



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

**Air Pollution Control Division**  
**9<sup>th</sup> Floor, L & C Annex, 401 Church Street, Nashville, TN 37243**

March 30, 2004

J.I. Palmer, Jr.  
Regional Administrator  
US EPA, Region IV  
Sam Nunn Atlanta Federal Center  
61 Forsythe Street, SW  
Atlanta, GA 30303

RE: Tennessee Early Action Compact Submittal for March 31, 2004 Milestone

Dear Mr. Palmer:

In accordance with the Early Action Compact (EAC) agreements, you will find enclosed air quality improvement plans for each of the seven (7) EAC Areas in Tennessee. The enclosed documentation is being submitted on behalf of each EAC area. This submittal is for the purpose of complying with the March 31, 2004 deadline to submit local air quality plans defining the measures to be taken to achieve compliance with the 8-hour ozone National Ambient Air Quality Standard no later than December 31, 2007.

Each local plan includes local measures that are specific and can be federally enforceable as either a part of the State Implementation Plan or Transportation Improvement Program no later than December 31, 2004. The documentation supporting each local plan and the modeling analysis are based on local controls demonstrating attainment of the 8-hour standard. The following information is enclosed:

- Chattanooga EAC Air Quality Improvement Plan  
for Hamilton, Marion, and Meigs Counties  
(Catoosa and Walker County, GA will make separate submittals)
- Knoxville EAC Air Quality Improvement Plan  
for Anderson, Blount, Jefferson, Loudon, Knox, Sevier, and Union  
Counties

- Nashville EAC Air Quality Improvement Plan for Cheatham, Davidson, Dickson, Robertson, Rutherford, Sumner, Williamson, and Wilson Counties
- Memphis EAC Air Quality Improvement Plan for Fayette, Tipton, and Shelby Counties (Desoto County, MS and Crittenden County, AR are to be submitted separately)
- Tri-Cities EAC Air Quality Improvement Plan for Carter, Hawkins, Sullivan, Unicoi, and Washington Counties
- Haywood County Air Quality Improvement Plan (Attainment)
- Putnam County Air Quality Improvement Plan (Attainment)
- Status of Statewide Measures
- Modeling Analysis Technical Support Documentation (TSD) (ATMOS TSD Final and Appendices A & B)
- Additional Technical Support Documentation (see CD)
  - Nashville EAC Report from UT 032204
  - TDOT VMT Emissions Growth 1999-2030
  - ATMOS Presentation 040212

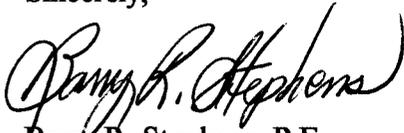
The 2001-2003 ozone monitoring data shows that both Haywood and Putman Counties have demonstrated attainment for the 8-hour ozone National Ambient Air Quality Standard. Haywood and Putnam Counties recognize the importance of air quality as it relates to the health and welfare of its citizens, and for this reason are volunteering to take additional measures. Their efforts at the local level are an attempt to target citizen behavior through education and outreach.

All of the Early Action Compact areas in Tennessee will be substantially impacted by forthcoming federal measures. The Regional impacts of low sulfur diesel fuel and Heavy-Duty Diesel Engine standards will have significant impacts on regional NO<sub>x</sub> and VOC emissions as well as an expected benefit from lowering the gasoline sulfur content beginning in 2004. The change in gasoline sulfur content is expected to make considerable emissions reductions from light and some heavy-duty gasoline powered vehicles. Following the implementation of these federal measures, some of the EAC areas in Tennessee with a minimal amount of local voluntary control measures should be able to achieve attainment of the 8-hour ozone standard by 2007.

J.I. Palmer, Jr.  
March 30, 2004  
Page 3

Due to time constraints, some documents may not have all of the local signatures. The documents have been signed, we have just not received the originals. They will be forwarded to EPA upon our receipt. I believe this submittal satisfies all requirements of the March 31, 2004 EAC milestone, but if more information is needed do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script that reads "Barry R. Stephens".

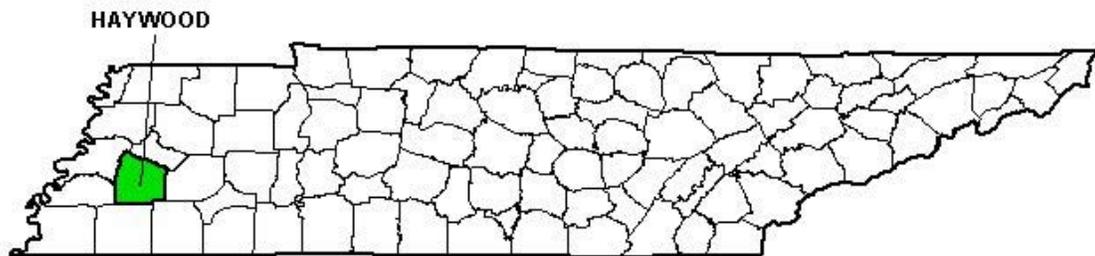
Barry R. Stephens, P.E.  
Director  
Division of Air Pollution Control

cc: Kay Prince, Karen Borel, Dick Schutt, Clifford Beller, and Kenny Richardson  
at EPA Region IV  
Local Air Programs  
Tennessee Air Pollution Control Board  
EAC Signatories

# Haywood County Area

## Local Air Quality Improvement Plan

### Tennessee MSA Areas Pre-2000 Census



Haywood County Area

# Haywood County, Tennessee

## Geography/Topography

Haywood County has a land area of 533 square miles and is located in the gently rolling terrain of the West Grand Division of the state along the Interstate 40 corridor between Memphis and Jackson. It is contiguous to, but not part of the Memphis, TN-AR-MS MSA. It is located east of Tipton County and north of Fayette County. For purposes of this discussion, Haywood County will be compared with these two Memphis MSA counties.

## Meteorological Information

Wind data from Memphis, TN for the period of record from 1988 through 1992 was determined to be representative for Haywood County. The predominate wind direction and speed is from the southwest at 7 to 10 knots (see Figure 1 A). The mean high temperature for July is 92.1 F, while the mean low is 72.9 F. The mean July precipitation is 4.2 inches. The period of record for this data is from 1971 through 2000.

## Planning Authority

The authority for air quality planning for Haywood County resides with the Tennessee Department of Environment and Conservation. Transportation planning for Haywood County is performed by the Tennessee Department of Transportation.

## Air Monitoring

Preliminary analysis of the 2001-2003 monitoring period has shown an air quality improvement for Haywood County. The ozone monitor (ID#470750003-1) located at 1741 Hillville Loop Road shows an 8-hour design value of 0.081 parts per million (ppm) for the 2001-2003 monitoring period. It is unlikely that after the final quality assurance of the 2003 data the 8-hour design value will change significantly.

For the monitoring period of 2000-2002, the 8-hour design value showed a value of 0.086 ppm. In the July 18, 2003 Governor's recommendation for counties not meeting the ozone standard, Haywood County was recommended as non-attainment for ozone based on the 2000-2002 data. However, after reviewing the most recent data for 2001-2003 the State would propose Haywood County be classified as attainment (see Table 1 A).

## Population

Based on projections to 2002 from the 2000 census data, there are 19,655 persons living in Haywood County (see Table 1 C). This indicates a population density of 36.8 persons per square mile. The population of Haywood County is approximately 47.9% rural with the remaining 52.1% living in incorporated areas. The largest cities in Haywood County are Brownsville and Stanton (see Table 1 C).

Haywood County's population from 1990 through 2000 increased by 2.0% (19,414 to 19,797). The population is expected to increase by approximately 3.9% between 2000 and 2010 (see Table 1 B).

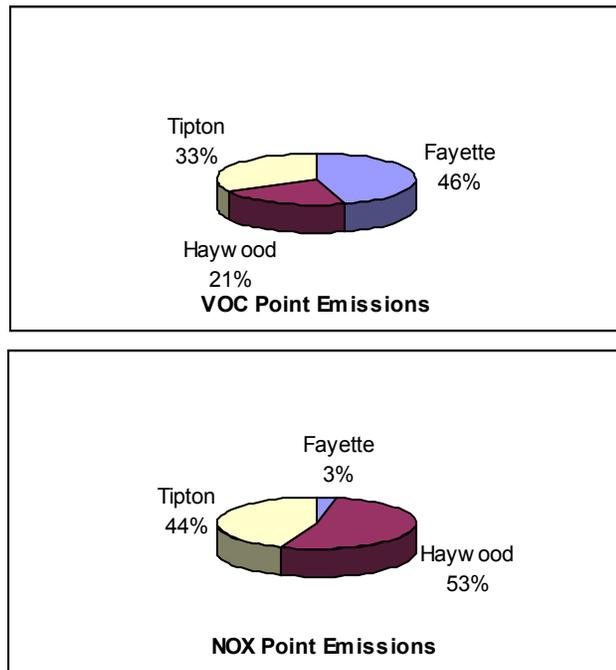
Based on the 2002 population data for Fayette, Haywood and Tipton counties, Haywood County represents approximately 18.8% of the total area population (see Table 1 C).

## Air Emissions

Point source NOX emissions from Haywood County were estimated at 5.83 ton/day in 1999 which represents approximately 53% of the 11.06 ton/day of overall NOX point source emissions from Fayette, Haywood, and Tipton counties (see Table 1 D).

Point source VOC emissions from Haywood County were estimated at 2.83 ton/day in 1999 which represents approximately 21% of the 13.46 ton/day of overall VOC point source emissions from Fayette, Haywood, and Tipton counties (see Table 1 D).

### 1999 NEI Point Source Emissions (ton/day)

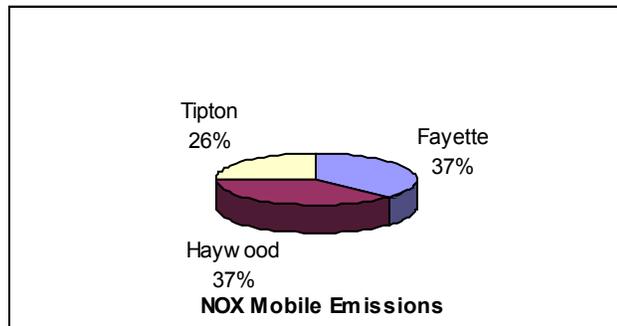
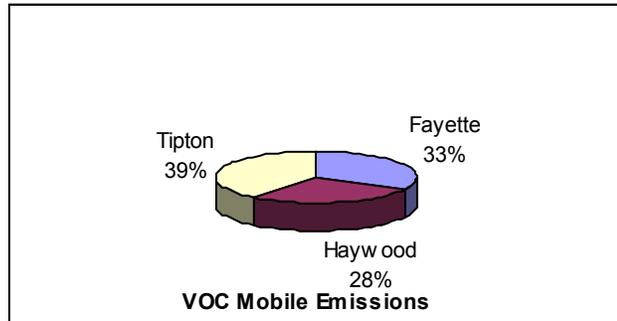


For NOX and VOC control, point sources located within Haywood County are subject to PSD requirements, CTG RACT requirements, Maximum Achievable Control Technology (MACT) requirements for Hazardous Air Pollutants (HAP), and New Source Performance Standards (NSPS).

Mobile source NOX emissions from Haywood County were estimated at 12.13 ton/day in 1999 which represents approximately 37% of the 32.93 ton/day of overall NOX mobile source emissions from Fayette, Haywood, and Tipton counties (see Table 1 D).

Mobile source VOC emissions from Haywood County were estimated at 2.78 ton/day in 1999 which represents approximately 28% of the 10.08 ton/day of overall VOC mobile source emissions from Fayette, Haywood, and Tipton counties (see Table 1 D).

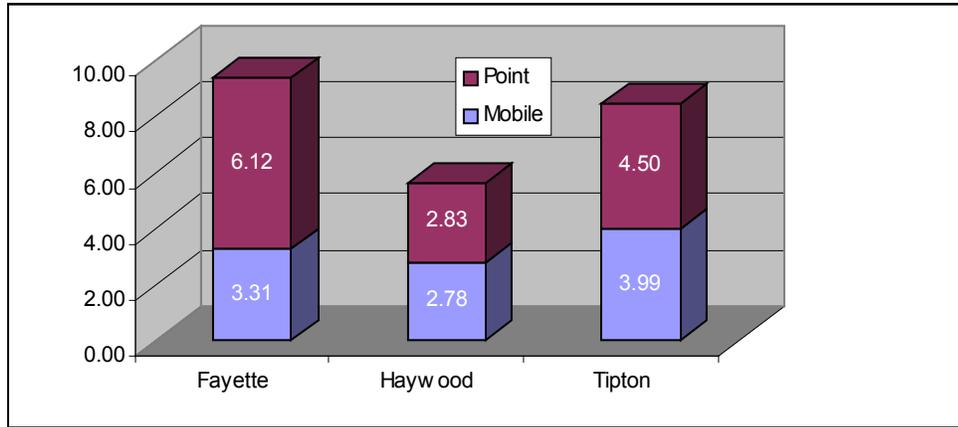
### 1999 NEI Mobile Source Emissions (ton/day)



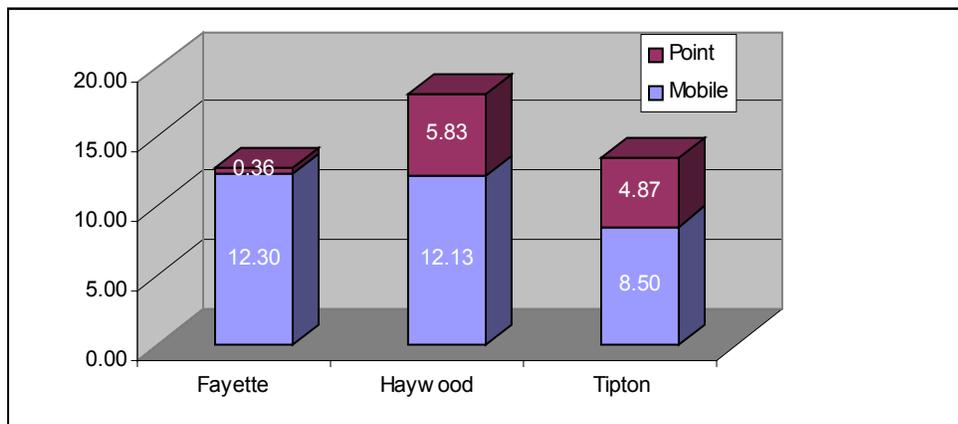
Commuting traffic from surrounding counties into Haywood County is minimal. Commuting traffic from Haywood County into surrounding counties is high.

<b>Commuting Classifications</b>	
Not Significant	0-10%
Minimal	11-30%
High	31-50%
Significant	51% or more

### 1999 NEI VOC Contribution (ton/day)



### 1999 NEI NOX Contribution (ton/day)



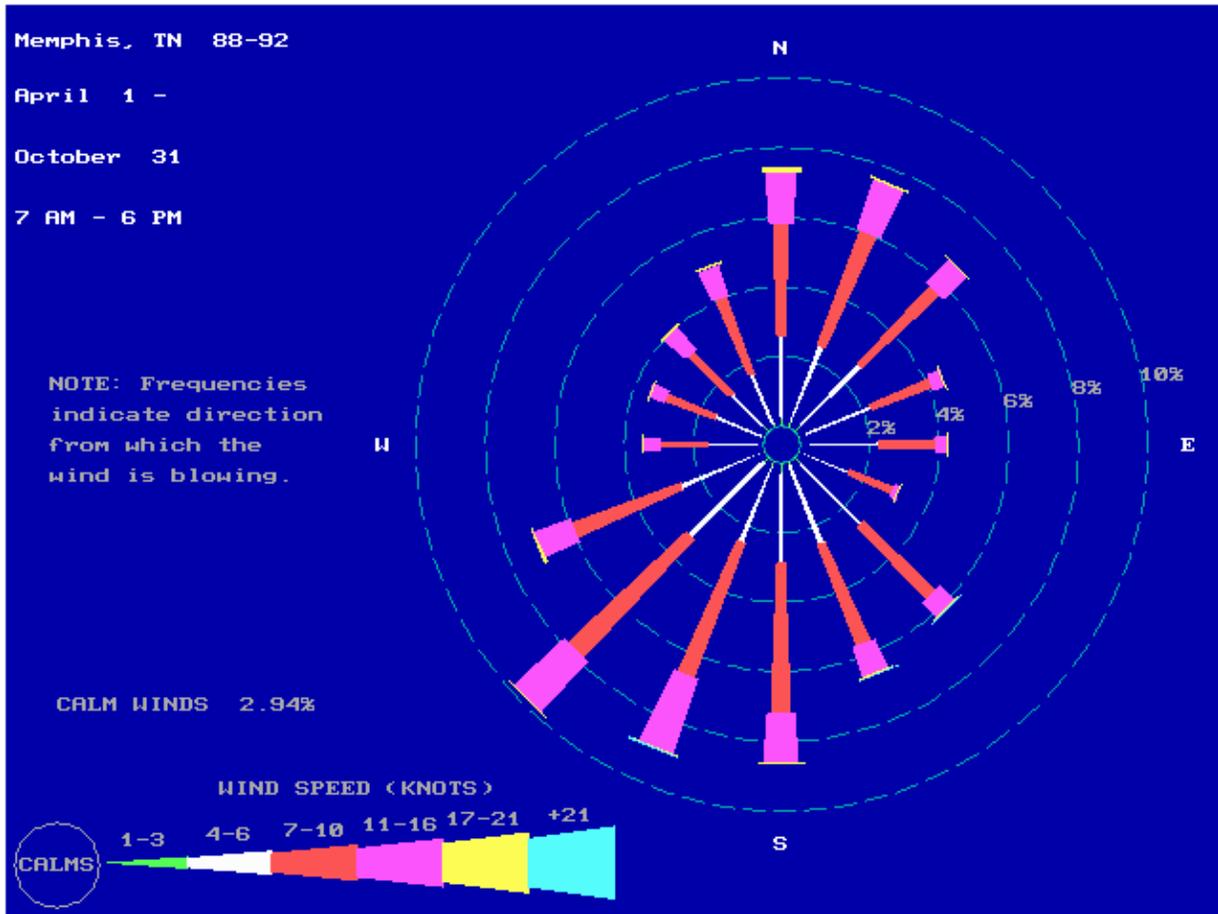
## Summary

Haywood County has demonstrated attainment for the 8-hour National Ambient Air Quality Standard for ozone. Based on the 2001-2003 ozone design value Haywood County's ozone design value is measured at 0.081 ppm. Although measuring attainment, the County recognizes the importance of air quality to the health and welfare of its citizens. For this reason the local government is volunteering to take measures not required of them to improve air quality.

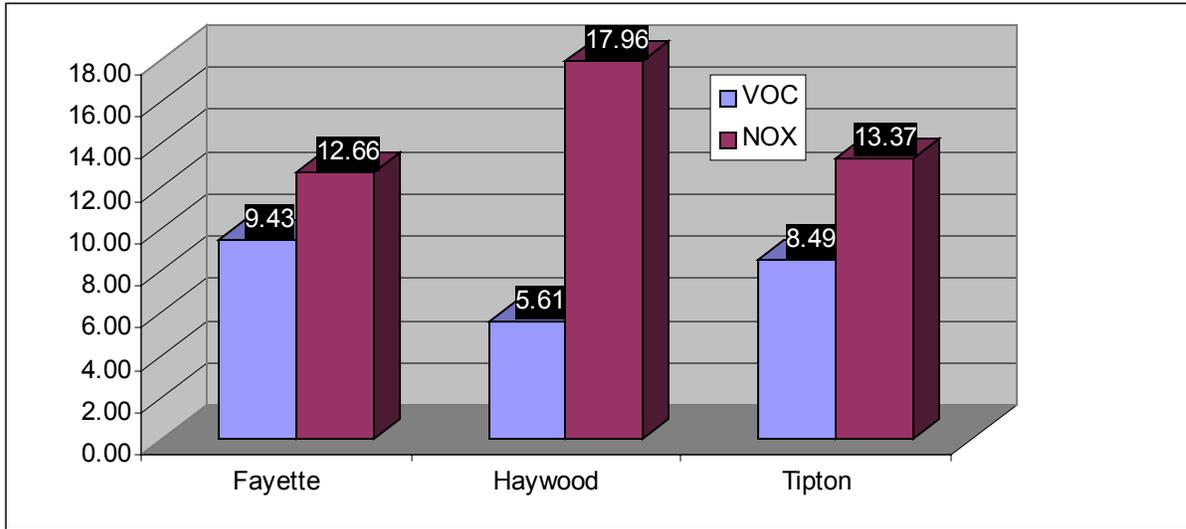
The County has selected several measures for local implementation. Due to the County's rural nature and few stationary source air pollution emissions, emphasis is being placed on public education. The primary source of NO<sub>x</sub> in the County is likely Interstate 40, traversing the County's length, east to west. It is possible the second most prevalent NO<sub>x</sub> source in the County is individual citizen behavior. Efforts on the local level will attempt to target citizen behavior through education and outreach. Through these efforts, and additional local government efforts, the County is attempting to reduce air pollution for its citizens.

# Haywood County Area

Figure 1 A  
Haywood County Area  
Wind Rose



**Figure 1 B**  
**Haywood County Area**  
**1999 NEI VOC and NOX Emissions**  
*(ton/day)*



**Table 1 A**  
**Haywood County Area**  
**Ozone Design Values**  
*(ppm)*

<b>County</b>	<b>Site Name</b>	<b>MONITOR ID</b>	<b>1999 2001 Design Value PPM</b>	<b>2000 2002 Design Value PPM</b>	<b>2001 2003 Design Value PPM</b>
Haywood Co	1741 Hillville Loop Road	470750003 - 1	0.089	0.086	0.081

**Table 1 B**  
**Haywood County Area**  
**Population Growth Data**

<b>County</b>	<b>Population 1990</b>	<b>Population 2000</b>	<b>PERCENT CHANGE 1990 - 2000</b>	<b>Population 2002</b>	<b>Area in Square Miles</b>	<b>2002 Pop. Density (Sq. Mile)</b>	<b>Projection 2010</b>	<b>% Growth 2000 - 2010</b>
Fayette	25,628	28,806	12.7	31,202	705	44.26	32,236	11.9
Haywood	19,414	19,797	1.9	19,655	533	36.88	20,567	3.9
Tipton	37,861	51,271	36.5	53,436	459	116.42	55,559	8.4

**Table 1 C**  
**Haywood County Area**  
**2002 Population Estimates**

Tennessee	Estimated Population
Haywood	19,655
* Brownsville	(10,748)
* Stanton	(615)
Fayette	31,202
Tipton	53,436
<b>Totals</b>	<b>104,293</b>

\* Based on 2000 Census Data

**Table 1 D**  
**Haywood County Area**  
**1999 NEI VOC and NOX Emissions**  
*(ton/day)*

County	VOC			NOX		
	Mobile	Point	Total	Mobile	Point	Total
Fayette	3.31	6.12	9.43	12.30	0.36	12.66
Haywood	2.78	2.83	5.61	12.13	5.83	17.96
Tipton	3.99	4.50	8.49	8.50	4.87	13.37
<b>TOTAL</b>	<b>10.08</b>	<b>13.46</b>	<b>23.54</b>	<b>32.93</b>	<b>11.06</b>	<b>43.99</b>

## **Letters of Support and Resolutions**

### LIST OF CONTROL MEASURES FOR

# HAYWOOD

COUNTY NAME

For the Early Action Compact, the signatory below agrees to the attached list of control measures for the above county. All other signatories shall sign below or attach pages as appropriate.

<u>John F. Shape, Jr.</u>	<u>Haywood County Mayor</u>	<u>03/24/04</u>
NAME	TITLE	DATE

Other signatories are as follows:

<u>Sandra Guisardini</u>	<u>Ex. Dir. BHC</u>	<u>3-24-04</u>
NAME	TITLE <u>Chamber of Commerce</u>	DATE

<u>Alan Russell</u>	<u>County Commissioner</u>	<u>3/24/04</u>
NAME	TITLE	DATE

<u>Robert Green</u>	<u>County Commissioner</u>	<u>3/24/04</u>
NAME	TITLE	DATE

<u>DA Stewart</u>	<u>Citizen</u>	<u>3/24/04</u>
NAME	TITLE	DATE

NAME	TITLE	DATE
------	-------	------

## **Haywood County, Tennessee EAC Control Measures**

1. Discuss with local school board/anti-idling regulation
2. Encourage city/county, local school board and highway department to use cleaner fuels
3. Open burning/only on Ozone Action Days
4. Implement an air quality Action Day in conjunction with Earth Day
5. Public education at community events
6. Student outreach through education systems; educate future drivers on the impact of motor vehicles on the environment