



STATE OF TENNESSEE  
**DEPARTMENT OF ENVIRONMENT AND CONSERVATION**  
**Air Pollution Control Division**  
9th Floor, L & C Annex, 401 Church Street  
Nashville, Tennessee 37243-1531

June 28, 2006

J.I. Palmer, Jr.  
Regional Administrator  
US EPA, Region IV  
Atlanta Federal Center, 12<sup>th</sup> Floor  
61 Forsyth Street, SW  
Atlanta, GA 30303

RE: Submittal of June 30, 2006 Progress Report for Early Action Compact Areas

Dear Mr. Palmer:

Enclosed is a copy of the June 30, 2006 Progress Report in accordance with the Early Action Compact (EAC) requirements for Chattanooga, Nashville, and Tri-Cities EAC areas. This submittal includes an update of the EAC progress from each of the EAC areas in Tennessee and is being submitted by the Tennessee Division of Air Pollution Control to you on their behalf.

This submittal shows Tennessee's and local government's ongoing commitment to achieve the 8-hour ozone standard early and improve our air quality. If any additional information is needed, or if you have questions, please do not hesitate to contact me.

Sincerely,

*Quincy N. Stokes III*

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

Enclosures

cc: Kay Prince and Dick Schutt, EPA Region IV

electronic copies to: TN Air Pollution Control Board  
TN Local Air Programs  
EPA Region IV

# **Progress Report Summary**

**for**

**Early Action Compact Areas**

**in**

**Chattanooga, Nashville and Tri-Cities  
Tennessee**

June 2006

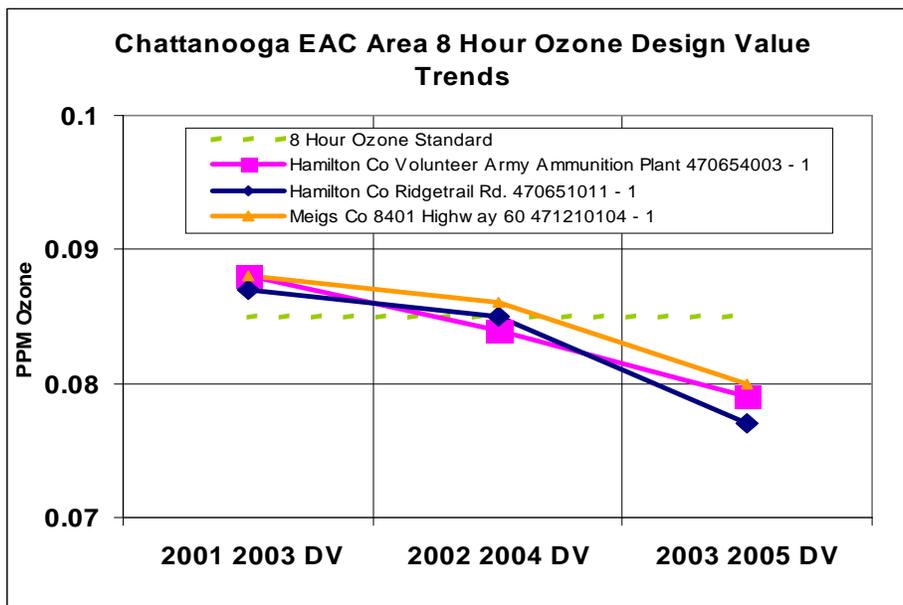
## Air Quality Section

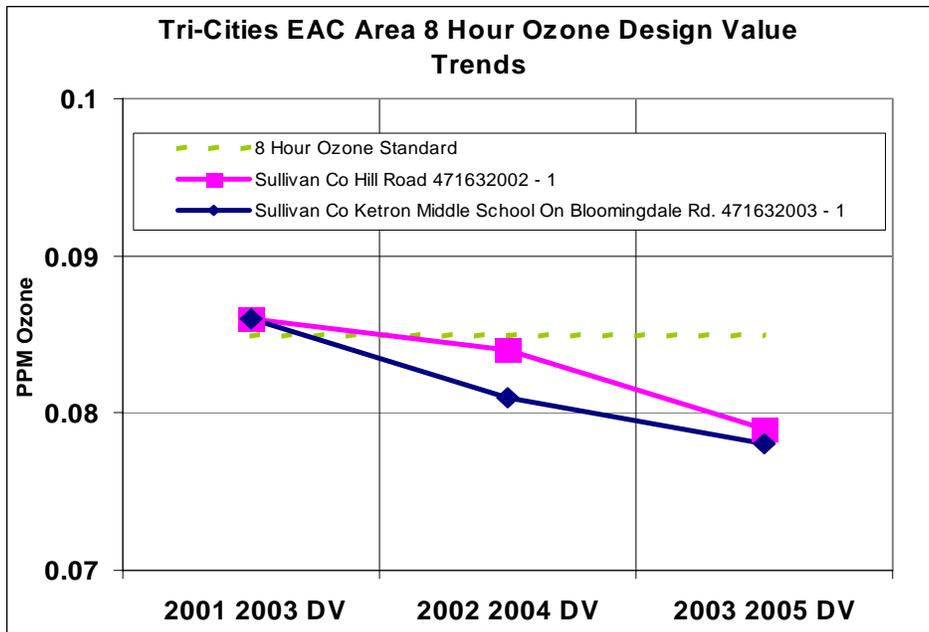
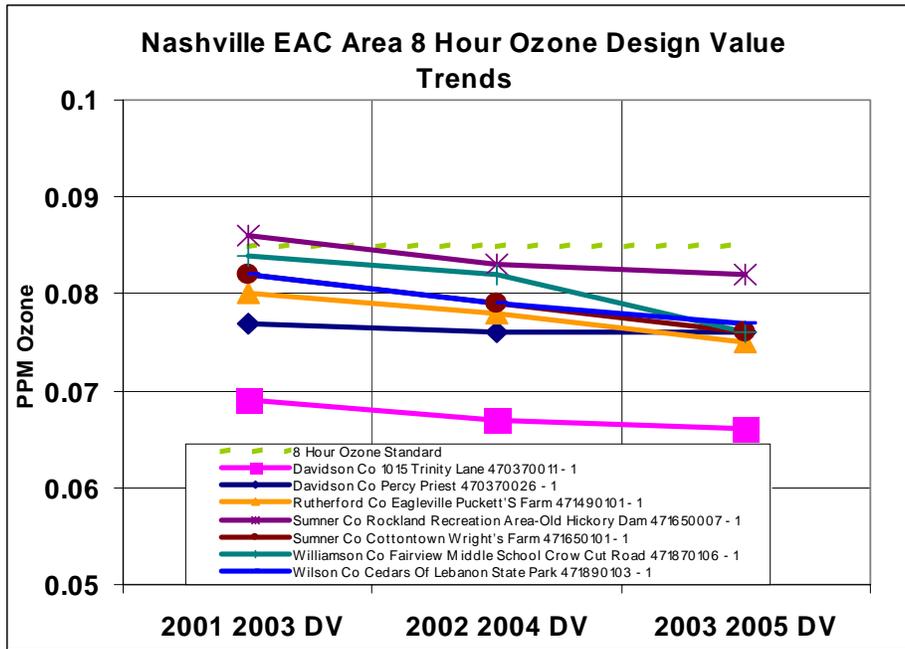
The preliminary ozone air quality data for 2006 continues to demonstrate progress towards meeting the goals outlined in the individual EAC agreements for Chattanooga, Nashville and Tri-Cities. Each of the EAC Areas should be able to show attainment with the 8-hour ozone NAAQS by December 31, 2007.

With preliminary data available through June 25, 2006, the highest 4<sup>th</sup> maximum values reported for all EAC areas in Tennessee are all less than the 8-hour ozone standard (0.085 ppm). The preliminary data reported for the Chattanooga area indicates that the 3 area ozone monitors are reporting from 0.075 to 0.081 ppm. The preliminary data reported for the Nashville area indicates that the 7 area ozone monitors are reporting from 0.068 to 0.076 ppm. The preliminary data reported for the Tri-Cities area indicates that the 2 area ozone monitors are reporting from 0.077 to 0.079 ppm. All EAC areas should successfully achieve attainment early due to the control measures that have been put into place to reduce ozone.

Historical ozone data for the three EAC areas is provided for comparison below:

County	MONITOR ID	2002 4th Max.	2003 4th Max.	2004 4th Max.	2005 4th Max.	2001 2003 DV	2002 2004 DV	2003 2005 DV
Hamilton Co	470654003 - 1	0.094	0.083	0.075	0.08	0.088	0.084	0.079
Hamilton Co	470651011 - 1	0.099	0.08	0.076	0.077	0.087	0.085	0.077
Meigs Co	471210104 - 1	0.099	0.082	0.077	0.081	0.088	0.086	0.080
Davidson Co	470370011 - 1	0.073	0.064	0.064	0.07	0.069	0.067	0.066
Davidson Co	470370026 - 1	0.079	0.074	0.076	0.079	0.077	0.076	0.076
Rutherford Co	471490101 - 1	0.09	0.076	0.07	0.079	0.080	0.078	0.075
Sumner Co	471650007 - 1	0.086	0.086	0.078	0.083	0.086	0.083	0.082
Sumner Co	471650101 - 1	0.087	0.074	0.076	0.078	0.082	0.079	0.076
Williamson Co	471870106 - 1	0.094	0.08	0.072	0.076	0.084	0.082	0.076
Wilson Co	471890103 - 1	0.088	0.079	0.071	0.081	0.082	0.079	0.077
Sullivan Co	471632002 - 1	0.093	0.082	0.077	0.08	0.086	0.084	0.079
Sullivan Co	471632003 - 1	0.093	0.08	0.072	0.083	0.086	0.081	0.078



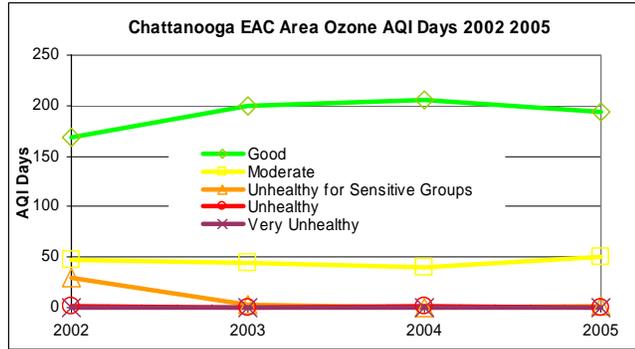


The design value trends for the three EAC areas all demonstrate declines and reductions in ozone levels with all of the there EAC areas reporting monitored compliance with the 8 hour ozone standard in the 2003 to 2005 time frame.

Additional data is presented below that describes the general ozone air quality as reported by the EAC areas AQI for the period fro 2002 through 2005. Note the decline in the number of USG days reported in 2005 as compared to 2002.

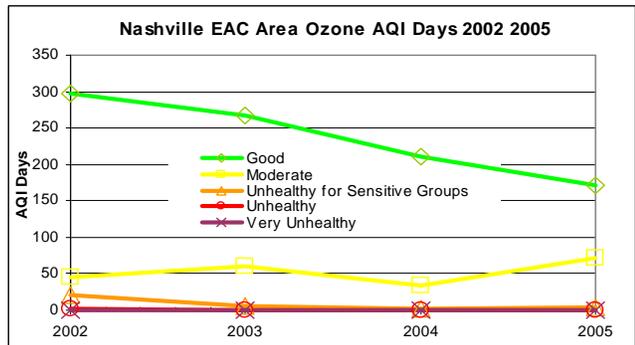
**Chattanooga EAC Area AQI Days (Ozone)**

AQI	2002	2003	2004	2005
<b>Good</b>	168	199	205	194
<b>Moderate</b>	47	44	40	50
<b>Unhealthy for Sensitive Groups</b>	29	3	0	2
<b>Unhealthy</b>	2	0	1	0
<b>Very Unhealthy</b>	0	0	0	0



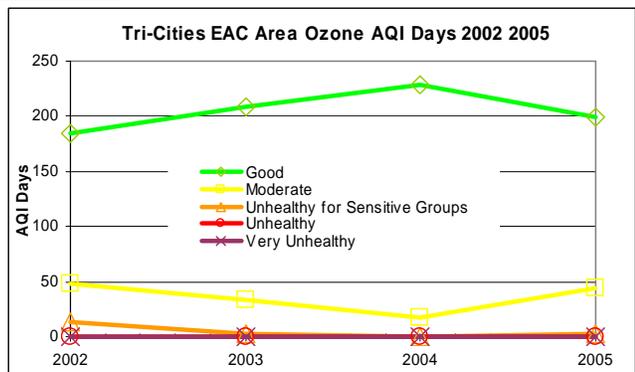
**Nashville EAC Area AQI Days (Ozone)**

AQI	2002	2003	2004	2005
<b>Good</b>	298	268	211	171
<b>Moderate</b>	46	60	34	71
<b>Unhealthy for Sensitive Groups</b>	20	6	1	4
<b>Unhealthy</b>	1	0	0	0
<b>Very Unhealthy</b>	0	0	0	0



**Tri-Cities EAC Area AQI Days (Ozone)**

AQI	2002	2003	2004	2005
<b>Good</b>	185	209	229	199
<b>Moderate</b>	48	34	17	44
<b>Unhealthy for Sensitive Groups</b>	13	3	0	3
<b>Unhealthy</b>	0	0	0	0
<b>Very Unhealthy</b>	0	0	0	0



# 8-HOUR OZONE EARLY ACTION COMPACT FOR CHATTANOOGA AREA

## PROGRESS REPORT

JUNE 26, 2006

The Local Plan for the Chattanooga Area Early Action Compact (EAC) continues to be implemented. The plan contains three regulatory measures and one voluntary measure for Hamilton County, Tennessee, which SIP credit was claimed for: (1) the Seasonal Burning Ban, (2) Stage 1 Vapor Recovery, (3) the Automobile and Light Truck Inspection and Maintenance Program and (4) the Air Quality Alert Program (Pollution Solution).

Marion County and Meigs County in Tennessee each have one regulatory and one voluntary program: (1) Stage 1 Vapor Recovery and (2) the Air Quality Alert Program (Pollution Solution).

Walker and Catoosa Counties in Georgia each have two regulatory measures and one voluntary measure: (1) Seasonal Burning Ban, (2) Stage 1 Vapor Recovery and (3) Air Quality Alert Program (Pollution Solution).

Table 1 shows the breakdown of these measures on a county-by-county basis.

**Table 1.** Chattanooga Area EAC Measures Implemented By County

<b>County</b>	<b>Measure</b>	<b>Regulatory/Voluntary</b>	<b>Effective Date</b>
Hamilton	Seasonal Burning Ban	Regulatory	May 1, 2005
Hamilton	Stage 1 Vapor Recovery	Regulatory	March 15, 2004
Hamilton	Inspection and Maintenance	Regulatory	April 1, 2005
Hamilton	Air Quality Alert Program – Pollution Solution	Voluntary	May 1, 2004
Marion	Air Quality Alert Program – Pollution Solution	Voluntary	May 1, 2005
Marion	Stage 1 Vapor Recovery	Regulatory	May 1, 2006
Meigs	Air Quality Alert Program – Pollution Solution	Voluntary	May 1, 2005
Meigs	Stage 1 Vapor Recovery	Regulatory	May 1, 2006
Catoosa	Seasonal Burning Ban	Regulatory	May 1, 2005
Catoosa	Stage 1 Vapor Recovery	Regulatory	May 1, 2006
Catoosa	Air Quality Alert Program – Pollution Solution	Voluntary	May 1, 2005
Walker	Seasonal Burning Ban	Regulatory	May 1, 2005
Walker	Stage 1 Vapor Recovery	Regulatory	May 1, 2006
Walker	Air Quality Alert Program – Pollution Solution	Voluntary	May 1, 2005

In Hamilton County all four measures have been implemented. In addition, 11 voluntary measures, for which SIP credit was not claimed, were included in the local plan and implementation of these voluntary measures is ongoing.

These additional voluntary measures are as follows:

- Municipal Buses – Increased Ridership
- Intelligent Transportation System
- HELP
- Diesel Retrofits
- Bike Trials and Bike Racks at Work Sites
- Pedestrian Greenways
- Accelerated Replacement of On-Road Vehicles
- Bio-diesel and Alternative-Fuel Vehicles
- Low-Sulfur Fuel in City and County Fleets
- Accelerated Replacement of On-and Off-Road Diesel Vehicles

## **Public Participation**

### Stakeholder Meetings

The major stakeholder meetings for the Chattanooga Area EAC were held in 2004; however, the Georgia Department of Natural Resources, Environmental Protection Division held a series of Open Houses/Q&A Sessions for the State Implementation Plan throughout their state.

The Bureau meets with interested groups to discuss the programs associated with the Early Action Compact, makes appearances with the local media (newspaper, television, and radio) to keep citizens informed and respond to questions and concerns on the progress being made toward the goals of the Early Action Compact.

### Survey to Demonstrate the Benefit of the Ozone Action Day Program

The Pollution Solution program is a voluntary program that was counted for EAC credit in the State Implementation Plan dated December 29, 2004. In order to gain credit, the Bureau is required to quantify the reductions gained by the program.

The preferred method for quantifying the benefit of the program is a public survey, as defined in the “Quantification Method Reference Manual: A Method to Measure Travel and Emissions Impacts of Ozone action Public Education Programs” (April 30, 2003, by ESTC for the California Air Resources Board, U.S. Environmental Protection Agency and the Federal Highway Administration.)

In November 2005, the Bureau contracted with the Center for Applied Social Research at the University of Tennessee at Chattanooga to conduct a survey Hamilton County residents. The survey was created by the government partnership, *It All Adds Up to Cleaner Air*, to gather market data specifically focusing on air and the environment. Before committing to this survey, the Bureau consulted with *It All Adds Up*, Mark Coryell of the EPA National Vehicle and Fuel Emissions Laboratory and with Eric Schreffler, Transportation Consultant, of ESTC, as recommended by EPA Region 4.

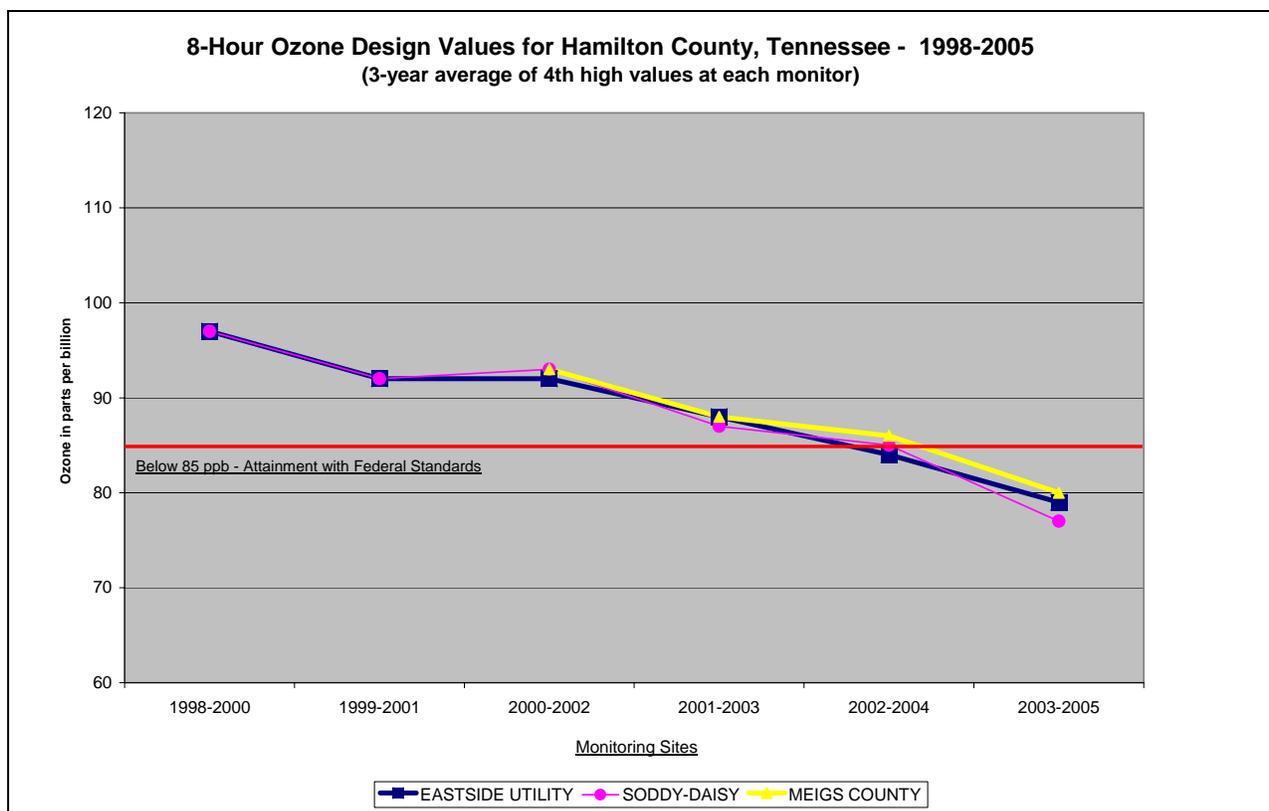
The Chattanooga-Hamilton County Air Pollution Control Board has contracted with True North Research, Inc. to conduct a series of episodic surveys (surveys taken after each ozone action day)

beginning in Ozone Season 2006. This is designed to determine how peoples' behavior changed as a result of the Action Day. Data will be compiled and reported at the end of Ozone Season 2006. The report will be available for review as well. Three surveys have been conducted to date for weekday episodes.

### Updates or Revisions to Modeling, Technical Analyses or Planning Activities

There have been no updates or revisions to modeling, technical analyses or planning activities. The Chattanooga Area Early Action Compact area ozone design value for 2003-2005 is 80 ppb at the end of the 2005 ozone season (see figure below). The design value is the Meigs County monitored design value. The Meigs County monitor has the highest design value in the EAC.

One exceedance of the ozone standard has been experienced thus far during the 2006 ozone season.



All regulatory measures have been adopted and implemented in Hamilton, Catoosa, and Walker Counties. In Meigs County Stage 1 Vapor Recovery has been adopted and is being implemented. Information follows on each of the three regulatory measures, along with information on the twelve voluntary measures.

## **Regulatory Measures**

### Seasonal Open Burning Ban

This control measure was described in full, along with the expected reduction in emissions, in the “Local Plan for the Chattanooga Area Early Action Compact” dated December 21, 2004, and submitted by the State of Tennessee as part of the “Non-Regulatory State Implementation Plan (SIP) Submittal for Tennessee’s Early Action Compact (EAC) Areas” dated December 29, 2004.

The seasonal open burning ban was adopted by Hamilton County on October 4, 2004 and went into effect May 1, 2005. No open burning was allowed in Hamilton County between May 1 and September 30, 2005. The seasonal open burning also went into effect again on May 1, 2006 and will continue until September 30, 2006.

The Bureau undertook a public awareness program in April 2005, disseminating information through media outlets, including 6 TV stations, 21 radio stations and 4 print publications. The information was also sent to local municipalities (including fire halls and police departments) and businesses through various mailing lists, including the Chamber of Commerce and the Chattanooga Manufacturers Association.

Information pertaining to the ban was provided on the Bureau’s website ([www.pollutionsolution.org](http://www.pollutionsolution.org)) and through the Bureau’s telephonic information line (423-643-5971). Additionally the Bureau developed a brochure about the burning ban, which was mailed to construction contractors and nine municipalities. It was also published on the Bureau’s website, where it can be accessed at [http://www.pollutionsolution.org/Open\\_Burning/burning\\_ban\\_brochure.pdf](http://www.pollutionsolution.org/Open_Burning/burning_ban_brochure.pdf).

In September 2005 the Bureau undertook a second public awareness program to make the public aware of the end of the ban and the beginning of the 2005 burning season. The same methods were employed as above, except the brochure was not mailed again.

In Walker and Catoosa Counties in Georgia, ozone season open burning restrictions went into effect on May 1, 2005 and continued through September 30, 2005.

### Stage 1 Vapor Recovery

This control measure was described in full, along with the expected reduction in emissions, in the “Local Plan for the Chattanooga Area Early Action Compact” dated December 21, 2004, and submitted by the State of Tennessee as part of the “Non-Regulatory State Implementation Plan (SIP) Submittal for Tennessee’s Early Action Compact (EAC) Areas” dated December 29, 2004.

Stage 1 Vapor Recovery was adopted by Hamilton County on March 15, 2004. Since that date all gasoline dispensing facilities that are subject to the rule have been issued air pollution control permits. There are 162 gas stations subject to the rule. All stations have been inspected. Renewal permits are being issued and annual gasoline dispensing facility inspections for 2006 are in progress.

During the initial inspections one convenience store chain was found to be out of compliance at two stores. A civil penalty was assessed.

Permitting forms continue to be available on the Bureau's website, [www.pollutionsolution.org](http://www.pollutionsolution.org).

Gasoline dispensing facilities in Meigs County and Marion County are subject to Stage 1 Vapor Recovery beginning May 1, 2006. The State of Tennessee has implemented Stage 1 Vapor Recovery in both Meigs and Marion County. Marion County is not part of the Early Action Compact area but is adjacent to Hamilton County, so was included in the program. The State of Tennessee has sent an information package which included permitting forms to gasoline dispensing facilities in Meigs and Marion Counties. The State is presently receiving applications from sources subject to Stage 1 Vapor Recovery

Stage 1 Vapor Recovery was required beginning May 1, 2006, for gasoline dispensing facilities in Walker and Catoosa counties in Georgia.

#### Automobile and Light Truck Inspection and Maintenance

This control measure was described in full, along with the expected reduction in emissions, in the "Local Plan for the Chattanooga Area Early Action Compact" dated December 21, 2004, and submitted by the State of Tennessee as part of the "Non-Regulatory State Implementation Plan (SIP) Submittal for Tennessee's Early Action Compact (EAC) Areas" dated December 29, 2004.

State vehicle emissions testing began in Hamilton County on April 1, 2005. All passenger cars and light trucks subject to the requirements must pass the emissions test prior to registration in Hamilton County.

The Bureau partnered with the State and members of Envirotest, the contractor in charge of the testing facilities, in a series of outreach events to educate the public about emissions testing. To aid in this the State created a Fact Sheet and a flyer describing the program. (Copies of these are included.)

Two series of Informational Sessions were held, the first on January 26-27, 2005, and the second on March 15, 2005. These were for city and county government officials, new car dealers, auto repair shops and used auto dealers. Presentations were made available to attendees through direct mail and at the Bureau's website, [www.pollutionsolution.org](http://www.pollutionsolution.org).

Two media days were also held, the first on February 15, 2005, and the second on March 16, 2005. In the first event, members of the PR Team met with the two major print media outlets and members of the media from the three local television affiliates of the networks (WRCB, WTVC and WDEF) to introduce them to the program.

The second event took place at the emissions testing center at 5206 Austin Road. Reporters from the three network television stations, Clear Channel Radio (which covers five local radio stations), Citadel Radio (which covers four local radio stations) and the Chattanooga Times-Free Press attended. Stories ran on all three TV stations, Talk Radio 102.3 and in the Chattanooga Times-Free Press.

Two PSAs were recorded for radio and sent to 21 radio stations. They ran at the stations' discretion beginning March 18. Information was also sent to the top ten major employers in

Hamilton County via email and mailed to all Hamilton County residents. The flyer also goes out with each resident's tag renewal notice.

Currently information is available through Hamilton County's website at [www.countyclerkanytime.com](http://www.countyclerkanytime.com), the Bureau's website at [www.pollutionsolution.org](http://www.pollutionsolution.org) and the State's website at [www.state.tn.us/environment/apc/vehicle](http://www.state.tn.us/environment/apc/vehicle). Fact Sheets and flyers are also distributed upon request by the State and the Bureau.

In calendar year 2004, 271,468 automobiles and light trucks were registered in Hamilton County. As of November 30, 2005, 176,185 automobiles and light trucks have been inspected. Of the vehicles inspected, 20,959 vehicles failed when tested, resulting in an 11.9% failure rate. (See Table 2.)

**Table 2.** Vehicle Emissions Testing Information

Vehicles Registered in Hamilton County in 2005	261,273
Vehicles Tested as of 04/31/06	278,824
Vehicles Failed	32,790 (11.9%)

In March 2006, the first cycle of automobile and light truck inspections in Hamilton County was completed. Vehicles will continue to be required to be inspected annually.

#### Truck Speed Limit Reduction

In March 2005, the Tennessee Department of Transportation (TDOT) reduced the speed limit for heavy-duty diesel trucks from 65 mph to 55 mph on all limited access highways in Hamilton County, including parts of Interstate 24, Interstate 75, U.S. Highways 27 and 111. This measure was implemented as an emissions reduction measure although not specified in the "Local Plan" dated December 21, 2004. It is anticipated to result in a reduction 0.7 tons of NOx/day, or 256 tons per year.

The measure was requested by the County Mayor of Hamilton County and the Chattanooga City Mayor for the purpose of improving air quality. This resulted in Hamilton County being the first area in the State of Tennessee to implement this specific emission reduction strategy.

### **Voluntary Measures**

#### Air Quality Alert Program

This control measure was described in full, along with the expected reduction in emissions, in the "Local Plan for the Chattanooga Area Early Action Compact" dated December 21, 2004, and submitted by the State of Tennessee as part of the "Non-Regulatory State Implementation Plan (SIP) Submittal for Tennessee's Early Action Compact (EAC) Areas" dated December 29, 2004.

The air quality alert program, called Pollution Solution, is exercised when the AQI for ozone is predicted to be greater than 100. On air quality alert days, information is sent via email and fax to more than 80 individuals; city, county and State employees in all of the EAC counties; daycares; gyms; hospitals and health care facilities; schools; police and fire departments and also

through media outlets, including 6 TV stations, 21 radio stations and 4 print publications. Information is also disseminated to employers, who then pass the information to their employees, via the Chamber of Commerce and the Chattanooga Manufacturers Association.

Information pertaining to Pollution Solution is also provided on the Bureau's website ([www.pollutionsolution.org](http://www.pollutionsolution.org)) and through the Bureau's telephonic information line (423-643-5971). The local daily newspaper prominently displays the alerts and television stations have been giving increasing coverage of these events.

During 2005, three days were experienced where the predicted AQI for ozone was greater than 100. Pollution Solution was also exercised for 9 days for PM<sub>2.5</sub>. In 2006 Pollution Solution has been exercised 3 times so far.

### **Other Voluntary Control Measures**

These voluntary measures were described in full, along with the expected reduction in emissions, in the "Local Plan for the Chattanooga Area Early Action Compact" dated December 21, 2004, and submitted by the State of Tennessee as part of the "Non-Regulatory State Implementation Plan (SIP) Submittal for Tennessee's Early Action Compact (EAC) Areas" dated December 29, 2004.

These voluntary measures were not modeled or included in the SIP, yet they continue to contribute to the effort to improve air quality. Specific notable accomplishments that contribute to air quality improvement include:

#### Municipal Buses – Increased Ridership

The public use of municipal buses continues to increase. The downtown shuttle route uses electric and hybrid-electric buses. In 2004, ridership for the year totaled 950,315. Through November 2005, ridership was 955,992. Since the shuttle began its service in 1992, CARTA estimates that 2,002,768 pounds of emissions have been eliminated as a result.

CARTA's ridership overall increased from 3,206,534 riders in 2004 to 3,223,309 in 2005. A further increase is expected in fiscal year 2006 as a result of higher gasoline prices and public awareness. Thus far ridership has increased by 6% since July 2005.

#### Intelligent Transportation System

TDOT began the installation of Hamilton County's SmartWay Intelligent Transportation System in 2005. Phase 1 of the project—installation of 64 freeway cameras—is underway and should be completed by spring 2006. These cameras are used to dispatch the HELP trucks.

This camera-dispatcher system will be used until 2008, which is when TDOT estimates the rest of the SmartWay system, including Phases 2 and 3, will come online. Between now and 2008 TDOT will be building a larger complex to house the equipment necessary to run the entire system.

Phase 2 of the project comprises the installation of 20-25 dynamic message signs, which will be installed on the freeways. These will reroute motorists away from congested areas. They will also be used to announce air quality alerts if TDOT agrees to this.

Phase 3 will include the installation of a traffic detection system, which senses the average speed of traffic and alerts dispatchers if there is a slow-down. Additionally a low-band AM radio station with traffic information will be put into service.

### HELP

TDOT's HELP trucks patrol the most heavily traveled freeways in Chattanooga, Knoxville, Memphis and Nashville seven days a week. The HELP Program emphasizes quick clearance of congestion-causing accidents and breakdowns on the highways. This is part of the TDOT SmartWay plan to address traffic congestion issues.

HELP has been operating in Chattanooga since June 2000. According to TDOT's website, 543,281 motorists have been assisted by this program since it began. Following is a table describing the type of service provided by HELP to motorists in Chattanooga. For comparison, in Table 3 the other major cities are listed as well.

**Table 3.** Types of Services Provided by HELP

Type of service	Knoxville	Nashville	Chattanooga	Memphis
Provided traffic control	25,932	70,441	52,252	19,744
Tagged abandon vehicles	11,545	25,242	11,075	37,364
Changed tires	12,029	23,824	8,693	29,875
Provided fuel	10,075	13,896	7,381	19,144
Relocated from travel lanes	4,684	15,161	8,735	6,989
Debris removal from lanes	12,207	9,399	9,504	10,228
Provided first aid	736	621	941	1,108

### Diesel Retrofits

The Chattanooga-Hamilton County Air Pollution Control Bureau and First Student, Inc., a provider of student transportation, announced the successful completion of the Clean School Bus project on September 29, 2005. This project resulted in a significant reduction of pollution from 105 school buses. This is more than half of the school buses in Chattanooga and Hamilton County. The diesel retrofit project improved local air quality and reduced children's exposure to diesel exhaust. It was made possible through grant funding provided by U.S. EPA.

### Bike Trails and Bike Racks at Work Sites

Chattanooga has once again been designated one 5 best Cycling Cities in its size class in the United States by Bicycling Magazine in 2006. The Chattanooga area has a Bicycle Task Force (BTF) that meets monthly and the chairperson serves on the Executive Staff of the Transportation Planning Organization. BTF hosted Bike2Work 2005 with support from the community, including key sponsorship by Blue Cross/Blue Shield of Tennessee. Bike2Work was held on the first Friday of every month from May until October. Bike2Work2006 started on May 5. It was held also on June 2 and will be held July 7 August 4, September 1 and October 6.

Attendance routinely included participation from the Chattanooga City Council, as well as the Administrator for Parks & Recreation and the Executive Director of Outdoor Chattanooga.

In partnership with the Chattanooga Bicycle Club, Urban Bicycle Tours are held each week which highlight the bicycle facilities and community.

Additional events were held during Bicycle Friendly Week in October. They included:

- Riverwalk Bicycle Day – This event equipped bicyclists with free bicycle bells, safety and etiquette information, and a free maintenance check.
- Bicycle Friendly Community Award – The presentation celebrated Chattanooga's designation as a Bicycle Friendly Community by the League of American Bicyclists. It was attended by the Mayor, a member of the City Council, the Parks & Recreation Administrator and other government and citizen representatives.
- Undercover Chattanooga: A Scavenger Hunt – This event was hosted by the Chattanooga Bicycle Club to explore the public architecture and sculpture around the city.

The Tennessee Riverwalk was completed between downtown Chattanooga and the Chickamauga Dam in April 2005. This shared-use facility serves as an important recreational and transportation facility for bicyclists and pedestrians. It is used as a primary feeder route as part of the area's Bike2Work activities. The Mayor and other dignitaries completed a bicycle ride of the entire facility as part of a grand opening celebration.

The Chattanooga Urban Area Bicycle Facilities Master Plan, presented on April 2002 at a public meeting, builds upon the 140 miles of existing and previously planned greenways within the planning area. The plan identifies 382 miles of additional facilities that are comprised of the following:

- 40 miles of Class I - Multi-use Paths
- 154 miles of Class II- Bike Lanes (separated lane 4-6 ft. wide immediately adjacent to vehicular travel lane)
- 188 miles of Class III - Bike Routes (a wide outside lane to accommodate both vehicles and bicycles)

The planning horizon for this plan is 20 years. The plan addresses engineering, education, encouragement, and enforcement. These aspects of bike plans, often referred to as the "Four Es," are essential to the successful implementation of the plan.

The final segments of Phase I of the area's Bicycle Plan were delayed in 2005 due to many of the street conversions being completed in the downtown area. However, 8 additional miles of bike paths were added through the Riverwalk and 1 additional mile of bike lane was added to portions of East 3<sup>rd</sup> Street.

The City has installed bike racks along the Market Street corridor and libraries and recreation centers. Additional bike racks were installed in 2006. Major employers such as Unum Provident, TVA and Blue Cross have bicycle parking facilities installed at their facilities.

All mainline buses from the Chattanooga Regional Area Transportation Authority (CARTA) are equipped with bicycle racks. The Bicycle Task Force has a demonstration unit which is used to

promote usage. Use of bicycle racks on buses is increasing as a result of outreach efforts. In 2004, 2656 bikes were transported on buses. In 2005, 2788 bikes were transported on buses. In 2006, during the first 4 months of the year, 966 bicycles were transported on the buses.

During Riverbend 2006, a large outdoor musical festival lasting 9 days in June, a heavily-publicized and successful “Bike-To-Riverbend” program was conducted.

### Pedestrian Greenways

The Chattanooga area has an extensive network of pedestrian greenways. In 2005 the Tennessee Riverpark added 8 miles to its greenway and the new, mile-long University Greenway was opened. This greenway provides a pedestrian pathway to the University of Tennessee at Chattanooga campus.

There are now 27.5 miles of greenways in Chattanooga, up from 12 miles in 2004.

Funding in the amount of \$1.78M has been earmarked for the extension of the South Chickamauga Creek Greenway. This will add approximately seven miles to the pedestrian greenway system in Hamilton County.

### Accelerated Replacement of On-Road Vehicles

The Bureau has 2 hybrid-electric automobiles in its fleet and presently requisitioning a third hybrid electric vehicle. The City of Chattanooga has purchased 11 hybrid-electric automobiles and is committed to buying more alternative-fuel vehicles as the fleet turns over. The City of Chattanooga is also purchasing at least 7 to 10 2007 garbage to replace older vehicles.

### Bio-diesel and Alternative Fuel Vehicles

In December 2004 bio-diesel entered the Chattanooga retail market through the Midnite Oil station on Bonny Oaks Drive and Benton Oil Company.

Use of biodiesel in East Tennessee continues to grow. No biodiesel was used in East Tennessee in 2003. Starting in 2004 approximate biodiesel use is as follows:

2004 approximately 90,000 gallons of B100  
2005 approximately 750,000-8,000,000 gallons of B100  
2006 goal of 1,000,000 gallons of B100

Other local fleet users include the City of Chattanooga, Hamilton County, Benton Oil Company, McCallie School, Southern Champion Tray, Stafford Bus Service, Chattanooga Regional Transportation Authority and Crabtree Farms. In addition, the fuel is available for purchase at a retail station centrally located in the city so a number of vehicles in the Chattanooga area are using a B20 blend in their vehicles.

A local private school, Baylor, is turning the dining hall waste oil into fuel for its vehicles. The program is being led by a 17-year old student who wrote a grant for the program. The student is building the distiller himself and using a standard recipe for biodiesel. The school hopes to make 30-40 gallons of biodiesel per week for its own use.

## Low-Sulfur Fuel in City and County Fleets

The City of Chattanooga and Hamilton County continue to purchase only on-road low-sulfur diesel for the fleet vehicles (including off-road vehicles) not using a bio-diesel blend. The City says it will begin using ultra-low-sulfur diesel in its fleet when it becomes available in 2006.

## Accelerated Replacement of On- and Off-Road Diesel Vehicles

CARTA has a total of 83 buses in its fleet:

- 54 diesel buses (3 have been converted to bio-diesel)
- 15 Care-A-Vans (1 has been converted to bio-diesel)
- 12 Battery-powered electric buses
- 2 Hybrid-electric buses

CARTA offers an aggressive program for reducing vehicle emissions. In addition to the pilot project they are running on bio-diesel, 39 buses in the mainline fleet have been replaced with new buses with cleaner technology. By March 1, 2006, 10 more will be replaced, leaving only 5 buses in the fleet that were manufactured between 1986-88. CARTA will replace these during the next round of purchasing, though no official date has been set.

## Additional Measures

In addition to the voluntary measures listed above, two other initiatives have been taken.

*Waste Transfer Station* – A private waste transfer station has been constructed in a central location. The City of Chattanooga has contracted with the facility to haul its refuse collected to the sanitary landfill. New, cleaner-burning 2005 Kenworth trucks and two, 2006 roll-off trucks were purchased. The facility also serves private waste haulers.

Each trip delivers the equivalent of five loads of refuse under the previous system. Between December 2004 and 2005, this project eliminated an estimated 543,000 vehicle miles traveled by the older and dirtier garbage trucks.

The City of Chattanooga also implemented a “Register for Recycling” program to reduce VMTs from these heavy-duty diesel vehicles as well.

*Conversion to Two-Way Streets* – Downtown Chattanooga converted several downtown streets from one-way to two-way in 2004. Conversion of two-way streets decreases the number of vehicle miles traveled by allowing drivers to travel a more direct route to their destination. It also makes streets more pedestrian friendly.