secondary ozone National Ambient Air Quality Standards (NAAQS). In addition, this memorandum identifies important factors states and tribes should consider in making recommendations for area designations. Please share this information with the state and tribal agencies in your Region.

The U.S. Environmental Protection Agency (EPA) revised the ozone NAAQS on March 12, 2008 (73 FR 16436; March 27, 2008). The new primary ozone standard was lowered from 0.08 parts per million (ppm) to a level of 0.075 ppm based on numerous epidemiological studies conducted during the past decade in which many of the health effects associated with ozone exposure were identified. These studies showed health effects at and below the level of the 0.08 ppm standard, which was promulgated in 1997. Prolonged (i.e., 8-hour) exposure to ozone is associated with increased mortality and a range of serious morbidity health effects, including aggravation of a variety of respiratory symptoms and lung impairment, asthma attacks, respiratory hospital admissions and emergency department visits, and cardiovascular problems. In March 2008, EPA also strengthened the secondary ozone standard to provide increased protection against adverse public welfare effects including impacts on vegetation and forested ecosystems. EPA made the secondary standard identical in all respects to the revised primary standard.

Section 107(d) of the Clean Air Act (CAA) governs the process for area designations following the establishment of new or revised NAAQS. Under section 107(d), states are required to submit recommendations on designations for their areas to EPA not later than one year after the promulgation of a new or revised standard. If, after careful consideration of the recommendations, EPA intends to promulgate a designation that deviates from a state recommendation, EPA must notify the state at least 120 days prior to promulgating the final designation, and EPA must provide the state an opportunity to demonstrate why the potential

modification is inappropriate. The CAA requires EPA to complete the designation process within two years of promulgation of a new or revised NAAQS unless the Administrator has insufficient information to make these decisions. In such a case, EPA may take up to an additional year to make the designations. While the language of section 107 specifically addresses states, EPA intends to follow the same process for tribes to the extent practicable, pursuant to section 301(d) of the CAA and the Tribal Authority Rule, or TAR (see 63 FR 7254).

Accordingly, state designation recommendations for the 2008 revised ozone standards should be submitted to the Administrator no later than March 12, 2009. Areas should be identified as attainment, nonattainment, or unclassifiable on the basis of available information. We will notify states by letter no later than November 12, 2009 if we plan to modify a state's recommendation. In order to consider public input in the designation process, we plan to provide a 30-day public comment period immediately following issuance of EPA's response letters to the states and tribes; we anticipate the comment period would conclude in mid-December 2009. If a state or tribe has additional information that they want EPA to consider with respect to a designation recommendation EPA plans to modify, we would request such information be submitted by January 12, 2010. This will ensure that EPA can fully consider any such information as we move forward to issue designations by March 12, 2010. Because the 2008 revised primary and secondary ozone NAAQS are identical, EPA expects that each area will have the same designation and boundary for both standards.

We recommend that states and tribes identify violating areas using the most recent three consecutive years of quality-assured, certified air quality data. In most cases, we expect these to be data from 2005-2007 or 2006-2008 (if these 2006-2008 data have been certified more quickly than is required) that are stored in the EPA Air Quality System (AQS).¹ In general, violations are identified using data from Federal reference method (FRM) and Federal equivalent method (FEM) monitors that are sited and operated in accordance with 40 CFR Part 58. Special Purpose Monitors (SPM) using an FRM or FEM which have operated for more than 24 months are eligible for comparison to the relevant NAAQS, subject to the requirements given in the October 17, 2006 Revision to Ambient Air Monitoring Regulations (71 FR 61236). Procedures for using the air quality data to determine whether a violation has occurred are given in 40 CFR Part 50 Appendix P, as revised on March 27, 2008 (73 FR 16511). We expect to base the final designations in March 2010 on the most recent quality-assured data which would be from 2006-2008 or 2007-2009.

Air quality monitoring data affected by exceptional events may be excluded from use in identifying a violation if they meet the criteria for exclusion, as specified in the Final Rule on the Treatment of Data Influenced by Exceptional Events (72 FR 13560; March 22, 2007). We recently issued a direct final rule to provide schedules for flagging exceptional event data and submitting documentation specifically for ozone data collected from 2005 through 2009 that are used in the designations process for the 2008 ozone NAAQS. (See 73 FR 58042; October 6, 2008). These schedules reflect our interest in assuring that the exceptional events claims can be fully considered by EPA in the final designations.

¹ This information is available on EPA's website at www.epa.gov/ttn/airs/airsaqs/.

Section 107(d)(1) of the CAA defines an area as nonattainment if it is violating the NAAQS or if it is contributing to a violation in a nearby area. Ground-level ozone and ozone precursor emissions are pervasive and readily transported. Therefore, EPA believes it is important to examine ozone-contributing emissions across a relatively broad geographic area. Accordingly, we recommend that the Core Based Statistical Area (CBSA) or Combined Statistical Area (which includes 2 or more adjacent CBSA's) associated with the violating monitor(s) serve as the starting point or "presumptive" boundary for evaluating the geographic boundaries of an ozone nonattainment area. CBSA is a collective term that refers to both metropolitan and micropolitan statistical areas, which are distinguished based on population size.² Each CBSA consists of a county or counties containing at least one urban core plus adjacent counties that have a high degree of social and economic integration with the urban core as measured by commuting ties.³ EPA recommends starting with this presumption because the factors used to establish the CBSAs and CSAs are similar to the factors EPA plans to consider in determining whether a nearby area is contributing to the violation(s) of the standard. EPA used this same conceptual approach in the designations process for the 1997 ozone NAAQS.^{4,5} Where a violating monitor is not located in a CBSA or CSA, we recommend that the boundary of the county containing the monitor serve as the starting point for considering the extent of the nonattainment area.

EPA believes that each potential nonattainment area should be evaluated on a case-by-case basis and recognizes that these area-specific analyses conducted by states, tribes, and/or EPA may support nonattainment area boundaries that are larger or smaller than the presumptive area starting point. As a framework for area-specific analyses, we recommend that states and tribes base their boundary recommendations on an evaluation of the 9 factors listed in attachment 2. These factors are consistent with those used in the designations process for the 1997 ozone standard and are factors EPA plans to consider in evaluating and making decisions on the nonattainment area boundaries for the 2008 ozone standards. Additionally, states and tribes may

² The Office of Management and Budget (OMB) delineates CBSAs (metropolitan and micropolitan statistical areas) and CSAs. OMB adopted new standards for defining metropolitan and micropolitan statistical areas on December 27, 2000 (65 FR 82229). A micropolitan statistical area has a population of at least 10,000 but less than 50,000. A metropolitan statistical area has a population of at least 50,000.

³ For lists of the CBSAs and CSAs and their geographic components see www.census.gov/population/www/metroareas/metrodef.html. EPA recommends using the most recent available updated lists of the statistical areas. The lists are updated annually to reflect the most recent Census Bureau population estimates.

⁴ Memorandum from John S. Seitz, Director of Office of Air Quality Planning and Standards to Air Directors, Regions I-X, "Boundary Guidance on Air Quality Designations for the 8-Hour Ozone National Ambient Air Quality Standards," March 23, 2000.

⁵ In addition, CAA section 107(d)(4) established the consolidated metropolitan statistical area or metropolitan statistical area as the presumptive boundary for the most polluted areas that were designated nonattainment by operation of law in 1991 for the 1-hour ozone NAAQS.

identify and evaluate other relevant factors or circumstances specific to a particular area.

In addition to nearby areas with sources contributing to nonattainment, ozone concentrations in a local area may be affected by long-range transport of ozone and its precursors (notably nitrogen oxides). In certain parts of the country, such as the eastern United States, ozone is a widespread problem. Where this is the case, the CAA does not require that all contributing areas be designated nonattainment, only the nearby areas. Regional strategies, such as those employed in the Ozone Transport Region and EPA's NO_x SIP Call are needed to address the long-range transport component of ozone nonattainment, while the local component must be addressed through local planning in and around the designated nonattainment area.

This memorandum provides EPA's current views on how boundaries should be determined for ozone designations. The guidance is not binding on states, tribes, the public, or EPA. Issues concerning nonattainment area boundaries will be addressed in EPA's action to designate areas under the 2008 ozone standard. When EPA promulgates designations, those determinations will be binding on states, tribes, the public, and EPA as a matter of law. Ozone nonattainment areas will be classified at the time of designation. The approach EPA will use to classify nonattainment areas under the 2008 revised ozone NAAQS will be established through a separate notice-and-comment rulemaking. Information related to the designations for the 2008 revised ozone NAAQS will be provided on EPA's website at www.epa.gov/ozonedesignations.

Attachment 1 is a timeline of important dates in the designation process for the revised 2008 ozone NAAQS designation process. Attachment 2 provides the list of nine factors that EPA plans to consider in evaluating and making decisions on nonattainment area boundaries.

Staff in EPA's Office of Air Quality Planning and Standards are available for assistance and consultation throughout the designation process. Questions on this guidance may be directed to Carla Oldham at 919-541-3347.

Attachments (2)

cc: Air Division Directors, Regions I-X
Greg Green, OAQPS
Bill Harnett, OAQPS
Brian McLean, OAP
Margo Oge, OTAQ
Stephen D. Page, OAQPS
Peter Tsirigotis, OAQPS
Richard Wayland, OAQPS
Lydia Wegman, OAQPS

ATTACHMENT 1

TIMELINE FOR REVISED 2008 OZONE NAAQS DESIGNATION PROCESS*	
Milestone	Date
EPA promulgated revised ozone NAAQS	March 12, 2008
State and tribal recommendations due for ozone designations	No later than March 12, 2009
EPA notifies states and tribes concerning any modifications to their recommendations (120-day letters).	No later than November 12, 2009 (120 days prior to final designations)
EPA publishes public notice of state recommendations and EPA's proposed modifications and initiates 30-day public comment period.	Mid-November 2009
End of 30-day public comment period.	Mid-December 2009
States and Tribes submit additional information to demonstrate why an EPA modification is inappropriate.	No later than January 12, 2010
EPA promulgates final ozone designations.	No later than March 12, 2010

* This schedule assumes EPA has sufficient information to promulgate designations within 2 years. In the event EPA determines that insufficient information is available to do so, the designation process could be extended up to one year, but no later than March 12, 2011.

ATTACHMENT 2

Factors EPA Plans to Consider in Determining Nonattainment Area Boundaries in Designations for the 2008 Ozone NAAQS

EPA recommends that the Core Based Statistical Area (CBSA) or Combined Statistical Area (CSA) (which includes 2 or more adjacent CBSA's) serve as the starting point or "presumptive" boundary for considering what should be the geographic boundaries of an ozone nonattainment area.⁶ Where a violating monitor is not located in a CBSA or CSA, we recommend that the boundary of the county containing the monitor serve as the presumptive boundary for the nonattainment area. As a framework for area-specific analyses to support nonattainment area boundary recommendations and final boundary determinations, we recommend an evaluation of the 9 factors listed below:

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

Analysis of these factors may support nonattainment boundaries that are either larger or smaller than the presumptive boundary. EPA plans to consider these factors, along with any other relevant information, in determining whether to make modifications to the boundary recommendations from states and tribes. The factors listed above, while generally comprehensive, are not intended to be exhaustive. States and tribes may submit additional information they believe is relevant for EPA to consider. In general, a state's or tribe's demonstration supporting their boundary recommendation for an area should show that: 1) violations are not occurring in nearby portions that are excluded from the recommended area, and 2) the excluded nearby portions do not contain emission sources that contribute meaningfully to the observed violations. While states are not bound to use the approach outlined here, EPA plans to evaluate a state recommendation and determine whether to modify such recommendation based on the above factors and any other information the Agency determines is relevant.

⁶ For lists of the CBSAs and CSAs and their geographic components see www.census.gov/population/www/metroareas/metrodef.html.



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary

March 12, 2009

A. Stanley Meiburg
Regional Administrator
USEPA, Region 4
Sam Nunn Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960

Dear Mr. Meiburg:

Pursuant to the requirements of the federal Clean Air Act and on behalf of Governor Beverly E. Perdue, I am submitting to you and your colleagues at the U.S. Environmental Protection Agency (EPA) the State of North Carolina's recommendations concerning the boundaries within our State of areas that either attain or do not attain the March 12, 2008 8-hour standard for ozone. We are recommending the boundaries which are described in the enclosed package because we believe that they are the most effective way to achieve the goals of cleaner air, healthier lives, a stronger economy, and more effective conservation of our land and water. We look forward to discussing these recommendations with you after EPA has had the opportunity to review and comment on them.

The federal Clean Air Act requires EPA to designate areas as attainment or nonattainment following promulgation of a new national ambient air quality standard (NAAQS), such as the March 12, 2008 8-hour standard for ozone. EPA has asked states for their recommendations for nonattainment boundaries by March 12, 2009.

Development and submittal of the State's recommendations on appropriate nonattainment boundaries are the first steps in the process of addressing the revised ozone NAAQS. We understand that if EPA intends to designate areas that differ from the State's recommendations, EPA is required to notify the State by no later than 120 days prior to the final designations which would be no later than November 12, 2009. In addition, it is our understanding that EPA plans to provide a 30-day public comment period immediately following issuance of its response letters to the states in order to consider public input in the designation process. The comment period will conclude in mid-December 2009. EPA must then provide the State an opportunity to demonstrate why modifications to a state's recommendations are inappropriate. EPA has established January 12, 2010, as the deadline for such State response. At that time, my staff anticipates providing supplemental information including consideration of the 2009 ozone season monitoring data and EPA's implementation rule currently scheduled to be released in August 2009.

In developing the recommendations, staff in the Division of Air Quality, North Carolina Department of Environment and Natural Resources (DENR), consulted with staff from the Department of Commerce, Department of Transportation, and Department of Agriculture and Consumer Services. In addition, my staff conducted meetings with elected officials and public meetings around the State on draft staff recommendations and EPA presumptive boundaries in December 2008 and January 2009, and held a public comment period through February 9, 2009. Through this process, staff sought comments from local officials, metropolitan planning organizations, environmental organizations, business, industry, and the

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general public. The recommendations prepared for your review include consideration of the comments received.

Based on our extensive public discussions and analysis, we are recommending that 24 entire counties and parts of 17 counties in ten areas of the state be designated as nonattainment for the 8-hour ozone standard, one area be designated unclassifiable and all remaining areas be designated as attainment. The State's proposal reflects a regional approach that, we believe, will target areas that need our best efforts in order to achieve the goals listed above.

Ozone pollution is a serious problem in North Carolina that we are working hard in conjunction with our many local, state, and national partners to solve. Over the past decade North Carolina has implemented substantial, progressive emissions reductions that have resulted in almost statewide attainment of the 1997 8-hour ozone standard in all areas of the State except the Charlotte Metro area. Under the North Carolina legislature's Clean Air Bill of 1999, the State's vehicle inspection and maintenance program was changed to an on-board diagnostic (OBD) program which now covers 48 counties. In addition to implementation of the NOx SIP Call rules, in 2002 North Carolina's General Assembly also enacted the landmark multipollutant legislation known as the Clean Smokestacks Act (CSA) which continues to result in significant sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions reductions from the State's two largest electric utility companies. As demonstrated by these and other actions, North Carolina is committed to improving air quality. The State has and will continue to use its statutory authority to implement controls in the State as warranted, regardless of whether the emission sources are located within the boundary of a nonattainment area.

North Carolina is committed to protecting the health of our citizens, our environment, and our economy. Solving our ozone and other air quality problems is critical to achieving those goals. Improving air quality is critical to the health of our citizens, our future growth, prosperity and quality of life. We look forward to continuing to work with EPA and all of our other partners on the challenging tasks ahead to establish appropriate boundaries for nonattainment areas and to develop strategies to attain the 2008 8-hour ozone standard. More detailed information and supporting data are included in the enclosed recommendation package. Thank you for your consideration of these recommendations.

Sincerely,



Dee Freeman
Secretary

DF:jb

Enclosure

c: The Honorable Beverly E. Perdue
The Honorable Steve Troxler
The Honorable Gene Conti
The Honorable J. Keith Crisco
B. Keith Overcash

Table 1: North Carolina – Ozone (8-Hour Standard)

Designated Area	Designation Type	Classification Type
Snow Bird Mountains – Joyce Kilmer-Slickrock Wilderness Area: Graham County Above 4000 feet elevation in the Snow Bird Mountains range Joyce Kilmer-Slickrock Wilderness Area boundary Cherokee County Above 4000 feet elevation in the Snow Bird Mountains range	Nonattainment	
Great Smoky Mountains National Park: Haywood County Park boundary Swain County Park boundary	Nonattainment	
Great Balsam Mountains – Shining Rock Wilderness Area: Buncombe County Above 4000 feet elevation in this mountain range Haywood County Above 4000 feet elevation in this mountain range Shinning Rock Wilderness Area boundary Henderson County Above 4000 feet elevation in this mountain range Jackson County Above 4000 feet elevation in this mountain range Transylvania County Above 4000 feet elevation in this mountain range	Nonattainment	

Table 1: North Carolina – Ozone (8-Hour Standard)

Designated Area	Designation Type	Classification Type
Black Mountains: Buncombe County Above 4000 feet elevation in this mountain range Madison County Above 4000 feet elevation in this mountain range McDowell County Above 4000 feet elevation in this mountain range Yancey County Above 4000 feet elevation in this mountain range	Nonattainment	
Hickory-Lenoir-Morganton Area: Alexander County Burke County Unifour Metropolitan Planning Organization boundary Caldwell County Unifour Metropolitan Planning Organization boundary Catawba County	Nonattainment	
Charlotte-Gastonia-Salisbury Area: Cabarrus County Gaston County Iredell County Davidson Township Coddle Creek Township Lincoln County Mecklenburg County Rowan County Union County	Nonattainment	

Table 1: North Carolina – Ozone (8-Hour Standard)

Designated Area	Designation Type	Classification Type
Greensboro-Winston-Salem-High Point Area: Alamance County Davidson County Forsyth County Guilford County Caswell County Davie County Orange County Burlington-Graham Metropolitan Planning Organization boundary Randolph County High Point Metropolitan Planning Organization boundary Rockingham County	Nonattainment	
Raleigh-Durham-Cary Area: Chatham County Baldwin Township Center Township New Hope Township Williams Township Durham County Franklin County Granville County Johnston County Capital Area Metropolitan Planning Organization boundary Orange County Outside Burlington-Graham Metropolitan Planning Organization boundary Person County Wake County	Nonattainment	
Fayetteville Area: Cumberland County	Nonattainment	

Table 1: North Carolina – Ozone (8-Hour Standard)

Designated Area	Designation Type	Classification Type
Rocky Mount Area: Edgecombe County Nash County	Nonattainment	
Greenville Area: Pitt County	Unclassifiable	
Rest of State	Attainment	



North Carolina Department of Environment and Natural Resources

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary

October 28, 2011

Gwendolyn Keyes Fleming
Regional Administrator
USEPA, Region 4
Sam Nunn Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-8960

Dear Ms. Fleming:

Pursuant to the requirements of the federal Clean Air Act and on behalf of Governor Beverly E. Perdue, I am submitting to you and your colleagues at the U.S. Environmental Protection Agency (EPA) the State of North Carolina's revised recommendations for boundaries delineating the areas in the State that either attain or do not attain the March 12, 2008 8-hour standard for ozone. We believe the boundaries described in the enclosed package are the most effective way to achieve the goals of the Clean Air Act. We look forward to discussing these recommendations with you after EPA has had the opportunity to review and comment on them.

The federal Clean Air Act requires EPA to designate areas as attainment or nonattainment following promulgation of a new national ambient air quality standard. The EPA has asked states for their recommendations for nonattainment boundaries by October 28, 2011. Please note that North Carolina plans to certify its 2011 ambient air quality data for ozone by the end of 2011 so that this data may be used in determining nonattainment boundaries for the March 12, 2008 8-hour standard for ozone.

Based on extensive public discussion of our initial boundary recommendations for the 2008 ozone standard submitted in March 2009 and analysis of the current ambient air quality data through 2011, we are recommending that six entire counties and one partial county in the Charlotte-Gastonia-Salisbury metropolitan area be designated as nonattainment for the 2008 8-hour ozone standard and all remaining areas be designated as attainment. The proposed nonattainment area is consistent with the area that was designated nonattainment for the 1997 8-hour ozone standard. North Carolina was able to attain the 1997 8-hour ozone standard using this recommended nonattainment boundary area.

North Carolina learned of the need to update the boundary recommendations in a call with EPA Region 4 staff on September 29, 2011. As a result, the state has not had sufficient time to consult with local elected officials and other partners prior to this submittal. North Carolina reserves the right to further amend these recommendations as we have the opportunity to do that over the

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coming weeks. Any changes in the state's recommendations will be communicated during the 120 day process that will follow EPA's response to these initial recommendations.

North Carolina has been working hard to address ozone pollution in conjunction with our many local, state, and national partners. Over the past decade, North Carolina has implemented substantial, progressive emissions reductions that have resulted in attainment of the 1997 8-hour ozone standard statewide. Under the North Carolina legislature's Clean Air Bill of 1999, the State's vehicle inspection and maintenance program was changed to an on-board diagnostic (OBD) program that now covers 48 counties. In addition to implementation of the NOx SIP Call rules, in 2002 North Carolina's General Assembly also enacted the landmark multi-pollutant legislation known as the Clean Smokestacks Act which continues to result in significant sulfur dioxide and nitrogen oxides (NOx) emissions reductions from the State's two largest electric utility companies. As demonstrated by these and other actions, North Carolina is committed to improving air quality.

North Carolina believes that good air quality is vital to the health of our citizens, the state's environment, and future economic growth and quality of life. We look forward to continuing to work with EPA and our other partners to develop strategies to attain the 2008 8-hour ozone standard. More detailed information and supporting data are included in the enclosed recommendation package. Thank you for your consideration of these recommendations.

Sincerely,

A handwritten signature in black ink, appearing to read "Dee Freeman", with a stylized, flowing script.

Dee Freeman
Secretary

DF:lab

Enclosure

c: The Honorable Beverly E. Perdue
The Honorable Steve Troxler
The Honorable Gene Conti
The Honorable J. Keith Crisco
Sheila C. Holman



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

DEC - 8 2011

The Honorable Beverly Perdue
Governor of North Carolina
State Capitol
20301 Mail Service Center
Raleigh, North Carolina 27699-0301

Dear Governor Perdue:

Thank you for your recommendations dated March 12, 2009, and October 28, 2011, on air quality designations for the revised 2008 National Ambient Air Quality Standards for ozone throughout North Carolina. I appreciate the information North Carolina shared with the U.S. Environmental Protection Agency as we move forward to improve ozone air quality. This letter is to notify you of the EPA's preliminary response to North Carolina's recommendations and to inform you of our approach for completing the designations for the revised ozone standards.

On March 12, 2008, the EPA revised its national ambient air quality standards for ground-level ozone to provide increased protection of public health and the environment. The EPA lowered the primary 8-hour ozone standard from 0.08 parts per million (ppm) to 0.075 ppm to protect against health effects associated with ozone exposure, including a range of serious respiratory illnesses and increased premature death from heart or lung disease. The EPA revised the secondary 8-hour ozone standard, making it identical to the primary standard, to protect against welfare effects, including impacts on sensitive vegetation and forested ecosystems.

History shows us that better health and cleaner air go hand-in-hand with economic growth. Working closely with the states and tribes, the EPA is implementing the standards using a common sense approach that improves air quality and minimizes the burden on state and local governments. As part of this routine process, the EPA is working with the states to identify areas in the country that meet the standards and those that need to take steps to reduce ozone pollution. Within one year after a new or revised air quality standard is established, the Clean Air Act requires the Governor of each state to submit to the EPA a list of all areas in the state, with recommendations for whether each area meets the standard. As a first step in implementing the 2008 ozone standards, the EPA asked states to submit their designation recommendations, including appropriate area boundaries, by March 12, 2009. In September 2009, the EPA announced it was reconsidering the 2008 ozone standards. The EPA later took steps to delay the designation process for the 2008 ozone standards pending outcome of the reconsideration. However, in September 2011, the Office of Management and Budget returned to the EPA, the draft final rule addressing the reconsideration of the 2008 ozone standards. On September 22, 2011, the EPA restarted the implementation effort by issuing a memorandum to clarify for state and local agencies the status of the 2008 ozone standards and to outline plans for moving forward to implement them. The EPA indicated that it would proceed with initial area designations for the 2008 standards, and planned to use the recommendations states made in 2009 as updated by the most current, certified air quality data from 2008-2010. While the EPA did not request that states submit updated designation recommendations, the

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EPA provided the opportunity for states to do so. Thank you for the October 28, 2011, updated designation recommendation from North Carolina based on the assessment of preliminary 2009-2011 air quality data.

As required by the Clean Air Act, the EPA will designate an area as nonattainment if it is violating the 2008 ozone standards or contributing to a violation of the standards in a nearby area. Consistent with designations for previous ozone standards, the EPA intends to designate an area as unclassifiable/attainment if there are certified, quality-assured air quality monitoring data showing the area is meeting the ozone standards or there are no monitoring data for the area, and the EPA has not made a determination that the area is contributing to a violation in a nearby area.

After considering North Carolina's October 28, 2011, ozone designation recommendations for the Greensboro-Winston Salem-High Point Area, which was based on preliminary 2009-2011 air quality data, as well as other relevant technical information, the EPA intends to designate the Greensboro-Winston Salem-High Point Area as unclassifiable/attainment. In order for the EPA to consider 2009-2011 air quality data in the final designation decisions for this area, North Carolina must submit certified, quality assured 2009-2011 air quality monitoring data for the area to the EPA by February 29, 2012.

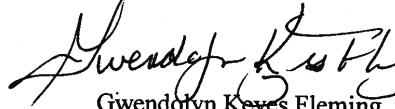
Next, after considering North Carolina's March 12, 2009, and October 28, 2011, ozone designation recommendations and other relevant technical information, including 2008-2010 air quality data, the EPA intends to support North Carolina's recommended area designations and boundaries for all other areas including the Charlotte-Gastonia-Salisbury Area. The EPA has preliminarily concluded that the following North Carolina counties should be included as part of the Charlotte-Gastonia-Salisbury, NC-SC nonattainment area: Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union Counties in their entirety, and a portion of Iredell County. The enclosed Technical Support Document provides a detailed analysis to support our preliminary decisions. The EPA intends to designate all other areas of the state as unclassifiable/attainment.

The EPA will continue to work with state officials regarding the appropriate boundary for the Charlotte-Gastonia-Salisbury Area. If North Carolina has additional information that you would like the EPA to consider, please submit it to us by February 29, 2012. The EPA will also make its preliminary designation decisions and supporting documentation available to the general public for review and comment. We will be announcing a 30-day public comment period shortly in the *Federal Register*. After considering additional information we receive, the EPA plans to promulgate final ozone designations in spring of 2012.

The EPA is committed to working with the states and tribes to share the responsibility of reducing ozone air pollution. Current and upcoming federal standards and safeguards, including pollution reduction rules for power plants, vehicles and fuels, will assure steady progress to reduce ozone-forming pollution and will protect public health in communities across the country. We look forward to a continued dialogue with you and your staff as we work together to implement the 2008 ozone standards. Should you have any questions regarding this matter, please do not hesitate to contact me at (404) 562-8357 or

have a member of your staff contact Beverly H. Banister, Director, Air, Pesticides and Toxics Management Division at (404) 562-9077.

Sincerely,



Gwendolyn Keyes Fleming
Regional Administrator

Enclosure

cc: Dee Freeman, Secretary
North Carolina Department of Environmental and Natural Resources (NCDENR)

Sheila Holman, Director
Division of Air Quality, NCDENR

David Brigman, Director
Western North Carolina Regional Air Quality Agency

Robert R. Fulp, Director
Forsyth County Environmental Affairs Department

Don R. Willard, Director
Air Quality, Land Use & Environmental Services Agency
Mecklenburg County

Gina McCarthy, Assistant Administrator for Air and Radiation
Stephen D. Page, Director, Office of Air Quality Planning and Standards

North Carolina Area Designations for the 2008 Ozone National Ambient Air Quality Standards

The table below identifies the areas and associated counties or parts of counties in North Carolina that EPA intends to designate as nonattainment for the 2008 ozone national ambient air quality standards (2008 ozone NAAQS). In accordance with section 107(d) of the Clean Air Act, EPA must designate an area (county or part of a county) “nonattainment” if it is violating the 2008 ozone NAAQS or if it is contributing to a violation of the 2008 ozone NAAQS in a nearby area. The technical analyses supporting the boundaries for the individual nonattainment areas are provided below.

Intended Nonattainment Areas in North Carolina

Area	North Carolina’s Recommended Nonattainment Counties	EPA’s Intended Nonattainment Counties
Charlotte-Gastonia-Salisbury, NC-SC *	Cabarrus Gaston Iredell (partial) Lincoln Mecklenburg Rowan Union	Cabarrus Gaston Iredell (partial) Lincoln Mecklenburg Rowan Union

* Charlotte-Gastonia-Salisbury, NC-SC is a multi-jurisdictional nonattainment area that includes Indian Country. Table 1 below identifies the counties in the other state and for the area of Indian country that EPA intends to designate as part of the nonattainment area.

EPA intends to designate the remaining counties in North Carolina that are not listed in the table above as “unclassifiable/attainment” for the 2008 ozone NAAQS.

The analysis below provides the basis for intended nonattainment area boundaries. It relies on our analysis of whether and which monitors are violating the 2008 ozone NAAQS, based on certified air quality monitoring data from 2008-2010 and an evaluation of whether nearby areas are contributing to such violations. EPA has evaluated contributions from nearby areas based on a weight of evidence analysis considering the factors identified below.

EPA issued guidance on December 4, 2008 that identified these factors as ones EPA would consider in determining nonattainment area boundaries and recommended that states consider these factors in making their designations recommendations to EPA.¹

1. Air quality data (including the design value calculated for each Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitors in the area);
2. Emissions and emissions-related data (including location of sources and population, amount of emissions and emissions controls, and urban growth patterns);
3. Meteorology (weather/transport patterns);
4. Geography and topography (mountain ranges or other basin boundaries);

¹ The December 4, 2008 guidance memorandum “Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards” refers to 9 factors. In this technical support document we have grouped the emissions-related factors together under the heading of “Emissions and Emissions-Related Data,” which results in 5 categories of factors.

5. Jurisdictional boundaries (e.g., counties, air districts, existing nonattainment areas, Indian country, metropolitan planning organizations (MPOs))

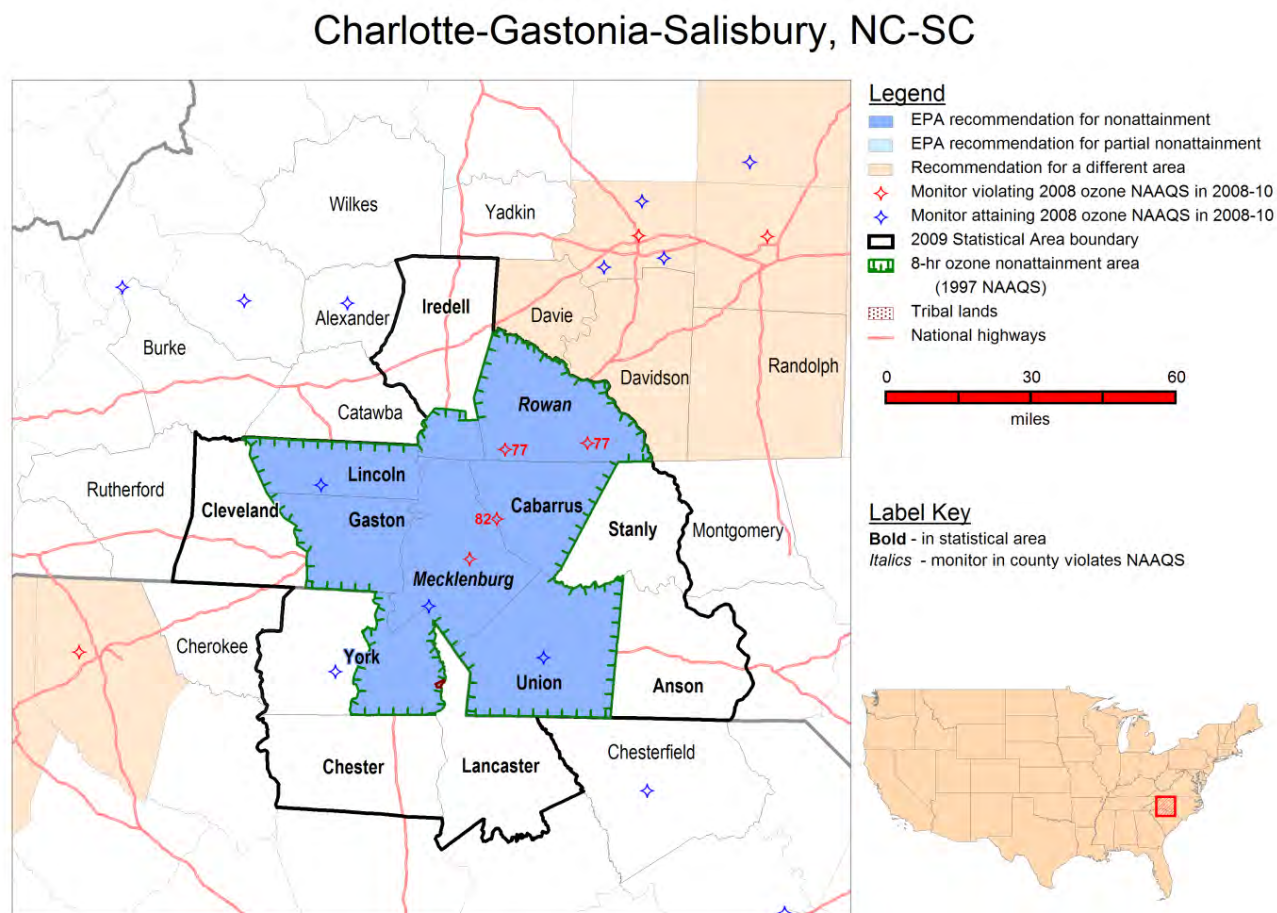
Ground-level ozone generally is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. Because NO_x and VOC emissions from a broad range of sources over a wide area typically contribute to violations of the ozone standards, EPA believes it is important to consider whether there are contributing emissions from a broad geographic area. Accordingly, EPA chose to examine the 5 factors with respect to the larger of the Combined Statistical Area (CSA) or Core Based Statistical Area (CBSA) associated with the violating monitor(s).² All data and information used by EPA in this evaluation are the latest available to EPA and/or provided to EPA by states or tribes.

In EPA's designations guidance for the 2008 ozone NAAQS EPA recommended examining CSA/CBSAs because certain factors used to establish CSAs and CBSAs are similar to the factors EPA is using in this technical analysis to determine if a nearby area is contributing to a violation of the 2008 ozone NAAQS. Congress required a similar approach in 1990 for areas classified as serious or above for the 1-hour ozone standard and EPA used the same basic approach in the designation process for the 1997 ozone NAAQS. Where a violating monitor is not located in a CSA or CBSA, EPA's guidance recommended using the boundary of the county containing the violating monitor as the starting point for considering the nonattainment area's boundary.

² Lists of CBSAs and CSAs and their geographic components are provided at www.census.gov/population/www/metroareas/metrodef.html. The lists are periodically updated by the Office of Management and Budget. EPA used the most recent update, based on 2008 population estimates, issued on December 1, 2009 (OMB Bulletin No. 10-02).

Technical Analysis for Charlotte-Gastonia-Salisbury, NC-SC

Figure 1 is a map of the Charlotte-Gastonia-Salisbury, NC-SC intended nonattainment area. The map provides other relevant information including the locations and design values of air quality monitors, county and other jurisdictional boundaries, the CSA boundary, and national highways.



For purposes of the 1997 8-hour ozone NAAQS, this area was designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entire counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan, Union Counties, in their entireties, and a portion of Iredell County in North Carolina; the Catawba Indian Nation Reservation³; and a portion of York County, in South Carolina.

In March 2009, North Carolina recommended that the counties of Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan, Union, and a portion of Iredell (Davidson and Coddle Creek Townships) be designated as “nonattainment” for the 2008 8-hour ozone standard based on air quality data from 2006-

³ The Catawba Indian Nation Reservation is located within the South Carolina portion of the bi-state Charlotte nonattainment area. Generally air quality State Implementation Plans (SIPs) do not apply in Indian country throughout the United States. However, for purposes of the Catawba Indian Nation Reservation in Rock Hill, the South Carolina SIP does apply within the Reservation. Pursuant to the Catawba Indian Claims Settlement Act, S.C. Code Ann. 27-16-120, “all state and local environmental laws and regulations apply to the [Catawba Indian Nation] and Reservation and are fully enforceable by all relevant state and local agencies and authorities.”

2008. Additionally, in March 2009, South Carolina recommended that the portion of York County encompassed by the boundaries of the Rock Hill-Fort Mill Area Transportation Study (RFATS) Metropolitan Planning Organization (MPO) and the contiguous area encompassing the York ozone monitoring station (45-091-0006) be designated as “nonattainment” for the 2008 8-hour ozone standard based on air quality data from 2006-2008. In October 2011, North Carolina submitted an update to their 2009 recommendation and did not make revisions to their previous recommendation. Additionally, in October 2011, South Carolina submitted an amendment to their 2009 recommendation, and based on preliminary air quality data from 2009-2011, revised their recommendation to “attainment” designations for each county in the State, including York County, for the 2008 8-hour ozone standard. These data are from Federal Reference Method (FRM) monitors or Federal Equivalent Method (FEM) monitors sited and operated in accordance with 40 CFR Part 58. (Letters from Dee Freeman, North Carolina Environmental Secretary to A. Stanley Meiburg, Acting Regional Administrator-EPA Region 4 and Gwendolyn Keyes Fleming, Regional Administrator-EPA Region 4 regarding the initial and updated nonattainment boundary recommendations for the 2008 8-hour ozone standard for North Carolina (October 28, 2011 and March 12, 2009, respectively); Letter from Mark Sanford, South Carolina Governor to A. Stanley Meiburg, Acting Regional Administrator-EPA Region 4 regarding initial nonattainment boundary recommendations for the 2008 8-hour ozone standard for South Carolina (March 12, 2009); Letter from Robert W. King, Jr., Deputy Commissioner of the South Carolina Environmental Quality Control to Gwendolyn Keyes Fleming, Regional Administrator-EPA Region 4 regarding updated nonattainment boundary recommendations for the 2008 8-hour ozone standard for South Carolina (October 11, 2011)).

After considering these recommendations and based on EPA's technical analysis described below, EPA intends to designate six whole counties and one partial county in North Carolina; the Catawba Indian Nation Reservation, and one partial county in South Carolina (identified in Table 1 below) as “nonattainment” for the 2008 ozone NAAQS as part of the Charlotte-Gastonia-Salisbury nonattainment area.

Table 1. State's Recommended, Tribe's Recommended and EPA's Intended Designated Nonattainment Counties for Charlotte-Gastonia-Salisbury, NC-SC

Charlotte-Gastonia-Salisbury, NC-SC	State- or Tribe-Recommended Nonattainment Counties	EPA Intended Nonattainment Counties
Catawba Indian Nation	None	Catawba Indian Nation Reservation
North Carolina	Cabarrus Gaston Iredell (partial) Lincoln Mecklenburg Rowan Union	Cabarrus Gaston Iredell (partial) Lincoln Mecklenburg Rowan Union
South Carolina	None	York (partial)

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values (in parts per billion (ppb)) for air quality monitors in counties in the Charlotte-Gastonia-Salisbury, NC-SC area based on data for the 2008-2010 period (i.e., the 2010 design value, or DV), which are the most recent years with fully-certified air quality data. A monitor's DV is the metric or statistic that indicates whether that monitor attains a specified air quality standard. The 2008 ozone NAAQS are met at a monitor when the annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years is 75 ppb or less. A DV is only valid if minimum data completeness criteria are met. See 40 CFR part 50 Appendix P. Where several monitors are located in a county (or a designated nonattainment area or maintenance area), the DV for the county or area is determined by the monitor with the highest level.

The 2010 DVs for the ozone NAAQS for counties in the Charlotte-Gastonia-Salisbury, NC-SC CSA and nearby surrounding area are shown in Table 2.

Table 2. Air Quality Data.**

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Mecklenburg, NC	Yes	82
Lincoln, NC	Yes	72
Rowan, NC	Yes	77
Union, NC	Yes	72
York, SC	No	67

**Bolded counties are those violating the 2008 ozone NAAQS.

Mecklenburg and Rowan Counties in North Carolina show violations of the 2008 ozone NAAQS, therefore these counties are included in the nonattainment area. A county (or partial county) must also be designated nonattainment if it contributes to a violation in a nearby area. Each county without a violating monitor that is located near a county with a violating monitor has been evaluated, as discussed below, based on the five factors and other relevant information to determine whether it contributes to the nearby violation.

Factor 2: Emissions and Emissions-Related Data

EPA evaluated emissions of ozone precursors (NO_x and VOC) and other emissions-related data that provide information on areas contributing to violating monitors.

Emissions Data

EPA evaluated county-level emission data for NO_x and VOC derived from the 2008 National Emissions Inventory (NEI), version 1.5. This is the most recently available NEI. (See <http://www.epa.gov/ttn/chief/net/2008inventory.html>) Significant emissions levels in a nearby area indicate the potential for the area to contribute to observed violations. We will also consider any additional information we receive on changes to emissions levels that are not reflected in recent inventories. These changes include emissions reductions due to permanent and enforceable emissions controls that will be in place before final designations are issued and emissions increases due to new sources. The precursor emission source-category percentages used below and throughout the document were derived from emissions data from the 2008 NEI version 1.5 referenced above.

Table 3 shows emissions of NO_x and VOC (given in tons per year (tpy)) for violating and nearby counties that we considered for inclusion in the Charlotte-Gastonia-Salisbury, NC-SC area.

Table 3. Total 2008 NOx and VOC Emissions.

County	State Recommended Nonattainment?	NOx (tpy)	VOC (tpy)
Anson, NC	No	1,241	1,123
Cabarrus, NC	Yes	5,361	9,074
Chester, SC	No	2,652	1,780
Cleveland, NC	No	3,393	4,799
Gaston, NC	Yes	13,002	7,326
Iredell, NC	Yes (partial)	10,261	10,815
Lancaster, SC	No	1,626	2,744
Lincoln, NC	Yes	2,097	3,320
Mecklenburg, NC	Yes	27,275	33,412
Rowan, NC	Yes	7,117	9,834
Stanly, NC	No	1,935	2,986
Union, NC	Yes	5,190	7,748
York, SC	No	7,031	11,840
	Areawide:	88,179	106,802

VOCs and NOx are the primary contributors to ozone formation. Source category emissions data indicate that mobile sources, area sources and point sources are all contributors to NOx emissions in the Charlotte-Gastonia-Salisbury, NC-SC Area; mobile sources and area sources are the primary contributors to VOC emissions in the Charlotte-Gastonia-Salisbury, NC-SC Area. Thus, significant increases in population, vehicles miles traveled would indicate a county with contribution in the Area. The emissions profile for this area indicates that population-related factors are a driver for ozone formation in this area.

NOx Emissions: The profile reveals that mobile emissions make up 55 percent of the total NOx emissions in the Charlotte-Gastonia-Salisbury, NC-SC Area and area sources make up nine percent. The total of both mobile and area sources makes up 64 percent of the total NOx emissions in the Charlotte-Gastonia-Salisbury, NC-SC Area. Point source emissions make up 20 percent of the total NOx emissions for the Charlotte-Gastonia-Salisbury, NC-SC Area.

Mecklenburg, Gaston, Iredell, Rowan, and York Counties have the largest amounts of total NOx emissions in the CSA with 31 percent, 15 percent, 12 percent, and 8 percent, (for both Rowan and York) respectively. The highest percentage of NOx emissions for Mecklenburg, Iredell, and Rowan and York are from mobile sources, with 19 percent, 8 percent, and 4 percent of their total NOx emissions, respectively. For Gaston, the highest percentage of NOx emissions comes from point sources, with 9 percent of their total NOx emissions, respectively.

VOC Emissions: The profile reveals that mobile emissions make up 42 percent of the total VOC emissions in the Charlotte-Gastonia-Salisbury, NC-SC Area and area sources make up 38 percent. The total of both mobile and area sources makes up 80 percent of the total VOC emissions in the Charlotte-Gastonia-Salisbury, NC-SC Area.

Mecklenburg, York, Iredell, Rowan, and Cabarrus counties have the largest amounts of total VOC emissions in the CSA with 31 percent, 11 percent, 10 percent, 9 percent, and 8 percent, respectively.

The highest percentage of VOC emissions for Mecklenburg comes from Area sources with 14 percent of their total VOC emissions. The highest percentage of VOC emissions for Iredell, Cabarrus, and Rowan is comes from mobile sources with 6 percent for Iredell and 5 percent for both Cabarrus and Rowan. Mecklenburg County's VOC emissions for mobile sources are 13 percent. York County, emissions primarily are from point and area sources.

Mecklenburg, Iredell, Rowan, Cabarrus, Gaston, and York Counties indicate contribution to nonattainment in the Charlotte-Gastonia-Salisbury, NC-SC Area based on emissions data.

Population density and degree of urbanization

EPA evaluated the population and vehicle use characteristics and trends of the area as indicators of the probable location and magnitude of non-point source emissions. These include ozone-creating emissions from on-road and off-road vehicles and engines, consumer products, residential fuel combustion, and consumer services. Areas of dense population or commercial development are an indicator of area source and mobile source NO_x and VOC emissions that may contribute to ozone formation. Rapid population or vehicle miles travelled (VMT) growth (see below) in a county on the urban perimeter signifies increasing integration with the core urban area, and indicates that it may be appropriate to include the area associated with the area source and mobile source emissions as part of the nonattainment area. Table 4 shows the population, population density, and population growth information for each county in the area.

Table 4. Population and Growth.

County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Anson, NC	No	26,948	0.05	1,637	+6%
Cabarrus, NC	Yes	178,011	0.49	45,793	+35%
Chester, SC	No	33,140	0.06	(968)	-3%
Cleveland, NC	No	98,078	0.21	1,607	+2%
Gaston, NC	Yes	206,086	0.57	15,310	+8%
Iredell, NC	Yes (partial)	159,437	0.27	35,828	+29%
Lancaster, SC	No	76,652	0.14	15,259	+25%
Lincoln, NC	Yes	78,265	0.25	14,176	+22%
Mecklenburg, NC	Yes	919,628	1.67	218,914	+31%
Rowan, NC	Yes	138,428	0.26	7,753	+6%
Stanly, NC	No	60,585	0.15	2,339	+4%
Union, NC	Yes	201,292	0.31	75,733	+60%
York, SC	No	226,073	0.32	60,368	+36%
Areawide:		2,402,623	0.36	493,749	+26%

Sources: U.S. Census Bureau population estimates for 2010 as of August 4, 2011
http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_PL_GCTP_L2.STO5&prodType=table)

Mecklenburg County has the largest population and is the most densely populated of all CSA counties with a population of 919,628 and 1,670 people/square mile. All counties previously designated counties for the 1997 8-hour Charlotte nonattainment area have population densities above 250 people/square mile (Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, Union, and York Counties). Additionally, the population growth for these same counties is 22 percent and above.

Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, and Union Counties in North Carolina and York County in South Carolina indicate contribution to nonattainment in the Charlotte-Gastonia-Salisbury, NC-SC Area based on population and population density.

Traffic VMT data and commuting patterns

EPA evaluated the total VMT for each county in the area. In combination with the population/population density data and the location of main transportation arteries (see above), this information helps identify the probable location of non-point source emissions. A county with high VMT is generally an integral part of an urban area and indicates the presence of motor vehicle emissions that may contribute to ozone formation that contributes to nonattainment in the area. Rapid population or VMT growth in a county on the urban perimeter signifies increasing integration with the core urban area, and indicates that the associated area source and mobile source emissions may be appropriate to include in the nonattainment area. Table 5 shows traffic data, including total 2008 VMT data. .

Table 5. Traffic and VMT Data.

County	State Recommended Nonattainment?	2008 VMT (million miles)
Anson, NC	No	287
Cabarrus, NC	Yes	1,982
Chester, SC	No	562
Cleveland, NC	No	1,230
Gaston, NC	Yes	2,347
Iredell, NC	Yes (partial)	2,558
Lancaster, SC	No	656
Lincoln, NC	Yes	805
Mecklenburg, NC	Yes	11,315
Rowan, NC	Yes	1,816
Stanly, NC	No	605
Union, NC	Yes	1,791
York, SC	No	2,002
Areawide:		27,956

*** MOBILE model VMT are those inputs into the NEI version 1.5.

Cabarrus, Gaston, Iredell, Mecklenburg, Rowan, Union, and York Counties VMT are the highest where each county have VMT greater than 1,790 million miles. These traffic data support a preliminary conclusion that Cabarrus, Gaston, Iredell, Mecklenburg, Rowan, Union, and York Counties contribute to nonattainment in the Charlotte-Gastonia-Salisbury, NC-SC.

Factor 3: Meteorology (weather/transport patterns)

For this factor, EPA analyzed 30-years of National Weather Service (NWS) wind speed and wind direction data collected at the Charlotte/Douglas International Airport (NWS Station 13881) to help determine transport patterns and source contributions. EPA assessed wind direction and speed for the 2008-2010 “ozone season” (March through October) in the Charlotte CSA. These analyses were conducted to better understand the fate and transport of precursor emissions contributing to ozone formation. EPA’s analysis of the NWS data indicate predominate south, north, and south-southwest component for the Charlotte CSA.

Factor 4: Geography/topography (mountain ranges or other air basin boundaries)

The geography/topography analysis evaluates the physical features of the land that might affect the airshed and, therefore, the distribution of ozone over the area.

The Charlotte-Gastonia-Salisbury, NC-SC area does not have any geographical or topographical barriers significantly limiting air pollution transport within its air shed. Therefore, this factor did not play a significant role in this evaluation.

Factor 5: Jurisdictional boundaries

Once we identified the general areas we anticipated we would recommend should be included in the nonattainment area, we then considered existing jurisdictional boundaries for the purposes of providing a clearly defined legal boundary and to help identify the areas appropriate for carrying out the air quality planning and enforcement functions for nonattainment areas. Examples of jurisdictional boundaries include existing/prior nonattainment area boundaries for ozone or other urban-scale pollutants, county lines, air district boundaries, township boundaries, area covered by a MPOs, state lines, Reservation boundaries, and urban growth boundary. Where existing jurisdictional boundaries were not adequate or appropriate to describe the nonattainment area, other clearly defined and permanent landmarks or geographic coordinates were considered.

The Charlotte-Gastonia-Salisbury, NC-SC area has previously established nonattainment boundaries associated with the both the 1-hour ozone and 1997 8-hour ozone NAAQS. The Charlotte nonattainment boundary for the 1-hour ozone NAAQS included Mecklenburg County, North Carolina in its entirety. Whereas the Charlotte nonattainment boundary for the 1997 8-hour ozone NAAQS included Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union Counties in North Carolina in their entireties, a portion of Iredell County, North Carolina, a portion of York County, South Carolina, and the Catawba Indian Nation Reservation. The States have recommended a different boundary for the 2008 ozone NAAQS. In South Carolina’s October 2011 letter, they revised their boundary recommendations to attainment statewide as a result of the most current air quality data which indicates attainment of the 2008 8-hour ozone standard. The presence of a violating monitor is not the only factor considered in nonattainment boundaries. However, a consideration of the other factors was not presented in their October 2011 letter.

The Charlotte-Gastonia-Salisbury area also includes an area of Indian country. As defined at 18 U.S.C. 1151, "Indian country" refers to: "(a) all land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation, (b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a state, and (c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same." EPA recognizes the sovereignty of tribal governments, and has attempted to take the desires of the tribes into account in establishing appropriate nonattainment area boundaries. As mentioned earlier, The Catawba Indian Nation Reservation is located within the South Carolina portion of the bi-state Charlotte nonattainment area. Generally air quality State Implementation Plans (SIPs) do not apply in Indian country throughout the United States. However, for purposes of the Catawba Indian Nation Reservation in Rock Hill, the South Carolina SIP does apply within the Reservation. Pursuant to the Catawba Indian Claims Settlement Act, S.C. Code Ann. 27-16-120, "all state and local environmental laws and regulations apply to the [Catawba Indian Nation] and Reservation and are fully enforceable by all relevant state and local agencies and authorities."

Conclusion

Based on the assessment of factors described above, EPA has preliminarily concluded that the following counties should be included as part of the Charlotte-Gastonia-Salisbury, NC-SC nonattainment area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Cabarrus, Gaston, Lincoln, Mecklenburg, Rowan and Union Counties in North Carolina in their entirety, a portion of Iredell County, North Carolina, a portion of York County, South Carolina, and the Catawba Indian Nation Reservation. All of these counties and the Catawba Indian Nation Reservation are included in the Charlotte nonattainment area for the 1997 ozone NAAQS. The air quality monitors in Mecklenburg and Rowan Counties, North Carolina indicate violations of the 2008 ozone NAAQS based on 2010 DVs, therefore these counties are preliminarily included in the nonattainment area. Cabarrus, Gaston, Lincoln, and Union Counties in North Carolina in their entirety, a portion of Iredell County, North Carolina, a portion of York County, South Carolina, and the Catawba Indian Nation Reservation are nearby counties that do not have violating monitors, but EPA has preliminarily concluded that these areas contribute to the ozone concentrations in violation of the 2008 ozone NAAQS through emissions from point sources and non-point sources (e.g., vehicles and other small area sources). Gaston, Iredell, Mecklenburg, Rowan, and York have the highest NO_x emissions in the area. Cabarrus, Iredell, Mecklenburg, Rowan, and York have among the highest VOC emissions in the area. Lincoln and Union ranked relatively high for emissions-related data such as population, and population density; commuting; meteorology, and jurisdictional boundaries.