

US EPA ARCHIVE DOCUMENT



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

July 19, 2012

Ms. Lisa Jackson
Administrator
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

OFFICE OF THE
EXECUTIVE SECRETARIAT

2012 JUL 23 AM 10:30

RECEIVED

Dear Administrator Jackson:

Tennessee is filing a Petition for Reconsideration of the final rule designating Shelby County, Tennessee as non-attainment under the 2008 ozone NAAQS. The decision was announced on April 30, 2012 and published in the Federal Register on May 21, 2012 (77 Fed. Reg. 30088). Prior to the announcement, Tennessee corresponded with EPA through the Governor's office and the Department of Environment and Conservation about Shelby County, Tennessee's designation. Shelby County is part of a larger metropolitan area that has formed around the major city of Memphis. This metropolitan area extends into northern Mississippi and eastern Arkansas.

Tennessee recommended that Shelby County be classified as attainment based on the most recent ozone season data from 2009 – 2011. This data showed the 3-year Design Value of the ozone monitors in Shelby County as attaining the standard. Alternatively, Tennessee proposed that a partial county non-attainment area boundary be selected within Shelby County.

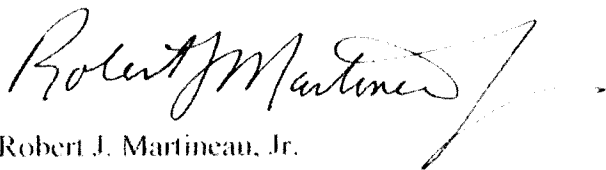
EPA designated the full county as a non-attainment area. Tennessee challenges this decision and urges reconsideration. Tennessee supports this challenge through its petition and the accompanying exhibits. Although Tennessee submitted a certification for its 2011 ozone monitoring data, this data was not considered in the EPA non-attainment area determination. The failure to use the most recent data was for various reasons unlawful and arbitrary, as detailed in our petition. Also, the 2011 data is important because the location of the non-attaining monitor shifts to Arkansas.

Although the uncertified data from Arkansas was available to EPA, EPA based its analysis on 2008 – 2010 data which showed a non-attaining monitor within Shelby County. EPA's failure to consider Tennessee's 2009 – 2011 certified data was inconsistent with EPA's actions in the Chicago tri-state area. The lack of uniformity in data analysis methods between regions violated 40 CFR §§ 56.3-56.5. The inconsistent treatment of the Memphis and Chicago tri-state areas lacked a rational basis and was therefore also arbitrary and capricious.

EPA incorrectly based its analysis on a non-attaining 2008 – 2010 Shelby County air monitor. The 2009 – 2011 data is of central relevance to the final area designation because the location of the non-attaining monitor shifts, and EPA did not analyze contribution from Shelby County to the Crittenden County, Arkansas air monitor.

In conclusion, Tennessee urges reconsideration and respectfully request that upon reconsideration EPA find Shelby County to be in attainment or at least adopt the partial county non-attainment area that Tennessee recommended. This letter is being sent electronically and includes the petition. Overnight courier delivery is being scheduled for the hard copy of this letter, the petition, and the supporting exhibits referenced therein. Thank you in advance for your consideration in this matter.

Sincerely,

A handwritten signature in black ink, reading "Robert J. Martineau, Jr.", with a stylized flourish at the end.

Robert J. Martineau, Jr.
Commissioner

cc. Gina McCarthy, USEPA-HQ-OAR
Janet McCabe, USEPA-HQ-OAR
Beverly Banister, USEPA-Region 4 Atlanta

US EPA ARCHIVE DOCUMENT

)
)
)
)
)
)
)
)
)
)

Specifically, the State of Tennessee seeks reconsideration of the portion of the final rule which designated all of Shelby County, Tennessee as a non-attainment area for the 2008 ozone standard, as detailed below. The grounds for the objections raised in this petition arose after the period for public comment but within the time specified for judicial review and are of central relevance to the outcome of the rule. The Administrator must therefore “convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been

afforded had the information been available at the time the rule was proposed.” *See* Exhibit 14, at 7607(d)(7)(B).

INTRODUCTION

This petition raises objections to the final rule captioned above. Each objection is “of central relevance to the outcome of the rule,” CAA § 307(d)(7)(B), in that it demonstrates that the rule is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” *Id.*, at 7607(d)(9)(A). With respect to each objection, EPA’s actions and decisions that render the rule illegal and arbitrary were announced on April 30, 2012 and published in the Federal Register on May 21, 2012 (77 Fed. Reg. 30088). *See* Exhibit 18.

Prior to the final rule, a Federal Register notice soliciting comment on the rule was published on December 20, 2011 (76 Fed. Reg. 78872). *See* Exhibit 16, at 78873. The public comment period was extended on January 19, 2012 (77 Fed. Reg. 2677) and closed on February 3, 2012. *See* Exhibit 17, at 2678. The grounds for the objections raised in this petition thus “arose after the period for public comment.” *See* Exhibit 14, at 7607(d)(7)(B). As set out in more detail below, EPA’s final designation of Shelby County, Tennessee as a non-attainment area was illegal and arbitrary for the following reasons:

- I. EPA has unlawfully failed to assure uniform application by all regional offices of the criteria, procedures, and policies employed in implementing and enforcing the Clean Air Act.
- II. EPA acted arbitrarily and capriciously when making its area designation for Shelby County, Tennessee by using inconsistent sets of ozone monitoring data without providing a rational basis for that inconsistency.

III. EPA's failure to use the 2009 – 2011 data was of central relevance to the outcome of the rule.

Because EPA's designation of non-attainment areas concerns the provisions of CAA § 107(d), the grounds also arose after the conclusion of the 120-day consultation process specified in 107 – if EPA considers the consultation period to be equivalent to a public comment period. Because judicial review of the rule is available by the filing of a petition for review by July 20, 2012, the grounds for the objections arose “within the time specified for judicial review.” *See* Exhibit 14, at 7607(d)(7)(B). A more complete chronology of events related to the process of EPA's final decision designating Shelby County, Tennessee as non-attainment for the 2008 ozone standard are set forth in a timeline attached to this petition. *See* Attachment 1.

The final rule unlawfully and arbitrarily designates Shelby County, Tennessee as non-attainment. *See* Exhibit 18, at 30146. In the final rule, EPA designated Shelby County, Tennessee as non-attainment based on unlawful, unfair, non-uniform, and arbitrary applications of air quality monitoring data that changed the outcome of the rule. EPA's unlawful and arbitrary application of the data and the subsequent results of the action occurred after the close of the public comment period. Thus, the grounds for our objections arose after the period for public comment, and the raising of those objections during the public comment period was impracticable. *See* Exhibit 14, at 7607(d)(7)(B). These objections are of central relevance to the outcome of the rule, *see Id.*, because they provide substantial support for the argument that the final rule should be revised. These objections are also central to the substantive final decision designating Shelby County as non-attainment - the outcome that should be revised.

EPA'S FINAL DESIGNATION OF SHELBY COUNTY, TENNESSEE AS A NON-ATTAINMENT AREA WAS ILLEGAL AND ARBITRARY FOR THE FOLLOWING REASONS:

I. EPA has unlawfully failed to assure uniform application by all regional offices of the criteria, procedures, and policies employed in implementing and enforcing the Clean Air Act

EPA failed to assure the fair, uniform, and consistent application of certified air quality monitoring data methods among its Regional Offices. Therefore, its action on this rule was unlawful. Under 40 CFR § 56.3, it is EPA's policy to "[a]ssure fair and uniform application by all Regional Offices of the criteria, procedures, and policies employed in implementing and enforcing the [Clean Air Act]." Furthermore, 40 CFR § 56.4 requires the Administrator to "include, as necessary...mechanisms to assure that the rule or regulation is implemented and enforced fairly and uniformly by the Regional Offices." Regional Administrators must also assure, where reasonably possible, consistency "with the activities of other Regional Offices" under 40 CFR § 56.5.

As the attached EPA Technical Support Document indicates, EPA used 2008 – 2010 certified "air quality monitoring data" ("data") from Tennessee, Arkansas, and Mississippi to make its determination that Shelby County be designated non-attainment. *See* Exhibit 5. Despite having more recent 2009 – 2011 certified data from Tennessee ("TN") and Mississippi ("MS") in its possession, EPA used less recent 2008 – 2010 certified data from TN and MS to

make its area designations. *Id.* EPA's December 8, 2011 letter from Regional Administrator Gwendolyn Keyes Fleming indicated EPA's intention to consider TN's 2009 – 2011 certified data so long as EPA received the data by February 29, 2012. *See* Exhibit 3. TN relied upon this representation and sent EPA its 2009 – 2011 certified data on February 27, 2012, two days before the February 29, 2012 deadline. *See* Exhibit 9. EPA also received MS's 2009 – 2011 certified data before the February 29, 2012 deadline. *See* Exhibit 5.

Contrary to EPA's representation, EPA failed to consider TN's or MS's more recent 2009 – 2011 certified air data when making its area designations. *Id.* EPA stated that it did not consider the more recent data because Arkansas ("AR") had not also provided 2009 – 2011 data for EPA to use. *Id.* EPA instead used 2008 – 2010 monitoring data from TN, AR, and MS on the basis that it was the most recent "full set" of certified data from a common 3-year period for the tri-state area. *Id.* Because EPA used the 2008 – 2010 certified data, it focused on the non-attaining monitor in Shelby County, TN as a basis for determining that Shelby County be designated non-attainment. If EPA had used the TN 2009 – 2011 certified data, Shelby County could have been designated as attainment.

In stark contrast to its action concerning Shelby County, in EPA's Chicago-Naperville, Illinois-Indiana-Wisconsin Area Designations, EPA used 2009 – 2011 certified data from Illinois ("IL") and 2008 – 2010 certified data from Indiana ("IN") and Wisconsin ("WI") to make its area designations. *See* Exhibit 6. In that tri-state area, as opposed to the Memphis, TN's tri-state area, EPA did not require a "full set" of certified data from a common 3-year period to make its designations. EPA instead chose to make its area designations using more recent 2009 – 2011 data from IL while using less recent 2008 – 2010 certified data from IN and WI. *See* Exhibit 6 and Exhibit 19, at 34224. EPA thus demonstrated a willingness to use more recent data from

one state in conjunction with less recent data from other states in the same designation area. Contrary to the methods EPA employed in the Chicago tri-state area, EPA failed to consider TN or MS's most recent certified data when making its Memphis, TN-MS-AR tri-state area designations. EPA unlawfully, arbitrarily, and unfairly employed two different certified data consideration methods among its Regional Offices when EPA required a "full set" of tri-state, common period, (but less recent) 3-year data for its Memphis tri-state area analysis while preferring and using a combination of uncommon periods from each state for its Chicago tri-state area analysis.

EPA's actions violated 40 CFR §§ 56.3 – 56.5 by failing to assure the use of data methods in a fair, uniform, and consistent manner among its Regional Offices. This failure was of central relevance to the outcome of the rule because designations of attainment and non-attainment change depending on which sets of data are used by EPA in its area designation analysis.

Section 107(d) of the CAA requires a designation of non-attainment for areas that are violating the NAAQS or are contributing to violations in a nearby area. Section 107(d)(1)(A)(i) defines "non-attainment" as an area that "does not meet (or that contributes to ambient air quality in a nearby area that does not meet)" the NAAQS. *See* Exhibit 15. As stated in 40 CFR § 50, Appendix P, EPA shall use "the three most recent, consecutive calendar years of monitoring data" to compute the 3-year period average.¹ EPA therefore should have followed that policy uniformly across Regional Offices, as 40 CFR §§ 56.3 – 56.5 requires, and considered TN and MS's most recent 2009 – 2011 monitoring data in conjunction with AR's 2008 – 2010 data just as EPA did for the Chicago-Naperville, IL-IN-WI area designations. The 2009 – 2011 certified

¹ Nothing in the Clean Air Act or these regulations requires data to be officially certified for EPA to use the data in its ozone area designations. EPA had the ozone air monitoring data available, regardless of whether it was officially certified.

data from TN and MS, which was available to EPA, showed no violation of the NAAQS based on the Shelby County, TN and Desoto County, MS air monitors. *See Exhibit 9 and Exhibit 10.* If EPA had followed its policy of using, when available, the most recent certified data and if EPA had lawfully, fairly, and uniformly applied its data application methods across Regional Offices, EPA would have designated Shelby County, TN either as attainment or partial non-attainment. Instead, EPA's unlawful use of the less recent 2008 – 2010 certified data in its analysis resulted in Shelby County, TN being designated as non-attainment. If EPA had used a combination of 2008 – 2010 certified data from AR and 2009 – 2011 certified data from TN and MS, as it did in the Chicago tri-state area, it would have designated Shelby County as attainment.

Alternatively, upon granting this petition for reconsideration, the State of Tennessee asserts that EPA could designate Shelby County, TN as partial non-attainment and still comply with its statutory duties. First, EPA now has AR's 2009 – 2011 certified data in its possession, which it can use upon reconsideration. *See Exhibit 12.* Second, EPA could have, and should have, used AR's 2009 – 2011 air quality monitoring data for its initial designations. Tennessee Governor Bill Haslam and Tennessee Department of Environment and Conservation Commissioner Robert Martineau, Jr. both urged EPA to use AR's more recent 2009 – 2011 air monitoring data in its initial considerations. *See Exhibit 11 and Exhibit 13.*

Although there is some uncertainty about when EPA formally received AR's 2009 – 2011 certified air data, Commissioner Martineau informed EPA that the data was quality assured, even if not yet certified, and urged EPA to use that more recent data, with certification to follow. *See Exhibit 7, Exhibit 9, and Exhibit 11.* TN received confirmation from the State of Arkansas that indicated AR uploaded its 2009 – 2011 certified data to the AIRS database on April 17, 2012. *See Exhibit 12.* Executive Order 13563 of January 18, 2011 requires regulatory

systems to be “based on the best available science” and also requires regulatory systems to “consider regulatory approaches that reduce burdens and maintain flexibility.” *See* Exhibit 21. EPA stated that the final designation rule is exempt from this executive order. Insofar as EPA must promulgate an ozone designation rule, the State of Tennessee agrees that the executive order cannot undo this statutory duty. However, the executive order also contains important directives explaining how regulatory agencies should operate within the regulatory system. The State of Tennessee does not take issue with the fact that EPA promulgated a rule – a duty which the executive order cannot take from EPA. The methods that EPA used to reach the promulgated rule, on the other hand, are not exempt from Executive Order 13563, and EPA’s methods must therefore comply with the order. *Id.*

In this case, the most recent certified data, the 2009 – 2011 certified data from the AR, MS, and TN tri-state area, constitutes the best available science on which to base EPA’s air quality regulatory system. The Clean Air Act **requires** the most recent data, and EPA has leeway under Executive Order 13563 to remain flexible in its regulation of air quality. EPA should have used that flexibility to include the most recent data in its analysis. Furthermore, EPA’s May 15, 2009 guidance document concerning Ambient Air Monitoring Data Certification states that after the deadline for data certification has passed, EPA “may move ahead and use both certified and uncertified data to propose and make designations or findings of attainment.” *See* Exhibit 20. Thus, EPA could have, and should have, used AR’s 2009 – 2011 air quality monitoring data for its area designations.

As the analysis discussed in Part III of this reconsideration petition demonstrates, the 2009 – 2011 certified data sets from TN, AR, and MS show a violation of the Crittenden County, AR air monitor but no violations of the TN and MS air monitors. *See* Part III’s discussion and

Exhibits 22 – 31. Based on the 2009 – 2011 data from TN, AR, and MS, Shelby County, TN's area designation should only be evaluated by considering its possible contribution to the monitor violation in Crittenden County, AR. *Id.* The State of Tennessee originally addressed the "contribution" issue, based on 2009 – 2011 data from each state, and recommended that EPA designate Shelby County, TN as only partial non-attainment. *See* Exhibit 9 *and* Exhibit 11. Because EPA used the 2008 – 2010 air monitoring data with the violating monitor in TN, it ignored the contribution scenario in its analysis. *See* Exhibit 5.

As the State of Tennessee's technical analysis demonstrates, a partial non-attainment designation for Shelby County captures nearly all of the possible contributing sources of ozone pollution from Shelby County, TN. *See* Exhibit 23. Such a designation of partial non-attainment also uses the "least burdensome [tool] for achieving" the Clean Air Act's goal by designating as partial non-attainment only that part of Shelby County necessary to improve air quality. *See* Exhibit 21 *and* Exhibit 2, *stating* "In addition, EPA's modeling indicates that approximately half of the 52 areas would attain the 0.075 ppm standard by 2015 (the expected attainment deadline for Marginal areas) as a result of the emission-reducing rules already in place."² In this second alternative, as in the first, our objection to EPA's unlawful action is of central relevance to the outcome of the rule because designations of attainment, non-attainment, and partial non-attainment change when EPA's statutory requirements of uniformity and fairness and EPA's own policies on data use are followed.

² EPA conducted modeling in conjunction with its promulgation of the Cross-State Air Pollution Rule ("CSAPR"), see "Air Quality Modeling Final Rule Technical Support Document, Appendix B" at B-30. (<http://www.epa.gov/airtransport/pdfs/AQModeling.pdf>). This modeling shows the effect of reductions in ozone based on NOx emissions required by CSAPR plus other federal measures, resulting in projected design values at the Shelby County monitors well below the 2008 standard. While CSAPR has been stayed pending review by the D.C. Circuit Court of Appeals, the stay also continued the provisions of the 2005 Clean Air Interstate Rule ("CAIR"), which would result in nearly the same level of reductions. Hence, EPA would not be using the "least burdensome" method by designating the entire area of Shelby County, TN if no local reductions are to be anticipated.

II. EPA acted arbitrarily and capriciously when making its area designation for Shelby County, Tennessee by using inconsistent sets of ozone monitoring data without providing a rational basis for that inconsistency.

EPA's inconsistent treatment of the Memphis, TN tri-state area designations and Chicago, IL tri-state area designations lacks a rational basis and is therefore arbitrary and capricious. EPA approached the use of air monitoring data inconsistently among its Regional Offices, varied its policies and applied inconsistent methods relating to the use of air monitoring data, made unsupported factual claims about air monitoring data, and inexplicably treated the Memphis, TN tri-state area and the Chicago, IL tri-state area inconsistently, which produced an arbitrary outcome for the Memphis, TN tri-state area.

First, EPA Region 5 and Regions 4 and 6 approached the use of air monitoring data in starkly different ways to make area designations and provided no rationale for the inconsistency between the two Regions. In EPA's Region 5 Chicago-Naperville, Illinois-Indiana-Wisconsin Area Designations, EPA used 2009 – 2011 certified air data from IL and 2008 – 2010 certified air quality monitoring data from IN and WI to make its area designations. *See* Exhibit 6. In that tri-state area, as opposed to the tri-state Memphis, TN-MS-AR area, EPA did not require a "full set" of certified air quality monitoring data from the same 3-year period to make its designations. EPA instead chose to use more recent 2009 – 2011 data from IL while using less recent 2008 – 2010 certified data from IN and WI to make its area designations. *Id.* EPA in fact demonstrated a willingness to use more recent data from one state in conjunction with less recent data from other states.

Contrary to those methods employed for the Chicago area, and in violation of EPA's policy to consider the most recent data when available, EPA failed to consider TN or MS's most recent 2009 – 2011 data for its Memphis, TN-MS-AR area designations despite having that data in its possession. *See* Exhibit 5. Unlike Region 5 did in the Chicago area, Region 6 did not send a letter to Arkansas informing the state of EPA's use of more recent 2009 – 2011 data from TN and MS in its preliminary designations because Region 5 employed a different method of data use for its preliminary and final designations.

EPA employed two different and inconsistent data use methods among its Regional Offices when EPA required a "full set" of tri-state, common period, (but less recent) 3-year data for its Memphis tri-state area analysis while preferring and using a combination of uncommon periods, but latest 3-year data from each state for the Chicago tri-state area analysis. Such an inconsistent approach for choosing which air quality monitoring data is to be used is arbitrary and capricious because EPA offers no rationale for the inconsistency. In fact, the method EPA Regions 4 and 6 employed is instead contrary to EPA policy to use the most recent data available.

Second, EPA made varying and inconsistent statements to the State of Tennessee regarding the use and consideration of air quality monitoring data. In a letter dated December 8, 2011, Regional Administrator Fleming informed the State of Tennessee that EPA would consider TN's 2009 – 2011 certified data if TN submitted that data by the February 29, 2011 deadline. *See* Exhibit 3. The letter did not mention that AR 2009 – 2011 data would also need to be submitted for EPA to consider TN's 2009 – 2011 data. *Id.* In its final designations, however, EPA did not consider TN's 2009 – 2011 certified data, and EPA indicated that the reason for this was that AR had not also provided its data from the 2009 – 2011 period. *See* Exhibit 5. EPA

therefore varied the characterization of its policy regarding air quality data considerations and did so in its final rule, which gave TN no chance to respond to the inconsistencies.

EPA's rationale for not considering TN's 2009 – 2011 data was that it needed a "full set" of data from all three jurisdictions for a common 3-year period to conduct its analysis, but such a rationale is inconsistent with the methods EPA employed to arrive at its Chicago-Naperville, Illinois-Indiana-Wisconsin Area Designations. *See* Exhibit 5 and Exhibit 6. EPA varied the characterization of its policies regarding air monitoring data considerations, and EPA employed methods inconsistent with the rationale it offered. Moreover, it provides no explanation to justify its inconsistent decisions. These variations and inconsistencies lack a rational basis and are therefore arbitrary and capricious.

Third, EPA's rationale for not considering TN's 2009 – 2011 air quality monitoring data is also not supported by other EPA guidance and policy. Tennessee Governor Bill Haslam and Tennessee Department of Environment and Conservation Commissioner Robert Martineau, Jr. both urged EPA to use AR's more recent 2009 – 2011 air monitoring data in its initial considerations. *See* Exhibit 11 *and* Exhibit 13. Although there is uncertainty about when EPA formally received AR's 2009 – 2011 air data, Commissioner Martineau informed EPA that the data was quality assured, even if not yet certified, and urged EPA to use that more recent data, with certification to follow. *See* Exhibit 11. TN received confirmation from the State of Arkansas that indicated AR uploaded its 2009 – 2011 certified data to the AIRS database on April 17, 2012. *Id.*

Executive Order 13563 of January 18, 2011 requires regulatory systems to be "based on the best available science" and also requires regulatory systems to "consider regulatory approaches that reduce burdens and maintain flexibility." *See* Exhibit 21. EPA asked and

waited for more recent data from WI and IN and delayed the decision for the Chicago, IL-IN-WI tri-state area past the date of national announcement. *See* Exhibit 19, at 34224. EPA did not postpone the decision date for the Memphis, TN-MS-AR tri-state area although the consent decree deadline was not until May 31, 2012.

Furthermore, EPA's May 15, 2009 guidance document concerning Ambient Air Monitoring Data Certification states that after the deadline for data certification has passed, EPA "may move ahead and use both certified and uncertified data to propose and make designations or findings of attainment." *See* Exhibit 20. Based on that EPA guidance document, EPA could have, and should have, used AR's 2009 – 2011 air quality monitoring data for its area designations. Thus, EPA's rationale that it did not consider Tennessee's 2009 – 2011 data because AR had not provided its 2009 – 2011 data further lacks support. An unsupported rationale such as this is arbitrary and capricious.

Fourth, EPA treated the Chicago, IL and Memphis, TN tri-state areas inconsistently by employing different methods regarding the use of air quality monitoring data when it made its area designations. EPA employed two different certified data consideration methods among its Regional Offices when EPA required a "full set" of tri-state, common period, (but less recent) 3-year data for its Memphis tri-state area analysis while preferring and using a combination of uncommon periods from each state for its Chicago tri-state area analysis. In doing so, EPA failed to employ data methods in a consistent manner among its Regional Offices. While an agency may make different decisions, it must explain its basis for doing so. In *Catawba County, N. Carolina v. EPA*, 571 F.3d 20, 51 (D.C. Cir. 2009) the court explained:

In sum, Rockland County's nonattainment designation is troubling because of the apparent inconsistency in EPA's approach to designations in different EPA regions, EPA's varying characterizations of Rockland's statistics, and EPA's treatment of Rockland as compared to Dutchess and Ocean Counties. In light of

the agency's scientific expertise and the complexity of the designation process, we remand to give EPA another opportunity to provide a coherent explanation for its designation. *See, e. g., North Carolina v. EPA*, 550 F. 3d 1176 (D. C. Cir 2008).

Here as in *Catawba*, “[s]uch inconsistent treatment is the hallmark of arbitrary agency action.” *Id.* at 51. EPA has failed to provide a rationale in this case. Such failure was of central relevance to the outcome of the rule because designations of attainment and non-attainment change depending on which sets of data are used by EPA in its area designation analysis. Such inconsistent treatment lacks a rational basis and is therefore arbitrary and capricious.

The arbitrary and capricious EPA actions outlined above were of central relevance to the outcome of the rule because designations of attainment and non-attainment change depending on which sets of data are used by EPA in its analysis.

If EPA had followed its policy of using, when available, the most recent certified data and if EPA had consistently applied its data application methods across Regional Offices, EPA would have designated Shelby County, TN either as attainment or partial non-attainment. Instead, EPA's unlawful use of the less recent 2008 – 2010 certified data in its analysis resulted in Shelby County, TN being designated as non-attainment.

As the analysis discussed in Part III of this reconsideration petition demonstrates, the 2009 – 2011 certified data sets from TN, AR, and MS show a violation of the Crittenden County, AR air monitor but no violations of the TN and MS air monitors. *See* Part III's discussion *and* Exhibits 22 – 31. Based on the 2009 – 2011 data from TN, AR, and MS, Shelby County, TN should only be designated non-attainment or partial non-attainment by virtue of its possible contribution to the monitor violation in Crittenden County, AR. *Id.* The State of Tennessee originally addressed the “contribution” issue, based on 2009 – 2011 data from each state, and

recommended that EPA designate Shelby County, TN as only partial non-attainment. *See* Exhibit 9 *and* Exhibit 10. Because EPA used the 2008 – 2010 air monitoring data with the violating monitor in TN, it ignored the contribution scenario in its analysis. *See* Exhibit 5.

As the State of Tennessee’s technical analysis demonstrates, a partial non-attainment designation for Shelby County captures nearly all of the possible contributing sources of ozone pollution from Shelby County, TN. *See* Exhibit 23. Such a designation of partial non-attainment also uses the “least burdensome [tool] for achieving” the Clean Air Act’s goal by designating as partial non-attainment only that part of Shelby County necessary to improve air quality. *See* Exhibit 21. The State of Tennessee’s objection to EPA’s arbitrary and capricious actions are of central relevance to the outcome of the rule because the technical analysis and subsequent designations of attainment, non-attainment, and partial non-attainment change depending on which data use methods are employed to make those designations.

EPA may consider these statutory violations and its arbitrary and capricious agency action as procedural errors under CAA § 307(d)(9)(D). This makes no difference to this petition, though, because the unlawful, non-uniform data use methods and the arbitrary and capricious agency action meet the criteria set forth in the Act for reversal based on procedural violations. *Id.*

First, EPA’s procedural dereliction is arbitrary and capricious. *See* Exhibit 14, at 7607(d)(9)(D)(i). As outlined above, EPA’s unlawful, non-uniform, data use methods and inconsistent approach, treatment, and policies employed regarding the Memphis, TN tri-state area and Chicago, IL tri-state area lacked rational bases and are therefore arbitrary and capricious.

Second, via the present petition, petitioners have satisfied the requirements of Clean Air Act section 307(d). *See* Exhibit 14, at 7607(d)(9)(D)(ii).

Third, the challenged errors “were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.” *See* Exhibit 14, at 7607(d)(8) and 7607(d)(9)(D)(iii). If EPA had followed its statutory requirements to apply data methods uniformly and if EPA had employed rational, consistent, non-arbitrary approaches to the treatment of area designations in different Regions, there is a substantial likelihood that Shelby County, TN’s area designation, which was the outcome of the rule, would have, as outlined above, been significantly changed.

III. EPA’s Failure to Use the 2009 – 2011 Data Was of Central Relevance to the Outcome of the Rule

Use of 2009 – 2011 data would change the outcome of the designation rule because it would shift technical focus to that of “contribution” from Shelby County, TN to the measured non-attainment violating monitor in AR.

The specific proposal by the State of Tennessee for a partial non-attainment area within Shelby County, TN should be reconsidered. EPA can rectify its mistakes in failing to consider the most recent data and failing to properly consider the partial area recommendation by administrative reconsideration. Both the most recent data and the location of the non-attaining monitor are of central relevance to the outcome of the rule designating boundaries for non-attainment. Although TN demonstrated that EPA should have been focused on 2009 – 2011 data and on contribution of Shelby County, TN to a measured non-attainment condition in AR, EPA

can take the AR data and the full 2009 – 2011 data into account now. Considering the AR certified 2009 – 2011 data, EPA should change its position with respect to the designation of the full area of Shelby County, TN. Upon reconsideration, EPA can accept the partial non-attainment area that TN had recommended.

The use of the 2008 – 2010 data for the Shelby County area instead of the 2009 – 2011 data caused EPA to fail to make a contribution analysis of the Shelby County, TN area to the violating monitor in AR. TN submitted a partial area designation as an alternative to its primary recommendation for non-attainment based on that scenario. Upon reconsideration, EPA should look at the 2009 – 2011 data throughout the area with the AR certified data for 2011 now before it. EPA, however, was made aware of the AR data in its submitted, but uncertified form, during the state consultation process. As TN has stated earlier in this petition, the TN data itself should have caused EPA to shift focus to how emissions in Shelby County, TN would impact the monitor in AR. Using EPA's 5-factor analysis adopted in its Technical Support Document, the proposed partial non-attainment area would capture the emissions that could significantly contribute to the monitor violation in Crittenden County, AR.

Five-factor Analysis of the Proposed Partial Non-attainment Area in Shelby County Based on 2009 – 2011 Certified Data

Factor 1: Air Quality Data

TN's 2009 – 2011 certified data demonstrates that Shelby County monitors show attainment under the 2008 NAAQS. Now that the 2009 – 2011 certified data for AR is in EPA's possession, EPA should analyze what portions of Shelby County significantly contribute to the non-attainment monitor in Crittenden County.

Factor 2: Emissions and Emissions-Related Data

Exhibit 23 provides an overview of stationary and mobile source emissions for Shelby County. Most of these emissions sources are located within the South and Southwest portions of Shelby County and are included in the proposed partial county non-attainment area.

Stationary Source Emissions

All the facilities in the National Emissions Inventory and the vast majority of significant stationary source emissions are included in the proposed partial county non-attainment area. *See* Exhibit 22. TN included census tracts in the proposed partial county non-attainment area that contained large factories outside the Memphis city limits to ensure that significant stationary source emissions were placed in a non-attainment area.

Mobile Source Emissions

The partial county non-attainment area includes the vast majority of mobile source emissions that could significantly impact the Crittenden County monitor. The travel pattern maps show that the main travel corridors occur in the southern and southwestern portions of Shelby County. *See* Exhibit 28 *and* Exhibit 30. Annual average daily traffic data for the area also shows that the proposed partial county non-attainment area captures the great majority of traffic in the county. *See* Exhibit 24. Roads outside the proposed partial county non-attainment area have less traffic, and the traffic volume increases when those roads enter the proposed partial county non-attainment area. *Id.* The majority of workers living in the proposed partial county non-attainment

area drive less than ten miles to work, making them a significant cause of the increased traffic volume within the proposed partial county non-attainment area. *See* Exhibit 27.

Location of Population

The proposed partial county non-attainment area captures a significant majority of Shelby County's population and workers. Over 79% of the county population is found within the proposed partial county non-attainment area. *See* Exhibit 31. Although Shelby County as a whole has a large population density, the proposed partial county non-attainment area captures the vast majority of this density; the remaining portion of Shelby County only has a population density of about 409 persons per square mile, which is less densely populated than the partial county non-attainment area in DeSoto County. *Id.* A significantly greater number of individuals are employed within the proposed partial county non-attainment area than the remainder of Shelby County. *Compare* Exhibit 26 *and* Exhibit 27. Over 90% percent of the jobs within Shelby County are found within the proposed partial county non-attainment area. *Compare* Exhibit 25 *and* Exhibit 29.

Factor 3: Meteorological Data

With respect to monitor conditions in Crittenden County, EPA has not provided sufficient evidence of a significant contribution from the area of Shelby County that TN proposed as attainment. EPA did not analyze the contribution of Shelby County's emissions to the Crittenden County monitor.

Factor 4: Geography and Topography

As EPA indicated in its Technical Support Document, this factor does not play a significant role in the analysis of the Memphis, TN tri-state area. *See Exhibit 5.*

Factor 5: Jurisdictional Boundaries

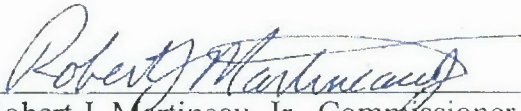
EPA's decision to classify the entirety of Shelby County as non-attainment does not take into account the significant differences between portions of the county that the above four factors highlight. EPA arbitrarily based their analysis on the county level, but classifying Shelby County as partial non-attainment would capture the main sources of emissions that could significantly contribute to the monitor violation in Crittenden County. Local governments outside the proposed partial county non-attainment area have no control over the significant emissions generated in the proposed partial county non-attainment area, so designating them as non-attainment would not meaningfully address the monitor violation in Crittenden County, AR. Instead, classifying the portion of Shelby County outside the proposed partial county non-attainment area as non-attainment places a needless burden on this area that Executive Order 13563 directs against.

CONCLUSION

Based upon all of the foregoing discussion and analysis, EPA should reconsider its rule designating the entirety of Shelby County as non-attainment. If EPA had used a combination of 2008 – 2010 certified data from AR and 2009 – 2011 certified data from TN and MS, as it did in the Chicago tri-state area, it would have designated Shelby County as attainment. Alternatively, as the five-factor analysis indicates, TN's proposed partial county non-attainment area

effectively includes the emissions in Shelby County that could significantly contribute to the monitor violation in Crittenden County.

Respectfully Submitted this 19th day of July, 2012.

A handwritten signature in blue ink, reading "Robert J. Martineau, Jr.", is written over a horizontal line.

Robert J. Martineau, Jr., Commissioner

Enclosures

Attachment 1

Timeline for Memphis Area Ozone Designation

2009

- March 10, 2009, Tennessee submitted initial ozone designation recommendations using 2006-2008 data, and recommended that Shelby County be designated non-attainment. *See* Exhibit 1.

2011

- September 22, EPA informed states of the 75 ppb standard and its plan to use state's 2009 recommendations and 2008 – 2010 ozone data in its forthcoming letters. *See* Exhibit 2.
- November 8, Tennessee recommended taking Shelby County off the non-attainment list using the 2009 – 2011 data. *See* Exhibit 7.
- December 8, The EPA responds to Tennessee's recommendations and states that based on 2008 – 2010 data, Shelby County is placed on the non-attainment list. The EPA also gives its reasons for designating Crittenden County as non-attainment. The EPA states; that Crittenden County has over 40% of its NOx emission deriving from area sources, which is considered a primary contributor to the formation of ozone in the Memphis area. *See* Exhibit 3.

2012

- February 23, Arkansas sent a response letter to the EPA requesting the EPA change its designation of Crittenden County according to the 2008 – 2010 data. *See* Exhibit 8.
- February 27, Tennessee sends a response letter to the EPA suggesting the EPA not include Shelby County based on the 2009 – 2011 certified data, or at least only designate part of Shelby County as non-attainment. This also serves as notification that data was certified before the deadline. *See* Exhibit 9.
- February 28, Mississippi sent a response letter to the EPA requesting that the EPA change its designation for DeSoto County based on certified 2009 – 2011 data, which shows attainment. This also serves as notification that data was certified before the deadline. *See* Exhibit 10.
- April 5, Tennessee sends follow up to EPA regarding Knox County and Shelby County disagreeing with the EPA's decision. *See* Exhibit 11.

Attachment 1

- April 17, Arkansas sends a letter to notify that certified data from 2011 has been submitted to the EPA. *See Exhibit 12.*
- April 30, The EPA sends response with revised designations. It states that Knox, Blount and part of Anderson counties are designated non-attainment, as well as all of Shelby County. *See Exhibit 4.*
- May 4, Tennessee, specifically Governor Haslam, sends response to EPA further stating Tennessee's disappointment in the EPA's decision. *See Exhibit 13.*
- May 21, EPA releases its rulings into the Federal Register, including designations for Shelby, Crittenden, and DeSoto counties. *See Exhibit 18.*

Attachment 2

Appendix of Exhibits

EPA Correspondence

Letter to Tennessee, March 10, 2009.....	Exhibit 1
Letter to Tennessee, September 22, 2011.....	Exhibit 2
Letter to Tennessee December 8, 2011.....	Exhibit 3
Letter to Tennessee April 30, 2011.....	Exhibit 4
Memphis Area Final Designations May, 2012.....	Exhibit 5
Chicago Area Final Designations May, 2012.....	Exhibit 6

State Correspondence

Tennessee Letter to EPA, November 8, 2011.....	Exhibit 7
Arkansas Letter to EPA February 23, 2012	Exhibit 8
Tennessee Letter to EPA February 27, 2012.....	Exhibit 9
Mississippi Letter to EPA February 28, 2012.....	Exhibit 10
Tennessee Letter to EPA April, 5, 2012.....	Exhibit 11
Arkansas Letter to EPA April 17, 2012.....	Exhibit 12
Tennessee Letter to EPA May 4, 2012.....	Exhibit 13

Attachment 2

Statutes and Regulation

CAA § 307 (Codified as 42 U.S.C. § 7607).....Exhibit 14

CAA § 107 (Codified as 42 U.S.C. § 7407).....Exhibit 15

Federal Register and Guidance Documents

76 Fed. Reg. 78872 (December 20, 2011).....Exhibit 16

77 Fed. Reg. 2677 (January 19, 2012).....Exhibit 17

77 Fed. Reg. 30088 (May 21, 2012).....Exhibit 18

77 Fed. Reg. 34221 (June 11, 2012).....Exhibit 19

Ambient Air Monitoring Group Guidance Document (May 15, 2009).....Exhibit 20

Executive Orders

Executive Order 13563 January 18, 2011.....Exhibit 21

Technical Documents

Proposed Partial Non-attainment Area Map.....Exhibit 22

Memphis Tri-State Area Emission Contributors Map.....Exhibit 23

Memphis Traffic Conditions.....Exhibit 24

Job Transportation Inflow/Outflow Report for Partial Attainment Area.....Exhibit 25

Home to Work Distance/Direction Report for Partial Attainment Area.....Exhibit 26

Attachment 2

Home to Work Distance/Direction Report for Non-attainment Area.....Exhibit 27

Shelby County Traffic Density Map.....Exhibit 28

Job Transportation Inflow/Outflow Report for Non-attainment Area.....Exhibit 29

Memphis Area Short Range Transit Plan.....Exhibit 30

Shelby and DeSoto County Population Density.....Exhibit 31



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

JAMES H. FYKE
COMMISSIONER

PHIL BREDESEN
GOVERNOR

March 10, 2009

Mr. A. Stanley Meiburg
Acting Regional Administrator
US EPA, Region IV
Atlanta Federal Center, 12th Floor
61 Forsyth Street, SW
Atlanta, GA 30303

RE: Clean Air Act
Tennessee Counties Recommended as Nonattainment for Ozone

Dear Mr. Meiburg:

As the Commissioner of the Tennessee Department of Environment and Conservation, I am designated to file the recommended eight-hour ozone attainment designations for Tennessee as required by the Clean Air Act. The designation recommendations are based on the most current ozone monitoring data (2006-2008) along with the December 4, 2008 USEPA guidance, "Area Designations for the 2008 Revised Ozone National Air Quality Standards." This guidance recommends states use the nine-factor analysis for designations taking into consideration the Core Based Statistical Area (CBSA) or Combined Statistical Area (which includes two or more adjacent CBSA's) associated with the violating monitor(s). Under this guidance, the following counties are recommended as nonattainment for the revised eight-hour ozone national ambient air quality standard:

Memphis Area
Shelby

Middle Tennessee Area
Davidson, Rutherford, Sumner
and Wilson

Tri-Cities Area
Sullivan and Hawkins⁽¹⁾

Chattanooga Area
Hamilton and Meigs⁽²⁾

Knoxville Area
Anderson, Blount, Knox,
Loudon and Sevier⁽³⁾

Morristown Area
Jefferson

(1) Tennessee recommends that Hawkins County be partially designated nonattainment for the portion of county limited to the census tract(s)

Mr. A. Stanley Meiburg
Acting Regional Administrator
US EPA, Region IV
Page 2 of 2

around the TVA John Sevier Fossil Plant. A detailed explanation of this recommendation will be included in a technical support document being sent under separate cover.

(2) Meigs County is not part of any CBSA.

(3) Sevier County is a Micropolitan Statistical Area (MiSA) by itself.

The remaining counties of Tennessee that are not specified above are recommended as attainment or unclassifiable, and these counties may be subject to additional control measures that will help all of Tennessee demonstrate attainment of the eight-hour standard.

I believe these recommendations will enable Tennessee to attain the ozone standards within the deadlines established by the Clean Air Act and its implementation regulations.

Your favorable review of these recommendations will be appreciated. Additional information used to formulate the recommendations will be forwarded to you under separate cover by our Air Pollution Control Division, Director, Barry R. Stephens.

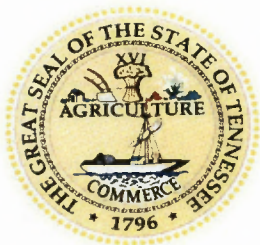
Sincerely,

A handwritten signature in black ink, appearing to read "James H. Pyke" followed by a stylized flourish or initials.

James H. Pyke

Copy to: Carol L. Kemker, Acting Director
Air, Pesticides and Toxics Management Division, EPA Region IV
Dick Schutt, Chief, Air Planning Branch, EPA Region IV
Tennessee Air Pollution Control Board
Tennessee Local Air Programs

Attachment



Tennessee Revised 8-Hour Ozone Standard
Nonattainment Area Designations
Nine-Factor Analysis

Executive Summary

On March 12, 2008, the U.S. Environmental Protection Agency promulgated the new ozone standard of 0.075 ppm. Pursuant to the Clean Air Act, the states have one year from issuance of the new standard to recommend areas of the state as nonattainment or attainment with the new standard. This technical summary document presents the State of Tennessee's recommendations. As detailed in Table 1, the State of Tennessee recommends 15 counties be designated nonattainment including one county partially with the new ozone standard and the remaining 80 counties be designated as attainment. These recommendations are based on the Nine-Factor analysis, which was outlined in the EPA guidance dated December 4, 2008. The State of Tennessee evaluated the counties shown below (Figure S) in each metropolitan statistical area (MSA). The following is a summary of each MSA.

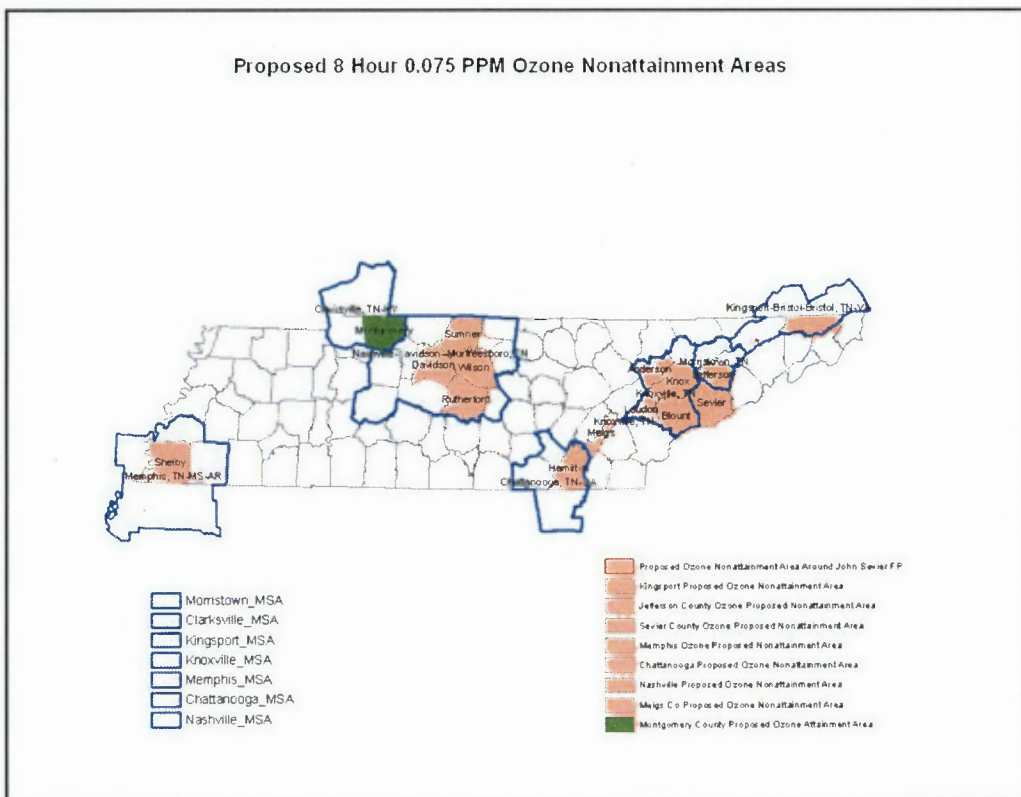


Figure S – Tennessee MSA/CBSA

Table 1 - Tennessee 8-Hour Ozone County Designations

MSA	County	Designation	
		Attainment	Nonattainment
Chattanooga MSA	Hamilton		Yes
	Marion	Yes	
	Sequatchie	Yes	
Clarksville MSA	Montgomery	Yes	
	Stewart	Yes	
	Tipton	Yes	
Davidson MSA	Cannon	Yes	
	Cheatham	Yes	
	Davidson		Yes
	Dickson	Yes	
	Hickman	Yes	
	Macon	Yes	
	Robertson	Yes	
	Rutherford		Yes
	Smith	Yes	
	Sumner		Yes
	Trousdale	Yes	
	Williamson	Yes	
	Wilson		Yes
Johnson City MSA	Carter	Yes	
	Unicoi	Yes	
	Washington	Yes	
Kingsport-Bristol MSA	Hawkins ⁽¹⁾		Yes
	Sullivan		Yes
Knoxville MSA	Anderson		Yes
	Blount		Yes
	Knox		Yes
	Loudon		Yes
	Union	Yes	
Memphis MSA	Fayette	Yes	
	Shelby		Yes
	Tipton	Yes	
Morristown MSA	Grainger	Yes	
	Hamblen	Yes	
	Jefferson		Yes
Sevierville ⁽²⁾ MiSA	Sevier		Yes
Not in any MSA	Meigs		Yes

⁽¹⁾ Hawkins County recommended being partially designated nonattainment for the census block around the TVA-John Sevier Fossil Plant.

⁽²⁾ Sevierville County is a Micropolitan Statistical Area (MiSA).

(1) Chattanooga, TN-GA Metropolitan Statistical Area

The Chattanooga, TN-GA Metropolitan Statistical Area (hereinafter referred to as the Chattanooga MSA) includes 3 TN counties. The TAPCD is recommending that one county be classified as nonattainment and two counties be classified as attainment. The single non-attainment county is Hamilton and was formerly classified as attainment. The air monitoring data in this county (Hamilton) showed a design value for 2006-8 data that exceeded the new Ozone standard. The two attainment counties are Marion and Sequatchie and have no air monitoring data.

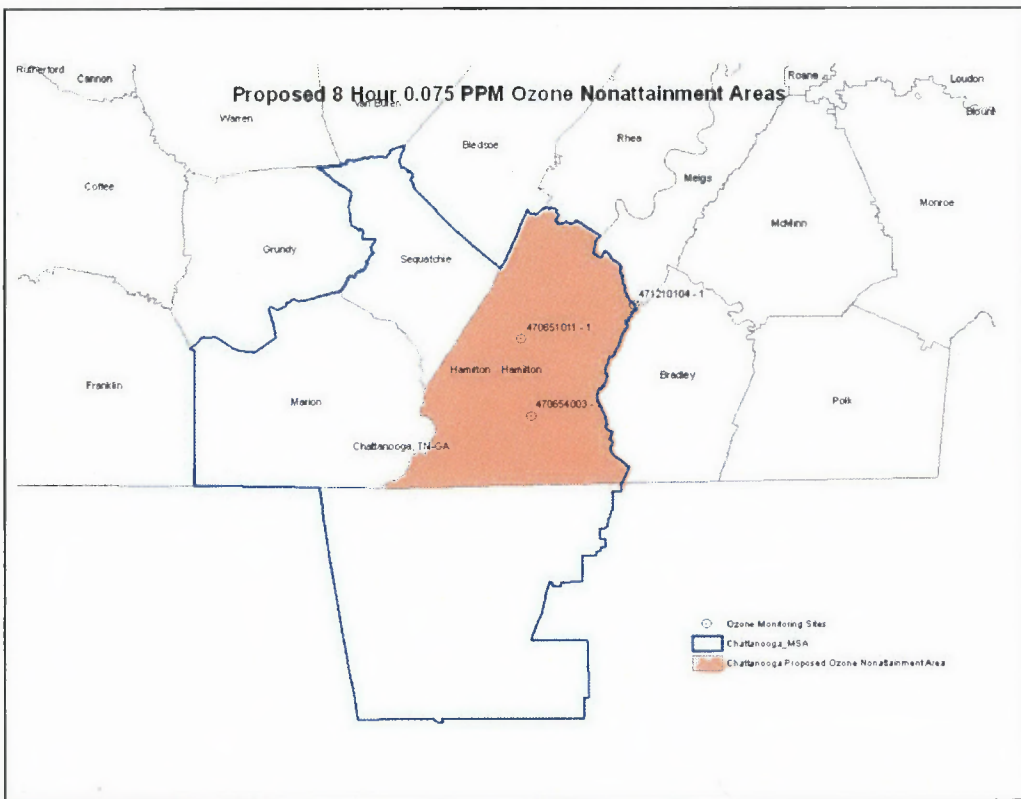


Figure 1 – Chattanooga MSA

Chattanooga MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Chattanooga MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Hamilton County

- Recommendation: nonattainment
- Jurisdictional boundaries: Hamilton County was previously classified as attainment for ozone.
- Air Quality Data: There are two ozone monitors in Hamilton County. Both ozone monitors in Hamilton County showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm.
- Emissions: 17,533 tons per year of NO_x and 19,880 tons per year of VOC. Only 15.6% of NO_x emissions are from point sources, 78.3% from mobile sources and 6% from area sources. VOC emissions are split primarily between area sources (52.5%) and mobile (39%) sources.
- Population: 330,168 people and 568.1 people per square mile.
- Traffic: 9,986,801 DVMT.
- Growth: The population grew 7.2% between 2000 and 2007. The DVMT grew 15% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Most of County is located in the Valley and Ridge Geographic Region. The topography of the Valley and Ridge consists of long linear ridges and parallel lowland valleys that trend in a northeast to southwest direction. The ridges usually have high elevations of 1100 to 1500 feet while adjacent valley floors vary from 700 feet to 1000 feet. A thin north-south strip of the County is located in the Cumberland Plateau Region having a different topography, like in places, the surface has been cut by stream valleys and precipitous gorges that are 200 to 400 feet deep.
- Level of control of emissions sources: There are 76 point sources in Hamilton County that reported for the Hamilton County local program. Control information not available at this time. Stage 1 vapor recovery is required for gasoline dispensing facilities.

Summary: The TAPCD recommends that Hamilton County be designated as nonattainment for Ozone. The County contribution to the Chattanooga MSA remains to be determined for the entire MSA, which includes counties from Georgia. For the three county TN part of Chattanooga MSA, the county contribution for VOC is 20%, of which the majority (68%) is from mobile sources. It is to be noted that the point source emission contribution of VOC to the MSA emission level is less than 3%. About 88.8% of the population, 81.3% of the DVMT contributes to the three county TN part of the MSA. The population density is 568.1 per square mile. The county is a mixed urban (City of Chattanooga) and mostly sparsely populated mountainous region.

Marion County

- Recommendation: Attainment.
- Jurisdictional boundaries: Marion County was previously classified as attainment for ozone.
- Air Quality Data: There is no ozone monitor in Marion County.
- Emissions: 5503 tons per year of NO_x and 2239 ton per year of VOC. Almost all of the (98.4%) NO_x emissions are from mobile sources and 0.2% from point sources. VOC emissions are split primarily between area sources (44.4%) and mobile sources (55.1%).
- Population: 28,138 people and 55.8 people per square mile.
- Traffic: 1,892,547 DVMT.
- Growth: The population grew 1.3% between 2000 and 2007. The DVMT grew 8% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: The County is located in the Cumberland Plateau Geographic Region. The Plateau's topography varies in different parts of the region; like in places, the surface has been cut by stream valleys and precipitous gorges that are 200 to 400 feet deep. In Marion and Hamilton Counties, the elevations range from 2000 to 2100 feet, while relief varies from 100 feet to as much as 400 feet.
- Level of control of emissions sources: There is one point source in Marion County that was reported for the 2005 NEI. There is no I/M program. Stage 1 vapor recovery is required for gasoline dispensing facilities.

Summary: The TAPCD recommends that Marion County be designated as attainment for Ozone. The County contribution to the Chattanooga MSA remains to be determined for the entire MSA, which includes counties from Georgia. For the three county TN part of Chattanooga MSA, the county contribution for VOC is 9.8%, of which the majority (55.2%) is from mobile sources. It is to be noted that the point source emission contribution of VOC and NO_x to the MSA emission level is less than 0.06% 0.2%, respectively. Only 7.5% of the population, 15.4% of the DVMT contributes to the three county TN part of the MSA. The population density is 55.8 per square mile. The county is mostly rural and agrarian and mostly a sparsely populated mountainous region.

Sequatchie County

- Recommendation: Attainment
- Jurisdictional boundaries: Sequatchie County was previously classified as attainment for ozone.
- Air Quality Data: There is no ozone monitor in Sequatchie County.
- Emissions: 630 tons per year of NO_x and 712 tons per year of VOC. Almost all of NO_x (90.5%) emissions are from mobile sources; 0% from point sources. VOC emissions are split primarily between area sources (41.3%) and mobile sources (38%).
- Population: 13,369 people and 42.7 people per square mile.
- Traffic: 392,886 DVMT
- Growth: The population grew 17.6% between 2000 and 2007. The VMT grew 20% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: The County is located in the Cumberland Plateau Geographic Region. The Plateau's topography varies in different parts of the region; like in places, the surface has been cut by stream valleys and precipitous gorges that are 200 to 400 feet deep. The tableland part of the Cumberland Plateau has an average elevation of 1800.

- Level of control of emissions sources: There is one point source in Sequatchie County that was reported for the 2005 NEI. There is no I/M program. Stage 1 vapor recovery is not required for all gasoline dispensing facilities.

Summary: The TAPCD recommends that Sequatchie County be designated as attainment for Ozone. The County contribution to the Chattanooga MSA remains to be determined for the entire MSA, which includes counties from Georgia. For the three county TN part of Chattanooga MSA, the county contribution for VOC and NOx are only 3.1% and 2.7%, respectively. It is to be noted that the point source emission contribution of VOC and NOx to the MSA emission level is less than 0.65% and 0.0%, respectively. Only 3.6% of the population and 3.2% of the DVMT contributes to the three county TN part of the MSA. The population density is 17.6 per square mile. The county is rural and a sparsely populated mountainous region.

(2) Clarksville, TN-KY Metropolitan Statistical Area

The Clarksville, TN-KY Metropolitan Statistical Area (hereinafter referred to as the Clarksville MSA) includes 2 TN counties. There is no monitor in Montgomery County. There is a monitor in Christian County (Hopkinsville, KY) for the Clarksville, TN-KY Metropolitan Statistical Area. The TAPCD is recommending that both Tennessee counties be classified as attainment. The two counties are Montgomery and Stewart.

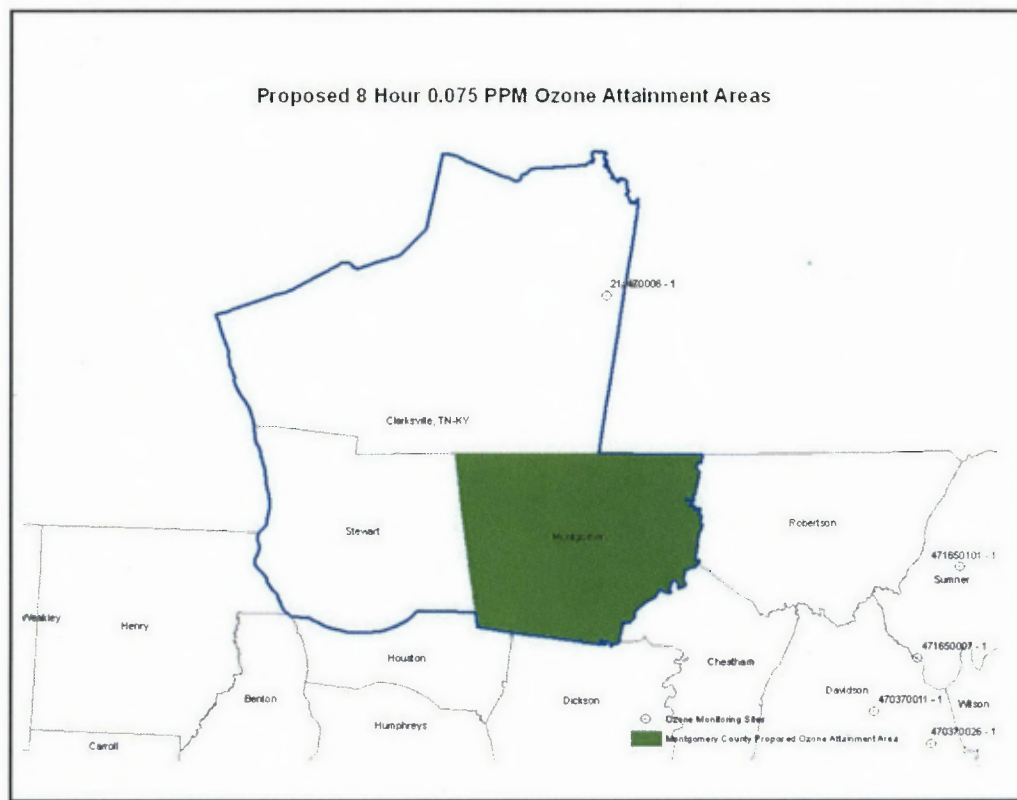


Figure 2 – Clarksville MSA

Clarksville MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Clarksville MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Montgomery County

- Recommendation: Attainment
- Jurisdictional boundaries: Montgomery County was previously classified as attainment for ozone.
- Air Quality Data: There is no monitor in Montgomery County. There is a monitor in Christian County (Hopkinsville, KY) for the Clarksville, TN-KY Metropolitan Statistical Area that showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm.
- Emissions: 6275 tons per year of NO_x and 6431 tons per year of VOC. The majority (93%) of NO_x emissions is from mobile sources; 5% from area sources only 2% from point sources. VOC emissions are split primarily between area sources (42%) and mobile sources (50%). The total percentile contribution of NO_x and VOC emissions for the entire Clarksville, TN-KY MSA that also include several counties from Kentucky is presently undetermined.
- Population: 154,460 people and 250 people per square mile. A Montgomery County population representation for the entire Clarksville, TN-KY MSA is undetermined.
- Traffic: 3,730,822 DVMT.
- Growth: The population grew 14.6% between 2000 and 2007. The DVMT grew 21% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest and occasionally north-northwest during winter season.
- Geography/topography: The County is located in the western division of the Highland Rim Geographic Region consists of a rolling terrain heavily dissected by stream erosion. Elevations range from 800 to 1000 feet, while relief varies from 100 to 200 feet. The topography is comprised of undulating tableland of low relief with widely scattered hills and knobs.
- Level of control of emissions sources: There are ten point sources in Montgomery County that reported for the 2005 NEI. Regulations have been implemented that control VOC emissions from point sources. Stage 1 vapor recovery is required for all gasoline dispensing facilities.

Summary: The TAPCD recommends that Montgomery County be designated as attainment for Ozone. The County contribution to the Clarksville MSA remains to be determined for the entire MSA, which includes counties from Kentucky. For the two county TN part of the Clarksville MSA, the county contribution for the following pollutants are 16.7% and 80% of NO_x and VOC emissions, respectively, of which the majority (92.4%) of the NO_x emissions are from mobile sources. It is to be noted that the point source emission contribution of NO_x and VOC to the Clarksville MSA emission level from Montgomery County is less than 1% and less than 7%, respectively. The population density is only 111.7 per square mile. Most of the county is rural and agrarian except the City of Clarksville.

Stewart County

- Recommendation: Attainment.
- Jurisdictional boundaries: Stewart County was previously classified as attainment for ozone.
- Air Quality Data: There is no ozone monitor in Stewart County.
- Emissions: 31,352 tons per year of NO_x and 1601 tons per year of VOC. Only 14% of VOC emissions are from point sources, 68% from mobile sources and 18% from area sources. Vast majority of the NO_x emissions (87%) come from a single source (TVA Cumberland fossil plant).
- Population: 13,087 people and 27 people per square mile.
- Traffic: 354,697 DVMT.
- Growth: The population grew 5.8% between 2000 and 2007. The DVMT grew 17% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest and occasionally north-northwest during the winter season.
- Geography/topography: The County is located in the western division of the Highland Rim Geographic Region consists of a rolling terrain heavily dissected by stream erosion. Elevations range from 800 to 1000 feet, while relief varies from 100 to 200 feet. The topography is comprised of undulating tableland of low relief with widely scattered hills and knobs.
- Level of control of emissions sources: There are two point sources in Stewart County that reported for the 2005 NEI. There is currently no I/M program. Stage 1 vapor recovery is not required for gasoline dispensing facilities.

Summary: The TAPCD recommends that Stewart County be designated as attainment for Ozone. The County contribution to the Clarksville MSA remains to be determined for the entire MSA, which includes counties from Kentucky. For the two county TN part of Clarksville MSA, the county contribution for VOC is 20%, of which the majority (68%) is from mobile sources. The vast majority of the NO_x emissions come from the TVA Cumberland fossil fuel plant. It is to be noted that the point source emission contribution of VOC to the MSA emission level is less than 3%. Only 7.8% of the population, 8.7% of the DVMT contributes to the two county TN part of the MSA. The population density is only 27 per square mile. The county is mostly rural and agrarian.

(3) Nashville-Davidson—Murfreesboro—Franklin, TN Metropolitan Statistical Area

34980 Nashville-Davidson—Murfreesboro—Franklin, TN Metropolitan Statistical Area

Principal Cities: Nashville-Davidson (balance)*, Murfreesboro, Franklin

Cannon County, Cheatham County, Davidson County, Dickson County, Hickman County, Macon County, Robertson County, Rutherford County, Smith County, Sumner County, Trousdale County, Williamson County, Wilson County

The Nashville-Davidson—Murfreesboro—Franklin, TN Metropolitan Statistical Area (hereinafter referred to as Nashville MSA) contains 13 counties. The city of Nashville is the center of the Nashville MSA. The Nashville MSA also contains the mid-sized cities of Franklin and Murfreesboro. There are three major interstates that converge in downtown Nashville. The State of Tennessee recommends the following four counties be designated as nonattainment: Davidson, Sumner, Wilson, and Rutherford. Air monitoring data in each of these four counties showed a design value for 2006-8 data that exceeded the new ozone standard of 0.075 ppm. The State of Tennessee recommends the following nine counties be designated as attainment: Hickman, Dickson, Williamson, Cheatham, Robertson, Cannon, Smith, Trousdale, and Macon.

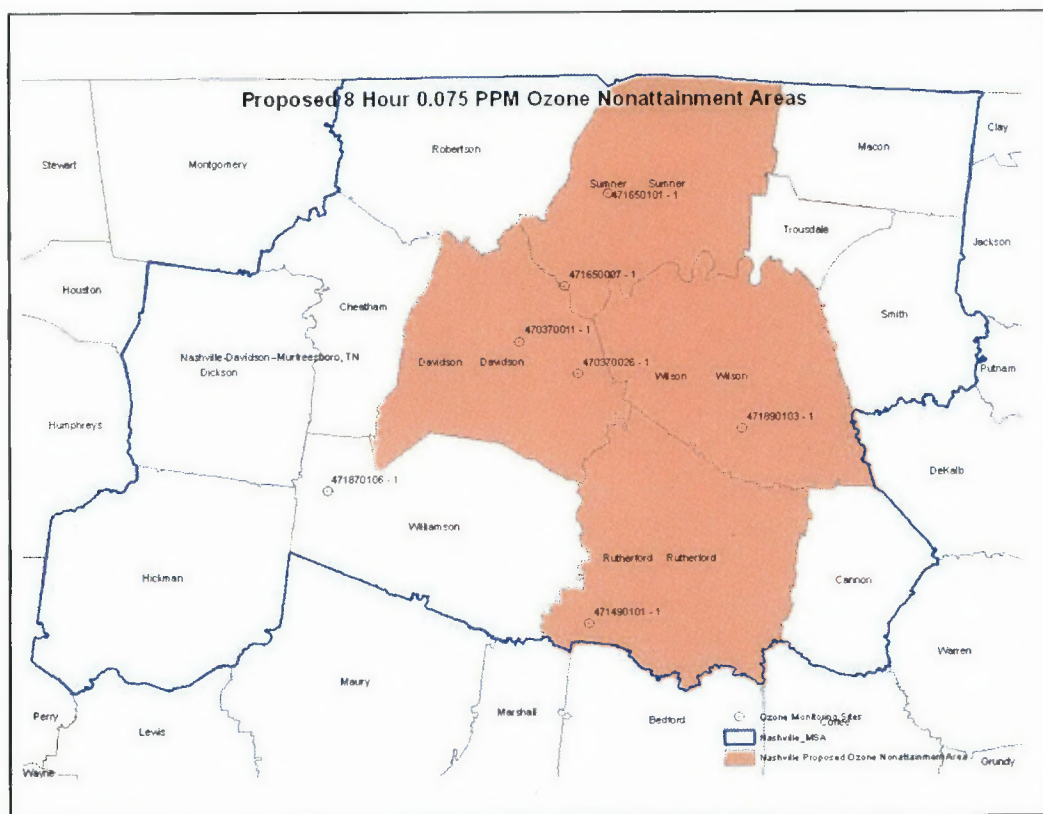


Figure 3 – Nashville MSA

Nashville MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Nashville-Davidson-Murfreesboro-Franklin 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns (“connectivity”), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Cannon County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Cannon County.
- Emissions: 342 tons per year of NO_x and 537 tons per year of VOC. The majority (93%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (51%) and mobile (49%) sources. Cannon County emits 0.4% of the total NO_x emissions and 0.7% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 13,432 people and 48.3 people per square mile. Cannon County represents 0.9% of the total population for the 13-county Nashville MSA.
- Traffic: 323,480 DVMT
- Growth: The population grew 4.7% between 2000 and 2007. The VMT grew 9% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Most of Cannon County is located in the Highland Rim. The western part of Cannon County is located in the Central Basin.
- Jurisdictional boundaries: Cannon County is currently classified as attainment.
- Level of control of emissions sources: There are no point sources in Cannon County that reported for the 2005 NEI. There is currently no I/M program. Stage I and Stage II vapor recovery are not required for gasoline dispensing facilities.
- Summary: The TAPCD recommends that Cannon County be designated as Attainment for several reasons. Cannon County has a small population and a small population density. Cannon County has a moderate growth rate. Due to the prevailing wind direction, emissions from Cannon County do not usually impact the other counties in the Nashville MSA since Cannon County is located on the far southeast corner of the Nashville MSA. Cannon County did not have any point sources that reported for the 2005 NEI, and there are only a few minor point sources in the county. Cannon County emits only 0.4% of the total NO_x emissions and 0.7% of the total VOC emissions for the 13-county Nashville MSA.

Cheatham County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Cheatham County.
- Emissions: 3,532 tons per year of NO_x and 2,904 tons per year of VOC. The majority (95%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (52%) and mobile (39%) sources. Cheatham County emits 3.8% of the total NO_x emissions and 3.8% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 39,112 people and 118.7 people per square mile. Cheatham County represents 2.6% of the total population for the 13-county Nashville MSA.
- Traffic: 1,389,262 DVMT
- Growth: The population grew 8.9% between 2000 and 2007. The VMT grew 20% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Cheatham County is located in the Highland Rim.
- Jurisdictional boundaries: Cheatham County is currently classified as attainment.
- Level of control of emissions sources: There are two major point sources in Cheatham County that reported for the 2005 NEI. There are no NO_x or VOC controls on these two sources. There is currently no I/M program. Stage 1 vapor recovery is required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Cheatham County be designated as Attainment for several reasons. Cheatham County has a small population and an average population density. Cheatham County has a moderate growth rate. Cheatham County only has two point sources that reported for the 2005 NEI, and there are only a few minor point sources in the county. Cheatham County emits 3.8% of the total NO_x emissions and 3.8% of the total VOC emissions for the 13-county Nashville MSA.

Davidson County

- Recommendation: Nonattainment
- Air Quality Data: There are two ozone monitors in Davidson County. One ozone monitor showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm. One ozone monitor showed a design value for 2006-8 data that is less than the new standard of 0.075 ppm.
- Emissions: 32,613 tons per year of NO_x and 24,377 tons per year of VOC. The majority (87%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (43%) and mobile sources (50%). Davidson County emits 34.8% of the total NO_x emissions and 31.9% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 619,626 people and 1134.6 people per square mile. Davidson County represents 40.7% of the total population for the 13-county Nashville MSA.
- Traffic: 21,488,670 DVMT
- Growth: The population grew 8.7% between 2000 and 2007. The VMT grew 19% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Most of Davidson County is located in the Central Basin. The western part of Davidson County is located in the Highland Rim.
- Jurisdictional boundaries: Davidson County was previously classified as nonattainment for ozone.
- Level of control of emissions sources: Regulations have been implemented that control VOC emissions from point sources. There is an I/M program in place. Stage I and Stage II vapor recovery are required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Davidson County be designated as Nonattainment for several reasons. Davidson County has an ozone monitor that showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm. The city of Nashville, which is a major metropolitan city, is located in Davidson County. Davidson County has a large population and a large population density. Davidson County has a moderately high growth rate. Davidson County has a high VMT, and there are three major interstates that go through downtown Nashville. Davidson County has a large number of point sources that reported for the 2005 NEI. Emissions are high in Davidson County. Davidson County emits 34.8% of the total NO_x emissions and 31.9% of the total VOC emissions for the 13-county Nashville MSA.

Dickson County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Dickson County.
- Emissions: 4,702 tons per year of NO_x and 15,042 tons per year of VOC. The majority (94%) of the NO_x emissions are from mobile sources. The majority (83%) of the VOC emissions are from point sources. Dickson County emits 5.0% of the total NO_x emissions and 19.7% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 47,366 people and 88.1 people per square mile. Dickson County represents 3.1% of the total population for the 13-county Nashville MSA.
- Traffic: 1,752,215 DVMT
- Growth: The population grew 9.8% between 2000 and 2007. The VMT grew 15% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Dickson County is located in the Highland Rim.
- Jurisdictional boundaries: Dickson County is currently classified as attainment.
- Level of control of emissions sources: There are seven point sources in Dickson County that reported for the 2005 NEI. One major point source has VOC controls. There is currently no I/M program. Stage 1 vapor recovery is required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Dickson County be designated as Attainment for several reasons. Dickson County has a small population and a small population density. Dickson County has a moderate growth rate. Dickson County has one major interstate going through the county. Dickson County has a fair number of industrial sources. Dickson County emits 5.0% of the total NO_x emissions and 19.7% of the total VOC emissions for the 13-county Nashville MSA.

Hickman County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Hickman County.
- Emissions: 3,313 tons per year of NO_x and 1,195 tons per year of VOC. The majority (72%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (44%) and mobile (50%) sources. Hickman County emits 3.5% of the total NO_x emissions and 1.6% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 23,768 people and 36.4 people per square mile. Hickman County represents 1.6% of the total population for the 13-county Nashville MSA.
- Traffic: 969,022 DVMT
- Growth: The population grew 6.6% between 2000 and 2007. The VMT grew 6% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Hickman County is located in the Highland Rim.
- Jurisdictional boundaries: Hickman County is currently classified as attainment.
- Level of control of emissions sources: There is one major point source in Hickman County that reported for the 2005 NEI. This source has NO_x controls. There is currently no I/M program. Stage 1 and Stage II vapor recovery are not required for gasoline dispensing facilities.
- Summary: The TAPCD recommends that Hickman County be designated as Attainment for several reasons. Hickman County has a small population and a small population density. Hickman County has a moderate growth rate. Hickman County only has one point sources that reported for the 2005 NEI, and there are only a few minor point sources in the county. Hickman County emits 3.5% of the total NO_x emissions and 1.6% of the total VOC emissions for the 13-county Nashville MSA.

Macon County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Macon County.
- Emissions: 1,631 tons per year of NO_x and 807 tons per year of VOC. NO_x emissions are split primarily between mobile sources (30%) and point sources (65%). VOC emissions are split primarily between area sources (44%) and mobile (56%) sources. Macon County emits 1.7% of the total NO_x emissions and 1.1% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 21,561 people and 66.4 people per square mile. Macon County represents 1.4% of the total population for the 13-county Nashville MSA.
- Traffic: 446,592 DVMT
- Growth: The population grew 5.8% between 2000 and 2007. The VMT grew 21% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Macon County is located in the Highland Rim.
- Jurisdictional boundaries: Macon County is currently classified as attainment.
- Level of control of emissions sources: There are two point sources in Macon County that reported for the 2005 NEI. There are no NO_x and VOC controls on these point sources. There is currently no I/M program. Stage 1 and Stage II vapor recovery are not required for gasoline dispensing facilities.
- Summary: The TAPCD recommends that Macon County be designated as Attainment for several reasons. Macon County has a small population and a small population density. Macon County has a moderate growth rate. Due to the prevailing wind direction, emissions from Macon County do not usually impact the other counties in the Nashville MSA since Macon County is located on the northeast corner of the Nashville MSA. Macon County only has two point sources that reported for the 2005 NEI, and there are only a few minor point sources in the county. Macon County emits only 1.7% of the total NO_x emissions and 1.1% of the total VOC emissions for the 13-county Nashville MSA.

Robertson County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Robertson County.
- Emissions: 5,229 tons per year of NO_x and 3,252 tons per year of VOC. The majority (91%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (42%) and mobile (45%) sources. Robertson County emits 5.6% of the total NO_x emissions and 4.3% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 63,333 people and 114.2 people per square mile. Robertson County represents 4.2% of the total population for the 13-county Nashville MSA.
- Traffic: 2,725,605 DVMT
- Growth: The population grew 16.4% between 2000 and 2007. The VMT grew 14% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Robertson County is located in the Highland Rim.
- Jurisdictional boundaries: Robertson County is currently classified as attainment.
- Level of control of emissions sources: There are four point sources in Robertson County that reported for the 2005 NEI. There are no NO_x or VOC controls on these four sources. There is currently no I/M program. Stage 1 vapor recovery is required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Robertson County be designated as Attainment for several reasons. Robertson County has a small population and an average population density. Robertson County has a moderately high growth rate. Robertson County does have two major interstates that run along the borders of the county. A significant percentage (42%) of commuters travel into Davidson County. Robertson County has a fair amount of industrial development. Robertson County emits 5.6% of the total NO_x emissions and 4.3% of the total VOC emissions for the 13-county Nashville MSA.

Rutherford County

- Recommendation: Nonattainment
- Air Quality Data: There is one ozone monitor in Rutherford County. The ozone monitor shows a design value for 2006-8 data that is greater than the new standard of 0.075 ppm.
- Emissions: 9,817 tons per year of NO_x and 11,075 tons per year of VOC. The majority (90%) of the NO_x emissions are from mobile sources. VOC emissions are split between area sources (38%), mobile sources (35%), and point sources (27%). Rutherford County emits 10.5% of the total NO_x emissions and 14.5% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 241,462 people and 294.1 people per square mile. Rutherford County represents 15.9% of the total population for the 13-county Nashville MSA.
- Traffic: 7,394,885 DVMT
- Growth: The population grew 32.7% between 2000 and 2007. The VMT grew 31% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Rutherford County is located in the Central Basin.
- Jurisdictional boundaries: Rutherford County was previously classified as nonattainment for ozone.
- Level of control of emissions sources: There are fourteen point sources in Rutherford County that reported for the 2005 NEI. There are no NO_x controls on these point sources. Four point sources have VOC controls. Regulations have been implemented that control VOC emissions from point sources. There is an I/M program. Stage I and Stage II vapor recovery are required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Rutherford County be designated as Nonattainment for several reasons. Rutherford County has an ozone monitor that showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm. The city of Murfreesboro is located in Rutherford County. Rutherford County has a average-size population and a average-size population density. Rutherford County has a high growth rate. Rutherford County has a high VMT, and there is one major interstate that goes through Murfreesboro. Emissions are relatively high in Rutherford County. Rutherford County emits 10.5% of the total NO_x emissions and 14.5% of the total VOC emissions for the 13-county Nashville MSA.

Smith County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Smith County.
- Emissions: 3,790 tons per year of NO_x and 1,411 tons per year of VOC. The majority (97%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (36%) and mobile (52%) sources. Smith County emits 4.0% of the total NO_x emissions and 1.8% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 18,845 people and 56.3 people per square mile. Smith County represents 1.2% of the total population for the 13-county Nashville MSA.
- Traffic: 1,059,994 DVMT
- Growth: The population grew 6.4% between 2000 and 2007. The VMT grew 9% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Part of Smith County is in the Central Basin and part is in the Highland Rim.
- Jurisdictional boundaries: Smith County is currently classified as attainment.
- Level of control of emissions sources: There are three point sources in Smith County that reported for the 2005 NEI. There are no NO_x controls on these three point sources. One of the three point sources has VOC controls. There is currently no I/M program. Stage I and Stage II vapor recovery are not required for gasoline dispensing facilities.
- Summary: The TAPCD recommends that Smith County be designated as Attainment for several reasons. Smith County has a small population and a small population density. Smith County has a moderate growth rate. Due to the prevailing wind direction, emissions from Smith County do not usually impact the other counties in the Nashville MSA since Smith County is located on the northeast corner of the Nashville MSA. Smith County only has three point sources that reported for the 2005 NEI, and there are only a few minor point sources in the county. Smith County emits 4.0% of the total NO_x emissions and 1.8% of the total VOC emissions for the 13-county Nashville MSA.

Sumner County

- Recommendation: Nonattainment
- Air Quality Data: There are two ozone monitors in Sumner County. Both ozone monitors showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm.
- Emissions: 13,905 tons per year of NO_x and 5,274 tons per year of VOC. NO_x emissions are split primarily between mobile sources (31%) and point sources (66%). By itself, the TVA-Gallatin power plant accounts for 61% of the total NO_x emissions. VOC emissions are split between area sources (39%), mobile sources (41%), and point sources (20%). Sumner County emits 14.8% of the total NO_x emissions and 6.9% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 152,721 people and 246.5 people per square mile. Sumner County represents 10.0% of the total population for the 13-county Nashville MSA.
- Traffic: 3,867,933 DVMT
- Growth: The population grew 17.1% between 2000 and 2007. The VMT grew 22% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: The southern part of Sumner County is located in the Central Basin and the northern part is located in the Highland Rim.
- Jurisdictional boundaries: Sumner County was previously classified as nonattainment for ozone.
- Level of control of emissions sources: There are eighteen point sources in Sumner County that reported for the 2005 NEI. Two point sources have NO_x controls. Two point sources have VOC controls. Regulations have been implemented that control VOC emissions from point sources. There is an I/M program. Stage I and Stage II vapor recovery are required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Sumner County be designated as Nonattainment for several reasons. Sumner County has two ozone monitors that show a design value for 2006-8 data that is greater than the new standard of 0.075 ppm. Sumner County has a average-size population and a average-size population density. Sumner County has a high growth rate. Sumner County has a moderately high VMT. Sumner County has a moderately high number of point sources that reported for the 2005 NEI. Sumner County emits 14.8% of the total NO_x emissions and 6.9% of the total VOC emissions for the 13-county Nashville MSA. Most of the NO_x emissions come from TVA-Gallatin power plant.

Trousdale County

- Recommendation: Attainment
- Air Quality Data: There is no ozone monitor in Trousdale County.
- Emissions: 993 tons per year of NO_x and 407 tons per year of VOC. The majority (95%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (44%) and mobile (56%) sources. Trousdale County emits 1.1% of the total NO_x emissions and 0.5% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 7,727 people and 63.5 people per square mile. Trousdale County represents 0.5% of the total population for the 13-county Nashville MSA.
- Traffic: 222,109 DVMT
- Growth: The population grew 6.4% between 2000 and 2007. The VMT grew 15% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: The southern part of Trousdale County is located in the Central Basin and the northern part is located in the Highland Rim.
- Jurisdictional boundaries: Trousdale County is currently classified as attainment.
- Level of control of emissions sources: There is one point source in Trousdale County that reported for the 2005 NEI. There are no NO_x and VOC controls on this point source. There is currently no I/M program. Stage I and Stage II vapor recovery are not required for gasoline dispensing facilities.
- Summary: The TAPCD recommends that Trousdale County be designated as Attainment for several reasons. Trousdale County has a small population and a small population density. Trousdale County has a moderate growth rate. Due to the prevailing wind direction, emissions from Trousdale County do not usually impact the other counties in the Nashville MSA since Trousdale County is located on the northeast corner of the Nashville MSA. Trousdale County only has one point sources that reported for the 2005 NEI, and there are only a few minor point sources in the county. Trousdale County emits only 1.1% of the total NO_x emissions and 0.5% of the total VOC emissions for the 13-county Nashville MSA.

Williamson County

- Recommendation: Attainment
- Air Quality Data: There is one ozone monitor in Williamson County. The ozone monitor shows a design value for 2006-8 data that is equal to the new standard of 0.075 ppm.
- Emissions: 7,154 tons per year of NO_x and 5,973 tons per year of VOC. The majority (94%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (45%) and mobile sources (46%). Williamson County emits 7.6% of the total NO_x emissions and 7.8% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 166,128 people and 217.3 people per square mile. Williamson County represents 10.9% of the total population for the 13-county Nashville MSA.
- Traffic: 5,733,049 DVMT
- Growth: The population grew 31.2% between 2000 and 2007. The VMT grew 37% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Most of Williamson County is located in the Central Basin. The western part of Williamson County is located in the Highland Rim.
- Jurisdictional boundaries: Williamson County was previously classified as nonattainment for ozone.
- Level of control of emissions sources: There are seven point sources in Williamson County that reported for the 2005 NEI. There are no NO_x controls on these point sources. Three point sources have VOC controls. Regulations have been implemented that control VOC emissions from point sources. There is an I/M program. Stage I and Stage II vapor recovery are required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Williamson County be designated as attainment for several reasons. Williamson County has an ozone monitor that showed a design value for 2006-8 data that is equal to the new standard of 0.075 ppm. The city of Franklin is located in Williamson County. Williamson County has an average-size population and a average-size population density. Williamson County has a high growth rate. Williamson County has a high VMT, and there is one major interstate that goes through Williamson County. Williamson County has an average number of point sources that reported for the 2005 NEI. Williamson County emits 7.6% of the total NO_x emissions and 7.8% of the total VOC emissions for the 13-county Nashville MSA.

Wilson County

- Recommendation: Nonattainment
- Air Quality Data: There is one ozone monitor in Wilson County. The ozone monitor shows a design value for 2006-8 data that is greater than the new standard of 0.075 ppm.
- Emissions: 6,673 tons per year of NO_x and 4,249 tons per year of VOC. The majority (95%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (38%) and mobile sources (58%). Wilson County emits 7.1% of the total NO_x emissions and 5.6% of the total VOC emissions for the 13-county Nashville MSA.
- Population: 106,356 people and 155.6 people per square mile. Wilson County represents 7.0% of the total population for the 13-county Nashville MSA.
- Traffic: 4,014,432 DVMT
- Growth: The population grew 19.8% between 2000 and 2007. The VMT grew 26% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Wilson County is located in the Central Basin.
- Jurisdictional boundaries: Wilson County was previously classified as nonattainment for ozone.
- Level of control of emissions sources: There are three point sources in Wilson County that reported for the 2005 NEI. There are no NO_x controls on these point sources. One point source has VOC controls. Regulations have been implemented that control VOC emissions from point sources. There is an I/M program. Stage I and Stage II vapor recovery are required for all gasoline dispensing facilities.
- Summary: The TAPCD recommends that Wilson County be designated as Nonattainment for several reasons. Wilson County has an ozone monitor that showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm. Wilson County has an average-sized population and an average-size population density. Wilson County has a high growth rate. Wilson County has a moderately high VMT, and there is one major interstate that goes through Wilson County. Wilson County emits 7.1% of the total NO_x emissions and 5.6% of the total VOC emissions for the 13-county Nashville MSA.

(4) Johnson City Metropolitan Statistical Area

Johnson City, TN Metropolitan Statistical Area (CBSA: 27740)

Principal Cities: Johnson City-Washington County, Elizabethton-Carter County, Erwin-Unicoi County
Carter County, Unicoi County, and Washington County (in Tennessee)

The Johnson City, TN Metropolitan Statistical Area (hereinafter referred to as the Johnson City MSA) consists of 3 TN counties. The TAPCD is recommending that all three counties be classified as attainment.

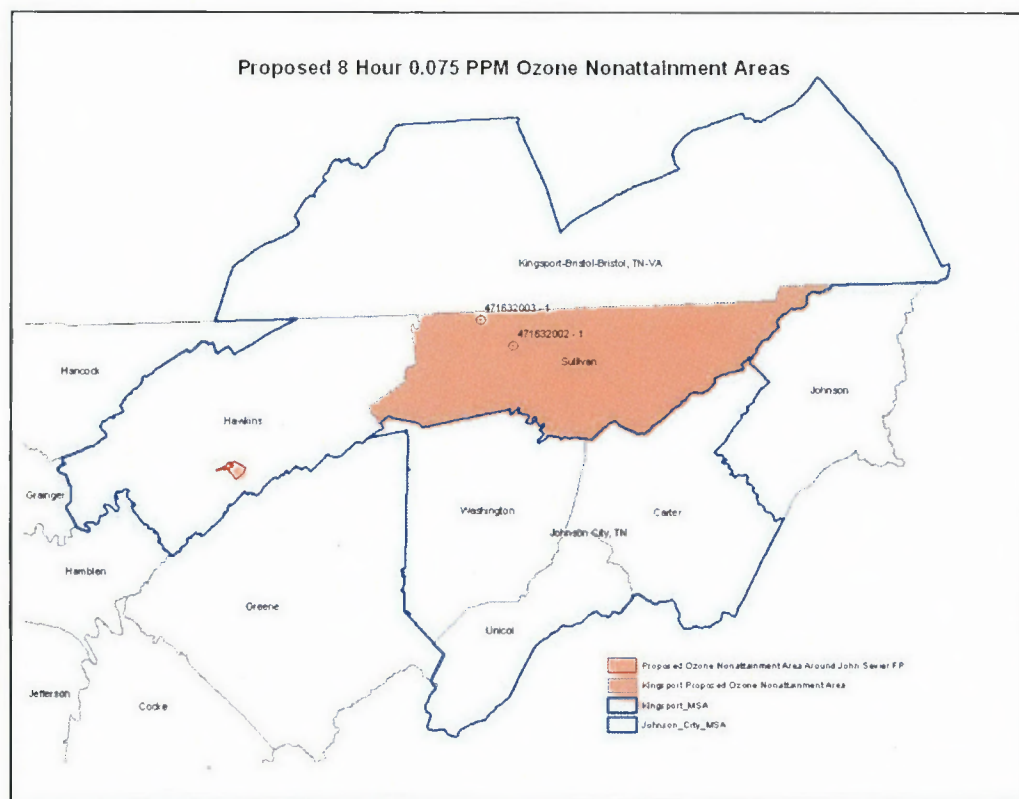


Figure 4 – Johnson City MSA and Kingsport-Bristol MSA

Johnson City MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Johnson City MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Carter County

- Recommendation: Attainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 1,365 tons per year of NO_x and 2,369 tons per year of VOC (2005 NEI). There are small point source emissions of NO_x (2%) and VOC (1%) of total emissions in this county. The majority (89%) of the NO_x emissions are from mobile sources and (9%) from area sources. The majority (53%) of the VOC emissions are from mobile sources and (46%) from area sources.
- Population: 59,198 people (2007) and 173.6 people per square mile. The population amounts to 17% of the total for the Morristown MSA.
- Traffic: Low/Medium VMT (1,168,904 VMT/day).
- Growth: The population grew 4.3% between 2000 and 2007. The VMT grew 9% between 2000 and 2007.
- Meteorology: The winds are climatologically from the west, west-southwest, and southwest.
- Geography/topography: Almost entirely rural. Unaka Smoky Mountains cover the entire county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are no point sources in the county that reported for the 2005 NEI. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program. Stage I vapor recovery is required for gasoline dispensing facilities.

Carter County Summary

- 1) Fourth largest emissions for both VOC (2.4 TPD) and NO_x (1.3 TPD) in the KB/JC CBSA.
- 2) No ozone monitoring in the county.
- 3) Third largest population in the area (59,198).
- 4) Third largest annual VMT in the area (0.43 billion VMT/year). Lowest VMT growth rate (9%) predicted between 2000 and 2007.
- 5) Meteorological analysis is supportive of frequent contribution.
- 6) 13.3% population growth rate predicted between 2000 and 2007.
- 7) Not located in the current 8-hour ozone maintenance area.
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements.

The TAPCD recommends that Carter County be designated attainment for ozone. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitor in Sullivan County is minimal as it is located downwind from that monitor (east, southeast) in a rural and agrarian environment. The majority of NO_x (89%) and VOC (53%) emissions are coming from mobile sources and the VMT growth rate is the lowest in the MSA (9%) from 2000-2007.

Unicoi County

- Recommendation: Attainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 953 tons per year of NO_x and 1,068 tons per year of VOC (2005 NEI). There are extremely small point source emissions of NO_x (0.03%) and VOC (0.03%) of total emissions in this county. The majority (88%) of the NO_x emissions are from mobile sources and (12%) from area sources. The majority (62%) of the VOC emissions are from mobile sources and (38%) from area sources.
- Population: 17,699 people (2007) and 95.2 people per square mile. The population amounts to 46% of the total for the Johnson City MSA.
- Traffic: Low VMT (627,850 VMT/day).
- Growth: The population grew 0.2% between 2000 and 2007. The VMT grew 31% between 2000 and 2007.
- Meteorology: The winds are climatologically from the west, west-southwest, and southwest.
- Geography/topography: Almost entirely rural. Unaka Smoky Mountains cover the entire county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are no point sources in the county that reported for the 2005 NEI. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program. Stage I vapor recovery is required for gasoline dispensing facilities.

Unicoi County Summary

- 1) Lowest emissions for both VOC (1.1 TPD) and NO_x (0.95 TPD) in the KB/JC CBSA.
- 2) No ozone monitoring in the county.
- 3) Lowest population in the area (17,699).
- 4) Lowest annual VMT in the area (0.23 billion VMT/year). Highest VMT growth rate (31%) predicted between 2000 and 2007.
- 5) Meteorological analysis is not supportive of frequent contribution.
- 6) 0.2% population growth rate predicted between 2000 and 2007.
- 7) Not located in the current 8-hour ozone maintenance area.
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements.

The TAPCD recommends that Unicoi County be designated attainment for ozone. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitor in Sullivan county is minimal as it is located downwind (east, southeast) from that monitor in a rural and agrarian environment. The majority of NO_x (88%) and VOC (62%) emissions are coming from mobile sources and this county has the lowest VMT (13%) in the MSA.

Washington County

- Recommendation: Attainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 4,055 tons per year of NO_x and 5,420 tons per year of VOC (2005 NEI). There are small point source emissions of NO_x (3%) and VOC (8%) of total emissions in this county. The majority (89%) of the NO_x emissions are from mobile sources and (8%) from area sources. The majority (47%) of the VOC emissions are from mobile sources and (45%) from area sources.

- Population: 116,657 people (2007) and 361.2 people per square mile. The population amounts to 46% of the total for the Morristown MSA.
- Traffic: High VMT (3,008,993 VMT/day).
- Growth: The population grew 8.8% between 2000 and 2007. The VMT grew 12% between 2000 and 2007.
- Meteorology: The winds are climatologically from the west, west-southwest, and southwest.
- Geography/topography: Rural with an urban center. Ridge and Valley topography covers the western portion while Unaka Smoky Mountains cover the eastern portion of the county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are only two major point sources in the county that reported for the 2005 NEI. They are: Cantech Industries (source 90-0232, unit 001) and IRIS Glen Environmental Center (source 90-0246, unit 001). These two sources are controlled for VOC emissions employing activated carbon adsorption and flaring technologies respectively. Since 2005, the TAPCD requires the application of low NOx burner (LNB) technology at new and certain modified sources for NOx control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Washington County Summary

- 1) Second largest emissions for VOC (5.4 TPD) and fourth largest for NOx (4.1 TPD) in the KB/JC CBSA.
- 2) No ozone monitoring in the county.
- 3) Second largest population in the area (116,657).
- 4) Second largest annual VMT in the area (1.1 billion VMT/year).
- 5) Meteorological analysis is not supportive of frequent contribution.
- 6) 8.8% population growth rate predicted between 2000 and 2007.
- 7) Not located in the current 8-hour ozone maintenance area.
- 8) Emission reductions have been realized from previous VOC/NOx control requirements.

The TAPCD recommends that Washington County be designated attainment for ozone. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitor in Sullivan county is minimal as it is located downwind (south, southeast) from that monitor in a rural and agrarian environment. Point source emissions of NOx (3%) and VOC (8%) are very small. Even though the VMT is on the high scale, its growth rate is only modestly progressing (12%) from 2000-2007.

(5) Kingsport-Bristol (TN)-Bristol (VA)- Metropolitan Statistical Area

Kingsport-Bristol (TN)-Bristol (VA), TN-VA Metropolitan Statistical Area (CBSA: 28700)
Principal TN Cities: Kingsport and Bristol -Sullivan County, Rogersville-Hawkins County
Hawkins County, and Sullivan County (in Tennessee)

The Kingsport-Bristol (TN)-Bristol (VA), TN-VA Metropolitan Statistical Area (hereinafter referred to as the Kingsport-Bristol MSA) consists of 2 TN counties. The TAPCD is recommending that Sullivan County be classified as nonattainment and Hawkins County be classified as partial nonattainment.

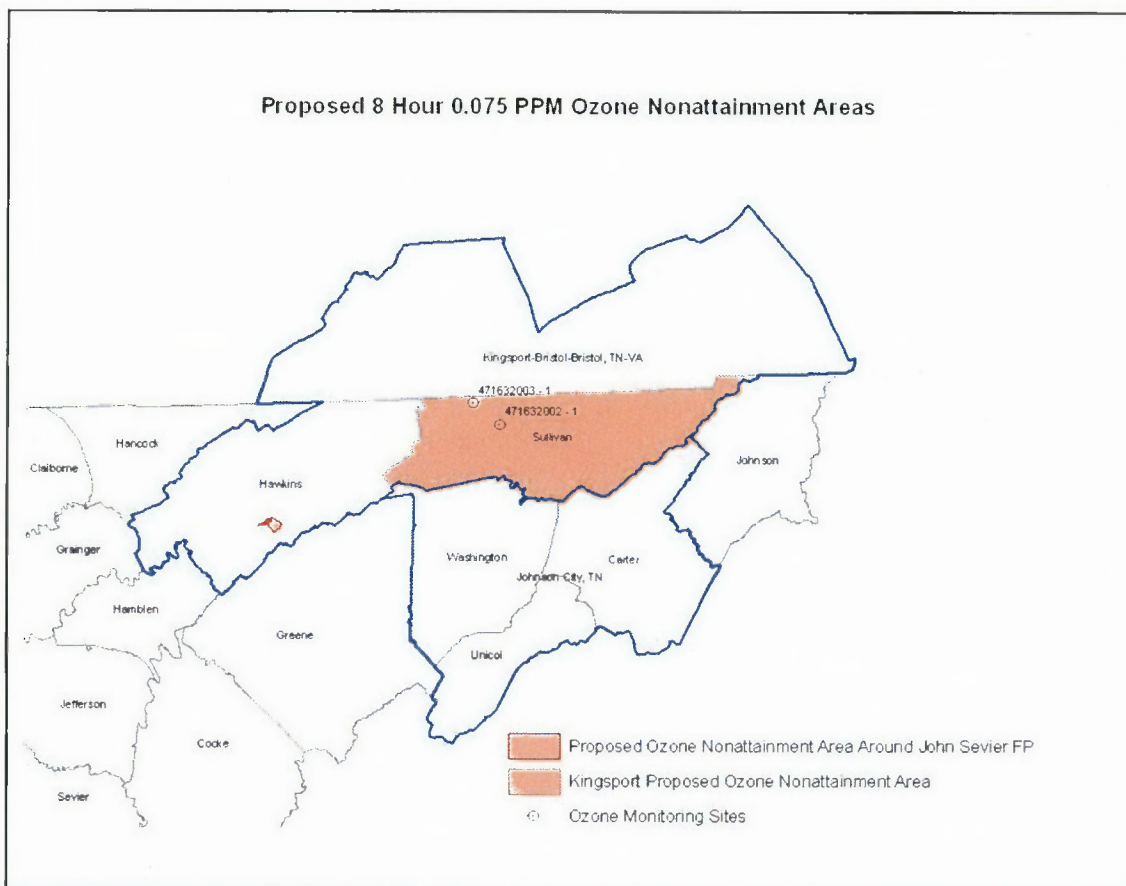


Figure 5A – Kingsport-Bristol MSA and Johnson City MSA

Kingsport-Bristol MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Kingsport-Bristol MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Hawkins County

- Recommendation: Partial Nonattainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 15,362 tons per year of NO_x and 4,688 tons per year of VOC (2005 NEI). The majority (88%) of the NO_x emissions are from point sources. VOC point source emissions account for (39%), area VOC sources account for (33%), and mobile VOC sources account for (28%) of total emissions respectively.
- Population: 57,054 people (2007) and 117.4 people per square mile. The population amounts to 27% of the total for the Kingsport-Bristol MSA.
- Traffic: Medium VMT (1,234,119 VMT/day).
- Growth: The population grew 6.5% between 2000 and 2007. The VMT grew 12% between 2000 and 2007.
- Meteorology: The winds are climatologically from the west, west-southwest, and southwest.
- Geography/topography: Almost entirely rural. Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are six major point sources and one minor source in the county that reported for the 2005 NEI. They are: Holston Army Ammunition Plant (major sources 37-0028 and 37-1029), TVA-John Sevier Fossil Plant (major source 37-0007, units 001 thru 004), TN Valley Manufacturing Co. (minor source 37-0029), International Playing Card & Label Co. (major sources 37-0057 and 37-0076), and BFI Waste System (major source 37-1029). TVA-John Sevier boilers are controlled with LNB for NO_x emissions. All the other facilities are controlled for VOC emissions. Controls including catalytic and thermal oxidizers, activated carbon absorbers, catalytic afterburners, direct flame afterburners and flares. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Hawkins County Summary

- 1) Second largest emissions for VOC (4.7 TPD) and third largest for NO_x (15.4 TPD) in the KB/JC CBSA.
- 2) No ozone monitoring in the county.
- 3) Fourth largest population in the area (57,054).
- 4) Third largest annual VMT in the area (0.45 billion VMT/year).
- 5) Meteorological analysis is not supportive of frequent contribution.
- 6) 6.5% population growth rate predicted between 2000 and 2007.
- 7) Not located in the current 8-hour ozone maintenance area.

8) Emission reductions have been realized from previous VOC/NOx control requirements.

The TAPCD recommends that Hawkins County be designated ozone partial nonattainment for the county portion limited to the census tract around the TVA John Sevier Fossil Plant as shown in Figure 5B, and detailed in Tables 5A and 5B below. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitor in Sullivan County is minimal as it is located downwind from those monitors (West and Northwest) in a predominately southwesterly wind vectors impacting the monitors. This county is in a rural and agrarian environment. The county VOC emission contribution (18%) to the Kingsport-Bristol MSA is the lowest. This county has the lowest population (27%), population density (117.4), and VMT (22%) for the Kingsport-Bristol MSA.



Figure 5B- TVA John Sevier Fossil Plant Census Tract

Parcel Information	
AREA	30740571.97
PERIMETER	89761.99943
PARC_	28095
PARC_ID	28122
CALC_ACRE	705.706
MAP	
PARCELID	A037126 02300 00001126 C
ID	126 023.00
ST_NUM	
STREET	OLD STATE HWY 70
ADDRESS	OLD STATE HWY 70
OWNER	T V A
PROPTYPE	4
PT	04 FEDERAL
LNDAPRDATE	11/19/2002
UPDATED	2/17/2006

Table 5A- TVA John Sevier Census Tract Details

Hawkins County John Sevier FP							
Census Information							
STFID	STATE	COUNTY	TRACT	BLKGRP	BLOCK	AREALAND	TOTALPOP
470730508001026	47	73	50800	1	1026	6088446	119
470730508001027	47	73	50800	1	1027	88732	0
470730508001028	47	73	50800	1	1028	26911	0
470730508001029	47	73	50800	1	1029	87059	0
470730508001032	47	73	50800	1	1032	416900	0

Table 5B- TVA John Sevier Census Tract Information

Sullivan County

- Recommendation: Nonattainment.
- Air Quality Data: Hill Road monitor in violation of the standard (2006-08 design value – 0.081 ppm)
- Emissions: 16,878 tons per year of NO_x and 20,849 tons per year of VOC (2005 NEI). The majority (63%) of the NO_x emissions are from point sources. Mobile NO_x sources account for (33%) and area NO_x sources account for (4%) of the rest of the emissions. VOC emissions are generated from area sources at (50%), point sources at (30%), and mobile sources at (20%) of total emissions respectively.
- Population: 153,519 people (2007) and 371.7 people per square mile.
- Traffic: High VMT (4,393,590 VMT/day).
- Growth: The population grew 0.3% between 2000 and 2007. The VMT grew 11% between 2000 and 2007.
- Meteorology: The winds are climatologically from the west, west-southwest, and southwest.
- Geography/topography: Rural area with urban centers. Ridge and Valley topography covers the western portion while Unaka Smoky Mountains cover the eastern portion of the county.
- Jurisdictional boundaries: Entire County stays as part of the existing Kingsport-Sullivan MSA.
- Level of control of emissions sources: There are five major point sources in the county that reported for the 2005 NEI. They are: Eastman Chemicals (source 82-0003), Seaman Corp. (source 82-0007), Holston Army Ammunition Plant (source 82-0018), Microporous Products (source 82-0153), and City of Kingsport (source 82-0021). Emission units at these facilities are controlled for NO_x and VOC emissions. Employed NO_x control technologies including thermal oxidation, condensing, and flaring. VOC controls including thermal and catalytic oxidizers, wet scrubbers, packed bed scrubbers, activated carbon adsorbers, and condensers. City of Kingsport emission unit is now closed. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Sullivan County Summary

- 1) Largest emissions for both VOC (20.8 TPD) and NO_x (16.9 TPD) in the KB/JC CBSA.
- 2) Hill Road monitor violates the 8-hour ozone standard using 2006-08 (design value – 0.081 ppm).
- 3) Largest population in the area (153,519).
- 4) Largest annual VMT in the area (1.6 billion VMT/year).
- 5) Meteorological analysis is supportive of frequent contribution.
- 6) 0.3% population growth rate predicted between 2000 and 2007.
- 7) Located in the current 8-hour ozone maintenance area.
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements.

Knoxville MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Knoxville MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Anderson County

- Recommendation: Nonattainment.
- Air Quality Data: Freels Bend monitor in violation of the standard (2005-07 design value – 0.080 ppm; 2006-08 design value – 0.078 ppm).
- Emissions: 16,606 tons per year of NO_x and 11,401 tons per year of VOC (2005 NEI). The majority (76%) of the NO_x emissions are from point sources. VOC emissions are primarily generated from area sources (78%). Mobile sources account for (22%) of NO_x and (18%) of VOC emissions respectively.
- Population: 73,471 people (2007) and 217.4 people per square mile.
- Traffic: High VMT (2,303,855 VMT/day).
- Growth: The population grew 3% between 2000 and 2007. The VMT grew 8% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Cumberland Plateau covers the western portion and Ridge and Valley topography covers the eastern portion of the county.
- Jurisdictional boundaries: Entire County stays part of the existing Knoxville MSA.
- Level of control of emissions sources: There are four major point sources in the county that reported for the 2005 NEI. They are: TVA-Bull Run Fossil Plant (source 01-0009, unit 001), U.S. DOE Y-12 (source 01-0020, unit 0012 and 0014), Omega Cabinetry (source 01-0145, unit 003), and Chestnut Ridge Landfill (source 01-0170, unit 001). TVA-Bull Run boiler is controlled with an SCR for NO_x emissions. The U.S. DOE Y-12 units are controlled with a high efficiency packed bed scrubber for NO_x control. Omega Cabinetry and Chestnut Ridge Landfill are controlled with an incinerator and a flair for VOC emissions respectively. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Anderson County Summary

- 1) Second largest emissions for both VOC (16.9 TPD) and NO_x (26.5 TPD) in the Knoxville MSA.
- 2) Freels Bend monitor violates the 8-hour ozone standard using 2006-08 (design value – 0.078 ppm).
- 3) Third largest population in the area (73,471).
- 4) Fourth largest annual VMT in the area (0.84 billion VMT/year). Lowest VMT growth rate (8%) predicted between 2000 and 2007.

- 5) Meteorological analysis is supportive of frequent contribution .
- 6) 3% population growth rate predicted between 2000 and 2007.
- 7) Located in the current 8-hour ozone maintenance area.
- 8) Emission reductions have been realized from previous VOC/NOx control requirements.

Blount County

- Recommendation: Nonattainment.
- Air Quality Data: Look Rock monitor in violation of the standard (2005-07 design value – 0.086 ppm; 2006-08 design value – 0.085 ppm).
- Emissions: 4,650 tons per year of NO_x and 7,418 tons per year of VOC (2005 NEI). The majority (78%) of the NO_x emissions are from mobile sources. VOC emissions are generated from mobile sources at (41%). VOC point source emissions account for (25%) and area VOC sources account for (34%) of total emissions respectively.
- Population: 119,855 people (2007) and 214.4 people per square mile.
- Traffic: High VMT (3,045,669 VMT/day).
- Growth: The population grew 13.3% between 2000 and 2007. The VMT grew 28% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Ridge and Valley topography covers the western portion of the county while Unaka Smoky Mountains extend throughout the eastern portion of the county.
- Jurisdictional boundaries: Entire County stays part of the existing Knoxville MSA.
- Level of control of emissions sources: There are only two major point sources in the county that reported for the 2005 NEI. They are: Alcoa-South Plant (source 05-0008, unit 030) and Denso Corporation (source 05-0138, units 0039 and 0095). The Alcoa unit is controlled with an incinerator for VOC emissions and Denso has miscellaneous control devices for NO_x emissions. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Blount County Summary

- 1) Third largest emissions for VOC (11.0 TPD) and fourth largest for NO_x (7.4 TPD) in the Knoxville MSA. Third largest for combined emissions of VOC and NO_x (18.4 TPD).
- 2) Look Rock monitor violates the 8-hour ozone standard using 2006-08 (design value – 0.085 ppm)
- 3) Second largest population in the area (119,855)
- 4) Second largest annual VMT in the area (1.1 billion VMT/year). Highest VMT growth rate (28%) predicted between 2000 and 2007.
- 5) Meteorological analysis is supportive of frequent contribution
- 6) 13.3% population growth rate predicted between 2000 and 2007
- 7) Located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

Knox County

- Recommendation: Nonattainment.
- Air Quality Data: Mildred Drive monitor in violation of the standard (2005-07 design value – 0.088 ppm; 2006-08 design value – 0.088 ppm).
- Emissions: 21,949 tons per year of NO_x and 20,700 tons per year of VOC (2005 NEI). The majority (84%) of the NO_x emissions are from mobile sources. VOC emissions are generated from mobile sources at (41%). VOC mobile source emissions account for (56%) and area VOC sources account for (39%) of total emissions respectively.
- Population: 382,032 people (2007) and 750.6 people per square mile.
- Traffic: High VMT (14,429,475 VMT/day).
- Growth: The population grew 11% between 2000 and 2007. The VMT grew 26% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Urban area. Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County stays part of the existing Knoxville MSA.
- Level of control of emissions sources: There is only one major point source in the county that reported for the 2005 NEI. Rohm and Haas (source 47-0012, unit 001) are controlled with an afterburner for VOC emissions. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Knox County Summary

- 1) Largest emissions for both VOC (30.7 TPD) and NO_x (35.0 TPD) in the Knoxville MSA.
- 2) Mildred Drive monitor violates the 8-hour ozone standard using 2006-08 (design value – 0.088 ppm)
- 3) Largest population in the area (382,032)
- 4) Largest annual VMT in the area (5.3 billion VMT/year). Second highest VMT growth rate (26%) predicted between 2000 and 2007.
- 5) Meteorological analysis is supportive of frequent contribution
- 6) 11% population growth rate predicted between 2000 and 2007
- 7) Located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

Loudon County

- Recommendation: Nonattainment.
- Air Quality Data: Roberts Road monitor in violation of the standard (2006-08 design value – 0.081 ppm)
- Emissions: 6,613 tons per year of NO_x and 4,141 tons per year of VOC (2005 NEI). The majority (81%) of the NO_x emissions are from mobile sources. VOC emissions are generated from mobile sources at (46%). VOC point source emissions account for (25%) and area VOC sources account for (29%) of total emissions respectively.
- Population: 45,448 people (2007) and 198.5 people per square mile.
- Traffic: High VMT (2,235,637 VMT/day).

- Growth: The population grew 16.3% between 2000 and 2007. The VMT grew 18% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County stays part of the existing Knoxville MSA.
- Level of control of emissions sources: There are only two major point sources in the county that reported for the 2005 NEI. They are: Tate & Lyle (source 53-0081, units 002 and 004) and Malibu Boats West (source 53-0098, units 001 and 002). These two sources are controlled for both NO_x and VOC emissions. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

Loudon County Summary

- 1) Fourth largest emissions for VOC (6.2 TPD) and third largest for NO_x (10.5 TPD) in the Knoxville MSA. Fourth largest for combined emissions of VOC and NO_x (16.7 TPD).
- 2) Roberts Road monitor violates the 8-hour ozone standard using 2006-08 (design value – 0.081 ppm)
- 3) Fourth largest population in the area (45,448)
- 4) Fourth largest annual VMT in the area (0.82 billion VMT/year). Third highest VMT growth rate (18%) predicted between 2000 and 2007.
- 5) Meteorological analysis is supportive of frequent contribution
- 6) 16.3% population growth rate predicted between 2000 and 2007
- 7) Located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

Union County

- Recommendation: Attainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 1,026 tons per year of NO_x and 1,121 tons per year of VOC (2005 NEI). The majority (59%) of the NO_x emissions are from mobile sources and (34%) from point sources. The majority (65.4%) of the VOC emissions are from mobile sources and (34.5%) from area sources. This county has the lowest emissions strength of all the counties in the MSA with 3% or less of the total.
- Population: 18,877 people (2007) and 84.3 people per square mile. The population amounts to only 3% of the total for the Knoxville MSA.
- Traffic: Low VMT (373,435 VMT/day).
- Growth: The population grew 6% between 2000 and 2007. The VMT grew 18% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Almost entirely rural. Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are no point sources in the county that reported for the 2005 NEI. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology

at new and certain modified sources for NO_x control. There is currently no I/M program. Stage I vapor recovery is required for gasoline dispensing facilities.

Union County Summary

- 1) Lowest emissions for both VOC (1.7 TPD) and NO_x (1.6 TPD) in the Knoxville MSA.
- 2) No ozone monitoring in the county
- 3) Lowest population in the area (18,877)
- 4) Lowest annual VMT in the area (0.14 billion VMT/year).
- 5) Meteorological analysis is not supportive of frequent contribution
- 6) 6% population growth rate predicted between 2000 and 2007
- 7) Located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

The TAPCD recommends that Union County be designated attainment for ozone. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitors in Knox and Jefferson counties is minimal as it is located downwind from those monitors (North) in a predominately southwesterly wind vectors impacting the monitors. This county is in a rural and agrarian environment. The county total emission contribution (3% or less) to the Knoxville MSA is the lowest for both NO_x and VOC emissions. This county has the lowest population (3%), population density (84.3), and VMT (2%) for the entire Knoxville MSA.

(7) Memphis, TN-MS-AR Metropolitan Statistical Area

Principal Cities: Memphis-Shelby County
Shelby County, Fayette County, Tipton County (in Tennessee)

The Memphis, TN-MS-AR Metropolitan Statistical Area (hereinafter referred to as the Memphis MSA) includes 3 TN counties. The City of Memphis is the center of the Memphis MSA. It also contains the city of West Memphis (in Arkansas). The Tennessee Division of Air Pollution Control (TAPCD) recommends that one county be classified as nonattainment and two counties be classified as attainment. The single non-attainment county is Shelby. The air monitoring data in this county showed a design value for 2006-8 data that exceeded the new Ozone standard. The two attainment counties are Fayette and Tipton.

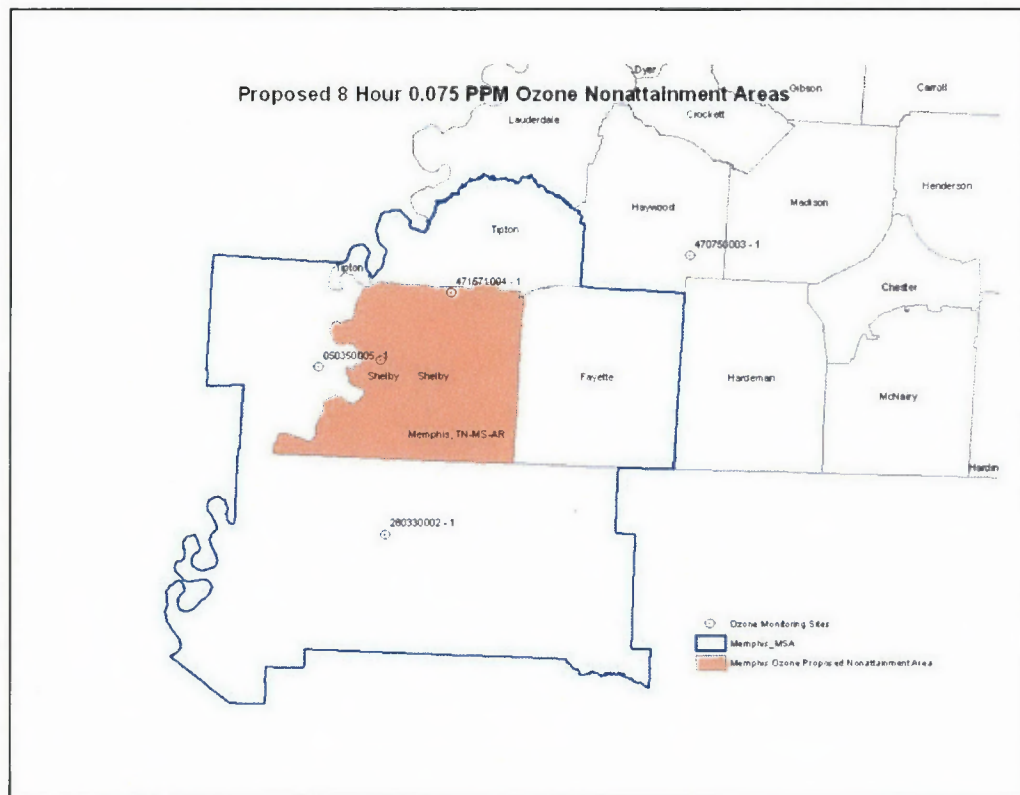


Figure 7 – Memphis MSA

Memphis MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Memphis MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns (“connectivity”), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Fayette County

- Recommendation: Attainment
- Jurisdictional boundaries: Fayette County was previously classified as attainment for ozone.
- Air Quality Data: There is no ozone monitor in Fayette County.
- Emissions: 3,884 tons per year of NO_x and 1835 tons per year of VOC. The vast majority (97%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (44%) and mobile (51%) sources.
- Population: 37,193 people and 40.8 people per square mile
- Traffic: 1,633,529 DVMT
- Growth: The population grew 29.1% between 2000 and 2007. The DVMT grew 16% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: The County is located in the West Tennessee Plain Geographic Region. The topography of this West Tennessee Plain is a relatively flat terrain that slopes gently westward to the Mississippi River floodplain.
- Level of control of emissions sources: There are two point sources in Fayette County that reported for the 2005 NEI. There is currently no I/M program. Stage 1 vapor recovery is required for gasoline dispensing facilities.

Summary: The TAPCD recommends that Fayette County be designated as attainment for Ozone. The County contribution to the Memphis MSA for the following pollutants are only 5.66% and 3.97% of NO_x and VOC emissions, respectively, of which the vast majority (97%) of the NO_x emissions are from mobile sources. It is to be noted that the point source emission contribution of NO_x and VOC to the Memphis MSA emission level is less than 1%. Only 3.7% of the population and 6% of the DVMT contributes to the MSA. The population density is only 40.8 per square mile. The county, even though adjacent to Shelby County is mostly rural and agrarian. The geographical location of the county (east) is downstream of the general annual wind flow direction, thus having a minimal impact on the Memphis MSA Ozone level.

Shelby County

- Recommendation: Nonattainment
- Jurisdictional boundaries: Shelby County was previously classified as nonattainment for ozone.
- Air Quality Data: There are a total of four ozone monitors in Memphis, TN-MS-AR Metropolitan Statistical Area, of which two are in Shelby County, one in DeSoto County (MS) and one in Crittenden County (AR). Both ozone monitors in Shelby County showed a design value for 2006-8 data that is greater than the new standard of 0.075 ppm. Also, the other two monitors in the same MSA area (MS and AR) showed a design value for 2006-8 data that are is greater than the new standard of 0.075 ppm.
- Emissions: 57,842 tons per year of NO_x and 41,885 tons per year of VOC. The majority (69%) of the NO_x emissions are from mobile sources; 27.5% from point sources. VOC emissions are split primarily between area sources (47%) and mobile sources (41%). Shelby County emits 84.3% of the total NO_x emissions and 90.6% of the total VOC emissions for the 3-county Memphis (TN Part) MSA.
- Population: 910,100 people and 1188.7 people per square mile. Shelby County represents 90.6% of the total population for the 3-county Memphis (TN part) MSA.
- Traffic: 24,502,348 DVMT
- Growth: The population grew 1.4% between 2000 and 2007. The DVMT grew 16% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Most of County is located in the West Tennessee Plain Geographic Region. The topography of this West Tennessee Plain is a relatively flat terrain that slopes gently westward to the Mississippi River floodplain. A small north-south strip of the County is located in the Mississippi Alluvial Valley Region.
- Level of control of emissions sources: There are 47 point sources in Shelby County that reported for the 2005 NEI. Regulations have been implemented that control VOC emissions from point sources. There is an I/M program for the City of Memphis within the Shelby County. They are yet to institute the OBD program. Stage 1 vapor recovery is required for all gasoline dispensing facilities.

Summary: The TAPCD recommends that Shelby County be designated as non-attainment for Ozone. The Shelby County contribution to the Memphis MSA for the following are: 90.56% of the population, 89.64% of the DVMT, 84.3% and 90.6% of NO_x and VOC emissions, respectively.

Tipton County

- Recommendation: Attainment
- Jurisdictional boundaries: Tipton County was previously classified as attainment for ozone.
- Air Quality Data: There is no ozone monitor in Tipton County.
- Emissions: 6,925 tons per year of NO_x and 2525 tons per year of VOC. The vast majority (94%) of the NO_x emissions are from mobile sources. 52% of VOC emissions are from mobile sources and 39% from area sources.
- Population: 57,686 people and 111.7 people per square mile
- Traffic: 1,198,023 DVMT
- Growth: The population grew 12.5% between 2000 and 2007. The DVMT grew 23% between 2000 and 2007.
- Meteorology: The winds are climatologically from the south, southwest, and south-southwest.
- Geography/topography: Most of County is located in the West Tennessee Plain Geographic Region. The topography of this West Tennessee Plain is a relatively flat terrain that slopes gently westward to the Mississippi River floodplain. A small north-south strip of the County is located in the Mississippi Alluvial Valley Region.
- Level of control of emissions sources: There are four point sources in Tipton County that reported for the 2005 NEI. There is currently no I/M program. Stage 1 vapor recovery is required for gasoline dispensing facilities.

Summary: The TAPCD recommends that Tipton County be designated as attainment for Ozone. The County contribution to the Memphis MSA for the following pollutants are 10% and 5.46% of NO_x and VOC emissions, respectively, of which the majority (94%) of the NO_x emissions are from mobile sources. It is to be noted that the point source emission contribution of NO_x and VOC to the Memphis MSA emission level is less than 1%. Only 5.74% of the population, 4.38% of the DVMT contribution to the MSA. The population density is only 111.7 per square mile. The county, even though adjacent to Shelby County is mostly rural and agrarian. The geographical location of the county (north) is downstream of general annual wind flow direction, thus having a minimal impact on the Memphis MSA Ozone level.

(8) Morristown Metropolitan Statistical Area

Morristown, TN Metropolitan Statistical Area (CBSA: 34100)

Principal Cities: Morristown-Hamblen County, Dandridge-Jefferson County, Rutledge-Grainger County
Grainger County, Hamblen County, and Jefferson County (in Tennessee)

The Morristown, TN Metropolitan Statistical Area (hereinafter referred to as the Morristown MSA) consists of 3 TN counties. The TAPCD is recommending that one county be classified as nonattainment and two counties be classified as attainment. The two attainment-designated counties are Hamblen and Grainger and were formerly classified as attainment also.

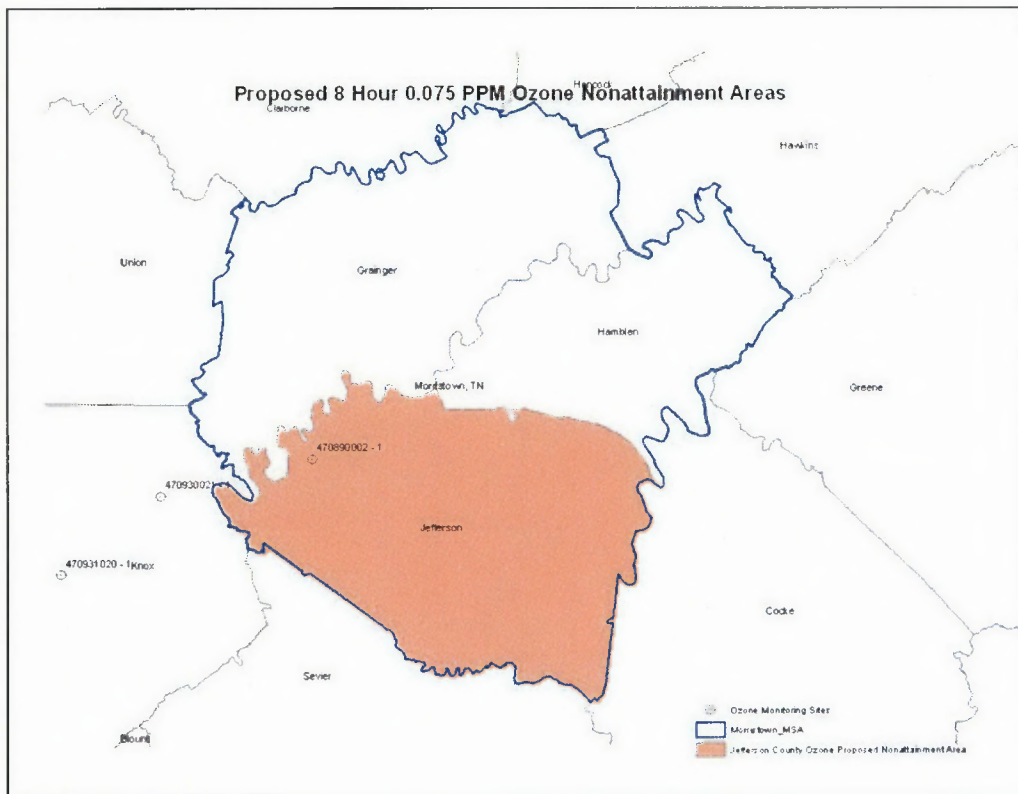


Figure 8 – Morristown MSA

Morristown MSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Morristown MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Grainger County

- Recommendation: Attainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 897 tons per year of NO_x and 1,540 tons per year of VOC (2005 NEI). There are no point source emissions of NO_x or VOC in this county. The majority (94%) of the NO_x emissions are from mobile sources. The majority (66%) of the VOC emissions are from mobile sources and (34%) from area sources.
- Population: 22,546 people (2007) and 80.5 people per square mile. The population amounts to 17% of the total for the Morristown MSA.
- Traffic: Low VMT (656,056 VMT/day).
- Growth: The population grew 9.1% between 2000 and 2007. The VMT grew 12% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Almost entirely rural. Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are no point sources in the county that reported for the 2005 NEI. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program.

Grainger County Summary

- 1) Lowest emissions for both VOC (2.3 TPD) and NO_x (1.4 TPD) in the Morristown MSA and second lowest in the overall Knoxville CBSA.
- 2) No ozone monitoring in the county
- 3) Lowest population in the Morristown MSA (22,546), and second lowest in the Knoxville CBSA.
- 4) Lowest annual VMT in the Morristown area (0.24 billion VMT/year), and second lowest in the Knoxville CBSA.
- 5) Meteorological analysis is not supportive of frequent contribution
- 6) 9% population growth rate predicted between 2000 and 2007
- 7) Not located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

The TAPCD recommends that Grainger County be designated attainment for ozone. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitors in Knox and Jefferson counties is minimal as it is located downwind from those monitors (North) in a

predominately southwesterly wind vectors impacting the monitors. This county is in a rural and agrarian environment. The county total emission contribution (8% or less) to the Morristown MSA is the lowest for both NO_x and VOC emissions. This county has the lowest population (17%), population density (80.5), and VMT (14%) for the entire Morristown MSA.

Hamblen County

- Recommendation: Attainment.
- Air Quality Data: No ozone monitoring in this county.
- Emissions: 5,340 tons per year of NO_x and 14,562 tons per year of VOC (2005 NEI). The majority (53%) of the NO_x emissions are from mobile sources and (40%) from point sources. The majority (69%) of the VOC emissions are from point sources. Approximately (17%) of VOC emissions come from area sources and 13% from mobile sources.
- Population: 61,829 people (2007) and 384 people per square mile. The population amounts to 46% of the total for the Morristown MSA.
- Traffic: Medium VMT (1,796,853 VMT/day).
- Growth: The population grew 6.4% between 2000 and 2007. The VMT grew 12% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Almost entirely rural. Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are five major point sources in the county that reported for the 2005 NEI. They are: NCR Corp. (source 32-0018, unit 001), International Polymers (source 32-0022, units 001 and 002), Macdermid Printing (source 32-0160, units 2-5), Vacumet Corp. (source 32-0169, unit 04), and Liberty Fibers (32-0197, unit 03). All these emission units are controlled for VOC emissions. Controls including thermal oxidizers, wet scrubbers, activated carbon absorbers, catalytic converters and afterburners, and condensers. Liberty Fibers has been shut down recently and is now closed. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions.

Hamblen County Summary

- 1) Highest emissions for both VOC (21.6 TPD) and NO_x (8.5 TPD) in the Morristown MSA
Second highest VOC and fourth highest NO_x emissions in the overall Knoxville CBSA.
- 2) No ozone monitoring in the county
- 3) Highest population in the Morristown MSA (61,829), and fifth highest in the Knoxville CBSA.
- 4) Second Highest annual VMT in the Morristown area (0.66 billion VMT/year)
- 5) Meteorological analysis is not supportive of frequent contribution
- 6) 6% population growth rate predicted between 2000 and 2007
- 7) Not located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

The TAPCD recommends that Hamblen County be designated attainment for ozone. The county does not have a representative ozone monitoring and its contribution to the nearest violating monitors in Knox and Jefferson counties is minimal as it is located downwind from those monitors (Northeast) in a

predominately southwesterly wind vectors impacting the monitors. This county is in a rural and agrarian environment.

Jefferson County

- Recommendation: Nonattainment
- Air Quality Data: Lost Creek Road monitor in violation of the standard (2005-07 design value – 0.084 ppm; 2006-08 design value – 0.081 ppm)
- Emissions: 5,128 tons per year of NO_x and 4,068 tons per year of VOC (2005 NEI). The majority (97%) of the NO_x emissions are from mobile sources. VOC emissions are generated from mobile sources at (57%). VOC point source emissions account for (17%) and area VOC sources account for (26%) of total emissions respectively.
- Population: 50,221 people (2007) and 183.3 people per square mile.
- Traffic: High VMT (2,305,508 VMT/day).
- Growth: The population grew 13.4% between 2000 and 2007. The VMT grew 8% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Almost entirely rural. Ridge and Valley topography covers the entire county.
- Jurisdictional boundaries: Entire County stays as part of the existing Morristown MSA.
- Level of control of emissions sources: There are no point sources in the county that reported for the 2005 NEI. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program. Stage I vapor recovery is required for gasoline dispensing facilities.

Jefferson County Summary

- 1) Second highest emissions for both VOC (6.0 TPD) and NO_x (8.2 TPD) in the Morristown MSA. Sixth highest VOC and fifth highest NO_x emissions in the overall Knoxville CBSA.
- 2) Lost Creek Road monitor in violation of the standard (2006-08 design value – 0.081 ppm).
- 3) Second highest population in the Morristown MSA (50,221), and sixth highest in the Knoxville CBSA.
- 4) Highest annual VMT in the Morristown area (0.84 billion VMT/year)
- 5) Meteorological analysis is not supportive of frequent contribution
- 6) 6% population growth rate predicted between 2000 and 2007
- 7) Located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

(9) Sevierville Micropolitan Statistical Area

Sevierville, TN Micropolitan Statistical Area (CBSA: 42940)

Principal Cities: Gatlinburg, Pigeon Forge, and Sevierville
Sevier County (in Tennessee)

The Sevierville, TN Micropolitan Statistical Area (hereinafter referred to as the Sevierville MiSA) consists of one TN County. The TAPCD is recommending that this county be classified as nonattainment.

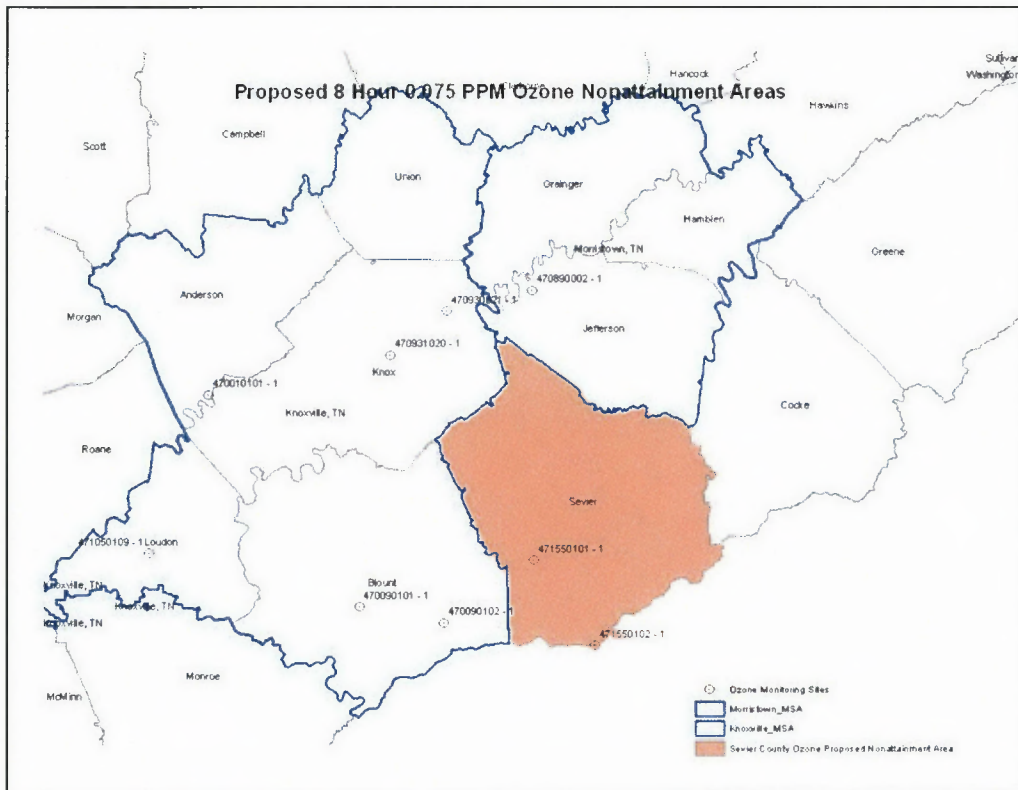


Figure 9 – Sevierville MiSA

Sevierville MiSA:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Sevierville MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Sevier County

- Recommendation: Nonattainment.
- Air Quality Data: Clingmans Dome () monitor in violation of the standard (2005-07 design value – 0.084 ppm; 2006-08 design value – 0.084 ppm).
- Emissions: 559 tons per year of NO_x and 2,371 tons per year of VOC (2005 NEI). Mobile source emissions generate the majority of NO_x (91%) and VOC (97%) of all emissions from this county.
- Population: 83,527 people (2007) and 141.1 people per square mile.
- Traffic: High VMT (3,453,187 VMT/day).
- Growth: The population grew 17.4% between 2000 and 2007. The VMT grew 32% between 2000 and 2007.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Developing touristic area. Ridge and Valley topography covers the western portion and Unaka Smoky Mountains cover the eastern portion of the state. The Great Smokies National Park () area is located across several counties in Tennessee and North Carolina.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emissions sources: There are no point sources in the county that reported for the 2005 NEI. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program. Stage I vapor recovery is required for gasoline dispensing facilities. Additionally, there are no industrial point sources of emissions in the park proper with an unknown portion of each county's respective mobile source contributions for NO_x and VOC. Ozone monitoring within the park at high elevations sites (Clingmans Dome) demonstrates a profound difference from those at lower elevation (Cades Cove monitor: 2005-07 design value – 0.070 ppm; 2006-08 design value – 0.072 ppm). The GSMNP is a federally controlled enclave within each of the two respective states.

Sevier County Summary

- 1) Seventh highest emissions for VOC (3.5 TPD) and lowest emission of NO_x (0.9 TPD) in the overall Knoxville CBSA.
- 2) Clingmans Dome (GSMNP) monitor in violation of the standard (2006-08 design value – 0.084 ppm).
- 3) Third highest population in the Knoxville CBSA (83,527).
- 4) Second highest annual VMT in the Knoxville CBSA (1.3 billion VMT/year)
- 5) Meteorological analysis is not supportive of frequent contribution
- 6) 17% population growth rate predicted between 2000 and 2007
- 7) Located in the current 8-hour ozone maintenance area
- 8) Emission reductions have been realized from previous VOC/NO_x control requirements

(10) Meigs County

Meigs County is not part of an MSA. The State of Tennessee recommends that Meigs County be designated as nonattainment. This recommendation is based almost entirely on the air monitoring data that showed a design value for 2006-8 data that exceeded the new ozone standard of 0.075 ppm.

Meigs County is not part of an MSA. The State of Tennessee recommends that Meigs County be designated as nonattainment. This recommendation is based almost entirely on the air monitoring data that showed a design value for 2006-8 data that exceeded the new ozone standard of 0.075 ppm.

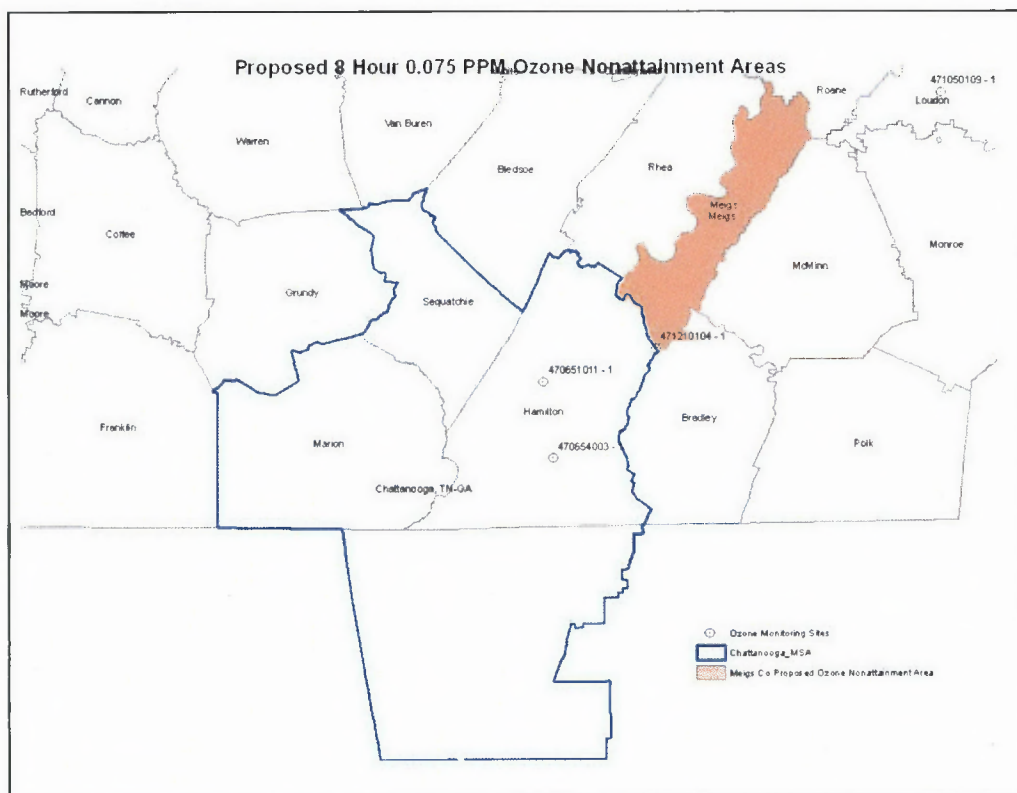


Figure 10 – Meigs County

Meigs County:

COUNTY BY COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Meigs County 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns (“connectivity”), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Meigs County

- Recommendation: Nonattainment
- Air Quality Data: There is one ozone monitor in Meigs County. The ozone monitor shows a design value for 2006-8 data that is greater than the new standard of 0.075 ppm.
- Emissions: 1,769 tons per year of NO_x and 935 tons per year of VOC. The majority (98%) of the NO_x emissions are from mobile sources. VOC emissions are split primarily between area sources (25%) and mobile (75%) sources.
- Population: 11,657 people and 56.9 people per square mile.
- Traffic: 278,982 DVMT
- Growth: The population grew 5.2% between 2000 and 2007. The VMT grew 10% between 2000 and 2007.
- Meteorology: Based on data from Chattanooga, the winds are climatologically from the south and north.
- Geography/topography: Meigs County is located in the Ridge and Valley region of Tennessee.
- Jurisdictional boundaries: Meigs County is currently classified as attainment.
- Level of control of emissions sources: There is one point source in Meigs County that reported for the 2005 NEI. However, NO_x and VOC are not emitted by this source. There is currently no I/M program. Stage I vapor recovery is required for gasoline dispensing facilities.
- Summary: The TAPCD recommends that Meigs County be designated as Nonattainment. This designation is based almost entirely on the fact that the ozone monitor shows nonattainment with the new standard. Due to the prevailing wind direction from the south, emissions from the Chattanooga area are probably causing the high ozone readings in Meigs County. If the ozone monitor in Meigs County shows a design value for 2007-9 data that is attaining the standard, then the TAPCD would change the recommendation to attainment. Meigs County has a small population and a small population density. Meigs County has a moderate growth rate. Meigs County had only one point source that reported for the 2005 NEI, and there are only a few minor point sources in the county.

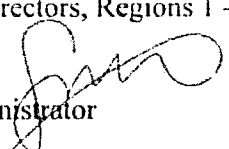


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

September 22, 2011

MEMORANDUM

TO: Air Division Directors, Regions 1 – 10

FROM: Gina McCarthy 
Assistant Administrator

SUBJECT: Implementation of the Ozone National Ambient Air Quality Standard

The purpose of this memorandum is to clarify for state and local air agencies the status of the ozone National Ambient Air Quality Standard (NAAQS) and to outline implementation steps moving forward. With the recent decision on the reconsideration of the ozone NAAQS, the current ozone NAAQS is 0.075 ppm. This standard will provide additional public health and welfare protection until the next regular review is completed, and EPA fully intends to implement this current standard as required under the Clean Air Act.¹

As I will describe below in more detail, EPA is moving ahead with certain required actions to implement the 2008 standard, but will do so mindful of the President's and Administrator's direction that in these challenging economic times EPA should reduce uncertainty and minimize the regulatory burdens on state and local governments. EPA is also continuing to implement and develop federal rules and other programmatic actions to reduce emissions that contribute to smog and improve air quality and public health across the nation.

Area Designations

EPA is proceeding with initial area designations under the 2008 standard, starting with the recommendations states made in 2009 and updating them with the most current, certified air quality data. We expect to issue our proposed changes to the states' recommendations (the "120-day letters") later this fall. We will quickly initiate and complete a rulemaking to establish nonattainment area classification thresholds so that we can finalize the designations. While we intend to take into consideration all comments we receive on the proposed rule, we note that we used a "percent above the standard" approach for classification under the 1997 ozone standard and believe that remains a reasonable approach.

¹ Note that the 2008 standard is under legal challenge. EPA has recently indicated to the Court that it does not object to the establishment of a briefing schedule in that litigation and has provided a schedule for the Court to consider.

Based on our initial review of ozone air quality data from 2008-2010, 52 areas monitor air quality that exceeds the 0.075 ppm standard. This preliminary review shows considerably fewer areas not meeting the 2008 standard than the number identified in 2009 when states made their recommendations. Using the "percent above the standard" classification approach, 43 of the 52 areas would fall into the Marginal category. As you know, many of the mandatory measures under the Clean Air Act are not required for Marginal areas since they are expected to achieve attainment within 3 years. In addition, EPA's modeling indicates that approximately half of the 52 areas would attain the 0.075 ppm standard by 2015 (the expected attainment deadline for Marginal areas) as a result of the emission-reducing rules already in place.

Because we have states' 2009 recommendations and quality assured ozone data for 2008-2010, there is nothing that state or local agencies need to do until we issue the 120-day letters later this year, though of course, states are welcome to contact us to discuss specific issues at any time. We expect to finalize initial area designations for the 2008 ozone NAAQS by mid-2012. However, we note that EPA currently faces litigation with respect to the timing of the designations and expects that the resolution of the litigation may well affect the precise timing of the schedule for designations.

Planning Requirements and Other Required Submissions

We will begin an expedited rulemaking to outline the implementation requirements for the 2008 standard in the very near future. The rule will be as straightforward and simple as we can make it. As you know, the Clean Air Act provides several years for states to develop their State Implementation Plans (SIPs) and to implement any mandatory measures. However, several deadlines for some state submissions have already passed, including the infrastructure SIPs and interstate transport SIPs. There are few requirements for Marginal areas beyond those SIPs.

EPA does not intend to penalize states for the passage of time, but we may also face litigation on these issues. In negotiating schedules for expeditious completion of required elements, we will seek to minimize any administrative burden on states associated with these requirements. To the extent that states are already engaged or would like to get started with clean air programs to address the standard, we will provide assistance with guidance and model language on rules or other programs, such as energy efficiency.

Federal Actions to Reduce Emissions

EPA will continue to move forward with implementation and development of federal rules that reduce emissions of pollutants that contribute to smog and threaten public health. These actions include recently promulgated rules that lower NO_x and VOC emissions such as the Cross-State Air Pollution Rule (CSAPR), the Portland Cement Rule, and Light and Heavy Duty Vehicle standards. They also include rules under development such as the Maximum Achievable Control Technology (MACT) standards for Boilers, the Mercury and Air Toxics Standards (MATS) for power plants, the New Source Performance Standards (NSPS) for Commercial Incinerators/Solid Waste Incinerators (CISWI) and the Oil/Gas sector, and the Tier 3 vehicle and fuel standards. These federal actions will ensure steady forward progress to clean up the nation's air and protect the health of American families, while minimizing and in many cases eliminating the need for states to use their scarce resources on local actions.

The Next Ozone Review

The next regular review of the health and welfare science is well underway. EPA will propose any appropriate revisions in the fall of 2013 and finalize any revisions to the standard in 2014. Attached to this memorandum is a schedule that lays out the upcoming steps in that review.

I hope this memorandum has answered some of the most immediate questions. Please distribute this memo to state and local air agencies in your Region. We will be providing opportunities for further discussion and questions with state and local officials in the coming weeks.

Attachment

September 22, 2011

Ozone NAAQS Review Schedule

Stage of review	Major milestones	Schedule
Integrated Science Assessment (ISA)	1 st Draft ISA CASAC and public review 1 st Draft ISA 2 nd Draft ISA CASAC and public review of 2 nd Draft ISA Final ISA	Mar 2011 May 19-20, 2011 Sept 2011 Dec 15-16, 2011 Feb/Mar 2012
Risk/Exposure Assessments (REAs)	Scope and Methods Plans CASAC consultation and public review of Scope and Methods Plans 1 st Draft REAs CASAC and public review 1 st Draft REAs 2 nd Draft REAs CASAC and public review 2 nd Draft REAs Final REAs	Apr 2011 May 19-20, 2011 Feb/Mar 2012 May 2012 Nov 2012 Jan/Feb 2013 Apr 2013
Policy Assessment (PA) and Rulemaking	1 st Draft PA CASAC and public review 1 st Draft PA 2 nd Draft PA CASAC and public review 2 nd Draft PA Final PA Proposed Rule Final Rule	Apr 2012 May 2012 Dec 2012 Jan/Feb 2013 May 2013 Oct 2013 July 2014



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

DEC - 8 2011

The Honorable Bill Haslam
Governor of Tennessee
State Capitol, First Floor
600 Charlotte Avenue
Nashville, Tennessee 37243-0001

Dear Governor Haslam:

Thank you for your recommendations dated March 10, 2009, and November 8, 2011, on air quality designations for the revised 2008 National Ambient Air Quality Standards for ozone throughout Tennessee. I appreciate the information Tennessee 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 Tennessee'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 EPA provided the opportunity for states to do so. Thank you for the November 8, 2011, updated designation recommendation from Tennessee 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 Tennessee's November 8, 2011, ozone designation recommendations for the Nashville Area, which was based on preliminary 2009-2011 air quality data, as well as other relevant technical information, the EPA intends to designate the Nashville Area as unclassifiable/attainment. In order for the EPA to consider 2009-2011 air quality data in the final designation decisions for this area, Tennessee must submit certified, quality assured 2009-2011 air quality monitoring data for the area to the EPA by February 29, 2012.

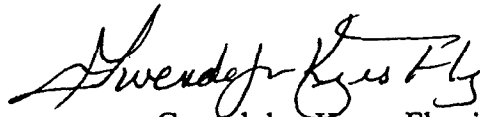
Next, after considering Tennessee's March 10, 2009, and November 8, 2011, ozone designation recommendations and other relevant technical information, including 2008-2010 air quality data, the EPA intends to support Tennessee's recommended area designations and boundaries for all areas with the exception of Shelby County in the Memphis, TN-MS-AR Area, and the counties in the Knoxville-Sevierville-La Follette Area. The EPA intends to modify Tennessee's recommended designations and boundaries for Shelby County in the Memphis, TN-MS-AR Area, and the counties in the Knoxville-Sevierville-La Follette Area. The EPA has preliminarily concluded that Shelby County, Tennessee should be included as part of the Memphis nonattainment area. The EPA has also preliminarily concluded that the following Tennessee counties should be included as part of the Knoxville-Sevierville-La Follette nonattainment area: Anderson, Blount, Knox, Loudon and Sevier Counties, in their entireties, and a portion of Cocke 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 boundaries for Shelby County in the Memphis, TN-MS-AR Area, and the counties in the Knoxville-Sevierville-La Follette Area. If Tennessee 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: Robert Martineau, Commissioner
Tennessee Department of Environment and Conservation (TDEC)

Barry Stephens, P.E., Director
Air Pollution Control Division, TDEC

Rob Raney, P.E., Director
Nashville Division of Pollution Control

Bob Rogers, P.E., Manager
Air Pollution Control Program, Memphis/Shelby County Health Department

Lynne A. Liddington, Director
Department of Air Quality Management, Knox County Health Department

Robert H. Colby, Director
Chattanooga-Hamilton County Air Pollution Control Bureau

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



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

APR 30 2012

MAY - 3 2012

THE ADMINISTRATOR

RECEIVED

MAY 07 2012

ENVIRONMENT AND CONSERVATION
COMMISSIONER'S OFFICE

The Honorable Bill Haslam
Governor of Tennessee
1st Floor, State Capitol
Nashville, Tennessee 37243

Dear Governor Haslam:

The U.S. Environmental Protection Agency today is taking the next step to address ozone air quality by issuing final area designations for the 2008 National Ambient Air Quality Standards for ozone. This action, required under the Clean Air Act, lets communities know if their outdoor air is meeting the national standards for ground-level ozone and which areas are violating, or contributing to violations of, the national standards.

The EPA strengthened the ozone standards on March 12, 2008, to increase protection of public health and the environment. Breathing air containing high levels of ozone, a key ingredient in smog, can reduce lung function, trigger respiratory symptoms, and worsen asthma or other respiratory conditions. Ozone exposure also can contribute to premature death, especially in people with heart and lung disease. The new standards, which also protect against damage to sensitive vegetation and forested ecosystems, are a key part of the EPA's commitment to a clean, healthy environment. As we have done for more than 40 years, the EPA will work with you to improve air quality and continue to protect the health of our citizens.

As part of the designations process, the EPA worked closely with states, tribes and local governments to identify areas in the nation that meet the standards and those that need to take steps to reduce ozone pollution. After reviewing the most recent certified ozone air quality data and evaluating factors to assess contribution to nearby levels of ozone, I have determined that some areas in Tennessee violate the 2008 ozone standards or contribute to violations of the standards in a nearby area. As a result, the EPA is designating portions of Tennessee "nonattainment." The remaining areas in the state, do not violate the standards or contribute to a violation of the standards in a nearby area and will be designated "unclassifiable/attainment." I appreciate the information that Tennessee shared with the EPA throughout this process to assess ozone air quality.

Under the Clean Air Act, ozone nonattainment areas are also classified at the time of designation according to severity of their ozone air quality problem. The EPA finalized a rule today that establishes the air quality thresholds for the different classification categories for the 2008 ozone standards and areas have been classified according to that rule.

The enclosed table identifies the designation and classification for areas within Tennessee Areas designated as nonattainment are subject to planning and emission reduction requirements as specified in the Clean Air Act. Requirements vary according to an area's classification. The EPA will be proposing an ozone implementation rule soon to assist states with nonattainment areas in the development of state implementation plans for attaining the ozone standards.

History shows that cleaner air, better health and economic growth go hand-in-hand. Areas designated "nonattainment" will need to take actions to improve ozone air quality expeditiously, as required by the Clean Air Act. For areas designated "unclassifiable/attainment," the challenge is to maintain clean air. Working closely with the states and tribes, the EPA is implementing the 2008 ozone standards using a common sense approach that protects air quality, maximizes flexibility and minimizes burden on state, tribal and local governments.

I recognize that the EPA shares the responsibility with the states and tribes for managing ozone air pollution. I also recognize that air pollution crossing state boundaries can contribute to downwind violations of the standards. Current and upcoming federal standards and safeguards, including pollution reduction rules for power plants, industrial facilities, vehicles and fuels, will ensure steady progress to reduce smog-forming pollution and will protect public health in communities across America.

The EPA will be assisting state, tribal and local air agencies by identifying currently available emission reduction measures as well as relevant information concerning their efficiency and cost-effectiveness. State, local and tribal agencies will be able to use this information in developing emission reduction strategies, plans and programs to attain and maintain cleaner air.

I look forward to continuing to work with you and your staff as we strive to advance our shared goal of clean air. Additional technical information on the ozone designations can be found at www.epa.gov/ozonedesignations. If you have questions, please contact me, or your staff may call Sarah Hospodor-Pallone, Deputy Associate Administrator for Intergovernmental Relations, at 202-564-7178.

Sincerely,



Lisa P. Jackson

Enclosure

Enclosure

**2008 Ozone National Ambient Air Quality Standards*
Initial Designations and Classifications for Areas in Tennessee**

Area Name	County Name	Designation	Classification
Knoxville, TN	Blount County Anderson County (p) Knox County	Nonattainment	Marginal
Memphis, TN-MS-AR**	Shelby County	Nonattainment	Marginal
Rest of State - Unclassifiable/Attainment			

* The primary and secondary ozone National Ambient Ozone Air Quality Standards are identical. Designations apply for both standards.

** This area is a multi-state nonattainment area. Only the counties in Tennessee are listed.

(p) - partial county

Memphis, TN-MS-AR Area Designations for the 2008 Ozone National Ambient Air Quality Standards

The table below identifies the areas in Arkansas, Mississippi and Tennessee that EPA is designating as nonattainment for the 2008 ozone national ambient air quality standards (2008 ozone NAAQS) as part of the Memphis, TN-MS-AR area. In accordance with section 107(d) of the Clean Air Act (CAA), 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 this nonattainment area is provided below.

Table 1: Final Nonattainment Area for the Memphis, TN-MS-AR

Area	State Recommended Nonattainment Counties*	EPA’s Final Designation Nonattainment Counties
Memphis, TN-MS-AR	Arkansas (None)	Crittenden
	Mississippi (None)	DeSoto (partial)
	Tennessee (None)	Shelby

*Mississippi and Tennessee based their nonattainment recommendations on 2009-2011. Arkansas based its nonattainment recommendation on 2008-2010 air quality data

EPA is designating the remaining counties (or portions thereof) in Arkansas and Mississippi as “unclassifiable/attainment” for the 2008 8-hour ozone NAAQS. EPA is designating as unclassifiable/attainment all counties in Tennessee other than those included in the table above or included in the Knoxville, TN nonattainment area (see the separate technical support document for this area).

The analysis below provides the basis for intended nonattainment area boundaries. It relies on EPA’s 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 monitor or Federal Equivalent Method (FEM) monitor 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);
5. Jurisdictional boundaries (e.g., counties, air districts, existing nonattainment areas, Indian country, metropolitan planning organizations (MPOs))

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.

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.

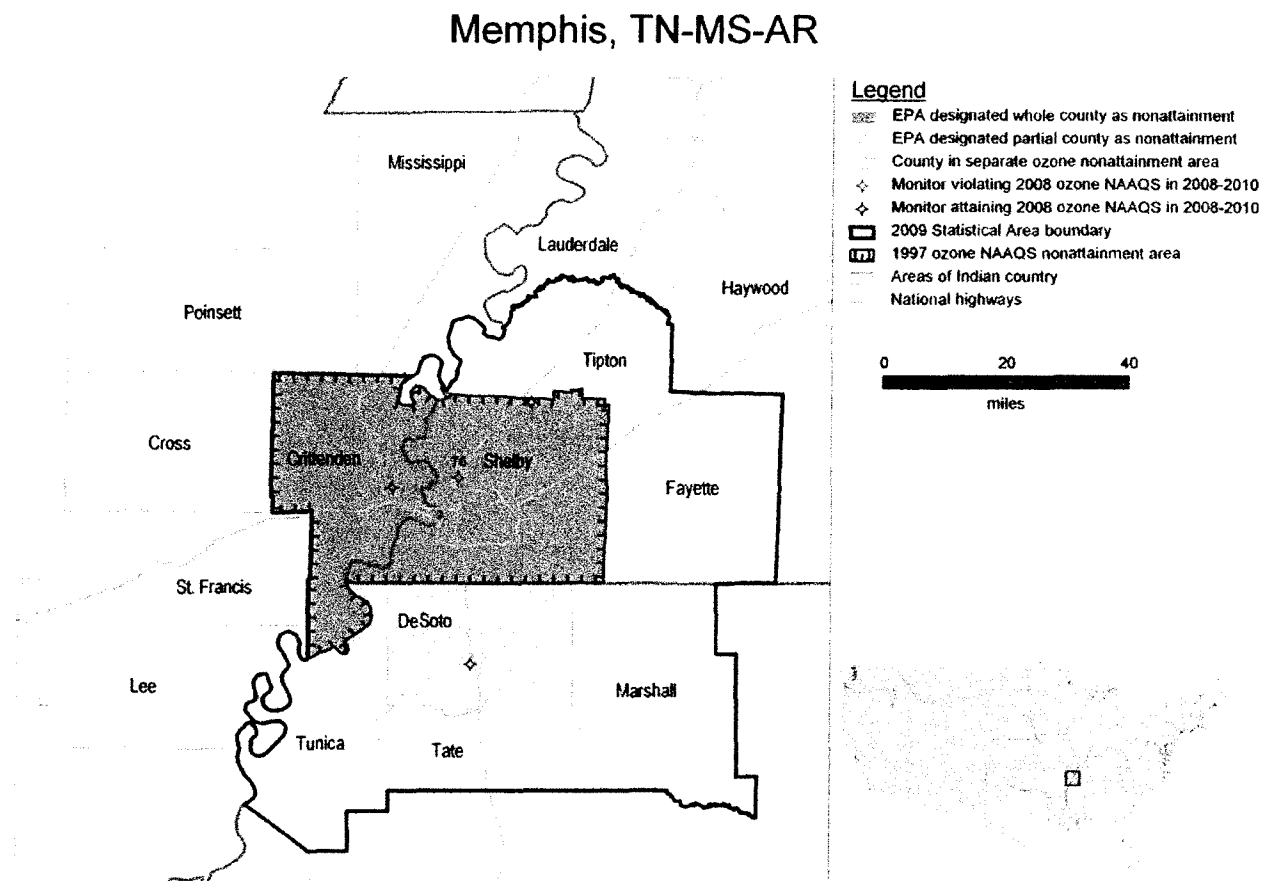
In EPA's designations guidance for the 2008 ozone NAAQS EPA recommended examining CSA/CBSAs because certain factors used to establish CSAs and CBSAs are similar to the factors EPA is using in this technical analysis to determine if a nearby area is contributing to a violation of the 2008 ozone NAAQS. Congress required a similar approach in 1990 for areas classified as serious or above for the 1-hour ozone NAAQS, and EPA used the same basic approach in the designation process for the 1997 ozone NAAQS. Section 107(d) of the CAA requires a designation of nonattainment for areas that are violating the NAAQS or contributing to violations in a nearby area. Section 107(d)(1)(A)(i) defines "nonattainment" as an area that "does not meet (or that contributes to ambient air quality in a nearby area that does not meet)" the 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 Memphis, TN-MS-AR

Figure 1 is a map of the Memphis, TN-MS-AR nonattainment area. The map provides other relevant information including the locations and design values of air quality monitors, county and other jurisdictional boundaries, relevant statistical area boundaries, the nonattainment area boundary for 1997 ozone NAAQS, and major transportation arteries.

Figure 1. Memphis, TN-MS-AR Nonattainment Area



For purposes of the 1997 8-hour ozone NAAQS, EPA designated all of Crittenden County, Arkansas, and Shelby County, Tennessee, as nonattainment.

In March 2009, Tennessee recommended that Shelby County be designated nonattainment for the 2008 8-hour ozone NAAQS based on air quality data from 2006 – 2008. Letter from James H. Fyke, Commissioner, State of Tennessee Department of Environment and Conservation to A. Stanley Meiburg, Acting Regional Administrator, US EPA Region 4 (March 10, 2009) (on file with US EPA Region 4, with copy available in the docket). Tennessee provided an update to its original recommendation in November 2011 based on preliminary 2009 – 2011 air quality data. In Tennessee's updated recommendation, the State did not provide a specific update to its 2009 recommendation for the Memphis TN-MS-AR area but stated that all other counties (with the exception of those recommended

for the Knoxville area) should be designated unclassifiable/attainment. These data are from FEM monitors sited and operated in accordance with 40 CFR Part 58. Letter from Robert J. Martineau Jr, Commissioner, State of Tennessee Department of Environment and Conservation to Gwendolyn Keyes Fleming, Regional Administrator, US EPA Region 4 (November 8, 2011) (on file with US EPA Region 4, with copy available in the docket).

Also, in March 2009, Mississippi recommended that DeSoto County, Mississippi be designated as a nonattainment area separate from the Memphis nonattainment area for the 2008 ozone NAAQS based on air quality data from 2006-2008. Mississippi provided an update to the original recommendation in October 2011 based on air quality data from 2008 – 2010, and preliminary data from 2009-2011. In its updated recommendation, Mississippi recommended that all counties in the State be designated attainment for the 2008 ozone NAAQS. These data are from FEM monitors sited and operated in accordance with 40 CFR Part 58. Letter from Haley Barbour, Governor of the State of Mississippi to A. Stanley Meiburg, Acting Regional Administrator, US EPA Region 4 (March 3, 2009) and Gwendolyn Keyes Fleming, Regional Administrator US EPA Region 4 (October 27, 2011) (on file with US EPA Region 4 and rulemaking docket).

Additionally, in March 2009, Arkansas recommended that Crittenden County, Arkansas be designated nonattainment based on 2006-2008 air quality data. This data is from an FEM monitor sited and operated in accordance with 40 CFR Part 58. Letter from Mike Beebe, Governor of the State of Arkansas to Lawrence E. Starfield, Acting Regional Administrator, US EPA Region 6 (March 10, 2009) (on file with US EPA Region 6, with copy available in the docket). Arkansas did not update its 2009 ozone recommendation prior to December 9, 2011.

On December 9, 2011, EPA initiated the 120 day consultation process by notifying Arkansas, Mississippi and Tennessee that based on EPA's technical analysis of the 8-county Memphis, TN-MS-AR CBSA, EPA intended to designate one county in Arkansas, a partial county in Mississippi, and one county in Tennessee (identified in Table 2 below) as "nonattainment" for the 2008 ozone NAAQS as part of the Memphis, TN-MS-AR nonattainment area. In this December 2011 letter, EPA also requested that if the States of Arkansas, Mississippi and Tennessee wished to provide additional information on EPA's intended designation or to use early certified 2011 monitoring data for designation, they should provide comments or early certify by February 29, 2012.

Table 2. State's Recommended and EPA's Intended Designated Nonattainment Counties for Memphis, TN-MS-AR from December 9, 2011.

Memphis, TN-MS-AR	State-Recommended Nonattainment Counties	EPA Intended Nonattainment Counties
Arkansas	Crittenden	Crittenden
Mississippi	None	DeSoto (partial)
Tennessee	None	Shelby

On February 27, 2012, the State of Tennessee provided an update to their November 2011 recommendation. This update was based on certified air quality data from 2009 – 2011, and was provided in response to EPA's preliminary boundary determination for the Memphis, TN-MS-AR CBSA. Tennessee recommended that Shelby County, Tennessee be designated attainment based on the State's early certification of the 2009 – 2011 air quality data which showed levels below the 2008 ozone NAAQS for the monitor in Shelby County, Tennessee. However, in the February 27, 2012, update, Tennessee also offered an alternative recommendation for Shelby County for a potential nonattainment

designation requesting EPA consider only the Memphis city limits for nonattainment because 70% of the county population resided within the city limits. On April 5, 2012, Tennessee provided EPA with more supplemental information for Shelby County reiterating that Shelby County be designated attainment based on early certified 2009 – 2011 data which showed levels below the 2008 ozone NAAQS and requested that Fayette and Tipton Counties be designated attainment. In addition, Tennessee provided an alternative recommendation for Shelby County regarding a nonattainment designation requesting EPA consider the Memphis City limits of Bartlett, Germantown and Collierville and the census tracts containing the Dupont and Atofina chemical facilities.

Likewise, in comments on intended ozone nonattainment area designations submitted to EPA on February 23, 2012, Arkansas withdrew its original recommendation for Crittenden County and revised it to recommend a designation of unclassifiable/attainment, based on the 2008 – 2010 design value for the ozone monitor located in the county.

On February 28, 2012, the State of Mississippi also submitted additional technical information to EPA in response to EPA's preliminary boundary determination for the Memphis, TN-MS-AR CBSA and maintained the State's recommendation that DeSoto County be designated attainment for the 2008 8-hour ozone NAAQS. Mississippi also submitted certified updated air quality data based on the 2009 – 2011 monitoring period.

EPA originally started with the CSA or CBSA areas for evaluating what areas violate and contribute to violations of the ozone NAAQS, and for final determinations refined its evaluation based on additional technical information provided by the states and tribes. After considering these recommendations and based on EPA's technical analysis described below, EPA is designating one county in Arkansas, a portion of a county in Mississippi, and one county in Tennessee (identified in Table 1 above) as nonattainment for the 2008 ozone NAAQS as part of the Memphis, TN-MS-AR multi-state nonattainment area.

Factor Assessment

Factor 1: Air Quality Data

For this factor, EPA considered 8-hour ozone design values (in parts per billion (ppb)) for air quality monitors in counties in the Memphis, TN-MS-AR CBSA based on data for the 2008-2010 period (i.e., the 2010 design value), which are the most recent years with fully-certified air quality data for all three states. Although Mississippi and Tennessee certified their 2009 – 2011 monitoring data early for EPA to consider for designations, Arkansas did not provide its 2009 – 2011 monitoring data for EPA to use for designations. Thus the most recent full set of certified data for all portions of the Memphis, TN-MS-AR CBSA is for the 2008-2010 period.

A monitor's design value 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 design value 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 design value for the county or area is determined by the monitor with the highest level.

The 2010 design values for the ozone NAAQS for counties in the Memphis, TN-MS-AR CBSA are provided in Table 3 below. The locations of the design value monitors are indicated in Figure 1 above. A more detailed map of the Memphis area monitoring network is provided in Figure 2 in the attachments.

Table 3. Air Quality Data³.

County	State Recommended Nonattainment*	2008-2010 Design Value (ppb)
Crittenden, AR	No	74
DeSoto, MS	No	73
Shelby, TN	No	76

*Mississippi and Tennessee based their nonattainment recommendations on 2009-2011. Arkansas based its nonattainment recommendation on 2008-2010 air quality data

Based on 2008-2010 monitoring data, Shelby County, Tennessee shows a violation of the 2008 ozone NAAQS, therefore this County is included in the Memphis, TN-MS-AR 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 to determine whether it contributes to the nearby violation.

Arkansas provided comments and a technical analysis of 8-hour ozone design value trends and meteorological conditions for the Memphis area, which was prepared by ICF International. A key point of the analysis prepared by ICF International is that previous studies, such as the Arkansas-Tennessee-Mississippi Ozone Study (ATMOS) study, indicate that the monitor site with the maximum design value for the area varies from year to year based on the frequency of occurrences of meteorological conditions (primarily wind directions) that are conducive to high ozone concentrations at the specific monitoring sites, and that this finding indicates that it is important to consider the monitoring sites as a group, as well as individually, in making attainment designation determinations.

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, which was the most recent available at the time of the analyses (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. EPA also considered any additional information we received on changes to emissions levels that are not reflected in recent inventories.

³ Only counties in the Memphis CBSA that have ozone monitors are included in this table.

As mentioned above, EPA received additional information from the States of Arkansas, Mississippi and Tennessee since the time EPA notified States of the preliminary boundary determination for the Memphis, TN-AR-MS nonattainment area, and this information was considered for this final designations.

Arkansas provided some commentary on emissions, population, and VMT data referenced in the TSD and also submitted additional data on Crittenden County and statewide VMT data. The additional VMT data submitted by Arkansas is summarized below in the section on traffic, VMT and commuter data.

While Tennessee provided information on point sources outside of the CBSA the state did not provide any additional emissions-related data for EPA to consider. Tennessee noted that some point sources in Arkansas, located outside of the Memphis, TN-MS-AR CBSA, are not subject to the same level of federal controls as sources within the area (i.e. NO_x SIP call) and thus could be contributing to ozone formation in the Memphis area. Tennessee also relied on a source-category analysis of county NO_x and VOC emissions.

Mississippi provided supplemental emissions-related data specifically for on-road (i.e. heavy-duty diesel truck traffic along area interstate roadways) and non-road (i.e. rail, barge and freight) emission sources including a technical study on forecasting on-road mobile-source emissions for DeSoto County. Mississippi also noted in its supplemental information that the State used the same data source for emissions-related and population growth rate data. However, Mississippi stated they analyzed the population growth rate data slightly different from EPA's analysis; Mississippi used absolute numbers rather than percentages to describe the population change over a 10-year period. Additionally, Mississippi commented on EPA's use of the National Oceanic and Atmospheric Administration Hybrid Single Particle Lagrangian Integrated Trajectory Model (NOAA HYSPLIT) model to determine potential ozone transport on days with high monitored ozone concentrations. EPA considered all the additional information provided by the states in the analysis below.

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 4 provides emissions of NO_x and VOC (given in tons per year (tpy)) for counties in the Memphis, TN-MS-AR CBSA that EPA considered for inclusion in the Memphis, TN-MS-AR nonattainment area.

Table 4. Total 2008 NOx and VOC Emissions.

County ¹	State Recommended Nonattainment	NO _x (tpy)	VOC (tpy)
Crittenden, AR	No	4,047	3,805
DeSoto, MS²	No	5,080	5,222
Fayette, TN	No	2,385	1,406
Marshall, MS	No	1,769	1,527
Shelby, TN	No	39,519	27,929
Tate, MS	No	3,102	1,392
Tipton, TN	No	2,119	2,251
Tunica, MS	No	1,598	1,096
Area-wide:		59,619	44,628

¹Counties that EPA is designating as nonattainment are shown in bold.

²EPA designating only a portion of the county nonattainment.

Shelby County contributes about 66 percent of the NO_x and 63 percent of the VOC precursor emissions in the CBSA. Of the County's 39,519 tpy NO_x emissions, 35 percent are from point and 35 percent from on-road mobile sources, 20 percent from area source emissions and 10 percent from non-road emissions. Of the County's 27,929 tpy VOC emissions, 36 percent is derived from mobile sources and 32 percent is derived from area sources.

DeSoto County contributes about 9 percent NO_x and 12 percent VOC precursor emissions in the CBSA. The county's 5,080 tpy NO_x emissions are mostly comprised of 45 percent from area sources, 35 percent from on-road mobile sources and 17 percent from non-road sources. DeSoto County's total VOC emissions include 44 percent from area sources and 34 percent from on-road mobile sources.

Crittenden County contributes 6.8 percent and 8.5 percent of the CBSA NO_x and VOC emissions, respectively. Of the county's total NO_x emissions listed in Table 1, 45 percent are from mobile sources, 34 percent from area sources and 16 percent from non-road emissions. The county's total VOC emissions include 35 percent from area sources and 31 percent from mobile sources, and 5 percent of the county's NO_x emissions are from point sources.

Fayette and Tipton Counties in Tennessee and Marshall, Tate, and Tunica Counties in Mississippi all contribute 5 percent or less of the total NO_x and VOC precursor emissions in the CBSA.

Together, Shelby, DeSoto and Crittenden Counties account for 82 percent of the NO_x emissions and 84 percent of the VOC emissions for the 8-county area.

Population density and degree of urbanization

EPA evaluated the population 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 non-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 county/area associated with the area source and mobile source emissions as contributing to the area violation, even if the monitor in that county is attaining the ozone NAAQS. Table 5 shows the population, population density, and population growth information for each county in the Area.

Table 5. Population and Growth.

County ¹	State Recommended Nonattainment?	2010 Population	2010 Population Density (1000 pop/sq mi)	Absolute change in population (2000-2010)	Population % change (2000-2010)
Crittenden, AR	No	50,902	0.08	(75)³	<1%
DeSoto, MS²	No	161,252	0.32	52,584	+48%
Fayette, TN	No	38,413	0.05	9,313	+32%
Marshall, MS	No	37,144	0.05	2,093	+6%
Shelby, TN	No	927,644	1.18	29,393	+3%
Tate, MS	No	28,886	0.07	3,444	+14%
Tipton, TN	No	61,081	0.13	9,545	+19%
Tunica, MS	No	10,778	0.02	1,557	+17%
Area-wide:		1,316,100	0.28	107,854	+9%

¹Counties that EPA is designating as nonattainment are shown in bold.

²EPA designating only a portion of the county nonattainment.

³Parenthetical indicates a decline in population.

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)

Shelby County, Tennessee is densely populated containing 70 percent of the CBSA population. From 2000 – 2010, the county only had 3 percent growth in population. Fayette and Tipton Counties in Tennessee had moderate growth from 2000 – 2010 but are sparsely populated.

DeSoto County, Mississippi is moderately populated in the northern portion of the county and mostly rural in the remaining portion of the county. DeSoto County contains 12 percent of the CBSA population, and experienced 48 percent growth from 2000 – 2010. Tate, Tunica and Marshall Counties in Mississippi all make up 3 percent or less of the CBSA population and are sparsely populated.

Crittenden County, Arkansas contains 4 percent of the CBSA population.

The attachment to this document contains Figure 2, Memphis, TN-MS-AR Area Ozone and Ozone Precursor Monitoring Network, with Population Density, Figure 3a, Population Density Change Percentage Between 2000 and 2010 Census for Memphis, TN-MS-AR Area Ozone and Ozone Precursor Monitoring Network and Figure 3b, 2010 Population Density for Memphis, TN-MS-AR Area U.S. Census Groups and Tracts all present graphical information on population density and growth for the Memphis Area.

Traffic VMT data and commuting patterns

EPA evaluated the commuting patterns of residents, as well as the total VMT for each county in the Memphis, TN-MS-AR CBSA. 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 6 provides total 2008 VMT for each county and 2010 worker data from the U.S. Census indicating the number of workers in each county and how many citizens work in a county with a violating monitor.

Table 6. Worker and VMT Data.

County ¹	State Recommended Nonattainment	2008 VMT ³ (million miles)	Number of County Workers ⁴ (2010 data)	Number of County Workers that Work in Counties with Violating Monitors ⁴	Percent of County Workers that Work in Counties with Violating Monitors ⁴
Crittenden, AR	No	903	20,550	6,148	29.9%
DeSoto, MS²	No	1,629	67,878	32,744	48.2%
Fayette, TN	No	573	16,482	10,816	65.6%
Marshall, MS	No	725	13,693	4,512	33.0%
Shelby, TN	No	8,789	376,250	324,192	86.2%
Tate, MS	No	376	10,854	2,170	20.8%
Tipton, TN	No	401	23,037	13,775	59.8%
Tunica, MS	No	337	4472	205	4.6%
Areawide:		13,733			

¹Counties that EPA is designating as nonattainment are shown in bold.

²EPA designating only a portion of the county nonattainment.

³MOBILE model VMTs are those inputs into the 2008 NEI version 1.5.

⁴Source: U.S. Census Bureau <http://onthemap.ces.census.gov/>

Shelby County is the only county in the Memphis, TN-MS-AR CBSA violating the 2008 ozone NAAQS with 2008 – 2010 air quality data and is the core CBSA county, with 64 percent of the VMT in the Memphis, TN-MS-AR CBSA. The 2010 census worker data also indicates that 86.2 percent of workers in Shelby County work in the county. Also 35 percent of Shelby County's NO_x emissions and 34 percent VOC emissions are from mobile sources. While 65.6 percent of Fayette County residents work in Shelby County, the number of workers is a third of those from DeSoto County that work in Shelby County, Tennessee. DeSoto County has four times the population and twice as much VMT as Fayette County, and four times the VMT and twice as much population as Tipton County.

DeSoto County has the second highest VMT in the Memphis, TN-MS-AR CBSA, which is also 12 percent of the total Memphis, TN-MS-AR CBSA. Additionally, DeSoto County has a 48 percent growth in population from 2000 – 2010 with approximately 48.2 percent of the County's work force working in Shelby County. Additionally, 35 and 34 percent of the county's NO_x and VOC emissions, respectively, derive from mobile sources.

Crittenden County has the third highest VMT in the CBSA and contains 4 percent of the CBSA population. Currently, 45 percent and 31 percent of the County's NO_x and VOC emissions, respectively, derive from mobile sources. In its response to our proposed Memphis nonattainment area designation and boundaries, Arkansas submitted additional statewide and Crittenden County VMT data for EPA to evaluate. This data consists of annual traffic reports for the years 2000 – 2010 prepared by the Arkansas State Highway and Transportation Department, which provide the daily VMT for Crittenden County for each of those years, as well as the underlying data on which the daily VMT is based. The additional data submitted by Arkansas expands on the 2008 VMT data that EPA relied upon by providing VMT for preceding and subsequent years at both the county and state level. The data indicates that the VMT for Crittenden County has been declining since 2007 and is currently at its lowest level since 2002, while state-wide VMT counts have been increasing year after year. For purposes of nonattainment designation, however, EPA evaluated 2008 VMT data for all eight counties in the Memphis TN-MS-AR CBSA in order to ensure consistency between the counties from the three affected states and to provide consistency between the VMT data and corresponding emissions data for 2008. The additional Arkansas VMT data is presented in Table 7 below

Table 7. Crittenden County and Arkansas Statewide VMT Data for 2000 – 2010

Year	Crittenden County Daily VMT (million miles)	Crittenden County Annual VMT (million miles)	Arkansas Daily VMT (million miles)	Arkansas Annual VMT (billion miles)
2000	2.22	809	77.5	28.3
2001	2.16	790	78.0	28.5
2002	2.36	860	80.0	29.2
2003	2.34	856	81.5	29.7
2004	2.45	893	84.5	30.8
2005	2.53	922	85.5	31.2
2006	2.48	906	87.5	31.9
2007	2.55	930	89.0	32.5
2008	2.47	903	88.9	32.4
2009	2.33	852	90.9	33.2
2010	2.25	820	92.2	33.6

Of the 8-county area, Crittenden County, Arkansas, DeSoto County, Mississippi, and Shelby County, Tennessee are all characterized by comparatively high VMT that exceed 900 million miles. Collectively, these counties account for 82 percent of the total VMT in the eight-county area.

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 Memphis International Airport (NWS Station 13893) to help determine transport patterns and source contributions. EPA initially assessed wind direction and speed for the 2008-2010 “ozone season” (March through October) in the Memphis CBSA and also evaluated only days when area ozone monitors exceeded the 2008 ozone NAAQS (See Figures 4a – 4d). EPA’s analysis of just the 2008-2010 NWS data indicates predominate south and south-southwest component for the Memphis CBSA. However, an examination of days when monitors in DeSoto County (Hernando) exceeded the 2008 ozone NAAQS suggested a northerly component. Additionally, on days when other monitors in Shelby County exceeded the 2008 NAAQS, the data indicated a southerly wind component. We performed these and other analyses to better understand the fate and transport of precursor emissions contributing to ozone formation in the Memphis Area. While the current Design Value for the Memphis CBSA monitors is typically set at one of the three monitors in Tennessee or Arkansas, exceedances at the other monitors will also have to be assessed in order to bring the area into attainment.

Arkansas provided a conceptual ozone analysis report and a summary analysis report for periods when exceedances have occurred at the Memphis CBSA monitors.⁴ This report indicates that the site with the maximum design value and highest frequency of exceedances varies from year to year based on frequency of occurrence of meteorological conditions (primarily wind directions) that are conducive to high ozone at the specific sites. Arkansas’s information indicated that high ozone days measured at the:

- Shelby County monitors were characterized by southerly, southwesterly, west-southwesterly and northeasterly winds on the surface;
- Crittenden County’s Marion monitor were characterized by southeasterly and some easterly surface winds;
- Desoto County’s Hernando monitor were characterized by northwesterly through northeasterly and some easterly surface winds.

A key summary point of the analysis provided by Arkansas is that since the monitor site with the maximum design value for the area varies from year to year based on the frequency of occurrences of meteorological conditions (primarily wind directions) that are conducive to high ozone concentrations at the specific monitoring sites, they make a finding indicating that it is important to consider the monitoring sites as a group, as well as individually, in making attainment designation determinations.

Overall, both EPA and ADEQ’s analyses of the NWS surface wind analyses indicate that on exceedance days at Memphis area monitors (Shelby, Desoto, and Crittenden County monitors), surface winds are much lighter and range from northeasterly to southwesterly (through easterly) on these days with less occurrences of westerly flows. Analyses also indicate that the DV monitor moves based on the more

⁴ Attachments to Arkansas Governor letter and ADEQ report, “Conceptual Description for 8-Hour Ozone for Crittenden County, Arkansas and the Memphis Metropolitan Area Final Report”, June 22, 2006

predominant winds during a three year period and all monitors should be considered due to the variability meteorology when ozone exceedances occur.

In addition to the NWS surface data analysis EPA evaluated wind back trajectories (which are an analysis of meteorological patterns) specifically on days when the current ozone design value monitor in Shelby County (Frayser monitor) exceeded the 2008 NAAQS. These analyses were conducted to better understand the fate and transport of precursor emissions contributing to ozone formation. To conduct wind back trajectory analyses, we initially utilized the NOAA HYSPLIT model to assess all exceedances at the Frayser monitor for the years 2008 – 2010. An examination of the meteorological data indicates that, for the 2008 – 2010 days with ozone concentrations above 75 ppb at the Memphis 2008 – 2010 Design Value site in Shelby County (Frayser monitor), the wind back trajectories primarily go back through Shelby County, Tennessee (on 10 out of 10 days) and DeSoto County, MS (on 7 out of 10 days), with back trajectories going back through Crittenden County, AR on 1 out of 10 days. HYSPLIT trajectories alone do not conclusively indicate contribution to monitored violations of the ozone NAAQS and therefore cannot be used to determine inclusion or exclusion of an area with regard to ozone designations. Rather, HYSPLIT trajectories are useful supporting information that complement other meteorological information, as well as information concerning the other factors, (emissions, etc.). For this reason, one can not set any interpretative thresholds, such as the percentage of trajectories that must traverse an area, for an area to be considered as contributing

Since the 2008 – 2010 data is only for three years and has only 10 exceedance days, we evaluated more years to better understand the meteorological transport conditions that exist during ozone exceedances. Normally when we are developing a conceptual model understanding of what yields ozone exceedances in an area we will evaluate 5 to 10 years worth of meteorological data. Therefore we decided to evaluate all days that had ozone exceedances at the Design Value monitor (Frayser) for the 2006 – 2010 period. The 2006 and 2007 years had more meteorology that was conducive for ozone formation than the years of 2008, 2009, and 2010. Figure 6 in the attachment to this document includes 72-hour back trajectories for 2006 – 2010 ozone exceedances at the Shelby County Frayser monitor using HYSPLIT. To further understand the meteorological transport conditions within the regional area around Memphis, we also refined and evaluated 24-hour back trajectories for the 2006-2010 time-periods using the NOAA HYSPLIT model. The results of these back trajectories are included in the attachment to this document as Figure 7 with a further zoom in view in Figure 8.

Evaluation of Figures 7 and 8 further supports our previous conclusions based on the 2008-2010 back trajectories when the Memphis area Frayser monitor has ozone exceedances. The 2006-2010 data further supports that most of the centerlines of the back trajectories passes through Shelby County Tennessee, and many of the back trajectory centerlines pass through DeSoto County in northern Mississippi with a smaller percentage passing through Crittenden County, Arkansas.

EPA's meteorological assessment of the area monitors ozone exceedances and specifically the wind back trajectory analysis at the Shelby County Frayser monitor indicate that emissions from Shelby, DeSoto and Crittenden Counties likely contribute to exceedances of the 2008 NAAQS at the Frayser monitor. See Figure 9 - Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County, Tennessee Frayser monitor that Cross DeSoto County, Mississippi, and also Figure 10 - Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County, Tennessee Frayser monitor for Ozone NAAQS exceedances.

As stated above, HYSPLIT back trajectories alone do not determine inclusion or exclusion of an area with regard to ozone designations but in fact are supporting information that compliments other

meteorological information as well as information concerning the other factors such as emissions, population growth and urbanization and, traffic/worker patterns. See Figures 2, 3a and 3b. Figure 2, Memphis Area Ozone and Ozone Precursor Monitoring Network and Figure 5 present graphical information on 24-hour back trajectories for exceedances in 2008-2010 at the Frayser monitor, locations of major stationary sources, and locations of ambient monitors with their design values. Figure 3a presents the Memphis Area population density percent change between 2000 and 2010 U.S. Census and ozone monitor locations. Figure 3b illustrates the Memphis Area 2010 population density based on census groups and tracts.

Arkansas also provided an analysis of wind directions on exceedance days at the Shelby County Frayser monitor for the last 15 years (1996-2010) and estimated that 15.6% of the exceedance days had one or more hours of southwest to northwest winds. Based on this analysis they concluded emissions from Crittenden County had the potential to contribute to an ozone exceedance 2.8 days per year on average. Arkansas also provided an analysis that used a combination of wind frequency from Crittenden to exceedance days at Frayser multiplied by the ratio of Crittenden County Emissions divided by the total 3 county emissions total (Shelby County, TN; Crittenden County, AR, and DeSoto County emissions). This assumes that emissions from the three county area contribute equally and linearly to a monitored ozone exceedance. There is a wide variety of reaction rates for differing VOC compounds that make up the total VOCs. This metric also assumes that all emissions in the three county area evenly added to a monitored ozone exceedance. Since not all emissions in the 3-county area would ever converge to impact one monitor this is not a reasonable approach. Furthermore, ozone chemistry is not linear and is also dependent upon a number of parameters. We disagree with the use of this metric and the conclusions that Arkansas made based on this data that Crittenden does not significantly contribute to exceedances in the area. We also disagree with the conclusions of Arkansas' wind analysis and the wind and emission ratio analysis. These analyses only concentrated on the Frayser monitor which conflicts with conclusions that are in ADEQ's conceptual model report for ozone exceedances in Memphis. The report indicates that analyses should be done for all the monitors in the Memphis area network, since changes in predominant wind patterns results in other monitor(s) than the Frayser monitoring being the monitor that sets the area design value. Furthermore, to bring the area into attainment, all the area monitors and meteorological regimes will have to be addressed in an attainment demonstration as Arkansas' Conceptual model report indicates and summarized elsewhere in this TSD.

EPA also performed a wind speed and transport analysis using data from the Memphis International Airport NWS station in combination with HYSPLIT back trajectories to further evaluate the potential for emissions from DeSoto County, Mississippi, to contribute to exceedances of the ozone standard measured at the Frayser monitor during the 2008-2010 timeframe. The analysis considered the surface-level wind speeds and directions, temperatures and cloud cover conditions, which are all important factors for ozone formation during the peak ozone concentration events at the Shelby County (Frayser monitor). See Figure 9 - Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County Frayser monitor that Cross DeSoto County, Mississippi. This analysis indicated that the range of transport times for DeSoto County precursor emissions to the Frayser ozone monitor is approximately 3-8 hours with average wind speeds of 3-5 miles per hour. The high temperatures ranged from the high 80's through mid-90's during the peak ozone times in the afternoon with clear skies for almost the entire period. This combination of clear skies (high incoming solar radiation), low wind speeds and high temperatures are favorable conditions for ozone formation. Under these conditions, it is very possible that the NO_x and VOC emissions from the local sources, including sources in DeSoto County, are contributing to the elevated ozone concentrations measured at the Shelby County Frayser monitor. Information evaluated also supports that Crittenden County emissions contribute to elevated ozone

concentrations when winds are from the west-southwest and southwest and also during light wind conditions (See figure 10).

EPA's wind speed and transport analysis and the HYSPLIT trajectory analyses indicate that emissions from Shelby County, Tennessee, DeSoto County, Mississippi, and Crittenden County, Arkansas, are impacting measured ozone concentrations in the area and emissions from other counties in the CBSA are less likely to affect ozone levels.

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 air shed and, therefore, the distribution of ozone over the area.

The Memphis, TN-MS-AR CBSA does not have any geographical or topographical barriers 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 EPA identified the general areas that the Agency anticipated would be included in the nonattainment area, EPA then considered existing jurisdictional boundaries for the purpose 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 an MPO, state lines, Areas of Indian Country, 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.

Memphis, TN-MS-AR CBSA has previously established nonattainment boundaries associated with both the 1-hour ozone and 1997 8-hour ozone NAAQS. The Memphis nonattainment boundary for the 1-hour ozone NAAQS included Shelby County, Tennessee in its entirety. Whereas the Memphis nonattainment boundary for the 1997 8-hour ozone NAAQS included Crittenden County, Arkansas and Shelby County, Tennessee in their entireties. In the 120-consultation period, Tennessee, Mississippi and Arkansas provided information and requests for their individual counties to be designated attainment.

The Memphis Urban Area MPO is within the Memphis, TN-MS-AR, CBSA and is considered the multi-jurisdictional agency responsible for the implementation and coordination of urban transportation planning for all of Shelby County, Tennessee, the western four miles of Fayette County, Tennessee and the northern twelve miles of DeSoto County, Mississippi. The portion of the Memphis Urban MPO in DeSoto County captures the more urbanized portion of the county that has experienced continuous growth and is the boundary that EPA recommended as part of the Memphis, TN-MS-AR nonattainment area in December 2011.

Conclusion

Based on the assessment of the factors described above, EPA is designating the following counties as nonattainment for the Memphis, TN-MS-AR area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Crittenden County, Arkansas, and Shelby County, Tennessee in their entireties, and the portion of DeSoto County that is included in the Memphis MPO boundary. Two of these counties (i.e., Crittenden County, Arkansas and Shelby County, Tennessee) were included in the Memphis nonattainment area for the 1997 ozone NAAQS. One of the air quality monitors in Shelby County indicates violation of the 2008 ozone NAAQS based on 2008-2010 design values, therefore this county is included in the nonattainment area. Crittenden County, Arkansas, and DeSoto County, Mississippi are nearby counties that do not have monitors indicating a violation of the NAAQS based on 2008-2010 design values. However, EPA has determined that these counties (or portions thereof) contribute to the ozone concentrations in violation of the 2008 ozone NAAQS through population-based emissions from mobile and area sources (e.g., vehicles and other small area sources).

Source category emissions data indicate that mobile sources and area sources are the primary drivers of contribution to ozone formation in the Memphis, TN-MS-AR CBSA. Thus, population-based emissions such as total population or population growth, area 2009 workforce patterns and precursor emission transport would indicate a county (or portions thereof) with contribution in the Memphis, TN-MS-AR CBSA. Additionally, EPA's meteorological assessment of the Memphis area indicates that emissions of ozone precursors from sources in Shelby County, Tennessee, DeSoto County, Mississippi, and Crittenden County, Arkansas, are contributing to ozone exceedances measured at monitors in the area.

Shelby County, Tennessee dominates the CBSA in terms of urbanization, precursor emission contribution and transport which indicate population-based emission (mobile and area sources) contribution to violations of monitors in the Memphis, TN-MS-AR CBSA. Although the county population growth was less than 5 percent from 2000-2010, it is densely populated with 70 percent of the CBSA population and five times DeSoto County's population. Shelby County makes up over 60 percent of the area's NO_x and VOC emissions. Of the county's 39,519 tpy NO_x emissions, 35 percent are from point and 35 percent from on-road mobile sources, 20 percent from area source emissions and 10 percent from non-road emissions. Of the County's 27,929 tpy VOC emissions, 36 percent is derived from mobile sources and 32 percent is derived from area sources. Also, EPA's analysis of meteorology and the conceptual model for high ozone events in the Memphis area and 2010 worker data indicate that Shelby County is contributing to violations at monitors in the Memphis, TN-MS-AR CBSA and should be designated nonattainment for the Memphis, TN-MS-AR nonattainment area.

The population in DeSoto County, Mississippi has grown steadily from 2000-2010 (particularly the northern portion of the county) with a 48 percent increase, even though it only makes up 12 percent of the total population in the CBSA. The county also has the CBSA's second highest VMT. More than 30 percent of the county's NO_x and VOC emissions are from mobile sources and over 40 percent are from area sources. In addition, EPA's analysis of meteorology and the conceptual model for high ozone events in the Memphis area suggests that DeSoto County is contributing to the violation in Shelby County due to southerly transport of mobile and area emissions as well as back trajectories indicating wind direction from DeSoto County on high ozone days at the monitors in the Memphis, TN-MS-AR CBSA. While DeSoto County does not have a monitor violating the 2008 ozone NAAQS, the area and mobile emissions in the portion of DeSoto County that is being designated nonattainment indicate that it is an integral part of the Memphis, TN-MS-AR CBSA, and contributes to violations at monitors in the Memphis, TN-MS-AR CBSA.

Crittenden County, Arkansas contains 4 percent of the CBSA population and makes up 6.8 percent and 8.5 percent of the CBSA NO_x and VOC emissions respectively. Also, Crittenden County has over 40 percent of its NO_x emissions deriving from area sources, which are considered a primary contributor to the formation of ozone in the Memphis, TN-MS-AR CBSA. In addition, EPA's analysis of meteorology and the conceptual model for high ozone events in the Memphis area indicates that the county's emissions contribute at times to violations of the 2008 ozone NAAQS in the area.

The remaining Tennessee (Tipton, Fayette) and Mississippi (Marshall, Tate, and Tunica) counties all have low population and urbanization, and precursor emission contribution suggesting that these areas do not contribute to violations at the monitors in the Memphis, TN-MS-AR CBSA. These areas have not previously been included as part of the Memphis nonattainment area for other ozone NAAQS.

ATTACHMENTS

Figure 2 – Memphis, TN-MS-AR Area Ozone and Ozone Precursor Monitoring Network, with Population Density.

Figure 3a – Population Density Change Percentage Between 2000 and 2010 Census for Memphis, TN-MS-AR Area Ozone and Ozone Precursor Monitoring Network.

Figure 3b – 2010 Population Density for Memphis, TN-MS-AR Area U.S. Census Groups and Tracts

Figure 4a – Memphis 2008-2010 Ozone Season (March-October) Wind Rose for Memphis International Airport NWS station.

Figure 4b – 2008 Wind Rose for Memphis International Airport NWS station for days when ozone exceedances occurred.

Figure 4c – 2009 Wind Rose for Memphis International Airport NWS station for days when ozone exceedances occurred.

Figure 4d – 2010 Wind Rose for Memphis International Airport NWS station for days when ozone exceedances occurred.

Figure 5 – Overlay of 24-hour HYSPLIT back trajectories of all 75 ppb exceedances at the Frayser monitor for the 2008-2010 period.

Figure 6 – NOAA HYSPLIT MODEL 72-Hour Back Trajectory Frayser Exceedances (2006-10).

Figure 7 – NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser Exceedances (2006-10).

Figure 8 – NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser Exceedances (2006-10) - Zoom View.

Figure 9 – Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County, Tennessee Frayser monitor that Cross DeSoto County, Mississippi

Figure 10 – Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County, Tennessee Frayser monitor for Ozone NAAQS Exceedances

Figure 2 – Memphis, TN-MS-AR Area Ozone and Ozone Precursor Monitoring Network, with Population Density.

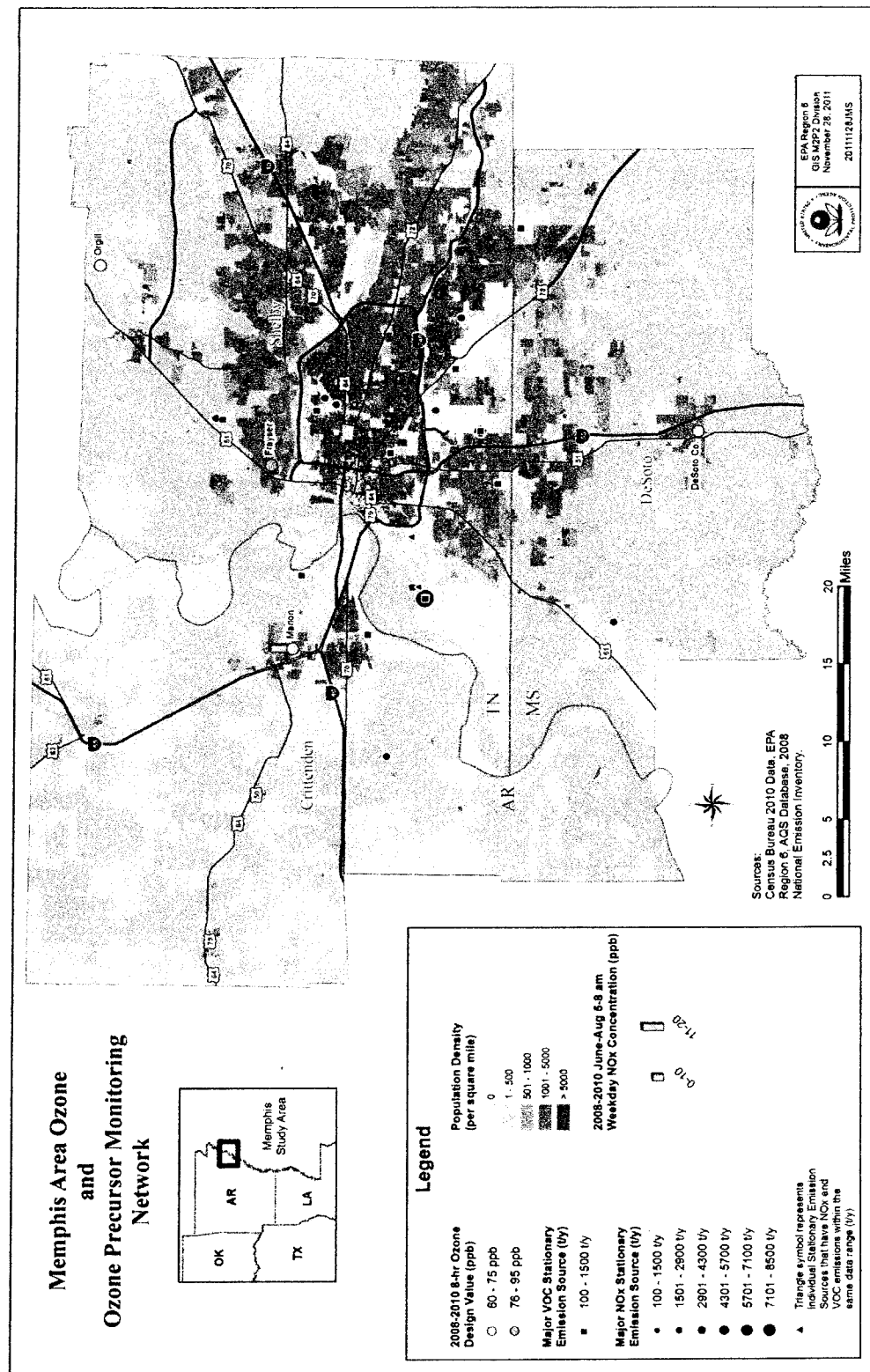


Figure 3a – Population Density Change Percentage Between 2000 and 2010 Census for Memphis, TN-MS-AR Area Ozone and Ozone Precursor Monitoring Network

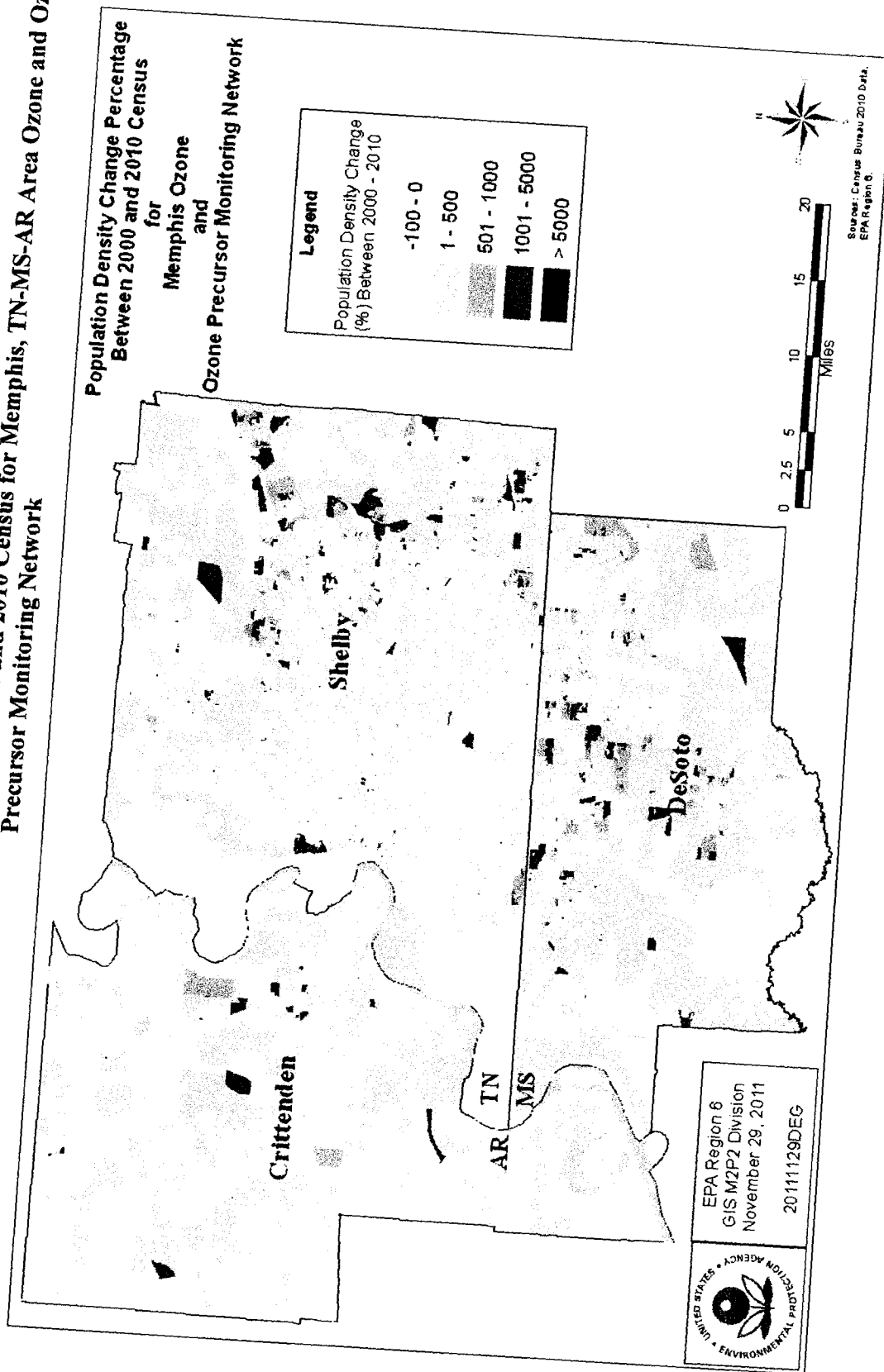


Figure 3b – 2010 Population Density for Memphis, TN-MS-AR Area U.S. Census Groups and Tracts

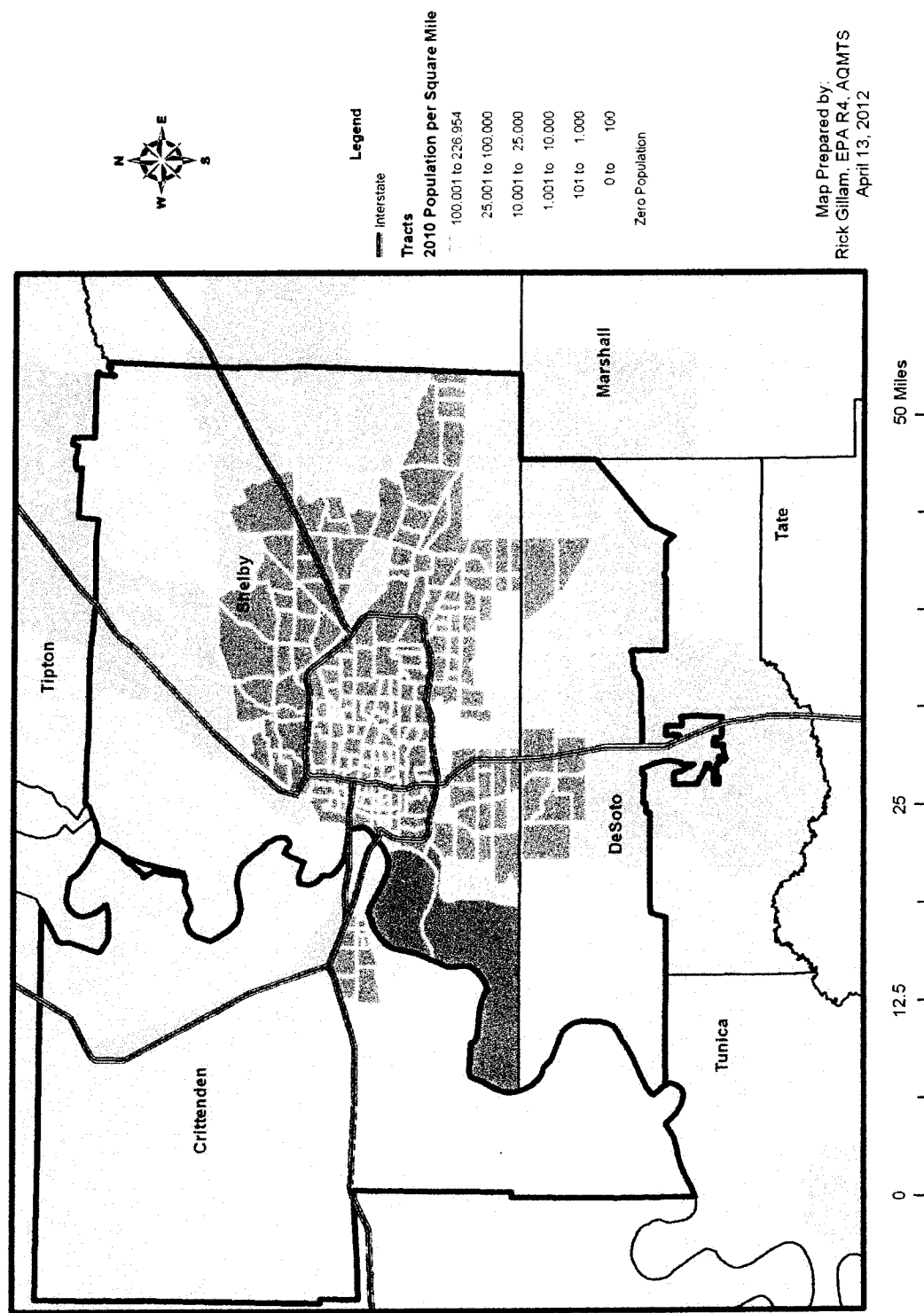
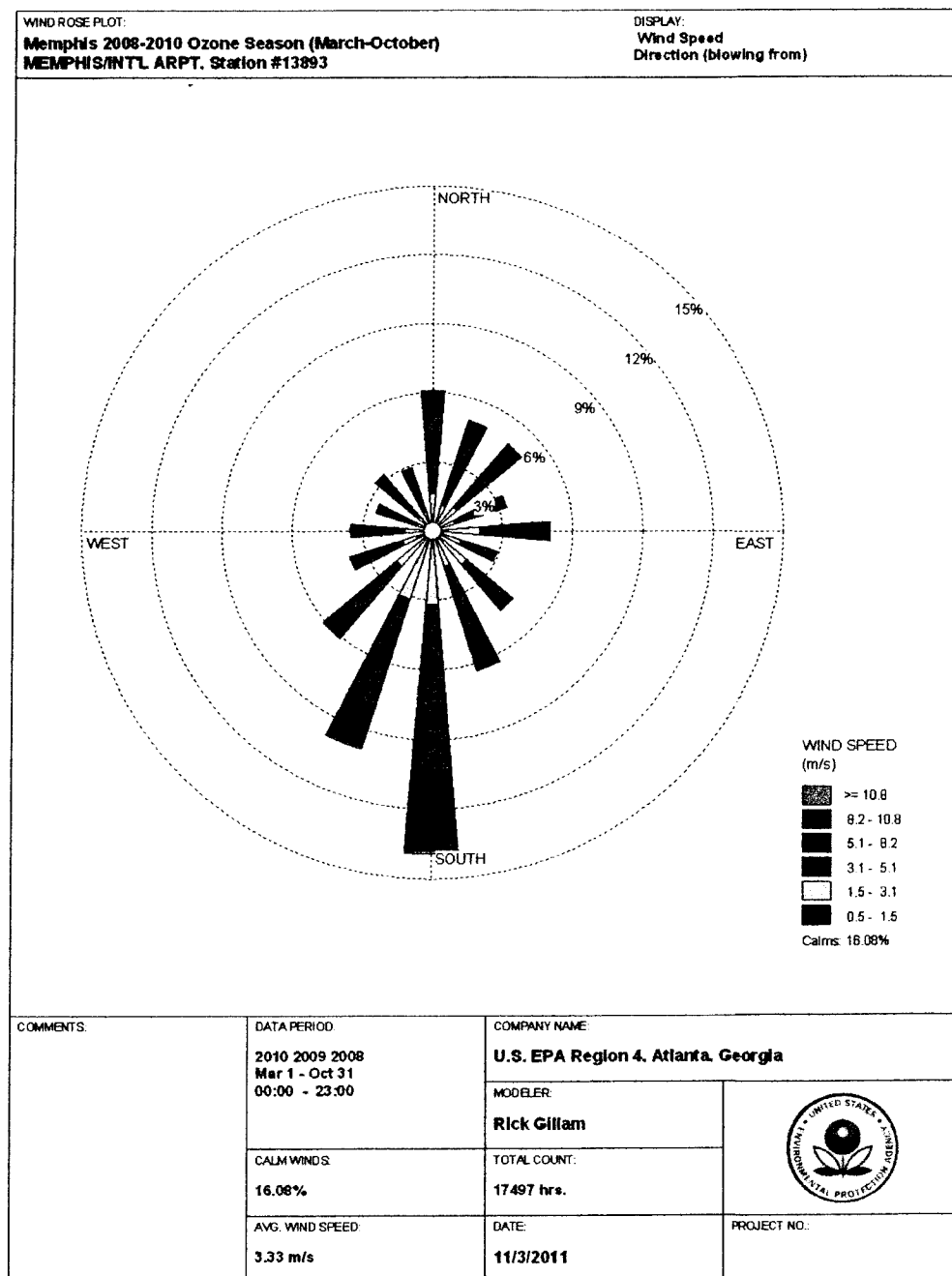
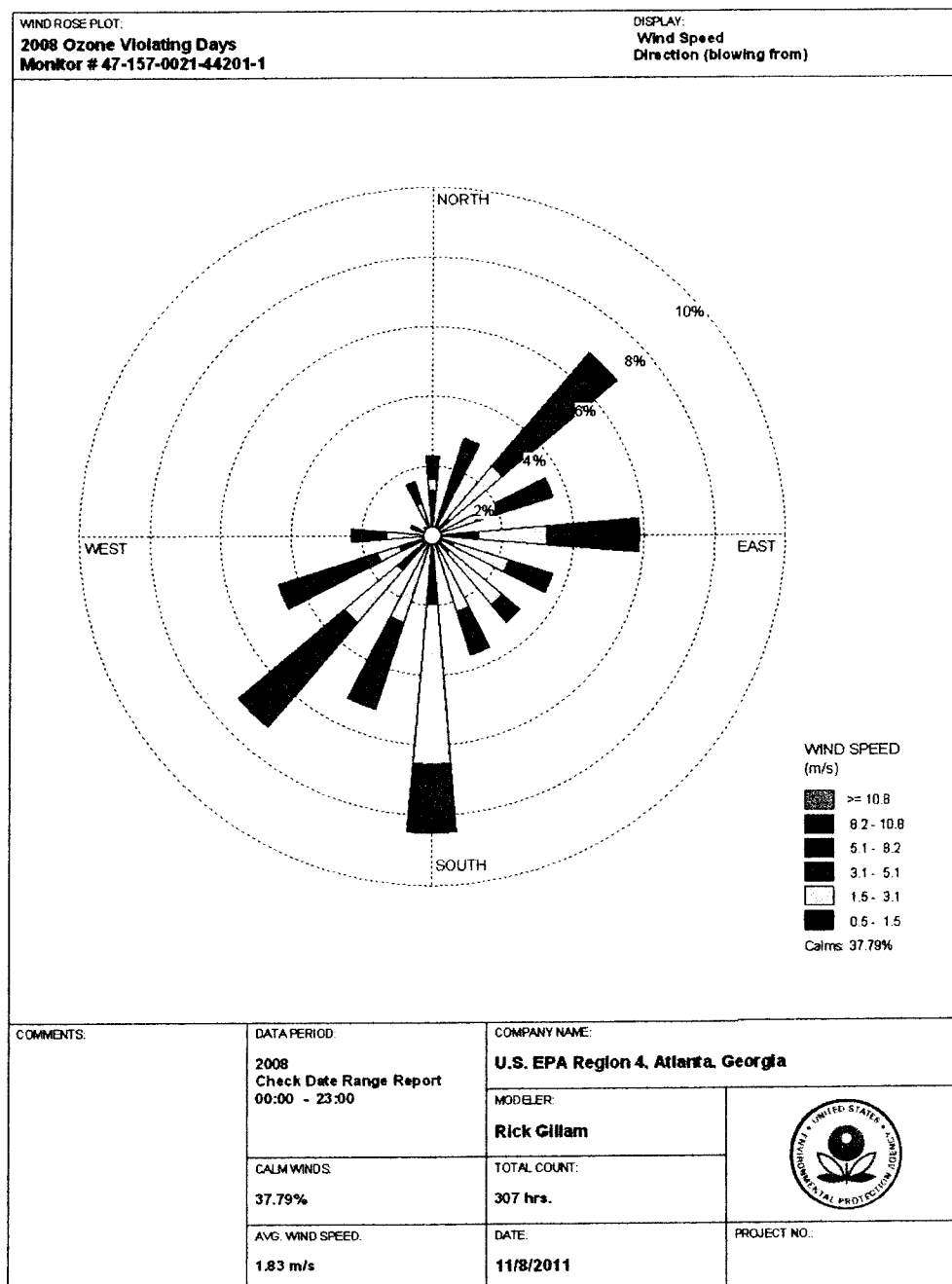


Figure 4a -Memphis 2008-2010 Ozone Season (March-October) Wind Rose for Memphis International Airport NWS station.



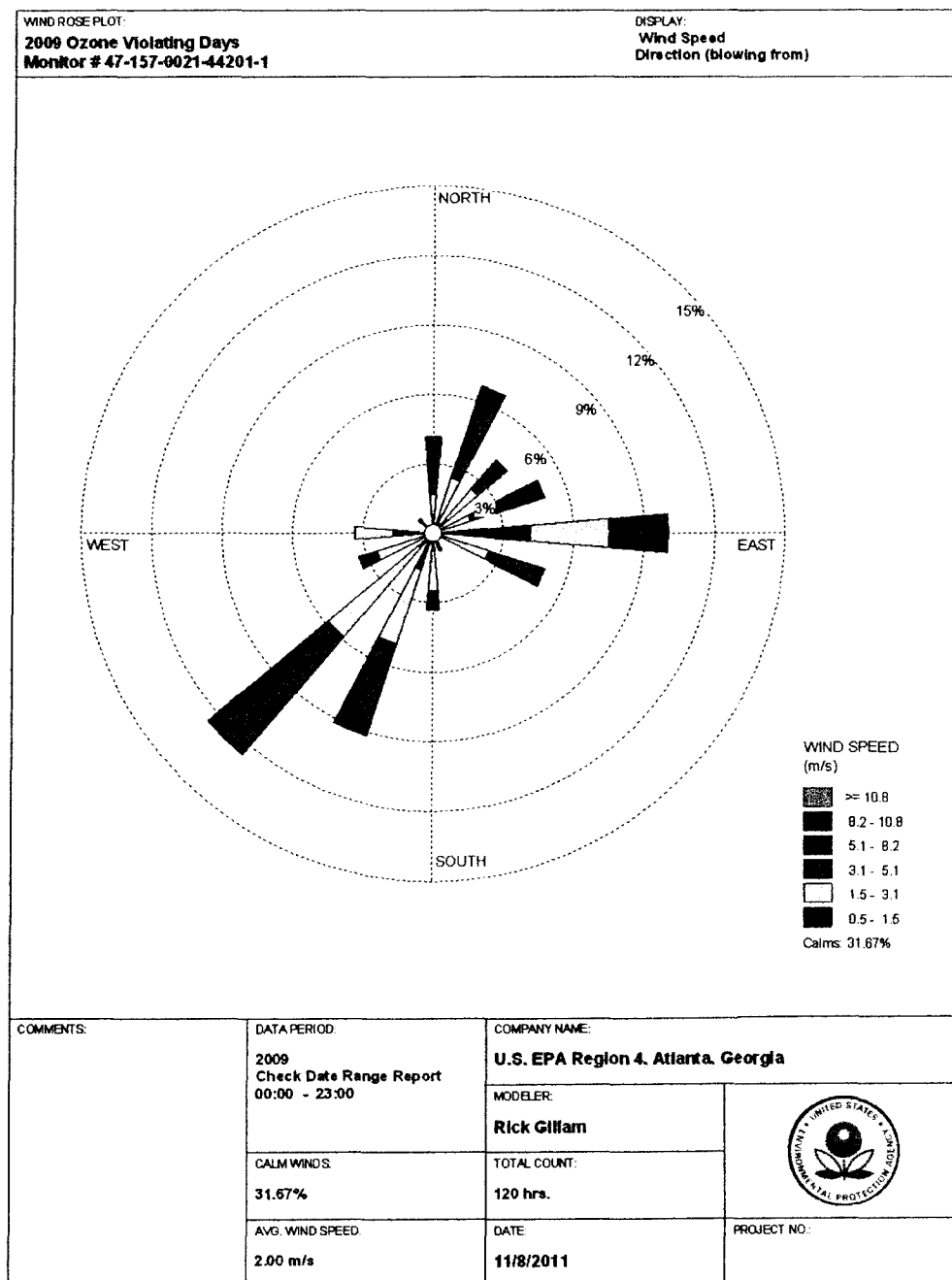
WRPLOT View - Lakes Environmental Software

Figure 4b – 2008 Wind Rose for Memphis International Airport NWS station for days when ozone exceedances occurred.



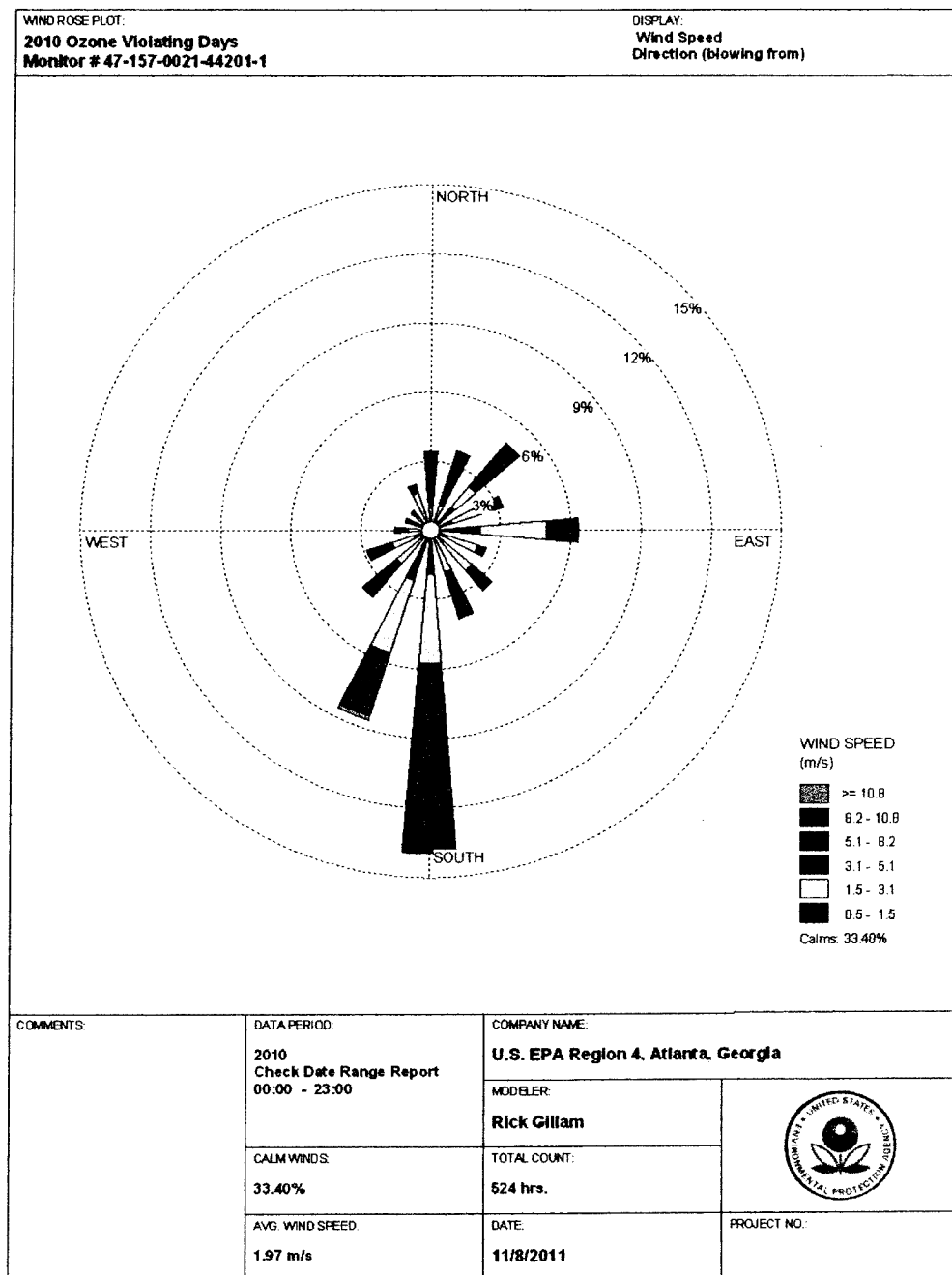
WRPLOT View - Lakes Environmental Software

Figure 4c – 2009 Wind Rose for Memphis International Airport NWS station for days when ozone exceedances occurred.



WRPLOT View - Lakes Environmental Software

Figure 4d – 2010 Wind Rose for Memphis International Airport NWS station for days when ozone exceedances occurred



WRPLOT View - Lakes Environmental Software

Figure 5 - Overlay of 24-hour HYSPLIT back trajectories of all 75 ppb exceedances at the Frayser monitor for the 2008-2010 period.

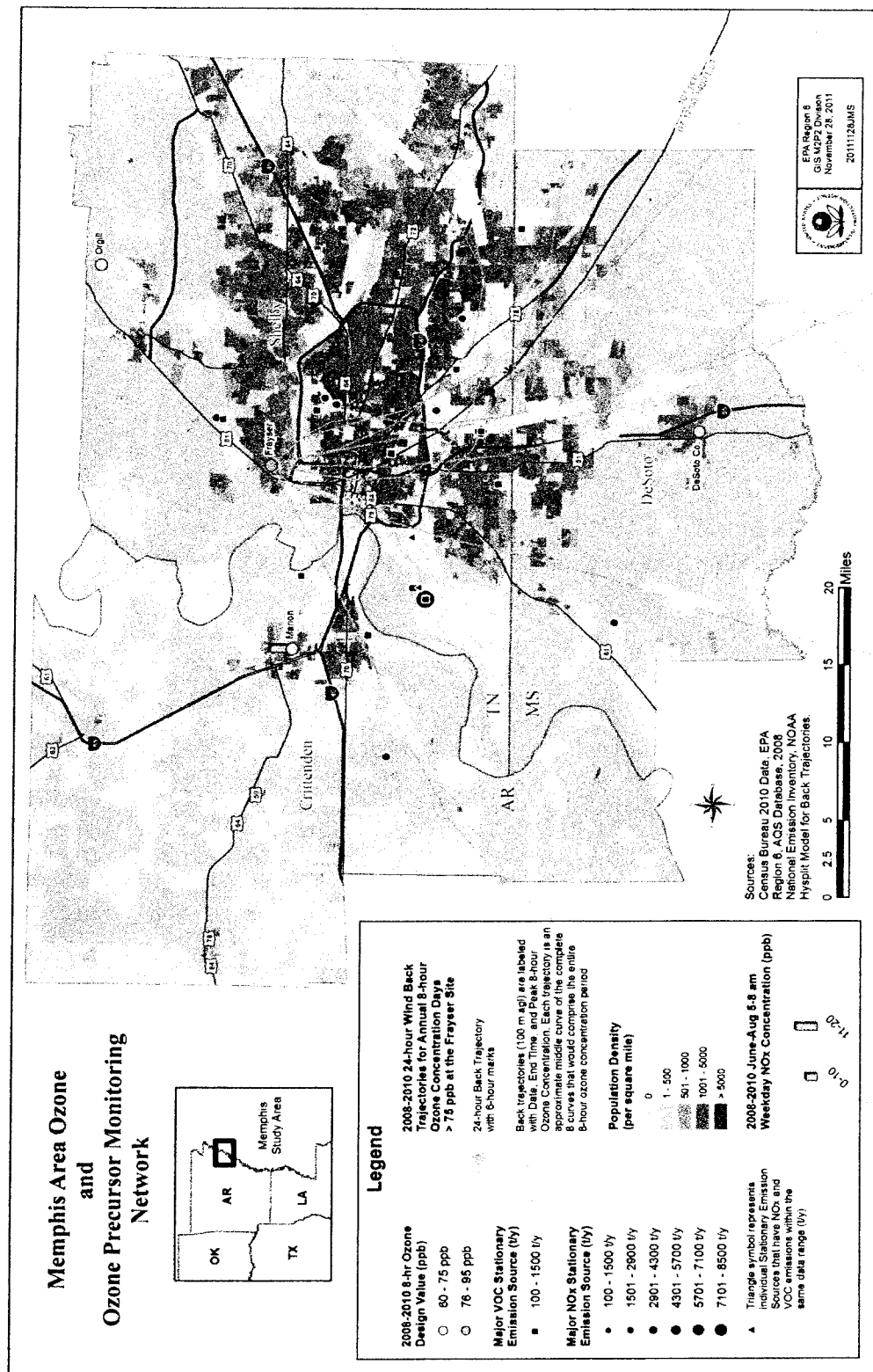


Figure 6. NOAA HYSPLIT MODEL 72-Hour Back Trajectory Frayser Exceedances (2006-10)

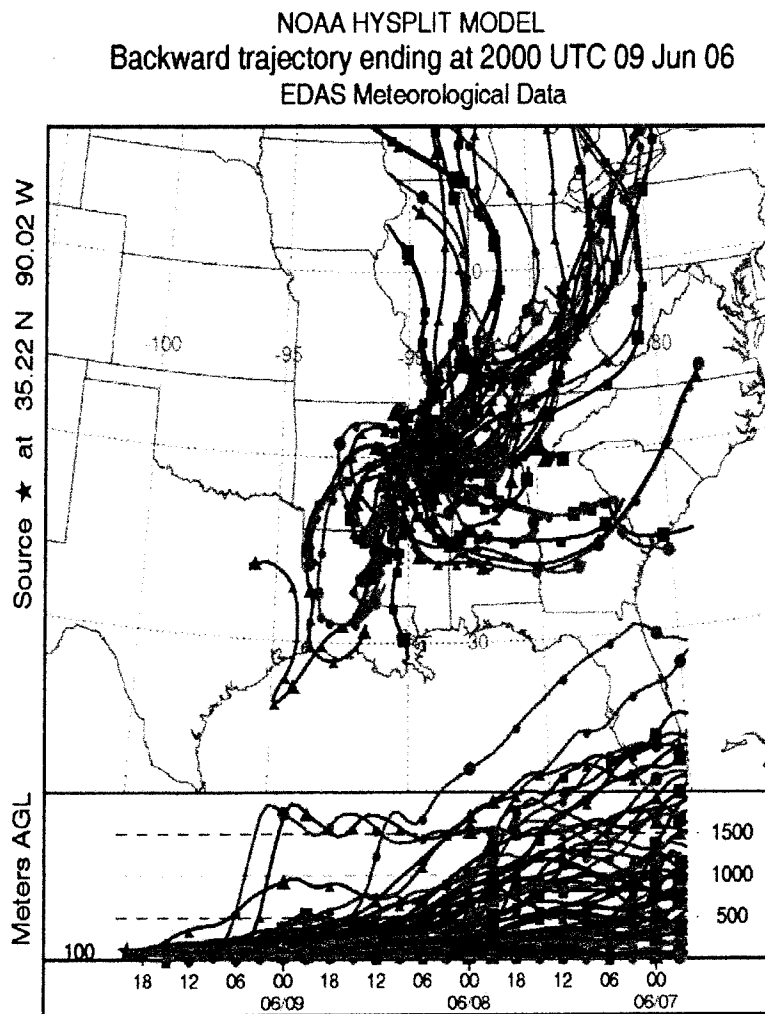


Figure 7. NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser Exceedances (2006-10)

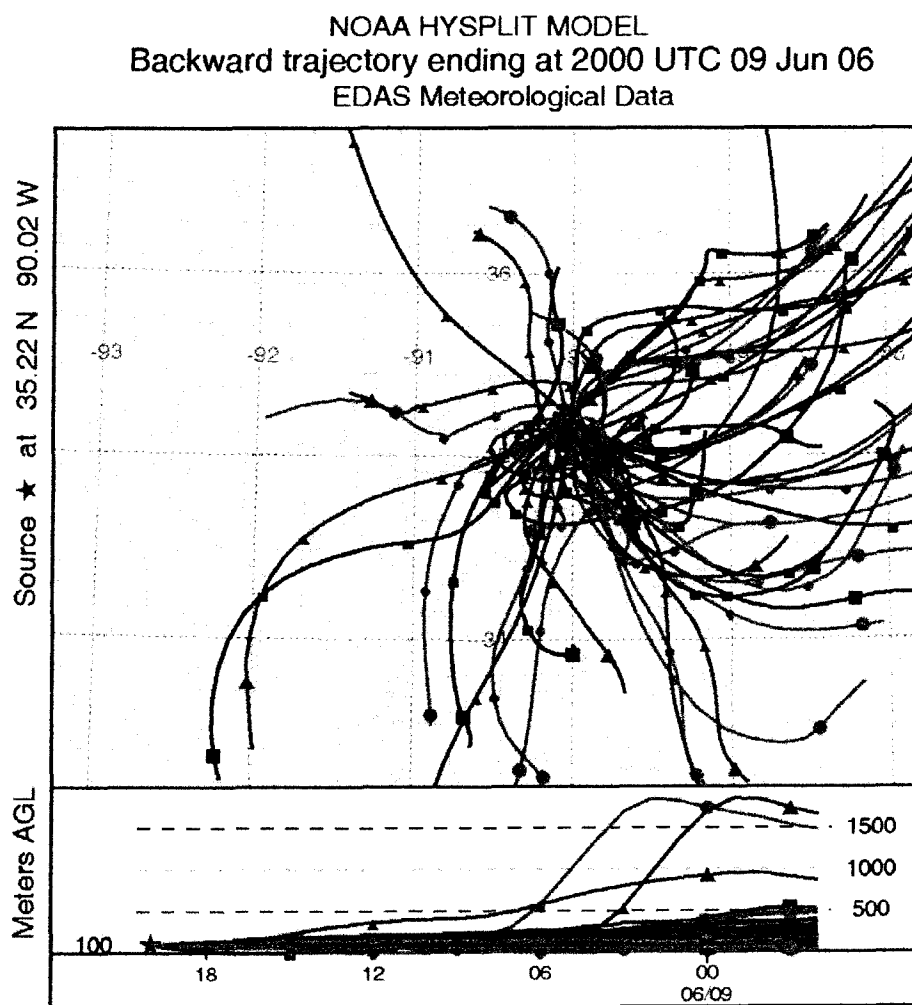


Figure 8. NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser
Exceedances (2006-10) - Zoom View

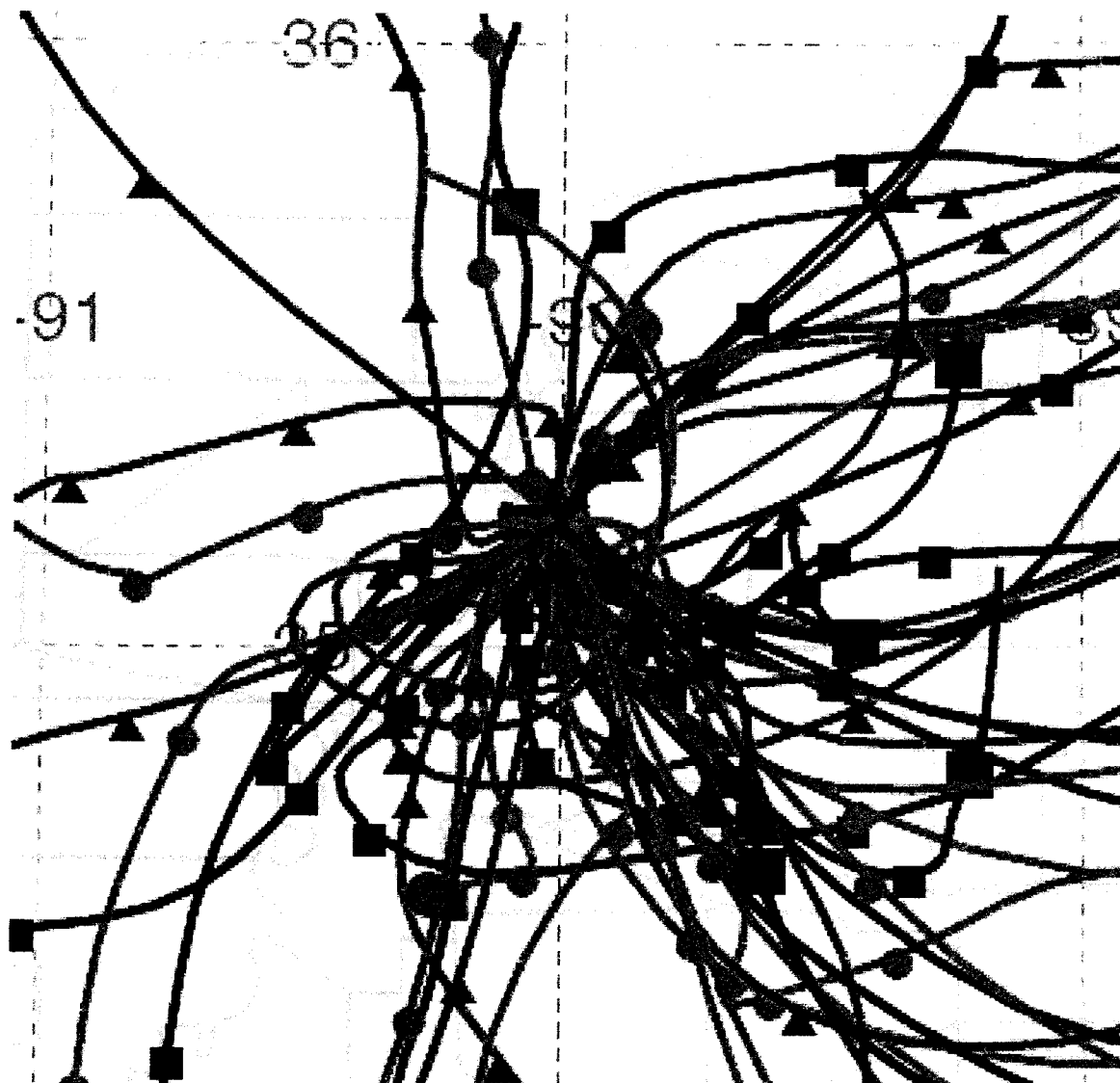


Figure 9 – Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County, Tennessee Frayser monitor that Cross DeSoto County, Mississippi

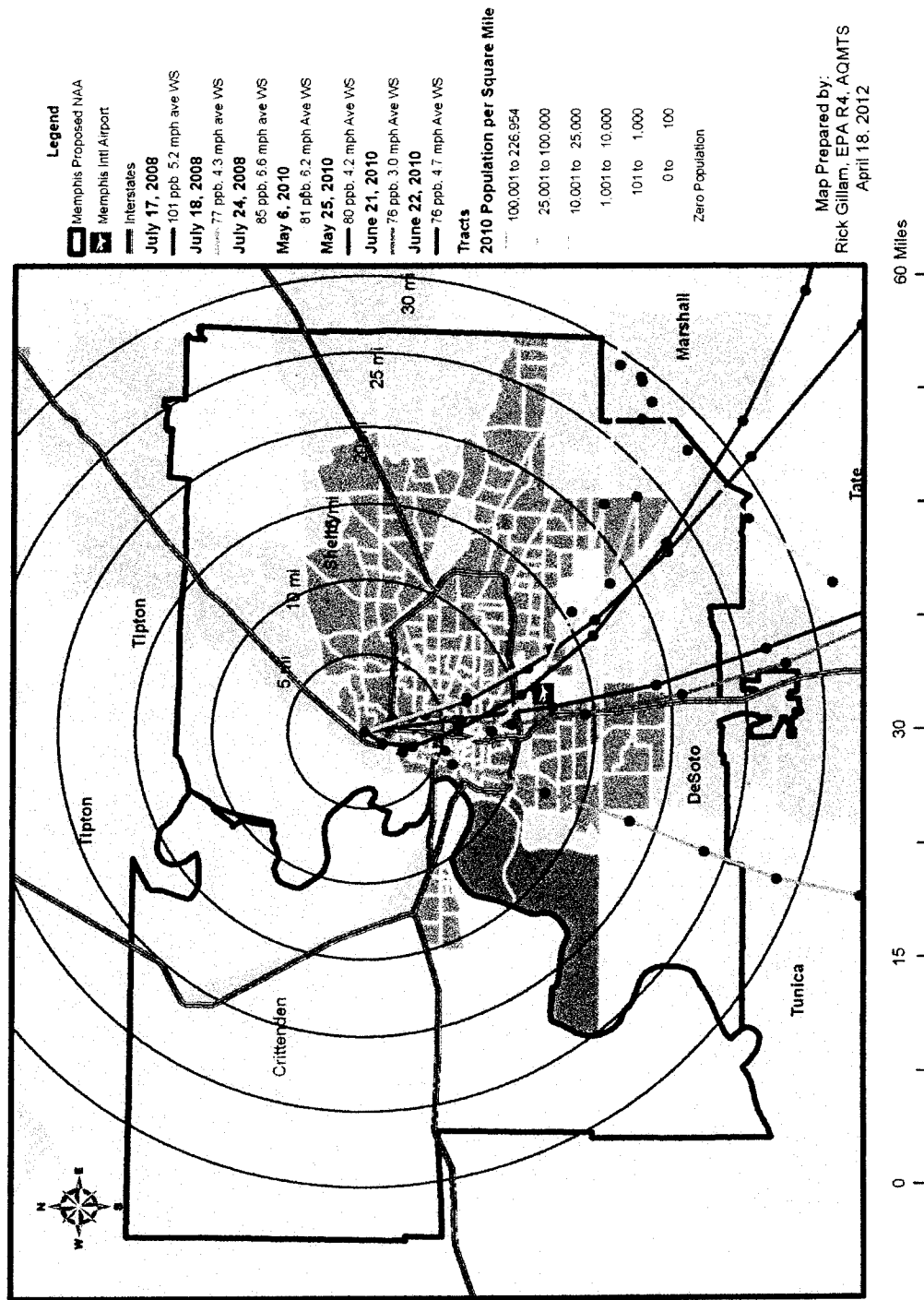
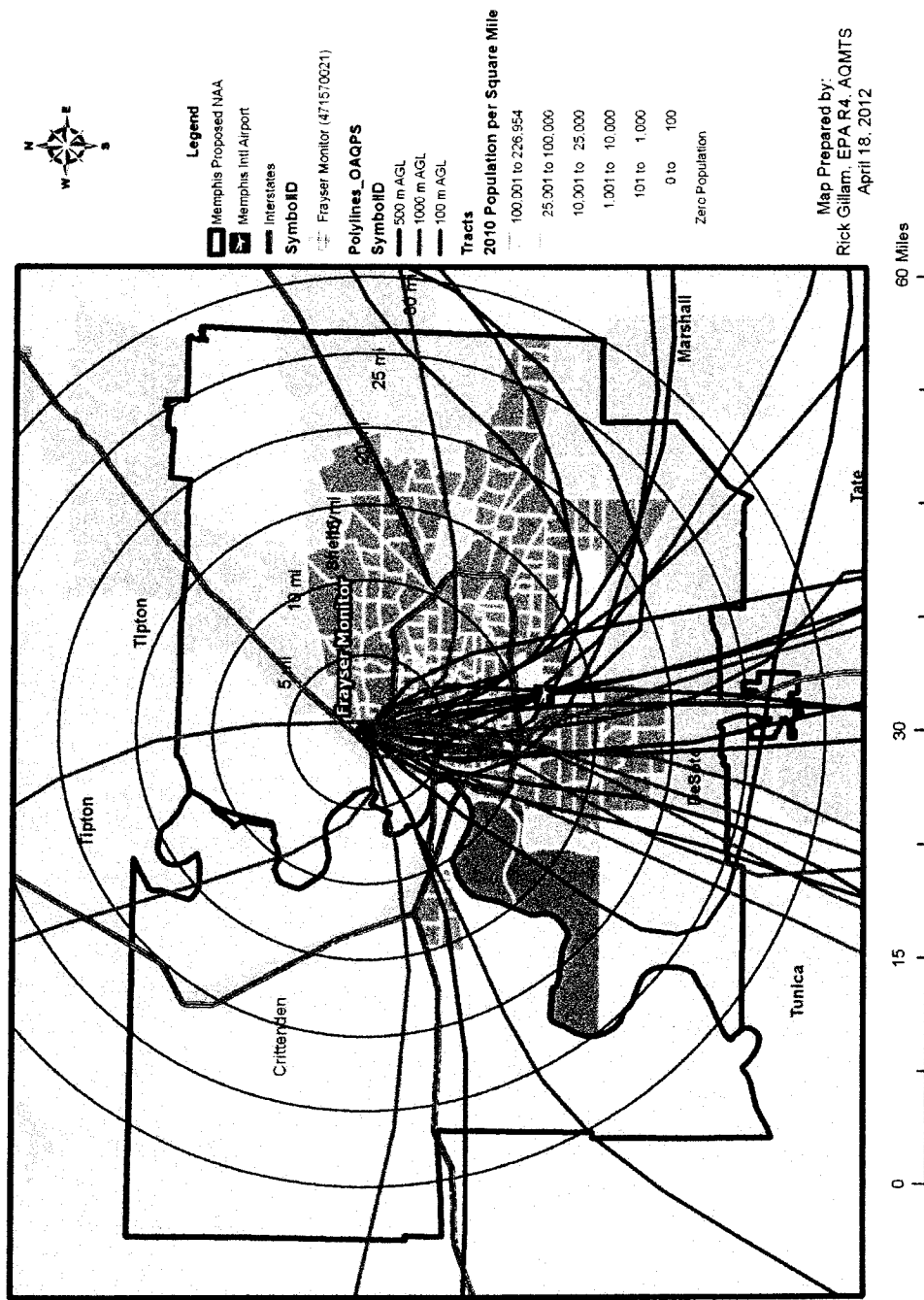


Figure 10 – Memphis, TN-MS-AR Area 2008-2010 Back Trajectories from the Shelby County, Tennessee Frayser monitor for Ozone NAAQS Exceedances



Chicago-Naperville, Illinois-Indiana-Wisconsin Area Designation for the 2008 Ozone National Ambient Air Quality Standards

The table below identifies the areas in Illinois, Indiana, and Wisconsin that EPA is designating as “nonattainment” for the 2008 8-hour ozone National Ambient Air Quality Standard (NAAQS)¹ as part of the Chicago-Naperville, Illinois-Indiana-Wisconsin (IL-IN-WI) multi-state nonattainment area. All of the areas in Table 1, below, are part of the Chicago-Naperville-Michigan City, IL-IN-WI Combined Statistical Area (CSA) (the Chicago CSA). In accordance with section 107(d) of the Clean Air Act (CAA), EPA must designate an area (county or part of a county) as “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 analysis supporting the boundaries for the individual state nonattainment areas is provided below.

Table 1. Chicago-Naperville, IL-IN-WI Nonattainment Area for the 2008 Ozone NAAQS

State	Counties in Chicago-Naperville-Michigan City IL-IN-WI CSA	State Recommended Nonattainment Counties	EPA’s Nonattainment Counties
Illinois	Cook DeKalb DuPage Grundy Kane Kankakee Kendall Lake McHenry Will	Cook DuPage Kane Lake McHenry Will Kendall – Partial Oswego Township Grundy – Partial Aux Sable Township Goose Lake Township	Cook DuPage Kane Lake McHenry Will Kendall – Partial Oswego Township Grundy – Partial Aux Sable Township Goose Lake Township
Indiana	Jasper Lake LaPorte Porter Newton	Lake	Lake Porter
Wisconsin	Kenosha	None	Kenosha – Partial Pleasant Prairie Township Somers Township

EPA is designating as “unclassifiable/attainment” for the 2008 ozone NAAQS: the remainder of Grundy and Kendall Counties in Illinois; Jasper, County in Indiana; and, the remainder of Kenosha County in Wisconsin.²

¹ The primary 8-hour ozone standard, set to protect human health, was revised on March 27, 2008 (73 FR 16436) from 0.08 parts per million (ppm) to 0.075 ppm. The secondary ozone standard, set to protect human welfare and the environment, was revised to equal the primary ozone standard.

² On April 30, 2012, EPA designated the following Chicago CSA counties as “unclassifiable/ attainment”: DeKalb and Kankakee Counties in Illinois and LaPorte and Newton Counties in Indiana.

The analysis below provides the basis for the Chicago-Naperville, IL-IN-WI area boundary. It relies on our analysis of whether and which monitors are recording violations of the 2008 ozone NAAQS, based on quality-assured ozone data for 2008-2010 for Indiana and Wisconsin and 2009-2011 for Illinois. EPA previously notified States that in order for the Agency to consider air quality data from 2011, the data must be certified and submitted to EPA prior to February 29, 2012. Our boundary decision also relies on an evaluation of whether nearby areas are contributing to monitored violations of the 2008 ozone NAAQS within the Chicago CSA. 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 designation recommendations to EPA.³

1. Air quality data, including the ozone design value⁴ calculated for each Federal Reference Method (FRM) or Federal Equivalent Method (FEM) monitor in the area;
2. Emissions and emissions-related data, including locations of sources, population, amounts of emissions and emission controls, and growth patterns;
3. Meteorology (weather/pollutant transport patterns);
4. Geography and topography (mountain ranges and other air basin boundaries affecting ozone levels and ozone precursor transport); and,
5. Jurisdictional boundaries, e.g. counties, air districts, existing ozone nonattainment areas, Indian country, Metropolitan Planning Organizations (MPOs) and their covered areas.

Ground-level ozone is generally not emitted directly into the air, but is created by chemical reactions involving Nitrogen Oxides (NOx) and Volatile Organic Compounds (VOC) in the presence of sunlight.⁵ Because NOx 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 CSA or Core Based Statistical Area (CBSA) associated with the violating monitor(s).⁶ All data and information used

³ 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-Related Data," which results in 5 main categories of factors used to evaluate potential nonattainment area boundaries.

⁴ Average of the annual fourth-highest daily maximum 8-hour ozone concentrations during a three-year period with complete data that the state has quality assured and certified. In evaluating the attainment status of an area, EPA generally considers complete ozone data for the most recent three-year period.

⁵ Peak ozone concentrations generally occur downwind of source areas on relatively sunny days with high temperatures and relatively low wind speeds.

⁶ 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

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 and above for the 1-hour ozone standard and EPA used the same approach in the designation process for the 1997 ozone NAAQS. Where a violating monitor is not located in a CSA or CBSA, EPA's September 4, 2008 guidance recommends using the boundary of the county containing the violating monitor as the starting point for considering the nonattainment area's boundary.

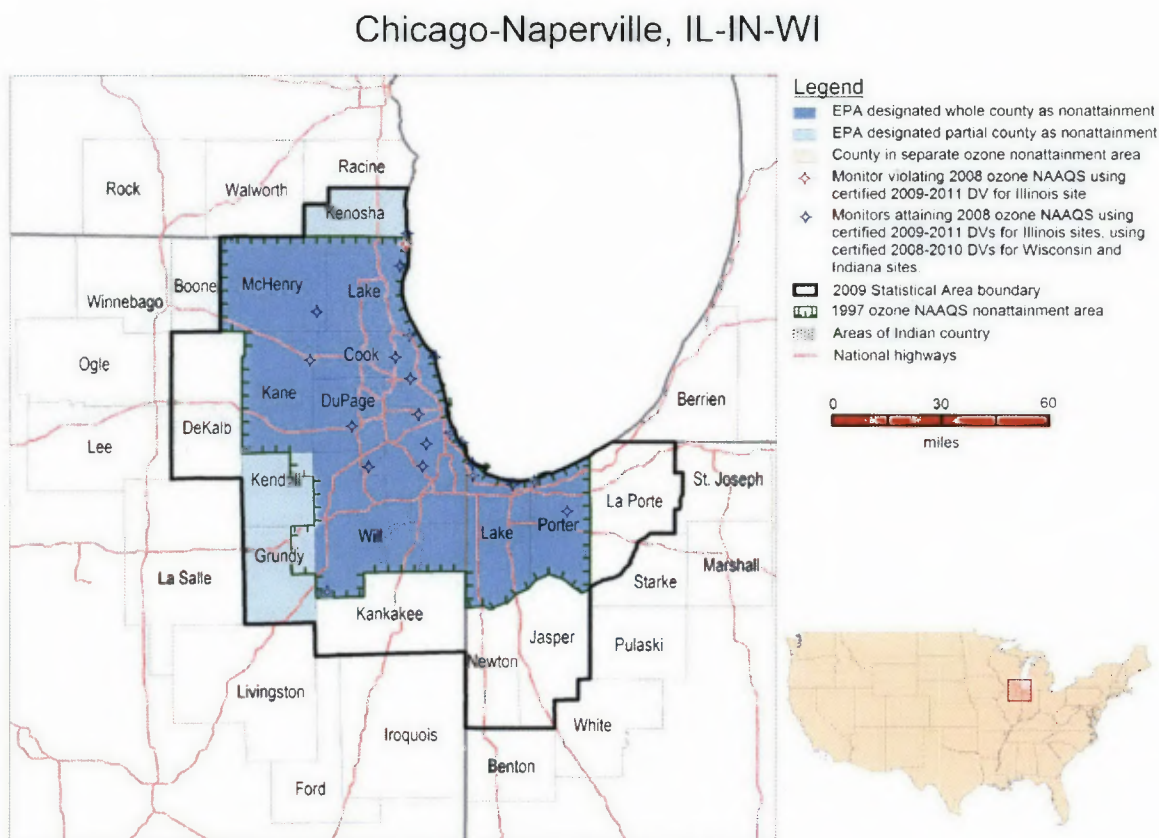
Technical Analysis for Chicago-Naperville, IL-IN-WI

Figure 1 is a map of the Chicago-Naperville-Michigan City, IL-IN-WI CSA, which includes the area we are designating as the Chicago-Naperville, IL-IN-WI ozone nonattainment area (indicated in blue/shaded colors in the map) for the 2008 ozone NAAQS. The map provides other relevant information, including the location and ozone design values⁷ of ozone air quality monitors (violating monitoring sites only), county and other jurisdictional boundaries, existing nonattainment area boundary for the 1997 8-hour ozone NAAQS, and major transportation arteries.

Management and Budget. EPA used the most recent update, based on 2008 population estimates, issued on December 1, 2009 (OMB Bulletin No. 10-02).

⁷ The average of the annual fourth-highest daily maximum 8-hour ozone concentrations for a three-year period, in this case 2009-2011 or 2008-2010.

Figure 1. Chicago-Naperville, IL-IN-WI Ozone Nonattainment Area within the Chicago-Naperville-Michigan City, IL-IN-WI CSA



For purposes of the 1997 ozone NAAQS, as noted in Figure 1, portions of the Chicago CSA were designated nonattainment. Lake and Porter Counties were subsequently redesignated to attainment (maintenance) of the 1997 ozone NAAQS. Illinois has requested redesignation of its portion of the Chicago-Gary-Lake County, IL-IN ozone nonattainment area to attainment of the 1997 ozone NAAQS. The Illinois portion of the nonattainment area for the 1997 ozone NAAQS includes the entire counties of Cook, DuPage, Kane, Lake, McHenry, and Will and portions of Grundy (Aux Sable and Goose Lake Townships) and Kendall (Oswego Township). Kenosha County, Wisconsin is currently designated nonattainment for the 1997 ozone NAAQS as part of the Milwaukee-Racine, WI ozone nonattainment area. The State of Wisconsin has requested the redesignation of the Milwaukee-Racine, WI area to attainment of the 1997 ozone NAAQS. Even though Kenosha County, Wisconsin was included as part of the Milwaukee-Racine, WI ozone nonattainment area for the 1997 ozone NAAQS, it is part of the Chicago CSA, and was part of Chicago-Gary-Lake County, IL-IN-WI Consolidated Metropolitan Statistical Area (CMSA) at the time it was designated as nonattainment as part of the Milwaukee-Racine, WI nonattainment area for the 1997 ozone NAAQS.

In March 2009, the Illinois Environmental Protection Agency (IEPA), representing the State of Illinois, recommended that Cook, DuPage, Kane, Lake, McHenry, Kendall (Oswego Township

only), Grundy (Aux Sable and Goose Lake Townships only), and Will Counties be designated as nonattainment for the 2008 ozone NAAQS based on ozone air quality data for 2006-2008. Illinois recommended that all other Illinois counties (and the remaining portions of Kendall and Grundy Counties) in the Chicago CSA be designated as attainment for the 2008 ozone NAAQS. On December 7, 2011, the IEPA submitted a certification of the State's ozone air quality data for 2011. The State did not provide a revised ozone nonattainment area recommendation in conjunction with the certification of the 2011 ozone data.

In March 2009, the State of Indiana recommended that Lake County be designated as nonattainment for the 2008 ozone NAAQS based on a monitored violation of this NAAQS in Lake County during 2006-2008, and that all other counties in the State be designated as attainment for the 2008 ozone NAAQS based on a lack of monitored violations of the 2008 ozone NAAQS in these counties during 2006-2008.

In March 2009, the State of Wisconsin recommended that Kenosha County be designated as attainment for the 2008 ozone NAAQS. At that time, a violation of the 2008 ozone NAAQS had been monitored in this county during 2006-2008.⁸

On December 9, 2011, EPA initiated the 120-day consultation process for area ozone designations by notifying the States of Illinois, Indiana, and Wisconsin that, based on air quality monitoring data from 2008-2010, EPA intended to designate all parts of this CSA as unclassifiable/attainment for the 2008 ozone NAAQS. EPA requested that, if the States wished to provide comments on EPA's intended designations for the Chicago CSA, they should do so by February 29, 2012. EPA also noted in the letter to each State that it had received Illinois' December 7, 2011, certification notice for Illinois' 2011 ozone data but that it had insufficient time to review and act on Illinois' 2011 ozone data prior to sending the December 9, 2011, letters. EPA committed to review and respond to Illinois' 2011 ozone data for the Chicago CSA as soon as possible and to notify the States of Illinois, Indiana, and Wisconsin as soon as possible if the 2011 data had implications for the designation of any areas in these States.

EPA reviewed Illinois' 2011 ozone data and determined that the 2008 ozone NAAQS had been violated at the Zion, Illinois monitoring site based on the 2009-2011 ozone design value for this monitoring site. EPA prepared a new Technical Support Document (TSD) for the Chicago area addressing the five factor analysis to determine the boundaries for the area EPA intended to designate as nonattainment in light of this violation and sent new/revised 120-day letters to the States of Illinois, Indiana, and Wisconsin on January 31, 2012, informing the States that EPA intended to designate the Chicago-Naperville, IL-IN-WI area as nonattainment for the 2008 ozone NAAQS. EPA provided that the States should submit any additional data or comments

⁸ Letter from Douglas P. Scott, Director, Illinois Environmental Protection Agency, to Bharat Mathur, Acting Regional Administrator, U.S. Environmental Protection Agency, Region 5, regarding Illinois' recommended ozone nonattainment boundaries (March 9, 2009); Letter from Thomas W. Easterly, Commissioner, Indiana Department of Environmental Management, to Bharat Mathur, Acting Regional Administrator, U.S. Environmental Protection Agency, Region 5, regarding: Recommendations Concerning Air Quality Designations for the 2008 Revised 8-Hour Ozone National Ambient Air Quality Standard (March 11, 2009); and, Letter from Governor Jim Doyle, State of Wisconsin, to Lisa Jackson, Administrator, U.S. Environmental Protection Agency, regarding: Designation of 8-Hour Ozone Nonattainment Areas in Wisconsin (March 12, 2009).

regarding the intended designation no later than April 20, 2012. The letters and supporting TSD informed the States that EPA intended to include the following areas as part of the Chicago-Naperville, IL-IN-WI nonattainment area: Cook, DuPage, Kane, Lake, McHenry, Kendall (Oswego Township only), Grundy (Aux Sable and Goose Lake Townships only), and Will Counties in Illinois (which is consistent with the counties and partial counties recommended as nonattainment by Illinois in its 2009 recommendation); Lake, Porter, and Jasper Counties in Indiana; and, Kenosha County in Wisconsin. Table 2 shows the state-recommended and EPA-intended nonattainment area for the 2008 ozone NAAQS.

Table 2. State's Recommended and EPA's Intended Nonattainment Counties for the Chicago-Naperville, IL-IN-WI Area in the January 31, 2012 Letters

State	State Recommended Nonattainment Counties	EPA's Intended Nonattainment Counties†
Illinois	Cook DuPage Kane Lake McHenry Will Kendall – Partial Oswego Township Grundy – Partial Aux Sable Township Goose Lake Township	Cook DuPage Kane Lake McHenry Will Kendall – Partial Oswego Township Grundy – Partial Aux Sable Township Goose Lake Township
Indiana	Lake	Lake Porter Jasper
Wisconsin	None	Kenosha

† Nonattainment for both primary and secondary 2008 8-hour ozone standards.

EPA used the Chicago CSA area as the starting point for its evaluation of which areas violate and/or contribute to the violation of the 2008 ozone NAAQS at the Zion monitor. For purposes of this final technical support document, we refined our evaluation based on additional technical information provided by the states in response to the January 2012 letters. We considered the recommendations from Illinois, Indiana, and Wisconsin; the information relied on in developing our intended designations in January 2012; and, additional technical information provided by Indiana and Wisconsin in the last several months, to evaluate the five factors as described below. Based on this evaluation, EPA is designating the area defined in Table 1 as “nonattainment” for the 2008 ozone NAAQS as the Chicago-Naperville, IL-IN-WI nonattainment area.

Factor Assessment

Factor 1: Air Quality Data

For this factor, we considered 8-hour ozone design values (in ppm) for air quality monitors in counties in the Chicago CSA. We used the most recent three-years of state-certified air quality

data available as of February 29, 2012; thus, we considered ozone data for the 2008-2010 period for Indiana and Wisconsin and for the 2009-2011 period for Illinois.

A monitor's ozone design value is the metric or statistic that indicates whether that monitor attained the ozone air quality standard. The 2008 ozone NAAQS are met at a monitor when the annual fourth-highest daily maximum 8-hour ozone concentrations, averaged over three years is 0.075 ppm or less. A design value is valid only if minimum data completeness requirements 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 design value for the county, or area, is determined by the monitor with the highest individual design value.

Note: Monitors that are eligible for providing design value data generally include State and Local Air Monitoring Stations (SLAMS) that are sited in accordance with 40 CFR part 58 Appendix D (Section 4.10) and operating with a FRM or FEM monitor that meets the requirements of 40 CFR part 58 Appendix A. All data from a Special Purpose Monitor (SPM) using an FRM or FEM monitor which has operated for more than 24 months is eligible for comparison to the NAAQS unless the monitoring agency demonstrates that the data came from a particular period during which the requirements of 40 CFR part 58 Appendix A (quality assurance requirements) or Appendix E (probe and monitoring path siting criteria) were not met.

The 2008-2010 (for Indiana and Wisconsin) and 2009-2011 (for Illinois) ozone design values for monitors and counties in the Chicago-Naperville-Michigan City, IL-IN-WI CSA are given in Table 3.

Table 3. Ozone Air Quality Data for the Chicago-Naperville-Michigan City, IL-IN-WI CSA

State/County	Site Number	2008-2010 8-Hour Ozone Design Value (ppm)	2009-2011 8-Hour Ozone Design Value (ppm)
Illinois:			
Cook	170317002	0.063	0.069
Cook	170310032	0.068	0.072
Cook	170310064	0.064	0.068
Cook	170310076	0.067	0.069
Cook	170314002	0.065	0.069
Cook	170311601	0.070	0.069
Cook	170314007	0.059	0.062
Cook	170314201	0.068	0.072
Cook	170310001	0.069	0.071
Cook	170311003	0.066	0.067
DuPage	170436001	0.060	0.063
Kane	170890005	0.066	0.069
Lake	170971007	0.074	0.076†
McHenry	171110001	0.065	0.067
Will	171971011	0.062	0.063
Indiana:			
Lake	180892008	0.067	NA
Lake	180890030	0.064	NA

Lake	180890022	0.061	NA
Porter	181270026	0.062	NA
Porter	181270024	0.067	NA
La Porte	180910010	0.065	NA
La Porte	180910005	0.065	NA
Wisconsin:			
Kenosha	550590019	0.074	NA

† Monitored violation of the 2008 8-hour ozone NAAQS.

Lake County (the Zion monitor) in Illinois shows a violation of the 2008 8-hour ozone NAAQS. This supports the inclusion of Lake County, Illinois in the intended ozone 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 based on the weight-of-evidence of the five factors to determine whether it may have contributed to the nearby violation.

On May 1, 2012, the State of Wisconsin has submitted certified 2011 ozone data. These data, show a violation of the 2008 ozone NAAQS at the Chiwaukee Prairie monitoring site, with a 2009-2011 ozone design value of 0.077 ppm. Because Wisconsin did not certify the 2011 ozone data by February 29, 2012, EPA did not have sufficient time to consider this information for purposes of designating Kenosha County nonattainment (and considering an appropriate boundary) as a violating area. However, we have taken note of this information in considering whether to include all or a portion of Kenosha County, Wisconsin in the Chicago-Naperville, IL-IN-WI ozone nonattainment area for the 2008 ozone NAAQS.

Factor 2: Emissions and Emissions-Related Data

Emissions Data

EPA evaluated county-level emissions data for NO_x and VOC derived from the 2008 National Emissions Inventory (NEI), version 1.5. This is the most recently available NEI emissions data. See <http://www.epa.gov/ttn/chieff/net/2008inventory.html>. Significant VOC and/NO_x emission levels in a nearby area (in a county within the CSA) indicate the potential for the area to contribute to observed ozone standard violations.

Table 4 shows the 2008 emissions of VOC and NO_x (tons per year (tpy)) and emissions percentages for all counties in the Chicago CSA. This table also indicates which of the counties were recommended by the states to be nonattainment for the 2008 ozone NAAQS.

Table 4. Total 2008 VOC and NO_x Emissions (tons/year) in the Chicago-Naperville-Michigan City, IL-IN-WI CSA

State/County	State Recommended Nonattainment?	VOC Emissions - tpy (percent of CSA total)	NO _x Emissions - tpy (percent of CSA total)
Illinois:			
Cook	Yes	129,466 (45.6)	143,372 (36.4)
DeKalb	No	4,395 (1.5)	4,637 (1.2)
DuPage	Yes	30,508 (10.7)	30,412 (7.7)

Grundy	Yes (partial)	3,291 (1.2)	4,577 (1.2)
Kane	Yes	13,893 (4.9)	15,161 (3.9)
Kankakee	No	5,179 (1.8)	6,941 (1.8)
Kendall	Yes (partial)	3,970 (1.4)	4,642 (1.2)
Lake	Yes	19,978 (7.0)	24,549 (6.2)
McHenry	Yes	9,012 (3.2)	9,138 (2.3)
Will	Yes	19,255 (6.8)	39,878 (10.1)
Illinois Totals		235,347 (82.9)	283,307 (72.0)
Indiana:			
Jasper	No	2,845 (1.0)	19,788 ⁹ (5.0)
Lake	Yes	21,266 (7.5)	46,808 (11.9)
La Porte	No	5,555 (2.0)	8,875 (2.3)
Newton	No	1,913 (0.6)	841 (0.2)
Porter	No	8,100 (2.9)	27,055 (6.9)
Indiana Totals		39,679 (14.0)	103,367 (26.3)
Wisconsin:			
Kenosha	No	5,370 (1.9)	6,788 (1.7)
Total CSA Emissions		283,996	393,462

Emissions Observations by State

Illinois:

From the Illinois emissions in Table 4, it can be seen that comparatively high VOC and NO_x emissions originate in the following counties: Cook, DuPage, Kane, Lake, McHenry, and Will. Emissions from these counties, in 2008, account for 94.4 percent of the total Illinois VOC emissions and 92.7 percent of the total Illinois NO_x emissions in the Illinois portion of the Chicago CSA. These same counties account for 78.3 percent of the total VOC emissions and 66.7 percent of the total NO_x emissions for the entire Chicago CSA.

The VOC and NO_x emissions for DeKalb, Grundy, Kankakee, and Kendall Counties are small compared to those from the higher emitting counties in the Chicago CSA.

Indiana:

From the Indiana emissions data in Table 4, it can be seen that comparatively high VOC and NO_x emissions originate in Lake and Porter Counties. These counties account for 74.0 percent of the total VOC emissions and 71.5 percent of the total NO_x emissions for the Indiana portion of the Chicago CSA. These same counties account for 10.3 percent of the total VOC emissions and 18.8 percent of the total NO_x emissions for the entire Chicago CSA.

VOC and NO_x emissions in Newton County represent only 0.6 and 0.2 percent of emissions totals for the Chicago CSA, respectively. VOC and NO_x emissions in LaPorte County represent

⁹ In Indiana's April 13, 2012 response from Commissioner Easterly, updated emissions data were provided for Jasper County showing 2011 NO_x emissions levels of 9,791 tons.

2.0 and 2.3 percent of emissions totals for the Chicago CSA, respectively.

Jasper County appears to be a small source area for VOC emissions. The data in Table 4 show emission for all counties in the CSA in 2008 including the 2008 NOx emission levels for Jasper County. However, in Indiana's April 13, 2012 response from Commissioner Easterly, updated emissions data were provided for Jasper County showing 2011 NOx emissions levels of 9,791 tons. The NOx emissions in Jasper County are dominated by emissions from the Northern Indiana Public Service Company-R.M. Schahfer Generating Station (NIPSCO-Schahfer) located in the northern end of Jasper County, near the border of Jasper County and Porter County. Indiana presented information that NIPSCO-Schahfer has substantially controlled its NOx emissions through the implementation of Selective Catalytic Reduction (SCR) on its largest power unit and implementation of low-NOx burner with over-fired air on the remaining combustion units. The installation of these NOx emission controls resulted in a reduction of NIPSCO-Schahfer NOx emissions from 17,324 tons in 2008 to 7,327 tons in 2011.

Wisconsin:

From the Wisconsin emissions in Table 4, it can be seen that comparatively low VOC and NOx emissions originate in Kenosha County. Kenosha County accounts for 1.9 percent of the total VOC emissions and 1.7 percent of the total NOx emissions for the entire Chicago CSA. Pleasant Prairie and Somers Townships contain 91 percent of the County's NOx emissions and 86 percent of the County's VOC emissions.

Population, Population Density, and Degree of Urbanization

EPA evaluated the county-specific populations, population trends, and vehicle use characteristics for the Chicago CSA 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 NOx and VOC emissions that may contribute to violating ozone monitors. Rapid population growth in a county on the urban perimeter signifies increasing integration with the urban core area, and indicates that it may be appropriate to include this county in the ozone nonattainment area, particularly if this county already has moderate or higher VOC and/or NOx emissions. Table 5 shows the 2010 population, population density, and population growth information for each county in the Chicago CSA.

Table 5. Population and Population Growth in the Chicago-Naperville-Michigan City, IL-IN-WI CSA

State/County	State Recommended Nonattainment?	2010 Population	2010 Population Density (1,000 per square mile)	Change in Population (2000-2010)	Population Percent Change (2000-2010)
Illinois:					
Cook	Yes	5,194,675	5.43	-182,417	-3
DeKalb	No	105,160	0.17	15,839	18
DuPage	Yes	916,924	2.73	10,269	1
Grundy	Yes (partial)	50,063	0.12	12,388	33
Kane	Yes	515,269	0.98	107,749	26
Kankakee	No	113,449	0.17	9,573	9
Kendall	Yes (partial)	114,736	0.36	59,529	108
Lake	Yes	703,462	1.50	55,288	9
McHenry	Yes	308,760	0.51	46,890	18
Will	Yes	677,560	0.80	169,531	33
Indiana:					
Jasper	No	33,478	0.06	3,296	11
Lake	Yes	496,005	0.99	11,516	2
La Porte	No	111,467	0.18	1,309	1
Newton	No	14,244	0.04	-298	-2
Porter	No	164,343	0.39	17,188	12
Wisconsin:					
Kenosha	No	166,426	0.60	16,352	11

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_GCTPL2.STO5&prodType=table) and U.S. Census Bureau GIS files for the county boundaries.

Population Observations By State

Illinois:

For Illinois, the population data show that Cook, DuPage, Kane, Lake, McHenry, and Will Counties have comparatively large populations and population densities and, therefore, are more urbanized than the other Illinois counties in this CSA. This indicates that the population-related VOC and NOx emissions in these counties are relatively high. In addition, the population change levels for 2000-2010 in Kane, Kendall, Lake, McHenry, and Will Counties significantly exceed those of other counties in the CSA, suggesting that these “fast growing” counties are becoming increasingly urbanized and integrated with the urban core of the Chicago CSA. This further indicates that the population-related emission contributions from these counties are increasing compared to those from other counties in the Chicago CSA.

The population densities of DeKalb, Grundy, Kendall, and Kankakee Counties are relatively small compared to those of other counties in the Chicago CSA. The portions of Grundy and

Kendall Counties we are including in the ozone nonattainment area are the greater populated portions of these counties.

Indiana:

In the Indiana portion of the Chicago CSA, the population and population density of Lake and County is comparable to Kane County in Illinois. The population density of Porter County in Indiana is similar to that of Kendall County in Illinois, but the population of Porter County is approximately 43 percent greater. The population in La Porte County is comparable to DeKalb and Kankakee Counties in Illinois.

The population and population densities in Jasper and Newton Counties are the lowest of any counties within the CSA.

Wisconsin:

Kenosha County has population levels very similar to those in Porter County, which is lower than the most highly populated counties in the Chicago CSA. However, the population density of Kenosha County is relatively high, showing that this county is significantly urbanized indicating increased integration with the core of the CSA. Pleasant Prairie and Somers Townships are the most densely populated portion of Kenosha County with 77 percent of the County's population.

Traffic and Commuting Patterns

EPA evaluated the total VMT for each county in the Chicago CSA. In combination with the population/population density data and the location of main transportation arteries (see the above area map), this information helps identify the probable location of non-point source emissions. A county with high VMT is generally an integral part of the urban area and indicates the presence of relatively high motor vehicle (on-road mobile source) emissions that may significantly contribute to ozone formation and transport in the urban area. This implies that this county should be included in the ozone nonattainment area, particularly if the VOC and/or NO_x emissions in this county are a significant portion of the total emissions in the area (in the CSA/CBSA).

Table 6 shows the traffic levels, total 2008 VMT, in each county in the Chicago CSA.

Table 6. Traffic Levels in the Chicago-Naperville-Michigan City, IL-IN-WI CSA

State/County	State Recommended Nonattainment?	2008 VMT (million miles)*
Illinois:		
Cook	Yes	32,755
DeKalb	No	883
DuPage	Yes	8,443
Grundy	Yes (partial)	678
Kane	Yes	3,628

Kankakee	No	945
Kendall	Yes (partial)	769
Lake	Yes	5,638
McHenry	Yes	2,169
Will	Yes	5,713
Indiana:		
Jasper	No	732
Lake	Yes	4,915
La Porte	No	936
Newton	No	219
Porter	No	1,640
Wisconsin:		
Kenosha	No	1,354

* Mobile source VMT are those input into the NEI version 1.6 used to compute the mobile source portion of the NEI emissions summarized above in Table 4.

VMT Observations By State

Illinois:

For Illinois, the VMT data show that VMT levels in Cook County are significantly higher than those for other counties in the Chicago CSA. The VMT levels for DuPage, Kane, Lake, McHenry, and Will Counties are comparatively higher than those of the other counties in the Chicago CSA and, cumulatively, are a significant portion of the total VMT for the Chicago CSA.

Indiana:

For Indiana, the VMT data show that VMT levels in Lake and Porter Counties are comparatively higher than those of the other counties in the Chicago CSA (with the exception of Cook County), and, cumulatively, are a significant portion of the total VMT for the Chicago CSA.

Wisconsin:

The VMT level in Kenosha County is similar to the VMT level in Porter County, Indiana. This indicates that the ozone impact of mobile source emissions in Kenosha County should be similar to that of Porter County.

Factor 3: Meteorology (Weather/Transport Patterns)

EPA evaluated available meteorological data to help determine how meteorological conditions, particularly transport conditions, affect the fate and transport of ozone and ozone precursors contributing to ozone formation in the Chicago CSA. The data available for part of this evaluation were presented by the States of Illinois and Wisconsin, as part of their March 2009 ozone designation recommendation submittals and by Indiana in its April 13, 2012 response to EPA's 120 day letter.

In Illinois' March 9, 2009 ozone designation recommendation submittal, the IEPA notes that the predominant wind direction across the State is from south/southwest, with an average wind speed

of approximately 11 miles per hour. The State notes that ozone monitors in the Chicago area that exceed the 2008 ozone NAAQS, based on 2006-2008 data, show strong evidence of regional (i.e., longer-range) contributions to high ozone levels. The State also presents a pollution wind rose (direction percent frequency) for days in 2006-2008 with peak 8-hour ozone concentrations exceeding 75 ppb, with wind data collected at the Alsip monitoring site (Cook County). These data show that, on high ozone days, the wind blew from the south through southwest. Some high ozone day winds were also recorded with winds from east-northeast through south-southeast and west-southwest through west. Virtually no high ozone day wind directions were recorded for wind directions for west-northwest through northeast.

In Wisconsin's March 12, 2009 ozone designation recommendation submittal technical support document, the Wisconsin Department of Natural Resources (WDNR) summarized the wind directions for days (2006-2008) when 1-hour ozone concentrations at the Chiwaukee Prairie monitoring site in Kenosha County exceeded 75 ppb. This analysis indicated that, on 57.9 percent of these high ozone days, winds were from the southeast through south. On 15.8 percent of the high ozone days, winds were from the southwest. Collectively, these wind directions point to the Northeast Illinois and Northwest Indiana areas as likely source areas for VOC and NO_x emissions that have contributed to the high ozone concentrations at the Chiwaukee Prairie monitoring site.

Wisconsin's analysis focused on the Chiwaukee Prairie monitoring site, which is not violating the standard based on 2008-2010 data but was violating the standard at the time that the State made its initial recommendation in March 2009. However, we believe this analysis is informative for purposes of evaluating the violation at the Zion monitor for the reasons presented below.

Figure 2 considers the relationship between daily peak 1-hour ozone concentrations for the Chiwaukee Prairie and Zion monitoring sites for the 2000-2011 period.

Figure 2. Correlation Between Daily Peak 1-Hour Ozone Concentrations at Chiwaukee Prairie (Wisconsin) and Zion (Illinois) Monitoring Sites (2000-2011)

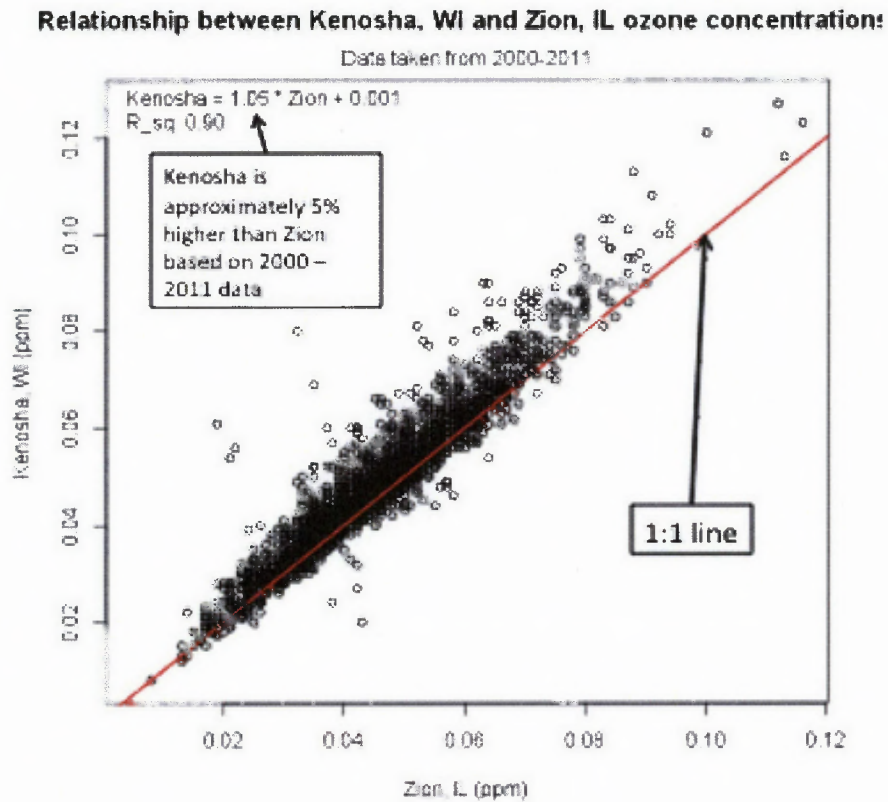
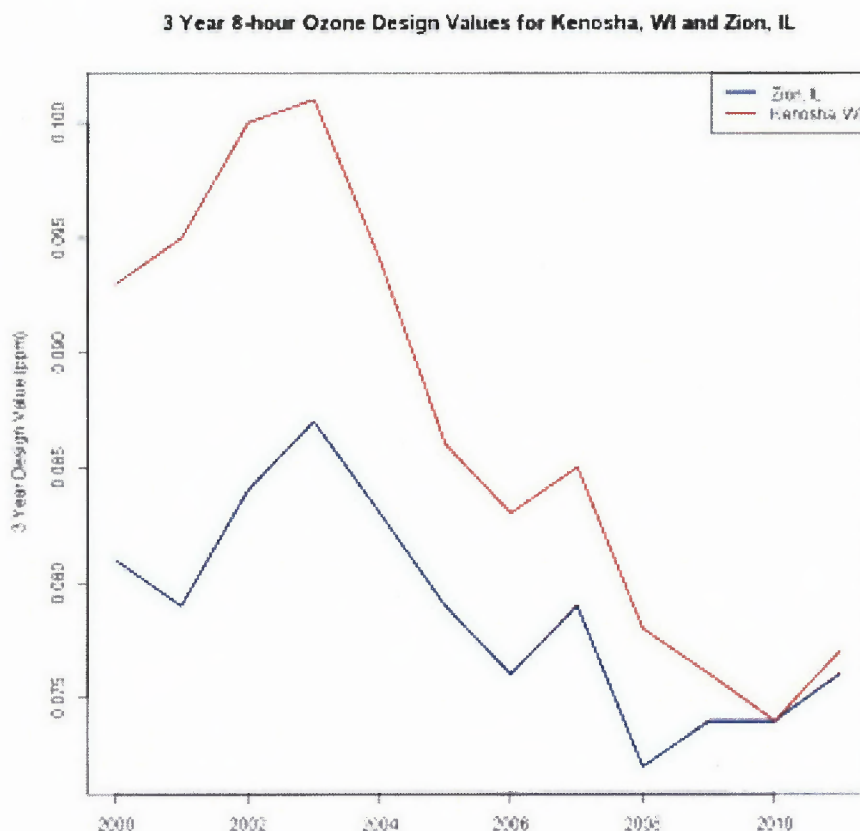


Figure 3 shows the comparison between 3-year ozone design values for the Chiwaukee Prairie and Zion monitoring sites for the 2000-2011 period.

Figure 3. Three-Year 8-Hour Ozone Design Values for Chiwaukee Prairie (Wisconsin) and Zion (Illinois) Monitoring Sites (2000-2011)



The Chiwaukee Prairie monitoring site is located approximately six miles north of the Zion, Illinois monitoring site. The data displayed in Figures 2 and 3 demonstrate the strong correlation between the peak ozone concentrations at the Chiwaukee Prairie and Zion monitoring sites.

Reacting to the January 31, 2011, 120-day letter to Governor Mitchell E. Daniels, Indiana Department of Environmental Management (IDEM) conducted several analyses that they suggest demonstrate that VOC and NO_x emissions from Northwest Indiana do not contribute to the high ozone concentrations monitored at the Zion, Illinois monitoring site. These analyses provide information on air pollutant transport and source apportionment of ozone contributions on high ozone days. IDEM conducted wind direction analyses for 2009-2011 summer ozone seasons in Northwest Indiana and 2009-2011 high ozone days at Zion, Illinois and pollutant trajectory analyses using National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory-Hybrid Single Particle Lagrangian Integrated Trajectory Model (HYSPLIT) for air transport trajectories originating in Northwest Indiana and air transport trajectories ending at Zion, Illinois (documented in Appendix F of IDEM's April 13, 2012, response to EPA's January 31, 2012, 120-day letter).

Using wind direction data for a Gary, Indiana meteorological site and from a NIPSCO-Schahfer meteorological tower, IDEM determined that summertime winds during 2009-2011 were primarily from south through southwest and from northeast through east. IDEM also considered wind-rose data for the Zion, Illinois ozone monitoring site. The Zion, Illinois wind-rose data provided by Indiana show that high ozone concentrations at this monitoring site occur on days with winds from the southeast and the southwest.

To apply HYSPLIT, IDEM input forty kilometer gridded meteorological data into HYSPLIT to determine air pollutant trajectory directions and heights. Background trajectories were run from the Chicago area and show where the air came from two days prior to an 8-hour ozone exceedance day at the Zion, Illinois monitoring site. Forward trajectories were created from the nearest surface weather stations (Valparaiso ASOS and Gary ASOS) to Jasper County. These HYSPLIT trajectories show the way the air travels two days before arriving in the Chicago area and way the air travels after picking up emissions in the Northwest Indiana area. The HYSPLIT upwind results show a complex pollutant transport pattern, with pollutants arriving in the Chicago area from a wide range of upwind areas covering much of the Midwest and states east of Illinois and Indiana. The downwind results, in the view of IDEM, show emissions from Northwest Indiana transporting over Lake Michigan and northeast into Michigan. IDEM argues that these results show that emissions contributions from Lake, Porter, and Jasper Counties to high ozone levels at the Zion, Illinois monitoring site are small as compared to emissions contributions from the rest of the Lake Michigan airshed. IDEM also argues that these results, along with wind-roses generated for Northwest Indiana demonstrate that Northwest Indiana emissions transport north and northeast away from the Zion, Illinois monitoring site on high ozone days at this monitoring site.

EPA's review of Indiana's summarized wind-rose and HYSPLIT results shows that Indiana has not demonstrated that Northwest Indiana emissions did not contribute to the Zion, Illinois ozone standard exceedances in 2009-2011. The wind-roses for the Zion, Illinois monitoring site show a definite wind component from the southeast on high ozone days. This implies that Northwest Indiana emissions may have contributed to the high ozone levels at Zion, Illinois. Forward HYSPLIT trajectories for certain high-ozone days at Zion, Illinois show the potential for pollutant transport from Northwest Indiana to the Zion, Illinois area. Such transport was modeled on the following high-ozone days: June 23, 2009; June 24, 2009; May 30, 2010; July 3, 2010; September 1, 2011; and June 30, 2011. Clearly, these data show that Northwest Indiana emissions may have contributed to high ozone levels on a number of high ozone days. In addition, EPA notes that Indiana ran HYSPLIT trajectories for a limited set of starting (forward trajectory) and ending (backward trajectory) hours. This has produced a relatively small number of trajectories. EPA believes that Indiana's HYSPLIT analysis has produced an insufficient number of trajectories to definitively demonstrate that Indiana's emissions have not contributed to the high ozone concentrations at Zion, Illinois for all of the periods of high ozone, which covers many hours over 12 plus high ozone days.

To demonstrate that Northwest Indiana emissions are small contributors to high ozone levels at Zion, Illinois, IDEM also considered ozone source apportionment modeling conducted by Lake Michigan Air Directors Consortium (LADCO) for 2007 high ozone periods at Zion, Illinois. LADCO modeled ozone concentrations for the Zion, Illinois monitoring site using meteorology

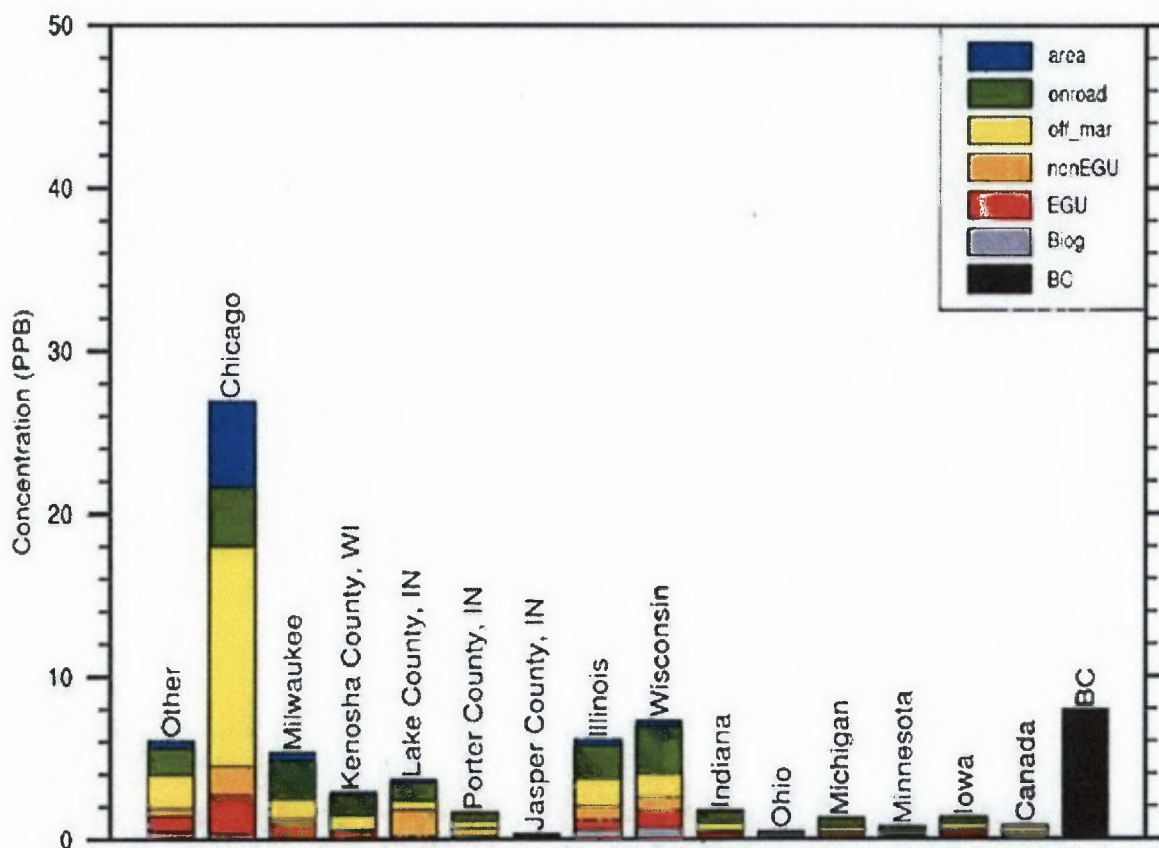
for 2007 and the CAMx ozone modeling system. Days modeled with peak 8-hour ozone concentrations exceeding 0.075 ppm were selected to conduct ozone source apportionment modeling using Ozone Source Apportionment Techniques (OSAT). The output of OSAT produced a graphed source distribution chart. This chart has been included in IDEM's April 13, 2012, response letter and is reproduced here. IDEM states in its comment letter that LADCO's OSAT modeling results show that Lake County VOC and NOx emissions only contributed 0.004 ppm (4 ppb) ozone levels to the Zion, Illinois ozone concentrations, that Porter County VOC and NOx emissions only contribute 0.002 ppm (2 ppb) to the Zion, Illinois ozone concentrations, and that Jasper County VOC and NOx emissions contributed less than 0.0005 ppm (0.5 ppb) ozone levels to the Zion, Illinois ozone concentrations. IDEM considers these contributed ozone levels to be small, proving that Northwest Indiana is an insignificant source area for high ozone concentrations at the Zion, Illinois monitoring site.

EPA disagrees with IDEM's conclusions. In keeping with EPA's ozone contribution levels used to select states that should be covered in regional emission control programs, 2 ppb to 4 ppb ozone concentration contributions are considered to be significant ozone contributions. We believe that the LADCO OSAT modeling results discussed by IDEM support that emissions in Lake and Porter Counties are significant contributors to the high ozone levels monitored at Zion, Illinois.

The LADCO OSAT modeling results also show that Kenosha County VOC and NOx emissions contributed approximately 0.003 ppm (3 ppb) ozone levels to the Zion, Illinois peak ozone concentrations, a contribution level that we believe is significant.

Figure 4: Ozone Contributions at the Zion, Illinois Ozone Monitor

Contribution to Ozone (Monid: 1709710071)



OSAT Modeling Results - Regional Analysis

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 air-shed, and, therefore, the distribution of ozone over the area.

The Chicago CSA borders Lake Michigan. The "lake effect" (the inshore flow of polluted air over Lake Michigan in afternoon hours under the effect of a land-lake breeze due to temperature differences between the Lake surface and the onshore surface) can significantly complicate the analysis of ozone formation and transport in this area. This effect can significantly affect the distribution of high ozone concentrations in the area, making it difficult to determine the source of the monitored high ozone concentrations. LADCO, however, has modeled meteorology, emissions, and ozone formation and transport in the Lake Michigan area over multiple day high ozone events. These ozone modeling analyses have led to LADCO's ozone modeling analysis of ozone contribution levels for specific areas, specific monitoring sites, and specific source categories, as discussed above.

Factor 5: Jurisdictional Boundaries

Once we identified the general area that we anticipated we would recommend as nonattainment for the 2008 8-hour ozone NAAQS, we then considered existing jurisdictional boundaries for purposes of providing a clearly defined legal boundary and to help identify the area appropriate for carrying out the air quality planning and enforcement functions for an ozone nonattainment area. Examples of jurisdictional boundaries include existing or prior nonattainment boundaries, air district boundaries, township boundaries, areas covered by metropolitan planning organizations, state lines, and Reservation boundaries. Where existing jurisdictional boundaries are not adequate or appropriate to describe the nonattainment area, other clearly defined and permanent landmarks or geographic coordinates may be considered.

The Chicago CSA has previously established ozone nonattainment boundaries associated with both the 1-hour and 8-hour ozone NAAQS. The Chicago nonattainment boundary for the 1-hour ozone NAAQS included Cook, DuPage, Kane, Lake, McHenry, and Will Counties and Lake and Porter Counties in Indiana in their entirety and partial counties for Grundy (Aux Sable and Goose Lake Townships) and Kendall (Oswego Township) Counties in Illinois. Kenosha County, Wisconsin was part of the Milwaukee 1-hour ozone nonattainment area. Both of these areas were designated as nonattainment for the both the 1-hour and 1997 8-hour ozone NAAQS.

Although Kenosha County was previously included with the Milwaukee nonattainment area, it is part of the Chicago CSA and was also part of the Chicago-Gary-Lake County, IL-IN-WI Consolidated Metropolitan Statistical Area, a metropolitan area definition used by the Office of Management and Budget at the time of the 1-hour ozone designations. The Chiwaukee Prairie monitoring site historically has been the high downwind monitoring site for the Chicago region and its design value was used to establish the classification for both the Chicago-Gary-Lake County, IL-IN and the Milwaukee-Racine, WI ozone nonattainment areas under the 1997 8-hour ozone standard and the 1-hour ozone standard. In addition, monitoring data from this monitoring site were historically used by the States of Illinois, Indiana, and Wisconsin in conjunction with modeled ozone concentrations to demonstrate that emission reductions in the Chicago area were sufficient to attain the 1-hour ozone standard and the 1997 8-hour ozone standard.

Illinois has recommended that the same full and partial counties in Illinois be included as part of the Chicago nonattainment area for the 2008 8-hour ozone NAAQS. Indiana has recommended that only Lake County be designated as nonattainment for the 2008 ozone NAAQS. Finally, Wisconsin has recommended that Kenosha County be designated as attainment for the 2008 8-hour ozone NAAQS.

Conclusion

Illinois:

Based on the assessment of factors described above, EPA intends to include the following Illinois counties and partial counties in the Chicago-Naperville, IL-IN-WI ozone nonattainment area: Cook, DuPage, Kane, Lake, McHenry, and Will Counties in their entirety; and, Oswego Township in Kendall County, and Aux Sable and Goose Lake Townships in Grundy County.

Based on the levels of VOC and NO_x emissions, and other emissions-related data, including population and VMT levels, it is concluded that Cook, DuPage, Kane, Lake, McHenry, and Will Counties are significant sources of emissions that contribute to the high ozone levels at the Zion monitor. Based on the State of Illinois' recommendation and on historical nonattainment boundary considerations, we also intend to include Oswego Township in Kendall County and Aux Sable and Goose Lake Townships in Grundy County as part of the Chicago-Naperville, IL-IN-WI ozone nonattainment area for the 2008 8-hour ozone standard.

Based on our analysis of the factors above, in particular the emissions- and population related factors, we are designating the remaining portions of Kendall and Grundy Counties, in the Chicago CSA as attainment for the 2008 8-hour ozone NAAQS. We notified the State of Illinois on April 30, 2012 that we were designating all other Illinois counties as unclassifiable/attainment for the 2008 ozone NAAQS.

Indiana:

Based on the assessment of factors described above, EPA intends to include Lake and Porter Counties in the Chicago-Naperville, IL-IN-WI nonattainment area for the 2008 8-hour ozone NAAQS. This is based on the significant emissions levels in these counties that contribute to high ozone concentrations at the Zion monitor. Meteorology on high ozone days in the Chicago area favors the transport of ozone and ozone precursor emissions from these counties to the Zion monitor.

LADCO OSAT modeling shows that while Jasper County has VOC and NO_x emissions levels similar to some of the other counties we are including in the nonattainment area, these levels are not significant contributors to the high ozone concentrations monitored at the Zion, Illinois monitoring site. Specifically, the LADCO monitoring indicates that Jasper County contributes 0.5 ppb to the Zion monitor. VOC emissions are relatively small for Jasper County. The low population and VMT data of Jasper County also favors the exclusion of this county from the nonattainment area. It is concluded that emissions from Jasper County do not meaningfully contribute to the high ozone concentrations at the Zion monitor and that Jasper County should be excluded from the Chicago-Naperville, IL-IN-WI ozone nonattainment area for the 2008 ozone NAAQS. We are designating Jasper County as unclassifiable attainment. We notified the State of Indiana on April 30, 2012 that we were designating all other Indiana counties as unclassifiable/attainment for the 2008 ozone NAAQS.

Wisconsin:

The VOC and NO_x emissions in Kenosha County are most similar to counties we are not including in the designated nonattainment area. While the wind direction analyses provided by Illinois and Wisconsin with their March 2009 recommendations indicate that Kenosha County emissions are predominately downwind of the violating Zion, Illinois monitor on high ozone days, LADCO OSAT modeling results (submitted by IDEM in response to the January 31, 2012 120-day letter) show that VOC and NO_x emissions do significantly contribute to high ozone levels at the Zion, Illinois monitoring site.

We also recognize the close link between Kenosha County and the Chiwaukee Prairie monitoring site and the historical Chicago nonattainment area. The Chiwaukee Prairie monitoring site is located approximately 6 miles north of the violating Zion monitoring site and both sites are located quite close to Lake Michigan and are similarly affected due to the “lake effect.” On May 1, 2012, Wisconsin submitted certified air quality data for 2011 and that data indicates that there is a violation at the Chiwaukee Prairie monitoring site based on data from 2009-2011. As previously explained, we did not have sufficient time to evaluate this violation and perform a five factor analysis for purposes of designating the area as a violating area and including any nearby contributing areas. We do take note of this new information, however, in our consideration of whether to include all or part of Kenosha County as part of the designated Chicago nonattainment area.

We also considered that the State of Wisconsin urged that if we include Kenosha County in the designated nonattainment area, we include only a narrow band of the easternmost portion of the county. The State based this suggestion on the fact that historical ozone monitoring data and LADCO ozone modeling demonstrate that high ozone levels are generally restricted to the eastern portion of Kenosha County, near the Lake Michigan shoreline. As noted, however, we are not evaluating Kenosha County on the basis of the recent violation at the Chiwaukee Monitor.

Recognizing that Kenosha County emissions do contribute to high ozone levels at the Zion monitor, we evaluated VOC and NO_x emissions and population distributions for this county. EPA has determined that 91 percent of the County’s NO_x emissions, 86 percent of the County’s VOC emissions, and 77 percent of the County’s population are covered by Somers and Pleasant Prairie Townships. The Chiwaukee monitor is located in Pleasant Prairie Township. Based on the above information, we are designating Somers and Pleasant Prairie Townships in Kenosha County, Wisconsin as part of the Chicago nonattainment area for the 2008 ozone NAAQS. We are designating the remaining portion of Kenosha County unclassifiable/attainment.



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

RECEIVED

NOV 14 2011

RA's Office

November 8, 2011

Gwen Keyes Fleming
Regional Administrator
US EPA, Region IV
Sam Nunn Atlanta Federal Center, 12th Floor
61 Forsyth Street, SW
Atlanta, GA 30303-3104

RE: Tennessee's Revised Designation Recommendations for the 2008 Ozone NAAQS (75 ppb)

Dear Administrator ^{Gwen}Fleming:

On March 10, 2009, the state of Tennessee sent EPA a letter recommending attainment/nonattainment boundaries for the 2008 Ground Level Ozone NAAQS of 75 ppb. This recommendation was based upon a review of 2006-2008 monitoring data. EPA tabled action on the state recommendations and recently announced that it would resume implementation of the 75 ppb standard. EPA is currently considering the March 10, 2009 recommendations and the 2008-2010 monitoring data to make its proposed boundary determinations and begin the 120 day consultative period with states, but said it would consider 2011 data if it was submitted as soon as it could be certified.

Tennessee wishes to modify its March 10, 2009 recommendation based upon 2009-2011 monitoring data (attachment #1). Because of the compressed time period to submit the recommendations with 2011 data, Tennessee is sending this letter now and will follow with a technical support document in the next few weeks.

Tennessee's revised recommendation is as follows:

Knoxville Area:

Partial Counties of Blount, Cocke & Sevier that comprise the Great Smoky Mountains National Park – nonattainment
Rest of Blount, Cocke & Sevier Counties – attainment

Each of the remaining counties in the state of Tennessee that are not described in the above table should be designated attainment. The portions of the counties that comprise the Tennessee side of the Great Smoky Mountains National Park are recommended as nonattainment for monitoring data obtained at the Look Rock monitoring site in Blount County and Clingman's Dome monitoring site in Sevier County. There are no monitoring sites in Cocke County. These two sites are elevated monitoring sites at 2,603 feet and 6,634 feet respectively. The technical support document to follow will argue that these sites are influenced primarily by transport from

afar, and only minimally influenced by local conditions of the area in which they are located. For initial comparison, Knoxville has an average elevation of about 900 feet.

Tennessee appreciates the opportunity to make this revised recommendation. We estimate our 2011 (attachment #2) data will be entered into AQS no later than November 30, 2011 and will be certified no later than mid December 2011. If you or your staff have questions pertaining to this recommendation, please contact our air pollution control division director, Barry R. Stephens, P. E. His contact information is as follows: Barry.Stephens@tn.gov; (615) 532-0525.

Sincerely,



Robert J. Martineau, Jr.
Commissioner

Cc: Tennessee Air Pollution Control Board Members
Tennessee Local Air Pollution Control Agencies
Division of Air Pollution Control
Beverly Banister, EPA Region IV
Scott Davis, EPA Region IV
Lynorae Benjamin, EPA Region IV

Attachments: 1 Preliminary Tennessee Ozone Data 2009 – 2011
2 2011 Preliminary Summary

Attachment # 1

Preliminary Tennessee Ozone Data for 2009 - 2011

County	Site Name	MONITOR ID	Preliminary 2011 4th Max.	Preliminary 2009 2011 DV > 0.075 PPM	2011 4th Max Needed for 8 Hr DV Violation (>0.075 PPM)
Anderson Co	Freels Bend Study Area Melton Lake	470010101 - 1	0.074	0.071	0.089
Blount Co	Great Smoky Mountains Np Look Rock	470090101 - 1	0.082		0.077
Blount Co	Great Smoky Mountains Np - Cades Cove	470090102 - 1	0.068	0.068	0.091
Davidson Co	1015 Trinity Lane	470370011 - 1	0.066	0.064	0.1
Davidson Co	Percy Priest	470370026 - 1	0.072	0.068	0.095
Hamilton Co	Volunteer Army Ammunition Plant	470654003 - 1	0.074	0.074	0.08
Hamilton Co	Ridgetrail Rd.	470651011 - 1	0.074	0.072	0.085
Jefferson Co	1188 Lost Creek Rd	470890002 - 1	0.073	0.073	0.08
Knox Co	9315 Rutledge Pike Mascot Tn 37806	470930021 - 1	0.074	0.070	0.091
Knox Co	4625 Mildred Drive	470931020 - 1	0.074	0.072	0.085
Loudon Co	1703 Roberts Rd	471050109 - 1	0.075	0.073	0.084
Meigs Co	8401 Highway 60	471210104 - 1	0.074	0.072	0.086
Rutherford Co	Eagleville Puckett'S Farm	471490101 - 1	0.067	0.068	0.091
Sevier Co	Great Smoky Mountain Np Cove Mountain	471550101 - 1	0.077		0.078
Sevier Co	Clingsmans Dome, Great Smoky Mtns. Np	471550102 - 1	0.079		0.079
Shelby Co	1330 Frayser Blvd	471570021 - 1	0.079	0.075	0.082
Shelby Co	6855 Mudville Rd. Edmond Orgill Park	471571004 - 1	0.077	0.073	0.084
Sullivan Co	Hill Road	471632002 - 1	0.074	0.071	0.089
Sullivan Co	Ketron Middle School On Bloomingdale Rd.	471632003 - 1	0.071	0.070	0.088
Sumner Co	Rockland Recreation Area-Old Hickory Dam	471650007 - 1	0.077		0.079
Sumner Co	Cottontown Wright's Farm	471650101 - 1	0.076	0.071	0.09
Williamson Co	Fairview Middle School Crow Cut Road	471870106 - 1	0.072	0.070	0.09
Wilson Co	Cedars Of Lebanon State Park	471890103 - 1	0.073	0.071	0.086
Christian	Hopkinsville	210470006 - 1	0.07	0.070	0.087
DeSoto	5 East South	280330002 - 1	0.073	0.073	0.08
Crittenden	Marion	050350005 - 1	0.082		0.078

Update

Date

Updated by ERB

11/3/2011

Modified last column for > 0.075 stats 10/6/11

0.061	and higher
0.066	and higher
0.071	and higher

ice Data (8 Hr (

	Memphis MSA	Clarksville	Nashville MSA	Chattanooga MSA	Greater Knoxville	Great Smoky Mtn	Tri-Cities
DATE	Farmington, CT	Dayton	Hennepin, MN	Columbia, MO	Chattanooga, TN	Dayton, OH	Dayton, OH
6/1/11			78				
6/2/11			83				
6/3/11							
6/4/11			78				
6/5/11							
6/6/11			77				
6/7/11							
6/8/11							
6/9/11							
6/10/11							
6/11/11							
6/12/11							
6/13/11							
6/14/11							
6/15/11							
6/16/11							
6/17/11							
6/18/11							
6/19/11							
6/20/11							
6/21/11							
6/22/11							
6/23/11							
6/24/11							
6/25/11							
6/26/11							
6/27/11							
6/28/11							
6/29/11							
6/30/11							
6/31/11							
6/32/11							
6/33/11							
6/34/11							
6/35/11							
6/36/11							
6/37/11							
6/38/11							
6/39/11							
6/40/11							
6/41/11							
6/42/11							
6/43/11							
6/44/11							
6/45/11							
6/46/11							
6/47/11							
6/48/11							
6/49/11							
6/50/11							
6/51/11							
6/52/11							
6/53/11							
6/54/11							
6/55/11							
6/56/11							
6/57/11							
6/58/11							
6/59/11							
6/60/11							
6/61/11							
6/62/11							
6/63/11							
6/64/11							
6/65/11							
6/66/11							
6/67/11							
6/68/11							
6/69/11							
6/70/11							
6/71/11							
6/72/11							
6/73/11							
6/74/11							
6/75/11							
6/76/11							
6/77/11							
6/78/11							
6/79/11							
6/80/11							
6/81/11							
6/82/11							
6/83/11							
6/84/11							
6/85/11							
6/86/11							
6/87/11							
6/88/11							
6/89/11							
6/90/11							
6/91/11							
6/92/11							
6/93/11							
6/94/11							
6/95/11							
6/96/11							
6/97/11							
6/98/11							
6/99/11							
6/100/11							

30

Unhealthy for Sensitive Groups - 8 Hour exceedance monitored at this site and concentration in ppb reported

Unhealthy - 8 Hour exceedance monitored at this site and concentration in ppb reported

Site operated by another state on the border of Tennessee (not inside of Tennessee)

8 Hour/1 Hour exceedance reported (> 125 ppb ozone), 108/139

Preliminary data indicates that there has been 30 day(s) in 2011 on which the 8 hour ozone standard (0.12 ppm) was exceeded by at least one monitoring site in Tennessee.



STATE OF ARKANSAS

MIKE BEEBE
GOVERNOR

February 23, 2012

Dr. Al Armendariz, Regional Administrator
United States EPA Region VI
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Dr. Armendariz:

I write in response to your letter dated December 9, 2011. I respectfully disagree with your preliminary designation of Crittenden County as nonattainment for the revised National Ambient Air Quality Standard (NAAQS) for eight-hour ozone. This seems to be contraindicated, based on the described criteria that EPA utilized in making the preliminary determination throughout the country. EPA stated that certified air quality monitoring data from 2008-2010, compared against the 2008 Ozone NAAQS of 0.075 ppm, would serve as the basis for the determinations. The design value for Crittenden County, based on the certified monitoring data from 2008 -2010, is in compliance with the 2008 Ozone NAAQS, with a value of 0.074 ppm. Additionally, Crittenden County does not significantly contribute to violations at the Shelby County, Tennessee, Frayser Monitor, as detailed in the attached technical support document. Therefore I submit for consideration an amended recommendation that Crittenden County, as well as Pulaski County, be designated as in attainment with the 2008 Ozone NAAQS with all other Arkansas counties being classified as "Unclassifiable/Attainment".

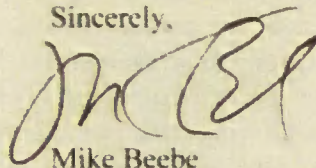
The EPA justified the designation of five of the eight counties in the Memphis area as in attainment, because they "...all have relatively low population and urbanization, and precursor emission contribution and transport suggesting negligible contribution to the violating county." This same rationale is true of Crittenden County, based on the Arkansas Department of Environmental Quality's (ADEQ) review of the data and the five-factor analysis used in EPA's technical document. The EPA has not provided a scientifically defensible basis for any other determination. Therefore, Crittenden County should be designated in attainment and not part of the nonattainment area for the same reasoning.

Of further note, meteorological conditions on episode days for the 2008-2010 certified air data for the violating Frayser monitor show that Crittenden County emissions are unlikely to significantly influence ozone concentrations at the Frayser site. The current analysis performed by ICF International for the period 2001-2010 (see appendix to attached technical support document) quantifies the potential for contribution based on both wind direction and emissions. The results indicate that the "potential for contribution is very small (with a frequency equivalent to much less than one exceedance day per year)."

ADEQ's analysis suggests that Crittenden County is not likely contributing to the violation in Shelby County, but instead is in attainment with the 2008 Ozone NAAQS and "...is relatively low population and urbanization, and precursor emission contribution and transport suggesting negligible contribution to the violating county." Therefore, Crittenden County should be classified as in attainment and definitely should not be included as part of the nonattainment area.

If you have questions regarding this submittal, please contact Mike Bates, Air Division Chief, Arkansas Department of Environmental Quality, 5301 Northshore Drive, North Little Rock, AR 72218-5317, (501) 682-0750. We look forward to your prompt reversal of this preliminary designation recommendation.

Sincerely,



Mike Beebe

cc: Teresa Marks, Director - ADEQ
Mike Bates, Air Division Chief - ADEQ
Guy Donaldson, Air Planning Section Chief - EPA - Region 6

Enclosures

These results are generally consistent with EPA findings (EPA, 2011b) which are based on the use of HYSPLIT and 2006-2010 meteorological data. EPA found that most of back trajectories for ozone exceedance days at the Frayser monitor pass "through Shelby County TN, and many of the back trajectory centerlines pass through Desoto County in northern Mississippi with a comparatively smaller percentage passing through Crittenden County, Arkansas." The current analysis considers a longer period and quantifies this potential for contribution based on both wind direction and emissions. The results suggest that the potential for contribution is very small (with a frequency equivalent to much less than one exceedance day per year).

Summary

Meteorological conditions on episode days for the Frayser monitor show that Crittenden County emissions are unlikely to significantly influence ozone concentrations at the Frayser site. Considering only wind directions as an indicator of potential contribution, emissions from Crittenden County may have contributed to exceedances at the Frayser monitor on approximately two days per year during the period 1996-2010 and approximately one day per year during the period 2001-2010. The current analysis considers a longer period and quantifies this potential for contribution based on both wind direction and emissions. The results suggest that the potential for contribution is very small (with a frequency equivalent to much less than one exceedance day per year).

All four monitoring sites in the greater Memphis area sites show a clear downward trend in 8-hour ozone design value for the period 1996-2010, culminating with values near 75 ppb in 2010. Both the regional-average design value (based on all four sites) and the regional-maximum design value (based on all four sites) also indicate a clear downward trend and both values decrease by approximately 1.25 ppb per year during the period. This trend is consistent with a reduction in national, regional, and local ozone precursor emissions during this same time period. This indicates that national/regional air quality improvement programs, including those realized on the local scale, are contributing to the observed ozone reductions in the Memphis area.

Current design values and trends indicate that emission reductions being realized from current and planned federal measures should result in near-term air quality improvements. The resulting emissions reductions will lead to further reductions in ozone and design values that are sufficiently below the standard to achieve sustained attainment of the NAAQS in the near future. The emission reductions include those expected to be realized by the final version and full implementation of the Cross-State rule for EGUs, the Regional Haze Rule, as well as new or updated standards and regulations for recreational equipment, lawn & garden equipment, and gasoline-powered boats and personal watercraft. For the on-road mobile sector, further emission reductions are expected from fleet turnover and the introduction of cleaner and more fuel efficient engines mandated by the applicable CAFE standards that are currently in place for cars and trucks.

References

- Douglas, S. G., Y. Wei, J. Mangahas, B. Hudischewskyj, A. Alvarez, G. Glass, S. Hartley, and J. L. Haney. 2004. "Early Action Compact Ozone Modeling Analysis for the State of Tennessee and Adjacent Areas of Arkansas and Mississippi." Technical Support Document. ICF International, San Rafael, California (04-012).

Considering only wind directions as an indicator of potential contribution, emissions from Crittenden County may have contributed to exceedances at the Frayser monitor on fewer than three days per year during the period 1996-2010 and on fewer than 2 days per year during the period 2001-2010. As noted above, the calculated values are conservatively high estimates since they are based on the maximum number of exceedance days with transport-conductive winds. In both cases, this contribution is not likely to influence the fourth highest ozone concentration at the Frayser monitor in any given year. Since the emissions for Crittenden County are small compared to the total emissions for Shelby County and the three-county area, an adjusted potential for contribution is also calculated based on the joint probability of 1) wind directions from SW to NW and 2) the likelihood of emissions from Crittenden County being involved in the ozone formation (based on the relative amount of emissions compared to the entire area). The adjusted potential for contribution is very small and is estimated to have occurred on less than one day per year for both periods.

As noted earlier, a majority of the emissions in Crittenden County are located to the west and southwest of the Frayser monitoring site. Table 3 estimates the number of exceedance days per year at the Frayser monitoring site with a potential contribution from emissions from Crittenden County for the wind direction range from SW to W.

Table 3. Summary of Number of Exceedance Days at the Frayser Monitoring Site with a Potential for Contribution from Emissions from Crittenden County, Based on Wind Direction Alone and Adjusted for Emissions: Based on SW to W Winds.

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
Period	Exceedance #	# Yrs	Exceedance # Days/Yr	% of Exceedance Days with SW to NW Wind Directions (%)	Exceedance Days/Yr with a Potential for Contribution	Fraction of Exceedance Days on Which Contribution is Possible	Fraction of Emissions Represented by Crittenden Co	Joint Probability of Contribution Based on Wind Emissions & Direction & Potential for Contribution with a Days/Yr	Emissions-Adjusted # of Exceedance Days/Yr
1996-2010	215	15	14.33	15.60	2.24	0.16	0.10	0.02	0.23
2001-2010	89	10	8.90	15.40	1.37	0.15	0.10	0.02	0.14

Calculated values by column are as follows:

$$D = B / C \quad (\text{Number of exceedance days per year})$$

$$F = D \cdot E / 100 \quad (\text{Number of exceedance days with SW to NW winds for at least one daytime hour})$$

$$I = G \cdot H \quad (\text{Joint probability defined as fraction of days with SW to NW wind directions multiplied by the emissions fraction for Crittenden County})$$

$$J = D \cdot I \quad (\text{Adjusted number of exceedance days per year with a potential for contribution that accounts for both SW to NW wind direction frequency and the emission fraction})$$

Considering only wind directions as an indicator of potential contribution, emissions from Crittenden County may have contributed to exceedances at the Frayser monitor on approximately two days per year during the period 1996-2010 and approximately one day per year during the period 2001-2010. Again, this contribution is not likely to influence the fourth highest ozone concentration at the Frayser monitor in any given year. For this range of wind directions, the adjusted potential for contribution is very small and is estimated to have occurred on less than one day per year for both periods.

Table 1. 2008 VOC and NO_x Emissions.

County	VOC	NO _x	VOC	NO _x	% of 3-County Emissions Total
Crittenden	3,805	4,047	10.3	8.3	
Desoto	5,222	5,080	14.1	10.4	
Shelby	27,929	39,519	75.6	81.2	
3-County	36,956	48,646			

VOC emissions from Crittenden County account for about 10 percent of the emissions for the 3-county area. NO_x emissions from Crittenden County account for about 8 percent of the total emissions for the 3-county area.

The simple probability analysis in Table 2, couples the wind direction frequency and emissions data. The analysis estimates the number of exceedance days per year at the Frayser monitoring site with a potential contribution from emissions from Crittenden County based on wind direction alone, as well as an adjusted value that accounts for the emissions relative to the overall emissions totals for the area. The analysis considers two periods: 1996-2010 and 2001-2010 and the wind direction range from SW to NW. The overall percentage of days with SW to NW winds assumes one hour per day with winds from this direction and is thus a high estimate. The larger of the two emissions fractions comparing emissions for Crittenden County to the 3-county area (the VOC fraction) is used.

Table 2. Summary of Number of Exceedance Days at the Frayser Monitoring Site with a Potential for Contribution from Emissions from Crittenden County, Based on Wind Direction Alone and Adjusted for Emissions: Based on SW to NW Winds.

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
Period	Exceedance #	# Yrs	# Exceedance Days/Yr	% of Exceedance Days with SW to NW Wind Directions (%)	# of Exceedance Days/Yr with a Potential for Contribution	Fraction of Exceedance Days on Which Contribution is Possible	Fraction of Emissions Represented by Crittenden Co	Joint Probability of Contribution Based on Wind Direction & Emissions	Emissions-Adjusted # of Exceedance Days/Yr with a Potential for Contribution
1996-2010	215	15	14.33	19.20	2.75	0.19	0.10	0.02	0.28
2001-2010	89	10	8.90	19.10	1.70	0.19	0.10	0.02	0.18

Calculated values by column are as follows:

D = B/C (Number of exceedance days per year)
 F = D • E/100 (Number of exceedance days with SW to NW winds for at least one daytime hour)
 I = G • H (Joint probability defined as fraction of days with SW to NW wind directions multiplied by the emissions fraction for Crittenden County)
 J = D • I (Adjusted number of exceedance days per year with a potential for contribution that accounts for both SW to NW wind direction frequency and the emission fraction)

Figure 9. Surface Wind Directions and Wind Speeds at the Memphis NWS Station for the Hours 8 am – Noon CST for All Ozone Season Days and Ozone Exceedance Days for the Frayser Monitoring Site (April–October 1996–2010).

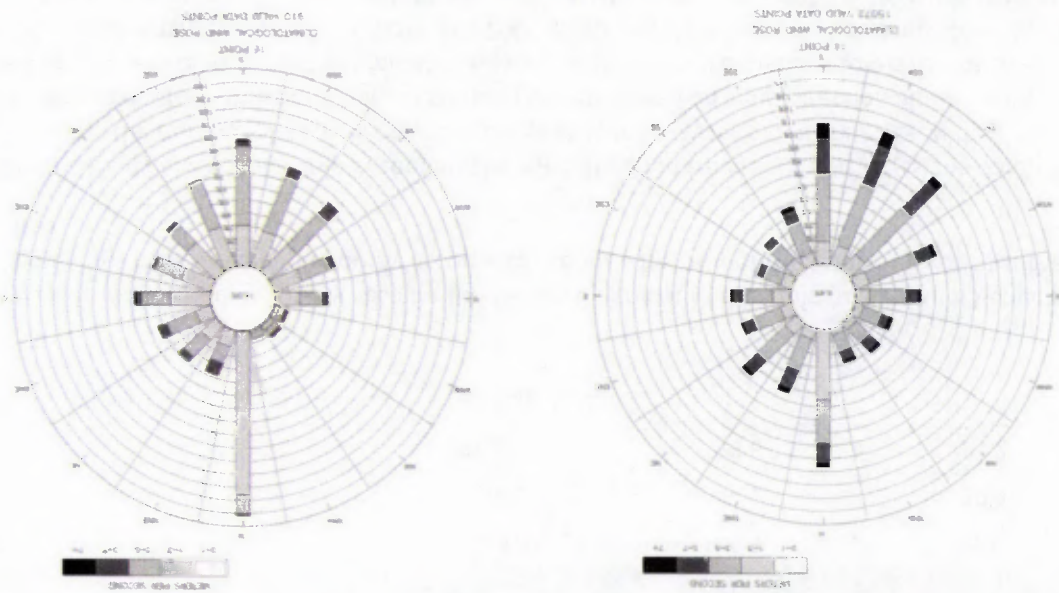
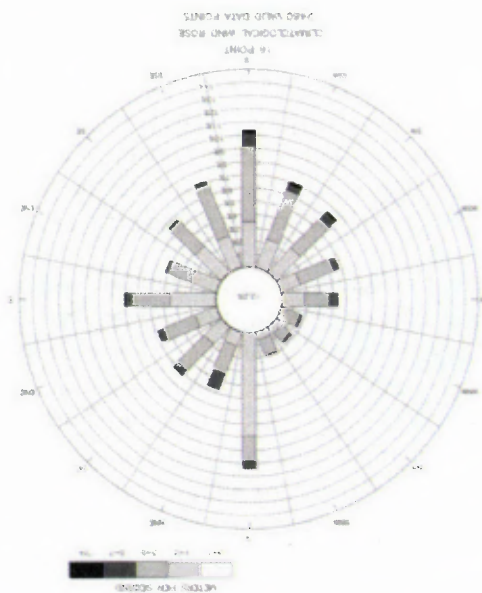


Figure 8. Surface Wind Directions and Wind Speeds at the Memphis NWS Station for the Hours 6 am – 6 pm CST for Ozone Exceedance Days for the Frayser Monitoring Site (April–October 1996–2010).



In this case, wind speeds are lower for the high ozone days. In addition, westerly wind components (winds from SSW to NNW) are less frequent and easterly wind components (from NNE to SSE) are more frequent on high ozone days. These results indicate that the distribution of wind directions and wind speeds is different on high ozone days compared to all ozone season days and that easterly wind components are more likely to occur and are possibly a contributing factor for some high ozone days. Note that winds with a westerly component (specifically SW to NW) are conducive to transport of ozone and precursor emissions from Crittenden County to the Frayser monitor. If the location of emissions sources within the county is considered, the range is SW to W, since most emissions are located in West Memphis, Marion, and along I-70 all of which are within this range of direction.

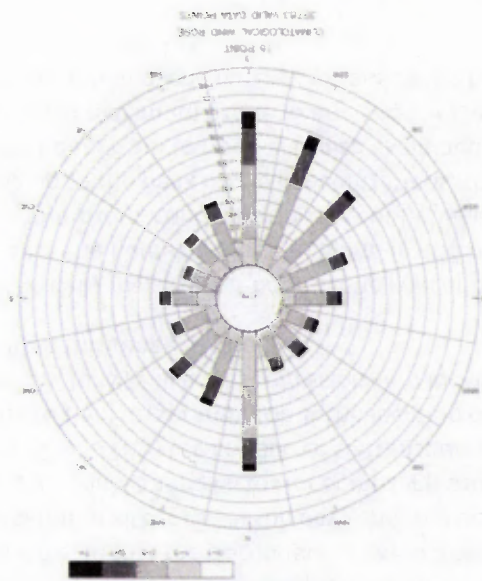
Most (more than 55 percent) of the daily maximum 8-hour ozone concentrations for the Frayser monitor are based on hourly data for the hours of 10 am to 6 pm. In addition, most (more than 70 percent) of the daily maximum 1-hour ozone concentrations occur between the hours of 11 am and 2 pm. To focus on the hours leading up to the peak ozone concentrations, the distribution of wind directions and wind speeds for the hours 8 am to noon was also examined. The wind directions and wind speeds leading up to the hours of maximum ozone (8 am – noon) are shown in Figure 9 for both all ozone season days and days with maximum ozone concentrations at the Frayser monitoring site.

Frequency Analysis of Contributions from Crittenden County Emissions to High Ozone at the Fraser Monitor

A key factor in EPA's recommendation (EPA, 2011b) to include Crittenden County in the Memphis nonattainment area is an analysis of meteorological data that "indicates that emissions from Crittenden County do occasionally contribute to violations of the 2008 ozone NAAQS in Shelby County." EPA based its conclusion that emissions from Crittenden County contribute to exceedances at the Fraser monitor in part on backward trajectories derived using the HYSPLIT model. This analysis explores this finding in more detail and examines the frequency of occurrence of wind directions (and wind speeds) that are conducive to transport of precursor emissions from Crittenden County to the Fraser monitor in Shelby County. This analysis focuses on the 15-year period 1996-2010 and uses hourly surface wind data from the National Weather Service (NWS) monitoring site at the Memphis International Airport.

Figure 7 illustrates the frequency of wind directions and speeds for all ozone season days (April through October) for the period 1996-2010. Wind data for the hours prior to and during the normal period of highest ozone concentration 6 am - 6 pm CST are shown. In this diagram, the indicated wind direction is the direction from which the wind is blowing. The length of the bar within that wind-direction sector indicates the frequency of occurrence of a particular wind direction. The shading indicates the distribution of wind speeds.

Figure 7. Surface Wind Directions and Wind Speeds at the Memphis NWS Station for the Hours 6 am – 6 pm CST for All Ozone Season Days (April–October 1996–2010).



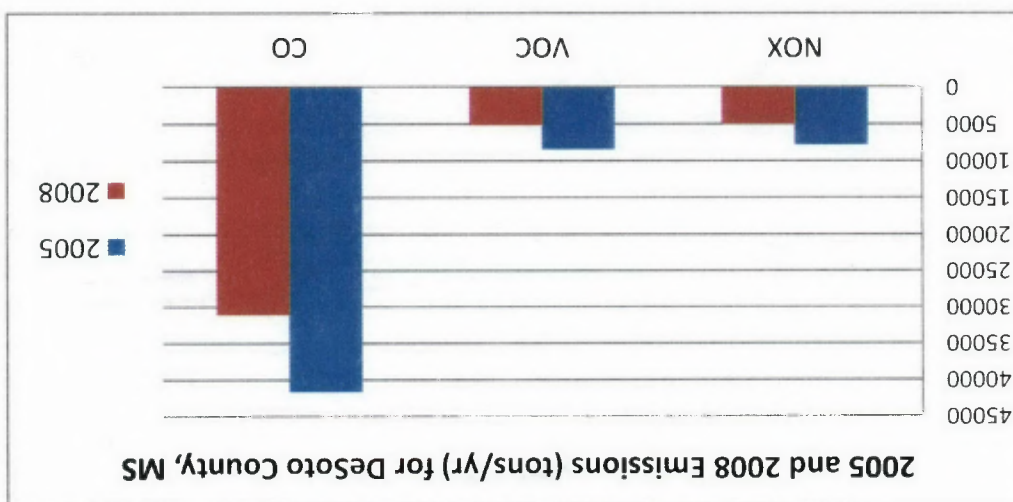
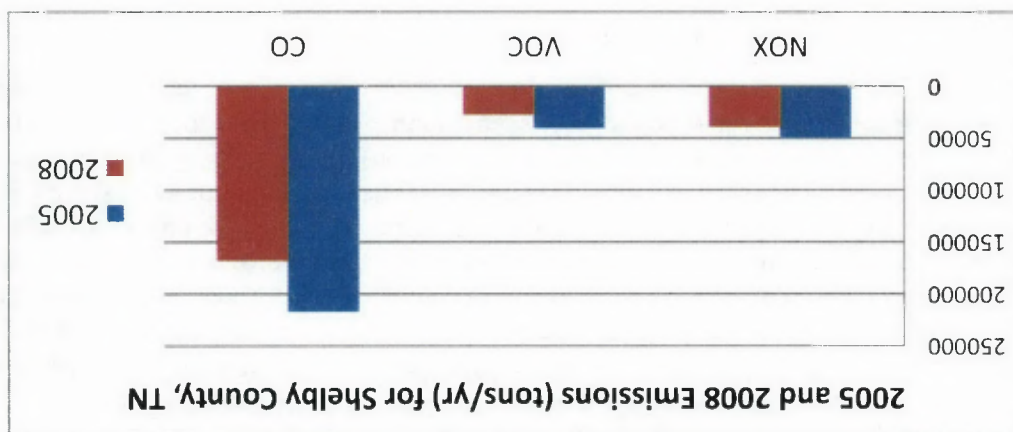
Winds from the north, south, and southwest are most common during the daytime hours during the ozone season, but all wind directions are represented.

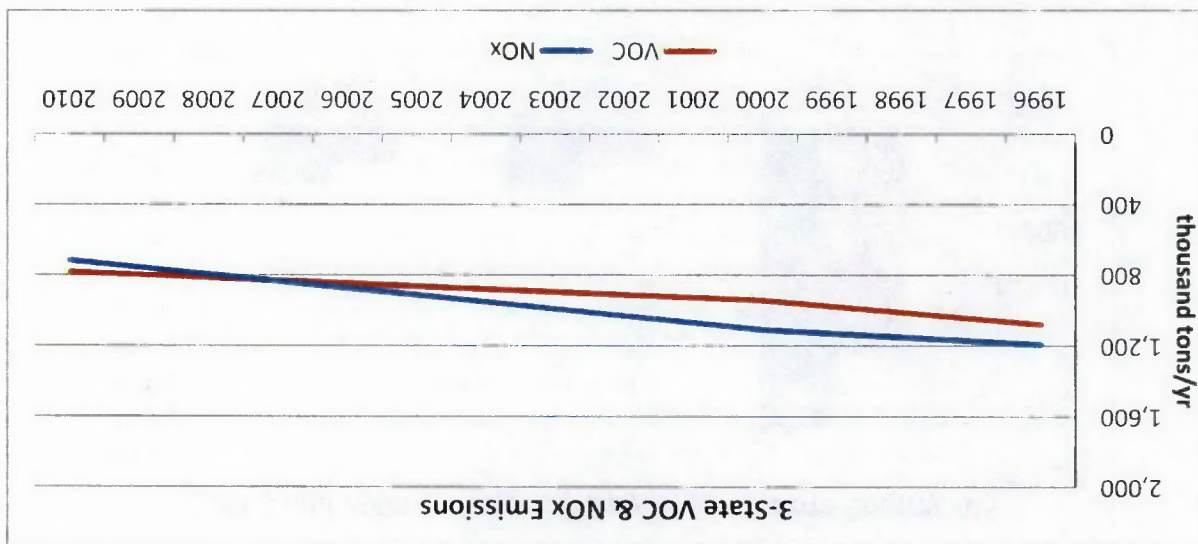
Figure 8 illustrates the frequency of wind directions and speeds for all ozone season days for which the daily maximum 8-hour ozone concentration at the Fraser monitoring site was greater than or equal to 75 ppb. Again the data are for 6 am – 6 pm and represent the period April through October, 1996-2010. Distinguishing features in the wind plots for the ozone exceedance days, when contrasted to those for all ozone-season days, can help to define the wind and/or transport patterns leading to high ozone.

It follows that these anticipated future emissions reductions associated with national, regional, and local air quality improvement programs will lead to further reductions in ozone and design values that are sufficiently below the standard to achieve sustained attainment of the NAAQS in the near future.

Beyond 2010, in addition to the emission reductions expected to be realized by the Regional Haze Rule and the final version and full implementation of the Cross-State rule for EGU's, other new or updated standards and regulations to take full effect include those for recreational equipment, lawn & garden equipment, and gasoline-powered boats and personal watercraft. For the on-road mobile sector, further emission reductions are expected from fleet turnover and the introduction of cleaner and more fuel efficient engines mandated by the applicable CAFE standards that are currently in place for cars and trucks.

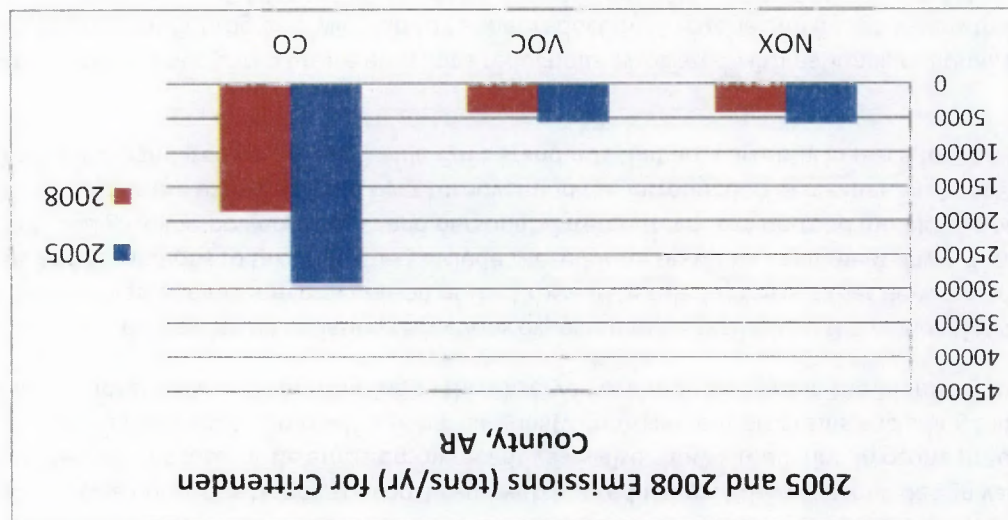
The regional-scale emissions trends are consistent with the reduction in 8-hour ozone design values during this period. The local-scale emissions in recent years also show a reduction in ozone precursor emissions. This indicates that national/regional air quality improvement programs, including those realized on the local scale, are contributing to the observed ozone reductions in the Memphis area.





The emissions trends for both the 13-state and 3-state regions indicate a reduction in both VOC and NO_x emissions between 1996 and 2010. NO_x emission decrease at a faster rate than VOC emissions. These reductions are consistent with the expected reductions in EGU's, area sources, and on-road and non-road sources resulting fleet turnover, equipment replacement, and other controls mandated by CAAA programs as well as the special rules targeting ozone transport in the eastern U.S. An examination of the trends in local emissions in recent years also shows a reduction in emissions. Figure 6 provides annual anthropogenic emission totals for Crittenden County, AR; Shelby County, TN; and DeSoto County, MS for 2005 and 2008. This information was extracted from EPA's National Emission Inventory (NEI). (Note the difference in scale for Shelby County). The percent reductions in NO_x and VOC are very consistent for each of the counties and, with a few exceptions, emissions for nearly all source categories are less in 2008 compared to 2005.

Figure 6. Anthropogenic Emissions Totals (tons/year) for the Greater Memphis Area for 2005 and 2008



In addition to programs primarily targeting EGUs and other large industrial sources, regional emissions reductions during this period have likely been realized in the on-road mobile source sector due to the fleet turnover of older vehicles, the use of cleaner fuels, and the introduction of cleaner, more efficient engines resulting from compliance with the applicable Corporate Average Fuel Economy Standards (CAFE) for cars and trucks, despite increases in vehicle miles traveled. Other programs promulgated by EPA in this period include new regulations and emission standards resulting from the Clean Air Nonroad Diesel rule of 2004 for diesel fuels, and engines (including locomotives and marine diesel engines), and updated performance standards/rules for spark-ignition engines affecting various off road equipment promulgated in 2008, with emission reductions expected from equipment turnover primarily after 2010. EPA recently conducted an analysis to assess the effects of the Clean Air Act (CAA) on air quality, the environment, public health, and the economy (EPA, 2011a). This work was performed in accordance with Section 812 of the CAA of 1990 that requires the EPA to periodically assess the effects of the Clean Air Act (CAA) on air quality, the environment, public health, and the economy. As part of this analysis, EPA prepared emissions estimates for 1990, 2000, 2010, and 2020. Emissions for the historical years (1990 and 2000) were based on the best available emission inventories for these years. Projection to the future years was based on economic growth projections, future-year control requirements (for attainment of NAAQS), and control efficiencies.

Figures 4 and 5 display the emissions data from the Section 812 EPA study (EPA, 2011a) for the years 1996-2010, for two different geographical regions. Figure 4 displays VOC and NO_x emission totals for the three states for which a portion of the greater Memphis area (Arkansas, Tennessee, and Mississippi) as well as ten additional states surrounding the three-state area: Alabama, Georgia, Illinois, Indiana, Kansas, Kentucky, Louisiana, Missouri, Oklahoma, and Texas. Figure 5 displays emission totals for Arkansas, Tennessee, and Mississippi only. Estimates for the interim years are based on interpolation.

Figure 4. Estimated Emissions Totals for the 13-State Region Surrounding Memphis for the Period 1996-2010.

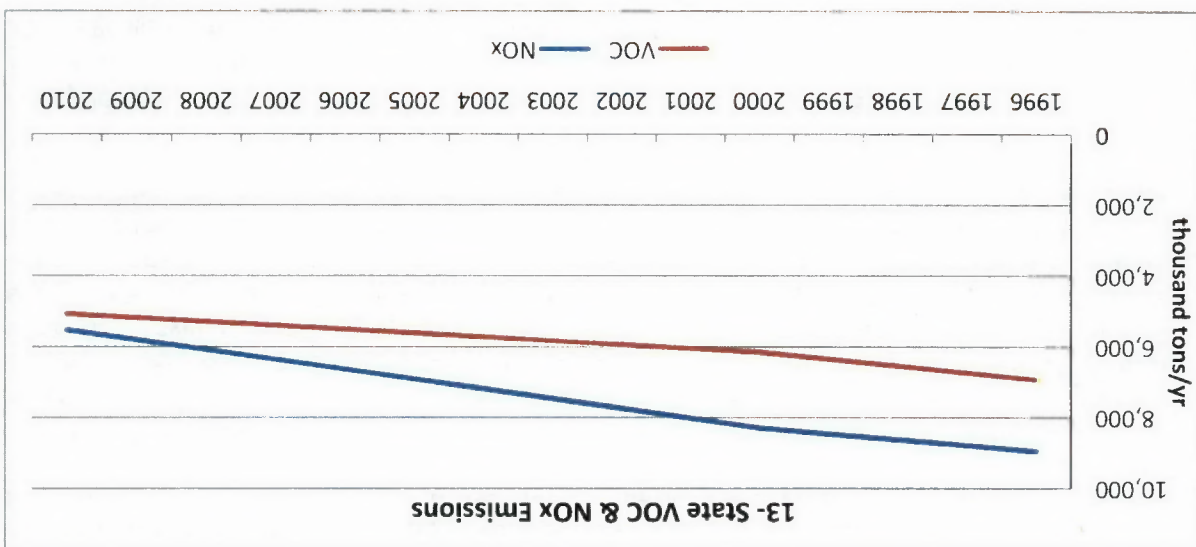


Figure 5. Estimated Emissions Totals for the 3-State Region Surrounding Memphis for the Period 1996-2010.

it follows that the decrease in ozone design values between 1996 and 2010 is attributable to emissions reductions during that period. Many of these reductions are associated with the Clean Air Act Amendments (CAAA) of 1990, which has led to reductions in emissions of volatile organic compounds (VOCs), oxides of nitrogen (NO_x), and carbon monoxide (CO) from a variety of sources including electric generating units (EGUs), industrial point sources, non-point industrial and area sources, and on-road and non-road motor vehicles and other equipment. National-scale emissions reductions associated with the CAAA during the period 1996-2010 have affected national, regional, and local pollutant concentrations. General emission reduction programs associated with the CAAA include the following:

- Title I VOC and NO_x reasonably available control technology (RACT) requirements in ozone nonattainment areas (NAAs);
- Title II on-road motor vehicle and non-road engine/vehicle provisions (NO_x , VOC, and CO);
- Title III National Emissions Standards for Hazardous Air Pollutants (NESHAPS), and
- Title IV emissions programs for electric generation units (EGUs), primarily for SO_2 .

In 1999, EPA promulgated the Regional Haze Rule to help protect visibility in national parks and wilderness areas. The rule mandated that states develop programs to identify short and long-term strategies to reduce precursor emissions (primarily NO_x and SO_2) in an effort to reduce the formation of secondary fine particulates ($\text{PM}_{2.5}$). The program included the identification of best available retrofit technology (BART) for older industrial sources and expanded visibility monitoring of Class I areas. Regional haze program plans were to be finalized by the states by 2008 with the initial phase of the program reductions completed by 2018. In addition, specific emission reduction programs targeting interstate transport of ozone and precursor emissions, primarily NO_x , that were expected to affect air quality somewhat in the Greater Memphis area include the NO_x SIP Call and the Clean Air Interstate Rule (CAIR). The NO_x SIP Call (Phase I) was promulgated in September 1998 and mandated that 22 eastern states implement programs to decrease NO_x emissions, primarily from EGUs, to lessen the effects of the regional transport of ground-level ozone. Phase I reductions were to begin in 2003. Phase II of the NO_x SIP call rule was promulgated in April 2004 and required that reductions be in place by 2007. Reductions in emissions from the NO_x SIP call were required in Tennessee and Missouri, but not Arkansas, Mississippi, Texas, or Louisiana, so the effect on Greater Memphis may have been limited.

The Clean Air Interstate Rule (CAIR) was promulgated in March 2005 and mandated significant reductions in SO_2 and NO_x emissions primarily from EGUs in 28 eastern states. Concurrent with this legislation, EPA also issued the Clean Air Mercury Rule (CAMR) targeting mercury emissions from coal-fired EGUs. Together, the CAIR and CAMR programs were intended to reduce regional emissions in the eastern U.S., with Phase I reductions originally slated to start in 2010, and Phase II reductions in 2015. The CAIR and CAMR rules mandated reductions in Tennessee, Mississippi, Arkansas (ozone season only), Texas, and Louisiana, but not Missouri. The effects of emission reductions from CAIR may have only been realized somewhat in 2009 and more fully in 2010 when control equipment was supposed to be in place.

In July 2008, the U.S. Court of Appeals for the D.C. Circuit remanded the CAIR rule back to EPA for review and possible revisions but kept in place the original emission reduction requirements of CAIR. In July 2011, EPA issued the Cross-State Air Pollution Rule (CSAPR), also referred to as the Transport Rule, which was intended to replace CAIR. The CSAPR rule mandated emission reductions in Tennessee, Mississippi, Arkansas, Texas, Louisiana, Missouri, and Nebraska. However, in December 2011, the rule was stayed by the D.C. Circuit court for further review, keeping in place the original provisions of CAIR.

maximum design value to shift to the Marion site. This finding indicates that it is important to consider the sites as a group (as well as individually) in determining attainment.

Figure 2 shows the average 8-hour ozone design value, where the average is taken over all four sites.

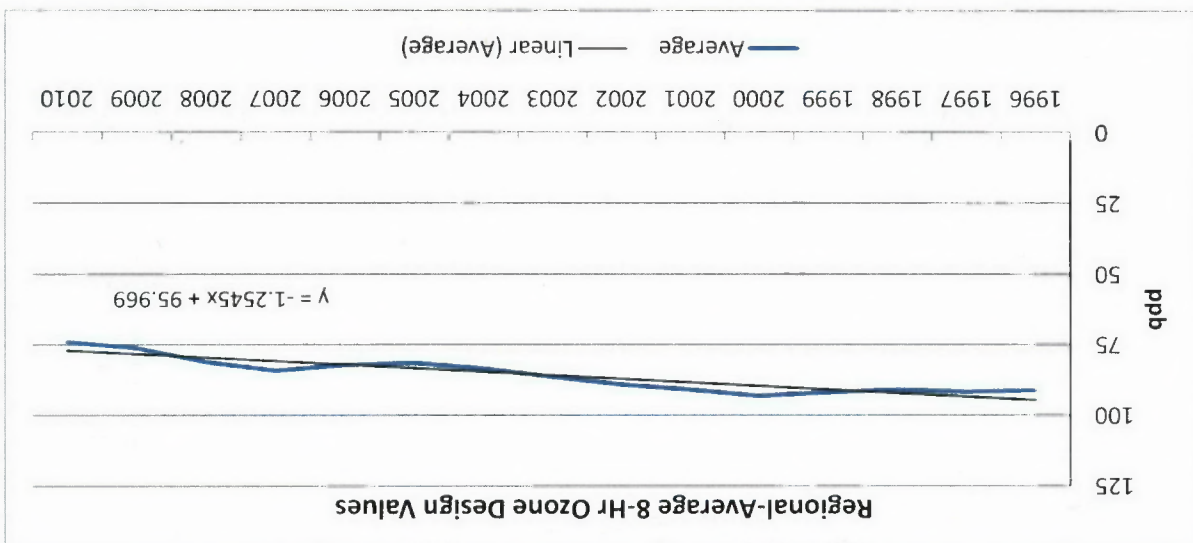
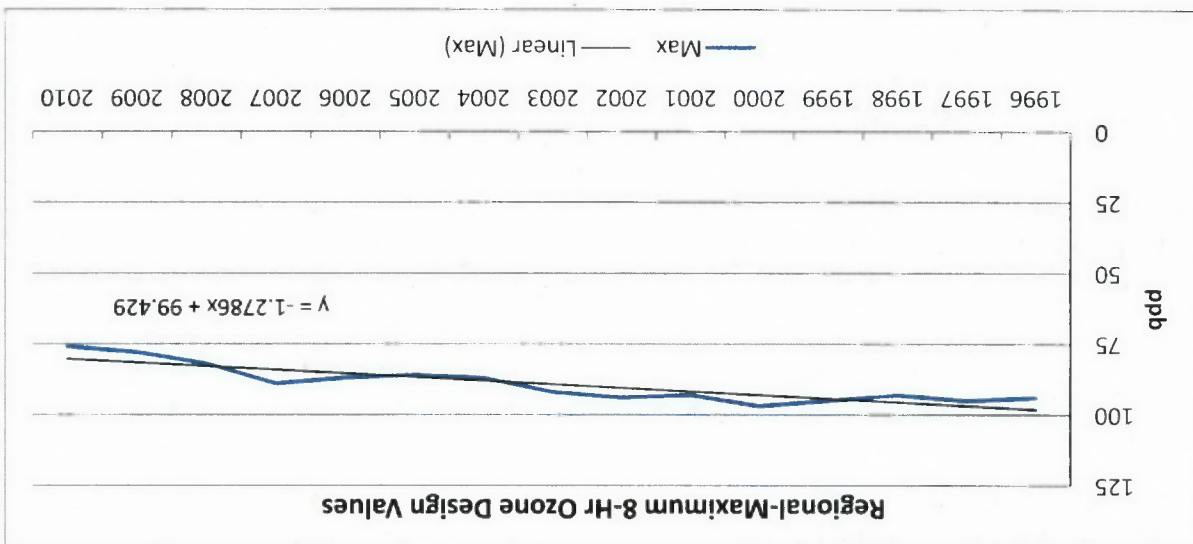


Figure 2. Four-Site Average 8-Hour Ozone Design Values for the Greater Memphis Area for the Period 1996-2010.

Figure 3 shows the maximum 8-hour ozone design value, where the maximum is taken over all four sites.

Figure 3. Four-Site Maximum 8-Hour Ozone Design Values for the Greater Memphis Area for the Period 1996-2010.



Linear trend lines indicate that, on average, both the regional-average design value (based on all four sites) and the regional-maximum design value (based on all four sites) decrease by approximately 1.25 ppb per year during this period. The confirms the overall downward trend despite that year-to-year differences in meteorology (and specifically prevailing wind directions) cause the location of the regional maximum value to vary from year to year.

All four sites show a clear downward trend in design value for the period, culminating with values near 75 ppb in 2010.

Previous studies such as the Arkansas-Tennessee-Mississippi Ozone Study (ATMOS) (Douglas et al., 2004) and the Crittenden County Ozone Study (CCOS) (Douglas et al., 2005), have indicated that the site with the maximum design value for the area varies from year to year based on the frequency of occurrence of meteorological conditions (primarily wind directions) that are conducive to high ozone at the specific sites. The CCOS study found that:

- ◆ High ozone days at the Frayser site are characterized, on average, by southerly or northwesterly surface winds (depending on the concentration level), and easterly to southwesterly winds aloft.
- ◆ High ozone days for Edmund Orgill Park have southerly wind components at all levels, and, on average, southerly to southwesterly winds at the surface and southeasterly to southwesterly winds aloft.
- ◆ High ozone days for the Marion site are characterized, on average, by southeasterly winds both near the surface and aloft. Certain of the high ozone days have easterly winds near the surface. Winds aloft also vary from southeasterly (to southwesterly or westerly) on certain of the higher ozone days.
- ◆ High ozone days for Hernando are clearly distinguished by northerly and easterly wind components. Surface winds range from northwesterly to northeasterly, while winds aloft are primarily from these same directions, but occasionally (especially on the highest ozone days) from the east or southeast.

Considering two consecutive design-value periods, a large percentage of days with wind from the northwest might result in the regional maximum value at the Frayser site for the first period, while a shift to more southwesterly winds during the next design value period might cause the location of

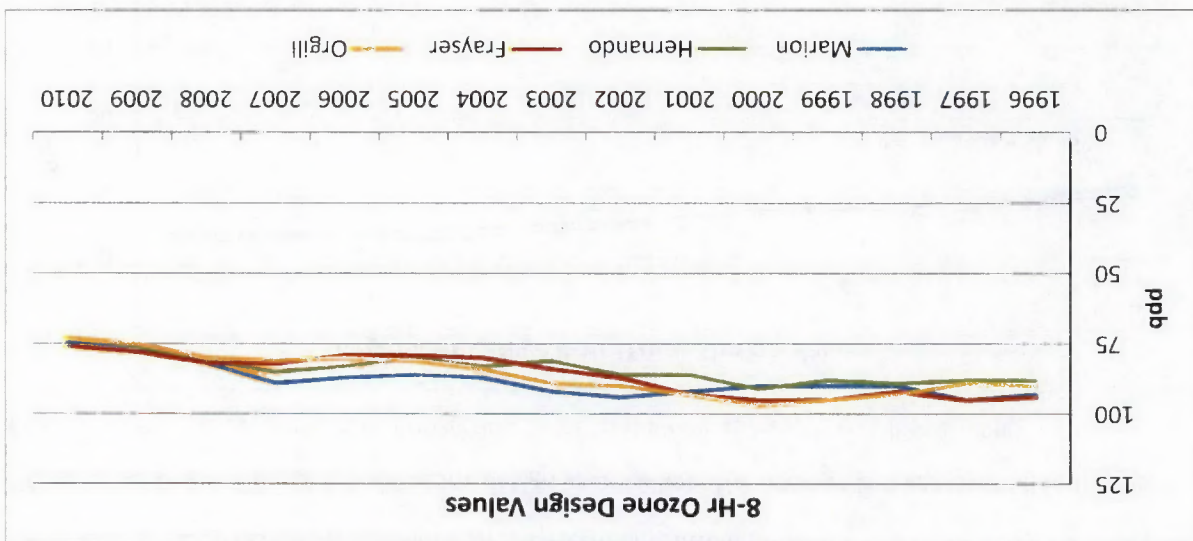


Figure 1. 8-Hour Ozone Design Values for Sites within the Greater Memphis Area for the Period 1996-2010.



MEMORANDUM

To: Kelly Jobe, Mark McCorkle, and Tony Davis, Arkansas DEQ
From: Sharon Douglas, Jay Haney, and Belle Hudischewskyj, ICF
Date: January 24, 2012
Re: 8-Hour Ozone Related Analyses

Analysis of 8-hour Ozone Design Value Trends

The 2008-2010 8-hour ozone design values for monitoring sites within the greater Memphis area are very close to the current National Ambient Air Quality Standard (NAAQS) of 75 ppb. The design values are 76 ppb for the Frayser monitoring site in Shelby County (TN), 74 ppb for the Marion monitoring site in Crittenden County (AR), and 73 ppb for both the Edmond Orgill Park monitoring site in Shelby County and the Hernando monitoring site in Desoto County (MS). The design value for a given monitor is the three-year average of the fourth highest daily maximum 8-hour average concentration for each of the three years. This metric was formulated to limit the effects of year-to-year variations in meteorology as well as unusual or infrequent meteorological or emissions conditions on attainment designations and attainment status.

With values so close to the NAAQS, however, year-to-year variations in meteorology can influence the designation of attainment. As an example, preliminary data indicate that the design values for 2009-2011 are 74, 77, 73, and 74 ppb for the Frayser, Marion, Orgill, and Hernando monitors, respectively (with the values for the Frayser and Marion sites giving a different outcome relative to attainment just one year later). In this case, given the potential confounding effects of year-to-year variations in meteorology, it is important to consider both current design values and longer-term trends in the determination of attainment/nonattainment.

The following analysis examines recent trends in design values for each of the monitors in the Memphis area and attempts to reconcile the trends in 8-hour ozone with known changes in emissions, both locally and regionally. This analysis focuses on the 15-year period 1996-2010.

Figure 1 displays the 8-hour ozone design values for each of the four monitoring sites in the Memphis area. The sites and counties are as follows: Marion (Crittenden County, AR), Hernando (Desoto County, MS), Frayser and Edmond Orgill Park (Shelby County, TN). Note that the design value for the Frayser monitor is the higher of the two values for Shelby County. The year indicated on the plot is the end year of the three-year design-value period.

measures, there are no additional benefits to be achieved by a new nonattainment designation. Designating Crittenden County, Arkansas as a nonattainment area for the 2008 NAAQS would serve no useful purpose.

Factor 5: Jurisdictional boundaries

Crittenden County, Arkansas was previously designated as a Targeted Economic Development Zone (TEDZ). At that time, ADEQ was required to demonstrate through photochemical modeling that the emissions from any new major facilities would not cause or contribute to either attainment or maintenance of the 1997 ozone standard. Since then, no new major sources have been sited in Crittenden County, AR.

Also since that time, total annual emissions of ozone precursor pollutants have decreased and ozone concentrations at the Marion monitor site, and all other sites in the CBSA, have been trending downward (see Fig. 2). It is apparent that emission reductions already being realized in Crittenden County, AR are resulting in improved air quality in the region.

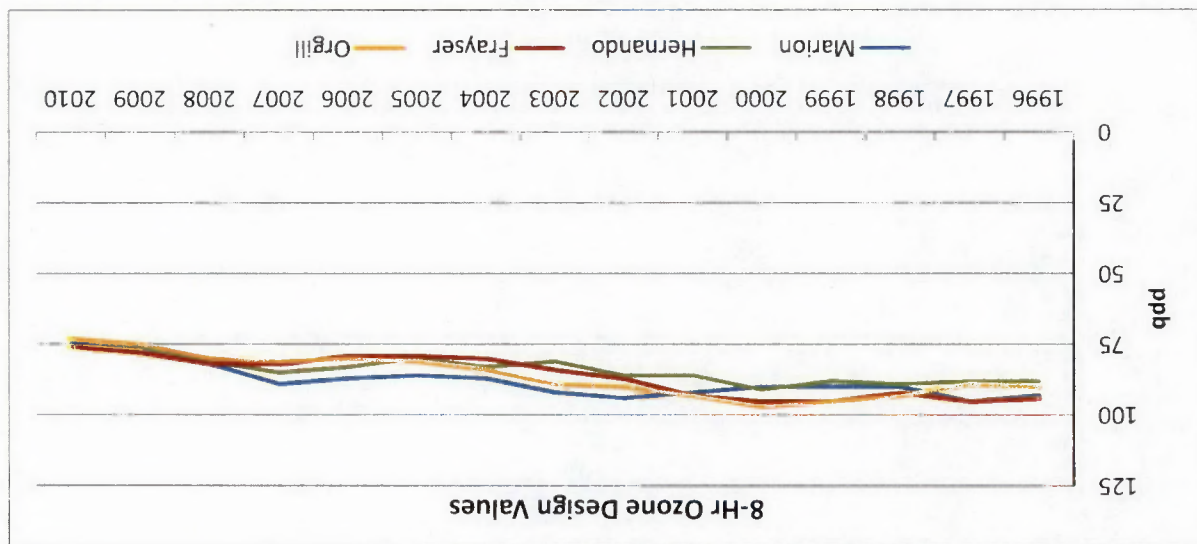


Figure 2

The major sources of ozone precursor emissions within the CBSA are located in the State of Tennessee. Table 3 in the EPA TSD clearly demonstrates this. The State of Arkansas has no authority to require either the State of Tennessee or Memphis/Shelby County, Tennessee, a jurisdiction with a local air quality control program, to implement any control measures that might be required to assure attainment and maintenance of the ozone NAAQS.

It is appropriate that Crittenden County, Arkansas be treated as a separate jurisdiction when considering its attainment status and any implications of nonattainment implementation. Its previous designation as a TEDZ and the fact that it was required to conduct its own Transportation Conformity demonstrations are examples of how it has been previously treated as a separate jurisdiction when required to address regional air quality issues.

Since Crittenden County, Arkansas is currently designated as a maintenance area for the 1997 ozone standard and has already been required to implement emission reduction and control

Factor 4: Geography and topography (mountain ranges or other basin boundaries)
EPA asserts that this factor "did not play a significant role in this evaluation." ADEQ has identified no relevant issues with respect to this factor.

Factor 3: Meteorology (weather/transport patterns)

With respect to monitored concentrations at the Frayser site, EPA has provided insufficient evidence of a significant contribution from Crittenden County. The analysis provided herein as an Appendix (Analysis of 8-Hour Ozone Design Value Trends – ICF International – Jan, 2011) describes how emissions from Crittenden County are unlikely to have a significant impact on the DV for the Frayser monitor. Note that Crittenden County lies to the west of the rest of the CBSA. As stated in the ICF memorandum:

For both periods considered, there is no apparently causal relationship between winds from the SW to the W and high ozone at the Frayser monitor. In fact, low wind speeds, easterly wind components (E to SSE winds), and/or northerly winds are more likely on ozone exceedance days compared to all days and appear to be a determining factor for ozone exceedances at this site.

The EPA TSD describes the use of historic meteorological data, primarily wind patterns, as a means of representing current contributions to nonattainment at the Frasier monitor. It does not consider the air quality of the air mass that might influence ozone concentrations at a particular monitoring site and does not account for emission reductions realized in the latest years analyzed.

The fact that an air mass passed through a portion of Crittenden County, AR prior to it arriving in the vicinity of the Frayser monitor site does not constitute a demonstration of significant contribution to a monitored exceedance. HYSPLIT modeling alone is insufficient evidence of a significant contribution. The EPA TSD acknowledges “back trajectories going back through Crittenden County, AR on only one out of 10 days” for the years 2008 – 2010. The ICF analysis provides additional analysis indicating that Crittenden County would influence Frayser monitor site ozone concentrations only infrequently and marginally.

AHTD: P&R: PAS: MCH 1/25/2012

2006-2010 5.1% increase in VMT

2000-2010 AAG=1.91% increase in VMT

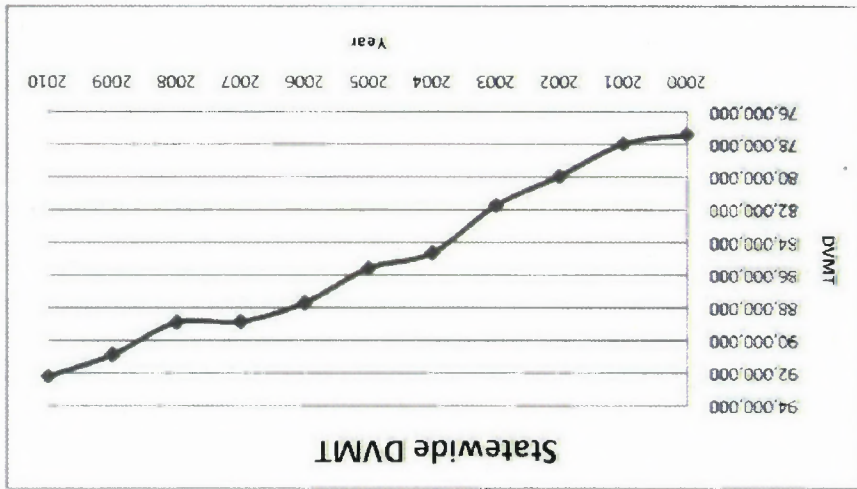


Chart 2

2006-2010 9.5% decrease in VMT

2000-2010 AAG=0.14% increase in VMT

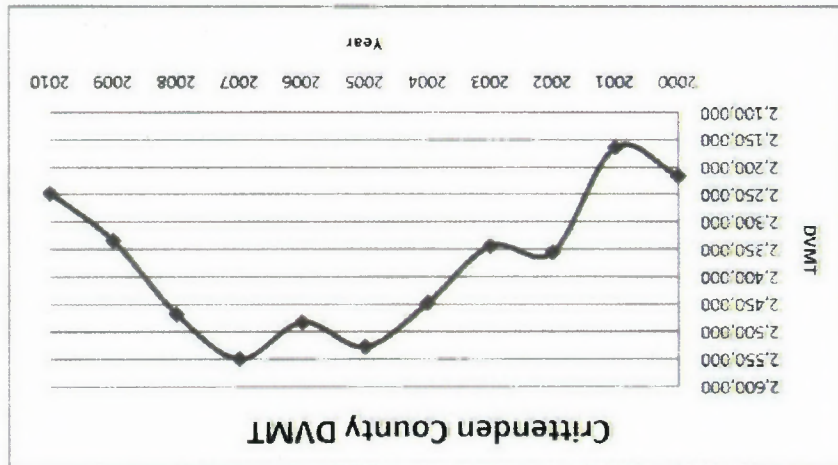


Chart 1

driving behavior in Crittenden County. Factors contributing to the decline in Crittenden County DVMT might include reduced commercial activity caused by a sluggish economy and a reduction in driving influenced by rising fuel prices. Charts 1 and 2 depict Crittenden County, Arkansas and state-wide VMT trends for the years 2000 – 2010.

but is mislabeled since it contains no information regarding commuting patterns. The latest available data from the U.S. Census Bureau (1980) shows that only about 10 percent of the population of Crittenden County, AR (~5000 - 6000 people) commutes to work in Shelby County, TN.

EPA states on P. 7 that "Crittenden County accounts for less than 10 percent of the CBSA VMT. The values in Table 5 show that Crittenden County accounts for less than 7 percent of the CBSA VMT. As can be visualized from the data contained in Figure 1, Mobile source NO_x emissions in Crittenden County, Arkansas are dominated by commercial vehicles and passenger vehicles that are passing through the county on the two interstate roadways that traverse it.

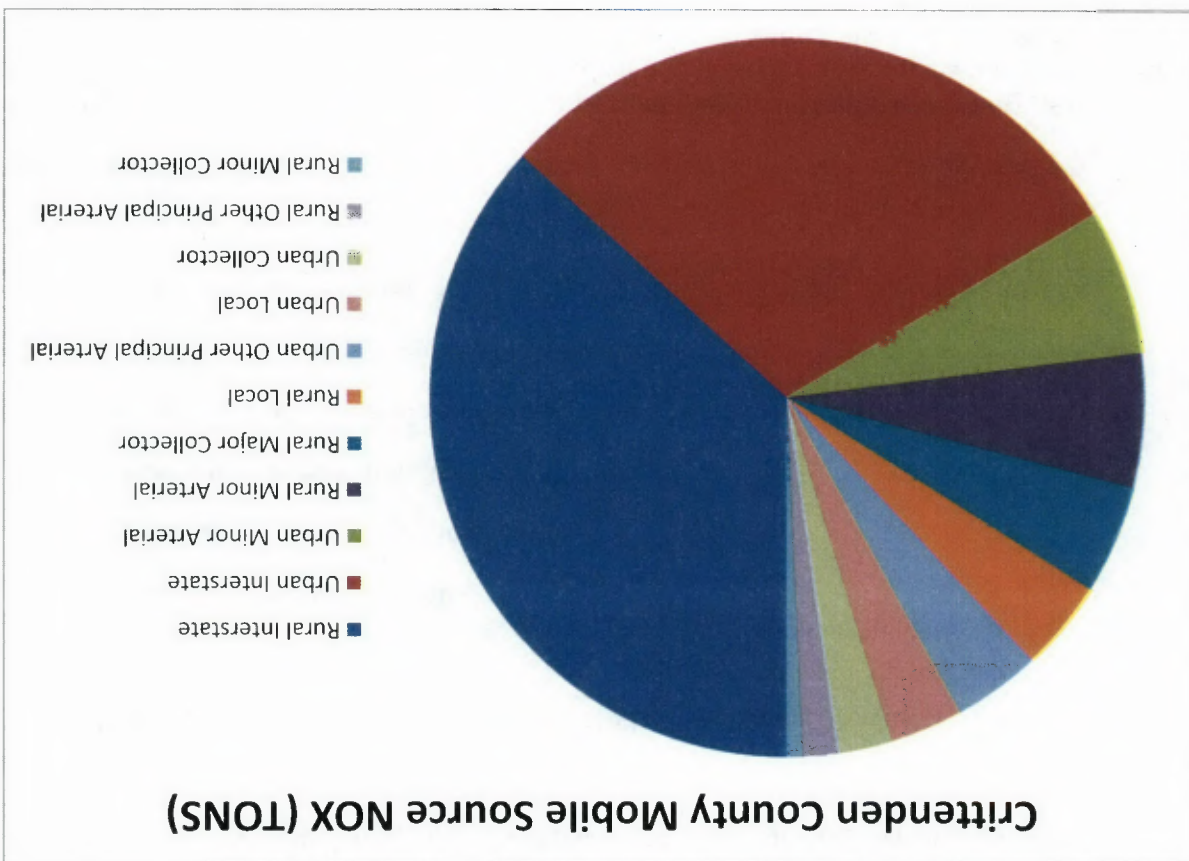


Figure 1

The Arkansas Highway and Transportation Department has provided an analysis comparing Daily Vehicle Miles Traveled (DMVT) in Crittenden County, AR to statewide totals for the years 2000 - 2010. Crittenden County DMVT peaked in 2007 at 2,500,000 and dropped to 2,250,000 in 2010. The 2010 DMVT for Crittenden County, AR is at the lowest level since 2001. Over the same period, the statewide DMVT trend has continued to rise. When compared to statewide trends, this regional decline in traffic may be indicative of factors that are influencing

The statement on P. 6 that "The emissions from Fayette and Tipton Counties in Tennessee and Marshall, Tate and Tunica Counties in Mississippi are not thought to contribute significantly to the violations of the 2008 ozone NAAQS that have been observed by monitors in Shelby County, Tennessee and Crittenden County Arkansas." is unsupported by analysis and misrepresents area-wide contributions.

While county-by-county emission totals and percentages show emissions in a relative sense, they do not, of themselves, indicate a significant contribution to nonattainment in an adjacent or nearby county.

emissions controls

Due to its previous nonattainment designation, most practically available emission controls are already in place in Crittenden County. Examples of programs already in place include:

Prevention of Significant Deterioration (PSD) New Source Review

Stage I Vapor Recovery

municipal fleet diesel retrofits

private-sector Truck Stop Electrification

Intelligent Transportation Systems

federal fuel and engine standards have reduced Crittenden County mobile emissions

federal fuel and engine standards have reduced Crittenden County non-road emissions

Transportation Conformity in the West Memphis Area Transportation Study area.

urban growth patterns

Column 6 of EPA's Table 4 represents the population change in Crittenden County as 0 percent. On P. 7 EPA states that Crittenden County "... had less than 1 percent population growth from 2000 - 2010 and contains only 4 percent of the CBSA population." Using the numbers in Table 4, the population of Crittenden County has actually declined by 1 percent.

Table 4 also indicates that there has been population growth in all other counties in the CBSA. DeSoto County, Mississippi has the highest actual population growth in the CBSA.

Ozone DVs in the CBSA have shown a downward trend, despite an overall increase in population of 107,854 in the period from 2000 - 2010.

On P. 7, EPA states that it has evaluated "... the commuting patterns of residents in the area..." but the TSD provides no documentation of any analysis of commuting activity that would support this statement. The title of EPA's Table 5 is labeled "Traffic and Commuting Patterns"

Factor 2: Emissions and Emissions-Related Data:**location of sources**

Memphis/Shelby County Tennessee emission sources dominate the area-wide emissions inventory. Arkansas has no control over the numerous emission sources in the Tennessee inventory. Sources in Tennessee account for 74 percent of the NO_x emissions and 71 percent of the VOC emissions in the CBSA.

A significant portion of the emissions inventory for Crittenden County, AR consists of emissions from agricultural activities. Many of these emissions sources are operated intermittently and should not be considered as contributing to typical ozone season daily emissions. Emissions from agricultural equipment are being reduced through federal programs requiring cleaner fuels and more efficient engines. Emissions from agricultural equipment in Crittenden County, Arkansas should continue to decline as new federal standards regulating non-road engines and fuels are implemented.

As evidenced by the information provided on Pgs. 5 – 8 and in Fig. 2 of the EPA TSD, Memphis/Shelby County, TN has the most potential for effective emission reductions.

location of population

Based on EPA analysis, 70 percent of the CBSA population resides in Shelby County, TN. The population of Crittenden County represents only 4 percent of the CBSA population. Crittenden County, Arkansas is primarily rural croplands and wetlands. As shown in Table 4 of the EPA TSD, the population of Crittenden County, Arkansas has actually decreased between 2000 and 2010. With the exception of West Memphis and Marion, the population density of Crittenden County is extremely low.

amount of emissions

On P. 5, EPA's TSD states that "Crittenden County contributes less than 10 percent of the precursor CBSA emissions." The actual contribution, based on the values in EPA's Table 3 is 7.5 percent. By generalizing, EPA's analysis overstates Crittenden County emissions by 2.5 percent. P. 6 of EPA's TSD states that "Both Crittenden County and DeSoto Counties have less than 1 percent of the entire area's NO_x and VOC emissions." Crittenden County, Arkansas continues to be subject to federal requirements for Prevention of Significant Deterioration (PSD). It is apparent that any Crittenden County point source emission reductions that would be mandated under a new nonattainment designation would have limited effectiveness.

Crittenden County NO_x and VOC emissions from all anthropogenic source categories (point, area, mobile and non-road) for 2008 have decreased from 2005 levels. This may well be a factor in the downward trend in ozone DVs that is described in Appendix A herein.

Weight of Evidence (WOE) analysis

Factor 1: Air Quality Data

EPA's Table 2 shows that Arkansas has recommended nonattainment for Crittenden County. While Arkansas originally recommended nonattainment when recommendations were first required, Arkansas is revising its recommendation to attainment/unclassifiable based on the 2010 DV of 74 ppb for the Marion monitor.

Tennessee has requested that EPA use its 2011 DVs (74 ppb) for designation purposes. The 2011 monitoring data for Arkansas monitors has yet to be certified as meeting quality assurance and control protocols and therefore, cannot be used for attainment designation purposes within Arkansas. Using 2011 DVs would cause the Marion monitor in Crittenden County, AR to have the highest estimated DV (77 ppb) in the CBSA. This would still result in nonattainment but would result in a higher DV being used for classification purposes. Basing a nonattainment designation on the DV of a primarily "downwind" monitor in an adjacent State in a CBSA where all other monitors are showing attainment would not be representative of the regional ozone formation and concentration dynamics.

the TSD attempts to assert that emissions, population and traffic patterns in Crittenden County, AR contribute to the DV of the Frayser monitor, the only indication of potential contributions that the EPA has asserted with any meaningful documentation is that prevailing winds occasionally pass through Crittenden County, AR. The TSD failed to document or elaborate in any way to show a correlation between winds patterns from Crittenden County, AR toward the violating monitor (Frayser) that establishes significant pollutant distribution that could be viewed as contributing to the exceedance of the NAAQS.

ICF International, a meteorological consulting firm, has provided ADEQ with an analysis that refutes the contention presented in the TSD by showing that Crittenden County, AR has only a marginal and infrequent influence on ozone concentrations recorded at the Frayser monitor site. The ICF memorandum is included as an Appendix herein.

The following discussion of the EPA TSD follows the structure of that document. Headings in bold type highlight the elements of the "5 factor analysis" that the EPA used to make preliminary determinations.

entirely in the 1997 ozone Memphis, TN-MS-AR nonattainment area and because Arkansas recommended inclusion of the county in its entirety.”

It should be noted that there is no regulatory justification for recommending the inclusion of a county in a nonattainment area based on its classification under a previous NAAQS.

Additionally, the rationale for inclusion of Crittenden County based on the previously submitted (2009) State recommendations significantly departs from EPA's publicly announced procedure for making preliminary designation determinations. The 2009 State recommendation should be considered only to the extent that the use of the 2008-2010 monitor data still indicates that a monitor show levels above the 2008 NAAQS.

As noted above, Arkansas is revising its recommendation based on the 2010 DV and is not recommending that Crittenden County, AR be designated as nonattainment.

Based on 2010 DVs for all ozone monitors located in the Memphis, TN-MS-AR CBSA, the only monitoring station that had a DV higher than the NAAQS was the Frayser monitor site in Memphis, Tennessee. ADEQ agrees that the EPA's stated intent to use 2010 DVs as the basis for designations is appropriate, especially since the 2010 DV would best represent the ozone concentrations experienced by the majority of the population in the densely urbanized portion of the Memphis area. Using 2010 DVs would also best represent monitoring in the vicinity of most of the major industrial and mobile sources of ozone precursor emissions in the Memphis area. Promulgated and proposed federal rules have projected near-future attainment in the Memphis area. Delays in implementation of the 2008 ozone NAAQS and other federally mandated programs have significantly impacted the ability of States to make progress in demonstrating regional attainment. Designating the area nonattainment for the 2008 standard would serve no useful purpose since it is likely, based on current trends further discussed herein, that the entire area will be attaining the standard in the near future.

In the TSD, EPA states that preliminary designations are based on:

Whether and which monitors are violating the 2008 ozone NAAQS with 2010 DVs.

and

Evaluation of whether nearby areas are contributing to violations.

Based on the above, Crittenden County, AR should not be designated nonattainment for the 2008 Ozone NAAQS not included in the nonattainment designation due to contribution to NAAQS violation. The 2010 DV for the ozone monitor located in Marion, AR did not violate the 2008 ozone NAAQS. Of the four ozone monitors located in the Memphis, TN-MS-AR Core Based Statistical Area (CBSA), only the Frayser monitor site, located in Memphis, TN, had a DV that exceeded the 2008 NAAQS.

The EPA TSD does not provide a scientifically defensible basis for its presumption that Crittenden County, AR contributes significantly to violations at the Frayser monitor site. While

Analysis of Environmental Protection Agency Technical Support Document

Arkansas Area Designations for the 2008 Ozone National Ambient Air Quality Standards

On December 9, 2011, the federal Environmental Protection Agency (EPA) sent a letter to the Honorable Mike Beebe, Governor of the State of Arkansas, describing a proposal to designate the attainment status of Arkansas counties with regard to the National Ambient Air Quality Standards (NAAQS) for ozone. Included with the letter as an enclosure, the EPA provided a Technical Support Document (TSD)¹ that describes the reasoning it used to arrive at preliminary designations. In that letter, the EPA stated its intent to designate Crittenden County, AR as being in nonattainment of the 2008 ozone NAAQS and all other counties in the State as unclassifiable/attainment. This document is prepared in response to the EPA TSD. It contains information intended to rebut the EPA proposal to designate Crittenden County, AR as nonattainment for the 2008 ozone NAAQS.

According to an EPA guidance memorandum (Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards – R. J. Meyers, Principal Assistant Administrator – 12/04/08), during its review of the State's recommended nonattainment designations, EPA is to consider / evaluate 9 factors when determining nonattainment area boundaries. The designation process for the 2008 ozone NAAQS has, by necessity, been altered somewhat from the traditionally followed process due to the reconsideration announced by EPA Administrator Lisa P. Jackson on 9/16/09, the proposal for an alternate "2008" standard and the ultimate decision on 09/22/11 to withdraw the proposed alternate standard and implement the original 2008 Standard. In the above-referenced letter to Governor Mike Beebe, EPA stated that it would make its preliminary designations decisions based on previously submitted State recommendations, modified as necessary, by the use of the most current certified quality assured/quality controlled data for the 2008 – 2010 time frame (unless the State "early certified" monitor data for 2011 and request the use of 2009 – 2011 data). Arkansas has not yet certified the 2011 ozone monitor data; therefore the monitor data for the years 2008-2010 must be utilized for attainment designation purposes.

Crittenden County, Arkansas is currently designated as a maintenance area for the 1997 ozone NAAQS. In 2009, Arkansas Governor Mike Beebe submitted a letter to EPA that included a designation recommendation of nonattainment for the 2008 ozone NAAQS for Crittenden County, AR. This recommendation was based on monitoring data that was recorded at the ozone monitoring station that is located in Marion, Arkansas for the years 2006 - 2008. Due to delays in implementation of the 2008 ozone NAAQS, as referenced above, this recommendation has become outdated. Based on ozone monitoring data collected at the Marion monitor site through 2010 (the last year for which quality-assured data has been provided to the EPA), Arkansas is now recommending that Crittenden County, Arkansas be designated as attainment for the 2008 ozone NAAQS. The 2010 Design Value (DV) for the Marion monitor is 74 ppb.

EPA states on page 11 of the TSD that it "... is proposing to include all of Crittenden County in the 2008 ozone Memphis, TN-MS-AR nonattainment area because the county was included in its

¹ ARKANSAS – Area Designations for the 2008 Ozone National Ambient Air Quality Standards (Dec. 2011)

Analysis of Environmental Protection Agency Technical Support Document
Arkansas Area Designations for the 2008 Ozone National Ambient Air Quality Standards

Arkansas Department of Environmental Quality
Air Division – Planning Branch

February 2012

Douglas, S. G., S. Beckmann, B. Hudischewskyj, and J. L. Haney. 2005. "Conceptual Description for 8-Hour for the Memphis Metropolitan Area." Prepared for the Arkansas Department of Environmental Quality. Prepared by ICF International, San Rafael, California (05-057).

EPA. 2011a. "The Benefits and Costs of the Clean Air Act from 1990 to 2020."

<http://www.epa.gov/oar/sect812/feb11/fullreport.pdf>.

EPA. 2011b. "Arkansas: Area Designations for the 2008 Ozone National Ambient Air Quality Standards."

<http://www.epa.gov/ozonedesignations/2008standards/state.htm>.



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

February 27, 2012

Gwendolyn Keyes Fleming
Regional Administrator
USEPA, Region IV
Sam Nunn Atlanta Federal Center, 12th Floor
61 Forsyth Street, SW
Atlanta, GA 30303

RE: TDEC Response to EPA Region 4 Dec. 8, 2011 Ozone Designations Letter

Dear Ms. Fleming:

In our letter dated November 8, 2011, the Tennessee Department of Environment and Conservation revised our March 10, 2009 recommendations for ozone nonattainment areas in Tennessee (2008 standard). Our revised recommendations were based on 2009-2011 data and requested nonattainment status only for those portions of Blount, Cocke, and Sevier Counties that are in the Great Smoky Mountains National Park.

Subsequent discussions between Region 4 and TDEC staff revealed that the 2011 monitoring data completeness requirements for the Knox County sites may not have been met. If the Knox County data is acceptable, we would like to limit the nonattainment area to that portion of Blount County that contains the Great Smoky Mountains National Park. If it is not acceptable, we present our revised nonattainment recommendations for the Knoxville area based on 2008-2010 data. Our revised recommendation for this area is as follows:

Blount, Knox, and Loudon Counties

That portion of Anderson County limited to the census tract(s) including the TVA Bull Run Fossil Plant (see attached)

Your December 8, 2011 letter indicated that you intend to designate Sevier County, all of Anderson County, and a portion of Cocke County nonattainment. However, Sevier County is considered a Micropolitan Statistical Area by itself, and both monitors in this county are

attaining the standard based on 2009-2011 data. Sevier County has very little industry, and the majority of volatile organic compound (VOC) and nitrogen oxide (NO_x) emissions are from mobile sources (greater than 90% of both pollutants). As an extremely popular tourist area, out-of-county vehicles are estimated to be responsible for a significant percentage of the vehicle miles traveled within the county.

If 2008-2010 data is used, we request only a partial nonattainment status for Anderson County. The TVA Bull Run Fossil Plant is by far the largest source of VOC and NO_x emissions in the county, and it is equipped with selective catalytic reduction for NO_x control. Since Anderson County is north of Loudon County and northwest of Blount and Knox Counties, and the winds are climatologically from the southwest, west-southwest, and south-southwest, we request that only the portion of Anderson County limited to the census tract(s) around the TVA facility be included in the nonattainment area. The monitor in Anderson County shows attainment for both 2008-2010 and 2009-2011.

Cocke County has no significant sources of VOC or NO_x and no ozone monitors. It is not adjacent to any counties with violating monitors, and should not be designated nonattainment simply because it contains a portion of the Great Smoky Mountains National Park.

Your December 8, 2011 letter also indicated that you intend to designate Shelby County as nonattainment. We believe Shelby County should be designated attainment for the reasons outlined below.

1. Both monitors in Shelby County are attaining the standard based on 2009-2011 data. The only non-attaining monitor in the Memphis Metropolitan Statistical Area is in Crittenden County Arkansas, which is west of Shelby County. The winds in this region are primarily from the south, southwest, and south-southwest, indicating that industries in Shelby County only infrequently impact the non-attaining monitor.
2. The western boundary of Shelby County is also the western boundary for the NO_x SIP Call. Shelby County has faithfully been implementing the requirements of the NO_x SIP Call and will implement whatever is required by the successor to the currently stayed Cross-State Air Pollution Rule. Two large power plants in the Arkansas counties just to the west of Shelby County are not subject to the NO_x SIP Call and have done little to help the area attain. Modeling performed by EPA or its contractors shows that Arkansas contributes 7.034 parts per billion to ozone in Tennessee.

If, however, you still intend to include Shelby County in the nonattainment area, we request that you designate only the census tracts including the city of Memphis and not the whole county. Seventy percent of the population of Shelby County reside within the city limits, and the majority of the point source VOC and NO_x emissions are generated within the city limits (see attachment).

More detail on each of the foregoing positions is set forth in the attached nine factor analysis. This nine factor analysis is consistent with EPA's December 4, 2008, memorandum from Robert J. Meyers, Principal Deputy Assistant Administrator, concerning "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards."

We appreciate the opportunity to provide input during this consultation process, and ask that you revise your initial determinations in accordance with this letter and the enclosed analysis. We welcome the opportunity to discuss these issues in further detail with you at your earliest convenience before final designations are made. Your favorable review of these recommendations will be appreciated. If you should have further questions, please do not hesitate to contact me personally or have your staff contact our air pollution control program director, Barry R. Stephens, P. E., at (615) 532-0525 or Barry.Stephens@tn.gov.

Sincerely,



Robert J. Martineau, Jr.
Commissioner

Enclosure: Nine-Factor Analysis

Copy to w/enclosures:

Stan Meiburg, EPA Deputy Regional Administrator
Beverly Banister, EPA Region IV
Carol Kemker, EPA Region IV
Scott R. Davis, EPA Region IV
Lynorae Benjamin, EPA Region IV



Tennessee Response to EPA's Suggested 8-Hour Ozone Standard
Nonattainment Area Designations
Nine-Factor Analysis

Executive Summary

On March 12, 2008, the U.S. Environmental Protection Agency promulgated the new ozone standard of 0.075 ppm. Pursuant to the Clean Air Act, states had one year from issuance of the new standard to recommend areas of the state as nonattainment or attainment with the new standard. Tennessee submitted its recommendations March 10, 2009, but the rule was subsequently stayed, proposed to be replaced, and re-validated. On November 8, 2011, Tennessee submitted its revised nonattainment recommendations based on preliminary 2009-2011 monitoring data. This technical summary document presents the State of Tennessee's response to EPA's letter dated December 8, 2011. All Tennessee counties are currently attaining the 1997 standard for ozone.

Our November 8, 2011 recommendations were for the entire state to be designated attainment with the exception of the partial counties of Blount, Cocke, and Sevier that comprise the Great Smoky Mountains National Park. Your December 8, 2011 letter stated your intention to designate Anderson, Blount, Knox, Loudon, Sevier, Shelby, and a portion of Cocke Counties as nonattainment.

Preliminary monitoring data for 2009-2011 shows that all monitors in the Knoxville MSA meet the 2008 standard with the exception of the Blount County monitor located at Look Rock in the Great Smoky Mountains National Park. We understand that the Knox County monitoring data for 2011 may not meet the data availability requirements, and 2008-2010 monitoring data must be used for designation purposes if it does not. Whichever data set is used, we would like to exclude Sevier and Cocke Counties from the designation area. Sevier County is a Micropolitan Statistical Area by itself, and the monitors in Sevier County measure attainment of the standard based on 2009-2011 monitoring data. Sevier County has very little industry, and the majority of volatile organic compound (VOC) and nitrogen oxide (NOx) emissions are from mobile sources (greater than 90% of both pollutants per the 2008 NEI). As an extremely popular tourist area, out-of-county vehicles are estimated to be responsible for a significant percentage of the vehicle miles traveled within the county. Cocke County is located northeast of Sevier County and east of Jefferson County. Only three sources in Cocke County reported for the 2008 NEI, with total NOx emissions of 26.4 tons and 89.1 tons of VOC. We had previously requested that only the portion of Cocke County containing the Great Smoky Mountains National Park be designated non attainment. If Sevier County is designated attainment, Cocke County will not be adjacent to any counties in the Knoxville nonattainment area, and we request that all of Cocke County be designated unclassifiable/attainment. We also request a partial nonattainment designation for Anderson County, limited to the census tracts contained in a 3.1 kilometer radius circle centered on the TVA Bull Run Fossil Plant (see Attachment 1). This facility is by far the largest source of VOC and NOx emissions in the county, and is equipped with selective catalytic reduction for NOx control. Anderson County is north of Loudon County and northwest of Blount and Knox Counties and the winds are primarily from the southwest, west-southwest, and south-southwest. Based on these factors, it is unlikely that TVA Bull Run Fossil Plant significantly impacts air quality in those counties.

If you determine that the 2011 monitoring data for Knox County is acceptable, we would like to modify our recommendation for designation to just the portion of Blount County that is part of the Great Smoky Mountains National Park, with the remaining counties in the MSA plus Sevier and Cocke Counties unclassifiable/attainment.

We also request that you reconsider your intention to designate Shelby County nonattainment. Shelby County is attaining the standard based on 2009-2011 monitoring data, with Crittenden County the only county in the metropolitan statistical area measuring nonattainment. Crittenden County is west of Shelby County, and the prevailing wind directions are from the south, southwest, and south-southwest. The

western boundary of Shelby County is also the western boundary for the NO_x SIP Call. Shelby County has faithfully been implementing the requirements of the NO_x SIP Call and will implement whatever is required by the successor to the currently stayed Cross-State Air Pollution Rule. Two large power plants in the Arkansas counties to the west of Shelby County are not subject to the NO_x SIP Call and have done little to help the area attain. See Attachment 2 for further discussion of the impact of neighboring EGUs on the failing Crittenden County monitor. Should the State of Arkansas fail to submit 2009-2011 monitoring data for Crittenden County, we request that EPA agree to evaluate Shelby County based on 2009-2011 data. The State of Tennessee has no control over the State of Arkansas and should not be penalized for their actions or their inaction.

The above recommendations are based on the Nine-Factor analysis, which was outlined in the EPA guidance dated December 4, 2008. The State of Tennessee evaluated the counties listed in your December 8, 2011 letter which we would like EPA to designate attainment rather than nonattainment. The following is our nine-factor analysis for these counties.

(1) Knoxville Metropolitan Statistical Area

Knoxville, TN Metropolitan Statistical Area (CBSA: 28940)

Principal Cities: Knoxville-Knox County, Oak Ridge-Anderson County, Maryville-Blount County
Anderson County, Blount County, Knox County, Loudon County, and Union County (in Tennessee)

The Knoxville, TN Metropolitan Statistical Area (hereinafter referred to as the Knoxville MSA) consists of 5 TN counties. The TAPCD is recommending that, should the Knox County 2011 monitoring data be deemed unacceptable, three counties be classified as nonattainment, one county be designated partial nonattainment, and one county be classified as attainment. The single attainment-designated county is Union. Union County is currently classified as attainment for the 1997 ozone standard and was not included in the 1997 ozone nonattainment area..

AFFECTED COUNTY SUMMARY

The following is a county-by-county summary of the factors that were considered in the inclusion/exclusion evaluation for the Knoxville MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Anderson County

- Recommendation: Attainment (2009-2011 monitoring data) OR Partial Nonattainment (2008-2010 monitoring data, Attachment 1).
- Air Quality Data: Anderson County has one ozone monitor (Freels Bend), and the preliminary design value for 2009-2011 is 0.070 ppm. Anderson County was included in the Knoxville nonattainment area for the 1997 ozone standard, and was designated attainment March 8, 2011.
- Emissions Data: The 2008 NEI shows 12,476 tons per year of NO_x and 3,569 tons per year of VOC from mobile and point sources. The majority (79.6%) of the NO_x emissions are from point sources; 20.4% from mobile sources. The majority of the VOC emissions (56.6%) are from mobile sources, with 43.4% from point sources. The TVA Bull Run Fossil Plant is the largest point source NO_x

emitter in the county, with 8,626.5 tons reported in the 2008 NEI. They have reduced their NO_x emissions significantly, however, reporting only 1,274.3 tons in 2009 and 1,224.6 tons in 2010. The next highest point source for NO_x emissions is the Chestnut Ridge Landfill, reporting 109.6 tons in 2008.

- Population density and degree of urbanization: 75,129 people (2010) and 222 people per square mile
- Traffic and commuting patterns: 2,147,996 DVMT in 2010
- Growth rates and patterns: The population grew 5.3% between 2000 and 2010. The DVMT decreased by 7.6 % between 2005 and 2010.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Cumberland Plateau covers the western portion and Ridge and Valley topography covers the eastern portion of the county.
- Jurisdictional boundaries: The census tracts that include the TVA Bull Run Fossil Plant.
- Level of control of emission sources: Five sources in the county reported for the 2008 NEI. They are: TVA-Bull Run Fossil Plant, U.S. DOE Y-12, Carlisle Tire and Wheel Company, Chestnut Ridge Landfill, and Rogers Group. TVA-Bull Run utilizes an SCR for NO_x emissions. U.S. DOE Y-12 replaced their coal-fired boilers with natural gas fired boilers (#2 Fuel oil as backup) in 2010. The boilers have a total NO_x limit of 81 TPY. Carlisle Tire and Wheel Company has a VOC PAL permit with a limit of 267.24 TPY. 49.4 TPY of NO_x is allowed from the boilers at Carlisle (primarily natural gas, #2 fuel oil backup), and they reported 9.4 TPY for 2008. Chestnut Ridge Landfill operates a gas collection and control system. The collected gas is routed to either one or more open utility flares or a treatment system at the on-site gas plant. Treated landfill gas is used at the four internal combustion engines. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. There is currently no I/M program for mobile emissions. Stage I vapor recovery is required for gasoline dispensing facilities.

(2) Sevierville Micropolitan Statistical Area

Sevierville, TN Micropolitan Statistical Area (CBSA: 42940)
Principal Cities: Gatlinburg, Pigeon Forge, and Sevierville
Sevier County (in Tennessee)

The Sevierville, TN Micropolitan Statistical Area (hereinafter referred to as the Sevierville MiSA) consists of one TN County. The TAPCD is recommending that this county be classified as attainment.

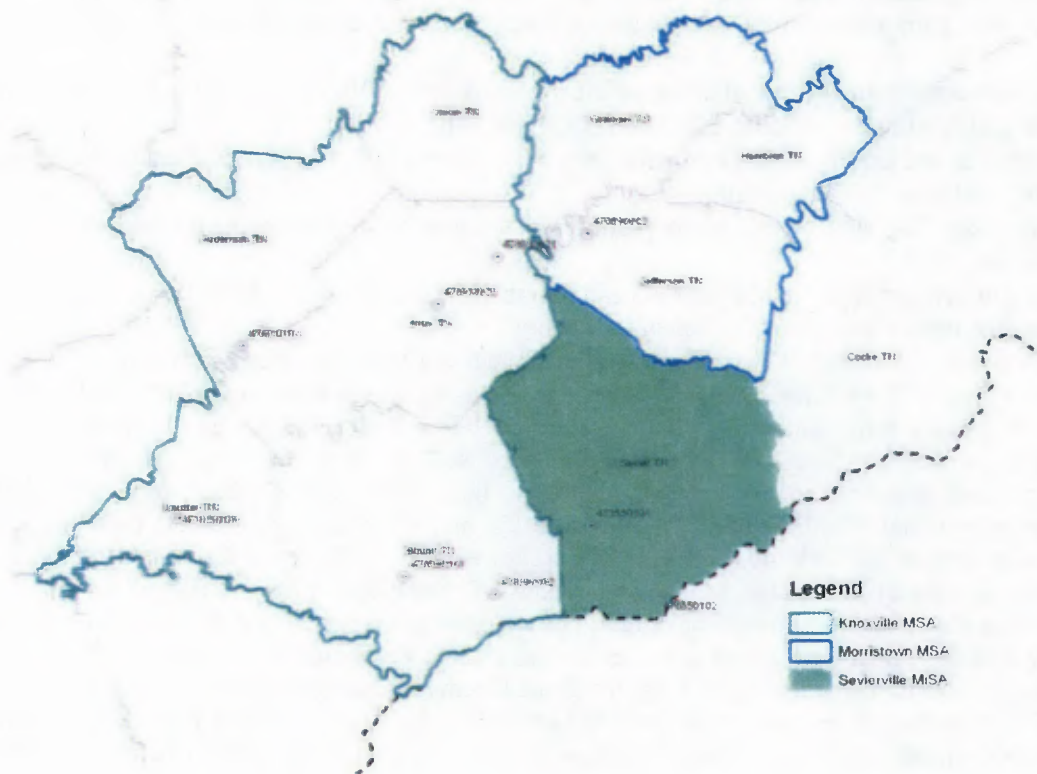


Figure 1 – Sevierville MiSA

Sevierville MiSA:

COUNTY SUMMARY

The following is a summary of the factors that were considered in the exclusion evaluation for the Sevierville MiSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns (“connectivity”), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Sevier County

- **Recommendation:** Attainment.
- **Air Quality Data:** Sevier County has two ozone monitors, both in the Great Smoky Mountains National Park. They are located at Cove Mountain and Clingmans Dome, and both have preliminary 2009-2011 design values of 0.075 ppm. Sevier County was included in the Knoxville nonattainment area for the 1997 ozone standard, and was designated attainment March 8, 2011.
- **Emissions Data:** The 2008 NEI shows 2,602 tons per year of NO_x and 2,272 tons per year of VOC from mobile and point sources. The majority (90.2%) of the NO_x emissions are from mobile sources;

9.8% from point sources. The majority of the VOC emissions (78.4%) are from mobile sources, with 21.6% from point sources.

- Population density and degree of urbanization: 89,889 people (2010) and 152 people per square mile. Sevier County one of the most popular tourist areas in Tennessee.
- Traffic and commuting patterns: 3,566,986 DVMT for 2010
- Growth rates and patterns: The population grew 26.3% between 2000 and 2010. The DVMT grew 9.6% between 2005 and 2010.
- Meteorology: The winds are climatologically from the southwest, west-southwest, and south-southwest.
- Geography/topography: Developing tourist area (Gatlinburg, Pigeon Forge). Ridge and Valley topography covers the western portion and Unaka Smoky Mountains cover the eastern portion of the state. The Great Smokies National Park (GSMNP) area is located across several counties in Tennessee and North Carolina, including Sevier County.
- Jurisdictional boundaries: Entire County by itself.
- Level of control of emission sources: One point source, East Tennessee Natural Gas Company, reported for the 2008 NEI. Reported NO_x emissions were 25 TPY, and allowable NO_x emissions are 108 TPY. The turbines use natural gas only. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control. Stage I vapor recovery is required for gasoline dispensing facilities. The GSMNP is a federally controlled enclave within each of the two respective states.

(3) Newport, TN

Cocke County Summary

Cocke County is not part of an MSA or MiSA.

Principal City: Newport

COUNTY SUMMARY

The following is a summary of the factors that were considered in the exclusion evaluation for the Cocke 8-hour ozone attainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

- Recommendation: Attainment
- Air Quality Data: No ozone monitors are located in Cocke County. The portion of Cocke County containing the Great Smoky Mountains National Park was included in the Knoxville nonattainment area for the 1997 ozone standard, and was designated attainment March 8, 2011.
- Emissions Data: The 2008 NEI shows 1,761 tons per year of NO_x and 5,399 tons per year of VOC from mobile and point sources. The majority (90.4%) of the NO_x emissions are from mobile sources; 9.6% from point sources. The majority of the VOC emissions (69.5%) are from mobile sources, with 30.5% from point sources.

- Population density and degree of urbanization: 35,662 people (2010) and 82 people per square mile.
- Traffic and commuting patterns: 1,233,802 DVMT for 2010
- Growth rates and patterns: The population grew 6.2% between 2000 and 2010. The DVMT decreased by 3.1 % between 2005 and 2010.
- Meteorology: Winds are primarily from the southwest during the day and the northeast at night.
- Geography/topography: The county has a total area of 443 square miles (1,147.4 km²), of which 434 square miles is land and 9 square miles (1.97%) is water. The county's highest point is Old Black at 1,942 meters (6,370 ft). The Great Smokies National Park (GSMNP) area is located across several counties in Tennessee and North Carolina, including Cocke County.
- Jurisdictional boundaries: The entire county by itself.
- Level of control of emission sources: Three emission sources reported in the 2008 NEI, and only two reported NO_x emissions. They reported 23.4 TPY and 3 TPY. Sonoco Paper Products Company has an allowable of 73 tons per year of NO_x, and SI Group has an allowable of 71 tons per year of NO_x. Since 2005, the TAPCD requires the application of low NO_x burner (LNB) technology at new and certain modified sources for NO_x control.

(4) Memphis, TN-MS-AR Metropolitan Statistical Area

Principal Cities: Memphis-Shelby County
Shelby County, Fayette County, Tipton County (in Tennessee)

The Memphis, TN-MS-AR Metropolitan Statistical Area (hereinafter referred to as the Memphis MSA) includes 3 TN counties, DeSoto County in Mississippi, and Crittenden County in Arkansas. The City of Memphis is the center of the Memphis MSA. It also contains the city of West Memphis (in Arkansas). The Tennessee Division of Air Pollution Control (TAPCD) recommends that all Tennessee counties be classified as attainment. Both ozone monitors in Shelby County show preliminary design values for 2009-2011 data (0.073 ppm and 0.074 ppm) that meet the new ozone standard. Fayette and Tipton counties are primarily rural and do not have ozone monitors.

Memphis MSA:

COUNTY SUMMARY

The following is a summary of the factors that were considered in the exclusion evaluation for the Memphis MSA 8-hour ozone nonattainment area. These factors include precursor emissions, air quality data, population, urbanization, commuter/traffic patterns ("connectivity"), meteorology, growth, and jurisdictional boundaries. All factors in the applicable EPA guidance were considered.

Shelby County

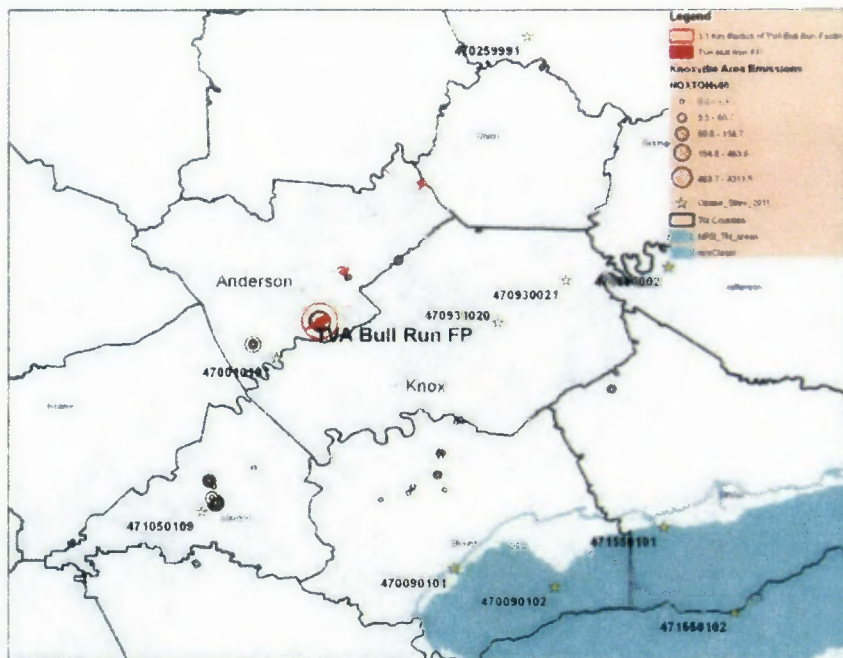
- Recommendation: Attainment
- Jurisdictional boundaries: Entire county by itself (attainment) OR the City of Memphis (nonattainment). 70% of the population of Shelby County resides in the Memphis city limits. See Attachments 2 and 3 for maps showing the Memphis City Limits and the NO_x and VOC sources in Shelby County and the EGU analysis.

- **Air Quality Data:** There are a total of four ozone monitors in the Memphis, TN-MS-AR Metropolitan Statistical Area, of which two are in Shelby County, one in DeSoto County (MS), and one in Crittenden County (AR). Preliminary data for both ozone monitors in Shelby County and the monitor in DeSoto County show design values for 2009-2011 data that are less than the new standard of 0.075 ppm. Preliminary data for the monitor in Crittenden County Arkansas shows a design value for 2009-2011 data that is greater than the new standard of 0.075 ppm. Shelby County and Crittenden County were classified as nonattainment for the 1997 ozone standard, and were designated attainment with that standard on January 4, 2010.
- **Emissions Data:** The 2008 NEI shows 39,519 tons per year of NO_x and 27,930 tons per year of VOC from mobile and point sources. The majority (69.7%) of the NO_x emissions are from mobile sources; 30.3% from point sources. The majority of the VOC emissions (54.6%) are from mobile sources, with 45.4% from point sources.
- **Population density and degree of urbanization:** 927,644 people (2010) and 1,229 people per square mile.
- **Traffic and commuting patterns:** 23,353,266 DVMT for 2010
- **Growth rates and patterns:** The population grew 3.4% between 2000 and 2010. The DVMT decreased 5% between 2005 and 2010.
- **Meteorology:** The winds are climatologically from the south, southwest, and south-southwest.
- **Geography/topography:** Most of Shelby County is located in the West Tennessee Plain Geographic Region. The topography of this West Tennessee Plain is a relatively flat terrain that slopes gently westward to the Mississippi River floodplain. A small north-south strip of the County is located in the Mississippi Alluvial Valley Region.
- **Level of control of emission sources:** There are 30 point sources in Shelby County that reported for the 2010 NEI. One of those sources permanently shut down in 2010, and another permanently shut down in 2011. The TVA Allen Steam Plant has selective catalytic reduction for control of nitrogen oxide emissions. Cargill uses low NO_x burners, fuel use limitations, and heat input restrictions. DuPont has fuel use restrictions. Valero uses low NO_x burners and fuel usage limitations, among other things. Regulations have been implemented that control VOC emissions from point sources. The City of Memphis requires OBD testing of motor vehicles. Stage I vapor recovery is required for gasoline dispensing facilities.

Summary: The TAPCD recommends that Shelby County be designated as attainment for Ozone.

Attachment 1
Proposed Anderson County Partial Designation
Census Tract Information

Proposed Anderson County Partial Designation 3 Kilometer Radius

2008 NO_x2010 NO_x

Note that the additional red properties in Anderson County are owned by TVA but are not part of the TVA Bull Run Fossil Plant.

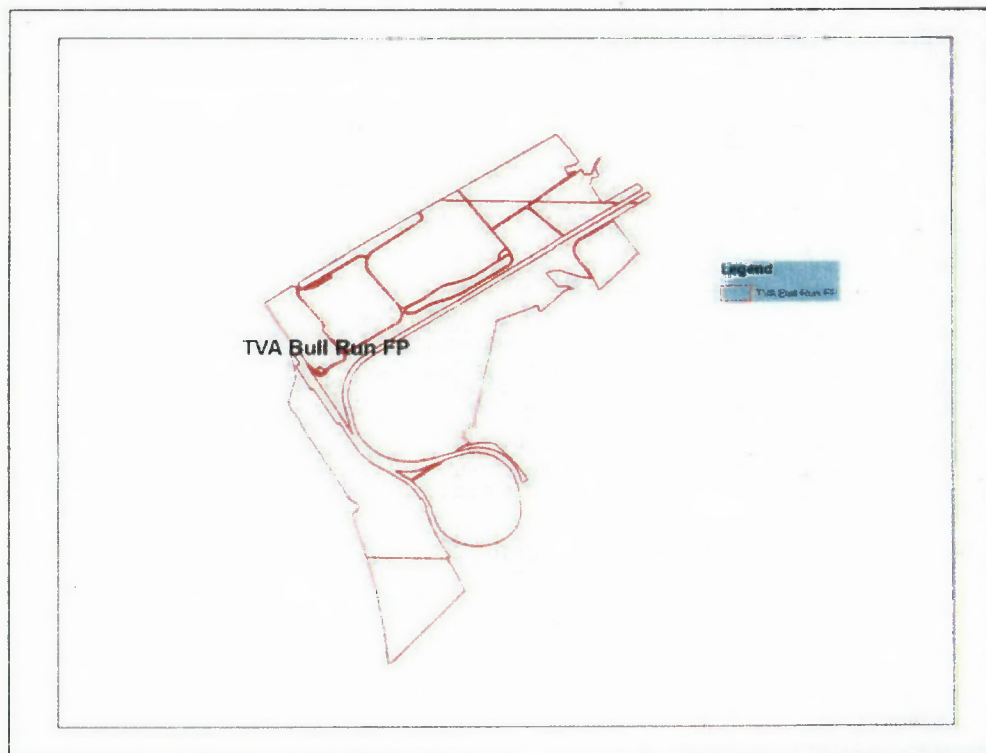
Close-Up of the Anderson County 3 Kilometer Radius Around TVA Bull Run



Partial Anderson County nonattainment area consisting of a 3.1 Km radius circle centered on the TVA Bull Run FP with a center of 36.021 latitude, -84.156 longitude.

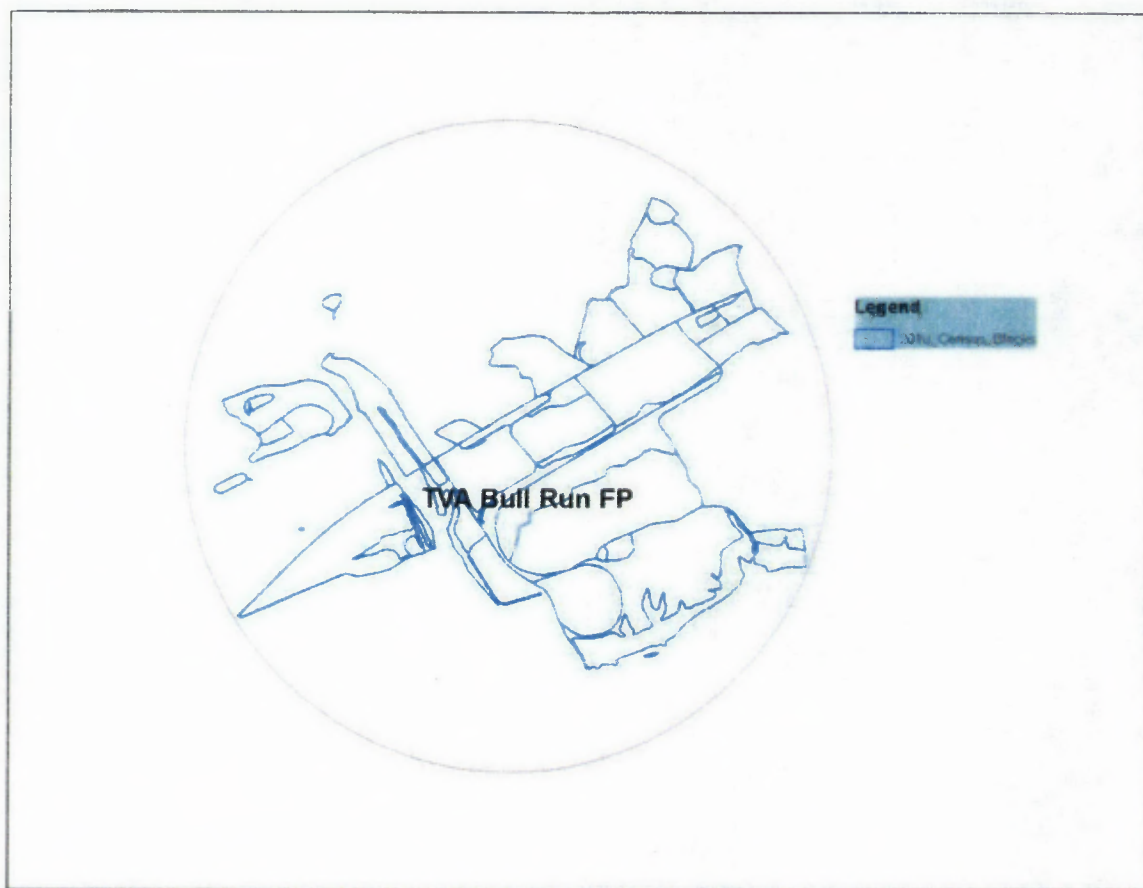
Parcel Information	
COUNTY_ID	1
CALC_ACRE	674.4899902
SHAPE_AREA	4853719.298
PARCELID	A001101 00900 000101 CA
ID	101 009.00
ST_NUM	
STREET	BULL RUN
ADDRESS	BULL RUN
OWNER	TVA
PROPTYPE	4
PT	04 FEDERAL
UPDSORT	20050412
UPDATED	4/12/2005

Table 1 TVA Bull Run Parcel Details



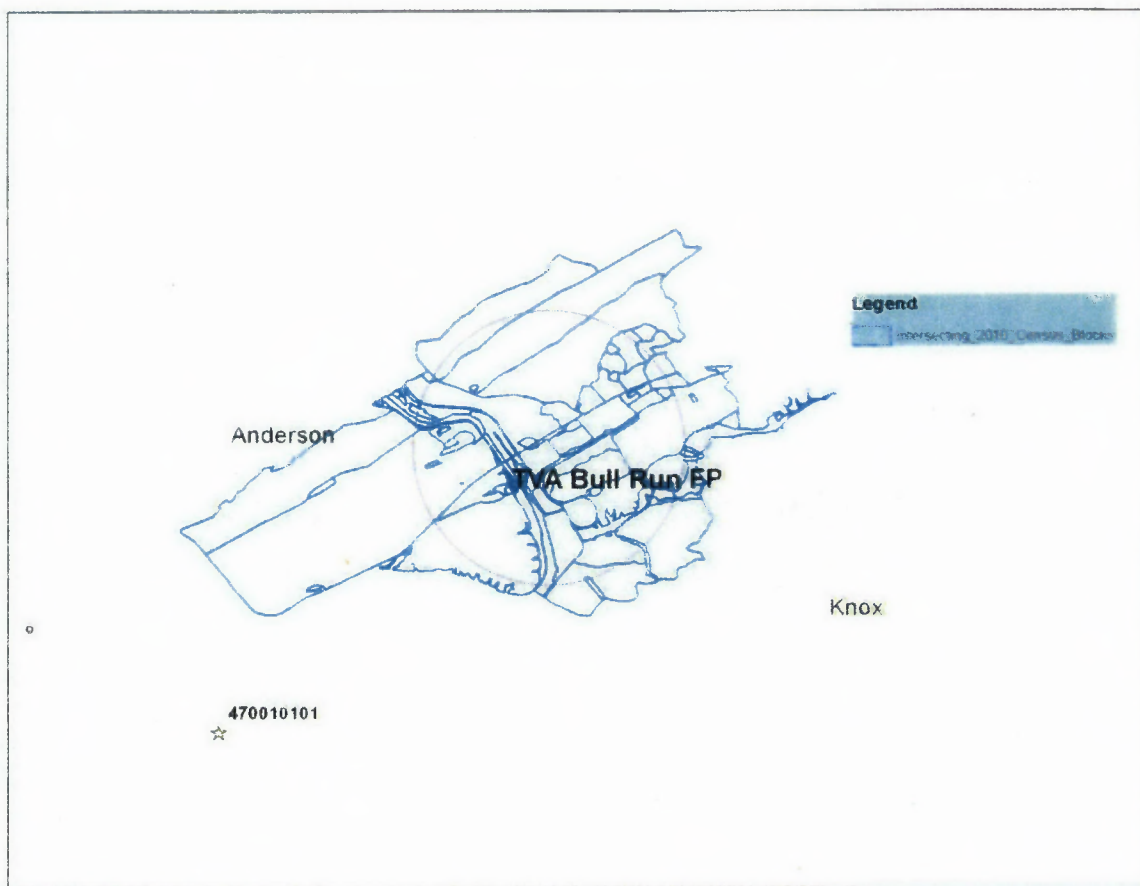
BLOCKID	TOTAL POP	STATE	COUNTY	TRACT	NAME	AREA LAND
470010202011002	0	47	1	20201	Block 1002	12647
470010202011003	0	47	1	20201	Block 1003	584278
470010202011004	0	47	1	20201	Block 1004	0
470010202011005	0	47	1	20201	Block 1005	0
470010202011006	0	47	1	20201	Block 1006	12857
470010202011008	167	47	1	20201	Block 1008	251436
470010202011009	0	47	1	20201	Block 1009	515
470010202011026	0	47	1	20201	Block 1026	261
470010202011027	131	47	1	20201	Block 1027	133627
470010202011029	15	47	1	20201	Block 1029	22879
470010202011030	2	47	1	20201	Block 1030	992
470010202011033	39	47	1	20201	Block 1033	34924
470010202011066	21	47	1	20201	Block 1066	20879
470010213011004	6	47	1	21301	Block 1004	15974
470010213011005	0	47	1	21301	Block 1005	302
470010213021002	50	47	1	21302	Block 1002	174876
470010213021006	56	47	1	21302	Block 1006	253174
470010213021007	21	47	1	21302	Block 1007	39472
470010213021010	5	47	1	21302	Block 1010	47836
470010213021017	0	47	1	21302	Block 1017	5721
470010213021018	74	47	1	21302	Block 1018	241849
470010213021019	42	47	1	21302	Block 1019	202221
470010213021020	0	47	1	21302	Block 1020	461
470010213021021	0	47	1	21302	Block 1021	0
470010213021022	0	47	1	21302	Block 1022	13564
470010213021023	29	47	1	21302	Block 1023	205739
470010213021024	36	47	1	21302	Block 1024	34760
470010213021025	0	47	1	21302	Block 1025	2037
470010213023025	0	47	1	21302	Block 3025	0
470010213023041	21	47	1	21302	Block 3041	57078
470010213024011	14	47	1	21302	Block 4011	163632
470010213024015	114	47	1	21302	Block 4015	894796
470010213024016	0	47	1	21302	Block 4016	183888
470010213024017	0	47	1	21302	Block 4017	5116
470010213024018	0	47	1	21302	Block 4018	42948
470010213024019	47	47	1	21302	Block 4019	553145
470010213024020	142	47	1	21302	Block 4020	67820
470010213024021	67	47	1	21302	Block 4021	16060
470010213024022	16	47	1	21302	Block 4022	10327
470010213024023	135	47	1	21302	Block 4023	47703
470010213024024	0	47	1	21302	Block 4024	355
470010213024025	142	47	1	21302	Block 4025	751634
470010213024026	0	47	1	21302	Block 4026	0
470010213024027	36	47	1	21302	Block 4027	41112
470010213024028	9	47	1	21302	Block 4028	9241
470010213024029	2	47	1	21302	Block 4029	491285
470010213024030	0	47	1	21302	Block 4030	330483
470010213024031	0	47	1	21302	Block 4031	65120
470010213024032	0	47	1	21302	Block 4032	3721
470010213024033	0	47	1	21302	Block 4033	1268
470010213024034	0	47	1	21302	Block 4034	59715
470010213024035	0	47	1	21302	Block 4035	284982
470010213024037	0	47	1	21302	Block 4037	0
470010213024038	0	47	1	21302	Block 4038	67105
470010213024039	0	47	1	21302	Block 4039	92461
470010213024040	0	47	1	21302	Block 4040	0
470010213024042	0	47	1	21302	Block 4042	5758
470010213024044	0	47	1	21302	Block 4044	2044
470010213024047	0	47	1	21302	Block 4047	312283

Table 2 Census Block Population and Area Within 3.1 Km Radius Area



BLOCKID	TOTAL POP	STATE	COUNTY	TRACT	NAME	AREA LAND
470010202011000	0	47	1	20201	Block 1000	0
470010202011001	0	47	1	20201	Block 1001	0
470010202011002	0	47	1	20201	Block 1002	12647
470010202011003	0	47	1	20201	Block 1003	584278
470010202011004	0	47	1	20201	Block 1004	0
470010202011005	0	47	1	20201	Block 1005	0
470010202011006	0	47	1	20201	Block 1006	12857
470010202011007	0	47	1	20201	Block 1007	94478
470010202011008	167	47	1	20201	Block 1008	251436
470010202011009	0	47	1	20201	Block 1009	515
470010202011013	17	47	1	20201	Block 1013	3854364
470010202011023	377	47	1	20201	Block 1023	9524633
470010202011026	0	47	1	20201	Block 1026	261
470010202011027	131	47	1	20201	Block 1027	139627
470010202011029	15	47	1	20201	Block 1029	22879
470010202011030	2	47	1	20201	Block 1030	992
470010202011033	59	47	1	20201	Block 1033	34924
470010202011053	33	47	1	20201	Block 1053	3614940
470010202011066	21	47	1	20201	Block 1066	20879
470010213011002	286	47	1	21301	Block 1002	3975067
470010213011004	6	47	1	21301	Block 1004	15974
470010213011005	0	47	1	21301	Block 1005	302
470010213011007	140	47	1	21301	Block 1007	2443731
470010213021000	391	47	1	21302	Block 1000	3689597
470010213021002	50	47	1	21302	Block 1002	174876
470010213021003	77	47	1	21302	Block 1003	331548
470010213021004	84	47	1	21302	Block 1004	202592
470010213021006	56	47	1	21302	Block 1006	253174
470010213021007	21	47	1	21302	Block 1007	39472
470010213021009	204	47	1	21302	Block 1009	1642448
470010213021010	5	47	1	21302	Block 1010	47836
470010213021011	0	47	1	21302	Block 1011	40011
470010213021012	0	47	1	21302	Block 1012	59694
470010213021013	0	47	1	21302	Block 1013	0
470010213021014	0	47	1	21302	Block 1014	105441
470010213021015	0	47	1	21302	Block 1015	0
470010213021017	0	47	1	21302	Block 1017	5721
470010213021018	74	47	1	21302	Block 1018	241849
470010213021019	42	47	1	21302	Block 1019	202221
470010213021020	0	47	1	21302	Block 1020	461
470010213021021	0	47	1	21302	Block 1021	0
470010213021022	0	47	1	21302	Block 1022	13564
470010213021023	29	47	1	21302	Block 1023	205739
470010213021024	36	47	1	21302	Block 1024	34760
470010213021025	0	47	1	21302	Block 1025	2037
470010213022029	49	47	1	21302	Block 2029	245256
470010213023022	0	47	1	21302	Block 3022	0
470010213023023	21	47	1	21302	Block 3023	144190
470010213023024	21	47	1	21302	Block 3024	159569
470010213023025	0	47	1	21302	Block 3025	0
470010213023026	0	47	1	21302	Block 3026	0
470010213023028	114	47	1	21302	Block 3028	459301
470010213023029	13	47	1	21302	Block 3029	33132
470010213023031	151	47	1	21302	Block 3031	1888579
470010213023032	20	47	1	21302	Block 3032	90873
470010213023041	21	47	1	21302	Block 3041	57078
470010213024008	350	47	1	21302	Block 4008	2494469
470010213024011	14	47	1	21302	Block 4011	169692
470010213024012	129	47	1	21302	Block 4012	165915
470010213024013	19	47	1	21302	Block 4013	52962
470010213024015	114	47	1	21302	Block 4015	894796
470010213024016	0	47	1	21302	Block 4016	183888
470010213024017	0	47	1	21302	Block 4017	5116
470010213024018	0	47	1	21302	Block 4018	42948
470010213024019	47	47	1	21302	Block 4019	559145
470010213024020	142	47	1	21302	Block 4020	67820
470010213024021	67	47	1	21302	Block 4021	16060
470010213024022	16	47	1	21302	Block 4022	10327
470010213024023	135	47	1	21302	Block 4023	47703
470010213024024	0	47	1	21302	Block 4024	355
470010213024025	142	47	1	21302	Block 4025	751694
470010213024026	0	47	1	21302	Block 4026	0
470010213024027	36	47	1	21302	Block 4027	41112
470010213024028	9	47	1	21302	Block 4028	9241
470010213024029	2	47	1	21302	Block 4029	491285
470010213024030	0	47	1	21302	Block 4030	330483
470010213024031	0	47	1	21302	Block 4031	65120
470010213024032	0	47	1	21302	Block 4032	3721
470010213024033	0	47	1	21302	Block 4033	1268
470010213024034	0	47	1	21302	Block 4034	59715
470010213024035	0	47	1	21302	Block 4035	284982
470010213024036	0	47	1	21302	Block 4036	804097
470010213024037	0	47	1	21302	Block 4037	0
470010213024038	0	47	1	21302	Block 4038	67105
470010213024039	0	47	1	21302	Block 4039	92461
470010213024040	0	47	1	21302	Block 4040	0
470010213024041	0	47	1	21302	Block 4041	0
470010213024042	0	47	1	21302	Block 4042	5758
470010213024043	124	47	1	21302	Block 4043	729124
470010213024044	0	47	1	21302	Block 4044	2044
470010213024045	176	47	1	21302	Block 4045	1471062
470010213024046	64	47	1	21302	Block 4046	52090
470010213024047	0	47	1	21302	Block 4047	312283

Table 3 Census Block Population and Area Intersecting 3.1 Km Radius Area



Attachment 2

EGU Contributions to Nonattaining Crittenden County Monitor

Acid Rain Program 2010 emissions data were reviewed for electricity generating units (EGUs) in Tennessee, Kentucky, Arkansas, Mississippi, and Missouri to determine if there was a difference in the level of control for each State (Table 1). While some differences were observed between the highest (Arkansas and Kentucky) and lowest Statewide emission rates (Missouri and Tennessee), significant differences were not observed from the Statewide data.

Table 1: Ozone Season NO _x Emissions by State (2010 ARP Data) Ranked by NO _x Emission Rate				
State	Year	NO _x Emissions (tons)	Heat Input (MMBtu)	NO _x Emission Rate (lb/MMBtu)
AR	2010	18,300	197,408,060	0.19
KY	2010	39,030	431,731,520	0.18
MS	2010	16,088	205,331,109	0.16
MO	2010	25,467	357,643,413	0.14
TN	2010	14,469	209,233,087	0.14

While the level of control appeared to be similar for all States, significant variation was observed for individual EGUs within the region (Table 2). Specifically, two large Arkansas EGUs (White Bluff and Independence) were identified, and review of a map suggested that both facilities were within 100-150 miles of Crittenden County. When facility locations were plotted against a back-trajectory analysis for the three worst days¹ from 2009 – 2011 (Figure 1), both facilities located along the 2,500 meter back-trajectory line for July 11, 2010. The back-trajectory analysis indicated additional large EGUs (Figure 2) located on or near the back-trajectory lines, and these facilities were also noted as potential NO_x contributors to the Crittenden County monitor. Finally, the Acid Rain Program data indicated multiple facilities that did not lie along the back-trajectory lines, but whose emissions and/or proximity could contribute to regional transport of NO_x at the violating monitor.

Table 2: Ozone Season NO _x Emissions for Selected Facilities (2010 ARP Data) Ranked by Total NO _x Emissions			
State	Facility	NO _x Emissions (tons)	NO _x Emission Rate (lb/MMBtu)
AR	White Bluff	8,165	0.29
AR	Independence	6,364	0.24
TN	Johnsonville	4,936	0.30
MO	Labadie	4,029	0.11
MO	Sioux	3,109	0.26
MS	Baxter Wilson	2,780	0.31
TN	Cumberland	2,240	0.07
AR	Flint Creek Power Plant	2,210	0.26
TN	Gallatin	2,062	0.15
MO	Rush Island	1,719	0.09
MO	New Madrid Power Plant	1,615	0.10
MS	Red Hills Generation Facility	1,166	0.12
MO	Sikeston	878	0.21

¹ Back trajectories were plotted for June 21, 2010, July 2, 2011, and July 9, 2011. The monitor would have attained the NAAQS for 2009 – 2011 if not for these three days.

Table 2: Ozone Season NO _x Emissions for Selected Facilities (2010 ARP Data) Ranked by Total NO _x Emissions			
State	Facility	NO _x Emissions (tons)	NO _x Emission Rate (lb/MMBtu)
TN	Allen	783	0.06

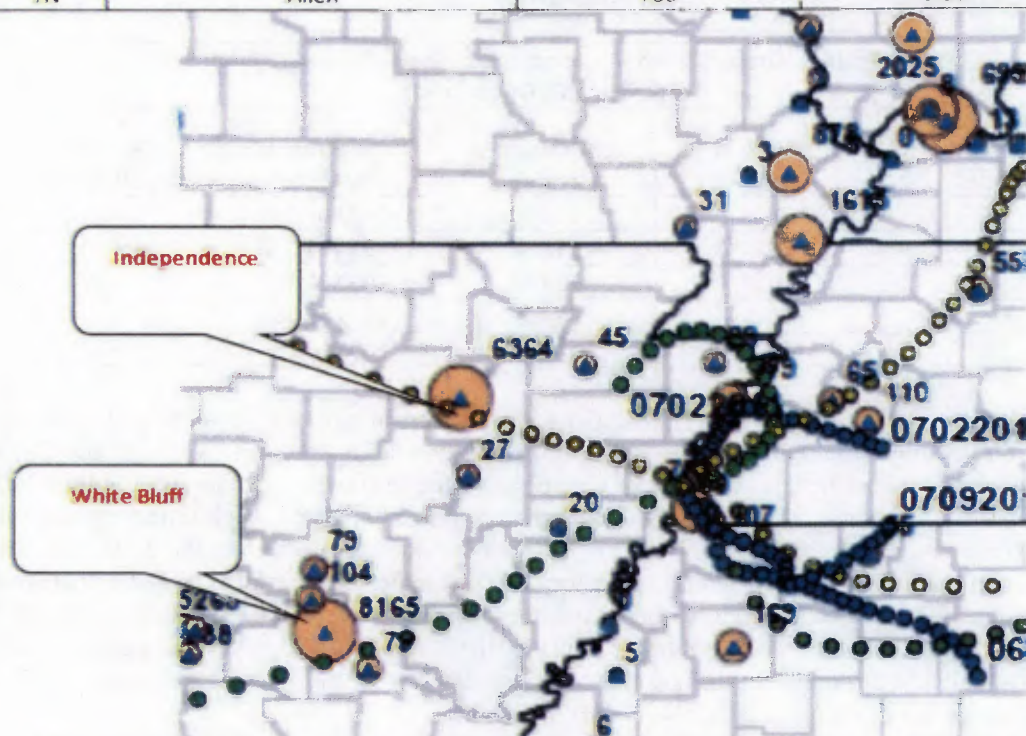


Figure 1: Back-Trajectory Analysis Showing White Bluff and Independence EGUs

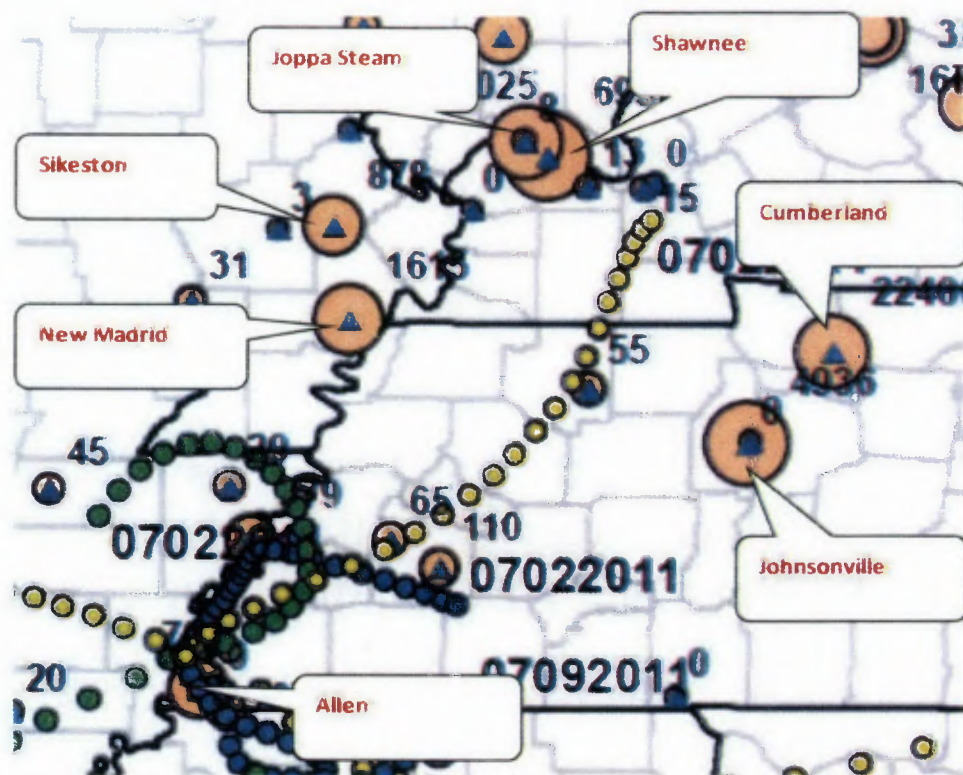
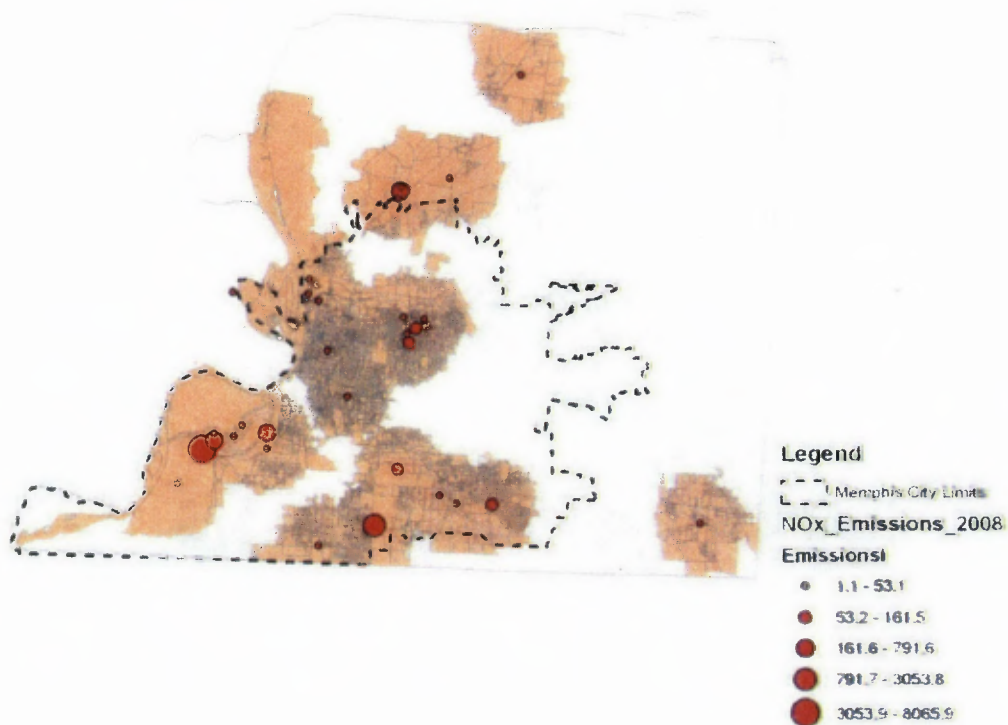


Figure 2: Back-Trajectory Analysis Showing Allen, Cumberland, Johnsonville, Joppa, New Madrid, Shawnee, and Sikeston EGUs

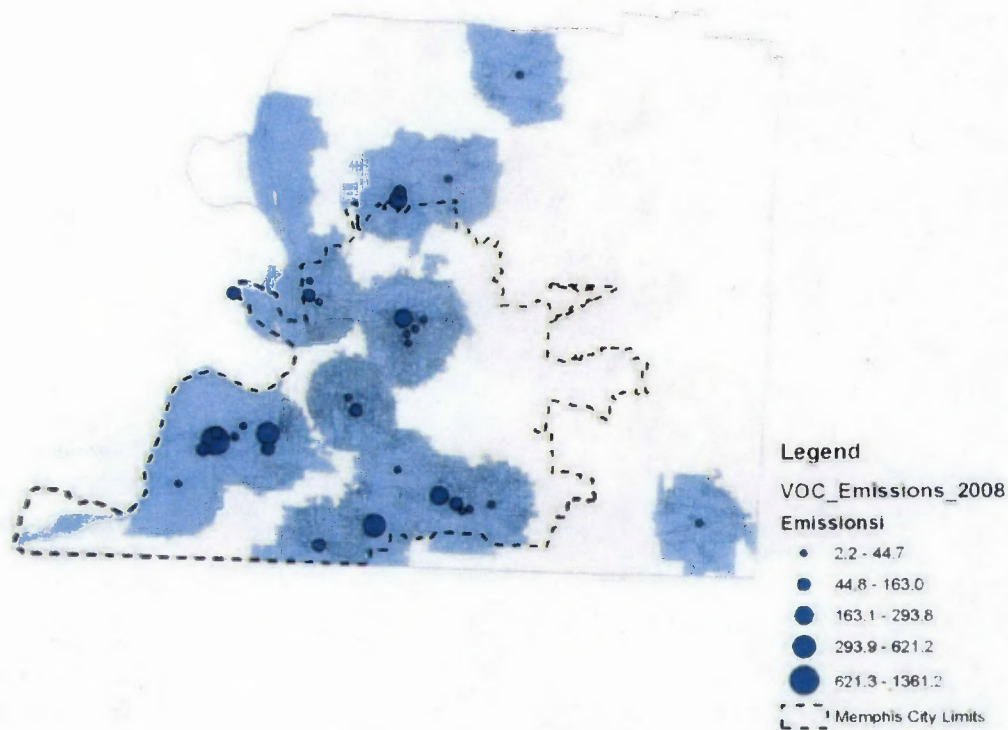
Attachment 3

Other Data Relevant to the Shelby County Recommendation

Shelby County NO_x Sources and the Memphis City Limits



Shelby County VOC Sources and the Memphis City Limits





STATE OF MISSISSIPPI
PHIL BRYANT
GOVERNOR
MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY
TRUDY D. FISHER, EXECUTIVE DIRECTOR

February 28, 2012

Ms. Gwendolyn Keyes Fleming
Regional Administrator
U.S. Environmental Protection Agency
Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

Re: Response to EPA Recommendation for Ozone Designations for the State of Mississippi

Dear Gwen:

I am writing this letter on behalf of Governor Phil Bryant in response to your letter dated December 8, 2011 to then Governor Haley Barbour, with EPA's recommendation for attainment designations for the various counties in Mississippi.

As stated in your letter, Mississippi DEQ based its recommendations on preliminary 2009-2011 air quality data. In your letter, you stated that for EPA to consider 2009-2011 air quality data in the final designation decisions for this area, Mississippi must submit certified, quality assured 2009-2011 air quality data by February 29, 2012. We are pleased to inform you that we sent you the certified data on February 1, 2012. Based on that data our recommendations made to you in our October 27, 2011 letter stands and we recommend that based on the 2009-2011 certified data, that EPA should designate all the counties in Mississippi as "Attainment".

Upon review of your December 8, 2011 letter, we agree with all your proposed recommendations except for the inclusion of the urbanized portion of DeSoto County in the Memphis TN-MS-AR Area. In your letter you stated that EPA has preliminarily concluded that the urbanized portion of DeSoto County, MS should be included as part of the Memphis non-attainment area. In the same letter, EPA did commit to continue to work with our state regarding the appropriate boundary for DeSoto County, MS in association with the Memphis TN-MS-AR Area. EPA, as specified in Section 107(d)(1)(B)ii of the Clean Air Act, also gave the state the opportunity to submit additional technical information to support the states recommendation by February 29, 2012.

Ms. Gwendolyn Keyes Fleming
February 28, 2012
Page 2

Due to the expedited review process, we realize that your staff did not have all the current data and technical information for making the recommendation on December 8, 2011. We very much appreciate your staff taking the time to have a detailed technical meeting with MS DEQ staff on January 12, 2012. MS DEQ staff had an opportunity to share the technical data and received valuable feedback to complete the detailed analysis included with this letter. Attached you will find the detailed "Technical Support Document" which we believe makes it clear that at this time the EPA should not include DeSoto County in the 'Memphis Non-Attainment Area' and the entire DeSoto County should be designated as "Attainment". The monitoring data shows that there has been a decline in concentration at the DeSoto County Monitor since 2007 and that DeSoto County has been attaining the 2008 standard for the last 2 years. Pursuant to the Clean Air Act, Section 107(d)(1)(B)(ii), EPA is only required to use the Metropolitan Statistical Area as the presumptive boundary if the area will be designated as a Serious, Severe, or Extreme Area. Based on EPA's proposed implementation rule, the Memphis Non-Attainment Area will likely be designated as Marginal. Therefore, EPA has discretion on the Memphis Non-Attainment Area boundary determinations.

In 2004, DeSoto County was excluded from the Memphis Non-Attainment Area as EPA determined that the county did not significantly contribute to ozone levels in the Memphis area. Since that time, ozone concentrations have dropped significantly for all of the monitors in the area and both Crittenden and Shelby Counties have subsequently attained the 1997 ozone standard. Therefore, this exclusion did not adversely effect the ozone concentrations. Since the ozone levels have declined and DeSoto County is attaining the standard, there is no reason to reverse the previous determination.

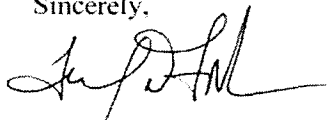
In accordance with EPA policy, there are nine factors to be considered in evaluating boundaries for designations of areas as non-attainment. In this report, MDEQ has analyzed each of the nine factors using the latest data and analysis. The analysis reveals overwhelmingly that DeSoto County does not contribute to violation of the ozone standard in neither Crittenden County, AR nor Shelby County, TN.

MS DEQ is committed to protecting the public health and welfare and we will continue to take an aggressive approach to better the air quality for the citizens of this state. We believe that we can do this more effectively through extensive outreach, public education, and voluntary measures without the burden of a non-attainment designation. Additionally, we have demonstrated our commitment in this regard through our proven track record in the last few years. With EPA having another opportunity to review the standard in 2013, MS DEQ strongly believes that EPA should not designate the DeSoto County as "Non-Attainment".

Ms. Gwendolyn Keyes Fleming
February 28, 2012
Page 3

We believe the attached Technical Document makes a strong case against including DeSoto County in the Memphis non-attainment boundary designations. If you or your staff have any questions, please contact me at 601-961-5000 or have a member of your staff contact Maya Rao of my staff at 601-961-5242.

Sincerely,

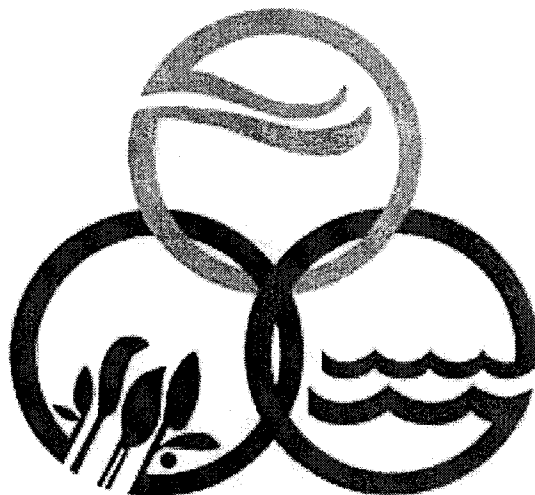


Trudy D. Fisher
Executive Director

cc: Mississippi Governor Phil Bryant w/attachments
Senator Roger Wicker w/ attachments
Senator Thad Cochran w/ attachments
Congressman Alan Nunnelee w/ attachments
Michael Garriga, DeSoto County Administrator w/ attachments

2008 Ozone Standard Designation Recommendation for DeSoto County, Mississippi

Response to U.S. Environmental Protection Agency's 120 Day Letter



**Mississippi Department of Environmental Quality
Air Division
February 2012**

Summary

In 2004, DeSoto County was excluded from the Memphis Non-Attainment Area as EPA determined that the county did not significantly contribute to ozone levels in the Memphis area. Since that time, ozone concentrations have dropped significantly for all of the monitors in the area and both Crittenden and Shelby Counties have subsequently attained the 1997 ozone standard. Therefore, this exclusion did not adversely effect the ozone concentrations. Since the ozone levels have declined and DeSoto County is attaining the standard, there is no valid basis to reverse the previous determination.

Based on current monitoring data, the Governor of Mississippi recommended the designation of attainment for Desoto County. This recommendation is supported by current monitoring data, which shows that the Hernando monitor, located in DeSoto County, is attaining the standard of 75 ppb. The monitoring data shows that there has been a decline in concentration at the DeSoto County Monitor since 2007 and that DeSoto County has been attaining the 2008 standard for the last 2 years. Pursuant to the Clean Air Act, Section 107(d)(1)(B)(ii), EPA is only required to use the Metropolitan Statistical Area as the presumptive boundary if the area will be designated as a Serious, Severe, or Extreme Area. Based on EPA's proposed implementation rule, the Memphis Non-Attainment Area will likely be designated as Marginal. Therefore, EPA has discretion on the designation of the Memphis Non-Attainment Area.

On December 8, 2011 EPA recommended a partial non-attainment designation for DeSoto County. Due to the expedited review process, EPA relied on older data and completed only a five factor analysis for their boundary recommendation.

In accordance with EPA policy¹, there are nine factors to be considered in evaluating boundaries for designations of areas as non-attainment. In this report, MDEQ has analyzed each of the nine factors using the latest data and analysis. The analysis reveals overwhelmingly that DeSoto County does not contribute to violation of the ozone standard in neither Crittenden County, AR nor Shelby County, TN.

The first of the nine factors to consider is air quality data. Air monitoring data shows that DeSoto County has attained the standard for the last two years. Furthermore, all of the monitors in the proposed non-attainment designated area show a downward trend in ozone values. Accordingly, it is clear that DeSoto County does not contribute to the violations in Shelby or Crittenden counties based on analysis of this first factor.

The second factor to be considered is emissions data. DeSoto County has only three facilities which are classified as major sources of emissions, while Shelby and Crittenden counties have exponentially more emission sources. In addition, Shelby County has the Memphis International Airport, the number three rail center in the country and the International Port of Memphis. There are significant intermodal rail facilities in both Crittenden and Shelby counties. There are nine major truck centers in Crittenden County,

¹ Meyers Memorandum, *Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards*, Dec. 4, 2008



six in Shelby County, and only one in DeSoto County. EPA erred in attributing only population based and general traffic factors as indicators of contribution, as the proof is overwhelming that the commerce activity in these areas is a much higher contributor with the emissions in closer proximity to the violating monitors than the emissions in DeSoto County. Thus, the complete analysis of this factor clearly supports that DeSoto County does not contribute to the violations in Shelby or Crittenden Counties.

The third factor for consideration is population density and degree of urbanization. In support of its proposed designation, EPA states that DeSoto County has the second highest population in the area; however, a broader analysis reveals that DeSoto County is a very, very distant second compared to Shelby County. Further, the area of DeSoto County which is proposed to be included in the designated area is only moderately populated, and is a mere percentage of the total population and degree of urbanization of Shelby County. Based on this analysis, DeSoto County does not contribute to the violations of the ozone standard in Shelby County, Tennessee or Crittenden County, Arkansas.

The fourth factor for consideration is traffic and commuting patterns. An evaluation of commuter traffic and Vehicle Miles Traveled (VMT) reveals that DeSoto County pales in comparison to the commuting within Shelby County. Further, Shelby and Crittenden counties are both dissected by I-40, one of the busiest routes for heavy duty diesel trucks in the country. The percentage of traffic from heavy duty diesel trucks in Shelby County and Crittenden counties is almost two and three times, respectively, higher than that of DeSoto County. Significantly, the Shelby County Fraser monitor and the Crittenden County monitors are both in close proximity to I-40. When the level of commerce traffic is properly considered in evaluating this fourth factor, it is clear that DeSoto County does not contribute to the violations of the ozone standard in Shelby County, Tennessee or Crittenden County, Arkansas.

The fifth factor to be considered is growth rates and patterns. EPA cites a growth rate of 48% in Desoto County in the last decade, but the use of a percentage based rate of growth is misleading when looking at the total population in the entire Memphis MSA. Because of the relatively low 2000 population in Desoto County, even a 48% increase is still insignificant when compared to Shelby County and the entire Memphis MSA. Further, even while Desoto experienced this growth rate, the ozone values within the county, as well as the other monitors in the area, have steadily decreased. This plainly disproves EPA's reasoning that Desoto's growth rate contributes to violations of the ozone standard in Shelby and Crittenden counties.

The sixth factor to consider is meteorology. EPA relies in error on back trajectories to reach its determination that Desoto County should be included in the designated area; however, EPA failed to consider issues related to back trajectories specific to the Shelby County Fraser monitor. A more complete analysis reveals that light winds and distant monitoring of those light winds cause the back trajectory analysis to be unreliable. Available modeling from Crittenden County, as well as EPA itself, reveals that Desoto



County does not significantly contribute to ozone concentrations in Shelby County or Crittenden counties.

The seventh factor to be considered is geography and topography. Analysis of the geography in the area does not reveal any conditions which would affect the contribution of Desoto to the Shelby and Crittenden County monitors. The topography of the area ranges from the flat lowland of the Mississippi Delta in the west to rolling hills in the central and eastern part of the MSA. This factor does not appear to have a significant impact on the overall evaluation of the designation.

The eighth factor to be considered is jurisdictional boundaries. Desoto County is in a different state with different governances than Shelby County, TN and Crittenden County, AR. Since the emissions in Desoto County are such a small fraction of those in the other two counties, there is nothing Desoto County can do to impact violations in the other counties. If Desoto County were included in the designation area, Desoto County and the State of Mississippi would be significantly negatively impacted by a designation over which it has no control and over which it has no regulatory authority to impact in any way. Based on consideration of this factor, it would be an error to include Desoto in the non-attainment designation.

The ninth and final factor for consideration is the level of emission sources. Considering the low emissions in Desoto County, there are few measures that could be applied that would yield significant reductions. The few facilities in the county are well controlled. Further, both the county and the cities therein have already undertaken voluntary measures to reduce mobile and area source emissions, which measures have had a positive effect in lowering ozone in Desoto County. The EPA failed to examine the level of control of emissions in the area in making its proposed designation. MDEQ's thorough analysis of this factor reveals that in addition to industry meeting strict standards, the citizens and leadership of Desoto County have been proactive in reducing emissions. To now include Desoto in a non-attainment designation after all they have done to successfully reduce emissions would be counterproductive in every sense of the word.

MDEQ's more thorough evaluation of all nine factors which EPA is to consider in determining boundaries for areas of non-attainment reveals overwhelmingly that no part of Desoto County should be included in the designated area. Eight of the nine factors demonstrate powerfully that Desoto does not contribute to the violations of the standard in Crittenden and Shelby counties, and the ninth factor bears no impact either positively or negatively in the analysis. It would be an error to include Desoto County in the area designated for non-attainment.



Nine Factor Analysis

EPA recommends that the Metropolitan Statistical Area (MSA) or Combined Statistical Area (CSA) serve as the starting point for determining the geographic boundaries of an ozone non-attainment area. According to the Clean Air Act, Section 107(d)(1)(B)(ii), EPA is only required to use the Metropolitan Statistical Area as the presumptive boundary if the area will be designated as a Serious, Severe, or Extreme Area. Based in EPA's proposed implementation rule, the Memphis Non-Attainment Area will likely be designated as Marginal. Therefore, EPA has discretion on the designation of the Memphis Non-Attainment Area.

There are nine factors² that need to be evaluated in making the boundary determination. These factors are:

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

MDEQ has analyzed all factors using the latest data. Based on that analysis, eight of the nine factors clearly indicate that DeSoto County does not contribute to violation of the ozone standard in neither Crittenden County, AR nor Shelby County, TN. The analysis reveals that the ninth factor, Geography, gives no evidence of contribution and is not a significant factor in the analysis.

² See Footnote 1



Factor 1: Air quality data

Table 1 shows the 4th maximum concentrations for the 2008-2011 as well as the 2008-2010 and 2009-2011 design values. DeSoto County has attained the standard for the last two years. Figure 1 shows a downward trend in ozone values for all of the monitors in the area.

County	Site	4 th Annual Maximum 8-hour Ozone				3-Year Average 2008-2010	3-Year Average 2009-2011
		2008	2009	2010	2011		
DeSoto, MS	Hernando	74	71	76	73	73	73
Shelby, TN	Frayser	84	69	76	79	76	74
Shelby, TN	Orgill Park	77	70	73	77	73	73
Crittenden, AR	Marion	74	71	78	82	74	77

Table 1: Monitoring Data for the Memphis CSA³

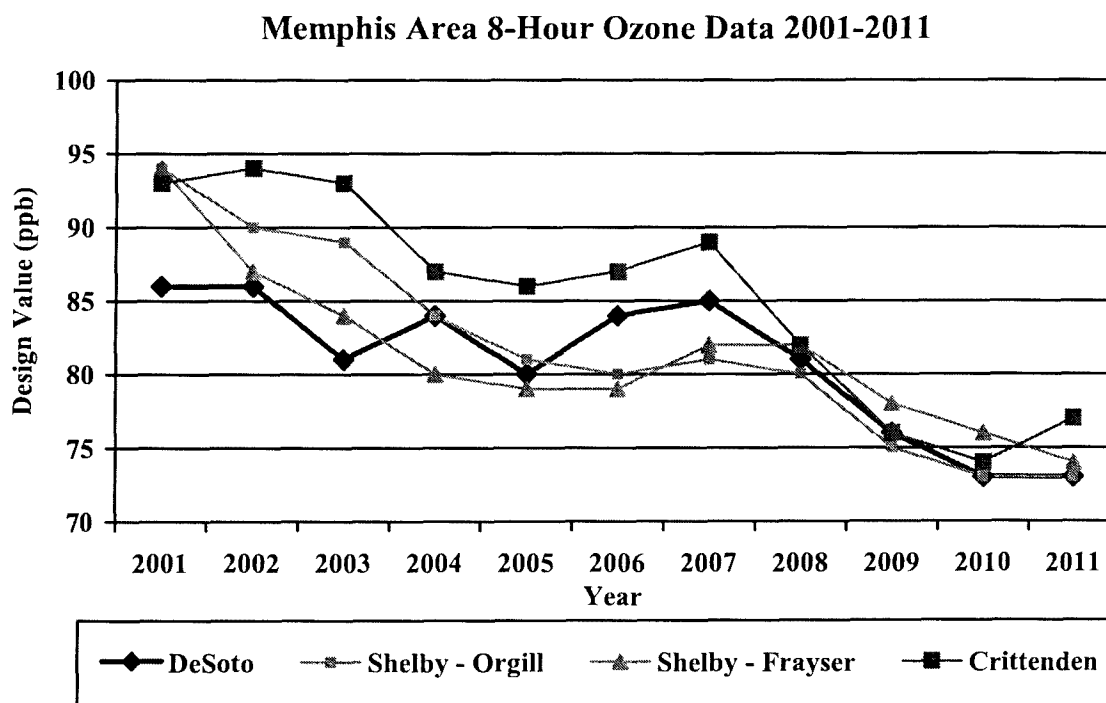


Figure 1: Ozone Design Value Trends for monitors in the Memphis CSA³

³ Mississippi Department of Environmental Quality, Shelby County Health Department, Arkansas Department of Environmental Quality



EPA's Technical Support Document (EPA-TSD), attached as Appendix 1, says that a county (or partial county) should be designated if it contributes to a violation in a nearby county. Several recent air quality modeling studies have shown that Mississippi counties do not significantly contribute to ozone concentrations in Shelby County, TN or Crittenden County, AR. The "Analysis of Three 2005 Crittenden County Ozone Study (CCOS) Episodes Using Air Quality Modeling Tools" (ADEQ, June 2007) report found that DeSoto County had an insignificant impact on the Shelby or Crittenden County Monitors.

Additionally, the analysis EPA performed for Clean Air Interstate Rule (CAIR) and Cross-State Air Pollution Rule (CSAPR) did not find any significant linkages for 8-hour ozone between Mississippi and Shelby County or Crittenden County. An analysis of the remaining factors also finds that DeSoto County does not contribute to the violations in Crittenden or Shelby Counties.

Since DeSoto County is attaining the current standards and an analysis of data relevant to the other factors finds that it does not contribute to the violations in Shelby or Crittenden counties, DeSoto County, or any part thereof, should not be included in the Memphis Non-Attainment Area.



Factor 2: Emissions data

Figure 2 is a detailed map of DeSoto, Shelby, and Crittenden Counties. Each of the four monitoring locations are marked with their corresponding ozone design values for 2008-2010 and 2009-2011. There is one monitor in DeSoto County which is reading in attainment of the 2008 ozone standard for both design values. There are two monitors in Shelby County. One monitor is in northern Shelby County and is reading in attainment for the 2008 ozone standard for both design values. The other monitor is within Memphis city limits near Interstate 240. This monitor is reading over the 2008 ozone standard for 2008-2010 but is under the limit for 2009-2011. The Crittenden County monitor is near the junction of Interstates 40 and 55 and meets the 2008 ozone standard for 2008-2010 but is over the standard for 2009 to 2011.

The Memphis International Airport located approximately three miles south of the central business district of Memphis and is home to the main FedEx Express global "SuperHub", which processes a significant portion of the freight carrier's packages. The airport also serves as a hub for Delta Airlines. Memphis is the number three rail center in the United States with significant intermodal rail facilities in both Crittenden and Shelby Counties.

The International Port of Memphis is 4th largest inland Port in the United States. The International Port of Memphis covers the Tennessee and Arkansas sides of the Mississippi River. The boundaries of the International Port of Memphis include the McKeller Lake/Presidents Island complex, the West Memphis Harbor, the Rivergate Harbor, the Wolf River Harbor downtown, and Fullen dock and harbor north of downtown.

Major air emission sources for each county are represented on the map as well as major truck centers (truck stops). As shown by the map, there are significantly more sources of emissions in Shelby County and in Crittenden County than in DeSoto County. There are nine truck centers in Crittenden County, six in Shelby County, and one in DeSoto County. All of the truck centers in Crittenden County are located within five miles of the ozone monitor. There are two locations in Crittenden County where major truck centers are too close to be accurately represented by separate markers. In these cases, the number of truck centers located at those points are labeled on top of the marker.



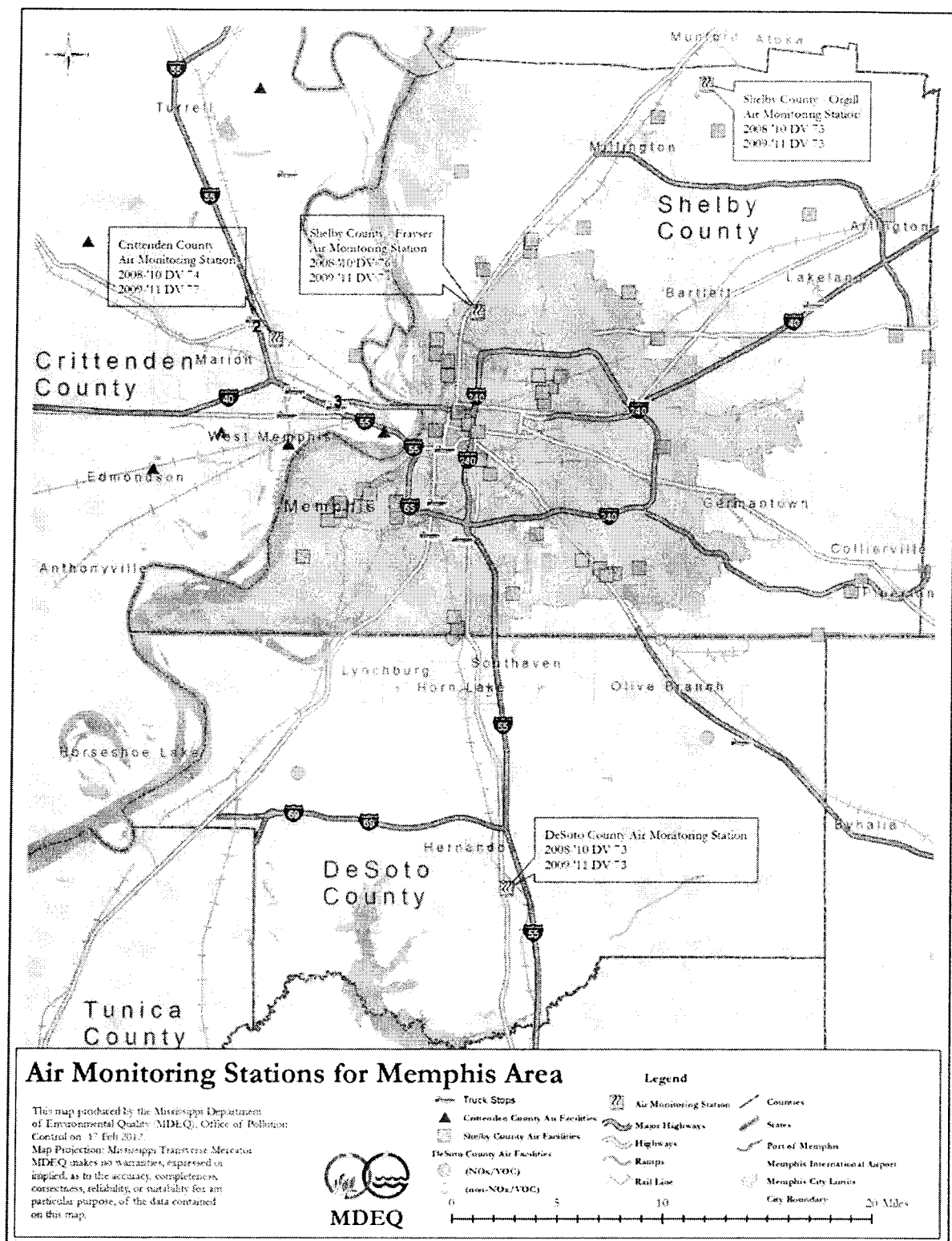


Figure 2: Monitor Locations in the Memphis CSA and Major Emission Sources



DeSoto County has a small number of major emission sources as shown in Figure 2. DeSoto County currently has two facilities that are classified as major sources of Nitrogen Oxides (NOx) and one facility classified as major sources of Volatile Organic Compounds (VOCs). Charts 1 and 2 show the NOx and VOC emissions from all source categories in DeSoto, Shelby, and Crittenden Counties. These charts demonstrate that the total emissions from DeSoto County are small in comparison to those from Shelby County.

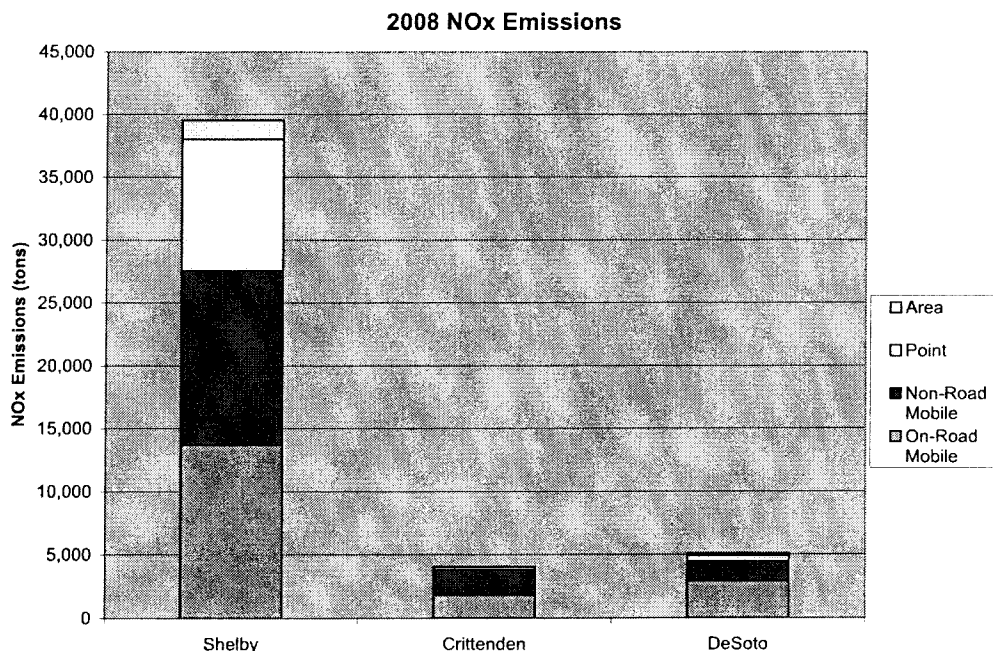


Chart 1: NOx and VOC Emission Comparison for Memphis CSA⁴

⁴ U.S. Environmental Protection Agency, 2008 National Emissions Inventory (NEI)



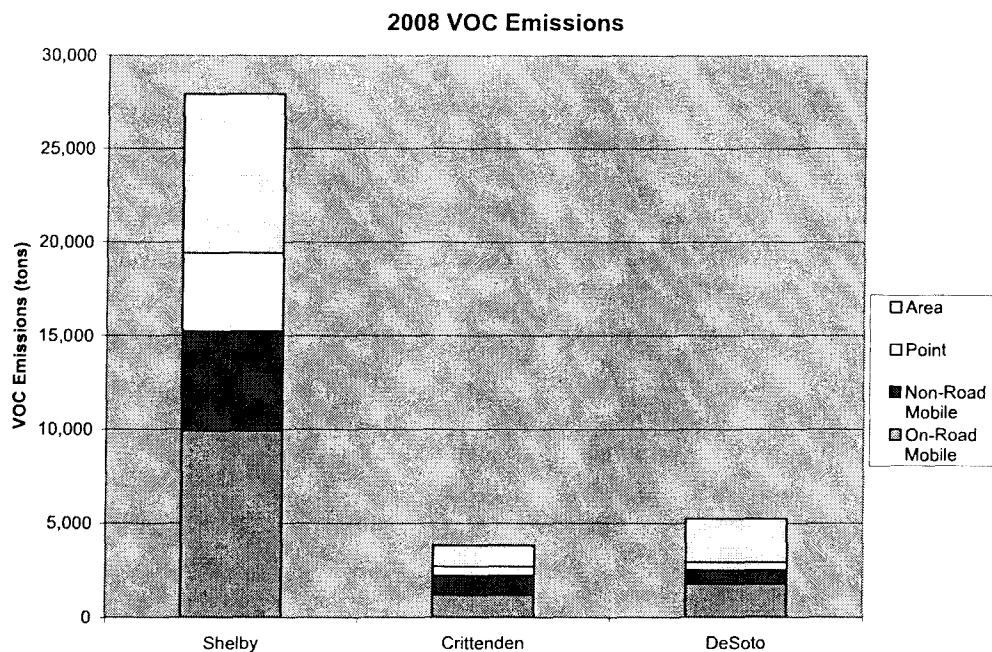


Chart 2: NOx and VOC Emission Comparison for Memphis CSA⁵

The EPA-TSD identifies that mobile and area source emissions are the primary contributors of ozone precursors in the area. However, it incorrectly identified population based and general traffic factors as the indicators of contribution. The Memphis area is a very busy freight hub that results in a high level of commerce based emissions. Interstate 40 runs through Shelby and Crittenden Counties and is one of the busiest interstates in the nation for heavy duty diesel truck traffic.

The Memphis/ West Memphis area is the number three rail center in the United States with significant intermodal rail facilities in both Crittenden and Shelby Counties. West Memphis Arkansas also has the highest diesel sales in the nation with nine truck centers. Many of the truck centers are grouped together and in close proximity to the Crittenden County monitor. Note from Figure 2 the proximity of the violating monitors to Interstate 40 and railroad lines. In addition, the Mississippi River carries a high volume of barge traffic that generates emissions and runs between Shelby and Crittenden Counties, both of which have river ports. The Memphis Airport is also the number one freight airport in the nation that has aircraft related emissions and generates a lot of truck traffic. Emissions from these sectors are not population based and are not centered in DeSoto County. This commerce activity is a much higher contributor with the emissions in closer proximity to the violating monitors than emissions in DeSoto County.

The overwhelming evidence of the emissions data demonstrates that DeSoto County does not contribute to violations of the ozone standard in Shelby County, TN or Crittenden County, AR and should not be included in the Memphis Ozone Non-Attainment Area.

⁵ See Footnote 5



Factor 3: Population density and degree of urbanization

The EPA-TSD states that “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.” DeSoto County is also cited as having the second highest in population in the area. Chart 3 and 4 show the population density and degree of urbanization for DeSoto, Shelby and Crittenden Counties. While DeSoto County is second, it is a very, very distant second compared to Shelby County. As noted in Chart 3, DeSoto County is not densely populated. The southern portion of the county is largely rural with the northern portion being a moderately populated suburban area.

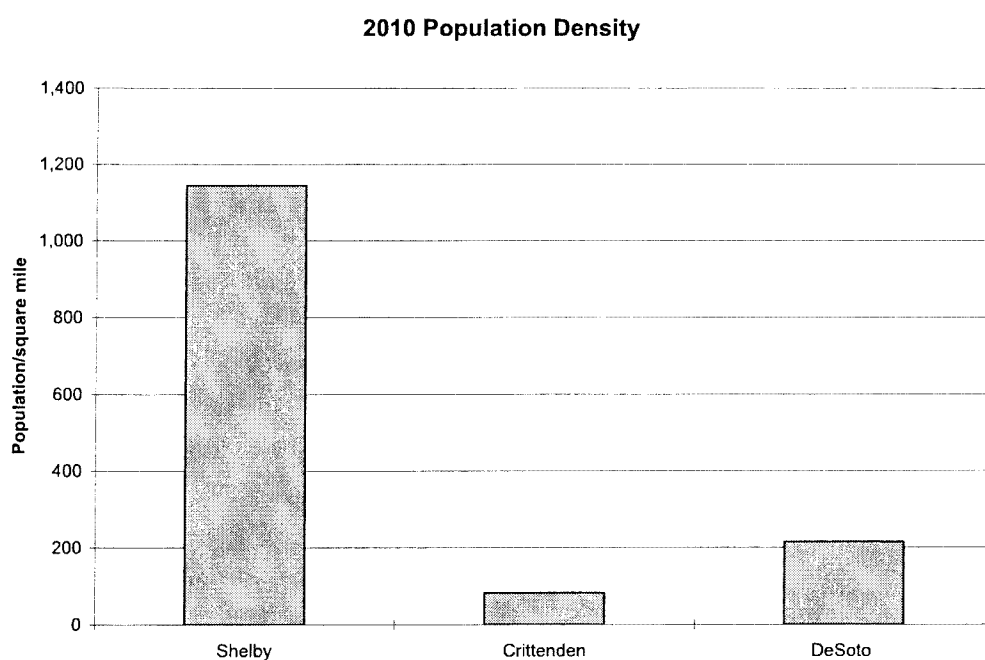


Chart 3: Population Density of Memphis CSA⁶

⁶ 2010 U.S. Census



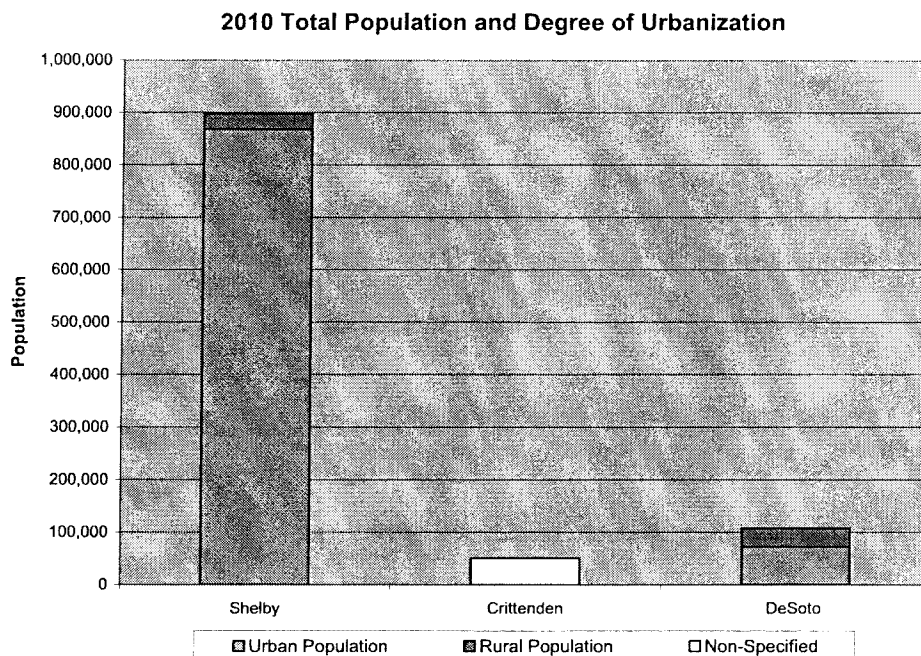


Chart 4: Total Population and Degree of Urbanization for Memphis CSA⁷

Based on the analysis of the population density and degree of urbanization, DeSoto County does not contribute to violations of the ozone standard in Shelby County, TN or Crittenden County, AR and should not be included in the Memphis Ozone Non-Attainment Area.

⁷ See Footnote 7



Factor 4: Traffic and commuting patterns

The overall amount of traffic from Mississippi Counties in the CSA is much smaller than that of Shelby County. Likewise, the number of commuters from the Mississippi Counties is much less than those from Shelby County. The amount of traffic is measured in Vehicle Miles Traveled (VMT) and is developed by the Mississippi and Tennessee Departments of Transportation. Chart 5 compares the traffic data for the Counties in the Memphis CSA.

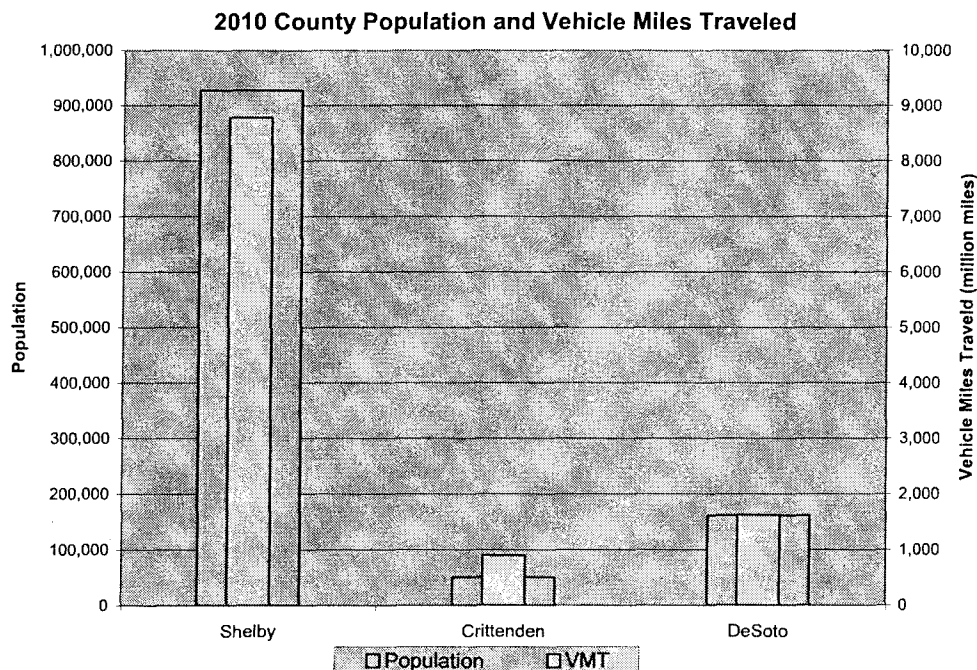


Chart 5: 2010 Population and Traffic Data^{8, 9}

⁸ See Footnote 7

⁹ U.S. Department of Transportation, Federal Highways Administration, Highway Performance Monitoring System



Commuting Patterns

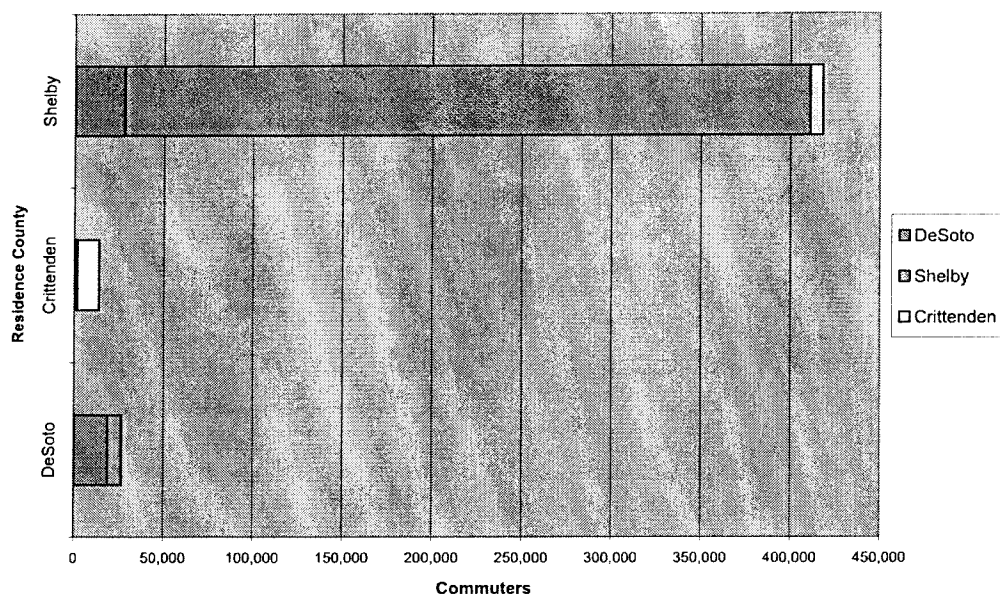


Chart 6: Commuting Patterns for Memphis CSA¹⁰

Because commuting data is not yet available for the 2010 census, data from the 2000 census was used to determine the commuting patterns. Chart 6 summarizes this information and shows that while there is some commuting between the Mississippi Counties and Shelby County, it pales in comparison to the commuting within Shelby County. The majority of all commuters remain in their perspective counties for their travel.

¹⁰ 2000 U.S. Census



Factor 6: Meteorology (weather and transport)

Back Trajectories

In the EPA Technical Support Document, EPA used the NOAA HYSPLIT model to run 24-hour and 72-hour back trajectories at the Frayser – Shelby County ozone monitoring site during ozone exceedance days for the period of 2006 – 2010. The results seemed to indicate that many of the back trajectory centerlines passed through DeSoto County. However, the following issues should have been considered when performing such an analysis:

- On most days, 24-hour back trajectories were less than 200 miles long for the Frayser site during the period of 2006-2010.
- This indicates that the average wind speeds were less than 8 mph.
- When there is a light wind regime wind directions can vary significantly at the surface.
- HYSPLIT uses surface and upper air wind conditions to calculate back trajectories. In this case, surface winds from the Memphis NWS station were used, but the closest upper-air wind data site is located in Little Rock, Arkansas - ~130 miles from Memphis.
- HYSPLIT is not accurate under light wind conditions because of the light wind direction variability.

Because of these issues, a back trajectory analysis is unreliable in determining if transport was occurring on the ozone exceedance days. Therefore, it should not have been used as a factor in the determination of the Memphis Non-Attainment Area boundary.

Modeling

In the past, there have been air quality modeling studies that show that Mississippi counties do not significantly contribute to ozone concentrations in Shelby County, TN or Crittenden County, AR. The “Analysis of Three 2005 Crittenden County Ozone Study (CCOS) Episodes Using Air Quality Modeling Tools” (ADEQ, June 2007) report found that DeSoto County had an insignificant impact on the Shelby or Crittenden County Monitors. This can be seen in Chart 8.



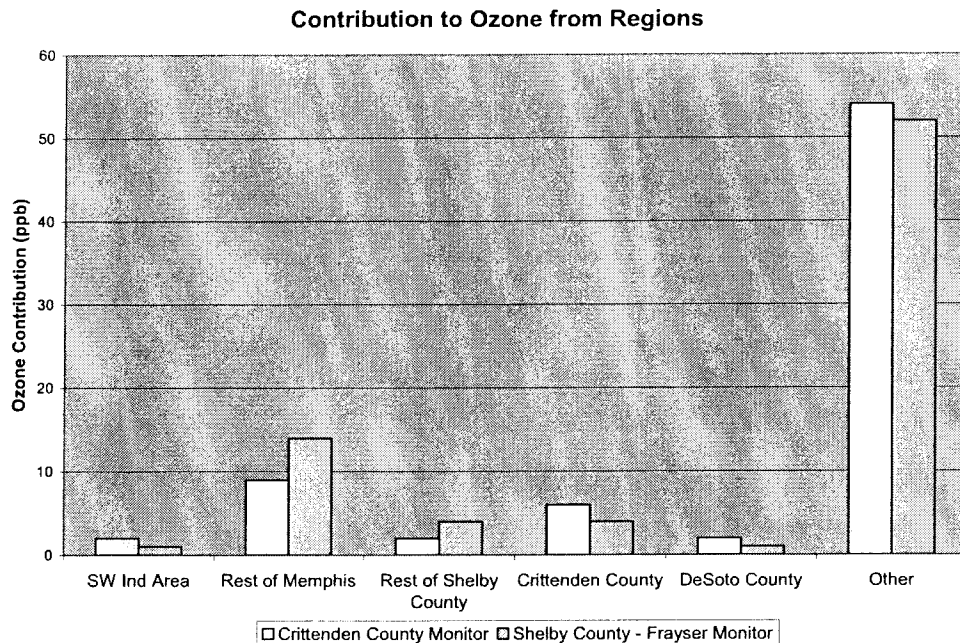


Chart 8: Contribution to Ozone from Regions¹⁷

In addition, the analysis that EPA performed for Clean Air Interstate Rule (CAIR) and Cross-State Air Pollution Rule (CSAPR) did not find any significant linkages for 8-hour ozone between Mississippi and Shelby County or Crittenden County. These rules were developed to particularly address the contribution of emissions from upwind states to downwind non-attainment or maintenance areas. While the rules address the emissions from Electric Generating Units, the analysis to determine contribution included emissions from all source categories.

Therefore, the available modeling data indicates that DeSoto County does not significantly contribute to ozone concentrations in Shelby County or Crittenden County. Based on the analysis of the meteorology, back trajectories, and modeling, DeSoto County does not contribute to violations of the ozone standard in Shelby County, TN or Crittenden County, AR and should not be included in the Memphis Ozone Non-Attainment Area.

¹⁷ Arkansas Department of Environmental Quality, *Analysis of Three 2005 Crittenden County Ozone Study (CCOS) Episodes Using Air Quality Modeling Tools*, June 2007



Factor 7: Geography and topography

The Mississippi counties in the Memphis MSA are located in northwestern Mississippi. DeSoto and Tunica counties border the Mississippi River. DeSoto and Marshall Counties border Tennessee while Tate is directly south of DeSoto County. The topography of the area ranges from the flat lowland of the Mississippi Delta in the west to rolling hills in the central and eastern part of the MSA. Analysis of the geography and topography does not show a DeSoto County contribution to violations of the ozone standard in Shelby County, TN or Crittenden County, AR and should not be factored in to include DeSoto County in the Memphis Ozone Non-Attainment Area.

Factor 8: Jurisdictional boundaries

DeSoto County is in a separate state with different governances than Shelby or Crittenden County. The DeSoto County monitor is attaining the standard. The emissions in the County are a small fraction of those in Shelby County and the evidence indicates that they are not contributing the violations in other counties. If Desoto County were included in the non-attainment area, neither DeSoto County nor Mississippi would be able to impact the monitors by controlling emissions and would have no authority to control emissions in the other states. DeSoto County and the State of Mississippi would be significantly negatively impacted by a designation over which it has no control and over which it has no regulatory authority to impact in any way.

DeSoto County was excluded from the Memphis Non-Attainment Area in 2004 because it was determined that the county did not significantly contribute to ozone levels in the Memphis area. Ozone concentrations have dropped significantly for all of the monitors in the area since the designation and both Crittenden and Shelby Counties have subsequently attained the 1997 ozone standard. Therefore, this exclusion did not adversely effect the ozone concentrations. Since the ozone levels have declined and DeSoto County is attaining the standard, there is no valid basis to reverse the previous determination.

Based on the precedence set by EPA in 2004 and the fact that DeSoto County has no control or authority over emissions impacting other monitors, it is illogical to include DeSoto County in the Memphis Non-Attainment Area. Therefore, DeSoto County should be excluded from the non-attainment designation.



Factor 9: Level of control of emission sources

Considering the low air emissions in DeSoto County, there are few measures that could be applied that would yield significant reductions. Overall, the few facilities in Mississippi are well controlled. Southaven Power is a newer gas cogeneration plant that meets BACT standards, Rexam Beverage Can has VOC capture and control devices to control emissions beyond NSPS requirements, and Texas Gas has voluntarily opted to include operational restrictions in its permit that reduces NOx emissions during Ozone Season.

There have also been measures taken to reduce mobile and area source emissions in DeSoto County. Mississippi has revised the Air Pollution Regulations to prohibit all open burning on Ozone Action Days. Open Burning is banned on all days in Hernando. Also, DeSoto County and the cities within the county have enacted strict idle reduction policies to reduce mobile source emissions from the county. The program to develop Idle Reduction Policies in DeSoto County and sample policies from within the county are shown in Appendix 2.

Additionally, ninety-three of DeSoto County's school buses have been retrofitted with diesel oxidation catalysts (DOC). All of DeSoto County's buses have either DOCs installed or other technologies to meet current diesel emission standards. In the surrounding counties, MDEQ has retrofitted an additional 57 buses with DOCs. Furthermore, there have been nine MDEQ Diesel Emission Reduction Projects reflecting 35 pieces of diesel equipment in and around DeSoto County. Private companies have spent over \$100,000 of their own money as matching funds for these projects.

The DeSoto Planning Commission began the Ozone Action Group to engage public and private groups in finding emission reductions and providing public outreach. This group meets monthly to promote and encourage behavior by the general public that will result in beneficial emission reductions. MDEQ, DeSoto County Ozone Action Group, and the DeSoto County Planning Commission have engaged in numerous outreach events throughout the county. A puppet show was also developed as an additional outreach tool for schools and public outreach. Outreach activities are listed in Appendix 4.

The Mississippi Department of Transportation (MDOT) has spent over \$1 million in the Safe Routes to School program, sidewalks, and bike path improvements in DeSoto County and has conducted an I-69 Corridor Alternatives Analysis to study preferred mass transit options for DeSoto County.

The EPA-TSD fails to examine the level of control of emissions in the area. A proper examination of this factor shows that in addition to industry that meets strict standards, the citizens and leadership of DeSoto County have also been proactive in reducing emissions.

As shown in this section, DeSoto County, MDEQ, and their strategic partners have been proactive in reducing emissions in the county. An arbitrary decision by EPA to include



DeSoto County in a non-attainment area would hinder these efforts. Therefore, DeSoto County should be excluded from the Memphis Non-Attainment Area.

Conclusion

Based on the analysis of the nine factors specified by EPA to be considered in determining the boundaries of the area to be designated as non-attainment, the evidence is overwhelming that Desoto does not contribute to the violation of standards in Crittenden County, AR, and Shelby County, TN. Eight of the nine factors fall in favor of excluding Desoto County from the area of non-attainment, and the ninth factor bears no impact on the analysis. Desoto was properly excluded from the designation in 2004, and since that time, has only improved upon its efforts to control and reduce emissions in the county. EPA should re-evaluate its decision in light of the additional information provided in this report, and should exclude Desoto County from the designated area.



Appendix 1: EPA's Technical Support Document -
Mississippi Area Designations for the 2008 Ozone
National Ambient Air Quality Standards



Mississippi 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 Mississippi 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 Mississippi

Area	Mississippi’s Recommended Nonattainment Counties	EPA’s Intended Nonattainment Counties
Memphis, TN-MS-AR*	None	DeSoto(partial)

*Memphis, TN-MS-AR is a multi-state nonattainment area. Table 1 below identifies the counties in the other states that EPA intends to designate as part of the nonattainment area.

EPA intends to designate the remaining counties in Mississippi 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 and other relevant information. 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 monitors or Federal Equivalent Method (FEM) monitor 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);
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

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.

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.

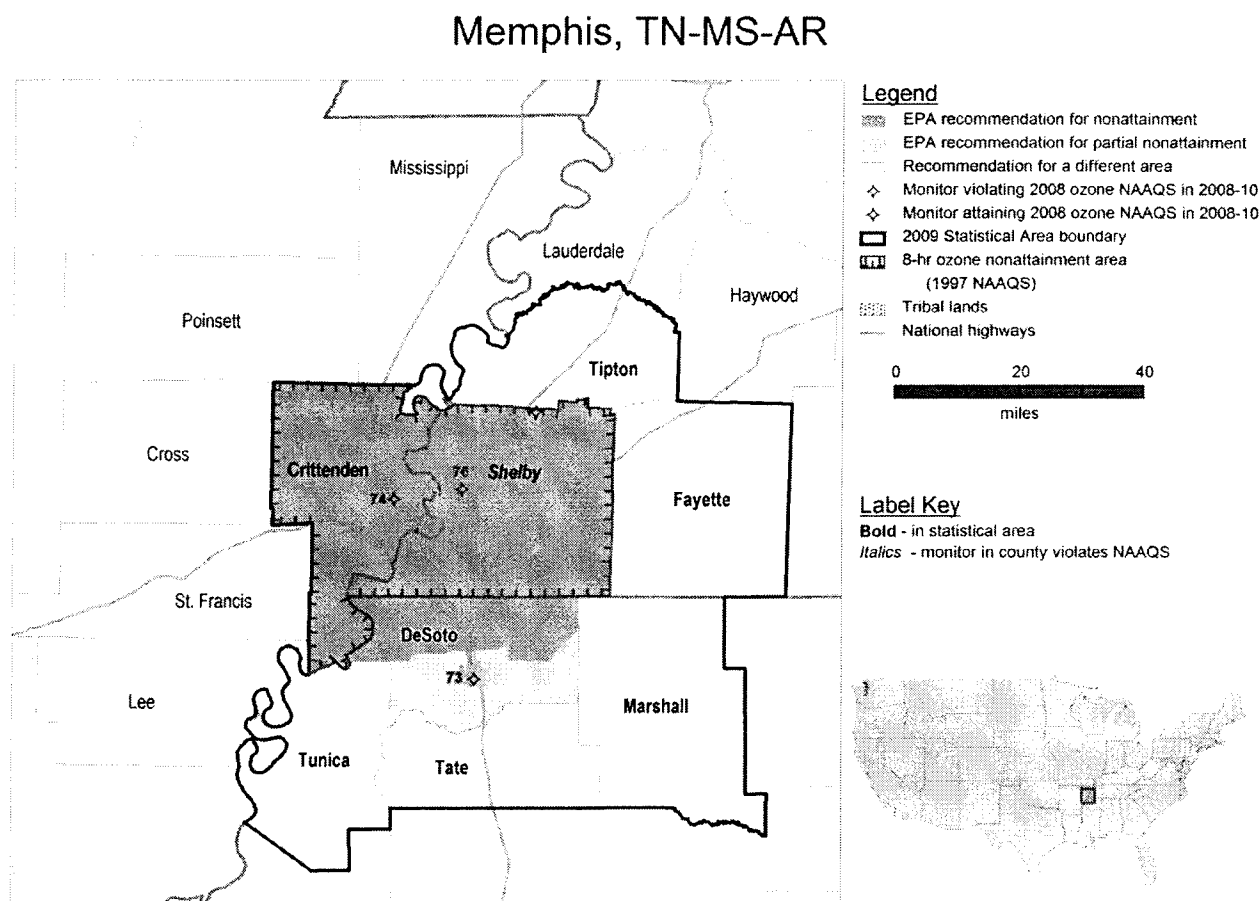
In EPA's designations guidance for the 2008 ozone NAAQS EPA recommended examining CSA/CBSAs because certain factors used to establish CSAs and CBSAs are similar to the factors EPA is using in this technical analysis to determine if a nearby area is contributing to a violation of the 2008 ozone NAAQS. 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 Memphis, TN-MS-AR

Figure 1 is a map of the Memphis, TN-MS-AR intended nonattainment area. The map provides other relevant information including the locations and design values of air quality monitors, county and other jurisdictional boundaries, relevant statistical area boundaries, the nonattainment area boundary for 1997 ozone NAAQS, and major transportation arteries.

Figure 1. TN-MS-AR Nonattainment Area



For purposes of the 1997 8-hour ozone NAAQS, portions of this area were designated nonattainment. The boundary for the nonattainment area for the 1997 ozone NAAQS included the entire counties of Crittenden County, Arkansas, and Shelby County, Tennessee.

In March 2009, Mississippi recommended that DeSoto County, Mississippi be designated as a nonattainment area separate from the Memphis nonattainment area for the 2008 ozone NAAQS based on air quality data from 2006-2008. Mississippi provided an update to the original recommendation in October 2011 based on air quality data from 2008-2010, and preliminary data from 2009-2011. In its updated recommendation, Mississippi recommended that all counties in the State be designated

attainment for the 2008 ozone NAAQS. Letter from Haley Barbour, Governor of the State of Mississippi to A. Stanley Meiburg, Acting Regional Administrator, US EPA Region 4 (March 3, 2009) and Gwendolyn Keyes Fleming, Regional Administrator US EPA Region 4 (October 27, 2011) (on file with US EPA Region 4). Also, in March 2009, Tennessee recommended that Shelby County be designated “nonattainment” for the 2008 8-hour ozone standard based on air quality data from 2006-2008. Letter from James H. Fyke, Commissioner, State of Tennessee Department of Environment and Conservation to A. Stanley Meiburg, Acting Regional Administrator, US EPA Region 4 (March 10, 2009) (on file with US EPA Region 4). Tennessee provided an update to its original recommendation in November 2011 based on preliminary 2009-2011 air quality data. In Tennessee’s updated recommendation, the state did not provide a specific update to its 2009 recommendation for the Memphis TN-MS-AR but stated that all other counties (with the exception of those recommended for Knoxville) should be designated unclassifiable/attainment. Letter from Robert J. Martineau Jr, Commissioner, State of Tennessee Department of Environment and Conservation to Gwendolyn Keyes Fleming, Regional Administrator, US EPA Region 4 (November 8, 2011) (on file with US EPA Region 4).

Additionally, in March 2009, Arkansas recommended that Crittenden County, Arkansas be designated nonattainment based on 2006-2008 air quality data. Arkansas did not update its 2009 ozone recommendation. These data are from FEM monitors sited and operated in accordance with 40 CFR Part 58. Letter from Mike Beebe, Governor of the State of Arkansas to Lawrence E. Starfield, Acting Regional Administrator, US EPA Region 6 (March 10, 2009) (on file with US EPA Region 6).

After considering these recommendations and based on EPA’s technical analysis described below, EPA intends to designate one county in Arkansas, one county (partial) in Mississippi, and one county in Tennessee (identified in Table 1 below) as nonattainment for the 2008 ozone NAAQS as part of the Memphis, TN-MS-AR multi-state nonattainment area.

Table 1. State’s Recommended and EPA’s Intended Designated Nonattainment Counties for Memphis, TN-MS-AR.

Memphis, TN-MS-AR	State-Recommended Nonattainment Counties	EPA Intended Nonattainment Counties
Arkansas	Crittenden	Crittenden
Mississippi	None	DeSoto (partial)
Tennessee	None	Shelby

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 Memphis, TN-MS-AR 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 Memphis and nearby surrounding area are shown in Table 2.

Table 2. Air Quality Data³.

County	State Recommended Nonattainment?	2008-2010 Design Value (ppb)
Crittenden, AR	Yes	74
DeSoto, MS	No	73
Shelby, TN	No	76

Shelby County, Tennessee shows a violation of the 2008 ozone NAAQS, therefore this county is 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 Memphis, TN-MS-AR area.

Table 3. Total 2008 NO_x and VOC Emissions.

County	State Recommended Nonattainment	NO _x (tpy)	VOC (tpy)
Crittenden, AR	Yes	4,047	3,805
DeSoto, MS	No	5,080	5,222
Fayette, TN	No	2,385	1,406
Marshall, MS	No	1,769	1,527

³ Only counties in the Memphis CBSA that have ozone monitors are included in this table.

Shelby, TN	No	39,519	27,929
Tate, MS	No	3,102	1,392
Tipton, TN	No	2,119	2,251
Tunica, MS	No	1,598	1,096
Areawide:		59,619	44,628

*Counties that EPA intends to designate as nonattainment are shown in bold.

DeSoto County contributes about 9 percent NO_x and 12 percent VOC precursor emissions in the CBSA. The County's 5,080 NO_x emissions are mostly comprised of 45 percent area sources, 35 percent mobile sources. DeSoto County's total VOC emissions include 44 percent area sources and 34 percent mobile sources.

Shelby County contributes about 66 percent of the NO_x and 63 percent of the VOC precursor emissions in the CBSA. Shelby makes up 23 percent of the entire CBSA NO_x emissions and 22 percent of the area's VOC emissions. Of the county's 39,519 NO_x emissions, 35 percent are from point and mobile emissions and 20 percent from area source emissions. The County's 27,929 VOC emissions include 36 percent mobile sources and 32 percent area sources.

Crittenden County contributes less than 10 percent of the precursor CBSA emissions. Of the County's total NO_x emissions listed in Table 1, 45 percent are from mobile sources and 34 percent from area sources. The County's total VOC emissions include 35 percent from area sources and 31 percent from mobile sources. Only 5 percent of the County's NO_x emissions are from point sources. Both Crittenden and DeSoto Counties represent less than 1 percent of the entire area's NO_x and VOC point source emissions.

Fayette and Tipton Counties in Tennessee and Marshall, Tate, and Tunica counties in Mississippi all contribute 5 percent or less NO_x and VOC precursor emissions in the CBSA.

Together, Crittenden, DeSoto and Shelby Counties account for 82 percent of the NO_x emissions and 83 percent of the VOC emissions for the 8-county area. The emissions from Fayette and Tipton Counties in Tennessee and Marshall, Tate and Tunica Counties in Mississippi are not thought to contribute to the violations of the 2008 ozone NAAQS that have been observed by monitors in Shelby County, Tennessee and Crittenden County, Arkansas.

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 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)
Crittenden, AR	Yes	50,902	0.08	(75)	<1%
DeSoto, MS	No	161,252	0.32	52,584	+48%
Fayette, TN	No	38,413	0.05	9,313	+32%
Marshall, MS	No	37,144	0.05	2,093	+6%
Shelby, TN	No	927,644	1.18	29,393	+3%
Tate, MS	No	28,886	0.07	3,444	+14%
Tipton, TN	No	61,081	0.13	9,545	+19%
Tunica, MS	No	10,778	0.02	1,557	+17%
Areawide:		1,316,100	0.28	107,854	+9%

*Counties that EPA intends to designate as nonattainment are shown in bold.

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)

DeSoto County, Mississippi is moderately populated in the northern portion of the county and mostly rural in the remaining portion of the County. DeSoto County contains 12 percent of the CBSA population, but experienced 48 percent growth from 2000-2010. Tate, Tunica and Marshall Counties in Mississippi all make up 3 percent or less of the CBSA population and are sparsely populated.

Shelby County, Tennessee is densely populated containing 70 percent of the CBSA population. From 2000-2010, the County only had 3 percent growth in population. Fayette and Tipton County in Tennessee had moderate growth from 2000-2010 but are sparsely populated.

Crittenden County, Arkansas had less than 1 percent population growth from 2000-2010 and contains only 4 percent of the CBSA population. The County is mostly rural with little urbanization.

The attachment to this document contains Figure 2, Memphis Area Ozone and Ozone Precursor Monitoring Network, and Figure 3, Population Density Change Percentage Between 2000 and 2010 Census for Memphis Ozone and Ozone Precursor Monitoring Network, which present graphical information on population density and growth for the Memphis area.

Traffic VMT Data and Commuting Patterns

EPA evaluated the total VMT for each county in the Memphis CBSA. 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 total 2008 VMT for each county.

Table 5. Traffic and VMT Data

County	State Recommended Nonattainment?	2008 VMT (million miles)
Crittenden, AR	Yes	903
DeSoto, MS	No	1,629
Fayette, TN	No	573
Marshall, MS	No	725
Shelby, TN	No	8,789
Tate, MS	No	376
Tipton, TN	No	401
Tunica, MS	No	337
Areawide:		13,733

*Counties that EPA intends to designate as nonattainment are shown in bold.

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

DeSoto County has the second highest VMT in the Memphis CBSA (12% of the total Memphis CBSA). Additionally, DeSoto County has a 48 percent growth in population from 2000-2010 with approximately 35 and 34 percent of the County's NO_x and VOC emissions (respectively) deriving from mobile sources.

Shelby County is the only county in the Memphis CBSA violating the 2008 ozone NAAQS with 2008-2010 air quality data and is considered the core CBSA county, with 64 percent of the VMT in the Memphis CBSA; Approximately 35 percent of Shelby County's NO_x emissions and 34 percent VOC emissions are from mobile sources.

Crittenden County, has less than 10 percent of the CBSA VMT (third highest in the Memphis CBSA). From 2000-2010, Crittenden County had less than 1 percent population growth with 45 percent and 31 percent of the County's NO_x and VOC emissions(respectively) deriving from mobile sources.

The remaining counties in the Memphis CBSA all have low total population and population growth with little urbanization and low precursor emission contribution suggesting negligible contribution of population-based emissions.

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 Memphis International Airport (NWS Station 13893) 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 Memphis CBSA as well as on days when area ozone monitors exceeded the 2008 ozone NAAQS. Additionally, EPA evaluated wind back trajectories (which are an analysis of meteorological patterns) specifically on days when the current ozone design value monitor in Shelby County (Frayser monitor) exceeded the 2008 NAAQS. 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 and south-southwest component for the Memphis CBSA. However, an examination on days when monitors in DeSoto County (Hernando) exceeded the 2008 ozone NAAQS suggested a northerly component. Additionally, on days when monitors in Shelby County exceeded the 2008 NAAQS, the data indicated a southerly wind component.

Figure 2, Memphis Area Ozone and Ozone Precursor Monitoring Network, and Figure 4 present graphical information on 24-hour back trajectories for exceedances in 2008-2010 at the Frayser monitor, locations of major stationary sources, and locations of ambient monitors with their design values. An examination of the meteorological data indicates that, for the 2008-2010 days with ozone concentrations above 75 ppb at the Memphis 2008-2010 Design Value site (Frayser monitor), the wind back trajectories primarily go back through Shelby County, TN (on 10 out of 10 days) and DeSoto County, MS (on 7 out of 10 days), with back trajectories going back through Crittenden County, AR on only 1 out of 10 days. As mentioned in Factor 1, the Shelby County monitor is the only monitor in the Memphis CBSA with a 2008-2010 violation of the 2008 ozone NAAQS.

Since the 2008-2010 data is only for three years and has only 10 exceedance days, we evaluated more years to better understand the meteorological transport conditions that exist during ozone exceedances. Normally when we are developing a conceptual model understanding of what yields ozone exceedances in an area we will evaluate 5 to 10 years worth of meteorological data. Therefore we decided to evaluate all days that had ozone exceedances at the Design Value monitor (Frayser) for the 2006-2010 period. The 2006 and 2007 years had more meteorology that was conducive for ozone formation than the years of 2008, 2009, and 2010. Figure 5 in the attachment to this document includes 72-hour back trajectories for 2006-2010 ozone exceedances at the Frayser monitor using the National Oceanic and Atmospheric Administration Hybrid Single Particle Lagrangian Integrated Trajectory Model (NOAA HYSPLIT). To further understand the meteorological transport conditions within the regional area around Memphis, we also evaluated 24-hour back trajectories for the 2006-2010 time-periods using the NOAA HYSPLIT model. The results of these back trajectories are included in the attachment to this document as Figure 6 with a further zoom in view in Figure 7.

Evaluation of Figures 6 and 7 further supports our previous conclusions based on the 2008-2010 back trajectories when the Memphis area Frayser monitor has ozone exceedances. The 2006-2010 data further supports that most of the centerlines of the back trajectories passes through Shelby County TN, and many of the back trajectory centerlines pass through DeSoto county in northern Mississippi with smaller percentage passing through Crittenden County, Arkansas.

EPA’s meteorological assessment of the area monitors ozone exceedances and specifically the wind back trajectory analysis at the Frayser monitor indicate that Shelby County is likely an emission

contributor to exceedances of the 2008 NAAQS at the Frayser monitor. Furthermore, the assessment also suggests that DeSoto and Crittenden Counties should be considered for potential inclusion in the intended Memphis nonattainment area.

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 Memphis area does not have any geographical or topographical barriers 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 for nonattainment, 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 an MPO, state lines, Reservation boundaries, and urban growth boundaries. 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 Memphis Area MPO is comprised of two study areas; the Memphis Urban Area MPO and the West Memphis MPO. Both organizations are considered multi-jurisdictional agencies responsible for the implementation and coordination of urban transportation planning and establishing transportation conformity infrastructure within their respective boundaries. The Memphis Urban jurisdiction is comprised of all of Shelby County, Tennessee, the western four miles of Fayette County, Tennessee and the northern twelve miles of DeSoto County. The portion of the Memphis Urban MPO in DeSoto County captures the more urbanized portion of the county that has experience continuous growth as well as the ozone air quality monitor. The West Memphis jurisdiction is comprised of the current and potential future urbanized portion of Crittenden County (including the ozone air quality monitor) with the following legal description:

That area west from the Mississippi River along the southern right of way line of County Road 18 (Miller Road and Caldwell Road) to the western right of way line of County Road 205 (Hinkley Road); then north along said right of way line and continuing north to the intersection of the southern right of way line of the St. Louis-Southwestern Railroad; then in a southwesterly direction along said right of way line to the intersection of eastern right of way line of State Highway 147; then north along said right of way to the intersection of the southern right of way line of State Highway 131; then west along said right of way line to the western right of way line of County Road 51 (Eubank Road); then north along said right of way line to U.S. 70; then continuing north along the western right of way line of County Road 25 (Katie Goodhope) to the northern right of way line of County Road 12 (Buck Lake Road); then east along said northern right of way line to State Road 306; then continuing east along the northern right of way line of State Road 306 to the western right of way line of County Road 165; then north along said right of way line to the northern right of way line of County Road 168; then northeasterly along said

right of way line to the intersection of the northern right of way of County Road 172; then east along said right of way line to the intersection of the western right of way line of County Road 5; then north along said right of way line to the intersection of the northern right of way line of James Mill Road; then east along said northern right of way line to the Mississippi River being the eastern boundary of the study area.

Memphis, TN-MS-AR Area has previously established nonattainment boundaries associated with both the 1-hour ozone and 1997 8-hour ozone NAAQS. The Memphis nonattainment boundary for the 1-hour ozone NAAQS included Shelby County, Tennessee in its entirety. Whereas the Memphis nonattainment boundary for the 1997 8-hour ozone NAAQS included Crittenden County, Arkansas and Shelby County, Tennessee in their entireties. Tennessee has recommended a different boundary for the 2008 ozone NAAQS for their portion of this Area. Arkansas recommended the same as the previous boundary for their portion of this Area. In addition, there is current infrastructure for meeting the transportation conformity requirements in Shelby County and the urbanized portions of DeSoto County and Crittenden County since both the Memphis Urban area and West Memphis MPO are currently implementing these requirements for the 1997 8-hour ozone standard.

Even though, DeSoto and Crittenden Counties do not have violating monitors for the 2008 ozone NAAQS based on air quality data from 2008-2010, our analysis suggest that both are likely contributing to the violation in Shelby County due to potential population-based emissions from mobile sources (VMT) and area source, meteorology and population growth.

Conclusion

Based on the assessment of the factors described above, EPA has preliminarily concluded that the following counties should be included as part of the intended Memphis nonattainment area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Crittenden County, Arkansas, and Shelby County, Tennessee in their entireties, and the portion of DeSoto County that is included in the Memphis MPO boundary. Two of these counties (i.e., Crittenden County, Arkansas and Shelby County, Tennessee) are included in the Memphis nonattainment area for the 1997 ozone NAAQS. One of the air quality monitors in Shelby County indicates violation of the 2008 ozone NAAQS based on 2010 DVs, therefore this county is preliminarily included in the nonattainment area. Crittenden County, Arkansas, and DeSoto County, Mississippi are nearby counties that do not have monitors indicating a violation of the standard based on 2010 DVs. However, EPA has preliminarily concluded that these counties (or portions thereof) contribute to the ozone concentrations in violation of the 2008 ozone NAAQS through population-based emissions from mobile and area sources (e.g., vehicles and other small area sources) and county VMT.

Source category emissions data indicate that mobile sources and area sources are the primary contributors to ozone formation in the Memphis CBSA. Thus, population-based emissions such as total population or population growth, and precursor emission transport would indicate a county with contribution in the Memphis Area.

The population in DeSoto County, Mississippi has grown steadily from 2000-2010 (particularly the northern portion) with a 48 percent increase, even though it only makes up 12 percent of the total population in the CBSA. The County also has the CBSA's second highest VMT. More than 30 percent of the County's NOx and VOC emissions are from mobile sources and over 40 percent from area

sources. In addition, meteorology suggests that DeSoto County is likely contributing to the violation in Shelby County due to potential southerly transport of mobile and area emissions.

Shelby County, Tennessee dominates the CBSA in terms of urbanization, precursor emission contribution and transport which indicate population-based emission (mobile and area sources) contribution to its own violating monitor. Although the County population growth was less than 5 percent from 2000-2010, it is densely populated with 70 percent of the CBSA population and five times DeSoto County's population. Shelby County makes up over 60 percent of the Area's NOx and VOC emissions. The County's has over 30 percent of the County's NOx and VOC emission coming from mobile sources and point sources. Meteorological analysis also indicates that Shelby County is contributing to its own violation as well as other monitors in the Memphis CBSA.

Crittenden County, Arkansas makes up less than 5 percent of the CBSA population with less than a 1 percent population growth from 2000-2010. Crittenden County is mostly rural with the least urbanization compared to Shelby and DeSoto Counties. The County contributes less than 10 percent of the CBSA NOx and VOC precursor emissions. However, Crittenden County has over 40 percent of its NOx emission deriving from area sources which is considered a primary contributor to the formation of ozone in the Memphis area. EPA is proposing to include all of Crittenden County in the 2008 ozone Memphis nonattainment area because the county was included in its entirety in the 1997 ozone Memphis nonattainment area and because Arkansas recommended inclusion of the county in its entirety.

The remaining Tennessee (Tipton, Fayette) and Mississippi (Marshall, Tate, and Tunica) counties all have low population and urbanization, and precursor emission contribution and transport suggesting negligible contribution to the violating county. With the exception of those counties that comprise the Memphis, TN-MS-AR 1997 8-hour ozone boundary and the portion of DeSoto County, Mississippi discussed in this TSD for inclusion, EPA preliminarily concludes that the remainder of the counties in the CBSA do not contribute to the violations at the monitors in the CBSA and therefore are not being considered as part of the nonattainment area.

ATTACHMENTS

Figure 2. Memphis Ozone and Ozone Precursor Monitoring Network, with Population Density.

Figure 3. Population Density Change Percentage Between 2000 and 2010 Census for Memphis Ozone and Ozone Precursor Monitoring Network.

Figure 4. Overlay of 24-hour HYSPLIT back trajectories of all 75 ppb exceedances at the Frayser monitor for the 2008-2010 period.

Figure 5. NOAA HYSPLIT MODEL 72-Hour Back Trajectory Frayser Exceedances (2006-10).

Figure 6. NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser Exceedances (2006-10).

Figure 7. NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser Exceedances (2006-10) - Zoom View.

Figure 2. Memphis Ozone and Ozone Precursor Monitoring Network, with Population Density

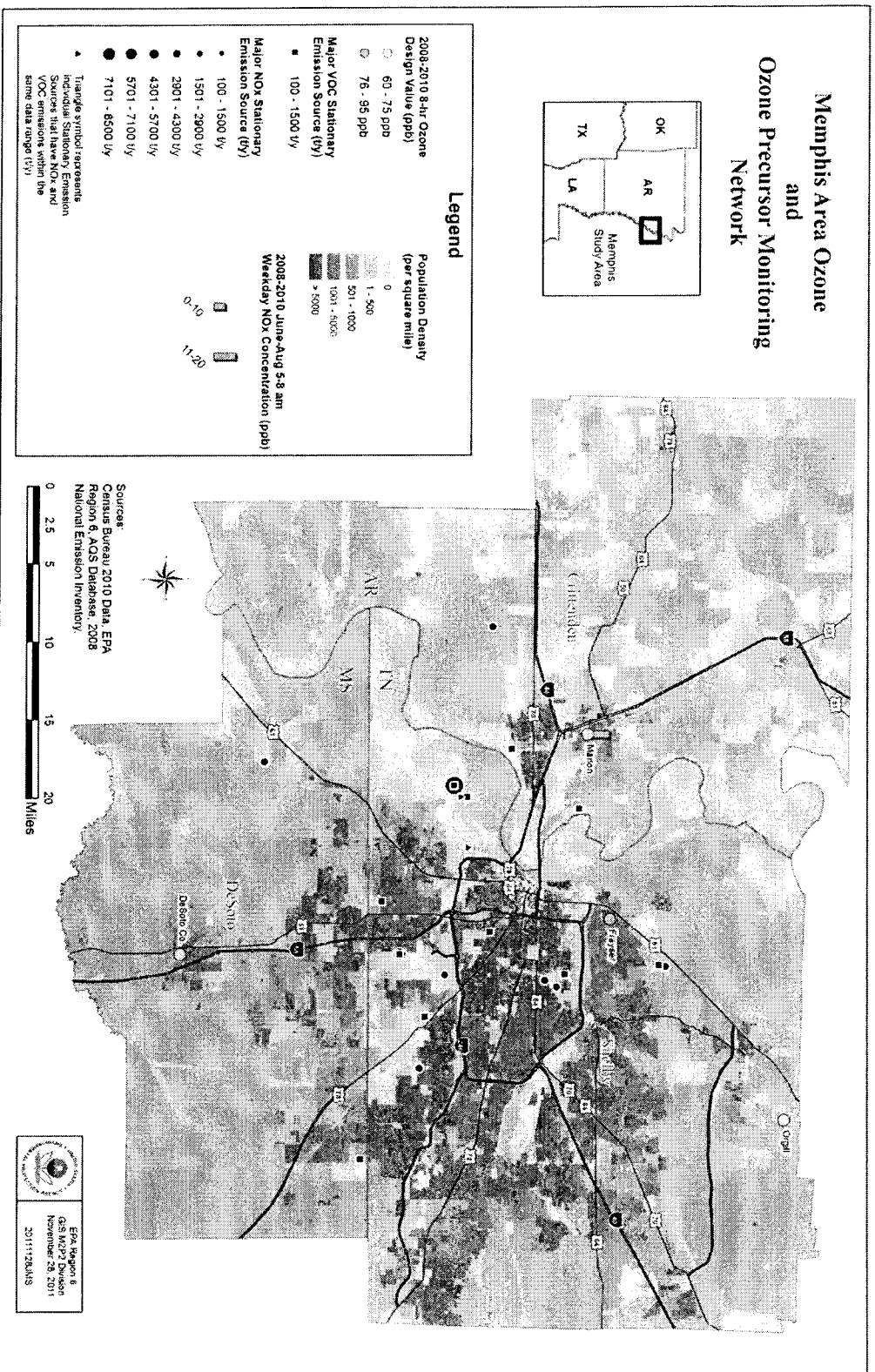


Figure 3. Population Density Change Percentage Between 2000 and 2010 Census for Memphis Ozone and Ozone Precursor Monitoring Network

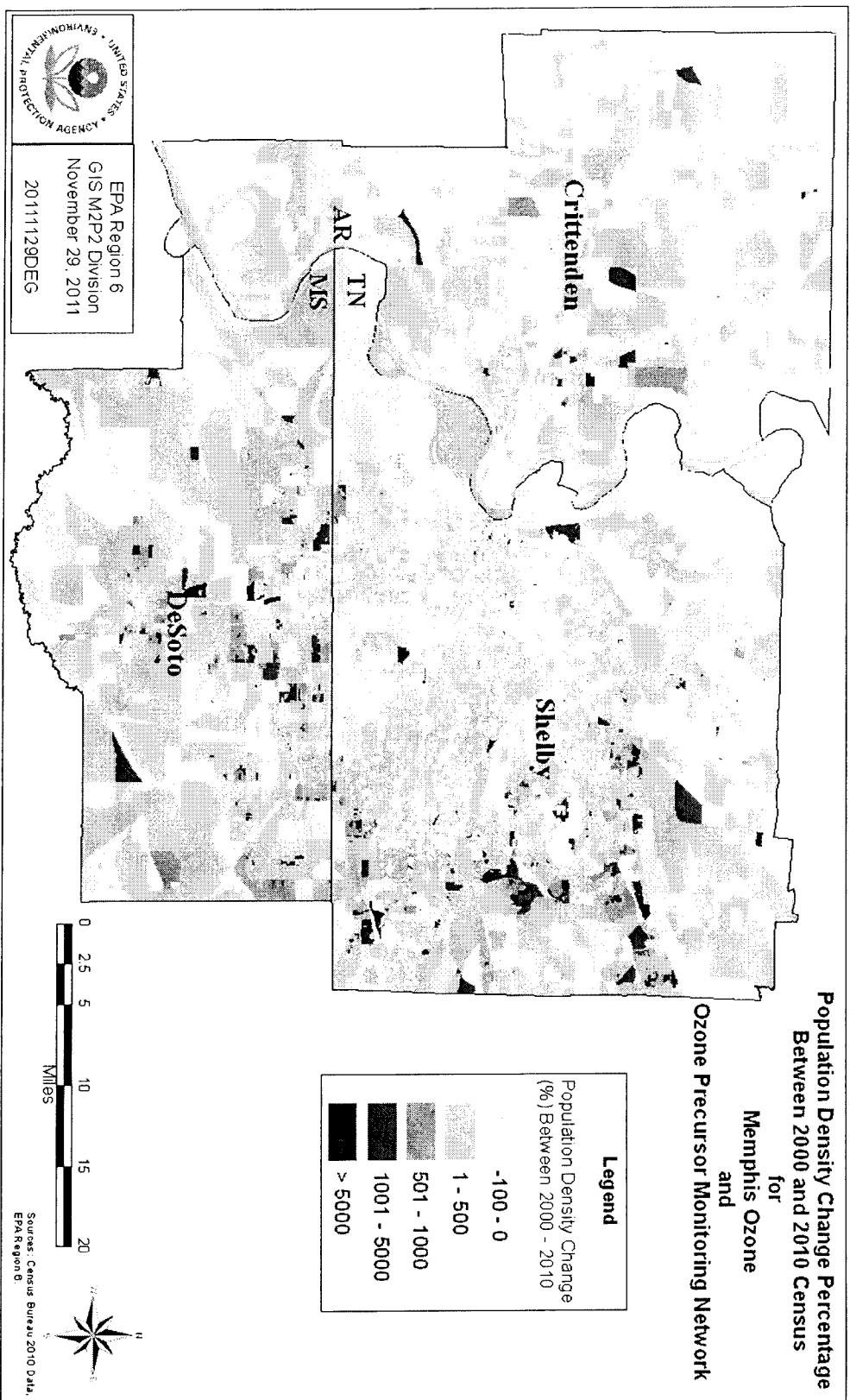


Figure 4 - Overlay of 24-hour HYSPLIT back trajectories of all 75 ppb exceedances at the Frayser monitor for the 2008-2010 period.

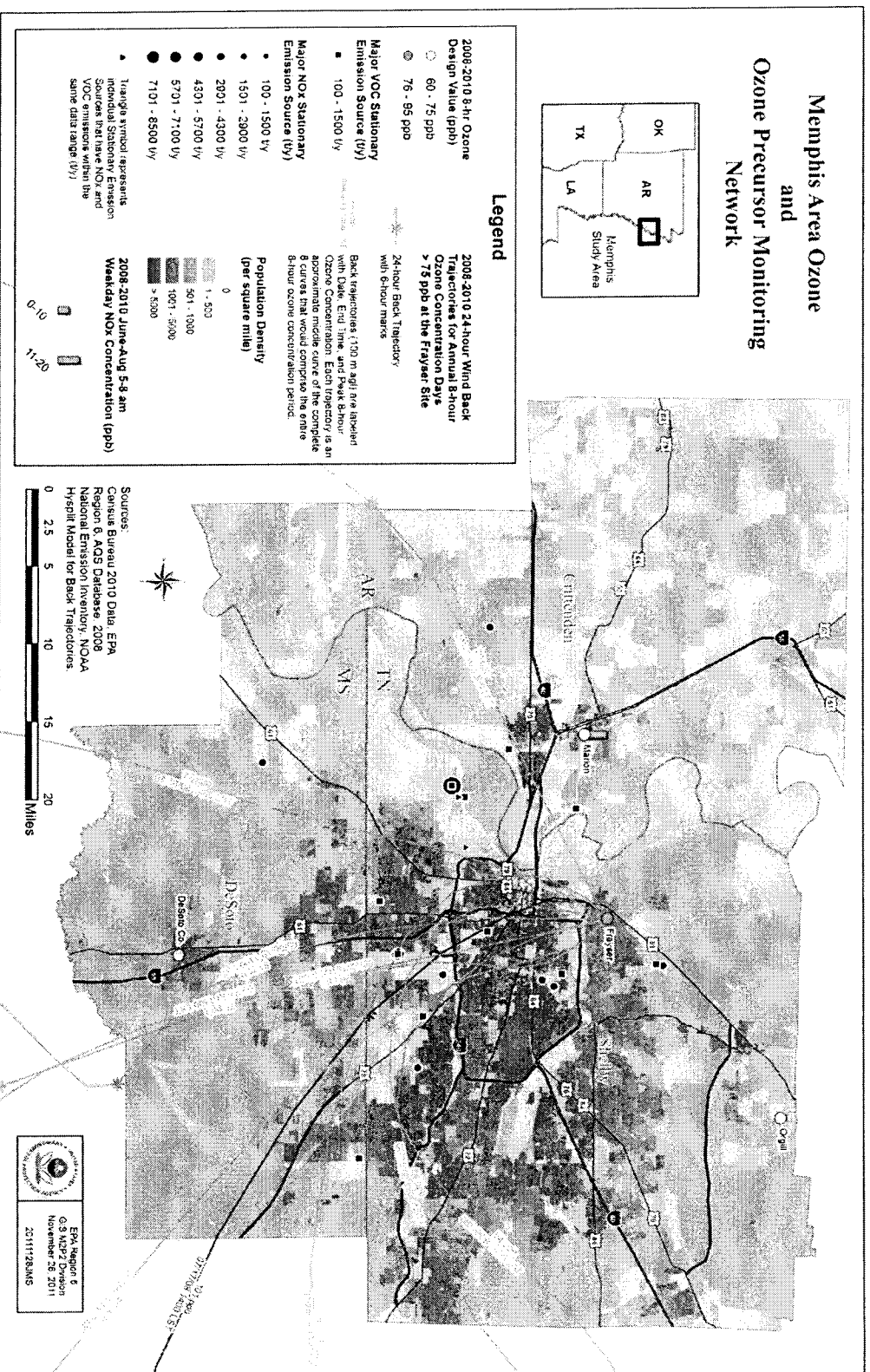


Figure 5. NOAA HYSPLIT MODEL 72-Hour Back Trajectory Frayser Exceedances (2006-10)

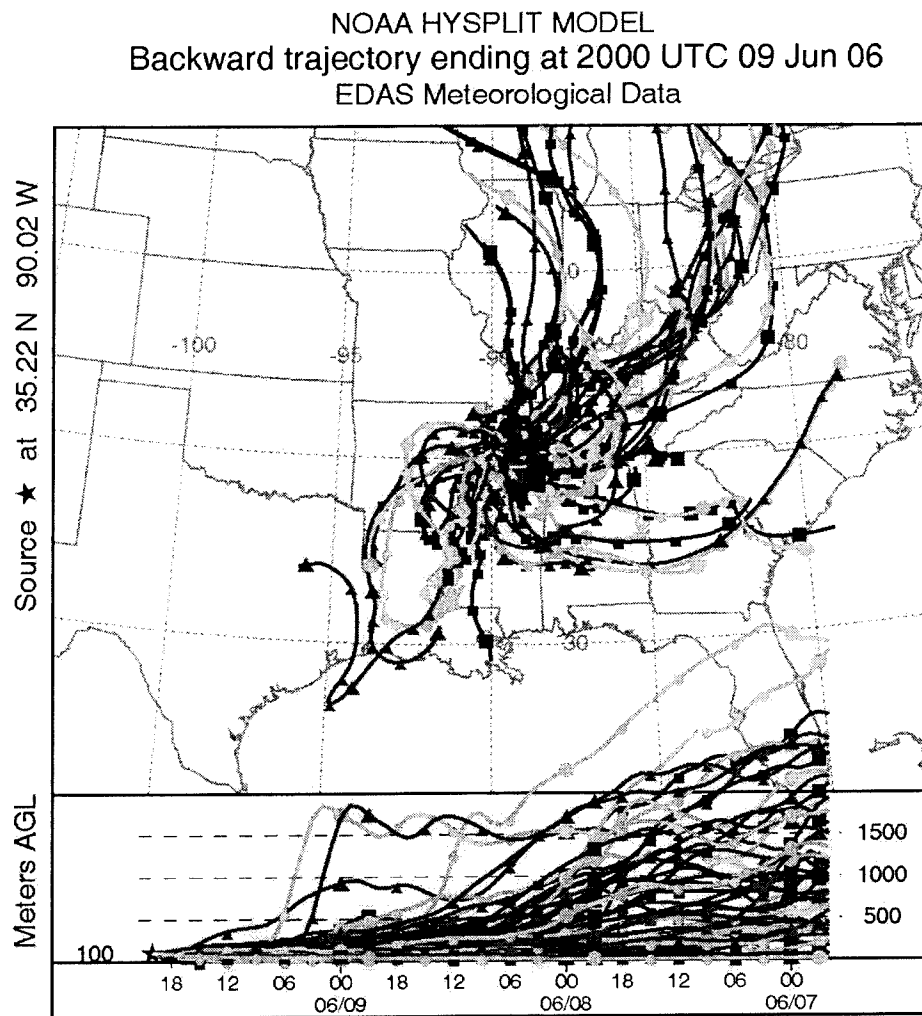


Figure 6. NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser Exceedances (2006-10)

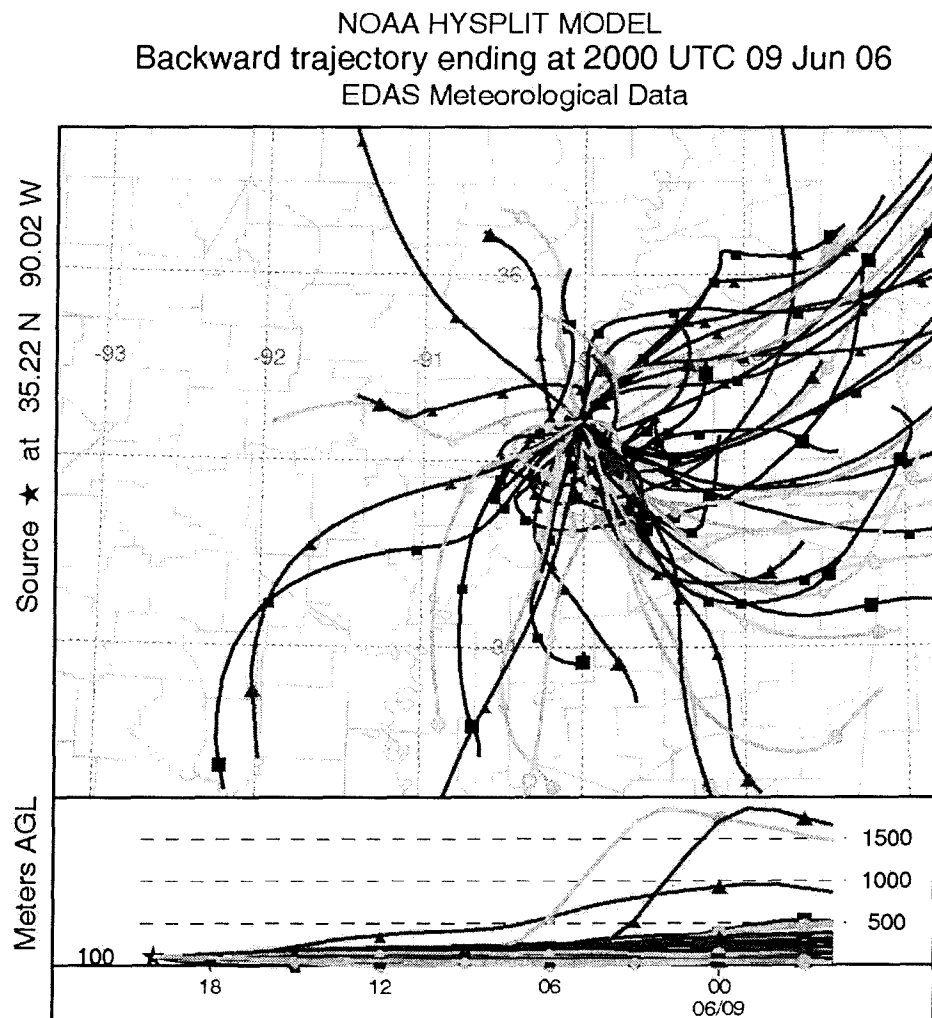
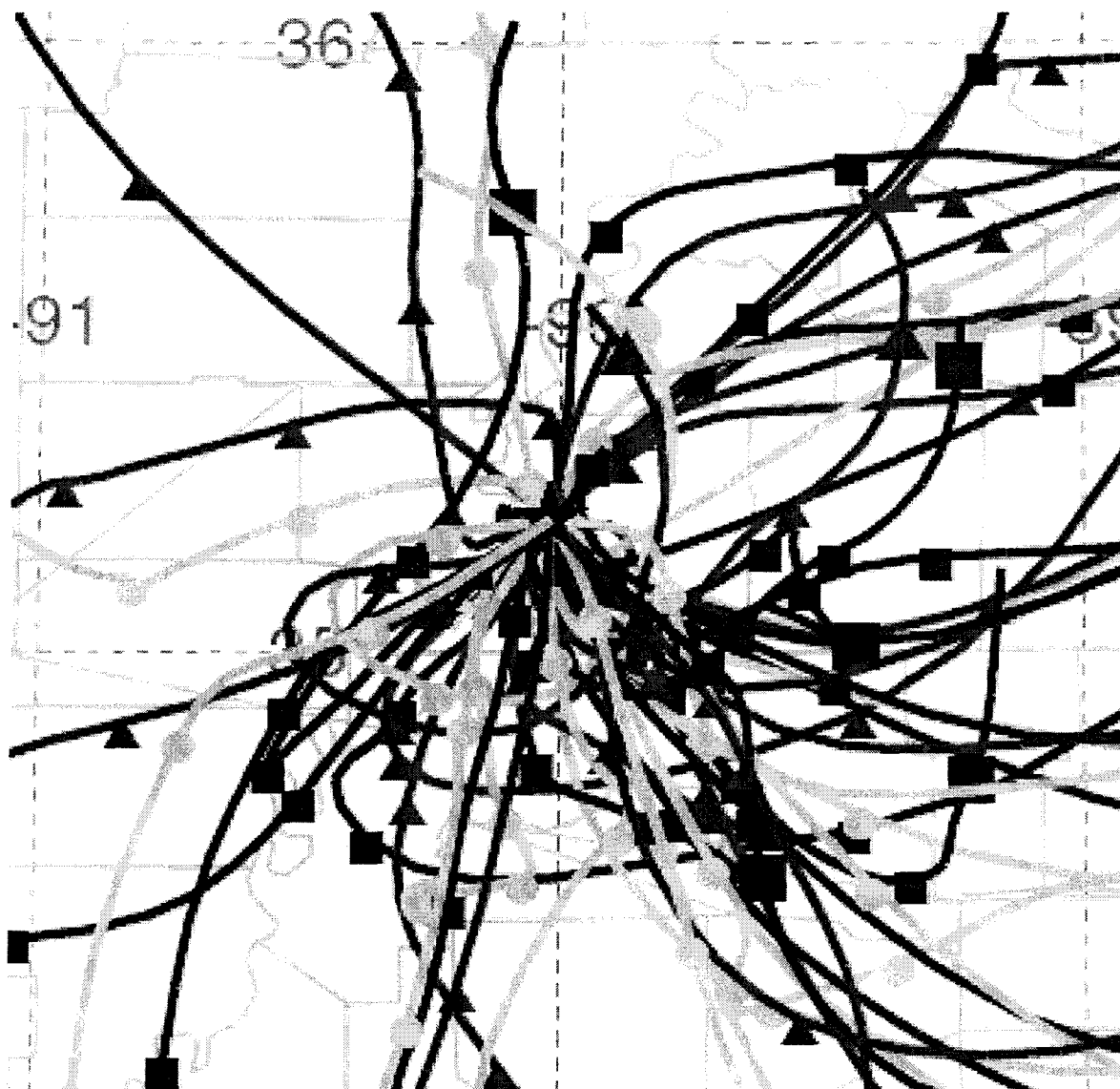


Figure 7. NOAA HYSPLIT MODEL 24-Hour Back Trajectory Frayser
Exceedances (2006-10) - Zoom View



Appendix 2: Mississippi Department of
Environmental Quality, Neel-Schaffer, Inc.: On-Road
Mobile-Source Emissions Forecast For Desoto
County, Mississippi (2010 to 2020)



**ON-ROAD MOBILE-SOURCE EMISSIONS
FORECAST
FOR DESOTO COUNTY, MISSISSIPPI
2010 to 2020**

*Prepared for
Mississippi Department of Environmental Quality
by Neel-Schaffer, Inc.
February 2012*

**ON-ROAD MOBILE-SOURCE EMISSIONS
FORECAST
FOR DESOTO COUNTY, MISSISSIPPI
2010 to 2020**

*Prepared for
Mississippi Department of Environmental Quality
by Neel-Schaffer, Inc.*

February 2012

TABLE OF CONTENTS

SECTION	PAGE
1. Background and Purpose	1
2. 2008 Emissions Summary	2
3. Population Forecast	4
4. Projected Traffic	4
5. Emissions Model Inputs	5
6. Emissions Model Outputs	6
7. Conclusion	7
 TABLE	
1. 2008 Memphis Proposed Nonattainment Area Oxides of Nitrogen and Volatile Organic Compounds Emissions by County (Tons)	3
2. Memphis Proposed Nonattainment Area Population by County: 2000-2020 (Projected)	4
3. 2004 Estimated and 2020 Projected Vehicle-Miles and Vehicle-Hours of Travel and Vehicle-Hours of Delay in Shelby County and DeSoto County	5
4. 2010 Estimated and 2020 Projected Peak-Hour On-Road Mobile-Source Emissions by County	7
 FIGURE	
1. Memphis Proposed Nonattainment Area Counties	2
2. 2010 Estimated and 2020 Projected Peak-Hour On-Road Mobile-Source Emissions by County for Proposed Memphis Nonattainment Area: Oxides of Nitrogen (NO _x) (Grams)	8
3. 2010 Estimated and 2020 Projected Peak-Hour On-Road Mobile-Source Emissions by County for Proposed Memphis Nonattainment Area: Volatile Organic Compounds (VOC) (Grams)	9
 APPENDICES	
A - MOVES2010A Input Files	
B - Notes on MOVES2010A Model Inputs	
C - Summary Reports: Emissions Modeling Results	

ON-ROAD MOBILE-SOURCE EMISSIONS FORECAST FOR DESOTO COUNTY, MISSISSIPPI: 2010 TO 2020

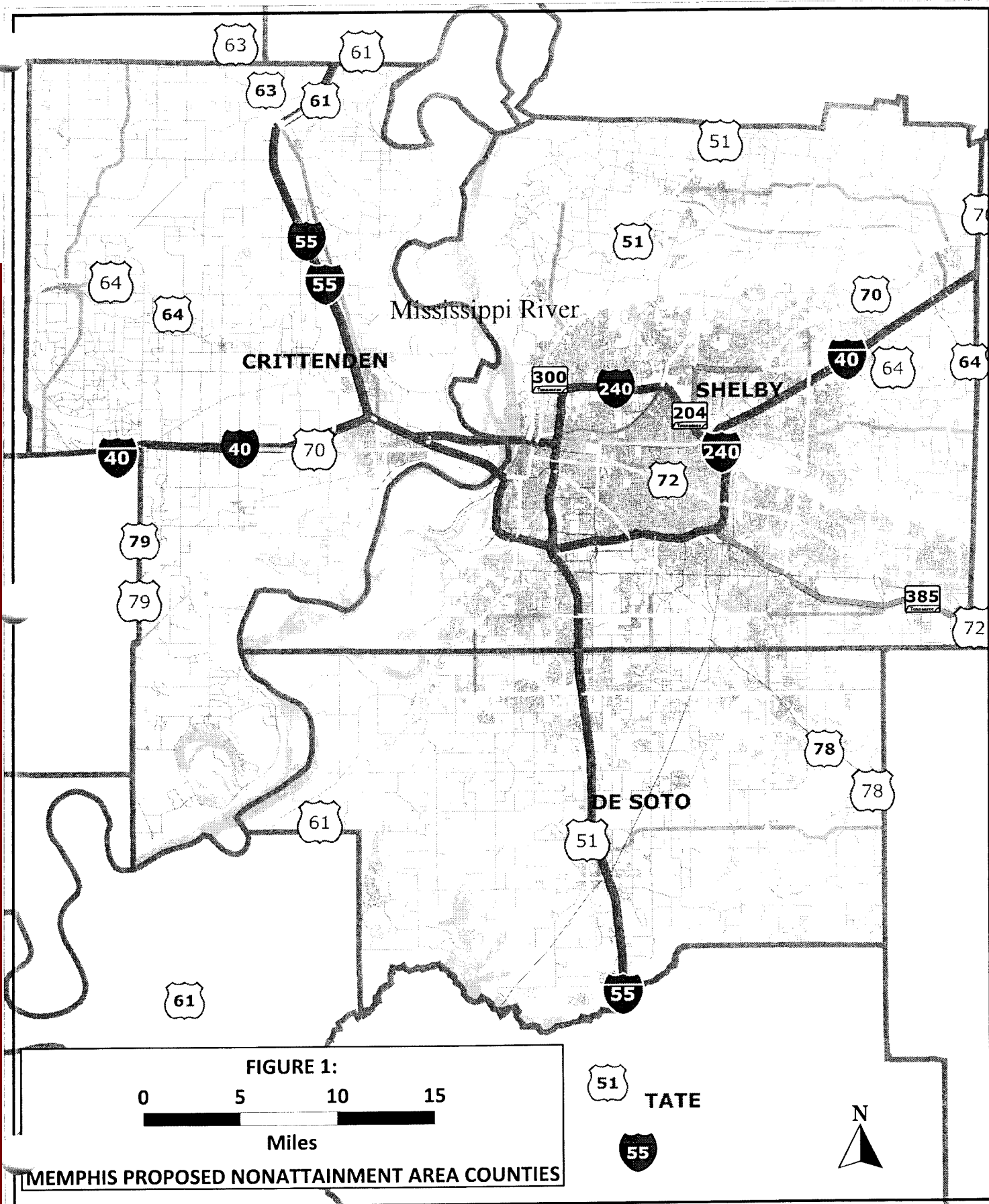
1. Background and Purpose

At the request of the Mississippi Department of Environmental Quality (MDEQ), Neel-Schaffer, Inc. (NSI) undertook a forecast of on-road mobile-source emissions for DeSoto County, Mississippi and two adjacent counties in the Memphis Metropolitan Area for the year 2020. The other counties included in the forecast were Shelby County, Tennessee and Crittenden County, Arkansas (see Figure 1). The U. S. Environmental Protection Agency (EPA) has recommended that the Memphis Nonattainment Area, with respect to the 2008 standard for ozone established under the National Ambient Air Quality Standards (NAAQS), be expanded to include a portion of DeSoto County in addition to all of the other two counties. The portion of DeSoto County recommended for inclusion in the nonattainment area is that which lies within the Memphis Metropolitan Planning Organization (MPO) study area boundary as it existed prior to adoption of the *2030 Long-Range Transportation Plan*. (The updated regional transportation plan expanded the study area to include all of DeSoto County.) This northern portion of DeSoto County, located immediately south of Memphis and Shelby County, includes the municipalities of Southaven, Horn Lake, Olive Branch, Walls and Hernando.

On-road mobile-source emissions were modeled at the county level using the *MOVES2010A* software developed by EPA for use in the preparation of State Implementation Plans and Transportation-Air Quality Conformity documents. Emissions modeling was limited to the criteria pollutants commonly referred to as *ozone precursors* – oxides of nitrogen (NO_x) and volatile organic compounds (VOC) – since it is their interaction in the presence of sunlight that produces ground-level ozone. The 2008 ozone standard is met “when the annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years is 75 ppb [parts per billion] or less” (U. S. Environmental Protection Agency, “Mississippi Area Designations for the 2008 Ozone National Ambient Air Quality Standards”). The following ozone levels were recorded for the three counties recommended for inclusion in the Memphis Nonattainment Area during the three-year period from 2008 through 2010:

Crittenden County	--	74 ppb
DeSoto County	--	73 ppb
Shelby County	--	76 ppb

While the value for Crittenden County falls below the 75 ppb threshold, EPA elected to recommend the county's inclusion in the nonattainment area, largely because it was previously included and because the State of Arkansas recommended its designation. DeSoto County is a different story: While falling even farther below the ozone threshold, it was neither included in the nonattainment area in the past nor recommended for inclusion now by the State of Mississippi. Nevertheless, after analyzing other



factors (i.e., population density and degree of urbanization, traffic conditions and commuting patterns, meteorological conditions, geography and topography, and jurisdictional considerations), EPA decided to recommend DeSoto be included on the grounds that it contributes to the violation (however slight) in Shelby County.

The purpose of the analysis undertaken for MDEQ was to determine how these marginal ozone levels are likely to be affected by street and highway vehicle emissions during the period between 2010 and the year 2020. Before examining the results of that analysis it will be useful to consider the larger picture, including the contribution of on-road mobile-source emissions to the overall level of ozone in the three-county area, projected population growth and the travel forecast for the region.

2. 2008 Emissions Summary

The 2008 EPA emissions summary indicates total oxides of nitrogen from all sources amounting to 48,646 tons in the three-county area (see Table 1). Crittenden County and DeSoto County together accounted for 9,127 tons or less than 19 percent of NO_x emissions from all sources, whether mobile or stationary. Shelby County alone accounted for over 39,500 tons or more than 81 percent of the areawide total. On-road mobile-source emissions generated by motor vehicles amounted to 18,415 tons and represented 37.9 percent of all NO_x output in the area. Nearly 10 percent of the three-county total was attributable to vehicles on Crittenden County roads, more than 15 percent to vehicles on DeSoto County streets and highways. The balance – 13,690 tons or 74.3 percent – was associated with traffic in Shelby County.

Table 1:
2008 MEMPHIS PROPOSED NONATTAINMENT AREA
OXIDES OF NITROGEN AND VOLATILE ORGANIC COMPOUNDS EMISSIONS BY COUNTY (TONS)

COUNTY	NO _x (ALL SOURCES)	PCT OF TOTAL (ALL SOURCES)	NO _x (ON-ROAD MOBILE)	PCT OF TOTAL (ON-ROAD MOBILE)
Crittenden AR	4,047	8.32	1,827	9.92
DeSoto MS	5,080	10.44	2,898	15.74
Shelby TN	39,519	81.24	13,690	74.34
TOTAL	48,646	100.00	18,415	100.00

COUNTY	VOC (ALL SOURCES)	PCT OF TOTAL (ALL SOURCES)	VOC (ON-ROAD MOBILE)	PCT OF TOTAL (ON-ROAD MOBILE)
Crittenden AR	3,805	10.30	1,189	9.23
DeSoto MS	5,222	14.13	1,762	13.68
Shelby TN	27,929	75.57	9,933	77.10
TOTAL	36,956	100.00	12,884	100.00

Source: U. S. Environmental Protection Agency, "State and County Emission Summaries" (online data resource).

The numbers for volatile organic compounds were comparable. Of the total tonnage from all sources (36,956), nearly 28,000 tons, or better than 75 percent, were attributable to sources in Shelby County. The remainder, amounting to less than 25 percent of the total, was split between Crittenden and DeSoto counties. On-road mobile-source emissions totaled 12,884 tons or 34.9 percent of all VOC. Of that total, more than 9,900 tons were attributable to vehicles operating in Shelby County. That represents more than 77 percent of on-road mobile-source VOC emissions, compared to a little more than nine percent in Crittenden County and 13.7 percent in DeSoto County.

3. Population Forecast

Much of the population growth in the Memphis area in recent years has taken place in DeSoto County, and EPA apparently infers from this that emissions in the Mississippi county will figure more prominently in air quality calculations for the metropolitan area in the future. Population in the three-county area increased by only eight percent between 2000 and 2010, but the number of people living in DeSoto County grew by 50 percent (see Table 2). There was almost no change in Crittenden County, and growth in Shelby County was sluggish. The Memphis MPO has projected that strong growth will continue in DeSoto County, with population increasing by another 44 percent between 2010 and 2020. Increased population growth is projected for Crittenden County, but very little change is expected in Shelby County. The result of this trend would be that the Shelby County share of total population in the three-county area would decline from 85 percent in 2000 to 75 percent in 2020. The DeSoto County share would increase from 10 to nearly 19 percent.

4. Projected Traffic

The way in which these demographic trends affect the distribution of traffic in the region will have a significant impact on emission levels in individual counties. Based on output from the Memphis MPO travel demand forecasting model, vehicles traveling on streets and highways in Shelby County during the base year (2004) logged just over 21,459,000 vehicle-miles traveled (VMT) on a typical weekday (see Table 3). That represented approximately 676,000 vehicle-hours traveled (VHT) of which some 188,000, or nearly 28 percent, were vehicle-hours of delay (VHD) resulting from traffic congestion. (*Delay* is the difference in travel time between that which would be required to make a trip under conditions of unimpeded flow and the time required to make the same trip under the less than optimal conditions resulting from congestion.) These figures dwarf those for DeSoto County: 3,358,160 vehicle-miles traveled, 82,418 vehicle-hours traveled and only 15,678 hours of delay. No data are available for Crittenden County, since it is not included in the Memphis MPO model area.

The substantial growth projected for DeSoto County during the current decade will not reduce the absolute difference in vehicle-miles and vehicle-hours but will affect the relative distribution somewhat. Based on the figures noted in the preceding paragraph, traffic in DeSoto County accounted for approximately 13.5 percent of vehicle-miles in 2004, 10.9 percent of vehicle-hours and 7.7 percent of delay in the two-county area. However, VMT is projected to increase by nearly 80 percent between 2004 and 2020, VHT by more than 80 percent and VHD by over 120 percent.

Table 2:
MEMPHIS PROPOSED NONATTAINMENT AREA POPULATION BY COUNTY:
2000-2020 (PROJECTED)

COUNTY	2000 POPULATION	PERCENT OF TOTAL
Crittenden	50,866	4.82
DeSoto	107,199	10.16
Shelby	897,472	85.03
TOTAL	1,055,537	100.00
COUNTY	2010 POPULATION	PERCENT OF TOTAL
Crittenden	50,902	4.47
DeSoto	161,252	14.15
Shelby	927,644	81.39
TOTAL	1,139,798	100.00
COUNTY	2000-2010 POPULATION CHANGE	PERCENT CHANGE
Crittenden	36	0.07
DeSoto	54,053	50.42
Shelby	30,172	3.36
TOTAL	84,261	7.98
COUNTY	2020 PROJECTED POPULATION	PERCENT OF TOTAL
Crittenden	57,617	4.66
DeSoto	232,678	18.83
Shelby	945,549	76.51
TOTAL	1,235,844	100.00
COUNTY	2010-2020 POPULATION CHANGE	PERCENT CHANGE
Crittenden	6,715	13.19
DeSoto	71,426	44.29
Shelby	17,905	1.93
TOTAL	96,046	8.43

Source: U. S. Census Bureau, "Census 2000 Demographic Profiles" and "2010 Census Interactive Population Search" (online data resources); Memphis Metropolitan Planning Organization (2011): 2020 population projections from regional travel demand forecasting model developed for 2040 Long-Range Transportation Plan.

5. Emissions Model Inputs

In order to project how these changes in population and traffic are likely to affect future on-road mobile-source emissions associated with the formation of ozone, the EPA MOVES2010A model was used to generate peak-hour emissions for oxides of nitrogen and volatile organic compounds for each of the three counties proposed for nonattainment status. Inputs to the emissions model include annual VMT by type of vehicle as defined by the Federal Highway Administration's Highway Performance Monitoring System (HPMS); the distribution of VMT by month, day and hour; the distribution of VMT by type of road; the distribution of vehicles by type of vehicle; the distribution of vehicles by age; the distribution

Table 3:
2004 ESTIMATED AND 2020 PROJECTED VEHICLE-MILES AND VEHICLE-HOURS OF TRAVEL
AND VEHICLE-HOURS OF DELAY IN SHELBY COUNTY AND DESOTO COUNTY

YEAR	COUNTY		VMT	VHT	VHD
2004	Shelby County	<i>Estimated</i>	21,459,007	676,154	188,495
2004	DeSoto County	<i>Estimated</i>	3,358,160	82,418	15,678
2020	Shelby County	<i>Projected</i>	26,284,742	778,783	216,062
2020	DeSoto County	<i>Projected</i>	5,996,943	150,806	35,098
2004-2020	Shelby County	<i>Absolute Change</i>	4,825,735	102,629	27,567
2004-2020	DeSoto County	<i>Absolute Change</i>	2,638,783	68,388	19,420
2004-2020	Shelby County	<i>Percent Change</i>	22.49	15.18	14.62
2004-2020	DeSoto County	<i>Percent Change</i>	78.58	82.98	123.87

Source: Memphis Metropolitan Planning Organization (2011): Summary output data from regional travel demand forecasting model.

of vehicles by average operating speed; fuel supply and fuel formulation; and basic meteorological data (average temperature and relative humidity). Printouts of the actual input files may be found in Appendix A. Notes on the development of those files will be found in Appendix B. Data from the Memphis MPO model were used to calculate average speeds for 2010 and 2020 for DeSoto and Shelby counties. The values for DeSoto County were also used for Crittenden County, since no model data were available for the Arkansas county. Data from the EPA publication documenting development of the emissions model (*MOVES2010 Highway Vehicle Population and Activity Data*, U. S. Environmental Protection Agency, November 2010) were used for the distribution of VMT by hour, day and month of the year, vehicle type, age of vehicle and type of road for all three counties. VMT and vehicle fleet data were based on HPMS and other available data for 2010, and both output and input data from the travel demand forecasting model were used for projecting vehicle miles and vehicles in future years. Fuel supply and formulation data were exported from the *MOVES2010A* model itself and represent conditions associated with fuel standards and fuel efficiency requirements mandated by EPA now and for the future. Meteorological data were taken from an EPA database providing average temperature and relative humidity by month and hour collected over a period of 30 years by the National Oceanic and Atmospheric Administration.

6. Emissions Model Outputs

In order to establish a basis for comparison, emissions were generated for a designated one-hour period from 3:00 p.m. until 4:00 p.m. on a weekday afternoon in July for both years, 2010 and 2020. Aggregate emissions for each of the criteria pollutants, under the conditions associated with each alternative, are presented in Table 4. It will immediately be noted that projected future emissions are significantly lower than those associated with the recent past. Oxides of nitrogen are reduced by more than 63 percent over the 10-year period, and volatile organic compounds are reduced by 56 percent. These dramatic reductions in on-road mobile-source emissions are attributable to higher fuel standards and

Table 4:
2010 ESTIMATED AND 2020 PROJECTED PEAK-HOUR ON-ROAD MOBILE-SOURCE EMISSIONS BY COUNTY

2010 Estimated Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOC)

COUNTY	1-HOUR (GRAMS)		PERCENT OF TOTAL	
	NOx	VOC	NOx	VOC
Crittenden	211,227	65,318	6.14	8.68
DeSoto	684,850	194,509	19.90	25.85
Shelby	2,546,100	492,722	73.97	65.47
TOTAL	3,442,177	752,549	100.00	100.00

2020 Projected Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOC)

COUNTY	1-HOUR (GRAMS)		PERCENT OF TOTAL	
	NOx	VOC	NOx	VOC
Crittenden	72,606	27,172	5.82	8.24
DeSoto	249,649	87,050	20.02	26.40
Shelby	924,819	215,508	74.16	65.36
TOTAL	1,247,074	329,730	100.00	100.00

2010 to 2020 Projected Change in Oxides of Nitrogen (NOx) and Volatile Organic Compounds (VOC)

COUNTY	1-HOUR (GRAMS)		PERCENT CHANGE	
	NOx	VOC	NOx	VOC
Crittenden	-138,621	-38,146	-65.63	-58.40
DeSoto	-435,201	-107,459	-63.55	-55.25
Shelby	-1,621,281	-277,214	-63.68	-56.26
TOTAL	-2,195,103	-422,819	-63.77	-56.18

fuel efficiency requirements already scheduled or anticipated to take effect in 2012 and subsequent years. The previously noted increase in the aggregate amount of travel, measured in miles (VMT) and hours (VHT), is more than offset by the decrease in emissions generated per mile or hour. Summary reports, containing the output data for each of the three study area counties, may be found in Appendix C.

7. Conclusion

The results of the emissions modeling effort are graphically represented in figures 2 and 3. These portray the very substantial decreases in emissions projected for both pollutants modeled. As noted earlier, on-road mobile sources account for a substantial share of total ozone precursor output in the three-county area: approximately 35 percent of all NOx emissions and 38 percent of all VOC emissions. Given the fact that current ozone levels in the three counties proposed for inclusion in the Memphis Nonattainment Area are either slightly above or slightly below the NAAQS threshold level (75 ppb) it

seems reasonable to suggest that the projected reductions in traffic-related NO_x and VOC emissions could greatly enhance efforts to maintain or achieve attainment status in the years ahead.

Figure 2:

2010 ESTIMATED AND 2020 PROJECTED PEAK-HOUR ON-ROAD MOBILE-SOURCE EMISSIONS BY COUNTY
FOR PROPOSED MEMPHIS NONATTAINMENT AREA: OXIDES OF NITROGEN (NOx) (GRAMS)

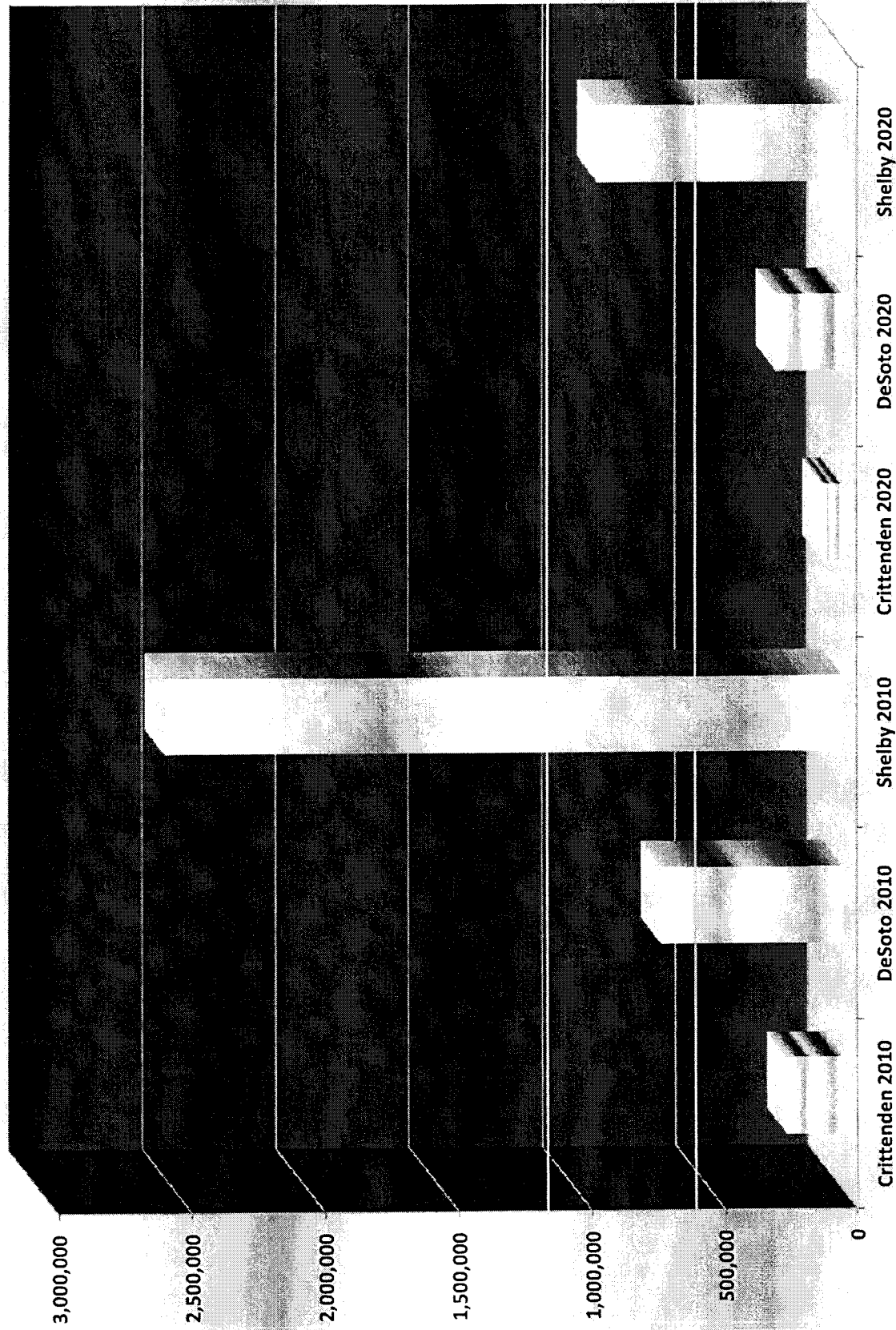
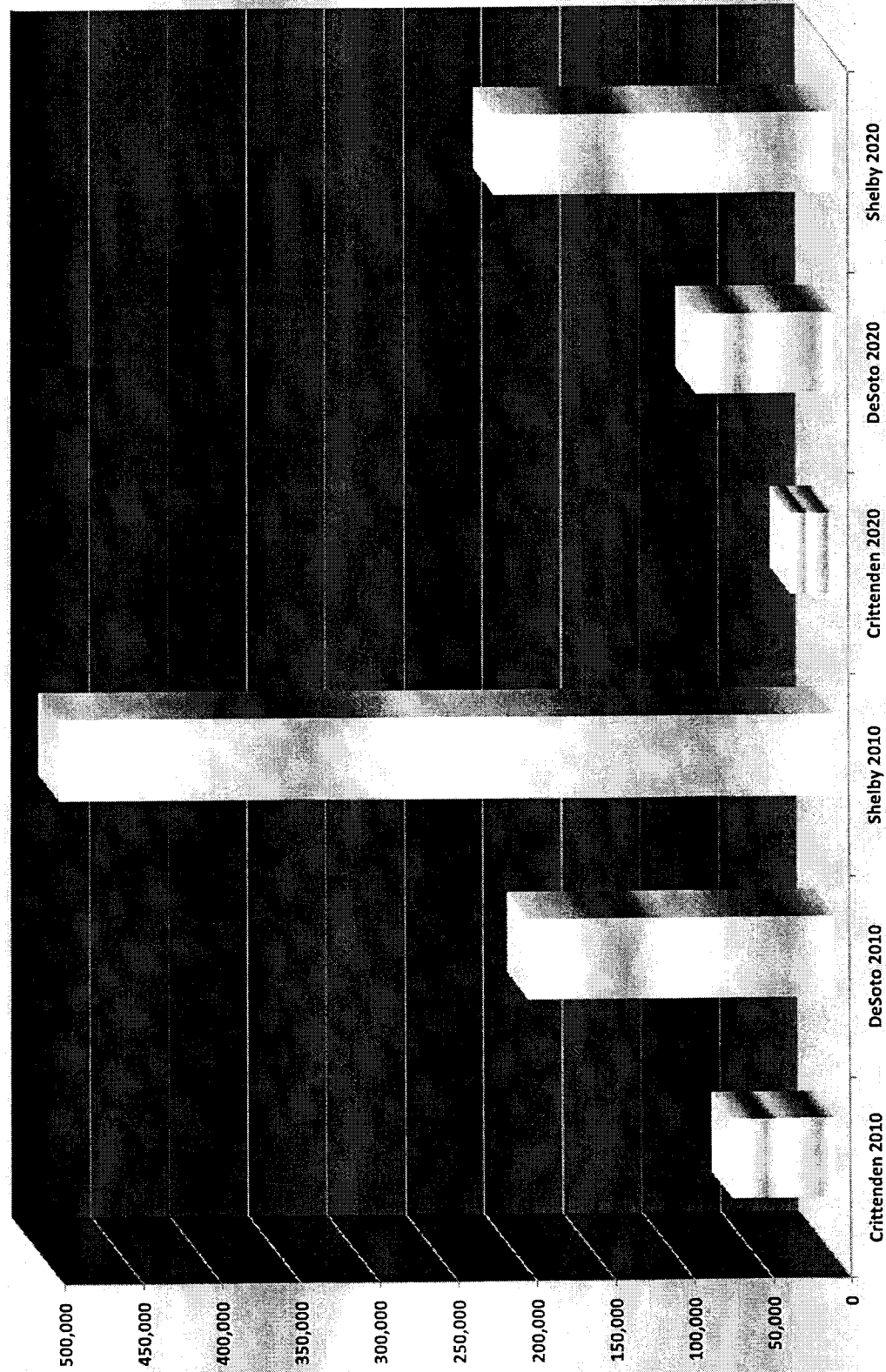


Figure 3:

2010 ESTIMATED AND 2020 PROJECTED PEAK-HOUR ON-ROAD MOBILE-SOURCE EMISSIONS BY COUNTY
FOR PROPOSED MEMPHIS NONATTAINMENT AREA: VOLATILE ORGANIC COMPOUNDS (VOC (GRAMS))



Appendix 3: Idle Reduction Policies in
DeSoto County



DeSoto County Anti-Idling Program

Proposal

The purpose of the DeSoto County Anti-Idling Program is to protect public health and the environment in DeSoto County by voluntarily restricting the amount of time that county and municipal non-emergency vehicles, school buses, and commercial vehicles idle. Vehicles that require unavoidable idling to provide a service or function would be exempt.

The DeSoto County Anti-Idling Program is a unique collaborative effort to reduce vehicle emissions while conserving fuel and lessen vehicle wear and tear. Any current anti-idling policies in the county or municipalities could be integrated into the DeSoto County Anti-Idling Program. The Mississippi Department of Environmental Quality will partner in this program and provide any assistance needed. Additionally, EPA is actively promoting anti-idling programs and will collaborate with this program.

Background

The United States Environmental Protection Agency sets National Ambient Air Quality Standards (NAAQS) for the protection and well being of human health and the environment. DeSoto County is currently designated as attainment of all Environmental Protection Agency's NAAQS. However, efforts must be made for DeSoto County to continue to enjoy good air quality.

Vehicle emissions have a significant impact on human health and our environment. Vehicle emissions contain nitrogen oxides and volatile organics compounds which contribute to ozone formation as well as fine particulates. Vehicles contribute one third of the nitrogen oxides and one fourth of the volatile organics emissions in Mississippi. Reducing emissions from vehicles are important to assure NAAQS continue to be met. Limiting the amount of time in which vehicles idle is one of the tools to lower emissions. A vehicle can use up to one gallon per hour when idling and produce up to 135 grams per hour of nitrogen oxides and 6.5 grams per hour of volatile organics.

An anti-idling program would provide an easy, cost-effective policy to assist in maintaining the air quality of DeSoto County and to reduce the exposure of people to the potential health impacts of vehicle emissions. It would also reduce fuel consumption and vehicle wear and tear which would create a cost savings for the county and municipalities. EPA is actively promoting anti-idling programs.

Goal

The goal is for all county and municipal governments, school bus fleets, and commercial fleets participating in the DeSoto County Anti-Idling Program to voluntarily adopt a policy restricting non-emergency vehicles from unnecessary idling. Vehicles that require unavoidable idling to provide a service or function would be exempt.



DeSoto County Anti-Idling Policy

1.0 Purpose:

DeSoto County, Mississippi is committed to reducing unnecessary county and municipal vehicle/equipment idling as a means of reducing air pollution and fuel expense.

The purpose of this policy is to establish guidelines for unnecessary idling of county and municipal vehicles and equipment. Limiting idling times reduces air pollution and contributes to healthier work environments and the efficient use of county/municipality resources.

2.0 Scope:

This policy applies to all staff operating vehicles and equipment owned or leased by DeSoto County and the municipalities within the county.

3.0 Definitions:

3.1 Idling:

the operation of a vehicle or equipment while they are not in motion and not being used to operate auxiliary equipment that is essential to the operation of the vehicle or equipment.

3.2 Fuels:

includes all vehicles or equipment that run on fossil fuels which include gasoline, diesel, propane, hydrogen, and natural gas.

3.3 Vehicles:

any self-propelled mechanized equipment that is used for transporting persons or commodities on public roads utilizing fossil fuels.

4.0 Procedures:

4.1 Manufacturer's Guidelines (Recommendations):

Always follow the manufacturer's guidelines and recommendations for idling unless otherwise specified.

4.2 Initial Warm-Up:

Idle times up to three (3) minutes are allowed for vehicles during their initial shift warm up and at subsequent times when the vehicle is being restarted after a prolonged period of shut down that results in vehicle conditions similar to those prior to initial shift warm up.

4.3 Operation of Equipment in the Field:



4.3.1 Gasoline and Alternative Fuel Vehicles

No operator shall idle the engine of a gasoline-fueled vehicle in excess of one (1) minute if the vehicle is stopped for a foreseeable period of time. Operators making multiple or frequent stops that require their vehicle to be stationary for time periods of several minutes may idle up to three (3) minutes in such circumstances.

4.3.2 Diesel-Fueled Vehicles/Equipment

No operator shall idle the engine of a diesel-fueled vehicle in excess of three (3) minutes if the vehicle is stopped for a foreseeable period of time. Diesel-fueled vehicles/equipment should only be turned off after enough time has passed to allow the proper circulation and cooling of the engine oil, coolant, and turbochargers, not to exceed three (3) minutes.

4.3.3 When engines must be left running for any reason, the operator must remain with the vehicle.

5.0 Exceptions:

This policy does not apply to the following vehicles, equipment, or situations. Operators must use their own discretion in certain situations.

- 5.1 Emergency vehicles and equipment are exempted while engaged in operational activities such as fire, police, or ambulance services.
- 5.2 Vehicles assisting in an emergency activity are exempt.
- 5.3 Where engine power is necessary for an associated power need such as, but not limited to, electrical power, compressed air, and various power take-off devices such as auxiliary hydraulics.
- 5.4 Vehicles may idle for the purpose of defogging, defrosting, or deicing windows. Idling must end when fog, frost, or ice conditions have been eliminated. When window ice or frost conditions are present, attempts to remove snow, ice, or frost from the windows with a scraper must be attempted before idling.
- 5.5 This policy does not apply to vehicles being serviced or inspected.
- 5.6 Where safety may be compromised by shutting down the engine, vehicles/equipment may idle at the discretion of the operator.



CITY OF OLIVE BRANCH
Engine and Equipment Idling Policy
January 23, 2006

Idling of fleet vehicles and equipment contributes to poor air quality, consumes fuel unnecessarily, and is harmful to engines. It is the responsibility of all city personnel to operate fleet equipment in an environmentally and economically sound manner.

City fleet vehicles and equipment shall not be parked with their engine operating for more than five minutes unless it is essential for performance of work. When engines must be left operating, for any reason other than public safety concerns, the operator must remain with the vehicle/equipment. Violators are subject to disciplinary action.



The City of Southaven Anti-Idling Policy

October 16, 2007

1.0 Purpose:

The City of Southaven, Mississippi is committed to reducing unnecessary municipal vehicle/equipment idling as a means of reducing air pollution and fuel expense.

The purpose of this policy is to establish guidelines for unnecessary idling of county and municipal vehicles and equipment. Limiting idling times reduces air pollution and contributes to healthier work environments and the efficient use of county/municipality resources.

2.0 Scope:

This policy applies to all staff operating vehicles and equipment owned or leased by the City of Southaven only.

3.0 Definitions:

3.1 Idling:

the operation of a vehicle or equipment while they are not in motion and not being used to operate auxiliary equipment that is essential to the operation of the vehicle or equipment.

3.2 Fuels:

includes all vehicles or equipment that run on fossil fuels which include gasoline, diesel, propane, hydrogen, and natural gas.

3.3 Vehicles:

any self-propelled mechanized equipment that is used for transporting persons or commodities on public roads utilizing fossil fuels.



Appendix 4: DeSoto County Report Card
and Table of Air Outreach Events



DeSoto County Report Card

EPA Region 4 staff and MDEQ – Air Division Staff held an Air Quality Workshop in Hernando, MS on June 20, 2007. The purpose of the meeting was to provide information and tools to DeSoto County citizens and officials to lower emissions across the county. Local citizens, elected officials, and MDEQ went above and beyond the recommendations given at the workshop. Currently, there is momentum in DeSoto County to continue steps to reduce Ozone precursor emissions. By continuing to focus resources toward outreach and ozone action planning, MDEQ can continue the efforts to reduce emissions.

DeSoto County Air Quality Workshop

Meeting Date: June 20, 2007

Attendees: EPA – Region 4, MDEQ, DeSoto County Officials, Local Elected Officials, and Public

EPA Recommendations	MDEQ / DeSoto County Responses
Ozone Action Program	<p>DeSoto County Ozone Action Group</p> <ul style="list-style-type: none"> The DeSoto Planning Commission began the Ozone Action Group to engage public and private groups in finding emission reductions and providing public outreach.
Outreach	<p>DeSoto County Ozone Action Group</p> <ul style="list-style-type: none"> The DeSoto Planning Commission began the Ozone Action Group to engage public and private groups in finding emission reductions and providing public outreach. This group meets regularly and brainstorms creative approaches and outreach ideas to reduce emissions. MDEQ, DeSoto County Ozone Action Group, and the DeSoto County Planning Commission have engaged in numerous outreach events throughout the county. A puppet show was also developed as an additional outreach tool for schools and public outreach.
Idle Reduction	<p>DeSoto County Anti-Idling Program</p> <ul style="list-style-type: none"> DeSoto County and all municipalities within the county adopted idle reduction policies and procedures for all county and municipal fleets.
Diesel Emission Reduction Projects	<p>MS School Bus Retrofit Project</p> <ul style="list-style-type: none"> MDEQ retrofitted 93 DeSoto County school buses with diesel oxidation catalysts. In the surrounding counties, MDEQ retrofitted an additional 57 buses with DOCs.

Additional Projects and Efforts:

- All open burning is banned on Ozone Action Days. Open Burning is banned on all days in Hernando.
- Texas Gas Transmission voluntarily added permit conditions to reduce the load on several compressor engines to 90%. This reduction creates a 50% NOx reduction from those engines.



- MDEQ and DeSoto County have had additional outreach to companies to develop Ozone Action Plans.
- DeSoto County has adopted a Greenways Master to create and enhance a comprehensive network of greenways, conservation trails, and natural areas. The county employs a County Greenways Coordinator to grow the greenways network within DeSoto County to preserve natural amenities, waterways, and environmental systems. The greenway system will connect our citizens with a variety of outdoor recreational opportunities and encourage the use of alternative modes of transportation including bicycle, pedestrian, canoe and kayak, and horseback to improve and maintain our air quality and the health of our citizens.
- In 2011, DeSoto County received Two Globe certification from the Green Building Initiative as a result of upgrades to existing County-owned buildings to meet energy efficiency standards and reduce. Green Globes certified/rated buildings, like the DeSoto County Administration building, are committed to using less energy, conserving water resources, emitting fewer pollutants, and providing a healthier indoor environment for occupants.
- There are currently nine MDEQ Diesel Emission Reduction Projects reflecting 35 pieces of diesel equipment in and around DeSoto County. Private companies have spent over \$106,000 of their own money on these projects. MDEQ received 28 application in January 2012 for the 2011/2012 state grant
- MDOT has spent over \$1 million in Safe Routes to School, sidewalks and bike path improvements in DeSoto County and conducted an I-69 Corridor Alternatives Analysis to study preferred mass transit options for DeSoto County.



Table of Air Outreach Events

Date	Event	Estimated Attendance
April 2009	Safe & Healthy Schools Summit	150
April 21, 2009	Great Green Expo-Keesler AFB	400
April 24, 2009	DeSoto County Outdoor Day-Olive Branch	250
May 2009	MS Asthma Coalition	85
June 17, 2009	MS Association of Supervisors-Gulf Coast Convention Center-Biloxi	1,700
June 23, 2009	Agri-Science Summer Campers-Career Development Center, Jackson, MS	20
July 15, 2009	MS Municipal League-Gulf Coast Convention Center-Biloxi	1,700
September 11, 2009	Mississippi Asthma Summit	125
September 23, 2009	Arkabutla Day - DeSoto County	700
September 25 to October 4, 2009	Mid South State Fair - DeSoto County	1,000
October 2, 2009	Renewable Energy Day - Agriculture Museum	400
November 2009	MDA Greening Local Communities Statewide (4 events)	400
January 30, 2010	Moss Point Going Green Rally	200
April 17, 2010	Waterfest - Reservoir	300
April 22, 2010	Earth Day at the Navy Battalion - Gulfport	500
April 24, 2010	Health Fair - Clinton	350
May 2010	MS Asthma Coalition	75
May 1, 2010	Moss Point Outreach Event	200
June 23, 2010	Jackson Career Development Center Agriscience	20
September 2010	Mississippi Asthma Summit	125
September 22, 2010	Arkabutla Day - DeSoto County	950
October 15, 2010	Odyssey Day - Biloxi	100
October 16, 2010	Romp on the River - Tunica	5000
March 19, 2011	North Mississippi Green Festival	500
April 16, 2011	Waterfest - Reservoir	300
April 30, 2011	Earth Day - Hernando	625
May 2011	MS Asthma Coalition	75
May 2011	MS Department of Health Presentation	25
August 2011	Center for Advance Vehicle Systems	100
September 14, 2011	Arkabutla Day - DeSoto County	950
October 2011	State Port Leadership Group	30
October, 2011	DeSoto County Board of Supervisors	25
October, 7 2011	Renewable Energy Day - Agricultural Museum	400
November 2011	State Port Leadership Group	30





STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

ROBERT J. MARTINEAU, JR.
COMMISSIONER

BILL HASLAM
GOVERNOR

April 5, 2012

Gwendolyn Keyes Fleming
Regional Administrator
USEPA, Region IV
Sam Nunn Atlanta Federal Center, 12th Floor
61 Forsyth Street, SW
Atlanta, GA 30303

RE: TDEC Follow-up to February 27, 2012 Ozone Designations Recommendation Letter

Dear Administrator Fleming:

Thank you for the opportunity to discuss our revised ozone nonattainment area designation recommendations (for the 2008 standard) with your staff on March 16 and April 2. Based on these discussions, we would like you to consider the additional information discussed below and in the attachments included with this letter.

For the Knoxville area, we were informed by your staff that the Knox County data from March 1, 2011 to June 23, 2011 may not be acceptable because the local program failed to activate the temperature sensors at the monitoring stations. Working closely with EPA staff, an in-depth 40 CFR Part 50 Appendix P data analysis was performed to create alternative data for your consideration. Please consider the data analysis for the 2011 Knox County data included in the letter from Barry Stephens to you dated April 5, 2012. This letter, without attachments, is included with this letter.

We recommend that the 2009-2011 monitoring data, with the Appendix P derived alternative Knox County data, be used for this area in your designations. Using this data, only the monitor located at Look Rock in Blount County exceeds the standard of 0.075 parts per million with a calculated design value of 0.077 parts per million. This is a high elevation site located within the Great Smoky Mountains National Park which we believe is predominately influenced by long range transport. Our recommendation for the Knoxville area is as follows:

Knoxville Area:

That portion of Blount County that contains the Great Smoky
Mountains National Park – nonattainment
Rest of Blount County – attainment
Anderson, Cocke, Knox, Loudon, and Sevier Counties - attainment

Tennessee has carefully evaluated the current and past monitoring data of the Knoxville area, and it is our opinion that the recommendation above is both legally defensible and environmentally sound. We refer to the 9-factor analysis contained in our correspondence dated February 27, 2012, and ask that you give this recommendation strong consideration. If however, you still deem this unacceptable, we ask that you consider the following two options, in order of preference: the partial Counties of Blount, Cocke & Sevier that comprise the Great Smoky Mountains National Park nonattainment, with the rest of Blount, Cocke and Sevier Counties attainment and Anderson, Knox, and Loudon Counties attainment; or Knox County and the partial counties of Blount, Cocke and Sevier that comprise the Great Smoky Mountains National Park nonattainment, with the rest of Blount, Cocke & Sevier Counties attainment and Anderson and Loudon Counties attainment.

If the Knox County 2011 data is still deemed unacceptable after your review of the jointly prepared Appendix P analysis of Knox County's 2011 data and 2008-2010 monitoring data must be used, we request that only Knox County be designated nonattainment (along with those areas listed above in the Great Smoky Mountains National Park) because only the Knox County data is inadequate, Knox County is the most urbanized and most populated county in the Metropolitan Statistical Area, and EPA expects to propose a new ozone standard in 2013. Blount County has lost approximately 450 high-paying manufacturing jobs from the shutdown of Alcoa's primary aluminum smelter, and it is essential that they have the ability to attract new industries to the site of the former smelter to regain some of those lost jobs. This is a prime industrial development site with approximately 4,000 MWH per day of clean energy available, and we have initiated discussions with your staff to examine the feasibility of an Economic Development Zone under Section 173(a)(1)(B) of the Clean Air Act (CAA).


If none of the recommendations presented above are acceptable, please consider the recommendation in Attachment 2. Based on 2008-2010 monitoring data, our recommendation is all of Knox County – nonattainment, Blount County – partial nonattainment and partial attainment, Anderson County – partial nonattainment and partial attainment, Loudon, Sevier, and Cocke Counties – attainment. For Blount County, we recommend that the area north of US Highway 411 be designated nonattainment, with the exception of the census tracts identified in Attachment 2 that include the Alcoa South property and the property between Alcoa South and Highway 411, and the portion of the Great Smoky Mountains National Park located in Blount County. We recommend that the remaining portion of Blount County, including the identified census tracts, be designated attainment. For Anderson County, we recommend that only the census tracts containing the TVA Bull Run facility be designated nonattainment, with the remainder of Anderson County attainment. See Attachment 2 for supporting information about the proposed boundaries in Anderson and Blount Counties.

For the Memphis area, we reiterate that the monitors in Shelby County demonstrate attainment with the 2008 standard based on 2009-2011 monitoring data and refer to our letter dated February 27, 2012. The Arkansas monitoring data for 2011 demonstrating

nonattainment of the standard has not yet been certified but has been quality assured and will be certified before official designations must be made. For this reason and the reasons outlined in our February 27, 2012 letter, we recommend that Shelby County be designated attainment with the 2008 ozone standard based on 2009-2011 monitoring data. As part of the NO_x SIP Call, major NO_x sources in Shelby County have already made significant NO_x reductions. Two large power plants in the Arkansas counties to the west of Shelby County are not subject to the NO_x SIP Call and have done little to help the area attain. If you still find that a full county designation of Shelby County as attainment is unacceptable, we request that you limit the nonattainment designation to the Memphis city limits; the city limits of Bartlett, Germantown, and Collierville; and the census tracts containing the Dupont and Atofina Chemicals facilities. (See Attachment 3) We also recommend that Fayette and Tipton County be designated attainment.

We appreciate the opportunity to provide input during this consultation process, and request you revise your initial determinations in accordance with this letter. We welcome the opportunity to discuss these issues in further detail with you at your earliest convenience before final designations are made. Your favorable review of these recommendations will be appreciated. If you should have further questions, please have your staff contact our air pollution control program director, Barry R. Stephens, P. E., at (615) 532-0525 or Barry.Stephens@tn.gov.

Sincerely,



Robert J. Martineau, Jr.
Commissioner

RJM:cm

Enclosures:

40 CFR Part 50 Appendix P Data Analysis transmittal letter dated April 5, 2012
Recommended Knoxville Nonattainment Area Boundaries
Recommended Shelby County Nonattainment Area Boundaries

Copy (w/enclosures):

Stan Meiburg, EPA Region IV
Beverly Banister, EPA Region IV
Carol Kemker, EPA Region IV
Scott R. Davis, EPA Region IV
Lynorae Benjamin, EPA Region IV
Lynne Liddington, Knox County Local Air Program
Bob Rogers, Shelby County Local Air Program

Attachment 1
40 CFR Part 50 Appendix P Data
Analysis Submittal Letter for Knox
County



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL
9TH FLOOR L & C ANNEX
401 CHURCH STREET
NASHVILLE, TENNESSEE 37243-1531

April 4, 2012

Ms. Gwendolyn Keyes Fleming
Regional Administrator
US EPA Region IV
Atlanta Federal Center, 12th Floor
61 Forsyth Street SW
Atlanta, GA 30303

Certified Mail 7006 3450 0003 9091 3381
Return Receipt Requested

Re: 40 CFR Part 50 Appendix P Data Analysis For Missing 2011 Knoxville Ozone Data

Dear Ms. Fleming:

Ambient ozone monitoring sites identified in the Air Quality Subsystem (AQS) under numbers 470930021 and 470931020 recorded incomplete data during calendar year 2011. The majority of missed data for both sites was due to the lack of recording shelter temperature for the period March 1 through June 22. Since the missed data occurred during the early part of the ozone monitoring season when ambient conditions were not conducive to concentrations above the level of the standard, the state of Tennessee requests a portion of this data (as referred to in the attachment) be considered as missed data less than the standard under 40 CFR Part 50 Appendix P Section 2.3(b). Attached is an analysis of the data in accordance with this rule.

Inclusion of the data for the time period requested allows both monitoring sites to meet minimum data completeness requirements for the period 2009 through 2011.

Your favorable consideration of this request would be greatly appreciated.

Sincerely,

Quincy N. Stiffler III

For Barry R. Stephens, P.E.
Director
Division of Air Pollution Control

Attachment

CC Stacey Harder
Lynne Liddington

Attachment 2
Proposed Blount County and Anderson County
Boundaries

Proposed Partial Blount County Nonattainment Area



Blount County Alcoa Census Tract Information

2010 Census Blocks Intersecting Alcoa South Parcels

TRACTE10	BLOCKCE	BLOCKID10	HOUSING10	POP10
10100	1003	470090101001003	0	0
10100	1008	470090101001008	15	43
10100	2000	470090101002000	0	0
10100	2001	470090101002001	0	0
10100	2002	470090101002002	5	16
10100	2007	470090101002007	0	0
10100	2008	470090101002008	0	0
10100	2009	470090101002009	0	0
10100	2010	470090101002010	0	0
10100	2011	470090101002011	0	0
10100	2012	470090101002012	0	0
10100	2013	470090101002013	0	0
10100	2014	470090101002014	0	0
10100	2015	470090101002015	0	0
10100	2070	470090101002070	0	0
10100	2071	470090101002071	0	0
10100	2072	470090101002072	0	0
10100	2074	470090101002074	0	0
10100	2076	470090101002076	0	0
10100	2077	470090101002077	0	0
10100	2078	470090101002078	0	0
10100	2079	470090101002079	0	0
10100	2080	470090101002080	0	0
10100	2081	470090101002081	0	0
10100	2092	470090101002092	0	0
10100	2137	470090101002137	0	0
10100	2143	470090101002143	0	0
10200	3024	470090102003024	0	0
10200	3027	470090102003027	0	0

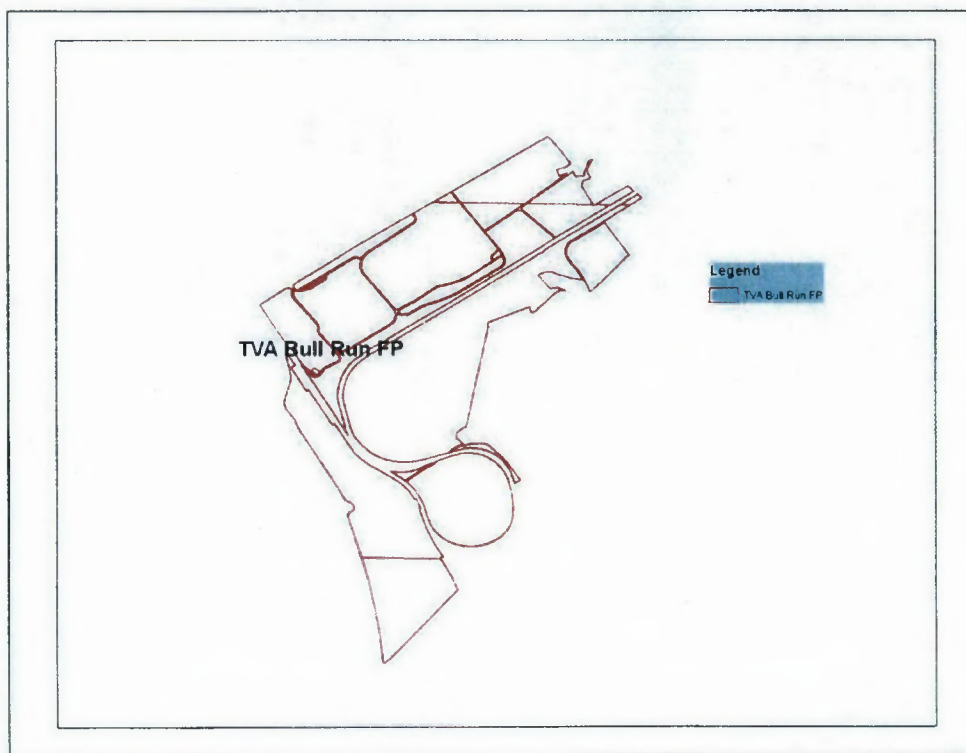
Additional Census Tracts Connecting Hwy 411 to the Alcoa South Site

TRACTE10	BLOCKCE	BLOCKID10	HOUSING	POP10
10100	2088	470090101002088	4	9
10100	2091	470090101002091	2	16
10100	2134	470090101002134	5	17
10700	4042	470090107004042	0	0
10500	1009	470090105001009	12	21
10100	2136	470090101002136	0	0
10100	2140	470090101002140	3	12
10800	2051	470090108002051	10	21
10800	2062	470090108002062	4	11
10800	2063	470090108002063	0	0
10700	4035	470090107004035	12	17
10800	2059	470090108002059	0	0
10500	1015	470090105001015	0	0
10100	2096	470090101002096	1	0
10700	4031	470090107004031	9	22
10100	2082	470090101002082	6	10
10100	2090	470090101002090	14	26
10700	4033	470090107004033	25	47
10800	2061	470090108002061	1	2
10800	2050	470090108002050	0	0
10100	2126	470090101002126	0	0
10100	2135	470090101002135	4	3
10700	4039	470090107004039	5	9
10100	2084	470090101002084	0	0
10700	4040	470090107004040	0	0
10500	1032	470090105001032	0	0
10700	4044	470090107004044	6	11
10100	2124	470090101002124	0	0
10100	2097	470090101002097	0	0
10700	4037	470090107004037	14	15
10500	1013	470090105001013	42	51
10100	2083	470090101002083	11	24
10800	2052	470090108002052	19	30
10700	4036	470090107004036	46	72
10700	4041	470090107004041	0	0
10100	2122	470090101002122	0	0
10700	4022	470090107004022	24	55
10500	1026	470090105001026	0	0
10100	2086	470090101002086	14	29
10700	4034	470090107004034	4	12
10800	2064	470090108002064	0	0
10500	1075	470090105001075	0	0
10800	2058	470090108002058	0	0
10500	1001	470090105001001	0	0
10100	2092	470090101002092	0	0
10100	2089	470090101002089	8	14
10100	2087	470090101002087	11	26
10700	4043	470090107004043	0	0
10800	2048	470090108002048	51	147
10500	1014	470090105001014	1	1
10700	4032	470090107004032	17	38
10100	2088	470090101002088	4	9
10100	2085	470090101002085	4	4
10500	1024	470090105001024	0	0
10800	2060	470090108002060	0	0

Proposed Partial Anderson County Nonattainment Area

Parcel Information	
COUNTY_ID	1
CALC_ACRE	674.4899902
SHAPE_AREA	4853719.298
PARCELID	A001101 00900 000101 CA
ID	101 009.00
ST_NUM	
STREET	BULL RUN
ADDRESS	BULL RUN
OWNER	TVA
PROPTYPE	4
PT	04 FEDERAL
UPDSORT	20050412
UPDATED	4/12/2005

Table 1 TVA Bull Run Parcel Details



BLOCKID	TOTAL POP	STATE	COUNTY	TRACT	NAME	AREA LAND
470010202011002	0	47	1	20201	Block 1002	12647
470010202011003	0	47	1	20201	Block 1003	584278
470010202011004	0	47	1	20201	Block 1004	0
470010202011005	0	47	1	20201	Block 1005	0
470010202011006	0	47	1	20201	Block 1006	12857
470010202011008	167	47	1	20201	Block 1008	251436
470010202011009	0	47	1	20201	Block 1009	515
470010202011026	0	47	1	20201	Block 1026	261
470010202011027	131	47	1	20201	Block 1027	133627
470010202011029	15	47	1	20201	Block 1029	22879
470010202011030	2	47	1	20201	Block 1030	992
470010202011033	39	47	1	20201	Block 1033	34924
470010202011066	21	47	1	20201	Block 1066	20879
470010213011004	6	47	1	21301	Block 1004	15974
470010213011005	0	47	1	21301	Block 1005	302
470010213021002	50	47	1	21302	Block 1002	174876
470010213021006	56	47	1	21302	Block 1006	253174
470010213021007	21	47	1	21302	Block 1007	39472
470010213021010	5	47	1	21302	Block 1010	47836
470010213021017	0	47	1	21302	Block 1017	5721
470010213021018	74	47	1	21302	Block 1018	241849
470010213021019	42	47	1	21302	Block 1019	202221
470010213021020	0	47	1	21302	Block 1020	461
470010213021021	0	47	1	21302	Block 1021	0
470010213021022	0	47	1	21302	Block 1022	13564
470010213021023	29	47	1	21302	Block 1023	205739
470010213021024	36	47	1	21302	Block 1024	34760
470010213021025	0	47	1	21302	Block 1025	2037
470010213023025	0	47	1	21302	Block 3025	0
470010213023041	21	47	1	21302	Block 3041	57078
470010213024011	14	47	1	21302	Block 4011	163632
470010213024015	114	47	1	21302	Block 4015	894796
470010213024016	0	47	1	21302	Block 4016	183888
470010213024017	0	47	1	21302	Block 4017	5116
470010213024018	0	47	1	21302	Block 4018	42948
470010213024019	47	47	1	21302	Block 4019	553145
470010213024020	142	47	1	21302	Block 4020	67820
470010213024021	67	47	1	21302	Block 4021	16060
470010213024022	16	47	1	21302	Block 4022	10327
470010213024023	135	47	1	21302	Block 4023	47703
470010213024024	0	47	1	21302	Block 4024	355
470010213024025	142	47	1	21302	Block 4025	751634
470010213024026	0	47	1	21302	Block 4026	0
470010213024027	36	47	1	21302	Block 4027	41112
470010213024028	9	47	1	21302	Block 4028	9241
470010213024029	2	47	1	21302	Block 4029	491285
470010213024030	0	47	1	21302	Block 4030	330483
470010213024031	0	47	1	21302	Block 4031	65120
470010213024032	0	47	1	21302	Block 4032	3721
470010213024033	0	47	1	21302	Block 4033	1268
470010213024034	0	47	1	21302	Block 4034	59715
470010213024035	0	47	1	21302	Block 4035	284982
470010213024037	0	47	1	21302	Block 4037	0
470010213024038	0	47	1	21302	Block 4038	67105
470010213024039	0	47	1	21302	Block 4039	92461
470010213024040	0	47	1	21302	Block 4040	0
470010213024042	0	47	1	21302	Block 4042	5758
470010213024044	0	47	1	21302	Block 4044	2044
470010213024047	0	47	1	21302	Block 4047	312283

Table 2 Census Block Population and Area

Attachment 3 Shelby County Maps



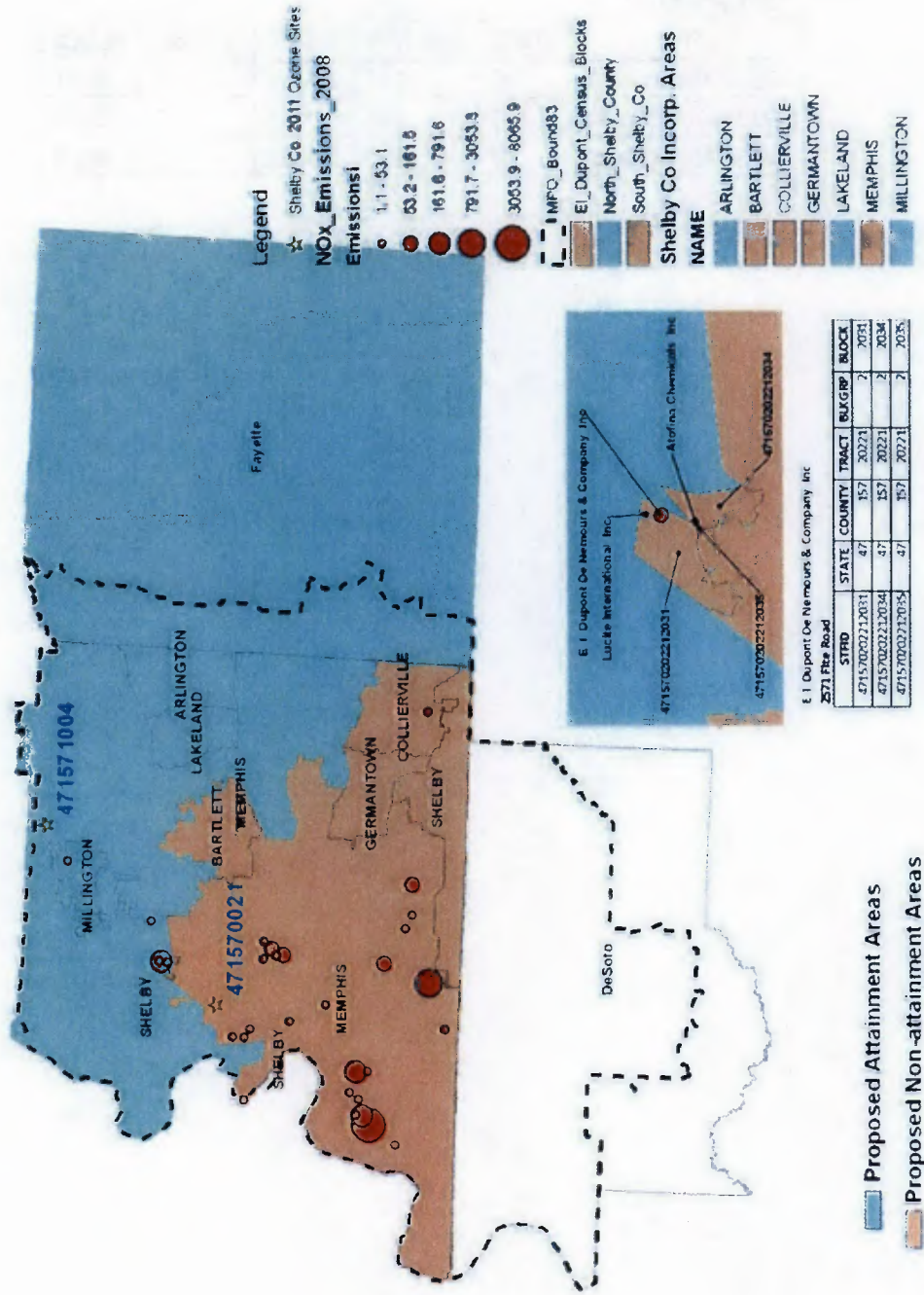
DuPont and Atofina Census Tracts

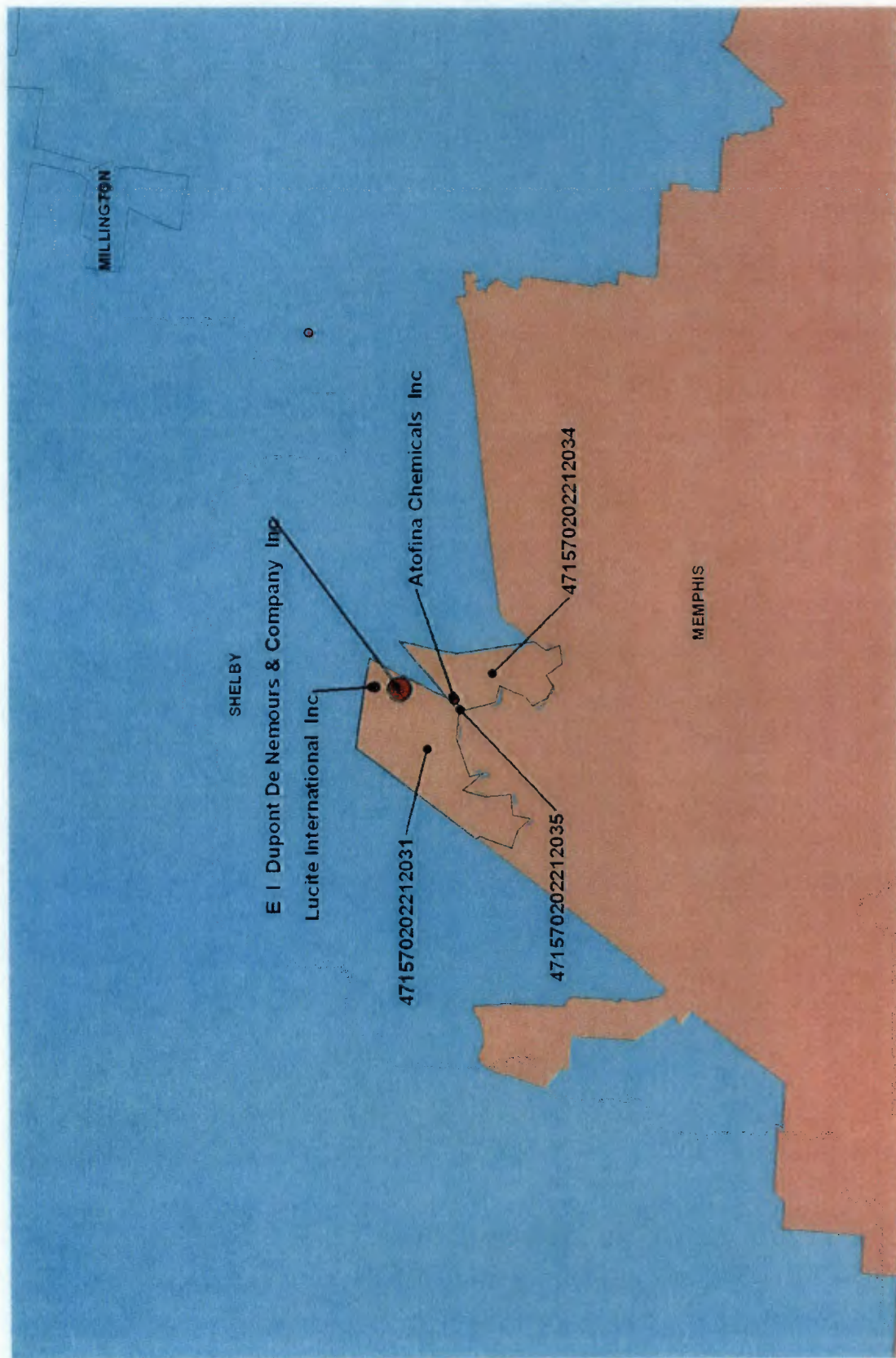
E I Dupont De Nemours & Company Inc

2571 Fite Road

STFID	STATE	COUNTY	TRACT	BLKGRP	BLOCK
471570202212031	47	157	20221	2	2031
471570202212034	47	157	20221	2	2034
471570202212035	47	157	20221	2	2035

Draft 03192012 Memphis 8 Hour (0.075 PPM) Ozone Non-attainment Area







ARKANSAS
Department of Environmental Quality

April 17, 2012

Mr. David Lutz
MQAG (C339-02)
US Environmental Protection Agency
Research Triangle Park, NC 27711

Re: Air Quality Data Certification

Dear Mr. Lutz:

This letter and the enclosed Annual Certification of Air Quality Data for the State of Arkansas are submitted as certification that the calendar year 2011. The 2011 ambient monitoring data has been completely uploaded to the AFRS database and is accurate to best of our knowledge, with consideration of QA findings. AMP450, AMP 450NC and AMP255 were emailed to Kara Allen.

This submittal is made in accordance with the 2012 timeframe and other requirements described in the FY 2011 105 Grant Work Plan.

If you require additional information, I can be reached at Tel: (501) 682-0937. Thank you for your acceptance of this certification.

Sincerely,

A handwritten signature in black ink, appearing to read "Dick Cassal", is written over a horizontal line.

Dick Cassal, Chief
Technical Services Division

US EPA ARCHIVE DOCUMENT



BILL HASLAM
GOVERNOR
STATE OF TENNESSEE

MAY
April 4, 2012

Ms. Lisa P. Jackson
Administrator
United States Environmental Protection Agency
Washington, DC 20460

Dear Administrator Jackson,

I received your letter of April 30, 2012 regarding several counties in Tennessee being designated as non-attainment. We were all very disappointed in these non-attainment designations.

Tennessee has 18 ozone monitors across the state. With the exception of one high elevation monitor in the Great Smoky Mountains National Park, all of these monitors measure attainment of national air quality standards for the most complete, recent 2009-2011 data. Based on these findings, the State of Tennessee provided recommendations to the EPA with extensive technical support and consulted repeatedly with the agency to ensure an informed decision was made based on current data and facts. According to the Tennessee Department of Environment and Conservation, air quality monitors in and around Knoxville and Memphis (the two regions designated as non-attainment), show that these areas are actually monitoring attainment under the new standard. The State of Tennessee and various counties and cities across the state have worked extremely hard toward improvements in the state's air quality. I think we can all agree the current monitoring indicates Tennessee's air is cleaner than it has been in decades. Thus, I hope you can understand why we were disappointed that EPA's final determination for Tennessee relied so heavily on one higher elevation monitor in Blount County. In addition, we think the EPA ignored the most recent three years of data showing Shelby County attained the standard.

It is my understanding that the EPA has acknowledged that all areas are expected to meet the lower standards within three years with rules already in place. To be honest with you, I feel that this is an example of why so many governors in states across the country no longer feel like EPA is a partner in the mission of protecting our environment. I would welcome a conversation with you at your convenience.

Sincerely,


Bill Haslam

cc: Nancy-Ann Deparle
Senator Lamar Alexander
Senator Bob Corbin

SEC. 2. *Designation of Facilities.* (a) The Administrator of the Environmental Protection Agency (hereinafter referred to as "the Administrator") shall be responsible for the attainment of the purposes and objectives of this Order.

(b) In carrying out his responsibilities under this Order, the Administrator shall, in conformity with all applicable requirements of law, designate facilities which have given rise to a conviction for an offense under section 113(c)(1) of the Air Act [42 U.S.C. 7413(c)(1)] or section 309(c) of the Water Act [33 U.S.C. 1319(c)]. The Administrator shall, from time to time, publish and circulate to all Federal agencies lists of those facilities, together with the names and addresses of the persons who have been convicted of such offenses. Whenever the Administrator determines that the condition which gave rise to a conviction has been corrected, he shall promptly remove the facility and the name and address of the person concerned from the list.

SEC. 3. *Contracts, Grants, or Loans.* (a) Except as provided in section 8 of this Order, no Federal agency shall enter into any contract for the procurement of goods, materials, or services which is to be performed in whole or in part in a facility then designated by the Administrator pursuant to section 2.

(b) Except as provided in section 8 of this Order, no Federal agency authorized to extend Federal assistance by way of grant, loan, or contract shall extend such assistance in any case in which it is to be used to support any activity or program involving the use of a facility then designated by the Administrator pursuant to section 2.

SEC. 4. *Procurement, Grant, and Loan Regulations.* The Federal Procurement Regulations, the Armed Services Procurement Regulations, and to the extent necessary, any supplemental or comparable regulations issued by any agency of the Executive Branch shall, following consultation with the Administrator, be amended to require, as a condition of entering into, renewing, or extending any contract for the procurement of goods, materials, or services or extending any assistance by way of grant, loan, or contract, inclusion of a provision requiring compliance with the Air Act, the Water Act, and standards issued pursuant thereto in the facilities in which the contract is to be performed, or which are involved in the activity or program to receive assistance.

SEC. 5. *Rules and Regulations.* The Administrator shall issue such rules, regulations, standards, and guidelines as he may deem necessary or appropriate to carry out the purposes of this Order.

SEC. 6. *Cooperation and Assistance.* The head of each Federal agency shall take such steps as may be necessary to insure that all officers and employees of this agency whose duties entail compliance or comparable functions with respect to contracts, grants, and loans are familiar with the provisions of this Order. In addition to any other appropriate action, such officers and employees shall report promptly any condition in a facility which may involve noncompliance with the Air Act or the Water Act or any rules, regulations, standards, or guidelines issued pursuant to this Order to the head of the agency, who shall transmit such reports to the Administrator.

SEC. 7. *Enforcement.* The Administrator may recommend to the Department of Justice or other appropriate agency that legal proceedings be brought or other appropriate action be taken whenever he becomes aware of a breach of any provision required, under the amendments issued pursuant to section 4 of this Order, to be included in a contract or other agreement.

SEC. 8. *Exemptions—Reports to Congress.* (a) Upon a determination that the paramount interest of the United States so requires—

(1) The head of a Federal agency may exempt any contract, grant, or loan, and, following consultation with the Administrator, any class of contracts, grants or loans from the provisions of this Order. In any such case, the head of the Federal agency granting such ex-

emption shall (A) promptly notify the Administrator of such exemption and the justification therefor; (B) review the necessity for each such exemption annually; and (C) report to the Administrator annually all such exemptions in effect. Exemptions granted pursuant to this section shall be for a period not to exceed one year. Additional exemptions may be granted for periods not to exceed one year upon the making of a new determination by the head of the Federal agency concerned.

(2) The Administrator may, by rule or regulation, exempt any or all Federal agencies from any or all of the provisions of this Order with respect to any class or classes of contracts, grants, or loans, which (A) involve less than specified dollar amounts, or (B) have a minimal potential impact upon the environment, or (C) involve persons who are not prime contractors or direct recipients of Federal assistance by way of contracts, grants, or loans.

(b) Federal agencies shall reconsider any exemption granted under subsection (a) whenever requested to do so by the Administrator.

(c) The Administrator shall annually notify the President and the Congress of all exemptions granted, or in effect, under this Order during the preceding year.

SEC. 9. *Related Actions.* The imposition of any sanction or penalty under or pursuant to this Order shall not relieve any person of any legal duty to comply with any provisions of the Air Act or the Water Act.

SEC. 10. *Applicability.* This Order shall not apply to contracts, grants, or loans involving the use of facilities located outside the United States.

SEC. 11. *Uniformity.* Rules, regulations, standards, and guidelines issued pursuant to this order and section 508 of the Water Act [33 U.S.C. 1368] shall, to the maximum extent feasible, be uniform with regulations issued pursuant to this order, Executive Order No. 11602 of June 29, 1971 [formerly set out above], and section 306 of the Air Act [this section].

SEC. 12. *Order Superseded.* Executive Order No. 11602 of June 29, 1971, is hereby superseded.

RICHARD NIXON.

§ 7607. Administrative proceedings and judicial review

(a) Administrative subpoenas; confidentiality; witnesses

In connection with any determination under section 7410(f) of this title, or for purposes of obtaining information under section 7521(b)(4)¹ or 7545(c)(3) of this title, any investigation, monitoring, reporting requirement, entry, compliance inspection, or administrative enforcement proceeding under the² chapter (including but not limited to section 7413, section 7414, section 7420, section 7429, section 7477, section 7524, section 7525, section 7542, section 7603, or section 7606 of this title),³ the Administrator may issue subpoenas for the attendance and testimony of witnesses and the production of relevant papers, books, and documents, and he may administer oaths. Except for emission data, upon a showing satisfactory to the Administrator by such owner or operator that such papers, books, documents, or information or particular part thereof, if made public, would divulge trade secrets or secret processes of such owner or operator, the Administrator shall consider such record, report, or information or particular portion thereof confidential in accordance with the purposes of section 1905 of title 18, except that such paper, book, document, or information may be dis-

¹ See References in Text note below.

² So in original. Probably should be "this".

³ So in original.

closed to other officers, employees, or authorized representatives of the United States concerned with carrying out this chapter, to persons carrying out the National Academy of Sciences' study and investigation provided for in section 7521(c) of this title, or when relevant in any proceeding under this chapter. Witnesses summoned shall be paid the same fees and mileage that are paid witnesses in the courts of the United States. In case of contumacy or refusal to obey a subpoena served upon any person under this subparagraph,⁴ the district court of the United States for any district in which such person is found or resides or transacts business, upon application by the United States and after notice to such person, shall have jurisdiction to issue an order requiring such person to appear and give testimony before the Administrator to appear and produce papers, books, and documents before the Administrator, or both, and any failure to obey such order of the court may be punished by such court as a contempt thereof.

(b) Judicial review

(1) A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title,³ any standard under section 7521 of this title (other than a standard required to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5)¹ of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title, under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c-10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and pub-

lishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

(2) Action of the Administrator with respect to which review could have been obtained under paragraph (1) shall not be subject to judicial review in civil or criminal proceedings for enforcement. Where a final decision by the Administrator defers performance of any nondiscretionary statutory action to a later time, any person may challenge the deferral pursuant to paragraph (1).

(c) Additional evidence

In any judicial proceeding in which review is sought of a determination under this chapter required to be made on the record after notice and opportunity for hearing, if any party applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Administrator, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Administrator, in such manner and upon such terms and conditions as to⁵ the court may deem proper. The Administrator may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken and he shall file such modified or new findings, and his recommendation, if any, for the modification or setting aside of his original determination, with the return of such additional evidence.

(d) Rulemaking

(1) This subsection applies to—

(A) the promulgation or revision of any national ambient air quality standard under section 7409 of this title,

(B) the promulgation or revision of an implementation plan by the Administrator under section 7410(c) of this title,

(C) the promulgation or revision of any standard of performance under section 7411 of this title, or emission standard or limitation under section 7412(d) of this title, any standard under section 7412(f) of this title, or any regulation under section 7412(g)(1)(D) and (F) of this title, or any regulation under section 7412(m) or (n) of this title,

(D) the promulgation of any requirement for solid waste combustion under section 7429 of this title,

⁴So in original. Probably should be "subsection,".

⁵So in original. The word "to" probably should not appear.

(E) the promulgation or revision of any regulation pertaining to any fuel or fuel additive under section 7545 of this title,

(F) the promulgation or revision of any aircraft emission standard under section 7571 of this title,

(G) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to control of acid deposition),

(H) promulgation or revision of regulations pertaining to primary nonferrous smelter orders under section 7419 of this title (but not including the granting or denying of any such order),

(I) promulgation or revision of regulations under subchapter VI of this chapter (relating to stratosphere and ozone protection),

(J) promulgation or revision of regulations under part C of subchapter I of this chapter (relating to prevention of significant deterioration of air quality and protection of visibility),

(K) promulgation or revision of regulations under section 7521 of this title and test procedures for new motor vehicles or engines under section 7525 of this title, and the revision of a standard under section 7521(a)(3) of this title,

(L) promulgation or revision of regulations for noncompliance penalties under section 7420 of this title,

(M) promulgation or revision of any regulations promulgated under section 7541 of this title (relating to warranties and compliance by vehicles in actual use),

(N) action of the Administrator under section 7426 of this title (relating to interstate pollution abatement),

(O) the promulgation or revision of any regulation pertaining to consumer and commercial products under section 7511b(e) of this title,

(P) the promulgation or revision of any regulation pertaining to field citations under section 7413(d)(3) of this title,

(Q) the promulgation or revision of any regulation pertaining to urban buses or the clean-fuel vehicle, clean-fuel fleet, and clean fuel programs under part C of subchapter II of this chapter,

(R) the promulgation or revision of any regulation pertaining to nonroad engines or nonroad vehicles under section 7547 of this title,

(S) the promulgation or revision of any regulation relating to motor vehicle compliance program fees under section 7552 of this title,

(T) the promulgation or revision of any regulation under subchapter IV-A of this chapter (relating to acid deposition),

(U) the promulgation or revision of any regulation under section 7511b(f) of this title pertaining to marine vessels, and

(V) such other actions as the Administrator may determine.

The provisions of section 553 through 557 and section 706 of title 5 shall not, except as expressly provided in this subsection, apply to actions to which this subsection applies. This subsection shall not apply in the case of any rule or circumstance referred to in subparagraphs (A) or (B) of subsection 553(b) of title 5.

(2) Not later than the date of proposal of any action to which this subsection applies, the Administrator shall establish a rulemaking docket for such action (hereinafter in this subsection referred to as a "rule"). Whenever a rule applies only within a particular State, a second (identical) docket shall be simultaneously established in the appropriate regional office of the Environmental Protection Agency.

(3) In the case of any rule to which this subsection applies, notice of proposed rulemaking shall be published in the Federal Register, as provided under section 553(b) of title 5, shall be accompanied by a statement of its basis and purpose and shall specify the period available for public comment (hereinafter referred to as the "comment period"). The notice of proposed rulemaking shall also state the docket number, the location or locations of the docket, and the times it will be open to public inspection. The statement of basis and purpose shall include a summary of—

(A) the factual data on which the proposed rule is based;

(B) the methodology used in obtaining the data and in analyzing the data; and

(C) the major legal interpretations and policy considerations underlying the proposed rule.

The statement shall also set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by the Scientific Review Committee established under section 7409(d) of this title and the National Academy of Sciences, and, if the proposal differs in any important respect from any of these recommendations, an explanation of the reasons for such differences. All data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.

(4)(A) The rulemaking docket required under paragraph (2) shall be open for inspection by the public at reasonable times specified in the notice of proposed rulemaking. Any person may copy documents contained in the docket. The Administrator shall provide copying facilities which may be used at the expense of the person seeking copies, but the Administrator may waive or reduce such expenses in such instances as the public interest requires. Any person may request copies by mail if the person pays the expenses, including personnel costs to do the copying.

(B)(i) Promptly upon receipt by the agency, all written comments and documentary information on the proposed rule received from any person for inclusion in the docket during the comment period shall be placed in the docket. The transcript of public hearings, if any, on the proposed rule shall also be included in the docket promptly upon receipt from the person who transcribed such hearings. All documents which become available after the proposed rule has been published and which the Administrator determines are of central relevance to the rulemaking shall be placed in the docket as soon as possible after their availability.

(ii) The drafts of proposed rules submitted by the Administrator to the Office of Management

and Budget for any interagency review process prior to proposal of any such rule, all documents accompanying such drafts, and all written comments thereon by other agencies and all written responses to such written comments by the Administrator shall be placed in the docket no later than the date of proposal of the rule. The drafts of the final rule submitted for such review process prior to promulgation and all such written comments thereon, all documents accompanying such drafts, and written responses thereto shall be placed in the docket no later than the date of promulgation.

(5) In promulgating a rule to which this subsection applies (i) the Administrator shall allow any person to submit written comments, data, or documentary information; (ii) the Administrator shall give interested persons an opportunity for the oral presentation of data, views, or arguments, in addition to an opportunity to make written submissions; (iii) a transcript shall be kept of any oral presentation; and (iv) the Administrator shall keep the record of such proceeding open for thirty days after completion of the proceeding to provide an opportunity for submission of rebuttal and supplementary information.

(6)(A) The promulgated rule shall be accompanied by (i) a statement of basis and purpose like that referred to in paragraph (3) with respect to a proposed rule and (ii) an explanation of the reasons for any major changes in the promulgated rule from the proposed rule.

(B) The promulgated rule shall also be accompanied by a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period.

(C) The promulgated rule may not be based (in part or whole) on any information or data which has not been placed in the docket as of the date of such promulgation.

(7)(A) The record for judicial review shall consist exclusively of the material referred to in paragraph (3), clause (i) of paragraph (4)(B), and subparagraphs (A) and (B) of paragraph (6).

(B) Only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review. If the person raising an objection can demonstrate to the Administrator that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed. If the Administrator refuses to convene such a proceeding, such person may seek review of such refusal in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section). Such reconsideration shall not postpone the effectiveness of the rule. The effectiveness of the rule may be stayed during such reconsideration, however, by the Administrator or the court for a period not to exceed three months.

(8) The sole forum for challenging procedural determinations made by the Administrator under this subsection shall be in the United States court of appeals for the appropriate circuit (as provided in subsection (b) of this section) at the time of the substantive review of the rule. No interlocutory appeals shall be permitted with respect to such procedural determinations. In reviewing alleged procedural errors, the court may invalidate the rule only if the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or

(D) without observance of procedure required by law, if (i) such failure to observe such procedure is arbitrary or capricious, (ii) the requirement of paragraph (7)(B) has been met, and (iii) the condition of the last sentence of paragraph (8) is met.

(10) Each statutory deadline for promulgation of rules to which this subsection applies which requires promulgation less than six months after date of proposal may be extended to not more than six months after date of proposal by the Administrator upon a determination that such extension is necessary to afford the public, and the agency, adequate opportunity to carry out the purposes of this subsection.

(11) The requirements of this subsection shall take effect with respect to any rule the proposal of which occurs after ninety days after August 7, 1977.

(e) Other methods of judicial review not authorized

Nothing in this chapter shall be construed to authorize judicial review of regulations or orders of the Administrator under this chapter, except as provided in this section.

(f) Costs

In any judicial proceeding under this section, the court may award costs of litigation (including reasonable attorney and expert witness fees) whenever it determines that such award is appropriate.

(g) Stay, injunction, or similar relief in proceedings relating to noncompliance penalties

In any action respecting the promulgation of regulations under section 7420 of this title or the administration or enforcement of section 7420 of this title no court shall grant any stay, injunctive, or similar relief before final judgment by such court in such action.

(h) Public participation

It is the intent of Congress that, consistent with the policy of subchapter II of chapter 5 of

title 5, the Administrator in promulgating any regulation under this chapter, including a regulation subject to a deadline, shall ensure a reasonable period for public participation of at least 30 days, except as otherwise expressly provided in section⁶ 7407(d), 7502(a), 7511(a) and (b), and 7512(a) and (b) of this title.

(July 14, 1955, ch. 360, title III, §307, as added Pub. L. 91-604, §12(a), Dec. 31, 1970, 84 Stat. 1707; amended Pub. L. 92-157, title III, §302(a), Nov. 18, 1971, 85 Stat. 464; Pub. L. 93-319, §6(c), June 22, 1974, 88 Stat. 259; Pub. L. 95-95, title III, §§303(d), 305(a), (c), (f)-(h), Aug. 7, 1977, 91 Stat. 772, 776, 777; Pub. L. 95-190, §14(a)(79), (80), Nov. 16, 1977, 91 Stat. 1404; Pub. L. 101-549, title I, §§108(p), 110(5), title III, §302(g), (h), title VII, §§702(c), 703, 706, 707(h), 710(b), Nov. 15, 1990, 104 Stat. 2469, 2470, 2574, 2681-2684.)

REFERENCES IN TEXT

Section 7521(b)(4) of this title, referred to in subsec. (a), was repealed by Pub. L. 101-549, title II, §230(2), Nov. 15, 1990, 104 Stat. 2529.

Section 7521(b)(5) of this title, referred to in subsec. (b)(1), was repealed by Pub. L. 101-549, title II, §230(3), Nov. 15, 1990, 104 Stat. 2529.

Section 1857c-10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977), referred to in subsec. (b)(1), was in the original "section 119(c)(2)(A), (B), or (C) (as in effect before the date of enactment of the Clean Air Act Amendments of 1977)", meaning section 119 of act July 14, 1955, ch. 360, title I, as added June 22, 1974, Pub. L. 93-319, §3, 88 Stat. 248, (which was classified to section 1857c-10 of this title) as in effect prior to the enactment of Pub. L. 95-95, Aug. 7, 1977, 91 Stat. 691, effective Aug. 7, 1977. Section 112(b)(1) of Pub. L. 95-95 repealed section 119 of act July 14, 1955, ch. 360, title I, as added by Pub. L. 93-319, and provided that all references to such section 119 in any subsequent enactment which supersedes Pub. L. 93-319 shall be construed to refer to section 113(d) of the Clean Air Act and to paragraph (5) thereof in particular which is classified to subsec. (d)(5) of section 7413 of this title. Section 7413(d) of this title was subsequently amended generally by Pub. L. 101-549, title VII, §701, Nov. 15, 1990, 104 Stat. 2672, and, as so amended, no longer relates to final compliance orders. Section 117(b) of Pub. L. 95-95 added a new section 119 of act July 14, 1955, which is classified to section 7419 of this title.

Part C of subchapter I of this chapter, referred to in subsec. (d)(1)(J), was in the original "subtitle C of title I", and was translated as reading "part C of title I" to reflect the probable intent of Congress, because title I does not contain subtitles.

CODIFICATION

In subsec. (h), "subchapter II of chapter 5 of title 5" was substituted for "the Administrative Procedures Act" on authority of Pub. L. 89-554, §7(b), Sept. 6, 1966, 80 Stat. 631, the first section of which enacted Title 5, Government Organization and Employees.

Section was formerly classified to section 1857h-5 of this title.

PRIOR PROVISIONS

A prior section 307 of act July 14, 1955, was renumbered section 314 by Pub. L. 91-604 and is classified to section 7614 of this title.

Another prior section 307 of act July 14, 1955, ch. 360, title III, formerly §14, as added Dec. 17, 1963, Pub. L. 88-206, §1, 77 Stat. 401, was renumbered section 307 by Pub. L. 89-272, renumbered section 310 by Pub. L. 90-148, and renumbered section 317 by Pub. L. 91-604, and is set out as a Short Title note under section 7401 of this title.

⁶So in original. Probably should be "sections".

AMENDMENTS

1990—Subsec. (a). Pub. L. 101-549, §703, struck out par. (1) designation at beginning, inserted provisions authorizing issuance of subpoenas and administration of oaths for purposes of investigations, monitoring, reporting requirements, entries, compliance inspections, or administrative enforcement proceedings under this chapter, and struck out "or section 7521(b)(5)" after "section 7410(f)".

Subsec. (b)(1). Pub. L. 101-549, §706(2), which directed amendment of second sentence by striking "under section 7413(d) of this title" immediately before "under section 7419 of this title", was executed by striking "under section 7413(d) of this title," before "under section 7419 of this title", to reflect the probable intent of Congress.

Pub. L. 101-549, §706(1), inserted at end: "The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action."

Pub. L. 101-549, §702(c), inserted "or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title," before "or any other final action of the Administrator".

Pub. L. 101-549, §302(g), substituted "section 7412" for "section 7412(c)".

Subsec. (b)(2). Pub. L. 101-549, §707(h), inserted sentence at end authorizing challenge to deferrals of performance of nondiscretionary statutory actions.

Subsec. (d)(1)(C). Pub. L. 101-549, §110(5)(A), amended subpar. (C) generally. Prior to amendment, subpar. (C) read as follows: "the promulgation or revision of any standard of performance under section 7411 of this title or emission standard under section 7412 of this title,".

Subsec. (d)(1)(D), (E). Pub. L. 101-549, §302(h), added subpar. (D) and redesignated former subpar. (D) as (E). Former subpar. (E) redesignated (F).

Subsec. (d)(1)(F). Pub. L. 101-549, §302(h), redesignated subpar. (E) as (F). Former subpar. (F) redesignated (G).

Pub. L. 101-549, §110(5)(B), amended subpar. (F) generally. Prior to amendment, subpar. (F) read as follows: "promulgation or revision of regulations pertaining to orders for coal conversion under section 7413(d)(5) of this title (but not including orders granting or denying any such orders)."

Subsec. (d)(1)(G), (H). Pub. L. 101-549, §302(h), redesignated subpars. (F) and (G) as (G) and (H), respectively. Former subpar. (H) redesignated (I).

Subsec. (d)(1)(I). Pub. L. 101-549, §710(b), which directed that subpar. (H) be amended by substituting "subchapter VI of this chapter" for "part B of subchapter I of this chapter", was executed by making the substitution in subpar. (I), to reflect the probable intent of Congress and the intervening redesignation of subpar. (H) as (I) by Pub. L. 101-549, §302(h), see below.

Pub. L. 101-549, §302(h), redesignated subpar. (H) as (I). Former subpar. (I) redesignated (J).

Subsec. (d)(1)(J) to (M). Pub. L. 101-549, §302(h), redesignated subpars. (I) to (L) as (J) to (M), respectively. Former subpar. (M) redesignated (N).

Subsec. (d)(1)(N). Pub. L. 101-549, §302(h), redesignated subpar. (M) as (N). Former subpar. (N) redesignated (O).

Pub. L. 101-549, §110(5)(C), added subpar. (N) and redesignated former subpar. (N) as (U).

Subsec. (d)(1)(O) to (T). Pub. L. 101-549, §302(h), redesignated subpars. (N) to (S) as (O) to (T), respectively. Former subpar. (T) redesignated (U).

Pub. L. 101-549, §110(5)(C), added subpars. (O) to (T).

Subsec. (d)(1)(U). Pub. L. 101-549, §302(h), redesignated subpar. (T) as (U). Former subpar. (U) redesignated (V).

Pub. L. 101-549, §110(5)(C), redesignated former subpar. (N) as (U).

Subsec. (d)(1)(V). Pub. L. 101-549, §302(h), redesignated subpar. (U) as (V).

Subsec. (h). Pub. L. 101-549, §108(p), added subsec. (h). 1977—Subsec. (b)(1). Pub. L. 95-190 in text relating to filing of petitions for review in the United States Court of Appeals for the District of Columbia inserted provision respecting requirements under sections 7411 and 7412 of this title, and substituted provisions authorizing review of any rule issued under section 7413, 7419, or 7420 of this title, for provisions authorizing review of any rule or order issued under section 7420 of this title, relating to noncompliance penalties, and in text relating to filing of petitions for review in the United States Court of Appeals for the appropriate circuit inserted provision respecting review under section 7411(j), 7412(c), 7413(d), or 7419 of this title, provision authorizing review under section 1857c-10(c)(2)(A), (B), or (C) to the period prior to Aug. 7, 1977, and provisions authorizing review of denials or disapprovals by the Administrator under subchapter I of this chapter.

Pub. L. 95-95, §305(c), (h), inserted rules or orders issued under section 7420 of this title (relating to noncompliance penalties) and any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter to the enumeration of actions of the Administrator for which a petition for review may be filed only in the United States Court of Appeals for the District of Columbia, added the approval or promulgation by the Administrator of orders under section 7420 of this title, or any other final action of the Administrator under this chapter which is locally or regionally applicable to the enumeration of actions by the Administrator for which a petition for review may be filed only in the United States Court of Appeals for the appropriate circuit, inserted provision that petitions otherwise capable of being filed in the Court of Appeals for the appropriate circuit may be filed only in the Court of Appeals for the District of Columbia if the action is based on a determination of nationwide scope, and increased from 30 days to 60 days the period during which the petition must be filed.

Subsec. (d). Pub. L. 95-95, §305(a), added subsec. (d).

Subsec. (e). Pub. L. 95-95, §303(d), added subsec. (e).

Subsec. (f). Pub. L. 95-95, §305(f), added subsec. (f).

Subsec. (g). Pub. L. 95-95, §305(g), added subsec. (g).

1974—Subsec. (b)(1). Pub. L. 93-319 inserted reference to the Administrator's action under section 1857c-10(c)(2)(A), (B), or (C) of this title or under regulations thereunder and substituted reference to the filing of a petition within 30 days from the date of promulgation, approval, or action for reference to the filing of a petition within 30 days from the date of promulgation or approval.

1971—Subsec. (a)(1). Pub. L. 92-157 substituted reference to section "7545(c)(3)" for "7545(c)(4)" of this title.

EFFECTIVE DATE OF 1977 AMENDMENT

Amendment by Pub. L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95-95, set out as a note under section 7401 of this title.

TERMINATION OF ADVISORY COMMITTEES

Advisory committees established after Jan. 5, 1973, to terminate not later than the expiration of the 2-year period beginning on the date of their establishment, unless, in the case of a committee established by the President or an officer of the Federal Government, such committee is renewed by appropriate action prior to the expiration of such 2-year period, or in the case of a committee established by the Congress, its duration is otherwise provided for by law. See section 14 of Pub. L. 92-463, Oct. 6, 1972, 86 Stat. 776, set out in the Appendix to Title 5, Government Organization and Employees.

PENDING ACTIONS AND PROCEEDINGS

Suits, actions, and other proceedings lawfully commenced by or against the Administrator or any other

officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under act July 14, 1955, the Clean Air Act, as in effect immediately prior to the enactment of Pub. L. 95-95 [Aug. 7, 1977], not to abate by reason of the taking effect of Pub. L. 95-95, see section 406(a) of Pub. L. 95-95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95-95 [this chapter], see section 406(b) of Pub. L. 95-95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7608. Mandatory licensing

Whenever the Attorney General determines, upon application of the Administrator—

(1) that—

(A) in the implementation of the requirements of section 7411, 7412, or 7521 of this title, a right under any United States letters patent, which is being used or intended for public or commercial use and not otherwise reasonably available, is necessary to enable any person required to comply with such limitation to so comply, and

(B) there are no reasonable alternative methods to accomplish such purpose, and

(2) that the unavailability of such right may result in a substantial lessening of competition or tendency to create a monopoly in any line of commerce in any section of the country,

the Attorney General may so certify to a district court of the United States, which may issue an order requiring the person who owns such patent to license it on such reasonable terms and conditions as the court, after hearing, may determine. Such certification may be made to the district court for the district in which the person owning the patent resides, does business, or is found.

(July 14, 1955, ch. 360, title III, §308, as added Pub. L. 91-604, §12(a), Dec. 31, 1970, 84 Stat. 1708.)

CODIFICATION

Section was formerly classified to section 1857h-6 of this title.

PRIOR PROVISIONS

A prior section 308 of act July 14, 1955, was renumbered section 315 by Pub. L. 91-604 and is classified to section 7615 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect

§ 7407. Air quality control regions

(a) Responsibility of each State for air quality; submission of implementation plan

Each State shall have the primary responsibility for assuring air quality within the entire geographic area comprising such State by submitting an implementation plan for such State which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained within each air quality control region in such State.

(b) Designated regions

For purposes of developing and carrying out implementation plans under section 7410 of this title—

(1) an air quality control region designated under this section before December 31, 1970, or a region designated after such date under subsection (c) of this section, shall be an air quality control region; and

(2) the portion of such State which is not part of any such designated region shall be an air quality control region, but such portion may be subdivided by the State into two or more air quality control regions with the approval of the Administrator.

(c) Authority of Administrator to designate regions; notification of Governors of affected States

The Administrator shall, within 90 days after December 31, 1970, after consultation with appropriate State and local authorities, designate as an air quality control region any interstate area or major intrastate area which he deems necessary or appropriate for the attainment and maintenance of ambient air quality standards. The Administrator shall immediately notify the Governors of the affected States of any designation made under this subsection.

(d) Designations

(1) Designations generally

(A) Submission by Governors of initial designations following promulgation of new or revised standards

By such date as the Administrator may reasonably require, but not later than 1 year after promulgation of a new or revised national ambient air quality standard for any pollutant under section 7409 of this title, the Governor of each State shall (and at any other time the Governor of a State deems appropriate the Governor may) submit to the Administrator a list of all areas (or portions thereof) in the State, designating as—

(i) nonattainment, any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant,

(ii) attainment, any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant, or

(iii) unclassifiable, any area that cannot be classified on the basis of available information as meeting or not meeting the na-

tional primary or secondary ambient air quality standard for the pollutant.

The Administrator may not require the Governor to submit the required list sooner than 120 days after promulgating a new or revised national ambient air quality standard.

(B) Promulgation by EPA of designations

(i) Upon promulgation or revision of a national ambient air quality standard, the Administrator shall promulgate the designations of all areas (or portions thereof) submitted under subparagraph (A) as expeditiously as practicable, but in no case later than 2 years from the date of promulgation of the new or revised national ambient air quality standard. Such period may be extended for up to one year in the event the Administrator has insufficient information to promulgate the designations.

(ii) In making the promulgations required under clause (i), the Administrator may make such modifications as the Administrator deems necessary to the designations of the areas (or portions thereof) submitted under subparagraph (A) (including to the boundaries of such areas or portions thereof). Whenever the Administrator intends to make a modification, the Administrator shall notify the State and provide such State with an opportunity to demonstrate why any proposed modification is inappropriate. The Administrator shall give such notification no later than 120 days before the date the Administrator promulgates the designation, including any modification thereto. If the Governor fails to submit the list in whole or in part, as required under subparagraph (A), the Administrator shall promulgate the designation that the Administrator deems appropriate for any area (or portion thereof) not designated by the State.

(iii) If the Governor of any State, on the Governor's own motion, under subparagraph (A), submits a list of areas (or portions thereof) in the State designated as nonattainment, attainment, or unclassifiable, the Administrator shall act on such designations in accordance with the procedures under paragraph (3) (relating to redesignation).

(iv) A designation for an area (or portion thereof) made pursuant to this subsection shall remain in effect until the area (or portion thereof) is redesignated pursuant to paragraph (3) or (4).

(C) Designations by operation of law

(i) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(A), (B), or (C) of this subsection (as in effect immediately before November 15, 1990) is designated, by operation of law, as a nonattainment area for such pollutant within the meaning of subparagraph (A)(i).

(ii) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(E) (as in effect immediately before November 15, 1990) is designated by operation of law, as an attainment area for such pollutant within the meaning of subparagraph (A)(ii).

(iii) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(D) (as in effect immediately before November 15, 1990) is designated, by operation of law, as an unclassifiable area for such pollutant within the meaning of subparagraph (A)(iii).

(2) Publication of designations and redesignations

(A) The Administrator shall publish a notice in the Federal Register promulgating any designation under paragraph (1) or (5), or announcing any designation under paragraph (4), or promulgating any redesignation under paragraph (3).

(B) Promulgation or announcement of a designation under paragraph (1), (4) or (5) shall not be subject to the provisions of sections 553 through 557 of title 5 (relating to notice and comment), except nothing herein shall be construed as precluding such public notice and comment whenever possible.

(3) Redesignation

(A) Subject to the requirements of subparagraph (E), and on the basis of air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate, the Administrator may at any time notify the Governor of any State that available information indicates that the designation of any area or portion of an area within the State or interstate area should be revised. In issuing such notification, which shall be public, to the Governor, the Administrator shall provide such information as the Administrator may have available explaining the basis for the notice.

(B) No later than 120 days after receiving a notification under subparagraph (A), the Governor shall submit to the Administrator such redesignation, if any, of the appropriate area (or areas) or portion thereof within the State or interstate area, as the Governor considers appropriate.

(C) No later than 120 days after the date described in subparagraph (B) (or paragraph (1)(B)(iii)), the Administrator shall promulgate the redesignation, if any, of the area or portion thereof, submitted by the Governor in accordance with subparagraph (B), making such modifications as the Administrator may deem necessary, in the same manner and under the same procedure as is applicable under clause (ii) of paragraph (1)(B), except that the phrase "60 days" shall be substituted for the phrase "120 days" in that clause. If the Governor does not submit, in accordance with subparagraph (B), a redesignation for an area (or portion thereof) identified by the Administrator under subparagraph (A), the Administrator shall promulgate such redesignation, if any, that the Administrator deems appropriate.

(D) The Governor of any State may, on the Governor's own motion, submit to the Administrator a revised designation of any area or portion thereof within the State. Within 18 months of receipt of a complete State redesignation submittal, the Administrator shall approve or deny such redesignation. The submis-

sion of a redesignation by a Governor shall not affect the effectiveness or enforceability of the applicable implementation plan for the State.

(E) The Administrator may not promulgate a redesignation of a nonattainment area (or portion thereof) to attainment unless—

(i) the Administrator determines that the area has attained the national ambient air quality standard;

(ii) the Administrator has fully approved the applicable implementation plan for the area under section 7410(k) of this title;

(iii) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other permanent and enforceable reductions;

(iv) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 7505a of this title; and

(v) the State containing such area has met all requirements applicable to the area under section 7410 of this title and part D of this subchapter.

(F) The Administrator shall not promulgate any redesignation of any area (or portion thereof) from nonattainment to unclassifiable.

(4) Nonattainment designations for ozone, carbon monoxide and particulate matter (PM-10)

(A) Ozone and carbon monoxide

(i) Within 120 days after November 15, 1990, each Governor of each State shall submit to the Administrator a list that designates, affirms or reaffirms the designation of, or redesignates (as the case may be), all areas (or portions thereof) of the Governor's State as attainment, nonattainment, or unclassifiable with respect to the national ambient air quality standards for ozone and carbon monoxide.

(ii) No later than 120 days after the date the Governor is required to submit the list of areas (or portions thereof) required under clause (i) of this subparagraph, the Administrator shall promulgate such designations, making such modifications as the Administrator may deem necessary, in the same manner, and under the same procedure, as is applicable under clause (ii) of paragraph (1)(B), except that the phrase "60 days" shall be substituted for the phrase "120 days" in that clause. If the Governor does not submit, in accordance with clause (i) of this subparagraph, a designation for an area (or portion thereof), the Administrator shall promulgate the designation that the Administrator deems appropriate.

(iii) No nonattainment area may be redesignated as an attainment area under this subparagraph.

(iv) Notwithstanding paragraph (1)(C)(ii) of this subsection, if an ozone or carbon monoxide nonattainment area located within a metropolitan statistical area or consolidated metropolitan statistical area (as established

by the Bureau of the Census) is classified under part D of this subchapter as a Serious, Severe, or Extreme Area, the boundaries of such area are hereby revised (on the date 45 days after such classification) by operation of law to include the entire metropolitan statistical area or consolidated metropolitan statistical area, as the case may be, unless within such 45-day period the Governor (in consultation with State and local air pollution control agencies) notifies the Administrator that additional time is necessary to evaluate the application of clause (v). Whenever a Governor has submitted such a notice to the Administrator, such boundary revision shall occur on the later of the date 8 months after such classification or 14 months after November 15, 1990, unless the Governor makes the finding referred to in clause (v), and the Administrator concurs in such finding, within such period. Except as otherwise provided in this paragraph, a boundary revision under this clause or clause (v) shall apply for purposes of any State implementation plan revision required to be submitted after November 15, 1990.

(v) Whenever the Governor of a State has submitted a notice under clause (iv), the Governor, in consultation with State and local air pollution control agencies, shall undertake a study to evaluate whether the entire metropolitan statistical area or consolidated metropolitan statistical area should be included within the nonattainment area. Whenever a Governor finds and demonstrates to the satisfaction of the Administrator, and the Administrator concurs in such finding, that with respect to a portion of a metropolitan statistical area or consolidated metropolitan statistical area, sources in the portion do not contribute significantly to violation of the national ambient air quality standard, the Administrator shall approve the Governor's request to exclude such portion from the nonattainment area. In making such finding, the Governor and the Administrator shall consider factors such as population density, traffic congestion, commercial development, industrial development, meteorological conditions, and pollution transport.

(B) PM-10 designations

By operation of law, until redesignation by the Administrator pursuant to paragraph (3)—

(i) each area identified in 52 Federal Register 29383 (Aug. 7, 1987) as a Group I area (except to the extent that such identification was modified by the Administrator before November 15, 1990) is designated nonattainment for PM-10;

(ii) any area containing a site for which air quality monitoring data show a violation of the national ambient air quality standard for PM-10 before January 1, 1989 (as determined under part 50, appendix K of title 40 of the Code of Federal Regulations) is hereby designated nonattainment for PM-10; and

(iii) each area not described in clause (i) or (ii) is hereby designated unclassifiable for PM-10.

Any designation for particulate matter (measured in terms of total suspended particulates) that the Administrator promulgated pursuant to this subsection (as in effect immediately before November 15, 1990) shall remain in effect for purposes of implementing the maximum allowable increases in concentrations of particulate matter (measured in terms of total suspended particulates) pursuant to section 7473(b) of this title, until the Administrator determines that such designation is no longer necessary for that purpose.

(5) Designations for lead

The Administrator may, in the Administrator's discretion at any time the Administrator deems appropriate, require a State to designate areas (or portions thereof) with respect to the national ambient air quality standard for lead in effect as of November 15, 1990, in accordance with the procedures under subparagraphs (A) and (B) of paragraph (1), except that in applying subparagraph (B)(i) of paragraph (1) the phrase "2 years from the date of promulgation of the new or revised national ambient air quality standard" shall be replaced by the phrase "1 year from the date the Administrator notifies the State of the requirement to designate areas with respect to the standard for lead".

(6) Designations

(A) Submission

Notwithstanding any other provision of law, not later than February 15, 2004, the Governor of each State shall submit designations referred to in paragraph (1) for the July 1997 PM_{2.5} national ambient air quality standards for each area within the State, based on air quality monitoring data collected in accordance with any applicable Federal reference methods for the relevant areas.

(B) Promulgation

Notwithstanding any other provision of law, not later than December 31, 2004, the Administrator shall, consistent with paragraph (1), promulgate the designations referred to in subparagraph (A) for each area of each State for the July 1997 PM_{2.5} national ambient air quality standards.

(7) Implementation plan for regional haze

(A) In general

Notwithstanding any other provision of law, not later than 3 years after the date on which the Administrator promulgates the designations referred to in paragraph (6)(B) for a State, the State shall submit, for the entire State, the State implementation plan revisions to meet the requirements promulgated by the Administrator under section 7492(e)(1) of this title (referred to in this paragraph as "regional haze requirements").

(B) No preclusion of other provisions

Nothing in this paragraph precludes the implementation of the agreements and rec-

ommendations stemming from the Grand Canyon Visibility Transport Commission Report dated June 1996, including the submission of State implementation plan revisions by the States of Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, or Wyoming by December 31, 2003, for implementation of regional haze requirements applicable to those States.

(e) Redesignation of air quality control regions

(1) Except as otherwise provided in paragraph (2), the Governor of each State is authorized, with the approval of the Administrator, to redesignate from time to time the air quality control regions within such State for purposes of efficient and effective air quality management. Upon such redesignation, the list under subsection (d) of this section shall be modified accordingly.

(2) In the case of an air quality control region in a State, or part of such region, which the Administrator finds may significantly affect air pollution concentrations in another State, the Governor of the State in which such region, or part of a region, is located may redesignate from time to time the boundaries of so much of such air quality control region as is located within such State only with the approval of the Administrator and with the consent of all Governors of all States which the Administrator determines may be significantly affected.

(3) No compliance date extension granted under section 7413(d)(5)¹ of this title (relating to coal conversion) shall cease to be effective by reason of the regional limitation provided in section 7413(d)(5)¹ of this title if the violation of such limitation is due solely to a redesignation of a region under this subsection.

(July 14, 1955, ch. 360, title I, § 107, as added Pub. L. 91-604, § 4(a), Dec. 31, 1970, 84 Stat. 1678; amended Pub. L. 95-95, title I, § 103, Aug. 7, 1977, 91 Stat. 687; Pub. L. 101-549, title I, § 101(a), Nov. 15, 1990, 104 Stat. 2399; Pub. L. 108-199, div. G, title IV, § 425(a), Jan. 23, 2004, 118 Stat. 417.)

REFERENCES IN TEXT

Section 7413 of this title, referred to in subsec. (e)(3), was amended generally by Pub. L. 101-549, title VII, § 701, Nov. 15, 1990, 104 Stat. 2672, and, as so amended, subsec. (d) of section 7413 no longer relates to final compliance orders.

CODIFICATION

Section was formerly classified to section 1857c-2 of this title.

PRIOR PROVISIONS

A prior section 107 of act July 14, 1955, as added Nov. 21, 1967, Pub. L. 90-148, § 2, 81 Stat. 490, related to air quality control regions and was classified to section 1857c-2 of this title, prior to repeal by Pub. L. 91-604.

Another prior section 107 of act July 14, 1955, as added Dec. 17, 1963, Pub. L. 88-206, § 1, 77 Stat. 399, was renumbered section 111 by Pub. L. 90-148 and is classified to section 7411 of this title.

AMENDMENTS

2004—Subsec. (d)(6), (7). Pub. L. 108-199 added pars. (6) and (7).

1990—Subsec. (d). Pub. L. 101-549 amended subsec. (d) generally, substituting present provisions for provi-

sions which required States to submit lists of regions not in compliance on Aug. 7, 1977, with certain air quality standards to be submitted to the Administrator, and which authorized States to revise and resubmit such lists from time to time.

1977—Subsecs. (d), (e). Pub. L. 95-95 added subsecs. (d) and (e).

EFFECTIVE DATE OF 1977 AMENDMENT

Amendment by Pub. L. 95-95 effective Aug. 7, 1977, except as otherwise expressly provided, see section 406(d) of Pub. L. 95-95, set out as a note under section 7401 of this title.

OZONE AND PARTICULATE MATTER STANDARDS

Pub. L. 108-199, div. G, title IV, § 425(b), Jan. 23, 2004, 118 Stat. 417, provided that: "Except as provided in paragraphs (6) and (7) of section 107(d) of the Clean Air Act [subsec. (d)(6), (7) of this section] (as added by subsection (a)), section 6101, subsections (a) and (b) of section 6102, and section 6103 of the Transportation Equity Act for the 21st Century [Pub. L. 105-178] (42 U.S.C. 7407 note; 112 Stat. 463), as in effect on the day before the date of enactment of this Act [Jan. 23, 2004], shall remain in effect."

Pub. L. 105-178, title VI, June 9, 1998, 112 Stat. 463, as amended by Pub. L. 109-59, title VI, § 6012(a), Aug. 10, 2005, 119 Stat. 1882, provided that:

"SEC. 6101. FINDINGS AND PURPOSE.

"(a) The Congress finds that—

"(1) there is a lack of air quality monitoring data for fine particle levels, measured as PM_{2.5}, in the United States and the States should receive full funding for the monitoring efforts;

"(2) such data would provide a basis for designating areas as attainment or nonattainment for any PM_{2.5} national ambient air quality standards pursuant to the standards promulgated in July 1997;

"(3) the President of the United States directed the Administrator of the Environmental Protection Agency (referred to in this title as the 'Administrator') in a memorandum dated July 16, 1997, to complete the next periodic review of the particulate matter national ambient air quality standards by July 2002 in order to determine 'whether to revise or maintain the standards';

"(4) the Administrator has stated that 3 years of air quality monitoring data for fine particle levels, measured as PM_{2.5} and performed in accordance with any applicable Federal reference methods, is appropriate for designating areas as attainment or nonattainment pursuant to the July 1997 promulgated standards; and

"(5) the Administrator has acknowledged that in drawing boundaries for attainment and nonattainment areas for the July 1997 ozone national air quality standards, Governors would benefit from considering implementation guidance from EPA on drawing area boundaries.

"(b) The purposes of this title are—

"(1) to ensure that 3 years of air quality monitoring data regarding fine particle levels are gathered for use in the determination of area attainment or nonattainment designations respecting any PM_{2.5} national ambient air quality standards;

"(2) to ensure that the Governors have adequate time to consider implementation guidance from EPA on drawing area boundaries prior to submitting area designations respecting the July 1997 ozone national ambient air quality standards;

"(3) to ensure that the schedule for implementation of the July 1997 revisions of the ambient air quality standards for particulate matter and the schedule for the Environmental Protection Agency's visibility regulations related to regional haze are consistent with the timetable for implementation of such particulate matter standards as set forth in the President's Implementation Memorandum dated July 16, 1997.

¹ See References in Text note below.

“SEC. 6102. PARTICULATE MATTER MONITORING PROGRAM.

“(a) Through grants under section 103 of the Clean Air Act [42 U.S.C. 7403] the Administrator of the Environmental Protection Agency shall use appropriated funds no later than fiscal year 2000 to fund 100 percent of the cost of the establishment, purchase, operation and maintenance of a PM_{2.5} monitoring network necessary to implement the national ambient air quality standards for PM_{2.5} under section 109 of the Clean Air Act [42 U.S.C. 7409]. This implementation shall not result in a diversion or reprogramming of funds from other Federal, State or local Clean Air Act activities. Any funds previously diverted or reprogrammed from section 105 Clean Air Act [42 U.S.C. 7405] grants for PM_{2.5} monitors must be restored to State or local air programs in fiscal year 1999.

“(b) EPA and the States, consistent with their respective authorities under the Clean Air Act [42 U.S.C. 7401 et seq.], shall ensure that the national network (designated in subsection (a)) which consists of the PM_{2.5} monitors necessary to implement the national ambient air quality standards is established by December 31, 1999.

“(c)(1) The Governors shall be required to submit designations referred to in section 107(d)(1) of the Clean Air Act [42 U.S.C. 7407(d)(1)] for each area following promulgation of the July 1997 PM_{2.5} national ambient air quality standard within 1 year after receipt of 3 years of air quality monitoring data performed in accordance with any applicable Federal reference methods for the relevant areas. Only data from the monitoring network designated in subsection (a) and other Federal reference method PM_{2.5} monitors shall be considered for such designations. Nothing in the previous sentence shall be construed as affecting the Governor's authority to designate an area initially as nonattainment, and the Administrator's authority to promulgate the designation of an area as nonattainment, under section 107(d)(1) of the Clean Air Act, based on its contribution to ambient air quality in a nearby nonattainment area.

“(2) For any area designated as nonattainment for the July 1997 PM_{2.5} national ambient air quality standard in accordance with the schedule set forth in this section, notwithstanding the time limit prescribed in paragraph (2) of section 169B(e) of the Clean Air Act [42 U.S.C. 7492(e)(2)], the Administrator shall require State implementation plan revisions referred to in such paragraph (2) to be submitted at the same time as State implementation plan revisions referred to in section 172 of the Clean Air Act [42 U.S.C. 7502] implementing the revised national ambient air quality standard for fine particulate matter are required to be submitted. For any area designated as attainment or unclassifiable for such standard, the Administrator shall require the State implementation plan revisions referred to in such paragraph (2) to be submitted 1 year after the area has been so designated. The preceding provisions of this paragraph shall not preclude the implementation of the agreements and recommendations set forth in the Grand Canyon Visibility Transport Commission Report dated June 1996.

“(d) The Administrator shall promulgate the designations referred to in section 107(d)(1) of the Clean Air Act [42 U.S.C. 7407(d)(1)] for each area following promulgation of the July 1997 PM_{2.5} national ambient air quality standard by the earlier of 1 year after the initial designations required under subsection (c)(1) are required to be submitted or December 31, 2005.

“(e) FIELD STUDY.—Not later than 2 years after the date of enactment of the SAFETEA-LU [Aug. 10, 2005], the Administrator shall—

“(1) conduct a field study of the ability of the PM_{2.5} Federal Reference Method to differentiate those particles that are larger than 2.5 micrometers in diameter;

“(2) develop a Federal reference method to measure directly particles that are larger than 2.5 micrometers in diameter without reliance on subtracting

from coarse particle measurements those particles that are equal to or smaller than 2.5 micrometers in diameter;

“(3) develop a method of measuring the composition of coarse particles; and

“(4) submit a report on the study and responsibilities of the Administrator under paragraphs (1) through (3) to—

“(A) the Committee on Energy and Commerce of the House of Representatives; and

“(B) the Committee on Environment and Public Works of the Senate.

“SEC. 6103. OZONE DESIGNATION REQUIREMENTS.

“(a) The Governors shall be required to submit the designations referred to in section 107(d)(1) of the Clean Air Act [42 U.S.C. 7407(d)(1)] within 2 years following the promulgation of the July 1997 ozone national ambient air quality standards.

“(b) The Administrator shall promulgate final designations no later than 1 year after the designations required under subsection (a) are required to be submitted.

“SEC. 6104. ADDITIONAL PROVISIONS.

“Nothing in sections 6101 through 6103 shall be construed by the Administrator of Environmental Protection Agency or any court, State, or person to affect any pending litigation or to be a ratification of the ozone or PM_{2.5} standards.”

PENDING ACTIONS AND PROCEEDINGS

Suits, actions, and other proceedings lawfully commenced by or against the Administrator or any other officer or employee of the United States in his official capacity or in relation to the discharge of his official duties under act July 14, 1955, the Clean Air Act, as in effect immediately prior to the enactment of Pub. L. 95-95 [Aug. 7, 1977], not to abate by reason of the taking effect of Pub. L. 95-95, see section 406(a) of Pub. L. 95-95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

MODIFICATION OR RESCISSION OF RULES, REGULATIONS, ORDERS, DETERMINATIONS, CONTRACTS, CERTIFICATIONS, AUTHORIZATIONS, DELEGATIONS, AND OTHER ACTIONS

All rules, regulations, orders, determinations, contracts, certifications, authorizations, delegations, or other actions duly issued, made, or taken by or pursuant to act July 14, 1955, the Clean Air Act, as in effect immediately prior to the date of enactment of Pub. L. 95-95 [Aug. 7, 1977] to continue in full force and effect until modified or rescinded in accordance with act July 14, 1955, as amended by Pub. L. 95-95 [this chapter], see section 406(b) of Pub. L. 95-95, set out as an Effective Date of 1977 Amendment note under section 7401 of this title.

§ 7408. Air quality criteria and control techniques

(a) Air pollutant list; publication and revision by Administrator; issuance of air quality criteria for air pollutants

(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant—

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

planned. For further information, please see the direct final action.

Dated: November 18, 2011.

Jared Blumenfeld,

Regional Administrator, Region IX.

[FR Doc. 2011-32476 Filed 12-19-11; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2010-1042; FRL-9609-1]

RIN 2060-AQ90

National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; notice of public hearings and extension of public comment period.

SUMMARY: The EPA published in the *Federal Register* on November 25, 2011, the proposed rules, "National Emission Standards for Hazardous Air Pollutants: Mineral Wool Production and Wool Fiberglass Manufacturing." The EPA was asked to hold a public hearing only on the wool fiberglass rule. Therefore, EPA is making two announcements: first, a public hearing for the proposed Wool Fiberglass Manufacturing rule will be held on January 4, 2012 in Kansas City Kansas, and second, the comment period for the Wool Fiberglass Manufacturing proposed rules will be extended until February 3, 2012.

DATES: The public hearing will be held on January 4, 2012. Comments must be received by February 3, 2012.

ADDRESSES: The public hearing to be held on January 4, 2012, will be held at the Hilton Garden Inn, 520 Minnesota Avenue, Kansas City, Kansas 66101; telephone: (913) 342-7900.

The public hearing will convene at 2 p.m. and will continue until 8 p.m. A dinner break is scheduled from 5 p.m. until 6:30 p.m. The EPA will make every effort to accommodate all speakers that arrive and register before 8 p.m. The EPA's Web site for the rulemaking, which includes the proposal and information about the hearings, can be found at: <http://www.epa.gov/ttn/atw/rrisk/rtrpg.html>.

FOR FURTHER INFORMATION CONTACT: If you would like to present oral testimony at the public hearing, please contact Ms. Pamela Garrett, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies

and Programs Division (D243-01), Research Triangle Park, North Carolina 27711; telephone: (919) 541-7966; fax number: (919) 541-5450; email address: garrett.pamela@epa.gov (preferred method for registering). The last day to register to present oral testimony in advance will be Friday, December 30, 2011. If using email, please provide the following information: the time you wish to speak (afternoon or evening), name, affiliation, address, email address and telephone and fax numbers. Time slot preferences will be given in the order requests are received. Requests to speak will be taken the day of each of the hearings at the hearing registration desk, although preferences on speaking times may not be able to be fulfilled. If you will require the service of a translator, please let us know at the time of registration.

Questions concerning the November 25, 2011, proposed rule should be addressed to Susan Fairchild, Office of Air Quality Planning and Standards, Sector Policies and Programs Division (D 243-04), Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-5167; facsimile number: (919) 541-3207; email address: Fairchild.susan@epa.gov.

Public hearing: The proposal for which the EPA is holding the public hearing was published in the *Federal Register* on November 25, 2011, and is available at: <http://www.epa.gov/ttn/atw/rrisk/rtrpg.html> and also in the docket identified below. The public hearing will provide interested parties the opportunity to present oral comments regarding the EPA's proposed standards, including data, views or arguments concerning the proposal. The EPA may ask clarifying questions during the oral presentations, but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as any oral comments and supporting information presented at the public hearing.

Commenters should notify Ms. Garrett if they will need specific equipment or if there are other special needs related to providing comments at the public hearing. The EPA will provide equipment for commenters to make computerized slide presentations if we receive special requests in advance. Oral testimony will be limited to 5 minutes for each commenter. The EPA encourages commenters to bring a copy of their oral testimony along with any other information supporting their statements in electronic (via email or CD) or in hard copy form. A recorder

will be present during the public hearing to record oral statements. All information submitted to the EPA during the public hearing and a transcribed copy of the oral statements will be entered into the docket.

The public hearing schedule, including lists of speakers, will be posted on the EPA's Web site at <http://www.epa.gov/ttn/atw/rrisk/rtrpg.html>. Verbatim transcripts of the hearing and written statements will be included in the docket for the rulemaking. The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearing to run either ahead of schedule or behind schedule.

How can I get copies of this document and other related information?

The EPA has established a docket for the proposed rule, "National Emission Standards for Hazardous Air Pollutants: Wool Fiberglass Manufacturing Risk and Technology Review," under No. EPA-HQ-OAR-2010-1042, available at www.regulations.gov.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: December 15, 2011.

Mary E. Henigin,

Acting Director, Office of Air Quality Planning and Standards.

[FR Doc. 2011-32630 Filed 12-19-11; 8:45 a.m.]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 81

[EPA-HQ-OAR-2008-0476; FRL-9608-6]

EPA Responses to State and Tribal 2008 Ozone Designation Recommendations: Notice of Availability and Public Comment Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of availability and public comment period.

SUMMARY: Notice is hereby given that the EPA has posted its responses to state and tribal designation recommendations for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) on the Agency's Internet Web site. The EPA invites public comments on its responses during the comment period

specified in the **DATES** section. The EPA sent responses directly to the states and tribes on or about December 9, 2011, and intends to make final designation determinations for the 2008 Ozone NAAQS in spring 2012.

DATES: Comments must be received on or before January 19, 2012. Please refer to **SUPPLEMENTARY INFORMATION** for additional information on the comment period.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–OAR–HQ–2008–0476, by one of the following methods:

- <http://www.regulations.gov>. Follow the online instructions for submitting comments.

- Email: a-and-r-docket@epa.gov. Attention Docket ID No. EPA–HQ–OAR–2008–0476.

- Fax: (202) 566–9744. Attention Docket ID No. EPA–HQ–OAR–2008–0476.

- Mail: Air Docket, Attention Docket ID No. EPA–HQ–OAR–2008–0476, Environmental Protection Agency, Mail Code: 6102T, 1200 Pennsylvania Ave. NW., Washington, DC 20460.

- Hand Delivery: EPA Docket Center, 1301 Constitution Avenue NW., Room 3334, Washington, DC. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2008–0476. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be confidential business information or other information whose disclosure is restricted by statute. Do not submit information that you consider to be confidential business information or otherwise protected through www.regulations.gov or email. The www.regulations.gov web site is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through www.regulations.gov, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your

comment and with any disk or CD–ROM you submit. If the EPA is unable to read your comment and cannot contact you for clarification due to technical difficulties, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>. For additional instructions on submitting comments, go to Section II of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, i.e., confidential business information or other information whose disclosure is restricted by statute.

Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Avenue NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

FOR FURTHER INFORMATION CONTACT: For general questions concerning this action, please contact Carla Oldham, U.S. EPA, Office of Air Quality Planning and Standards, Air Quality Planning Division, C539–04, Research Triangle Park, NC 27711, telephone (919) 541–3347, email at oldham.carla@epa.gov. For questions about areas in the EPA Region 1, please contact Richard Burkhart, U.S. EPA, telephone (617) 918–1664, email at burkhart.richard@epa.gov. For questions about areas in the EPA Region 2, please contact Bob Kelly, U.S. EPA, telephone (212) 637–3709, email at kelly.bob@email.gov. For questions about areas in the EPA Region 3, please contact Maria Pino, U.S. EPA, telephone (215) 814–2181, email at pino.maria@epa.gov. For questions about areas in the EPA Region 4, please contact Jane Spann, U.S. EPA, telephone (404) 562–9029, email at spann.jane@epa.gov. For questions about areas in the EPA Region 5, please contact Edward Doty, U.S. EPA,

telephone (312) 886–6057, email at doty.edward@epa.gov. For questions about areas in the EPA Region 6, please contact Guy Donaldson, U.S. EPA, telephone (214) 665–7242, email at donaldson.guy@epa.gov. For questions about areas in the EPA Region 7, please contact Lachala Kemp, U.S. EPA, telephone (913) 551–7214, email at kemp.lachala@epa.gov. For questions about areas in the EPA Region 8, please contact Scott Jackson, U.S. EPA, telephone (303) 312–6107, email at jackson.scott@epa.gov. For questions about areas in the EPA Region 9, please contact John J. Kelly, U.S. EPA, telephone (415) 947–4151, email at kelly.johnj@epa.gov. For questions about areas in EPA Region 10, please contact Claudia Vaupel, U.S. EPA, telephone (206) 553–6121, email at vaupel.claudia@epa.gov.

SUPPLEMENTARY INFORMATION:

I. Background and Purpose

On March 12, 2008, the EPA revised the NAAQS for ozone to provide increased protection of public health and welfare from ozone pollution (73 FR 16436; March 27, 2008). The process for designating areas following promulgation of a new or revised NAAQS is contained in Clean Air Act (CAA) section 107(d) (42 U.S.C. 7407). Following the promulgation of a new or revised standard, each governor or tribal leader has an opportunity to recommend air quality designations, including the appropriate boundaries for nonattainment areas, to the EPA. The EPA considers these recommendations as part of its duty to promulgate the formal area designations and boundaries for the new or revised standards. By no later than 120 days prior to promulgating designations, the EPA is required to notify states and tribes of any intended modification to an area designation or boundary recommendation that the EPA deems necessary. On or around December 9, 2011, the EPA notified states and tribes of its intended area designations for the 2008 Ozone NAAQS. States and tribes now have an opportunity to demonstrate why they believe an intended modification by the EPA may be inappropriate. The EPA encouraged states and tribes to provide comments and additional information for consideration by the EPA in finalizing designations. The EPA plans to make final designation decisions for the 2008 Ozone NAAQS in spring 2012.

The purpose of this notice is to solicit public comments from interested parties other than states and tribes on the EPA's recent responses to the state and tribal

designation recommendations for the 2008 Ozone NAAQS. These responses can be found on the EPA's Internet Web site at <http://www.epa.gov/ozonedesignations> and also in the public docket for ozone designations at Docket ID No. EPA-HQ-OAR-2008-0476. The CAA section 107(d) provides a process for designations that involves recommendations by states and tribes to the EPA and responses from the EPA to those parties, prior to the EPA promulgating final designations and boundaries. The EPA is not required under the CAA section 107(d) to seek public comment during the designation process, but is electing to do so for the 2008 Ozone NAAQS in order to gather additional information for the EPA to consider before making final designations. The EPA invites public comment on its responses to states and tribes during the 30-day comment period provided by this notice. Due to the statutory timeframe for promulgating designations set out in the CAA section 107(d), the EPA will not be able to consider any public comments submitted after January 19, 2012. This notice and opportunity for public comment does not affect any rights or obligations of any state, tribe or the EPA which might otherwise exist pursuant to the CAA section 107(d).

Please refer to the **ADDRESSES** section above in this document for specific instructions on submitting comments and locating relevant public documents.

In establishing nonattainment area boundaries, the EPA is required to identify the area that does not meet the 2008 Ozone NAAQS and any nearby area that is contributing to the area that does not meet that standard. We are particularly interested in receiving comments, supported by relevant information, if you believe that a specific geographic area that the EPA is proposing to identify as a nonattainment area should not be categorized by the CAA section 107(d) criteria as nonattainment, or if you believe that a specific area not proposed by the EPA to be identified as a nonattainment area should in fact be categorized as nonattainment using the CAA section 107(d) criteria. Please be as specific as possible in supporting your views.

- Describe any assumptions and provide any technical information and/or data that you used.

- Provide specific examples to illustrate your concerns, and suggest alternatives.

- Explain your views as clearly as possible.

- Make sure to submit your comments by the comment period

deadline identified in the **DATES** section above.

II. Instructions for Submitting Public Comments

What should I consider as I prepare my comments for the EPA?

1. *Submitting Confidential Business Information.* Do not submit this information to the EPA through www.regulations.gov or email. Clearly mark the part or all of the information that you claim to be confidential business information. For confidential business information in a disk or CD-ROM that you mail to the EPA, mark the outside of the disk or CD-ROM as confidential business information and then identify electronically within the disk or CD-ROM the specific information that is claimed as confidential business information. In addition to one complete version of the comment that includes information claimed as confidential business information, a copy of the comment that does not contain the information claimed as confidential business information must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. Send or deliver information identified as confidential business information only to the following address: Roberto Morales, U.S. EPA, Office of Air Quality Planning and Standards, Mail Code C404-02, Research Triangle Park, NC 27711, telephone (919) 541-0880, email at morales.roberto@epa.gov, Attention Docket ID No. EPA-HQ-OAR-2008-0476.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).

- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

- Describe any assumptions and provide any technical information and/or data that you used.

- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

- Provide specific examples to illustrate your concerns, and suggest alternatives.

- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

- Make sure to submit your comments by the comment period deadline identified.

III. Internet Web Site for Rulemaking Information

The EPA has also established a Web site for this rulemaking at www.epa.gov/ozonedesignations. The Web site includes the state and tribal designation recommendations, information supporting the EPA's preliminary designation decisions, as well as the rulemaking actions and other related information that the public may find useful.

Dated: December 13, 2011.

Jennifer Noonan Edmonds,

Acting Director, Office of Air Quality Planning and Standards.

[FR Doc. 2011-32557 Filed 12-19-11; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF DEFENSE

Defense Acquisition Regulations System

48 CFR Parts 201, 203, 204, 212, 213, 217, 219, 222, 225, 233, 243, 252, Appendix I to Chapter 2

RIN 0750-AH55

Defense Federal Acquisition Regulation Supplement: Title 41 Positive Law Codification—Further Implementation (DFARS Case 2012-D003)

AGENCIES: Defense Acquisition Regulations System, Department of Defense (DoD).

ACTION: Proposed rule.

SUMMARY: DoD is proposing to amend the Defense Federal Acquisition Regulation Supplement to conform statutory titles to the new Positive Law Codification of Title 41, United States Code, "Public Contracts."

DATES: *Comment Date:* Comments on the proposed rule should be submitted in writing to the address shown below on or before February 21, 2012, to be considered in the formation of a final rule.

ADDRESSES: Submit comments identified by DFARS Case 2012-D003, using any of the following methods:

- *Regulations.gov:* <http://www.regulations.gov>. Submit comments via the Federal eRulemaking portal by entering "DFARS Case 2012-D003" under the heading "Enter keyword or

competitive products represented 5.54 percent of total institutional costs.³ The contribution from competitive products to the recovery of the Postal Service's institutional costs was 6.78 percent in FY 2009 and 7.12 percent in FY 2010.⁴ In FY 2009 and FY 2010, institutional costs were reduced compared with previous years, due in part to the congressionally mandated reductions of the required annual contribution to the Retirement Health Benefits Fund. The Postal Service also has increasingly exercised its flexibility to transfer mail volume from market dominant products to competitive products. See 39 U.S.C. 3642.

On December 29, 2011, the Postal Service filed its 2011 Annual Compliance Report with the Commission. That report indicates that in FY 2011 competitive products collectively contributed 7.84 percent of the Postal Service's institutional costs.⁵

II. Invitation To Comment

The Commission invites comments to facilitate its examination of the appropriateness of the current contribution level. To inform its deliberations, the Commission requests comments from interested members of the public on whether and how changes in competitive market conditions, the allocation of costs to competitive products, the number and volume of competitive products, or any other changes should impact the minimum appropriate share of institutional costs of the Postal Service that should be provided by competitive products. As required by the statute, the Commission in making its determination must consider all relevant circumstances, including the prevailing competitive conditions in the market, and the degree to which any costs are uniquely or disproportionately associated with any competitive products. Comments also are welcome on any issues relevant to the reasonableness of the current 5.5 percent contribution requirement and retaining, modifying, or eliminating it.

Comments are due March 5, 2012. Reply comments may be submitted on or before April 2, 2012.

Pursuant to 39 U.S.C. 505, R. Kevin Harle is designated as the officer of the Commission to represent the interests of the general public (Public

Representative). The Public Representative will direct the activities of Commission personnel assigned to him and, upon request, will provide their names for the record. Neither the Public Representative nor any of the assigned personnel will participate in or provide advice on any Commission decision in this proceeding.

III. Ordering Paragraphs

It is ordered:

1. The Commission establishes Docket No. RM2012-3, in compliance with 39 U.S.C. 3633(b).

2. The Commission designates R. Kevin Harle as the Public Representative representing the interests of the general public in this proceeding.

3. Comments are due March 5, 2012.

4. Reply comments are due April 2, 2012.

5. The Secretary shall arrange for publication of this notice in the **Federal Register**.

By the Commission.

Shoshana M. Grove,

Secretary.

[FR Doc. 2012-851 Filed 1-18-12; 8:45 am]

BILLING CODE 7710-FW-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2011-0797; FRL-9619-5]

RIN 2060-AQ-92

National Emission Standards for Hazardous Air Pollutants: Primary Aluminum Reduction Plants; Extension of Comment Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; extension of public comment period.

SUMMARY: The EPA is announcing that the period for providing public comments on the December 6, 2011, proposed rule titled, "National Emission Standards for Hazardous Air Pollutants: Primary Aluminum Reduction Plants" is being extended for 12 days.

DATES: *Comments.* The public comment period for the proposed rule published December 6, 2011, (76 FR 76260) is being extended for 12 days to February 1, 2012, in order to provide the public additional time to submit comments and supporting information.

ADDRESSES: *Comments.* Written comments on the proposed rule may be submitted to EPA electronically, by mail, by facsimile or through hand

delivery/courier. Please refer to the proposal for the addresses and detailed instructions.

Docket. Publicly available documents relevant to this action are available for public inspection either electronically at <http://www.regulations.gov> or in hard copy at the EPA Docket Center, Room 3334, 1301 Constitution Avenue NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. A reasonable fee may be charged for copying.

World Wide Web. The EPA Web site for this rulemaking is at: <http://www.epa.gov/ttn/atw/alum/alumpg.html>.

FOR FURTHER INFORMATION CONTACT: Mr. David Putney, Metals and Inorganic Chemicals Group (D243-02), Sector Policies and Programs Division, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; Telephone number: (919) 541-2016; Fax number (919) 541-3207; Email address: putney.david@epa.gov.

SUPPLEMENTARY INFORMATION:

Comment Period

Due to requests received from industry to extend the public comment period, the EPA is extending the public comment period for an additional 12 days. Therefore, the public comment period will end on February 1, 2012, rather than January 20, 2012.

How can I get copies of this document and other related information?

The EPA has established the official public docket No. EPA-HQ-OAR-2011-0797. The EPA has also developed a Web site for the proposed rulemaking at the addresses given above.

Dated: January 12, 2012.

Gina McCarthy,
Assistant Administrator.

[FR Doc. 2012-962 Filed 1-18-12; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 81

[EPA-HQ-OAR-2008-0476; FRL-9619-4]

EPA Responses to State and Tribal 2008 Ozone Designation Recommendations; Extension of Public Comment Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule; extension of public comment period.

³ FY 2008 Annual Compliance Determination, March 30, 2009, at 87.

⁴ FY 2009 Annual Compliance Determination, March 29, 2010, at 117; FY 2010 Annual Compliance Determination, March 29, 2011, at 138.

⁵ See Docket No. ACR2011, FY 2011 Annual Compliance Report, December 29, 2011, at 64. Competitive products contribution, \$2.317 billion, divided by total institutional costs, \$29.554 billion.

SUMMARY: The EPA is announcing the extension of the public comment period for the EPA's responses to state and tribal ozone designation recommendations for the 2008 Ozone National Ambient Air Quality Standards. The EPA sent the responses directly to the states and tribes on or about December 9, 2011. On December 20, 2011 (76 FR 78872, FRL-9608-6), the EPA published a notice in the **Federal Register** that the EPA had posted the responses on its Internet Web site and the EPA invited public comment. In the notice, the EPA stated that public comments must be received on or before January 19, 2012. The EPA has received several requests from stakeholders for additional time to prepare their comments. Some of the requesters noted that the original 30-day comment period fell across two federal holidays. Taking that into consideration, the EPA is extending the comment period until February 3, 2012. The EPA intends to make final designation determinations for the 2008 ozone standards in spring 2012.

DATES: Comments must be received on or before February 3, 2012. Please refer to **SUPPLEMENTARY INFORMATION** for additional information on the comment period.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-OAR-HQ-2008-0476, by one of the following methods:

- <http://www.regulations.gov>. Follow the online instructions for submitting comments.

- **Email:** a-and-r-docket@epa.gov. Attention Docket ID No. EPA-HQ-OAR-2008-0476.

- **Fax:** (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2008-0476.

- **Mail:** Air Docket, Attention Docket ID No. EPA-HQ-OAR-2008-0476, Environmental Protection Agency, Mail Code: 6102T, 1200 Pennsylvania Ave. NW., Washington, DC 20460.

- **Hand Delivery:** EPA Docket Center, 1301 Constitution Avenue NW., Room 3334, Washington, DC. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OAR-2008-0476. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be confidential business

information or other information whose disclosure is restricted by statute. Do not submit information that you consider to be confidential business information or otherwise protected through www.regulations.gov or email. The www.regulations.gov Web site is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through www.regulations.gov, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If the EPA is unable to read your comment and cannot contact you for clarification due to technical difficulties, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>. For additional instructions on submitting comments, go to the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, *i.e.*, confidential business information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the EPA Docket Center, EPA West, Room 3334, 1301 Constitution Avenue NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air Docket is (202) 566-1742.

FOR FURTHER INFORMATION CONTACT: For general questions concerning this action, please contact Carla Oldham, U.S. EPA, Office of Air Quality Planning and Standards, Air Quality Planning

Division, C539-04, Research Triangle Park, NC 27711, telephone (919) 541-3347, email at oldham.carla@epa.gov. For questions regarding the EPA Region 1, please contact Richard Burkhart, U.S. EPA, telephone (617) 918-1664, email at burkhart.richard@epa.gov. For questions regarding the EPA Region 2, please contact Bob Kelly, U.S. EPA, telephone (212) 637-3709, email at kelly.bob@epa.gov. For questions regarding the EPA Region 3, please contact Maria Pino, U.S. EPA, telephone (215) 814-2181, email at pino.maria@epa.gov. For questions regarding the EPA Region 4, please contact Jane Spann, U.S. EPA, telephone (404) 562-9029, email at spann.jane@epa.gov. For questions regarding the EPA Region 5, please contact Edward Doty, U.S. EPA, telephone (312) 886-6057, email at doty.edward@epa.gov. For questions regarding the EPA Region 6, please contact Guy Donaldson, U.S. EPA, telephone (214) 665-7242, email at donaldson.guy@epa.gov. For questions regarding the EPA Region 7, please contact Lachala Kemp, U.S. EPA, telephone (913) 551-7214, email at kemp.lachala@epa.gov. For questions regarding the EPA Region 8, please contact Scott Jackson, U.S. EPA, telephone (303) 312-6107, email at jackson.scott@epa.gov. For questions regarding the EPA Region 9, please contact John J. Kelly, U.S. EPA, telephone (415) 947-4151, email at kelly.johnj@epa.gov. For questions regarding EPA Region 10, please contact Claudia Vaupel, U.S. EPA, telephone (206) 553-6121, email at vaupel.claudia@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. What should I consider as I prepare my comments for the EPA?

1. **Submitting Confidential Business Information.** Do not submit this information to the EPA through www.regulations.gov or email. Clearly mark the part or all of the information that you claim to be confidential business information. For confidential business information in a disk or CD ROM that you mail to the EPA, mark the outside of the disk or CD ROM as confidential business information and then identify electronically within the disk or CD ROM the specific information that is claimed as confidential business information. In addition to one complete version of the comment that includes information claimed as confidential business information, a copy of the comment that does not contain the information

claimed as confidential business information must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. Send or deliver information identified as confidential business information only to the following address: Roberto Morales, U.S. EPA, Office of Air Quality Planning and Standards, Mail Code C404-02, Research Triangle Park, NC 27711, telephone (919) 541-0880, email at morales.roberto@epa.gov, Attention Docket ID No. EPA-HQ-OAR-2008-0476.

2. *Tips for Preparing Your Comments.* When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

B. Where can I get a copy of this document and other related information?

The EPA has established a docket for the ozone designations rulemaking for the 2008 ozone standards at EPA-HQ-OAR-2008-0476. In addition, the EPA has established a Web site for the ozone designations rulemaking at www.epa.gov/ozone/designations. The Web site includes the state and tribal designation recommendations, information supporting the EPA's preliminary designation decisions, as well as the rulemaking actions and other related information that the public may find useful.

Dated: January 12, 2012.

Mary E. Henigin,

Acting Director, Office of Air Quality Planning and Standards.

[FR Doc. 2012-957 Filed 1-18-12; 8:45 am]

BILLING CODE 6560-50-P

DEPARTMENT OF DEFENSE

Defense Acquisition Regulations System

48 CFR Part 204

[DFARS Case 2012-D002]

RIN 0750-AH56

Defense Federal Acquisition Regulation Supplement: Order of Application for Modifications

AGENCY: Defense Acquisition Regulations System, Department of Defense (DoD).

ACTION: Proposed rule.

SUMMARY: DoD is proposing to amend the Defense Federal Acquisition Regulation Supplement to establish an order for application of contract modifications to resolve any potential conflicts that may arise from multiple modifications with the same effective date.

DATES: Comments on the proposed rule should be submitted in writing to the address shown below on or before March 19, 2012, to be considered in the formation of the final rule.

ADDRESSES: Submit comments identified by DFARS case 2012-D002, using any of the following methods:

• *Regulations.gov:* <http://www.regulations.gov>. Submit comments via the Federal eRulemaking portal by inputting "DFARS Case 2012-D002" under the heading "Enter keyword or ID" and selecting "Search." Select the link "Submit a Comment" that corresponds with "DFARS Case 2012-D002." Follow the instructions provided at the "Submit a Comment" screen. Please include your name, company name (if any), and "DFARS Case 2012-D002" on your attached document.

• *Email:* dfars@osd.mil. Include DFARS Case 2012-D002 in the subject line of the message.

• *Fax:* (703) 602-0350.

• *Mail:* Defense Acquisition Regulations System, Attn: Mr. Julian Thrash, OUSD (AT&L) DPAP/DARS, Room 3B855, 3060 Defense Pentagon, Washington, DC 20301-3060.

Comments received generally will be posted without change to <http://www.regulations.gov>, including any personal information provided. To confirm receipt of your comment(s), please check www.regulations.gov, approximately two to three days after submission to verify posting (except allow 30 days for posting of comments submitted by mail).

FOR FURTHER INFORMATION CONTACT: Mr. Julian Thrash, (703) 602-0310.

SUPPLEMENTARY INFORMATION:

I. Background

The Defense Federal Acquisition Regulation Supplement (DFARS) subpart 204.70, Uniform Procurement Instrument Identification Numbers, prescribes numbering procedures for contract modifications and the Federal Acquisition Regulation (FAR) part 43.1, General, prescribes rules for determining the effective date. There are no rules to describe in what order to apply modifications to determine the actual content of a resulting modified contract. In order to determine the sequence of modifications to a contract or order, a method for determining the order of application for modifications is needed to resolve any conflict arising from multiple modifications with the same effective date. As such, this rule proposes to add DFARS text at 204.7007, Order of Application for Modifications, to resolve any potential inconsistency.

II. Executive Orders 12866 and 13563

Executive Orders (E.O.s) 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This is not a significant regulatory action and, therefore, was not subject to review under section 6(b) of E.O. 12866, Regulatory Planning and Review, dated September 30, 1993. This rule is not a major rule under 5 U.S.C. 804.

III. Regulatory Flexibility Act

DoD does not expect this proposed rule to have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.*, because this rule only affects the internal operating processes of DoD by clarifying an order of application for contract modifications, and it does not have an economic impact on contractors. However, an initial regulatory flexibility analysis has been performed and is summarized as follows:

The objective for this case is to provide a set of rules to the contracting officer to resolve any potential conflict from multiple modifications with the same effective date. The changes



FEDERAL REGISTER

Vol. 77

Monday,

No. 98

May 21, 2012

Part III

Environmental Protection Agency

40 CFR Parts 50, 51 and 81

Air Quality Designations for the 2008 Ozone National Ambient Air Quality Standards; Implementation of the 2008 National Ambient Air Quality Standards for Ozone: Nonattainment Area Classifications Approach, Attainment Deadlines and Revocation of the 1997 Ozone Standards for Transportation Conformity Purposes; Final Rules

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Part 81**

[EPA-HQ-OAR-2008-0476; FRL-9668-2]

RIN 2060-AP37

Air Quality Designations for the 2008 Ozone National Ambient Air Quality Standards**AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

SUMMARY: This rule establishes initial air quality designations for most areas in the United States, including areas of Indian country, for the 2008 primary and secondary national ambient air quality standards (NAAQS) for ozone. The designations for several counties in Illinois, Indiana, and Wisconsin that the EPA is considering for inclusion in the Chicago nonattainment area will be designated in a subsequent action, no later than May 31, 2012. Areas designated as nonattainment are also being classified by operation of law according to the severity of their air quality problems. The classification categories are Marginal, Moderate, Serious, Severe, and Extreme. The EPA is establishing the air quality thresholds that define the classifications in a separate rule that the EPA is signing and publishing in the **Federal Register** on

the same schedule as these designations. In accordance with that separate rule, six nonattainment areas in California are being reclassified to a higher classification.

DATES: The effective date of this rule is July 20, 2012.

ADDRESSES: The EPA has established a docket for this action under Docket ID NO. EPA-HQ-OAR-2008-0476. All documents in the docket are listed in the index at <http://www.regulations.gov>. Although listed in the index, some information is not publicly available, i.e., Confidential Business Information or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in the docket or in hard copy at the Docket, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Office of Air and Radiation Docket and Information Center is (202) 566-1742.

In addition, the EPA has established a Web site for this rulemaking at: <http://www.epa.gov/ozonedesignations>. The Web site includes the EPA's final state and tribal designations, as well as state initial recommendation letters, the EPA modification letters, technical support documents, responses to comments and other related technical information.

FOR FURTHER INFORMATION CONTACT:

Carla Oldham, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C539-04, Research Triangle Park, NC 27711, phone number (919) 541-3347 or by email at: oldham.carla@epa.gov.

Regional Office Contacts

Region I—Richard Burkhardt (617) 918-1664

Region II—Bob Kelly (212) 637-3709

Region III—Maria Pino (215) 814-2181

Region IV—Jane Spann (404) 562-9029

Region V—Edward Doty (312) 886-6057

Region VI—Guy Donaldson (214) 665-7242

Region VII—Lachala Kemp (913) 551-7214

Region VIII—Scott Jackson (303) 312-6107

Region IX—John J. Kelly (415) 947-4151

Region X—Claudia Vaupel (206) 553-6121

SUPPLEMENTARY INFORMATION: The public may inspect the rule and state-specific technical support information at the following locations:

Regional offices	States
Dave Conroy, Chief, Air Programs Branch, EPA New England, 1 Congress Street, Suite 1100, Boston, MA 02114-2023, (617) 918-1661. Raymond Werner, Chief, Air Programs Branch, EPA Region 2, 290 Broadway, 25th Floor, New York, NY 10007-1866, (212) 637-3706. Cristina Fernandez, Branch Chief, Air Quality Planning Branch, EPA Region 3, 1650 Arch Street, Philadelphia, PA 19103-2187, (215) 814-2178. R. Scott Davis, Branch Chief, Air Planning Branch, EPA Region 4, Sam Nunn Atlanta Federal Center, 61 Forsyth, Street SW., 12th Floor, Atlanta, GA 30303, (404) 562-9127. John Mooney, Chief, Air Programs Branch, EPA Region 5, 77 West Jackson Street, Chicago, IL 60604, (312) 886-6043. Guy Donaldson, Chief, Air Planning Section, EPA Region 6, 1445 Ross Avenue, Dallas, TX 75202, (214) 665-7242. Joshua A. Tapp, Chief, Air Programs Branch, EPA Region 7, 901 North 5th Street, Kansas City, Kansas 66101-2907, (913) 551-7606. Monica Morales, Leader, Air Quality Planning Unit, EPA Region 8, 1595 Wynkoop Street, Denver, CO 80202-1129, (303) 312-6936. Lisa Hanf, Air Planning Office, EPA Region 9, 75 Hawthorne Street, San Francisco, CA 94105, (415) 972-3854. Debra Suzuki, Manager, State and Tribal Air Programs, EPA Region 10, Office of Air, Waste, and Toxics, Mail Code OAQ-107, 1200 Sixth Avenue, Seattle, WA 98101, (206) 553-0985.	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. New Jersey, New York, Puerto Rico, and Virgin Islands. Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia. Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. Iowa, Kansas, Missouri, and Nebraska. Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming. American Samoa, Arizona, California, Guam, Hawaii, Nevada, and Northern Mariana Islands. Alaska, Idaho, Oregon, and Washington.

Table of Contents

The following is an outline of the preamble.

- I. Preamble Glossary of Terms and Acronyms
- II. What is the purpose of this action?

- III. What is ozone and how is it formed?
- IV. What are the 2008 ozone NAAQS and the health and welfare concerns they address?
- V. What are the CAA requirements for air quality designations?

- VI. What is the chronology for this designations rule and what guidance did the EPA provide?
- VII. What air quality data has the EPA used to designate areas for the 2008 ozone NAAQS?

- VIII. What are the ozone air quality classifications?
- IX. What is the reclassification of six California nonattainment areas?
- X. Can states request that areas within 5 percent of the upper or lower limit of a classification threshold be reclassified?
- XI. How do designations affect Indian country?
- XII. Where can I find information forming the basis for this rule and exchanges between EPA, states, and tribes related to this rule?
- XIII. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulations and Regulatory Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Act
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
 - G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks
 - H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act (NTTAA)
 - J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations
 - K. Congressional Review Act
 - L. Judicial Review

I. Preamble Glossary of Terms and Acronyms

The following are abbreviations of terms used in the preamble.

APA Administrative Procedure Act
 CAA Clean Air Act
 CFR Code of Federal Regulations
 DC District of Columbia
 EPA Environmental Protection Agency
 FR Federal Register
 NAAQS National Ambient Air Quality Standards
 NO_x Nitrogen Oxides
 NTTAA National Technology Transfer and Advancement Act
 PPM Parts per million
 RFA Regulatory Flexibility Act
 UMRA Unfunded Mandate Reform Act of 1995
 TAR Tribal Authority Rule
 U.S. United States
 U.S.C. United States Code
 VCS Voluntary Consensus Standards
 VOC Volatile Organic Compounds

II. What is the purpose of this action?

The purpose of this action is to announce and promulgate initial area designations for most areas of the country with respect to the 2008 primary and secondary NAAQS for ozone, in accordance with the requirements of Clean Air Act (CAA) section 107(d). The EPA is designating areas as either nonattainment,

unclassifiable, or unclassifiable/attainment. In addition, the nonattainment areas are classified by operation of law according to the severity of their ozone air quality problems and six areas in California are being reclassified immediately to a higher classification. The classification categories are Marginal, Moderate, Serious, Severe, and Extreme. The EPA is establishing the air quality thresholds that define the classifications in a separate rule titled, "Implementation of the 2008 National Ambient Air Quality Standards for Ozone: Nonattainment Area Classifications Approach, Attainment Deadlines and Revocation of the 1997 Ozone Standards for Transportation Conformity Purposes" (Classifications Rule). In that separate rule, the EPA also codified the immediate reclassification of six areas in California. (See 40 CFR 51.1103(d).) The list of all areas being designated in each state and in areas of Indian country appear in the tables at the end of this final rule (amendments to 40 CFR 81.301–356). For areas designated as nonattainment, the tables include the area's classification by operation of law or the area's reclassification in accordance with 40 CFR 51.1103(d).

In this action, the EPA is designating 45 areas as nonattainment. Seven of the areas are multi-state areas. The EPA is designating one area, Uinta Basin, WY, as unclassifiable because there is existing non-regulatory monitoring in the area that detected levels of ozone that exceed the NAAQS. Regulatory monitoring has been conducted in that area since April 2011, and thus there are not yet three consecutive years of certified ozone monitoring data available that can be used to determine the area's attainment status. Consistent with previous initial area designations for ozone, the EPA is designating all the remaining state areas and Indian country as unclassifiable/attainment.

Consistent with the EPA's "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country" (December 20, 2011), the EPA is designating four areas of Indian country separately from their adjacent/surrounding state areas.¹ The lands of the Pechanga Tribe and the Morongo Tribe in Southern California are being designated as separate nonattainment areas, while two additional areas in Indian country are being designated as separate unclassifiable/attainment areas.

The EPA is basing the designations on the most recent certified ozone air

quality monitoring data and an evaluation of factors to assess contributions to nonattainment in nearby areas. State areas designated as nonattainment are subject to planning and emission reduction requirements as specified in the CAA. Requirements vary according to an area's classification. The EPA will be proposing shortly an implementation rule to assist states in the development of state implementation plans for attaining the ozone standards.

III. What is ozone and how is it formed?

Ground-level ozone, O₃, is a gas that is formed by the reaction of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) in the atmosphere in the presence of sunlight. These precursor emissions are emitted by many types of pollution sources, including power plants and industrial emissions sources, on-road and off-road motor vehicles and engines, and smaller sources, collectively referred to as area sources. Ozone is predominately a summertime air pollutant. However, high ozone concentrations have also been observed in cold months, where a few high elevation areas in the Western U.S. have experienced high levels of local VOC and NO_x emissions that have formed ozone when snow is on the ground and temperatures are near or below freezing. Ozone and ozone precursors can be transported to an area from sources in nearby areas or from sources located hundreds of miles away. For purposes of determining ozone nonattainment area boundaries, the CAA requires the EPA to include areas that contribute to nearby violations of the NAAQS.

IV. What are the 2008 ozone NAAQS and the health and welfare concerns they address?

On March 12, 2008, the EPA revised both the primary and secondary NAAQS for ozone to a level of 0.075 parts per million (ppm) (annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years) to provide increased protection of public health and the environment.² The 2008 ozone NAAQS retains the same general form and averaging time as the 0.08 ppm NAAQS set in 1997, but is set at a more protective level.

Ozone exposure also has been associated with increased susceptibility to respiratory infections, medication use by asthmatics, doctor visits, and emergency department visits and

¹ For more information, visit <http://www.epa.gov/ttncaaa1/t1/memoranda/20120117indiancountry.pdf>.

² See 73 FR 16436; March 27, 2008. For a detailed explanation of the calculation of the 3-year 8-hour average, see 40 CFR part 50, Appendix I.

hospital admissions for individuals with respiratory disease. Ozone exposure may also contribute to premature death, especially in people with heart and lung disease. The secondary ozone standard was revised to protect against adverse welfare effects including impacts to sensitive vegetation and forested ecosystems.

V. What are the CAA requirements for air quality designations?

When the EPA promulgates a new or revised NAAQS, the EPA is required to designate areas as nonattainment, attainment, or unclassifiable, pursuant to section 107(d)(1) of the CAA. The CAA requires the EPA to complete the initial area designation process within 2 years of promulgating the NAAQS. However, if the Administrator has insufficient information to make these designations within that time frame, the EPA has the authority to extend the deadline for designation decisions by up to 1 additional year.

By not later than 1 year after the promulgation of a new or revised NAAQS, each state governor is required to recommend air quality designations, including the appropriate boundaries for areas, to the EPA. The EPA reviews those state recommendations and is authorized to make any modifications the Administrator deems necessary. The statute does not define the term "necessary," but the EPA interprets this to authorize the Administrator to modify designations that did not meet the statutory requirements or were otherwise inconsistent with the facts or analysis deemed appropriate by the EPA. If the EPA is considering modifications to a state's initial recommendation, the EPA is required to notify the state of any such intended modifications to its recommendation not less than 120 days prior to the EPA's promulgation of the final designation. These notifications are commonly known as the "120-day letters." If the state does not agree with the EPA's intended modification, it then has an opportunity to respond to the EPA to demonstrate why it believes the modification proposed by the EPA is inappropriate. Even if a state fails to provide any recommendation for an area, in whole or in part, the EPA still must promulgate a designation that the Administrator deems appropriate.

Section 107(d)(1)(A)(i) of the CAA defines a nonattainment area as, "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." If an area meets either prong of this

definition, then the EPA is obligated to designate the area as "nonattainment." Section 107(d)(1)(A)(iii) provides that any area that the EPA cannot designate on the basis of available information as meeting or not meeting the standards should be designated as "unclassifiable." Historically for ozone, the EPA designates the remaining areas as "unclassifiable/attainment" indicating that the areas either have attaining air quality monitoring data or that air quality information is not available because the areas are not monitored, and the EPA has not determined that the areas contribute to a violation in a nearby area.

The EPA believes that section 107(d) provides the agency with discretion to determine how best to interpret the terms "contributes to" and "nearby" in the definition of a nonattainment area for a new or revised NAAQS, given considerations such as the nature of a specific pollutant, the types of sources that may contribute to violations, the form of the standards for the pollutant, and other relevant information. In particular, the EPA believes that the statute does not require the agency to establish bright line tests or thresholds for what constitutes "contribution" or "nearby" for purposes of designations.³ Similarly, the EPA believes that the statute permits the EPA to evaluate the appropriate application of the term "area" as may be appropriate for a particular NAAQS.

Section 301(d) of the CAA authorizes the EPA to approve eligible Indian tribes to implement provisions of the CAA on Indian reservations and other areas within the tribes' jurisdiction. The Tribal Authority Rule (TAR) (40 CFR Part 49), which implements section 301(d) of the CAA, sets forth the criteria and process for tribes to apply to the EPA for eligibility to administer CAA programs. The designations process contained in section 107(d) of the CAA is included among those provisions determined to be appropriate by the EPA for treatment of tribes in the same manner as states. Under the TAR, tribes generally are not subject to the same submission schedules imposed by the CAA on states. As authorized by the TAR, tribes may seek eligibility to submit designation recommendations to the EPA.

VI. What is the chronology for this designations rule and what guidance did the EPA provide?

Within one year after a new or revised air quality standard is established, the

³ This view was confirmed in *Catawba County v. EPA*, 571 F.3d 20 (D.C. Cir. 2009).

CAA 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. On December 4, 2008, the EPA issued guidance for states and tribal agencies to use for this purpose. (See memorandum from Robert J. Meyers, Principal Deputy Assistant Administrator, to Regional Administrators, Regions I–X, titled, "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards.") The guidance provided the anticipated timeline for designations and identified important factors that the EPA recommended states and tribes consider in making their recommendations. These factors include air quality data, emissions data, traffic and commuting patterns, growth rates and patterns, meteorology, geography/topography, and jurisdictional boundaries. In the guidance, the EPA asked that states and tribes submit their designation recommendations, including appropriate area boundaries, to the EPA by March 12, 2009. Later in the process, the EPA issued 2 new guidance memoranda related to designating areas of Indian country. (See December 20, 2011, memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, to Regional Air Directors, Regions I–X, titled, "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country," and December 20, 2011, memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, to Regional Air Directors, Regions I–X, titled, "Guidance to Regions for Working with Tribes during the National Ambient Air Quality Standards (NAAQS) Designations Process.")

Under the initial schedule, the EPA intended to complete the initial designations for the 2008 ozone NAAQS on a 2-year schedule, by March 12, 2010. On September 16, 2009, the EPA announced that it would initiate a rulemaking to reconsider the 2008 ozone NAAQS for various reasons, including the fact that the 0.075 ppm level fell outside of the range recommended by the Clean Air Scientific Advisory Committee, the independent group that provides advice to the EPA Administrator on the technical bases for the EPA's NAAQS. The EPA signed the proposed reconsideration on January 6, 2010. (See 75 FR 2938; January 19, 2010.) Because of the significant uncertainty the ozone NAAQS reconsideration created regarding the continued applicability of the 2008 NAAQS, the EPA determined there was insufficient information to

designate areas within 2 years of promulgation of the NAAQS. Therefore, the EPA used its authority under CAA section 107(d)(1)(B) to extend the deadline for designating areas by 1 year, until March 12, 2011. (See 75 FR 2936; January 19, 2010.) The EPA has not taken final action on the proposed reconsideration; thus, the current NAAQS for ozone remains at 0.075 ppm, as established in 2008.

After the March 12, 2011, designation deadline passed, WildEarth Guardians and Elizabeth Crowe (WildEarth Guardians) filed a lawsuit seeking to compel the EPA to take action to designate areas for the 2008 ozone NAAQS. *WildEarth Guardians and Elizabeth Crowe v. Jackson* (D. Ariz. 11-CV-01661). The EPA and WildEarth Guardians settled the case by entering into a consent decree that requires the EPA Administrator to sign a final rule designating areas for the 2008 ozone NAAQS by May 31, 2012.

On September 22, 2011, the EPA issued a memorandum to clarify for state and local agencies the status of the 2008 ozone NAAQS and to outline plans for moving forward to implement them. The EPA indicated that it would proceed with initial area designations for the 2008 NAAQS, 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 EPA provided the opportunity for states to do so. Several states chose to update their recommendations, and some requested that the EPA base designations for their areas on certified air quality data from 2009–2011, and committed to certify the 2011 data earlier than the May 1 deadline for annual air monitoring certification under 40 CFR part 58.15(a)(2) so that the EPA would have sufficient time to consider the data in making decisions on designations and nonattainment area boundaries.

On or about December 9, 2011, the EPA sent letters to Governors and Tribal leaders notifying them of the EPA's preliminary response to their designation recommendations and to inform them of the EPA's approach for completing the designations for the 2008 ozone NAAQS. The EPA requested that states submit any additional information that they wanted the EPA to consider by February 29, 2011, including any certified 2011 air quality monitoring data. On January 31, 2011, the EPA sent revised 120-day letter responses to Illinois, Indiana, and Wisconsin based on updated ozone air quality data for 2009–2011, submitted

by the state of Illinois two days before the EPA sent the December 9, 2011, letters. Given the timing of Illinois' submission of certified data, EPA was not able to consider the information in the December 9, 2011, letters. After reviewing the new information, which indicated a violation of the ozone NAAQS at a monitor in the Chicago area, the EPA sent letters on January 31, 2012 notifying Illinois, Indiana, and Wisconsin that it intended to designate certain counties, identified in those letters, as nonattainment for the 2008 ozone NAAQS. The EPA cannot finalize a designation for those areas until 120 days following the letters. Therefore, the EPA will be designating the Illinois, Indiana, and Wisconsin counties identified in the January 31, 2011, letters in a separate rule that will be signed no later than May 31, 2012.

Although not required by section 107(d) of the CAA, the EPA also provided an opportunity for members of the public to comment on the EPA's 120-day response letters to states and tribes. The EPA announced a 30-day public comment period in the **Federal Register** on December 20, 2011 (76 FR 78872). The comment period was subsequently extended until February 3, 2012 (77 FR 2677; January 19, 2012). On February 14, 2012 (77 FR 8211), the EPA reopened the public comment period for the limited purpose of inviting comment on the EPA's revised responses to Illinois, Indiana, and Wisconsin. State and tribal recommendations and the EPA's preliminary responses were posted on EPA's Web site at <http://www.epa.gov/ozonedesignations> and are available in the docket for the designations action. Comments from the states, tribes and the public, and EPA's responses to significant comments, are also in the docket.

VII. What air quality data has the EPA used to designate areas for the 2008 ozone NAAQS?

The final ozone designations are based primarily on certified air quality monitoring data from calendar years 2008–2010, which was the most recent certified data available to the EPA at the time the EPA notified the states of its intended modifications to their recommendations. Under 40 CFR 58.16, states are required to report all monitored ozone air quality data and associated quality assurance data within 90 days after the end of each quarterly reporting period, and under 40 CFR part 58.15(a)(2) states are required to submit annual summary reports and a data certification letter to the EPA by May 1 for ozone air quality data collected in the previous calendar year. States

generally had not completed these requirements for calendar year 2011 ozone air quality data when the EPA notified states of our intended designations on December 9, 2011. In certain cases, states included as part of their designation recommendations a request that the EPA consider monitoring data from 2009–2011 in making final designation decisions. In these requests, they indicated to the EPA what they expected their certified ozone air quality data would show regarding whether an area was attaining the standard, and for designations purposes they committed to certifying their 2011 data no later than February 29, 2012, so that the EPA would have sufficient time to consider it. Thus, for those areas, the EPA considered the state's preliminary representation of 2011 data in sending the 120-day notification letter. We have verified these representations in making our final designations decisions.

VIII. What are the ozone air quality classifications?

In accordance with CAA section 181(a)(1), each area designated as nonattainment for the 2008 ozone NAAQS is classified by operation of law at the same time as the area is designated by the EPA. Under Subpart 2 of part D of title I of the CAA, state planning and emissions control requirements for ozone are determined, in part, by a nonattainment area's classification. The ozone nonattainment areas are classified based on the severity of their ozone levels (as determined based on the area's "design value," which represents air quality in the area for the most recent 3 years).⁴ The possible classifications are Marginal, Moderate, Serious, Severe, and Extreme. Nonattainment areas with a "lower" classification have ozone levels that are closer to the standard than areas with a "higher" classification. Areas in the lower classification levels have fewer and/or less stringent mandatory air quality planning and control requirements than those in higher classifications. The final Classifications Rule, which is being signed at the same time as the designations rule and being published and effective at the same time or before the designations, establishes the classification thresholds for each classification category for purposes of the 2008 NAAQS and explains the EPA's methodology for calculating the thresholds. In addition, in the

⁴ The air quality design value for the 8-hour ozone NAAQS is the 3-year average of the annual 4th highest daily maximum 8-hour average ozone concentration. See 40 CFR part 50, Appendix I.

Classifications Rule, the EPA promulgated a regulation, 40 CFR 51.1103(d), that immediately reclassifies 6 areas in California to higher classifications. The classification for each nonattainment area designated for the 2008 ozone NAAQS is shown in the 40 CFR part 81 tables at the end of this designations rule.

IX. What is the reclassification of six California nonattainment areas?

The final Classifications Rule addresses the reclassification for the 2008 ozone NAAQS of selected areas in California that had voluntarily reclassified under the 1997 ozone NAAQS. In accordance with the final Classifications Rule, the following areas are being voluntarily reclassified to a higher classification for purposes of the 2008 NAAQS pursuant to that rule: Serious—Ventura County, CA; Severe—Los Angeles-San Bernardino Counties (West Mojave Desert), Riverside County (Coachella Valley), and Sacramento Metro, CA; Extreme—Los Angeles-South Coast Air Basin, and San Joaquin Valley, CA. These classifications are reflected in the tables at the end of this final rule (amendments to 40 CFR 81.301–356).

X. Can states request that areas within 5 percent of the upper or lower limit of a classification threshold be reclassified?

Under CAA section 181(a)(4), an ozone nonattainment area may be reclassified to a higher or lower classification (also known as a classification bump up or a bump down) “if an area classified under paragraph (1) (Table 1) would have been classified in another category if the design value in the area were 5 percent greater or 5 percent less than the level on which such classification was based.” The section also states that “In making such adjustment, the Administrator may consider the number of exceedances of the national primary ambient air quality standard for ozone in the area, the level of pollution transport between the area and other affected areas, including both intrastate and interstate transport, and the mix of sources and air pollutants in the area.”

As noted in the preamble to the rule designating and classifying areas following enactment of the CAA Amendments of 1990, the section 181(a)(4) provisions grant the Administrator broad discretion in making or determining not to make, a reclassification. (See 56 FR 56698; November 6, 1991.) As part of the 1991 action, the EPA developed criteria to evaluate whether it is appropriate to reclassify a particular area. (See list

below and at 56 FR 56698.) Because section 181(b)(3) provides that the EPA must grant any state request to reclassify an area into a higher classification, the EPA focused these criteria primarily on how the EPA would assess requests for a lower classification. In 1991, EPA approved reclassifications when the area met the first requirement (a request by the state to EPA) and at least some of the other criteria, and did not violate any of the criteria (emissions reductions, trends, etc.). The EPA used the same method and criteria once again to evaluate reclassification requests under section 181(a)(4) for purposes of the 1997 ozone NAAQS. The EPA intends to continue to use this same approach for purposes of evaluating any request for a reclassification for the 2008 ozone NAAQS. For reclassifications downwards, states may only request a reclassification to the next lower classification, and air quality data from prior years cannot be used as justification to be reclassified to an even lower classification.

The criteria EPA intends to use to evaluate whether it is appropriate to reclassify a particular area include:

Request by state: The EPA does not intend to exercise its authority to reclassify areas on the EPA's own initiative. Rather, the EPA intends to rely on the state to submit a request for a reclassification. A tribe may also submit such a request and, in the case of a multi-state nonattainment area, all affected states must submit the same reclassification request.

Discontinuity: A five percent reclassification must not result in an illogical or excessive discontinuity relative to surrounding areas. In particular, in light of the area-wide nature of ozone formation, a reclassification should not create a “donut hole” where an area of one classification is surrounded by areas of higher classification.

Attainment: Evidence should be available that the proposed area would be able to attain by the earlier date specified by the lower classification in the case of a reclassification downward.

Emissions reductions: Evidence should be available that the area would be very likely to achieve the appropriate total percent emission reduction necessary in order to attain in the shorter time period for a reclassification downward.

Trends: Near- and long-term trends in emissions and air quality should support a reclassification. Historical air quality data should indicate substantial air quality improvement for a reclassification downward. Growth projections and emission trends should

support a reclassification downward. In addition, we will consider whether vehicle miles traveled and other indicators of emissions are increasing at higher than normal rates.

Years of data: The same years of ozone air quality data used for the initial designation and classification should be used for reclassification requests.

A. Five Percent Reclassifications to a Lower Classification

For an area to be eligible to be reclassified to a lower classification under section 181(a)(4), the area's design value must be within five percent of the upper limit for the next lower classification. For example, an area with a Moderate design value of 0.090 ppm (or less) would be eligible to request a reclassification to Marginal because 0.090 ppm is five percent more than the upper limit of 0.086 ppm for the Marginal classification. Accordingly, areas with the following design values may be eligible to request a reclassification to the next lower classification: Moderate areas with a design value of 0.090 ppm or less; Serious areas with a design value of 0.105 ppm or less; and Severe areas with a design value of 0.118 ppm or less.

B. Five Percent Reclassifications to a Higher Classification

An ozone nonattainment area may also be reclassified under section 181(a)(4) to the next higher classification. As with five percent reclassifications to a lower classification, the EPA does not intend to exercise its authority to reclassify areas to a higher classification on the EPA's own initiative. Rather, the EPA intends to rely on the state to submit a request for such a reclassification. Areas with the following design values are eligible to request a reclassification to the next higher classification: Marginal areas with a design value of 0.082 ppm or more; Moderate areas with a design value of 0.095 ppm or more; and Serious areas with a design value of 0.108 ppm or more.

C. Timing of the Five Percent Reclassifications

A Governor or eligible Tribal governing body of any area that wishes to pursue a reclassification should submit all requests and supporting documentation to the EPA Regional Office by June 20, 2012. This relatively short time frame is necessary because section 181(a)(4) only authorizes the Administrator to make such

reclassifications within 90 days after the initial classification.

XI. How do designations affect Indian country?

All state areas listed in the tables at the end of this document are designated as indicated, and include Indian country geographically located within such areas, except as otherwise noted. In general, state recommendations for initial area designations do not apply to Indian country. Consistent with the "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country" (December 20, 2011), in instances where the EPA did not receive an initial designation recommendation from a tribe, the EPA is designating their area of Indian country along with the adjacent/surrounding state area(s). Tribes whose areas of Indian country are designated as nonattainment for the 2008 ozone NAAQS are being affected by poor air quality. Where nonattainment areas include both Indian country and state land, it is important for states and tribes to work together to coordinate planning efforts. Coordinated planning will help ensure that the planning decisions made by the states and tribes complement each other and that the nonattainment area makes reasonable progress toward attainment and ultimately attains the 2008 ozone NAAQS.

XII. Where can I find information forming the basis for this rule and exchanges between the EPA, states, and tribes related to this rule?

Information providing the basis for this action are provided in the docket for this rulemaking. The applicable EPA guidance memoranda and copies of correspondence regarding this process between the EPA and the states, tribes, and other parties are available for review at the EPA Docket Center listed above in the addresses section of this document, and on the EPA's ozone designation Web site at <http://www.epa.gov/ozonedesignations>. State-specific information is available from the EPA Regional Offices.

XIII. Statutory and Executive Order Reviews

Upon promulgation of a new or revised NAAQS, the CAA requires the EPA to designate areas as attaining or not attaining the NAAQS. The CAA then specifies requirements for areas based on whether such areas are attaining or not attaining the NAAQS. In this final rule, the EPA assigns designations to areas as required.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action responds to the CAA requirement to promulgate air quality designations after promulgation of a new or revised NAAQS. This type of action is exempt from review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). This rule responds to the CAA requirement to promulgate air quality designations after promulgation of a new or revised NAAQS. This requirement is prescribed in the CAA section 107. The present final rule does not establish any new information collection requirements.

C. Regulatory Flexibility Act

This final rule is not subject to the Regulatory Flexibility Act (RFA), which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act (APA) or any other statute. This rule is not subject to notice-and-comment requirements as provided under CAA section 107(d)(2)(B).

D. Unfunded Mandates Reform Act

This action contains no federal mandate under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local, or tribal governments or the private sector. The action imposes no enforceable duty on any state, local or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 and 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. It does not create any additional requirements beyond those of the CAA and ozone NAAQS (40 CFR 50.15). The CAA establishes the process whereby states take primary responsibility in developing plans to meet the ozone NAAQS.

E. Executive Order 13132: Federalism

This final rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The CAA establishes the process whereby states take primary responsibility in developing plans to meet the ozone NAAQS. This rule will not modify the relationship of the states and the EPA for purposes of developing programs to implement the ozone NAAQS. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) the EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or the EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

The EPA has concluded that this action may have tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. Tribes whose areas of Indian country are being designated as "nonattainment" for the 2008 ozone NAAQS are affected by poor air quality. Although tribes are not required to submit implementation plans under the Clean Air Act, for those tribes whose areas are being designated as part of surrounding state areas, it will be imperative that states and the tribes coordinate on air quality planning efforts to ensure that ozone levels are reduced. In addition, several tribes' areas of Indian country are being designated as "nonattainment" separately from their surrounding state areas. For these tribes, internal capacity for air quality planning will be important to enable their areas of Indian country to come into attainment.

The EPA consulted with tribal officials early in the process of developing this regulation to permit them to have meaningful and timely input into its development. At the beginning of the designations process,

letters were sent to all tribes who were expected to be impacted by designations for the 2008 ozone NAAQS. These letters not only informed the tribes of the overall designations process, but also offered the tribes consultation to ensure early communication and coordination. Additionally, letters were sent to potentially affected tribes indicating the EPA's intended designations for their areas of Indian country. These letters offered an additional opportunity for consultation. All consultations were completed in late February/early April 2012. During consultation, the primary concerns raised by tribes included the following: Impact of nonattainment designation on future economic development; appropriateness of using data from monitors not on tribal land; and ensuring final decisions are consistent with the EPA's "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country." (December 20, 2011). During the consultations, the EPA's Regional Offices ensured that the tribes fully understood the reasoning for the EPA's preliminary designations decisions and how those decisions are aligned with a consideration of the most recent certified air quality data and all other relevant information, including the EPA's "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country." To the extent possible, the EPA included the tribes' input into the final decision-making process for designations of their areas of Indian country for the 2008 ozone NAAQS.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

Section 12(d) of the NTTAA of 1995, Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs the EPA to provide Congress, through the Office of Management and Budget, explanations when the Agency decides not to use available and applicable VCS.

This action does not involve technical standards. Therefore, the EPA did not consider the use of any VCS.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations.

Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the U.S.

The CAA requires that the EPA designate as nonattainment "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." By designating as nonattainment all areas where available information indicates a violation of the ozone NAAQS or a contribution to a nearby violation, this action protects all those residing, working, attending school, or otherwise present in those areas regardless of minority or economic status.

The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the U.S. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the U.S. prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective July 20, 2012.

L. Judicial Review

Section 307(b)(1) of the CAA indicates which Federal Courts of Appeal have venue for petitions of review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit: (i) When the agency action consists of "nationally applicable regulations promulgated, or final actions taken, by the Administrator," or (ii) when such action is locally or regionally applicable, if "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination."

This rule designating areas for the 2008 ozone NAAQS is "nationally applicable" within the meaning of section 307(b)(1). This rule establishes designations for areas across the U.S. for the 2008 ozone NAAQS. At the core of this rulemaking is the EPA's interpretation of the definition of nonattainment under section 107(d)(1) of the CAA, and its application of that interpretation to areas across the country.

For the same reasons, the Administrator also is determining that the final designations are of nationwide scope and effect for the purposes of section 307(b)(1). This is particularly appropriate because, in the report on the 1977 Amendments that revised section 307(b)(1) of the CAA, Congress noted that the Administrator's determination that an action is of "nationwide scope or effect" would be appropriate for any action that has a scope or effect beyond a single judicial circuit. H.R. Rep. No. 95–294 at 323, 324, *reprinted* in 1977

U.S.C.C.A.N. 1402–03. Here, the scope and effect of this rulemaking extends to numerous judicial circuits since the designations apply to areas across the country. In these circumstances, section 307(b)(1) and its legislative history calls for the Administrator to find the rule to be of “nationwide scope or effect” and for venue to be in the D.C. Circuit.

Thus, any petitions for review of final designations must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date final action is published in the **Federal Register**.

List of Subjects in 40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: April 30, 2012.

Lisa P. Jackson,
Administrator.

For the reasons set forth in the preamble, 40 CFR Part 81, is amended as follows:

PART 81—DESIGNATIONS OF AREAS FOR AIR QUALITY PLANNING PURPOSES

■ 1. The authority citation for part 81 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart C—Section 107 Attainment Status Designations

■ 2. Section 81.301 is amended as follows:

■ a. By revising the table heading for “Alabama—Ozone (8-Hour Standard)” to read “Alabama—1997 8-Hour Ozone NAAQS (Primary and Secondary)”

■ b. By adding a new table entitled “Alabama—2008 8-Hour Ozone NAAQS (Primary and Secondary)” following the newly designated table “Alabama—1997 8-Hour Ozone NAAQS (Primary and Secondary)” to read as follows:

§ 81.301 Alabama.

* * * * *

ALABAMA—2008 8-HOUR OZONE NAAQS (Primary and secondary)

Designated area ¹	Designation		Classification	
	Date ²	Type	Date ²	Type
Autauga County	Unclassifiable/Attainment.		
Baldwin County	Unclassifiable/Attainment.		
Barbour County	Unclassifiable/Attainment.		
Bibb County	Unclassifiable/Attainment.		
Blount County	Unclassifiable/Attainment.		
Bullock County	Unclassifiable/Attainment.		
Butler County	Unclassifiable/Attainment.		
Calhoun County	Unclassifiable/Attainment.		
Chambers County	Unclassifiable/Attainment.		
Cherokee County	Unclassifiable/Attainment.		
Chilton County	Unclassifiable/Attainment.		
Choctaw County	Unclassifiable/Attainment.		
Clarke County	Unclassifiable/Attainment.		
Clay County	Unclassifiable/Attainment.		
Cleburne County	Unclassifiable/Attainment.		
Coffee County	Unclassifiable/Attainment.		
Colbert County	Unclassifiable/Attainment.		
Conecuh County	Unclassifiable/Attainment.		
Coosa County	Unclassifiable/Attainment.		
Covington County	Unclassifiable/Attainment.		
Crenshaw County	Unclassifiable/Attainment.		
Cullman County	Unclassifiable/Attainment.		
Dale County	Unclassifiable/Attainment.		
Dallas County	Unclassifiable/Attainment.		
De Kalb County	Unclassifiable/Attainment.		
Elmore County	Unclassifiable/Attainment.		
Escambia County	Unclassifiable/Attainment.		
Fayette County	Unclassifiable/Attainment.		
Franklin County	Unclassifiable/Attainment.		
Geneva County	Unclassifiable/Attainment.		
Greene County	Unclassifiable/Attainment.		
Hale County	Unclassifiable/Attainment.		
Henry County	Unclassifiable/Attainment.		
Houston County	Unclassifiable/Attainment.		
Jackson County	Unclassifiable/Attainment.		
Jefferson County	Unclassifiable/Attainment.		
Lamar County	Unclassifiable/Attainment.		
Lauderdale County	Unclassifiable/Attainment.		
Lawrence County	Unclassifiable/Attainment.		
Lee County	Unclassifiable/Attainment.		
Limestone County	Unclassifiable/Attainment.		
Lowndes County	Unclassifiable/Attainment.		
Macon County	Unclassifiable/Attainment.		
Madison County	Unclassifiable/Attainment.		
Marengo County	Unclassifiable/Attainment.		
Marion County	Unclassifiable/Attainment.		
Marshall County	Unclassifiable/Attainment.		

TENNESSEE—2008 8-HOUR OZONE NAAQS

[Primary and secondary]

Designated area	Designation		Classification	
	Date ¹	Type	Date ¹	Type
Knoxville, TN: ²		Nonattainment		Marginal.
Anderson County (part)				
2000 Census tracts: 202, 213.02				
Blount County				
Knox County				
Memphis, TN-MS-AR: ²		Nonattainment		Marginal.
Shelby County				
Rest of State: ³		Unclassifiable/Attainment.		
Anderson County (part) remainder		Unclassifiable/Attainment.		
Bedford County		Unclassifiable/Attainment.		
Benton County		Unclassifiable/Attainment.		
Bledsoe County		Unclassifiable/Attainment.		
Bradley County		Unclassifiable/Attainment.		
Campbell County		Unclassifiable/Attainment.		
Cannon County		Unclassifiable/Attainment.		
Carroll County		Unclassifiable/Attainment.		
Carter County		Unclassifiable/Attainment.		
Cheatham County		Unclassifiable/Attainment.		
Chester County		Unclassifiable/Attainment.		
Claiborne County		Unclassifiable/Attainment.		
Clay County		Unclassifiable/Attainment.		
Coke County		Unclassifiable/Attainment.		
Coffee County		Unclassifiable/Attainment.		
Crockett County		Unclassifiable/Attainment.		
Cumberland County		Unclassifiable/Attainment.		
Davidson County		Unclassifiable/Attainment.		
Decatur County		Unclassifiable/Attainment.		
DeKalb County		Unclassifiable/Attainment.		
Dickson County		Unclassifiable/Attainment.		
Dyer County		Unclassifiable/Attainment.		
Fayette County		Unclassifiable/Attainment.		
Fentress County		Unclassifiable/Attainment.		
Franklin County		Unclassifiable/Attainment.		
Gibson County		Unclassifiable/Attainment.		
Giles County		Unclassifiable/Attainment.		
Grainger County		Unclassifiable/Attainment.		
Greene County		Unclassifiable/Attainment.		
Grundy County		Unclassifiable/Attainment.		
Hamblen County		Unclassifiable/Attainment.		
Hamilton County		Unclassifiable/Attainment.		
Hancock County		Unclassifiable/Attainment.		
Hardeman County		Unclassifiable/Attainment.		
Hardin County		Unclassifiable/Attainment.		
Hawkins County		Unclassifiable/Attainment.		
Haywood County		Unclassifiable/Attainment.		
Henderson County		Unclassifiable/Attainment.		
Henry County		Unclassifiable/Attainment.		
Hickman County		Unclassifiable/Attainment.		
Houston County		Unclassifiable/Attainment.		
Humphreys County		Unclassifiable/Attainment.		
Jackson County		Unclassifiable/Attainment.		
Jefferson County		Unclassifiable/Attainment.		
Johnson County		Unclassifiable/Attainment.		
Lake County		Unclassifiable/Attainment.		
Lauderdale County		Unclassifiable/Attainment.		
Lawrence County		Unclassifiable/Attainment.		
Lewis County		Unclassifiable/Attainment.		
Lincoln County		Unclassifiable/Attainment.		
Loudon County		Unclassifiable/Attainment.		
McMinn County		Unclassifiable/Attainment.		
McNairy County		Unclassifiable/Attainment.		
Macon County		Unclassifiable/Attainment.		
Madison County		Unclassifiable/Attainment.		
Marion County		Unclassifiable/Attainment.		
Marshall County		Unclassifiable/Attainment.		
Maury County		Unclassifiable/Attainment.		
Meigs County		Unclassifiable/Attainment.		
Monroe County		Unclassifiable/Attainment.		
Montgomery County		Unclassifiable/Attainment.		

Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Office of Air and Radiation Docket and Information Center is (202) 566-1742.

In addition, the EPA has established a Web site for this rulemaking at: <http://www.epa.gov/ozonedesignations>. The Web site includes the EPA's final state and tribal designations, as well as state initial recommendation letters, the EPA modification letters, technical support documents, responses to comments and other related technical information.

FOR FURTHER INFORMATION CONTACT:

Carla Oldham, Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Mail Code C539-04, Research Triangle Park, NC 27711, phone number (919) 541-3347 or by email at: oldham.carla@epa.gov.

Regional Office contact: Edward Doty, phone number (312) 886-6057 or by email at: doty.edward@epa.gov.

SUPPLEMENTARY INFORMATION: The public may inspect the rule and state-specific technical support information at the following location:

Regional office	Affected states
John Mooney, Chief, Air Programs Branch, EPA Region 5, 77 West Jackson Street, Chicago, IL 60604, (312) 886-6043.	Illinois, Indiana, and Wisconsin.

Table of Contents

The following is an outline of the preamble.

- I. Preamble Glossary of Terms and Acronyms
- II. What is the purpose of this action?
- III. What is ozone and how is it formed?
- IV. What are the 2008 ozone NAAQS and the health and welfare concerns they address?
- V. What are the CAA requirements for air quality designations?
- VI. What is the chronology for the initial air quality designation rules and what guidance did the EPA provide?
- VII. What air quality data has the EPA used to designate these areas for the 2008 ozone NAAQS?
- VIII. What are the ozone air quality classifications?
- IX. Can states request that areas within 5 percent of the upper or lower limit of a classification threshold be reclassified?
- X. Where can I find information forming the basis for this rule and exchanges

between EPA, states, and tribes related to this rule?

- XI. What are the corrections to inadvertent errors in the designations for three areas in the April 30, 2012, designations rule?
- XII. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulations and Regulatory Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Act
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132: Federalism
 - F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments
 - G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks
 - H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act (NTTAA)
 - J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations
 - K. Congressional Review Act
 - L. Judicial Review

I. Preamble Glossary of Terms and Acronyms

The following are abbreviations of terms used in the preamble.

APA Administrative Procedure Act
 CAA Clean Air Act
 CFR Code of Federal Regulations
 D.C. District of Columbia
 EPA Environmental Protection Agency
 FR Federal Register
 NAAQS National Ambient Air Quality Standards
 NO_x Nitrogen Oxides
 NTTAA National Technology Transfer and Advancement Act
 PPM Parts per million
 RFA Regulatory Flexibility Act
 UMRA Unfunded Mandate Reform Act of 1995
 TAR Tribal Authority Rule
 U.S. United States
 U.S.C. United States Code
 VCS Voluntary Consensus Standards
 VOC Volatile Organic Compounds

II. What is the purpose of this action?

The purpose of this action is to promulgate initial air quality designations for 12 counties in Illinois, Indiana and Wisconsin for the 2008 primary and secondary NAAQS for ozone, in accordance with the requirements of Clean Air Act (CAA) section 107(d). Whenever the EPA establishes a new or revised NAAQS, section 107(d) requires the EPA to designate all areas of the country as to whether the areas are meeting or not meeting the new or revised NAAQS. In an action signed on April 30, 2012, the EPA designated all other areas of the country for the 2008 ozone NAAQS (77

FR 30088; May 21, 2012). At that time, the EPA did not designate 12 counties in Illinois, Indiana and Wisconsin because the EPA was still evaluating them for inclusion in the Chicago-Naperville, IL-IN-WI nonattainment area. The EPA has now completed that evaluation. The EPA is designating eight of the counties and parts of three of the counties as the Chicago-Naperville, IL-IN-WI nonattainment area. The EPA is designating the remaining county and parts of counties as unclassifiable/attainment. The Chicago-Naperville, IL-IN-WI nonattainment area is also being classified by operation of law as a Marginal area according to the severity of its air quality problem. The designation for each of these 12 counties is provided in the tables at the end of this notice (amendments to 40 CFR 81.314, 315, and 350). For areas designated as nonattainment, the tables include the area's classification.

State areas designated as nonattainment are subject to planning and emission reduction requirements as specified in the CAA. Requirements vary according to an area's classification. The EPA will be proposing shortly an implementation rule to assist states in the development of state implementation plans for attaining the ozone standards.

This rule also corrects inadvertent errors in the regulatory text regarding the designation of three areas in the ozone designation rule signed on April 30, 2012. The affected areas are the Kentucky portion of the Cincinnati, OH-KY-IN nonattainment area, the partial Kenton County, KY unclassifiable/attainment area, and Crittenden County, AR.

III. What is ozone and how is it formed?

Ground-level ozone, O₃, is a gas that is formed by the reaction of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) in the atmosphere in the presence of sunlight. These precursor emissions are emitted by many types of pollution sources, including power plants and industrial emissions sources, on-road and off-road motor vehicles and engines, and smaller sources, collectively referred to as area sources. Ozone is predominately a summertime air pollutant. However, high ozone concentrations have also been observed in cold months, where a few high elevation areas in the Western U.S. have experienced high levels of local VOC and NO_x emissions that have formed ozone when snow is on the ground and temperatures are near or below freezing. Ozone and ozone precursors can be transported to an area from sources in nearby areas or from

sources located hundreds of miles away. For purposes of determining ozone nonattainment area boundaries, the CAA requires the EPA to include areas that contribute to nearby violations of the NAAQS.

IV. What are the 2008 ozone NAAQS and the health and welfare concerns they address?

On March 12, 2008, the EPA revised both the primary and secondary NAAQS for ozone to a level of 0.075 parts per million (ppm) (annual fourth-highest daily maximum 8-hour average concentration, averaged over 3 years) to provide increased protection of public health and the environment.¹ The 2008 ozone NAAQS retain the same general form and averaging time as the 0.08 ppm NAAQS set in 1997, but are set at a more protective level.

Ozone exposure has been associated with increased susceptibility to respiratory infections, medication use by asthmatics, doctor visits, and emergency department visits and hospital admissions for individuals with respiratory disease. Ozone exposure may also contribute to premature death, especially in people with heart and lung disease. The secondary ozone standard was revised to protect against adverse welfare effects including impacts to sensitive vegetation and forested ecosystems.

V. What are the CAA requirements for air quality designations?

When the EPA promulgates a new or revised NAAQS, the EPA is required to designate areas as nonattainment, attainment, or unclassifiable, pursuant to section 107(d)(1) of the CAA. The CAA requires the EPA to complete the initial area designation process within 2 years of promulgating the NAAQS. However, if the Administrator has insufficient information to make these designations within that time frame, the EPA has the authority to extend the deadline for designation decisions by up to 1 additional year.

By not later than 1 year after the promulgation of a new or revised NAAQS, each state governor is required to recommend air quality designations, including the appropriate boundaries for areas, to the EPA. The EPA reviews those state recommendations and is authorized to make any modifications the Administrator deems necessary. The statute does not define the term "necessary," but the EPA interprets this to authorize the Administrator to

modify designations that did not meet the statutory requirements or were otherwise inconsistent with the facts or analysis deemed appropriate by the EPA. If the EPA intends to make any modifications to a state's initial recommendation, the EPA is required to notify the state of any such intended modifications to its recommendation not less than 120 days prior to the EPA's promulgation of the final designation. These notifications are commonly known as the "120-day letters." If the state does not agree with the EPA's intended modification, it then has an opportunity to respond to the EPA to demonstrate why it believes the modification proposed by the EPA is inappropriate. Even if a state fails to provide any recommendation for an area, in whole or in part, the EPA still must promulgate a designation that the Administrator deems appropriate.

Section 107(d)(1)(A)(i) of the CAA defines a nonattainment area as, "any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant." If an area meets either prong of this definition, then the EPA is obligated to designate the area as "nonattainment." Section 107(d)(1)(A)(iii) provides that any area that the EPA cannot designate on the basis of available information as meeting or not meeting the standards should be designated as "unclassifiable." Historically for ozone, the EPA designates the remaining areas that do not meet the definition of a nonattainment area or an unclassifiable area as "unclassifiable/attainment" indicating that the areas either have attaining air quality monitoring data or that air quality information is not available because the areas are not monitored, and the EPA has not determined that the areas contribute to a violation in a nearby area.

The EPA believes that section 107(d) provides the agency with discretion to determine how best to interpret the terms "contributes to" and "nearby" in the definition of a nonattainment area for a new or revised NAAQS, given considerations such as the nature of a specific pollutant, the types of sources that may contribute to violations, the form of the standards for the pollutant, and other relevant information. In particular, the EPA believes that the statute does not require the agency to establish bright line tests or thresholds for what constitutes "contribution" or "nearby" for purposes of designations.²

Similarly, the EPA believes that the statute permits the EPA to determine the most appropriate application of the term "area" for a particular NAAQS.

Section 301(d) of the CAA authorizes the EPA to approve eligible Indian tribes to implement provisions of the CAA on Indian reservations and other areas within the tribes' jurisdiction. The Tribal Authority Rule (TAR) (40 CFR Part 49), which implements section 301(d) of the CAA, sets forth the criteria and process for tribes to apply to the EPA for eligibility to administer CAA programs. The designations process contained in section 107(d) of the CAA is included among those provisions determined to be appropriate by the EPA for treatment of tribes in the same manner as states. Under the TAR, tribes generally are not subject to the same submission schedules imposed by the CAA on states. As authorized by the TAR, tribes may seek eligibility to submit designation recommendations to the EPA.

VI. What is the chronology for the initial air quality designation rules and what guidance did the EPA provide?

As discussed above, in 2008 the EPA revised both the primary and secondary NAAQS for ozone. On December 4, 2008, the EPA issued guidance for states and tribal agencies to use in developing area designation recommendations for the 2008 ozone NAAQS. (See memorandum from Robert J. Meyers, Principal Deputy Assistant Administrator, to Regional Administrators, Regions I–X, titled, "Area Designations for the 2008 Revised Ozone National Ambient Air Quality Standards.") The guidance provided the anticipated timeline for designations and identified important factors that the EPA recommended states and tribes consider in making their recommendations. These factors include air quality data, emissions data, traffic and commuting patterns, growth rates and patterns, meteorology, geography/topography, and jurisdictional boundaries. In the guidance, the EPA asked that states and tribes submit their designation recommendations, including appropriate area boundaries, to the EPA by March 12, 2009. Later in the process, the EPA issued two new guidance memoranda related to designating areas of Indian country.³

¹ See 73 FR 16436; March 27, 2008. For a detailed explanation of the calculation of the 3-year 8-hour average, see 40 CFR part 50, Appendix I.

² This view was confirmed in *Catawba County v. EPA*, 571 F.3d 20 (D.C. Cir. 2009).

³ See December 20, 2011, memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, to Regional Air Directors, Regions I–X, titled, "Policy for Establishing Separate Air Quality Designations for Areas of Indian Country," and December 20, 2011, memorandum from Stephen D. Page, Director,

Continued

(There are no areas of Indian country affected by this action.)

Under the initial schedule, the EPA intended to complete the initial designations for the 2008 ozone NAAQS on a 2-year schedule, by March 12, 2010. On September 16, 2009, the EPA announced that it would initiate a rulemaking to reconsider the 2008 ozone NAAQS for various reasons, including the fact that the 0.075 ppm level fell outside of the range recommended by the Clean Air Scientific Advisory Committee, the independent group of scientists that provides advice to the EPA Administrator on the technical bases for the EPA's NAAQS. The EPA signed the proposed reconsideration on January 6, 2010 (75 FR 2938; January 19, 2010). Because of the significant uncertainty the ozone NAAQS reconsideration created regarding the continued applicability of the 2008 NAAQS, the EPA determined there was insufficient information to designate areas within 2 years of promulgation of the NAAQS. Therefore, the EPA used its authority under CAA section 107(d)(1)(B) to extend the deadline for designating areas by 1 year, until March 12, 2011 (75 FR 2936; January 19, 2010). The EPA has not taken final action on the proposed reconsideration; thus, the current NAAQS for ozone remains at 0.075 ppm, as established in 2008.

After the March 12, 2011, designation deadline passed, WildEarth Guardians and Elizabeth Crowe (WildEarth Guardians) filed a lawsuit seeking to compel the EPA to take action to designate areas for the 2008 ozone NAAQS. *WildEarth Guardians and Elizabeth Crowe v. Jackson* (D. Ariz. 11-CV-01661). The EPA and WildEarth Guardians settled the case by entering into a consent decree that requires the EPA Administrator to sign a final rule designating areas for the 2008 ozone NAAQS by May 31, 2012.

On September 22, 2011, the EPA issued a memorandum to clarify for state and local agencies the status of the 2008 ozone NAAQS and to outline plans for moving forward to implement them. The EPA indicated that it would proceed with initial area designations for the 2008 NAAQS, 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 EPA provided the

opportunity for states to do so. Several states chose to update their recommendations, and some requested that the EPA base designations for their areas on certified air quality data from 2009–2011, and committed to certify the 2011 data earlier than the May 1 deadline for annual air monitoring certification under 40 CFR 58.15(a)(2) so that the EPA would have sufficient time to consider the data in making decisions on designations and nonattainment area boundaries. The states of Illinois, Indiana, and Wisconsin did not submit updated designation recommendations.

On or about December 9, 2011, the EPA sent letters to Governors and Tribal leaders notifying them of the EPA's preliminary response to their designation recommendations and to inform them of the EPA's approach for completing the designations for the 2008 ozone NAAQS. The EPA requested that states submit any additional information that they wanted the EPA to consider by February 29, 2011, including any certified 2011 air quality monitoring data. Two days prior to those letters, on December 7, 2011, Illinois sent a letter to the EPA submitting the state's 2011 certified air quality monitoring data for consideration in the designation process. The data, when considered with data from the two previous years (2009 and 2010), indicated a violation of the 2008 ozone NAAQS at a monitor in Lake County, Illinois (which is in the Chicago-Naperville-Michigan City, IL-IN-WI consolidated statistical area). Given the timing of Illinois' submission of the certified data, the EPA was not able to consider the information in the December 9, 2011, letters. After reviewing the 2011 air quality data and assessing contributions to nonattainment from nearby areas, the EPA sent letters on January 31, 2012, notifying Illinois, Indiana, and Wisconsin that it intended to designate certain counties (or parts thereof), identified in those letters, as nonattainment for the 2008 ozone NAAQS. On April 30, 2012, the EPA Administrator signed a final rule designating almost all areas in the United States, including Indian country. At that time, the EPA did not designate the Illinois, Indiana, and Wisconsin counties identified in the January 31, 2011, notification letters because the necessary 120-day period had not yet elapsed following the January letters notifying the states that the EPA intended to modify the states' recommendations.

Although not required by section 107(d) of the CAA, the EPA also provided an opportunity for members of

the public to comment on the EPA's 120-day response letters to states and tribes. For the notification letters sent on or about December 9, 2011, the EPA announced a 30-day public comment period in the *Federal Register* on December 20, 2011 (76 FR 78872). The comment period was subsequently extended until February 3, 2012 (77 FR 2677; January 19, 2012). On February 14, 2012 (77 FR 8211), the EPA reopened the public comment period for the limited purpose of inviting comment on the EPA's revised responses to Illinois, Indiana, and Wisconsin. State and tribal recommendations and the EPA's 120-day response letters were posted on EPA's Web site at <http://www.epa.gov/ozonedesignations> and are available in the docket for the designations action. Comments from the states, tribes and the public, and EPA's responses to significant comments, are also in the docket.

VII. What air quality data has the EPA used to designate these areas for the 2008 ozone NAAQS?

The EPA based the designations in this action on the most recent 3 years of certified air quality monitoring data available at the end of January 2012 when the EPA notified Illinois, Indiana, and Wisconsin of its revised responses to their designation recommendations. Thus, the EPA considered ozone monitoring data for the 2009–2011 period for Illinois and for the 2008–2010 period for Indiana and Wisconsin.

Under 40 CFR 58.16, states are required to report all monitored ozone air quality data and associated quality assurance data within 90 days after the end of each quarterly reporting period, and under 40 CFR 58.15(a)(2) states are required to submit annual summary reports and a data certification letter to the EPA by May 1 for ozone air quality data collected in the previous calendar year. States generally had not completed these requirements for calendar year 2011 ozone air quality data when the EPA notified states of our intended designations on December 9, 2011. For purposes of the designations promulgated on April 30, 2012, several states recommended that the EPA consider monitoring data from 2009–2011 in making final decisions and certified their 2011 data early for this purpose. In the letters to these states, the EPA indicated it would need the certified data by February 29, 2012, in order to have sufficient time to consider it in making final decisions. On December 7, 2011, Illinois sent a letter to the EPA submitting the state's 2011 certified air quality data for consideration in the designations.

Office of Air Quality Planning and Standards, to Regional Air Directors, Regions I–X, titled, "Guidance to Regions for Working with Tribes during the National Ambient Air Quality Standards (NAAQS) Designations Process."

Although there was not sufficient time for the EPA to consider the 2011 data from Illinois in the December 9, 2011, letters, the EPA subsequently considered the data and sent letters to Illinois, Indiana, and Wisconsin on January 31, 2012, revising the intended designation for 12 counties in the Chicago-Naperville, IL-IN-WI area. Indiana and Wisconsin did not request that the EPA consider their 2011 monitoring data or early certify such data.

VIII. What are the ozone air quality classifications?

In accordance with CAA section 181(a)(1), each area designated as nonattainment for the 2008 ozone NAAQS is classified by operation of law at the same time as the area is designated by the EPA. Under Subpart 2 of part D of Title I of the CAA, state planning and emissions control requirements for ozone are determined, in part, by a nonattainment area's classification. The ozone nonattainment areas are classified based on the severity of their ozone levels (as determined based on the area's "design value," which represents air quality in the area for the most recent 3 years).⁴ The possible classifications are Marginal, Moderate, Serious, Severe, and Extreme. Nonattainment areas with a "lower" classification have ozone levels that are closer to the standard than areas with a "higher" classification. Areas in the lower classification levels have fewer and/or less stringent mandatory air quality planning and control requirements than those in higher classifications. The EPA established the air quality thresholds that define the classification categories in a rule titled, "Implementation of the 2008 National Ambient Air Quality Standards for Ozone: Nonattainment Area Classifications Approach, Attainment Deadlines and Revocation of the 1997 Ozone Standards for Transportation Conformity Purposes" (77 FR 30160; May 21, 2012). Based on those thresholds, the Chicago-Naperville, IL-IN-WI area is classified as a Marginal area.

IX. Can states request that areas within 5 percent of the upper or lower limit of a classification threshold be reclassified?

As discussed in the April 30, 2012, final rule, states may request that an area be reclassified to a higher or lower

classification pursuant to section 181(a)(4), within 90 days of promulgation of the designation, if the area would have been classified in another category if the design value in the area were 5 percent greater or 5 percent less than the level on which such classification was based. The Chicago-Naperville, IL-IN-WI nonattainment area is being designated as a Marginal area, which is the lowest classification category. Therefore, the only possible reclassification would be to a higher classification. Marginal areas with an air quality design value of 0.082 ppm or more are eligible to request reclassification to a higher classification under section 181(a)(4). Because the 2009–2011 design value for the Chicago-Naperville, IL-IN-WI nonattainment area is 0.076 ppm, the nonattainment area is not eligible to be reclassified under that provision. However, the EPA notes that under section 181(b)(3), the EPA must grant any state request to reclassify an area into a higher classification.

X. Where can I find information forming the basis for this rule and exchanges between the EPA, states and tribes related to this rule?

Information providing the basis for this action is provided in the docket for this rulemaking, Docket ID NO. EPA–HQ–OAR–2008–0476. The applicable EPA guidance memoranda and copies of correspondence regarding this process between the EPA and the states, tribes and other parties are available for review at the EPA Docket Center listed above in the addresses section of this document, and on the EPA's ozone designation Web site at <http://www.epa.gov/ozone/designations>. State-specific information is available from the EPA Regional Office.

XI. What are the corrections to inadvertent errors in the designations for three areas in the April 30, 2012 designations rule?

This rule also corrects inadvertent errors in the regulatory text for two areas in Kentucky and one area in Arkansas in the ozone designation rule signed on April 30, 2012 (77 FR 30088; May 21, 2012). The affected areas are the Cincinnati, OH-KY-IN nonattainment area (specifically related to Boone and Campbell counties), the partial Kenton County, KY unclassifiable/attainment area, and Crittenden County, AR. These corrections are set forth in the regulatory text at the end of this notice.

The Technical Support Document for the Cincinnati, OH-KY-IN nonattainment area, which is part of the record for the April 30, 2012,

designations rule, states, "All of the census tracts in Boone, Campbell, and Kenton Counties are included in the nonattainment area for the 2008 8-hour ozone NAAQS, excluding census tracts 706.01 and 706.04 in Boone County, 637.01 and 637.02 in Kenton County, and 520.01 and 520.02 in Campbell County." In the regulatory text for the Cincinnati, OH-KY-IN nonattainment area, 2000 Census tracts 706.01 and 706.04 in Boone County, KY and 2000 Census tracts 520.01 and 520.02 in Campbell County, KY were inadvertently listed as being part of the nonattainment area. These 2000 Census tracts were also correctly listed in the regulatory text as designated unclassifiable/attainment. The EPA is removing the erroneous duplicative listings under the Cincinnati, OH-KY-IN nonattainment area. For the partial Kenton County unclassifiable/attainment area, this action corrects a typographical error that incorrectly numbered one of the component 2000 Census tracts as 637.04 rather than 637.02.

The Technical Support Document for the Memphis, TN-MS-AR nonattainment area, which is part of the record for the April 30, 2012, designations rule, states, "Based on the assessment of the factors described above, the EPA is designating the following counties as nonattainment for the Memphis, TN-MS-AR area because they are either violating the 2008 ozone NAAQS or contributing to a violation in a nearby area: Crittenden County, Arkansas, and Shelby County, Tennessee in their entireties and the portion of DeSoto County that is included in the Memphis MPO boundary." In the regulatory text for the April 30, 2012, designations rule, Crittenden County, AR was correctly listed as part of the Memphis, TN-MS-AR nonattainment area. However, the county was also inadvertently listed as an unclassifiable/attainment area. The EPA is correcting that error by removing the duplicative entry for Crittenden County, AR as an unclassifiable/attainment area.

XII. Statutory and Executive Order Reviews

Upon promulgation of a new or revised NAAQS, the CAA requires the EPA to designate areas as attaining or not attaining the NAAQS. The CAA then specifies requirements for areas based on whether such areas are attaining or not attaining the NAAQS. In this final rule, the EPA assigns designations to areas as required.

⁴ The air quality design value for the 8-hour ozone NAAQS is the 3-year average of the annual 4th highest daily maximum 8-hour average ozone concentration. See 40 CFR part 50, Appendix I.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action responds to the CAA requirement to promulgate air quality designations after promulgation of a new or revised NAAQS. This type of action is exempt from review under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the *Paperwork Reduction Act*, 44 U.S.C. 3501 *et seq.* Burden is defined at 5 CFR 1320.3(b). This rule responds to the CAA requirement to promulgate air quality designations after promulgation of a new or revised NAAQS. This requirement is prescribed in the CAA section 107. The present final rule does not establish any new information collection requirements.

C. Regulatory Flexibility Act

This final rule is not subject to the Regulatory Flexibility Act (RFA), which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act (APA) or any other statute. This rule is not subject to notice-and-comment requirements as provided under CAA section 107(d)(2)(B).

D. Unfunded Mandates Reform Act

This action contains no federal mandate under the provisions of Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), 2 U.S.C. 1531–1538 for state, local, or tribal governments or the private sector. The action imposes no enforceable duty on any state, local or tribal governments or the private sector. Therefore, this action is not subject to the requirements of sections 202 and 205 of the UMRA.

This action is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments. It does not create any additional requirements beyond those of the CAA and ozone NAAQS (40 CFR 50.15). The CAA establishes the process whereby states take primary responsibility in developing plans to meet the ozone NAAQS.

E. Executive Order 13132: Federalism

This final rule does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. The CAA establishes the process whereby states take primary responsibility in developing plans to meet the ozone NAAQS. This rule will not modify the relationship of the states and the EPA for purposes of developing programs to implement the ozone NAAQS. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Subject to the Executive Order 13175 (65 FR 67249, November 9, 2000) the EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or the EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

The EPA has concluded that this action does not have tribal implications. The EPA is not designating any areas of Indian country in this final rule.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

The EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997) as applying only to those regulatory actions that concern health or safety risks, such that the analysis required under section 5–501 of the Executive Order has the potential to influence the regulation. This action is not subject to Executive Order 13045 because it does not establish an environmental standard intended to mitigate health or safety risks.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211 (66 FR 28355 (May 22, 2001)), because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act (NTTAA)

Section 12(d) of the NTTAA of 1995, Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs the EPA to provide Congress, through the Office of Management and Budget, explanations when the Agency decides not to use available and applicable VCS.

This action does not involve technical standards. Therefore, the EPA did not consider the use of any VCS.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations.

Executive Order 12898 (59 FR 7629 (Feb. 16, 1994)) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the U.S.

The CAA requires that the EPA designate as nonattainment “any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.” By designating as nonattainment all areas where available information indicates a violation of the ozone NAAQS or a contribution to a nearby violation, this action protects all those residing, working, attending school, or otherwise present in those areas regardless of minority or economic status.

The EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it increases the level of environmental protection for all affected populations without having any disproportionately high and adverse human health or environmental effects on any population, including any minority or low-income population.

K. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the U.S. The EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the U.S. prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective July 20, 2012.

L. Judicial Review

Section 307(b)(1) of the CAA indicates which Federal Courts of Appeal have venue for petitions of review of final actions by the EPA. This section provides, in part, that petitions for review must be filed in the Court of Appeals for the District of Columbia Circuit: (i) when the agency action consists of "nationally applicable regulations promulgated, or final actions taken, by the Administrator," or (ii) when such action is locally or regionally

applicable, if "such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination."

This rule designating the final few areas for the 2008 ozone NAAQS is "nationally applicable" within the meaning of section 307(b)(1). This rule, along with a rule signed on April 30, 2012, establishes designations for areas across the U.S. for the 2008 ozone NAAQS. At the core of this rulemaking is the EPA's interpretation of the definition of nonattainment under section 107(d)(1) of the CAA, and its application of that interpretation to areas across the country.

Thus, any petitions for review of final designations must be filed in the Court of Appeals for the District of Columbia Circuit within 60 days from the date final action is published in the **Federal Register**.

List of Subjects in 40 CFR Part 81

Environmental protection, Air pollution control, National parks, Wilderness areas.

Dated: May 31, 2012.

Lisa P. Jackson,
Administrator.

For the reasons set forth in the preamble, 40 CFR part 81, is amended as follows:

ILLINOIS—2008 8-HOUR OZONE NAAQS
[Primary and secondary]

PART 81—DESIGNATIONS OF AREAS FOR AIR QUALITY PLANNING PURPOSES

■ 1. The authority citation for part 81 continues to read as follows:

Authority: 42 U.S.C. 7401, *et seq.*

Subpart C—Section 107 Attainment Status Designations

§ 81.304 [Amended]

■ 2. In section 81.304, the table entitled "Arkansas—2008 8-Hour Ozone NAAQS (Primary and Secondary)" is amended by removing the entry for Crittenden County before the entry for Cross County.

■ 3. In section 81.314, the table entitled "Illinois—2008 8-Hour Ozone NAAQS (Primary and Secondary)" is amended as follows:

■ a. By adding a new entry for "Chicago-Naperville, IL-IN-WI" before the entry for "St. Louis-St. Charles-Farmington, MO-IL";

■ b. By adding a new entry for "Grundy County (remainder)" before the entry for "Hamilton County"; and

■ c. By adding a new entry for "Kendall County (remainder)" before the entry for "Knox County".

The additions read as follows:

§ 81.314 Illinois.

* * * * *

Designated area	Designation		Classification	
	Date ¹	Type	Date ¹	Type
Chicago-Naperville, IL-IN-WI: ²		Nonattainment		Marginal.
Cook County				
DuPage County				
Grundy County (part)				
Aux Sable Township				
Goose Lake Township				
Kane County				
Kendall County (part)				
Oswego Township				
Lake County				
McHenry County				
Will County				
* * * * *				
Grundy County (remainder) ³		Unclassifiable/Attainment.		
* * * * *				
Kendall County (remainder)		Unclassifiable/Attainment.		
* * * * *				

¹ This date is July 20, 2012, unless otherwise noted.

² Excludes Indian country located in each area, unless otherwise noted.

³ Includes any Indian country in each county or area, unless otherwise specified.

* * * * *

■ 4. In section 81.315, the table entitled "Indiana—2008 8-Hour Ozone NAAQS (Primary and Secondary)" is amended as follows:

- a. By adding a new entry for "Chicago-Naperville, IL-IN-WI" before the entry for "Cincinnati, OH-K-IN"; and
- b. By adding a new entry for "Jasper County" before the entry for "Jay County".

The additions read as follows:

§ 81.315 Indiana.

* * * * *

INDIANA—2008 8-HOUR OZONE NAAQS
[Primary and secondary]

Designated area	Designation		Classification	
	Date ¹	Type	Date ¹	Type
Chicago-Naperville, IL-IN-WI: ² Lake County Porter County		Nonattainment		Marginal.
* * *				
Jasper County ³		Unclassifiable/Attainment.		
* * *				

¹ This date is July 20, 2012, unless otherwise noted.² Excludes Indian country located in each area, unless otherwise noted.³ Includes any Indian country in each county or area, unless otherwise specified.

* * * * *

§ 81.318 [Amended]

■ 5. In section 81.318, the table entitled "Kentucky—2008 8-Hour Ozone NAAQS (Primary and Secondary)" is amended as follows:

- a. By removing the 2000 Census tracts "706.01" and "706.04" under the entry for "Boone County (part)" under the entry for "Cincinnati, OH-KY-IN";

- b. By removing the 2000 Census tracts "520.01" and "520.02" under the entry for "Campbell County (part)" under the entry for "Cincinnati, OH-KY-IN"; and
- c. By revising 2000 Census tract "637.04" to read as "637.02" under the entry for "Kenton County (part)" under "Rest of State".

■ 6. In section 81.350, the table entitled "Wisconsin—2008 8-Hour Ozone NAAQS (Primary and Secondary)" is amended as follows:

- a. By adding a new entry for "Chicago-Naperville, IL-IN-WI" before the entry for "Sheboygan County, WI"; and
- b. By adding a new entry for "Kenosha County (remainder)" before the entry for "Kewaunee County".

The additions read as follows:

§ 81.350 Wisconsin.

* * * * *

WISCONSIN—2008 8-HOUR OZONE NAAQS
[Primary and secondary]

Designated area	Designation		Classification	
	Date ¹	Type	Date ¹	Type
Chicago-Naperville, IL-IN-WI: ² Kenosha County (part) Pleasant Prairie Township Somers Township		Nonattainment		Marginal.
* * *				
Kenosha County (remainder) ³		Unclassifiable/Attainment.		
* * *				

¹ This date is July 20, 2012, unless otherwise noted.² Excludes Indian country located in each area, unless otherwise noted.³ Includes any Indian country in each county or area, unless otherwise specified.

* * * * *

[FR Doc. 2012-14097 Filed 6-8-12; 8:45 am]

BILLING CODE 6560-50-P

Questions and Answers on Ambient Air Monitoring Data Certification for CY2008 Data

1. Are there any additional changes to the data certification process besides the changes that were made in the 2006 ambient monitoring rule revisions?

No. The data certification process is the same as previous years. For review purposes, we note that the 2006 amendments to 40 CFR Part 58 meant that three changes were applied to the data certification process. Also described is a fourth change, not required by the amendments. Each is discussed in more detail in responses to other questions.

Monitoring Data Subject to Certification - All PAMS monitoring data (ozone, VOC, NO/NOx/NO2, carbonyl, NH3, and HNO3 if collected) are subject to certification, except data from some monitors designated as special purpose monitors (SPMs). (Authority - 40 CFR 58.15(a) in combination with 40 CFR 58.16(a))

PAMS sites counted towards the minimum PAMS requirements cannot be designated as SPMs. Note that for PAMS data collected in 2008, the submission deadline and the certification deadline are both July 1, 2009.¹ Previously, OAQPS guidance was that only the ozone data from PAMS stations and unofficial PAMS stations required certification.

SPM data must be certified if the SPM uses a federal reference method (FRM), federal equivalent method (FEM), or approved regional method (ARM) and meets the QA requirements of 40 CFR 58 appendix A. (Since 2006, there have been no ARMs approved, so no attention is needed to the ARM aspect this cycle.) Previously, no SPM data required certification.

Required Language for the Certification Statement - The certification statement from the responsible State or local official must indicate that (1) the ambient concentration data *and the quality assurance data are completely submitted to AQS*, and (2) the ambient data are accurate to the best of his or her knowledge *taking into consideration the quality assurance findings*. The emphasized phrases are new. Previously, the old 40 CFR 58.26 only stated that the official must certify that "the annual summary report is accurate to the best of his knowledge." (Authority - 40 CFR 58.15(a))

Required Documentation - The certification letter must be accompanied by two summary reports:

- (1) The first is a summary report of the ambient concentration data from the

¹ Important note: In 2010, the certification deadline moves to May 1, which will be before the July 1 deadline for submitting VOC, carbonyl, NH3, and HNO3 from PAMS stations. Therefore, in 2010, the certification statement will not need to apply to these data unless the monitoring organization has already submitted them, and the 2011 statement will certify the 2009 data.

monitors required to have their data certified. We request this requirement be satisfied with a copy of the AQS AMP450 report for CO, NO₂, SO₂, ozone, lead, TSP, PM₁₀, and PM_{2.5} and the AMP450NC report for other pollutants. Multiple reports may be needed for complex situations, to capture all the monitors being certified. (Authority – 40 CFR 58.15(b))

(2) The second is a summary report of the precision and accuracy data for each monitor whose data are being certified. The AMP255 report is in the final steps of being updated to reflect the revised calculations according to Appendix A. This revision is expected to be available during the week of May 18-22, 2009². The output will be a “pdf” file, which will make it easier to run and transmit electronically compared with the previous version of the report. It will simplify the certification process as the report will readily identify any monitor which did not conform to the Appendix A calculations.

Changes in Certification Flags in AQS - For 2008, OAQPS will make some changes to how we set “certification flags” in AQS, once we receive and review a certification letter. This flagging process is not addressed by the monitoring regulations. It is an internal EPA process developed for informational purposes.

2. What types of monitoring organizations must certify their data?

State and local government monitoring organizations must certify their data. A state official should certify all data submitted for affected monitors in that state, except where responsibility for compliance with 40 CFR Part 58 requirements has been delegated to a local monitoring agency. Note that even if multiple monitoring organizations are considered to be with a single Primary Quality Assurance Organization, the certification must come from the state level, or from each local agency which has delegated responsibilities for compliance with 40 CFR Part 58.

The District of Columbia, Puerto Rico, and the Virgin Islands must also certify their data.

A Tribe must certify its data if the Tribe has received an approval for Treatment as a State that encompasses the responsibility for meeting 40 CFR Part 58 requirements, or the right to make recommendations to EPA regarding designations based on monitoring data the Tribe has collected. A Tribe may also be specifically required to certify its data under the terms of a grant from EPA.

3. What about other monitoring organizations that submit data to AQS?

Certification by agencies other than those identified in the answer to the previous question is optional. However, EPA encourages these agencies to certify their data to aid data users in interpreting the quality of the data.

4. What monitoring data must State/local and other subject monitoring agencies certify by

² Latest available information from the National Air Data Group.

July 1, 2009?

All data from SLAMS monitoring stations must be certified. The definition of SLAMS includes all ambient monitors operated by a state/local agency except those designated as special purpose monitors (SPMs). Hence, ambient concentration data (including criteria pollutant and other pollutants/compounds) from the following types of SLAMS monitors must be certified:

- Federal reference method (FRM) monitors for CO, NO₂, SO₂, ozone, lead, TSP, PM₁₀, PM_{10-2.5}, and PM_{2.5}
- Federal equivalent method (FEM) monitors for CO, NO₂, SO₂, ozone, lead, TSP, PM₁₀, and PM_{2.5}.
- Approved regional method (ARM) monitors for PM_{2.5} (in 2008, there were no ARMs approved)
- Continuous PM_{2.5} monitors
- Filter-based PM_{2.5} speciation monitors - (total mass and speciated components)
- Filter-based PM₁₀ speciation monitors (if any)- (total mass and speciated components)
- NCore station precursor gas monitors for CO, SO₂, and NO/NO_x/NO_y
- PAMS data (ozone, NO/NO_x/NO₂, VOC, carbonyl, NH₃, and HNO₃ if collected)
- Ammonia monitoring data (if submitted to AQS)

Data from special purpose monitors (SPMs) must also be certified, if the SPM is a FRM, FEM, or ARM monitor, and meets the QA requirements of 40 CFR 58 appendix A. Unless the Regional Administrator has approved an alternative to the QA requirements of appendix A, an SPM using an FRM or FEM method is required to meet the requirements of appendix A, so it should be presumed to do so and data from it should be certified. Special purpose monitors which do not use FRM/FEM methods are not subject to the requirement for data certification, although OAQPS encourages data from these monitors to be certified.

Many non-FRM/FEM monitors are discretionary and can be designated as special purpose monitors at the option of the monitoring organization, with Regional Office concurrence. This would remove the requirement for data certification. However, note that any monitor counted towards meeting a minimum monitoring requirement cannot be designated as an SPM. There are minimum requirements for PM_{2.5} speciation "Trends" monitors, continuous PM_{2.5} monitors, background and transport PM_{2.5} monitors, and PAMS monitors.

Before the revisions to the data certification requirements, the data certification process was limited to CO, NO₂, SO₂, ozone, lead, TSP, PM₁₀, PM_{2.5}, TSP, continuous PM_{2.5} mass, and PM_{2.5} speciation.

Air toxics data (other than VOC air toxics from PAMS stations and toxic metals from PM speciation monitors) and meteorological data are not subject to the certification requirement. OAQPS encourages the certification of such data on a voluntary basis, if the

data were collected under a Quality Assurance Project Plan or Quality Management Plan approved by EPA. OAQPS has no recommendation regarding certification of air toxics and meteorological data not collected under an EPA-approved plan.

OAQPS is aware that some monitoring organizations have in the past chosen not to certify data from PM_{2.5} speciation monitors for which chemical analysis is performed by Research Triangle Institute under an EPA-managed contract. This special situation is addressed in Questions 14 and 15, below.

State, local, and tribal monitoring agencies are not required or expected to certify data from IMPROVE program samplers located within their boundaries, regardless of whether or not the agencies are involved in operating the monitors. IMPROVE data does not flow into AQS on the same schedule as monitoring data submitted directly by these agencies, and the agencies have a much different role in the quality assurance and data validation processes for these data.

5. What other data can State/local, tribal, or other monitoring agencies certify if they choose?

Any monitoring organization may certify any of the other ambient data that have been submitted directly to AQS. Note that IMPROVE, some CASTNET, and NADP data are not submitted directly to AQS. Statements about the accuracy of these data may be included in the certification letter, but currently there is no mechanism for these statements to become visible to the users of these data.

6. What does it mean for a monitoring agency to certify its data or to not certify it?

The responsible official certifies that (i) the ambient concentration data and the quality assurance data are completely submitted to AQS, and that (ii) the ambient data are accurate to the best of his or her knowledge taking into consideration the quality assurance findings.

The first part means that all of the ambient data and all of the precision and accuracy that were collected, and that have completed and passed the monitoring agency's data validation process, have been submitted to AQS. The second part means that the official has considered the results of periodic verification, precision, and accuracy checks and any other relevant performance assessments.

7. Why may a monitoring agency that is not required to certify all or some of its data want to certify that data anyway?

Certifying data is optional in some cases as described in Questions 2, 3, 4, and 5. However, if data are not certified, this may lead some data users to not utilize these data in their analyses because they may presume the agency responsible for collecting,

analyzing, and reporting data has not yet completed its normal data validation process and/or that the agency does not believe the data are of good quality. The main purpose of collecting data is to make quality data available to the data user community. Certification signals that the monitoring agency has loaded all of its data for the year and has completed the monitoring agency's normal validation process.

8. How will the fact that a monitoring agency has certified the data from a particular monitor be communicated to potential data users via flags on AQS?

AQS includes a data certification flag, for each combination of site, monitor, pollutant, and POC, for each calendar year. As in the past several years, the insertion of a data certification flag for a particular site/monitor/pollutant/POC for 2008 will be the responsibility of OAQPS. For CO, NO₂, SO₂, ozone, lead, TSP, PM₁₀, and PM_{2.5} by FRM, this flag is displayed on the AMP450 Quick Look summary report. The certification of non-criteria pollutant data is not currently displayed on the AMP450NC report, but changes are being made in the next several months to modify the report to display the flags

For the review of 2007 and 2008 criteria pollutant data, OAQPS has added more possible values of the AQS data certification flag to convey more detailed information to data users. See Question 9 for more information.

9. What will be the possible values of the data certification flag and how will each flag be determined by OAQPS?

The possible flag values and the situations in which OAQPS intends to apply each are as follows.

<u>Flag Value</u>	<u>Applicable Situation</u>
Blank	<p>Certification is not required by 40 CFR 58.15 and no conditions apply to be the basis for assigning another flag value, or</p> <p>The deadline for certification letter has not yet passed, or</p> <p>OAQPS has not yet had time to note the receipt/nonreceipt of the certification letter or to determine what other flag to assign. or</p> <p>OAQPS finds that the data in AQS have been modified since the summary reports submitted with the certification letter were generated, and the discrepancy has not yet been resolved with the monitoring agency.</p>
S	The monitoring organization has submitted the certification letter and

required summary reports, and no conditions yet apply to be the basis for assigning another flag value. A value of “S” conveys no OAQPS assessment regarding data quality per se. This flag will be assigned as soon as OAQPS has determined that the conditions for it are met, and will remain until/unless OAQPS determines that a value of “Q” or “Y” is more descriptive.

- Q The monitoring organization has submitted the certification letter and required summary reports, but EPA has identified issues – not yet resolved – regarding the quality of the ambient concentration data. These issues may involve the amount of precision and accuracy data submitted to AQS, the uncertainty statistics shown in the AMP255 report, and/or the highest reported concentrations. OAQPS will always notify the Regional Office staff contact for AQS whenever a “Q” flag has been assigned, to initiate the resolution process.
- N The state did not submit a required certification letter and summary reports for this monitor even though the due date has passed, or

The state's certification letter specifically did not apply the certification to this monitor.
- Y The state has submitted a certification letter, and EPA has no unresolved reservations about data quality (after reviewing the letter, the attached summary reports, the amount of precision and accuracy data submitted to AQS, the quality statistics, and the highest reported concentrations).
- M The monitoring organization has revised data from this monitor since the most recent certification letter received from the state.

Note that under this scheme, the meaning of a “Y” flag value is the same as it has been in recent years. The possible meaning of an “N” flag value has been changed (previously, an “N” could be assigned in situations now described by a “Blank” or “Q” flag. The “S” flag value and “Q” flag value have been newly defined to provide fair distinctions.

10. How does data certification affect how ambient air monitoring data are used by EPA and others?

Under 58.15, an annual certification letter must be submitted to EPA by July 1³. EPA presumes that before this deadline has passed monitoring agencies may still be reviewing and validating their data, making the data subject to change. After the deadline has passed, EPA may move ahead and use both certified and uncertified data to propose and make designations or findings of attainment.

³ As noted earlier, the certification deadline next year will move up two months to May 1, 2010 (see 58.15(a)(2)).

Also, OAQPS does not restrict the release of uncertified data from AQS, for example in response to requests we receive for data before the required certification date. OAQPS usually advises outside data users to be cautious about using data before the certification deadline has passed. EPA typically does not use AQS data in broadly distributed publications until the deadline for certification has passed.

If a data certification letter is not received, OAQPS makes an inquiry through the Regional Office to determine the reasons for the failure to certify, to understand the implications if any for data use, and to encourage resolution of any obstacles to certification.

We have received some anecdotal reports that even after the deadline has passed, some outside data users do not utilize data in their analyses unless the certification flag in AQS has been set to "Y."

11. What documents need to be provided by July 1, 2009? Where should they be sent?

There are three items needed:

(a) A data certification statement signed by the senior air pollution monitoring person from the monitoring agency, or his or her designee. This statement must be in the form of a letter to the EPA Regional Administrator. The letter must make the specific statements given in the first paragraph of the response to Question 6 above. The letter must be clear regarding what combinations of site, monitor, pollutant, and POC are the subject of the certification statement. This clarity can be achieved by referring to the attached AMP450 and AMP450NC Quick Look summary report(s), and explicitly stating that data from all combinations of site, monitor, pollutant, and POC in the summary report are being certified (or all but certain of those listed in the report(s), if that is the case). Alternatively, a separate table can specify what data are being certified.

(b) An AMP450 or AMP450NC summary report (or reports, if multiple reports are necessary to identify all the data being certified) which shows the summary data statistics for identified combinations of site, monitor, pollutant, and POC. Please include the first page that lists the selection criteria. It is recommended that the "select criteria" utilized for the AMP450NC report be "ALL", and any special purpose monitors that the agency wants to be excluded from the certification be so cited in the cover memo.

(c) An AMP255 report which details the precision and accuracy statistics for the reporting organization's monitors (the zip file of reports that was created in the older version of the AMP255 has been replaced by a "pdf" file). It should be noted that the AMP255 report will not work properly if the "monitor collocated indicator flag" field is not populated for PM10, PM2.5, and Pb.

The reports for items "b" and "c" should be generated from AQS prior to but near the

date on which the senior air pollution monitoring person signs the data certification statement. If any additions or changes are made to the data in AQS after this report has been generated it will complicate the processing of the certification letter once received by EPA.

It will expedite processing if all required documents are provided in electronic form – a pdf scan of the letter and the AQS-generated PDF versions of the two summary reports together with the AMP255 “pdf” file.

These documents should be sent to the EPA Regional Administrator. Some Regional Offices require only that a copy be sent to the Regional Office, while other Regional Offices ask that a copy also be sent to OAQPS. Generally, OAQPS will not start reviewing its copy until the Regional Office confirms that it appears to be complete (see Question 16). However, an advance copy to OAQPS will help OAQPS track the progress of the submissions and expedite any conversations OAQPS and the Regional Office may need to have about the completeness of a package. When a reporting organization or the Regional Office sends a copy to OAQPS, please send it electronically to David Lutz at lutz.david@epa.gov. Or, when sending items by mail, David Lutz’s address is:

David Lutz
Data Certification Contact
US EPA (C304-06)
Ambient Air Monitoring Group
Research Triangle Park, NC 27711
(919) 541-5476
Fax (919) 541-1903

UPS/FedEx Address:
US EPA (C304-06)
4930 Page Road
Durham, NC 27703

12. What if a required document is missing or defective?

If one of the required documents is missing, the EPA Regional Office will contact the monitoring organization to ask for the missing item and to emphasize the importance of coordinating the dates of all three required items.

13. Are precision and accuracy check data to be certified?

The signing official is required to certify that quality assurance data are completely submitted to AQS. (40 CFR 58.15(a)) This includes the precision and accuracy check data.

Some agencies will need to change their past practices for the signing official to make this certification, because they have not been reporting all such data. In particular, continuous PM_{2.5} monitors counted towards the minimum requirements for this type of monitoring (which were increased in the October, 17, 2006 final rule) must be designated SLAMS. They therefore must follow Appendix A requirements which include periodic flow checks. The data from these flow checks must be reported to AQS.

The signing official does not have to certify the accuracy of the precision and accuracy check data themselves, as he/she must for ambient concentration data. The precision and accuracy check data are one of the main considerations when the signing official judges the accuracy of the ambient data.

OAQPS uses the precision and accuracy data to determine which data certification flag to put on the data in AQS. (See Question 9)

14. What about data with split responsibilities, such as for some PM_{2.5} speciation monitoring in which an EPA contractor does the laboratory work and gives the monitoring agency a period to review and make changes before the contractor enters the data into AQS?

Most monitoring agencies send PM_{2.5} speciation filters to Research Triangle Institute (RTI) under an EPA-managed contract. OAQPS is aware that some monitoring organizations have in the past chosen not to certify data from PM_{2.5} speciation monitors for which chemical analysis is performed by RTI because RTI is not under direct contract and supervision by the monitoring organizations. However, the monitoring regulations require the senior air pollution control officer of state or local agency which operates a monitor (i.e., the agency which manages the monitoring station, changes filters, and does flow checks and maintenance on the monitor) to certify all the data from that monitor, with no exception based on where chemical analyses were performed. This certification must indicate that the ambient data are accurate to the best of his or her knowledge. The certifying official may add additional explicit text if he or she wishes to document what parts of the field versus laboratory operations were performed by his or her agency. OAQPS encourages every monitoring agency using the RTI laboratory service to actively review data provided by RTI prior to it being uploaded into AQS. More information on the data validation process for the RTI laboratory analysis is available at <http://www.epa.gov/ttn/amtic/files/ambient/pm25/spec/05datval.pdf>.

15. What about situations when PM sampler flow rates are checked for precision and accuracy by the monitoring agency's own QA program but ambient PM concentration data are all submitted to AQS by an EPA contractor?

See the response to the question immediately above.

At the present time, neither the monitoring agencies nor RTI are entering data from PM_{2.5} speciation sampler flow checks into AQS. OAQPS acknowledges that this is in

part because of the lack of a convenient submission process for monitoring agencies to use. When the senior official certifies data from such samplers, he or she may make special note that PM speciation sampler flow rate precision and accuracy checks from specifically named or described monitors have not been completely submitted to AQS due to the current absence of a suitable submission process. The senior official should nevertheless take into consideration the results of the flow checks conducted by the monitoring agency when declaring that the ambient data is accurate to the best of his or her knowledge.

OAQPS is working towards a suitable submission process for these flow check data for use in the reporting of 2008 PM_{2.5} speciation sampler flow checks.

16. What is the role of EPA Regional Offices?

The EPA Regional Offices should review the data certification package received from the monitoring agency for completeness before sending it to OAQPS (or confirming to OAQPS that an advance copy already received by OAQPS is ready for action), and should retain a copy as the official record of the certification. Any problems discovered in this process should be sent back to the agency collecting the data to be rectified. OAQPS staff will in most cases consult with Regional Office monitoring staff about any complicated cases before setting data certification flags in AQS.

17. Why is a monitor's certification flag re-set to "blank" if a monitoring agency modifies the data for that monitor after EPA first sets the flag? How can a monitoring agency get a non-blank value restored?

AQS automatically re-sets the certification flag to blank if any deletion, revision, or addition of data causes a change in the value of a summary statistic. AQS is programmed to re-set the data certification flag because the data within AQS are no longer what was originally submitted and certified. The monitoring agency should repeat the normal procedure of submitting a signed certification letter, including submission of a new AMP450 or AMP450NC and a new AMP 255 report. This will allow the Regional Office and OAQPS to repeat their reviews and re-set the certification flag to an appropriate non-blank value, thus informing all data users that the monitoring organization considers the new data set to be accurate and complete. OAQPS will monitor the Critical Review report from AQS for cases in which a flag has been re-set to "blank" and no new certification letter has been received within a month or two, and will ask the Regional Office to remind the monitoring organization to re-submit a certification letter.

18. How can I comment on EPA's requirements regarding data certification?

Send all your comments to Lewis Weinstock. His E-MAIL is weinstock.lewis@epa.gov.

Administration of Barack Obama, 2011

Executive Order 13563—Improving Regulation and Regulatory Review
January 18, 2011

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to improve regulation and regulatory review, it is hereby ordered as follows:

Section 1. General Principles of Regulation. (a) Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science. It must allow for public participation and an open exchange of ideas. It must promote predictability and reduce uncertainty. It must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends. It must take into account benefits and costs, both quantitative and qualitative. It must ensure that regulations are accessible, consistent, written in plain language, and easy to understand. It must measure, and seek to improve, the actual results of regulatory requirements.

(b) This order is supplemental to and reaffirms the principles, structures, and definitions governing contemporary regulatory review that were established in Executive Order 12866 of September 30, 1993. As stated in that Executive Order and to the extent permitted by law, each agency must, among other things: (1) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing that some benefits and costs are difficult to quantify); (2) tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; (3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity); (4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information upon which choices can be made by the public.

(c) In applying these principles, each agency is directed to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible. Where appropriate and permitted by law, each agency may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts.

Sec. 2. Public Participation. (a) Regulations shall be adopted through a process that involves public participation. To that end, regulations shall be based, to the extent feasible and consistent with law, on the open exchange of information and perspectives among State, local, and tribal officials, experts in relevant disciplines, affected stakeholders in the private sector, and the public as a whole.

(b) To promote that open exchange, each agency, consistent with Executive Order 12866 and other applicable legal requirements, shall endeavor to provide the public with an opportunity to participate in the regulatory process. To the extent feasible and permitted by law, each agency shall afford the public a meaningful opportunity to comment through the

Internet on any proposed regulation, with a comment period that should generally be at least 60 days. To the extent feasible and permitted by law, each agency shall also provide, for both proposed and final rules, timely online access to the rulemaking docket on regulations.gov, including relevant scientific and technical findings, in an open format that can be easily searched and downloaded. For proposed rules, such access shall include, to the extent feasible and permitted by law, an opportunity for public comment on all pertinent parts of the rulemaking docket, including relevant scientific and technical findings.

(c) Before issuing a notice of proposed rulemaking, each agency, where feasible and appropriate, shall seek the views of those who are likely to be affected, including those who are likely to benefit from and those who are potentially subject to such rulemaking.

Sec. 3. Integration and Innovation. Some sectors and industries face a significant number of regulatory requirements, some of which may be redundant, inconsistent, or overlapping. Greater coordination across agencies could reduce these requirements, thus reducing costs and simplifying and harmonizing rules. In developing regulatory actions and identifying appropriate approaches, each agency shall attempt to promote such coordination, simplification, and harmonization. Each agency shall also seek to identify, as appropriate, means to achieve regulatory goals that are designed to promote innovation.

Sec. 4. Flexible Approaches. Where relevant, feasible, and consistent with regulatory objectives, and to the extent permitted by law, each agency shall identify and consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public. These approaches include warnings, appropriate default rules, and disclosure requirements as well as provision of information to the public in a form that is clear and intelligible.

Sec. 5. Science. Consistent with the President's Memorandum for the Heads of Executive Departments and Agencies, "Scientific Integrity" (March 9, 2009), and its implementing guidance, each agency shall ensure the objectivity of any scientific and technological information and processes used to support the agency's regulatory actions.

Sec. 6. Retrospective Analyses of Existing Rules. (a) To facilitate the periodic review of existing significant regulations, agencies shall consider how best to promote retrospective analysis of rules that may be outmoded, ineffective, insufficient, or excessively burdensome, and to modify, streamline, expand, or repeal them in accordance with what has been learned. Such retrospective analyses, including supporting data, should be released online whenever possible.

(b) Within 120 days of the date of this order, each agency shall develop and submit to the Office of Information and Regulatory Affairs a preliminary plan, consistent with law and its resources and regulatory priorities, under which the agency will periodically review its existing significant regulations to determine whether any such regulations should be modified, streamlined, expanded, or repealed so as to make the agency's regulatory program more effective or less burdensome in achieving the regulatory objectives.

Sec. 7. General Provisions. (a) For purposes of this order, "agency" shall have the meaning set forth in section 3(b) of Executive Order 12866.

(b) Nothing in this order shall be construed to impair or otherwise affect:

(i) authority granted by law to a department or agency, or the head thereof; or

(ii) functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(c) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(d) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

BARACK OBAMA

The White House,
January 18, 2011.

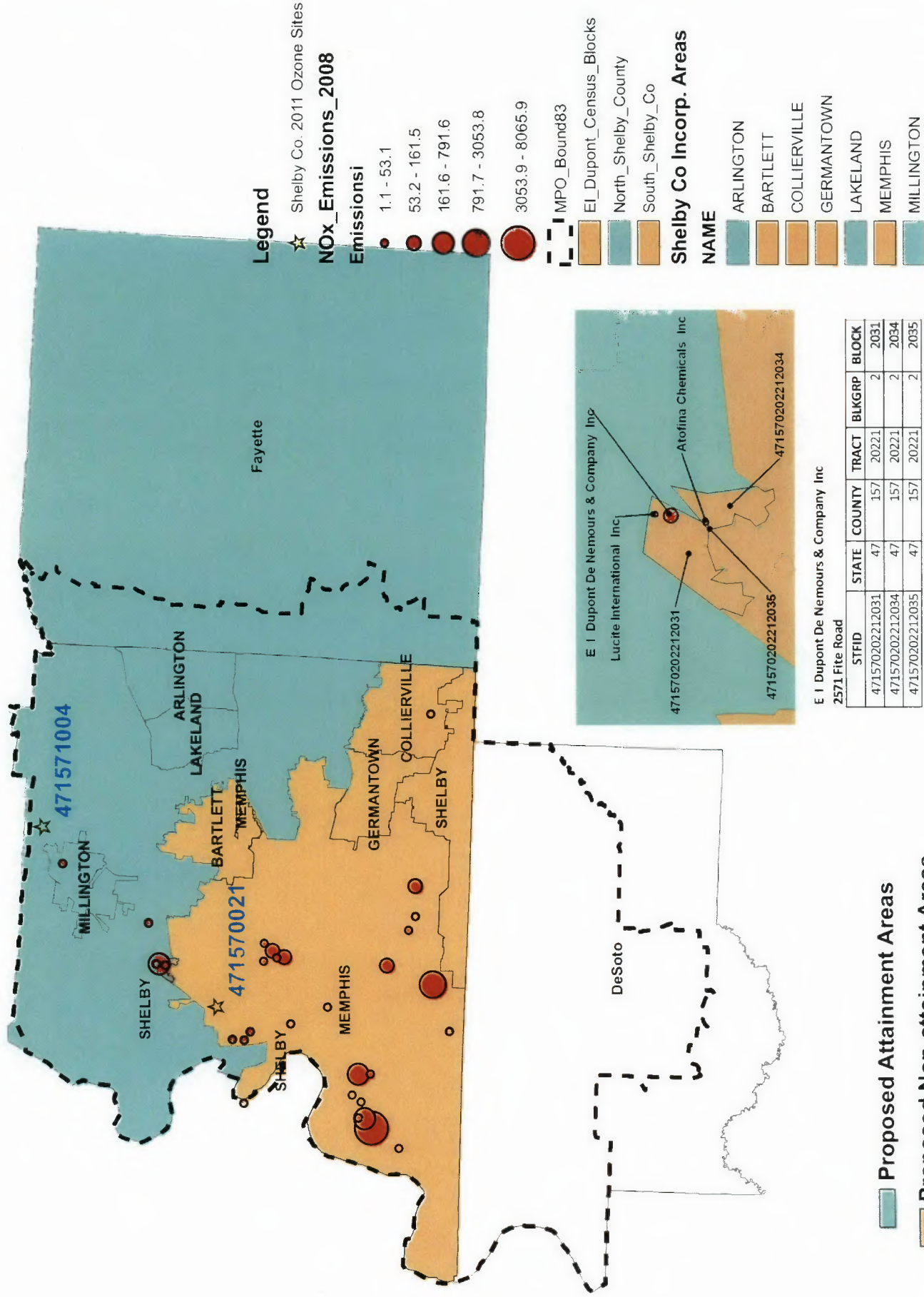
[Filed with the Office of the Federal Register, 8:45 a.m., January 20, 2011]

NOTE: This Executive order was published in the *Federal Register* on January 21.

Categories: Executive Orders : Regulation and regulatory review, improvement.

Subjects: Government organization and employees : Accountability and transparency, strengthening efforts; Government organization and employees : Federal regulations, review.

DCPD Number: DCPD201100031.



Legend

☆ Shelby Co. 2011 Ozone Sites

NOx_Emissions_2008

Emissionsi

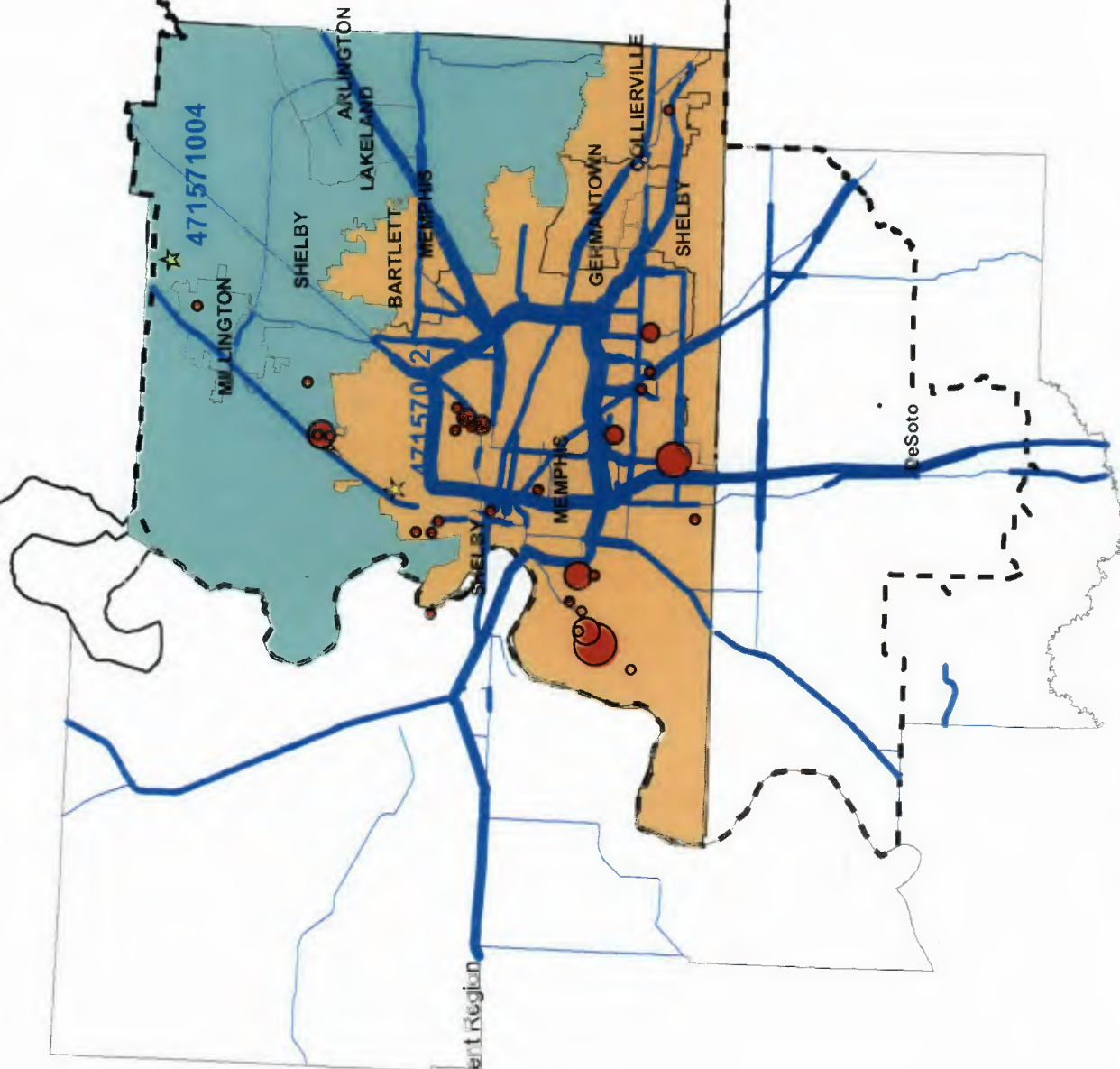
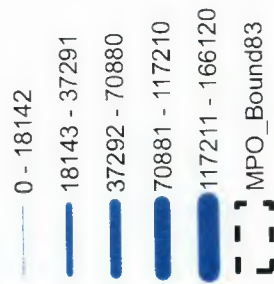


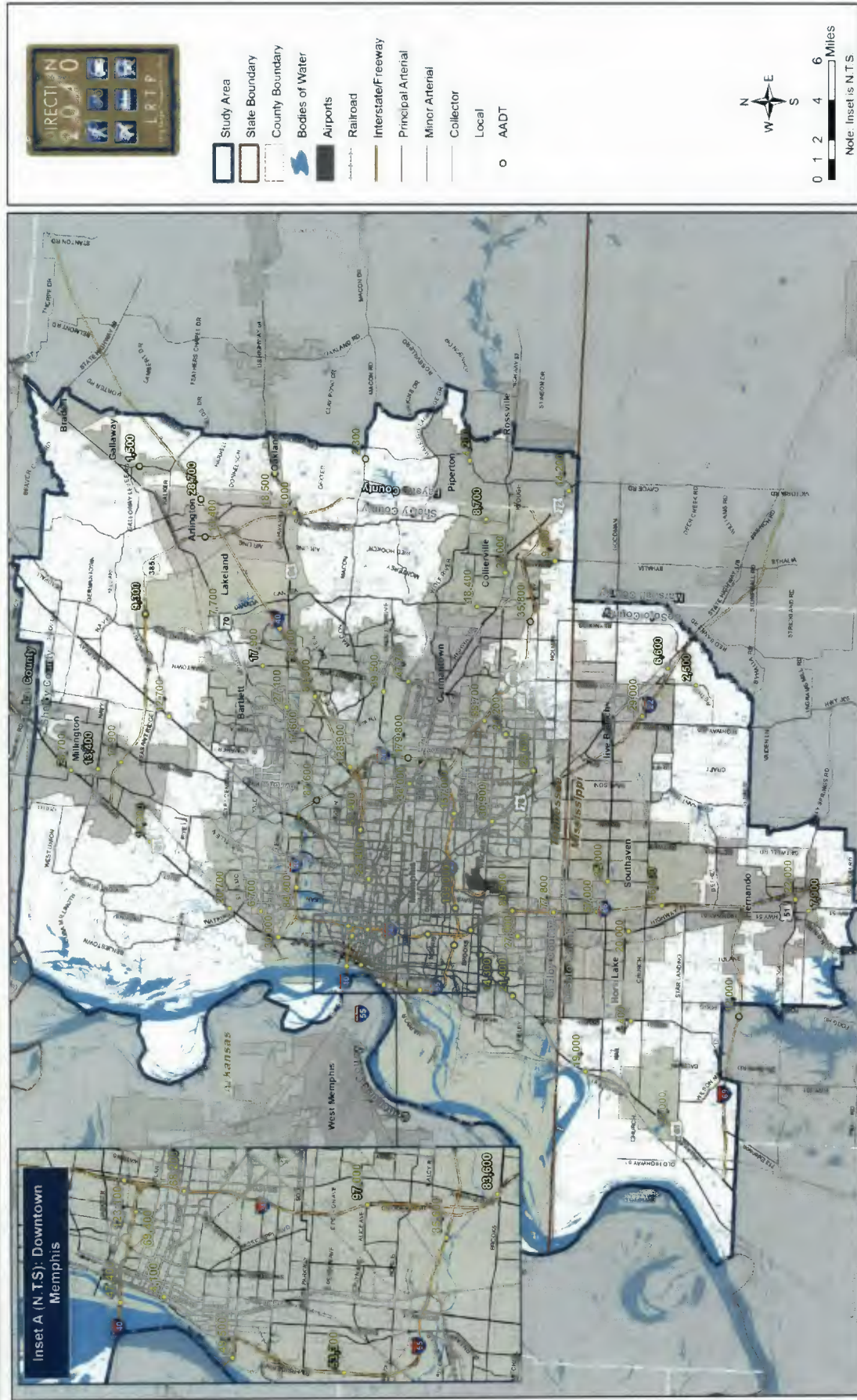
Proposed Partial Non-attainment Region

Proposed Attainment Region

hpms multistate

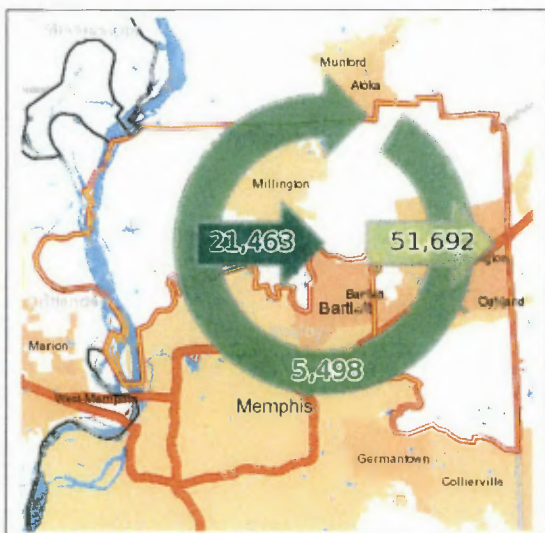
AADT





Note: Counts from TxDOT (2011) and MDOT (2008)

Inflow/Outflow Report

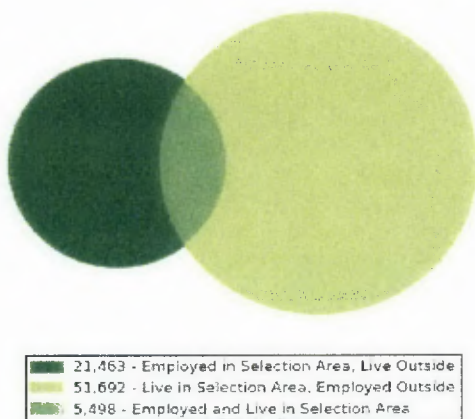


Inflow/Outflow Job Counts in 2010

Analysis Selection

Note: Overlay arrows do not indicate directionality of worker flow between home and employment locations.

- ➔ Employed and Live In Selection Area
- ➔ Employed in Selection Area, Live Outside
- ➔ Live in Selection Area, Employed Outside



21,463 - Employed in Selection Area, Live Outside
51,692 - Live in Selection Area, Employed Outside
5,498 - Employed and Live in Selection Area

Inflow/Outflow Job Counts (Primary Jobs)

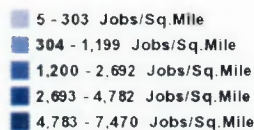
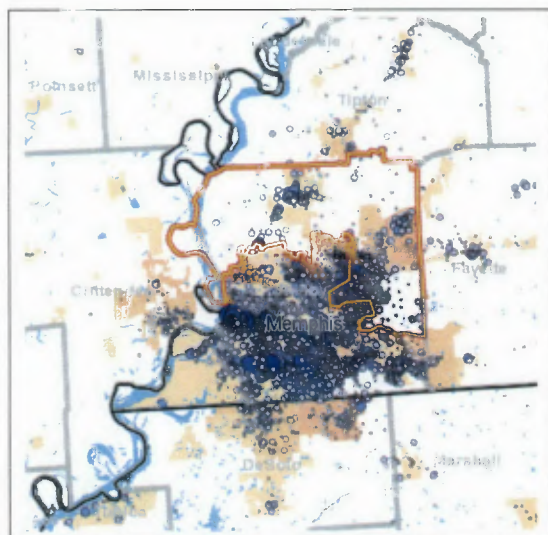
	2010	
	Count	Share
Employed in the Selection Area	26,961	100.0%
Employed in the Selection Area but Living Outside	21,463	79.6%
Employed and Living in the Selection Area	5,498	20.4%
Living in the Selection Area	57,190	100.0%
Living in the Selection Area but Employed Outside	51,692	90.4%
Living and Employed in the Selection Area	5,498	9.6%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2010).

Notes:

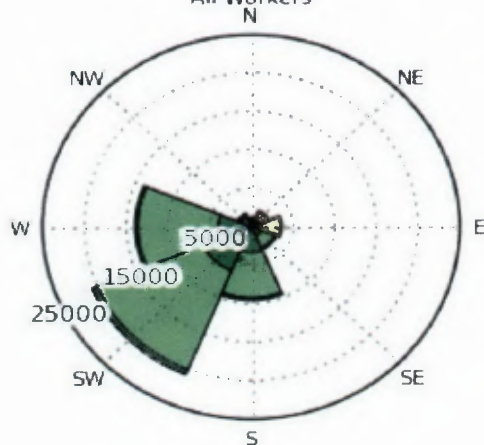
1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and only available for 2009 and 2010 data.
2. Educational Attainment is only produced for workers aged 30 and over.

Distance/Direction Report - Home Census Block to Work Census Block



Analysis Selection

Job Counts by Distance/Direction in 2010
 All Workers



Jobs by Distance - Home Census Block to Work Census Block

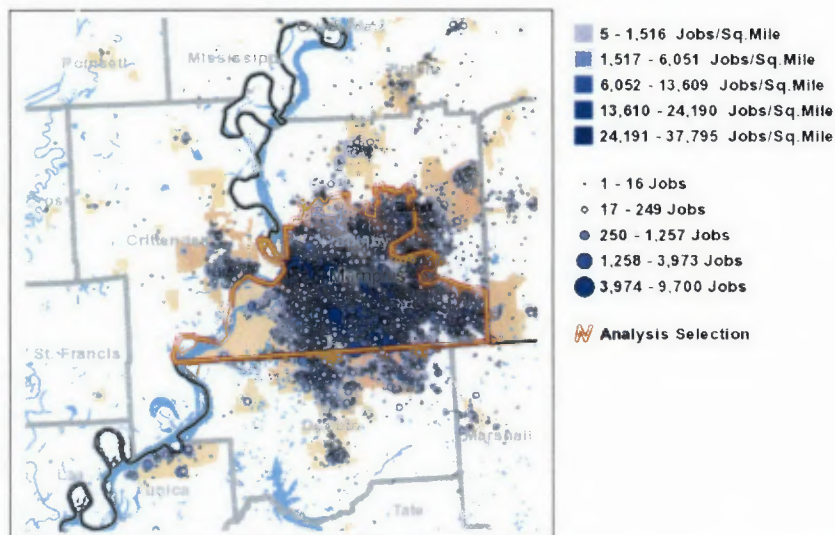
	2010	
	Count	Share
Total Primary Jobs	56,199	100.0%
Less than 10 miles	18,469	32.9%
10 to 24 miles	32,067	57.1%
25 to 50 miles	1,159	2.1%
Greater than 50 miles	4,504	8.0%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2010).

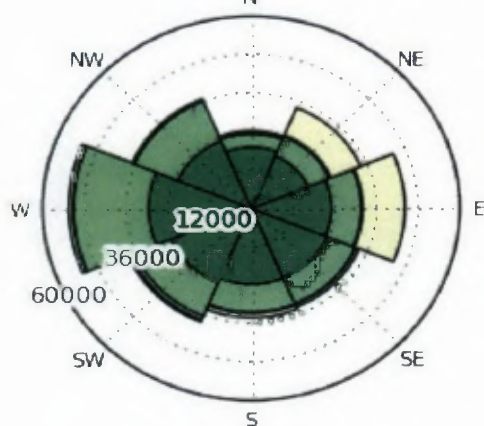
Notes:

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and only available for 2009 and 2010 data.
2. Educational Attainment is only produced for workers aged 30 and over.

Distance/Direction Report - Home Census Block to Work Census Block



Job Counts by Distance/Direction in 2010
All Workers



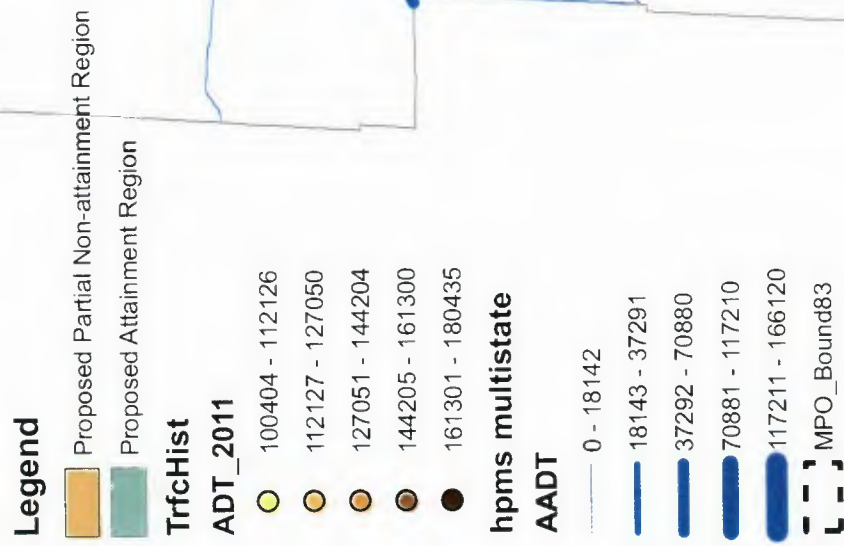
Jobs by Distance - Home Census Block to Work Census Block

2010		
	Count	Share
Total Primary Jobs	297,882	100.0%
Less than 10 miles	184,672	62.0%
10 to 24 miles	83,226	27.9%
25 to 50 miles	3,187	1.1%
Greater than 50 miles	26,797	9.0%

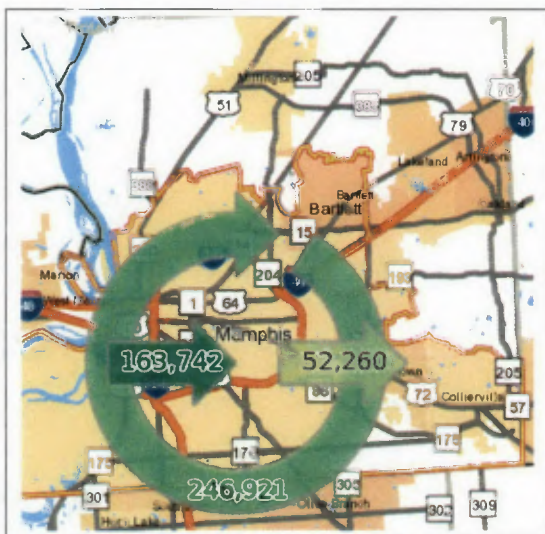
Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2010).

Notes:

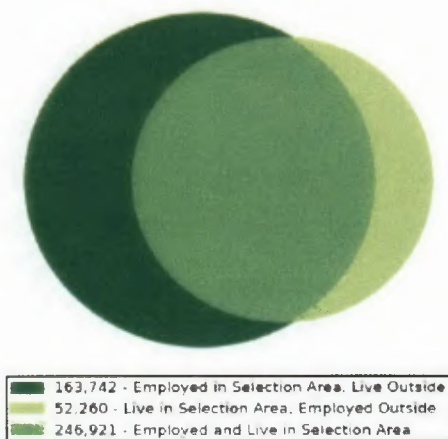
1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and only available for 2009 and 2010 data.
2. Educational Attainment is only produced for workers aged 30 and over.



Inflow/Outflow Report



Inflow/Outflow Job Counts in 2010



Analysis Selection

Note: Overlay arrows do not indicate directionality of worker flow between home and employment locations.

- Employed and Live in Selection Area
- Employed in Selection Area, Live Outside
- Live in Selection Area, Employed Outside

Inflow/Outflow Job Counts (Primary Jobs)

	2010	
	Count	Share
Employed in the Selection Area	410,663	100.0%
Employed in the Selection Area but Living Outside	163,742	39.9%
Employed and Living in the Selection Area	246,921	60.1%
Living in the Selection Area	299,181	100.0%
Living in the Selection Area but Employed Outside	52,260	17.5%
Living and Employed in the Selection Area	246,921	82.5%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2010).

Notes:

1. Race, Ethnicity, Educational Attainment, and Sex statistics are beta release results and only available for 2009 and 2010 data.
2. Educational Attainment is only produced for workers aged 30 and over.



7 TRAVEL PATTERNS

In order to assess how well existing MATA services match with the overall travel patterns, the study team used the Memphis MPO Travel Demand Model to document travel between districts for all daily trips and home based work trips. The base year of the travel demand model is 2004; demographic and employment used in this analysis estimates reflect year 2010 estimates.

The travel pattern analysis considered the broader regional travel patterns as well as the travel patterns within the study area. Travel that includes all types of trips (i.e. not just trips between home and work) within the study area is shown in Figure 22 and Figure 23, aggregate trips, and trips per square mile, respectively. These figures show that the heaviest travel flows are mainly oriented in the suburban areas in eastern Shelby County. The planning districts in the study area with the highest total of all purpose daily trip interactions are listed in Table 9. The trips shown in the table below represent the total all purpose trips between the planning districts. The importance of the Shelby Farms/Germantown district is evident by accounting for approximately 47.5% of all of the trips listed in Table 9.

However, the planning district pair with the greatest number of trips (Raleigh Bartlett to Shelby Farms/Germantown) has a fairly low density of trips. This compares with travel between the CBD and Midtown and Depot, which has about half as many trips, but the trips are three times as dense. Thus, despite being smaller in terms of overall demand, travel between the CBD and Midtown and Depot is more easily served by transit. Likewise, trips between East Memphis and the University District; and between Midtown/Depot and East Memphis have a relatively high density of travel, despite having fewer trips overall.

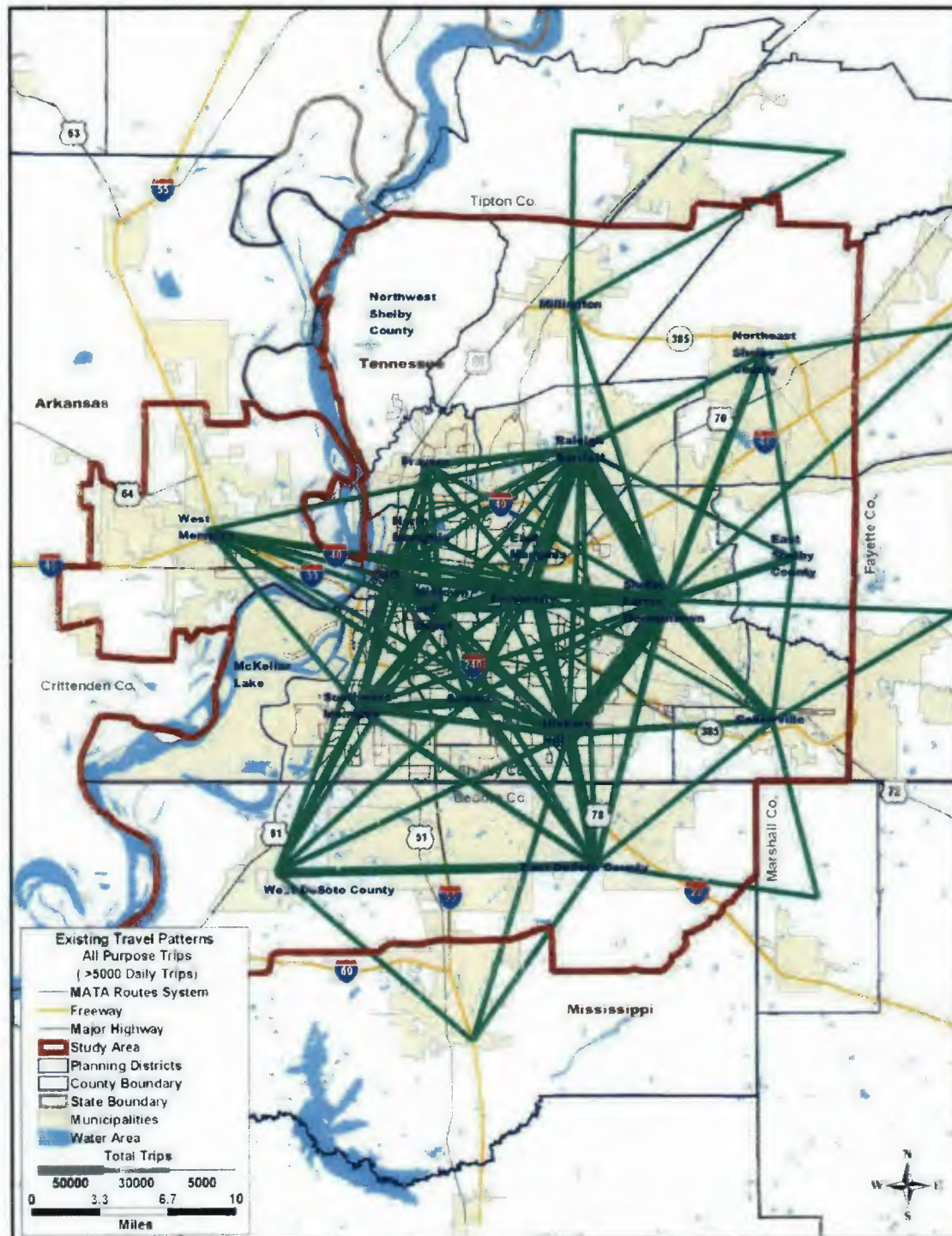


Table 9 Largest Total All Purpose Daily Trip Density between Planning Districts

Planning Districts		Total All Purpose Daily Trips	Total Trips per Square Mile
CBD	Midtown and Depot	50,247	2024.2
East Memphis	University	37,429	996.9
Midtown and Depot	East Memphis	44,910	887.0
Hickory Hill	Shelby Farms Germantown	97,596	796.4
Raleigh Bartlett	Shelby Farms Germantown	100,026	755.4
East Memphis	Shelby Farms Germantown	78,143	740.2
East Memphis	Hickory Hill	56,291	707.2
Hickory Hill	Airport	41,105	640.1
Southwest Memphis	Airport	41,024	613.7
CBD	Southwest Memphis	33,433	592.6
East Memphis	Raleigh Bartlett	46,373	518.3
Midtown and Depot	Southwest Memphis	36,261	516.3
Collierville	Shelby Farms Germantown	41,947	345.1
Northeast Shelby County	Shelby Farms Germantown	32,582	174.1



Figure 22 Existing Regional All Purpose Trips

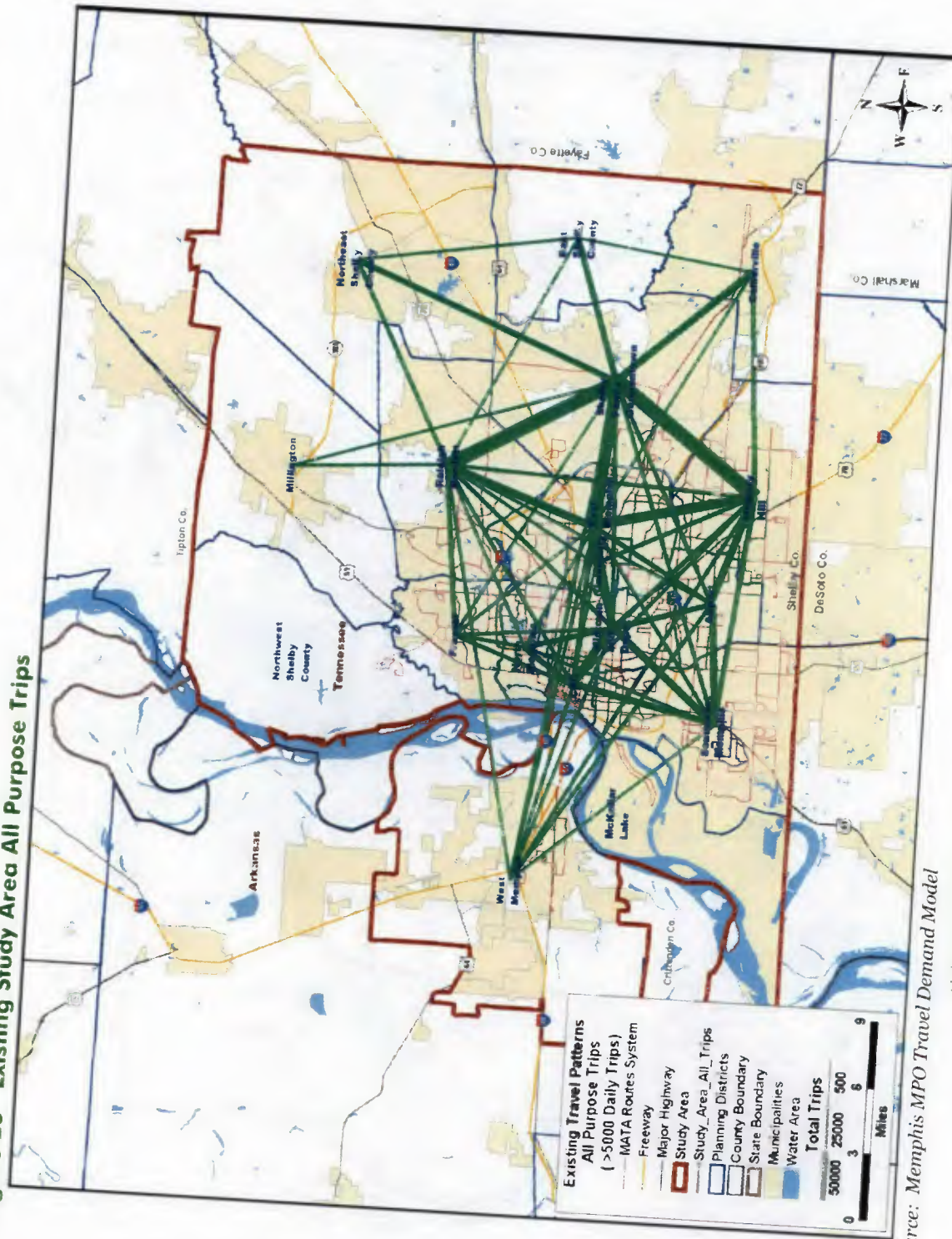


Source: Memphis MPO Travel Demand Model



MATA Short Range Transit Plan Market Analysis

Figure 23 Existing Study Area All Purpose Trips



Source: Memphis MPO Travel Demand Model



MATA Short Range Transit Plan Market Analysis

Overall, many of the districts with higher travel flows are well served in the MATA system. However, there is a heavy concentration of travel located outside of the MATA service area, where the MATA system coverage is not as extensive as other areas. This includes demand between Raleigh/Frayser and Shelby Farms/Germantown; between Shelby Farms/Germantown and Hickory Hill; and to/from East and West DeSoto County. As discussed, in many cases despite being important regional markets for transit, the density of demand may make these less attractive for traditional types of fixed-route bus service. Instead, they offer opportunities to design and develop new, potentially more flexible types of transit service.

Home-Based Work Trips

Travel patterns for work oriented trips are shown in Figure 24 and Figure 25. It should be noted that the Memphis MPO Travel Demand Model does not contain data related to work trips for the West Memphis area and, therefore, was not included in this analysis.

Home based work trips exhibit similar patterns as observed with all purpose trips, with large volumes of travel occurring in Hickory Hill, Raleigh Bartlett, eastern Shelby County, and East Memphis. Table 10 lists the planning districts with the highest interaction of home based trips in the study area. As with the all purpose trips, trips the Shelby Farms/Germantown district makes up a large proportion of work based trips. Of just the home based work trips listed in Table 11, Shelby Farms/Germantown accounts for approximately 52.5% of the trips.

Similar to our analysis for all purpose trips, the study team also calculated the density of trips between planning district pairs for home based work trips. This calculation is similarly used to provide a measure of the density of trips, i.e. the number of trips that occur per square mile and is used as a reference against the total volume of trips, which may be taken over a large geographic area. This data, much like the previous analysis, shows that the planning district pairs with the largest volume of trips does not have the greatest density of trips. For example, travel between the CBD and Midtown and Depot is twice as dense as between Hickory Hill and Shelby Farms Germantown. Also as mentioned previously, the density of demand provides additional insights into how service to markets might be prioritized and/or most effectively served.



MATA Short Range Transit Plan
Market Analysis

Table 10 Largest Total Home Based Work Trip Density between Planning Districts

Planning Districts		Total Home Based Work Daily Trips	Total Trips per Square Mile
CBD	Midtown and Depot	13,439	541.4
Hickory Hill	Shelby Farms Germantown	32,272	263.3
Hickory Hill	Airport	14,145	220.3
Raleigh Bartlett	Shelby Farms Germantown	28,000	211.5
East Memphis	Shelby Farms Germantown	21,557	204.2
East Memphis	Hickory Hill	15,620	196.2
CBD	Southwest Memphis	10,204	180.9
Southwest Memphis	Airport	10,817	161.8
East Memphis	Raleigh Bartlett	11,703	130.8
Collierville	Shelby Farms Germantown	13,450	110.7
Southwest Memphis	Hickory Hill	10,393	104.8

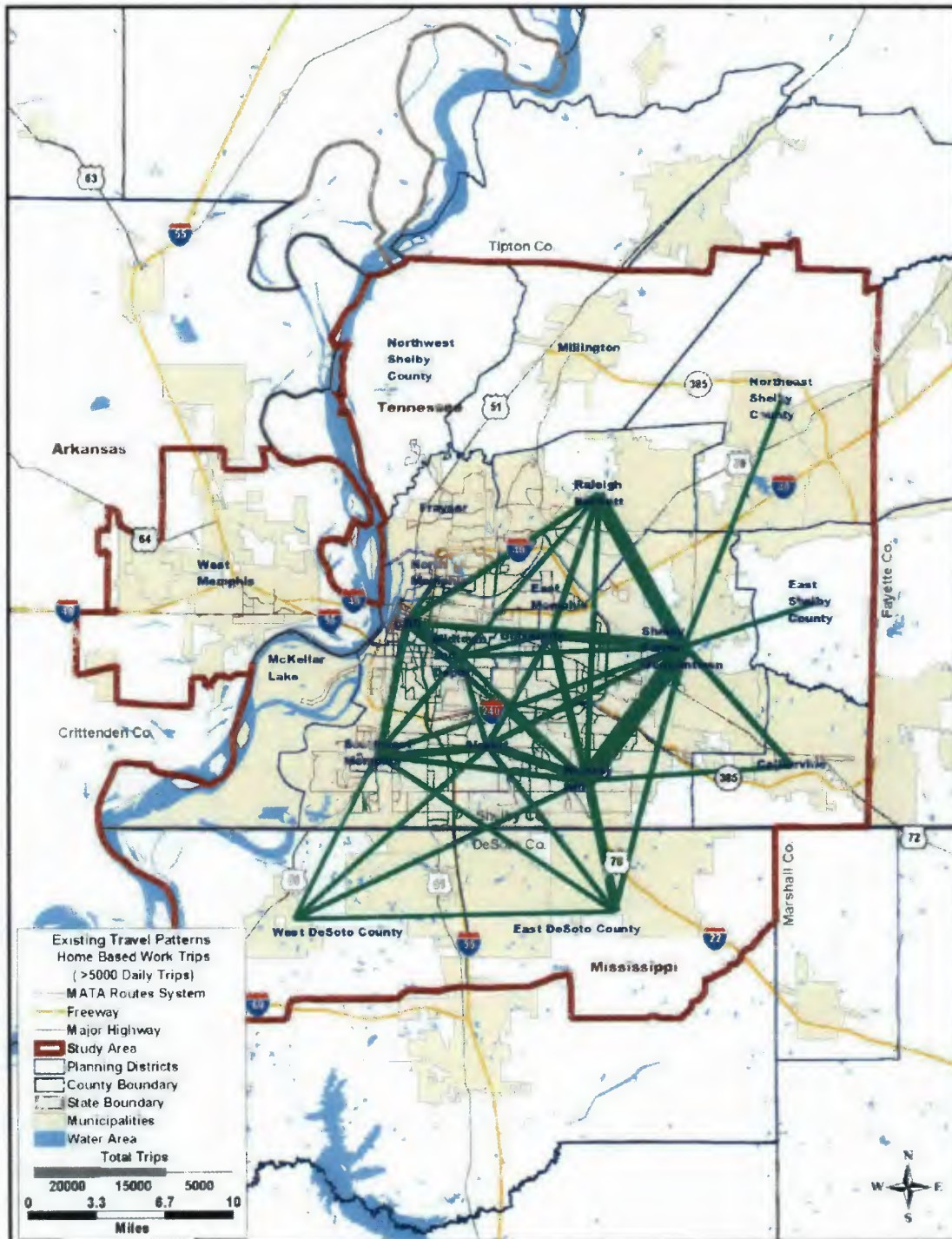
SUMMARY

The largest travel corridors for the study area are in eastern Shelby County, primarily between Raleigh Bartlett and Shelby Farms/Germantown and between Hickory Hill and Shelby Farms/Germantown. The data also shows the importance of connections to and from Hickory Hill, East Memphis, downtown, and Southwest Memphis. These connections are particularly important for home based work trips and several of these corridors are currently not well served by MATA routes. However, despite having the greatest volume of trips, these markets do not always have the greatest density of trips. The challenge, therefore, is to scale and design service to the key markets in ways that are appropriate and effective.



MATA Short Range Transit Plan
Market Analysis

Figure 24 Existing Regional Home Based Work Trips



Source: Memphis MPO Travel Demand Model





8 SUMMARY OF RESULTS

MATA's service area has seen many changes over the years. Similar to other metropolitan areas in the United States, Memphis' urban core is losing population and employment to the suburban areas. However, while the urbanized area still has the most population and employment, the trend is towards continued shifting of population and employment to the suburban parts of Shelby County and into the surrounding counties.

In the short-term, therefore, urbanized Memphis continues to be MATA's strongest market with more population and employment; greater densities of population and employment; and more people who rely on public transportation services. At the same time, connecting the urban core with the employment markets in the outlying areas will likely become increasingly important.

Other key findings resulting from the market analysis include:

- Within the MATA service area, the Shelby Farms/Germantown planning district is the fastest growing and most populated planning district as well as one of the wealthiest. It is also the fastest growing planning district in terms of employment and has the most jobs. However, much of the population and employment in this area is low density, making traditional transit services less effective. So, while the growing market is important, traditional services are not likely to be as effective as they are in the denser parts of the market.
- Hickory Hill is an increasingly important market in MATA's service area, both for population and employment. There is also strong travel demand to and from this area. Challenges associated with serving this growing and important market are associated with the low density development and the demand from Hickory Hill to other low density areas, such as Shelby Farms/Germantown.
- None of the planning districts in the study area have average population densities that meet industry standards for the highest frequency transit service. Of the planning districts used for this study, only Midtown, University and the CBD demonstrated densities greater than 3 households per acre, which are considered appropriate for higher frequency transit service, such as enhanced bus or BRT.
 - It is important to note, however, that the Planning Districts are fairly large and consequently mask smaller areas with higher densities. Indeed, several neighborhoods within these planning districts have significantly higher densities than shown for the planning district as a whole.



MATA Short Range Transit Plan Market Analysis

- In terms of average employment density at the district level, only the Memphis CBD district has sufficient employment density to support high capacity transit, such as higher frequency bus service or bus rapid transit service.
- Looking at Memphis' population in terms of transit dependent characteristics suggests that the key demographic traits accounting for a high propensity to use transit are low income and zero-vehicle households. These are some of MATA's strongest markets for service.
- The transit needs index suggests that the five planning districts in the MATA study area with the highest likelihood of using transit are the CBD, North Memphis, Southwest Memphis, the Airport and Frayser.
- The Poplar Avenue corridor is a critical transportation facility and home to much of the region's activity and employment centers. Overall, however, the corridor does not contain large transit dependent populations. As a result, it will be important to connect neighborhoods to the corridor as well as support travel along the corridor.
- The MPO Travel Demand Model identifies Shelby Farms/Germantown as a key market for transit service, especially for home based work trips. The data also suggests that there are a lot of people traveling between Shelby Farms/Germantown and the Raleigh/Bartlett area, Hickory Hill and East Memphis.
- The MPO Travel Demand Model also identifies Hickory Hill as both an important origin and destination for trips including all trips and home based work trips. Important markets are between Hickory Hill and East Memphis and the Airport.

In summary, the MATA service area is growing and changing. While much of MATA's service operates in areas with the most population and employment and the largest concentrations of key population groups, the service may be less well oriented around the shortest path between these markets. For example, the existing service orientation supports travel between east to west and is concentrated around the western part of the urban areas; this is a critical market for service and also reflects MATA's funding source. At the same time, there is a growing market for services in the eastern part of the service area and providing north-south connections between existing service areas and new employment markets might be under served.

Tennessee	Area Land Sq Meters	2010 Total Pop	Sq Miles	Pop Density / Sq Mile
Shelby Co	1976612450	927,644	763.17	1215.5
Partial NA Area	764870455	736,219	295.32	2493.0
Balance of Co		191,425	467.85	409.2

Mississippi	Area Land Sq Meters	2010 Total Pop	Sq Miles	Pop Density / Sq Mile
DeSoto Co	1233222786	161,252	476.15	338.7
Partial NA Area	612678231	146,774	236.56	620.5
Balance of Co		14,478	239.59	60.4