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)

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,

James H. Fyke

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.

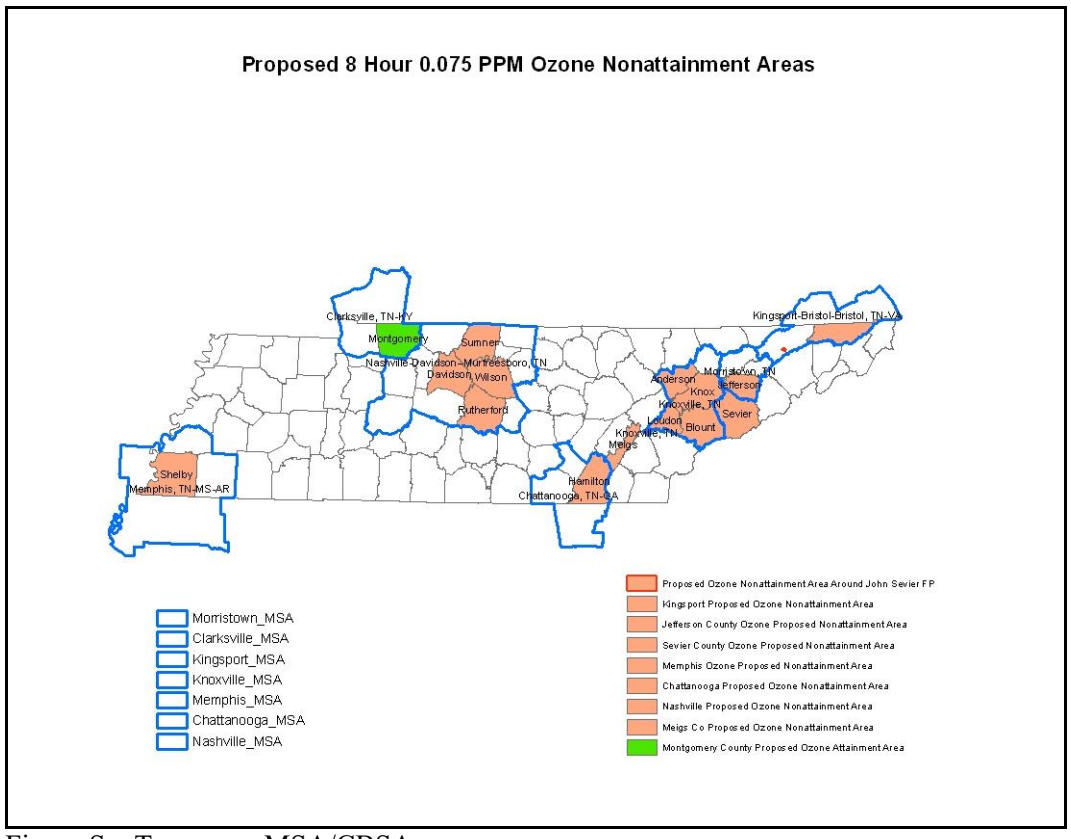

Figure S – Tennessee MSA/CBSA

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.

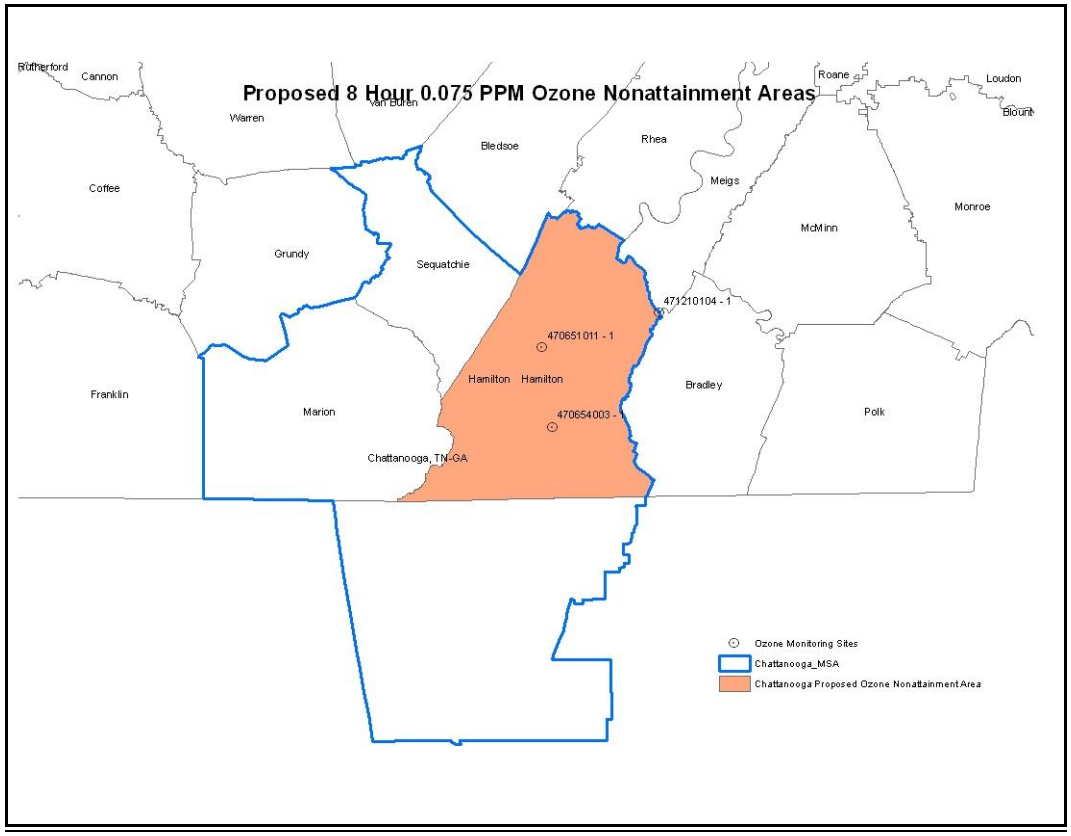

Figure 1 – Chattanooga MSA

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 NOx 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%) NOx 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: 1,892547 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 NOx 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 NOx (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.

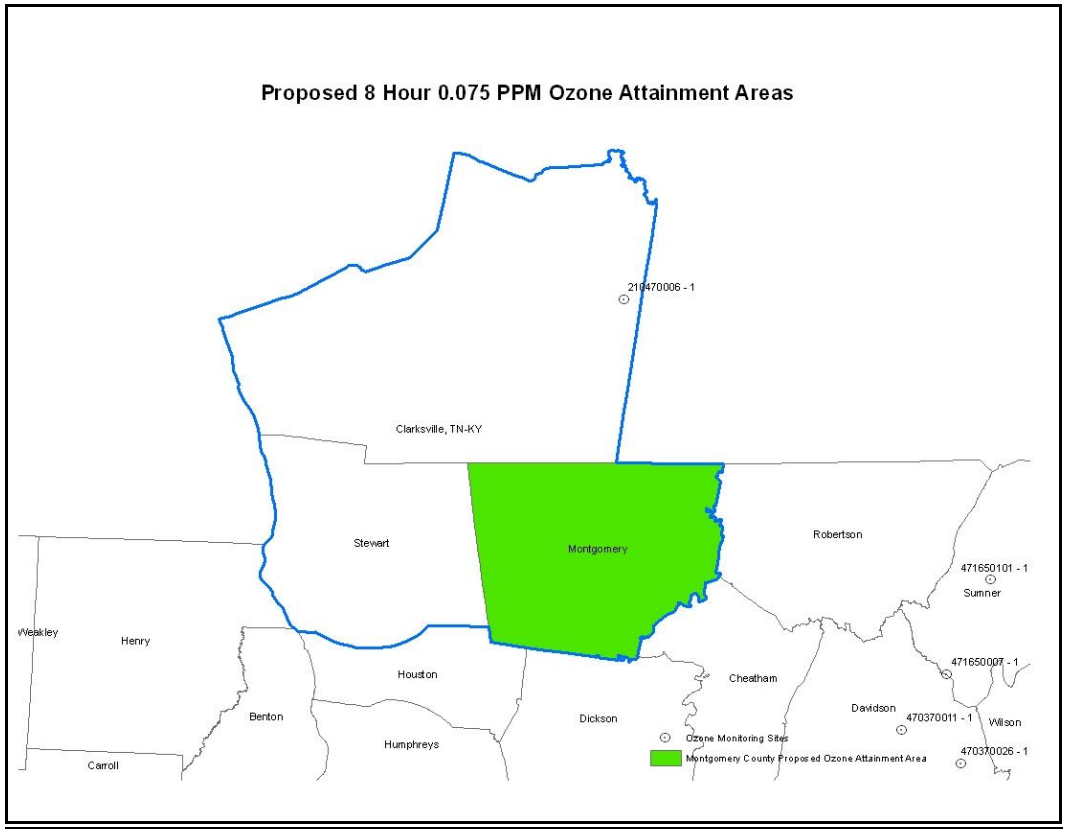

Figure 2 – Clarksville MSA

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 NOx 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 NOx 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 NOx and VOC emissions, respectively, of which the majority (92.4%) of the NOx emissions are from mobile sources. It is to be noted that the point source emission contribution of NOx 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 NOx 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 NOx 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.

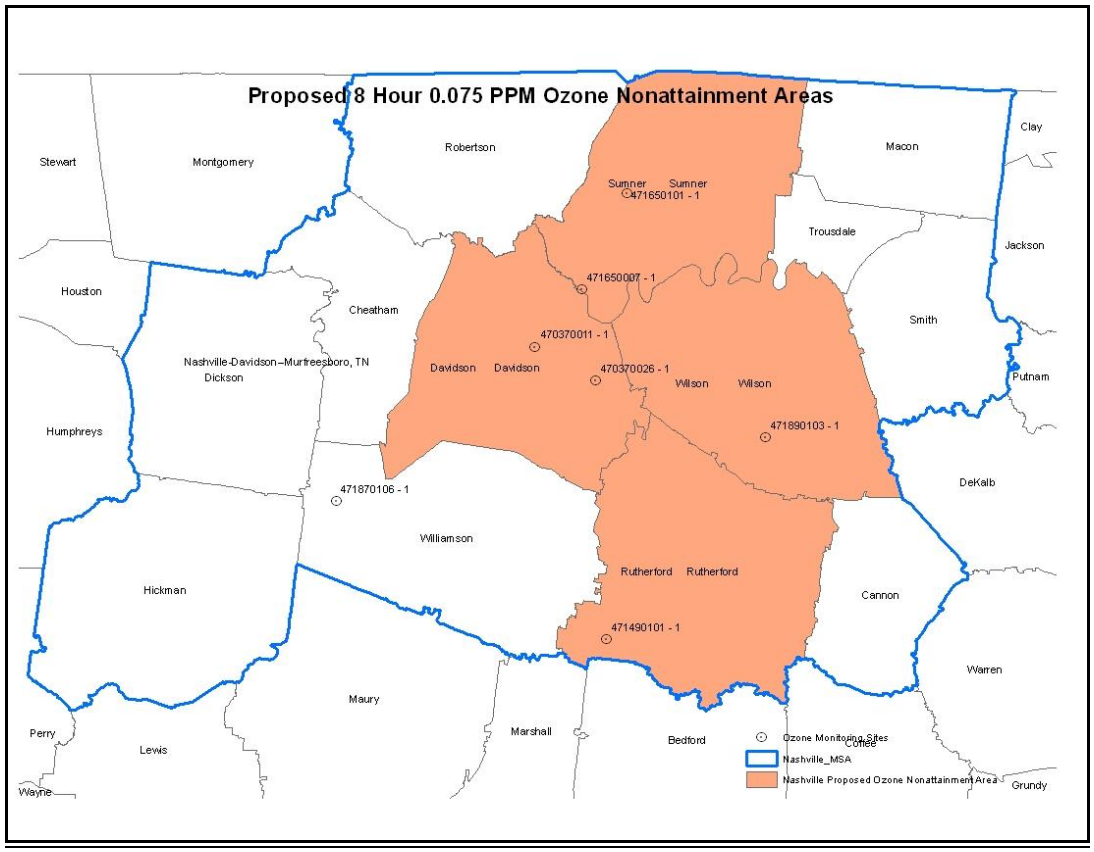

Figure 3 – Nashville MSA

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 NOx 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 NOx 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 1 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 NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 1 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 NOx 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 NOx emissions are from mobile sources. The majority (83%) of the VOC emissions are from point sources. Dickson County emits 5.0% of the total NOx 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 NOx 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 NOx 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 NOx 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 NOx 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. NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 1 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 NOx 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 NOx 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 NOx 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 1 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 NOx 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 NOx 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 1 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 NOx emissions and 6.9% of the total VOC emissions for the 13-county Nashville MSA. Most of the NOx 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 NOx 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 NOx 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 1 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 NOx 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 NOx 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 NOx 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 1 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 NOx 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 NOx 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 NOx 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 1 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 NOx 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.

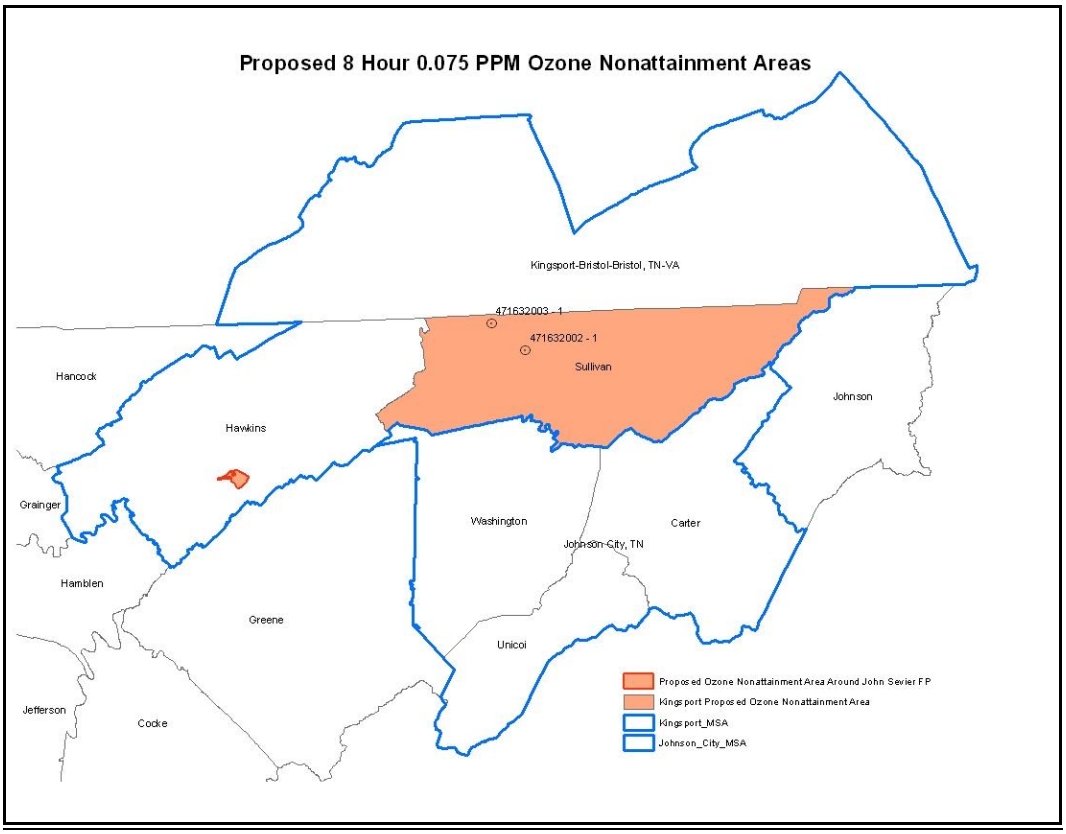

Figure 4 – Johnson City MSA and Kingsport-Bristol MSA

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 NOx (2%) and VOC (1%) of total emissions in this county. The majority (89%) of the NOx 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 NOx burner (LNB) technology at new and certain modified sources for NOx 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 NOx (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/NOx 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 NOx (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 NOx (0.03%) and VOC (0.03%) of total emissions in this county. The majority (88%) of the NOx 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 NOx burner (LNB) technology at new and certain modified sources for NOx 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 NOx (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/NOx 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 NOx (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 NOx (3%) and VOC (8%) of total emissions in this county. The majority (89%) of the NOx 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.

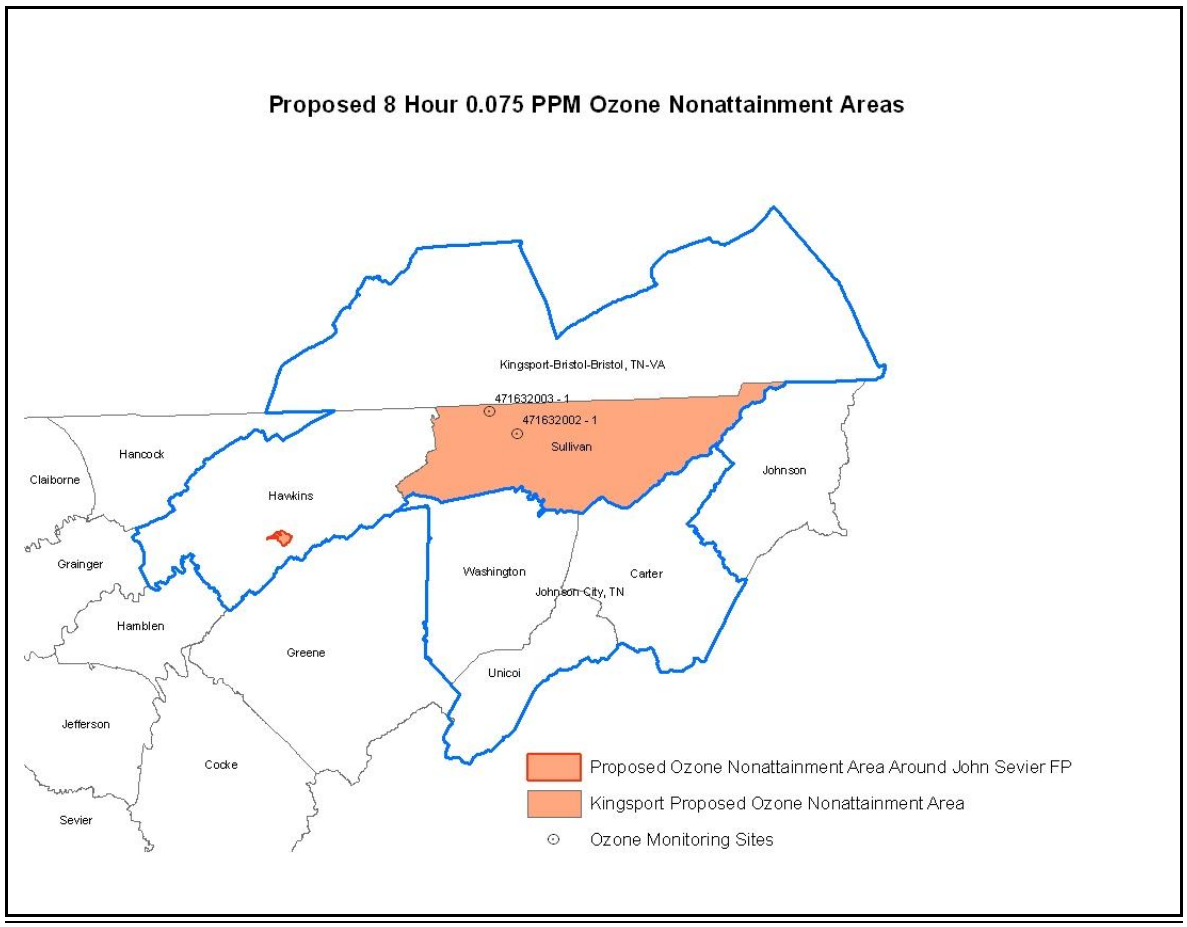

Figure 5A – Kingsport-Bristol MSA and Johnson City MSA

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 NOx 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 NOx 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 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.

Hawkins County Summary

1) Second largest emissions for VOC (4.7 TPD) and third largest for NOx (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.

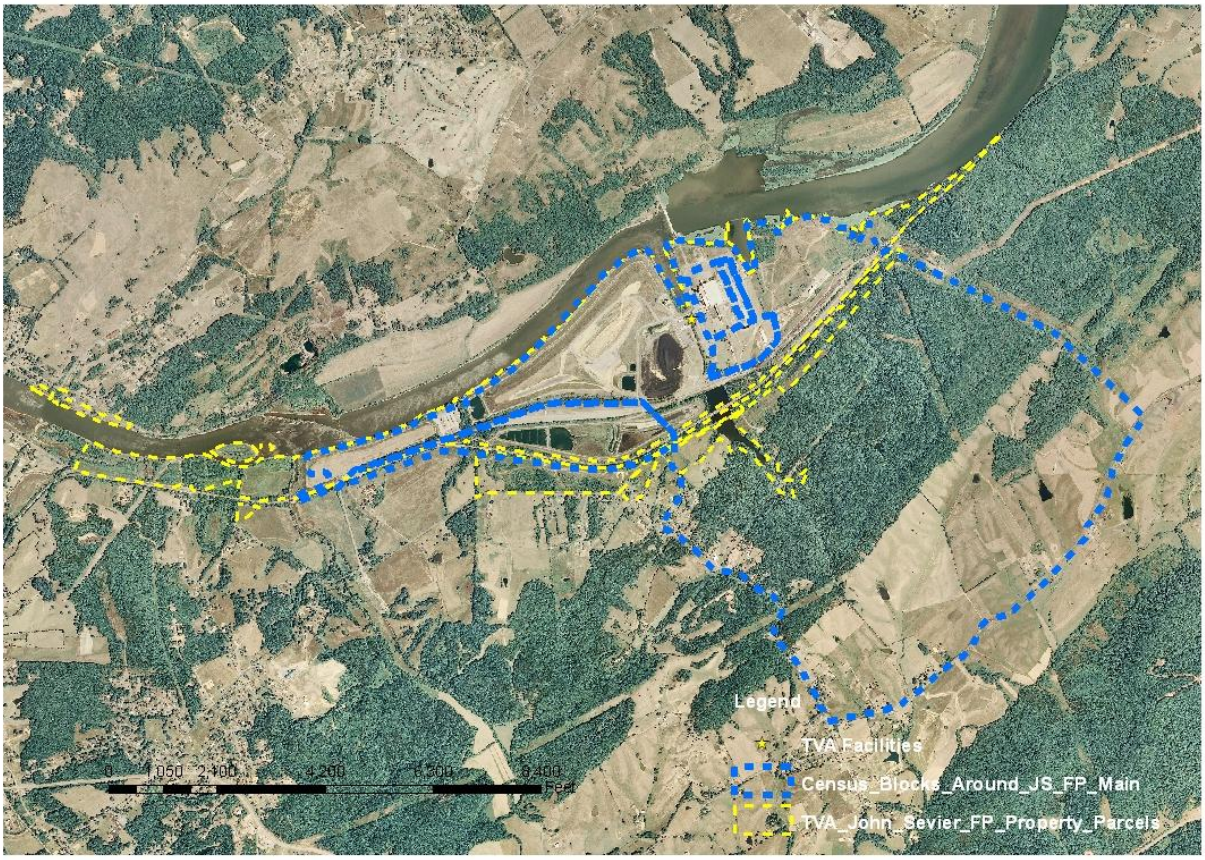

Figure 5B- TVA John Sevier Fossil Plant Census Tract

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 NOx emissions are from point sources. Mobile NOx sources account for (33%) and area NOx 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 NOx and VOC emissions. Employed NOx 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 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.

Sullivan County Summary

1) Largest emissions for both VOC (20.8 TPD) and NOx (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/NOx control requirements.

(6) 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 (Figure 1). The TAPCD is recommending that four counties be classified as nonattainment and one county be classified as attainment. The single attainment-designated county is Union and was formerly classified as attainment also.

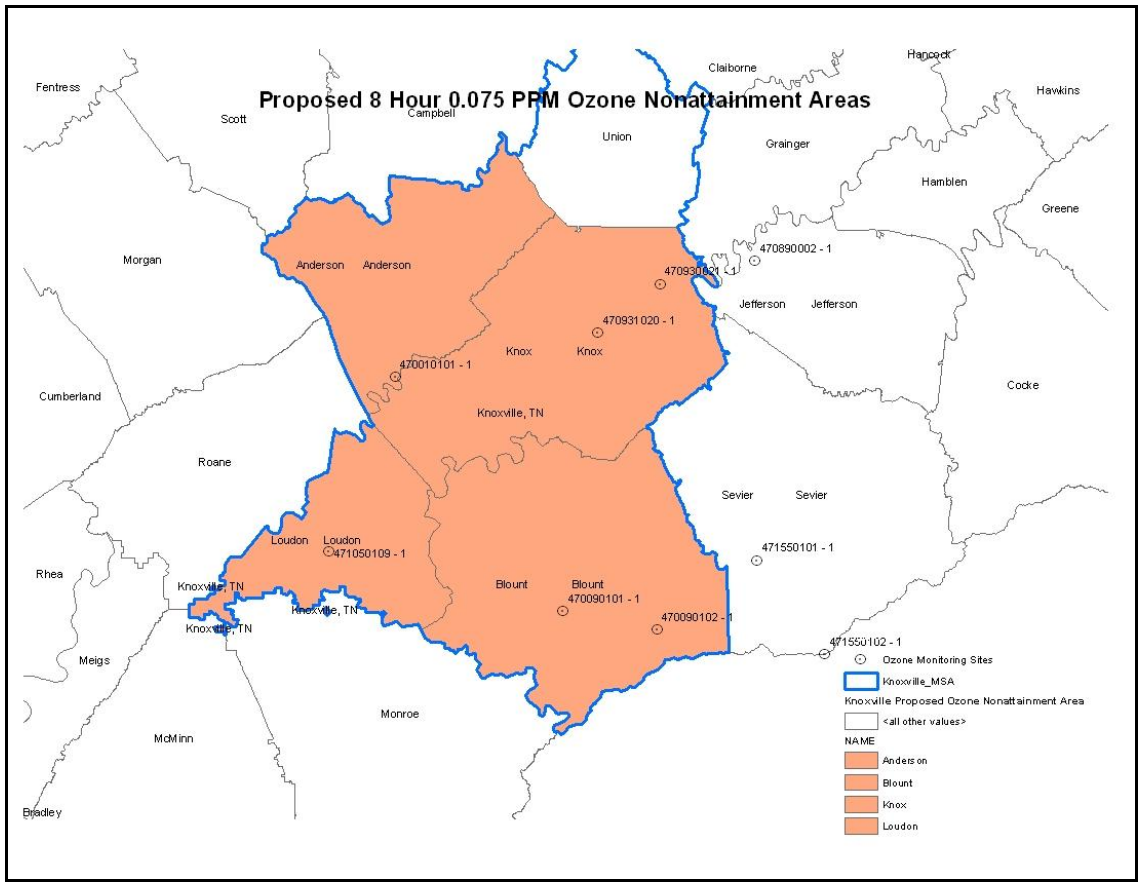

Figure 6 – Knoxville MSA

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 NOx emissions are from point sources. VOC emissions are primarily generated from area sources (78%). Mobile sources account for (22%) of NOx 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 NOx emissions. The U.S. DOE Y-12 units are controlled with a high efficiency packed bed scrubber for NOx 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 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.

Anderson County Summary

1) Second largest emissions for both VOC (16.9 TPD) and NOx (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 NOx 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 NOx emissions. 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.

Blount County Summary

1) Third largest emissions for VOC (11.0 TPD) and fourth largest for NOx (7.4 TPD) in the Knoxville MSA. Third largest for combined emissions of VOC and NOx (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/NOx 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 NOx 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 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.

Knox County Summary

1) Largest emissions for both VOC (30.7 TPD) and NOx (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/NOx 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 NOx 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 NOx and VOC emissions. 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.

Loudon County Summary

1) Fourth largest emissions for VOC (6.2 TPD) and third largest for NOx (10.5 TPD) in the Knoxville MSA. Fourth largest for combined emissions of VOC and NOx (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/NOx 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 NOx 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 NOx burner (LNB) technology

at new and certain modified sources for NOx 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 NOx (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/NOx 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 Knox MSA is the lowest for both NOx 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.

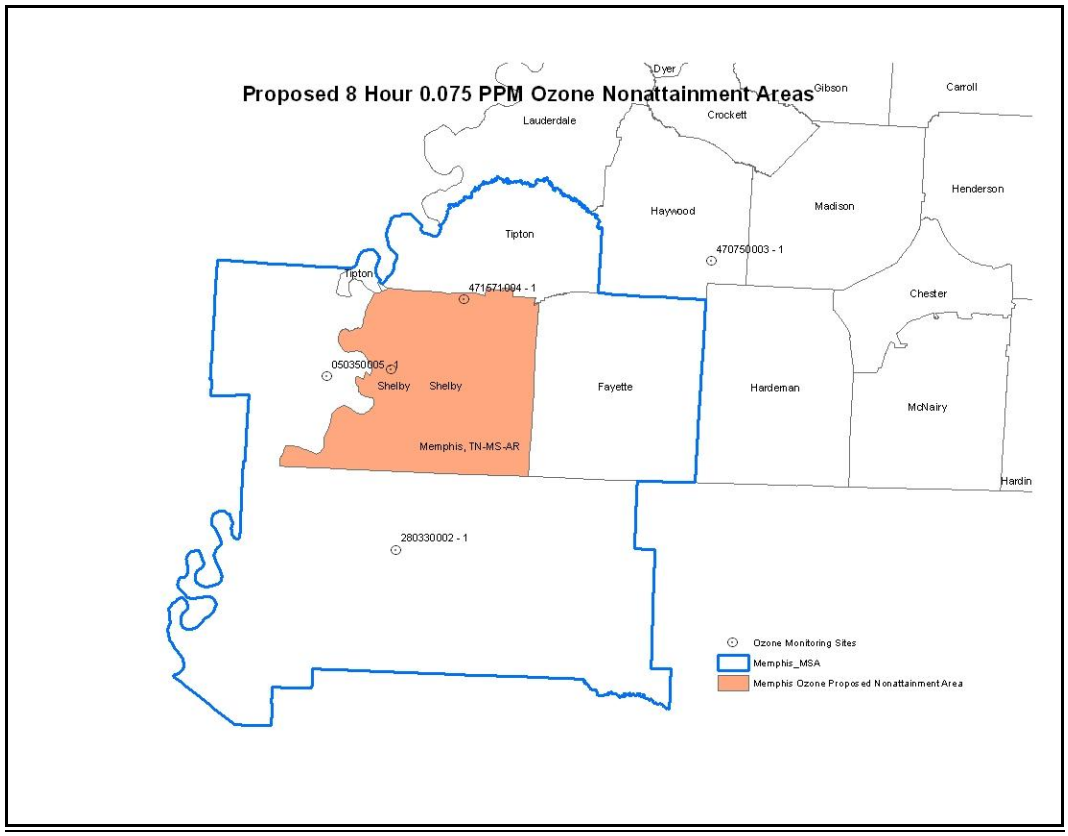

Figure 7 – Memphis MSA

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 NOx 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 NOx and VOC emissions, respectively, of which the vast majority (97%) of the NOx emissions are from mobile sources. It is to be noted that the point source emission contribution of NOx 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 NOx 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 NOx 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 NOx 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 NOx 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 NOx and VOC emissions, respectively, of which the majority (94%) of the NOx emissions are from mobile sources. It is to be noted that the point source emission contribution of NOx 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.

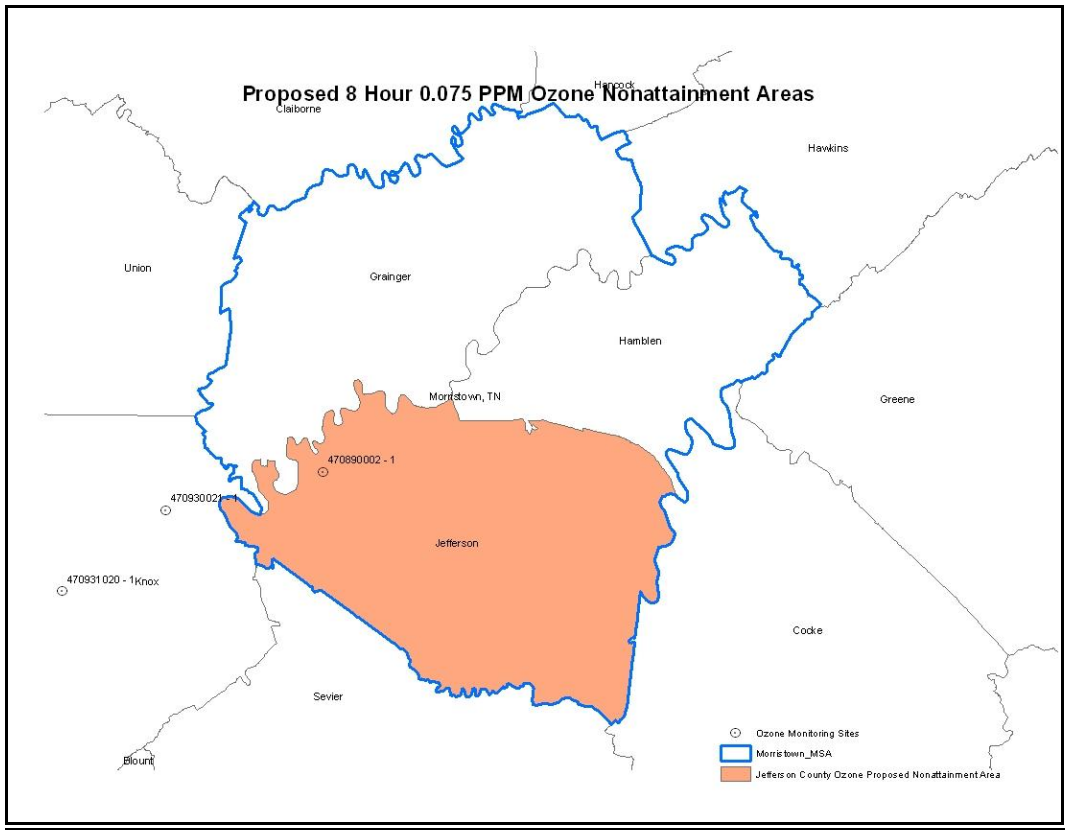

Figure 8 – Morristown MSA

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 NOx or VOC in this county. The majority (94%) of the NOx 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 NOx burner (LNB) technology at new and certain modified sources for NOx control. There is currently no I/M program.

Grainger County Summary

1) Lowest emissions for both VOC (2.3 TPD) and NOx (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/NOx 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 NOx 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 NOx 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 NOx burner (LNB) technology at new and certain modified sources for NOx control. There is currently no I/M program for mobile emissions.

Hamblen County Summary

1) Highest emissions for both VOC (21.6 TPD) and NOx (8.5 TPD) in the Morristown MSA Second highest VOC and fourth highest NOx 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/NOx 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 NOx 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 NOx burner (LNB) technology at new and certain modified sources for NOx 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 NOx (8.2 TPD) in the Morristown MSA. Sixth highest VOC and fifth highest NOx 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/NOx 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.

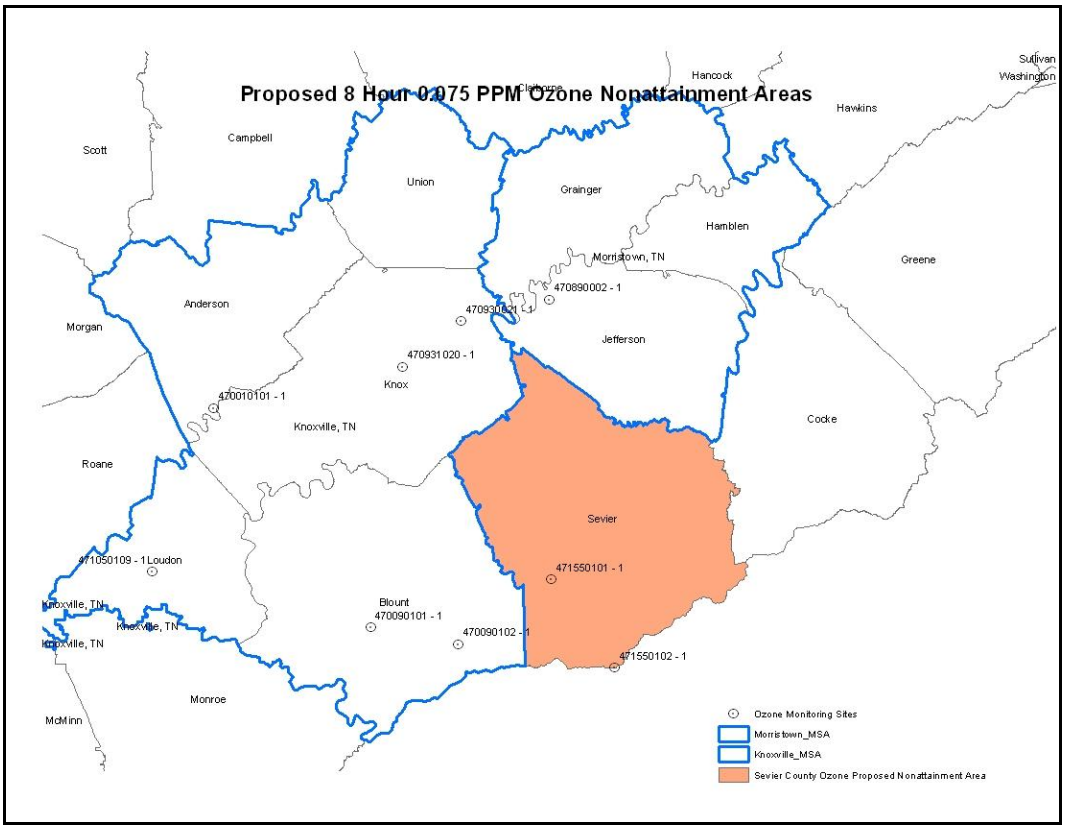

Figure 9 – Sevierville MiSA

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 NOx (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 NOx burner (LNB) technology at new and certain modified sources for NOx 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 NOx 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 NOx (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/NOx 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.

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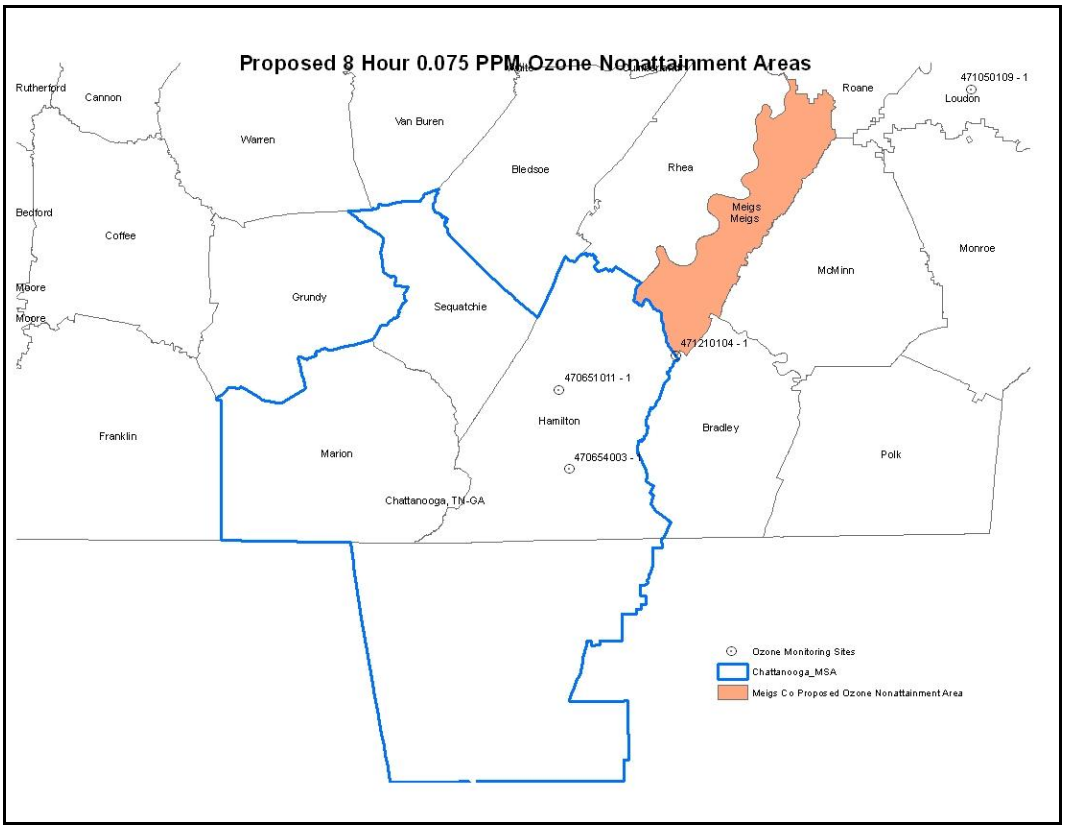

Figure 10 – Meigs County

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 NOx 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, NOx and VOC are not emitted by this source. There is currently no I/M program. Stage 1 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.