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

December 28, 2006

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

RE: Submittal of December 31, 2006 Progress Report for Early Action Compact Areas

Dear Mr. Palmer:

Enclosed is a copy of the December 31, 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,

Barry R. Stephens 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
FOR THE
CHATTANOOGA AREA EARLY ACTION COMPACT**
December 31, 2006

Submitted by the Chattanooga-Hamilton County
Air Pollution Control Bureau
December 15, 2006

**PROGRESS REPORT ON 8-HOUR OZONE EARLY ACTION COMPACT FOR THE CHATTANOOGA,
TENNESSEE AREA**

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

County	Measure	Regulatory/Voluntary	Effective Date
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 SIP credit measures have been implemented. In addition, 12 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:

- Public Transit – Increased Ridership
- Intelligent Transportation System
- HELP – Motorist Assist Trucks
- Diesel Retrofits
- Truck Speed Limit Reduction
- Bike Trials and Bike Racks at Work Sites
- Pedestrian Greenways
- Safe Routes to School
- Accelerated Replacement of On-Road Vehicles
- Bio-diesel and Alternative-Fuel Vehicles
- Ultra-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 stakeholders' involvement is currently through the public Transportation Planning Organization (TPO).

The Bureau continues to meet with interested groups to discuss the programs associated with the Early Action Compact and 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 included for EAC credit in the State Implementation Plan (SIP) dated December 29, 2004. In order to gain credit, the Bureau is required to quantify the reductions gained by the program. The SIP credit given by EPA for the voluntary mobile source emission reduction program (VMEP) was 0.13 tons of oxides of nitrogen (260 lbs) per day.

The preferred method for quantifying the benefit of the program was 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 of Hamilton County residents. The survey was created by the government partnership, *It All Adds Up to Cleaner Air*, to gather market

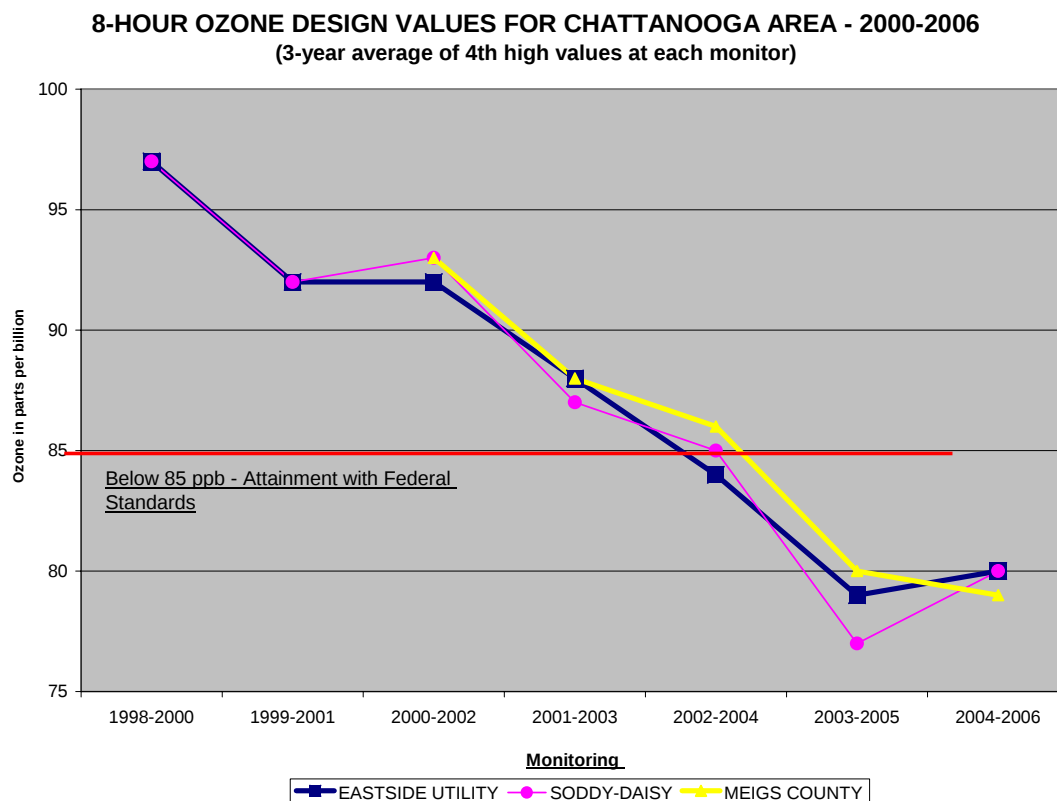
data specifically focusing on air and the environment. Before committing to this survey, the Bureau consulted with *It All Adds Up*, Mark Coryell of the EPA National Vehicle and Fuel Emissions Laboratory and with Eric Schreffler, Transportation Consultant, of ESTC, as recommended by EPA Region 4.

The Chattanooga-Hamilton County Air Pollution Control Board contracted with True North Research, Inc. to conduct a series of episodic phone surveys (surveys taken after each ozone action day) during the 2006 Ozone Season. This was designed to determine how peoples' behavior changed as a result of the Ozone Action Day. A total of 500 randomly selected adults in Hamilton County participated on the evening of one of the five Ozone Action Days. These surveys were conducted in May, July, and August and lasted an average of 15 minutes. The survey concluded that 4,812 trips were reduced daily as a result of the Ozone Action Days, totaling 26,499 miles per day. True North used a reducer of 50% to compensate for respondents who might inflate their responses. Overall 2.04% of respondents indicated they had reduced driving as a result of the Ozone Action Day. The daily oxides of Nitrogen reductions were 0.026 tons (52 lbs) per day, or 20% of our target. In order to achieve 0.13 tons per day 24,060 people in Hamilton County will need to change their driving habits on Ozone Action Days. One factor which may have impacted the effectiveness of the program is that the Public Relations Specialist resigned in February (before Ozone season) and a replacement was not obtained until August (after the survey had been completed.) Another factor is the average daily commute trip which was provided for use in the calculation. The average work trip of 6.88 miles and 5.42 miles for non-work trips seems low for the geographic layout of the area. Further investigation will be made into this. The results can be viewed in the "2006 Ozone Action Day Summer Season Evaluation Report."

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 2004-2006 is 80 ppb at the end of the 2006 ozone season (see figure below). The design value is the Eastside Utility and the Soddy Daisy monitors. Both the Eastside Utility and Soddy Daisy monitors have the same design value.

On seven (7) days, ozone readings of 85 ppb (8-hour average) or greater were observed during the 2006 ozone season.



All regulatory measures have been adopted and implemented in Hamilton, Catoosa, and Walker Counties. Information follows on each of the three regulatory measures, along with information on the voluntary measures.

Regulatory Measures

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

The Bureau undertook a public awareness program in April 2006, 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 and through the Bureau's telephonic information line 423-643-5971. Additionally the Bureau distributed a brochure about the burning ban. 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.

During the burning ban this year (May 1, 2006 – September 30, 2006) we responded to a total of 59 complaints of burning. Fifty (50) of those were confirmed violations.

During the burning ban last year (May 1, 2005 – September 30, 2005) we responded to a total of 88 complaints of burning and 66 of those were confirmed. During the same period the year before (May 1, 2004 – September 30, 2004) we responded to 156 complaints of open burning and 126 of those were confirmed. Overall, Hamilton County residents are reducing burning during the seasonal burning ban. The number of complaints decreased 62% since the ban went into effect in May 2004.

In September 2006 the Bureau undertook a second public awareness program to make the public aware of the end of the ban and the beginning of the 2006 burning season. The same methods were employed as above.

In Walker and Catoosa Counties in Georgia, ozone season burning restrictions went into effect on May 1, 2005 and continued through September 30, 2005. This was enforced again from May through September 2006.

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 175 gas stations subject to the rule and 145 have had their annual inspection so far this year. The remaining 30 gas stations will be inspected by February 1, 2007.

Permitting forms continue to be available on the Bureau's website, www.pollutionsolution.org.

Gasoline dispensing facilities in Meigs County and Marion County were subject to Stage 1 Vapor Recovery beginning May 1, 2006 and the State of Tennessee has implemented this effort in both counties. 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 sent an information package which included permitting forms to gasoline dispensing facilities in Meigs and Marion Counties. There are 15 gas stations in Marion County and 7 in Meigs County that have been identified for permitting.

Stage 1 Vapor Recovery was required beginning May 1, 2006, for gasoline dispensing facilities in Walker and Catoosa counties in Georgia. There are 111 gas stations in the counties, combined, that are subject to the Stage 1 Vapor Recovery.

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.

Two Public Service Announcements were recorded for radio and sent to 21 radio stations. They ran at the stations’ discretion beginning March 18. 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, the Bureau’s website at www.pollutionsolution.org and the State’s website at www.state.tn.us/environment/apc/vehicle. Fact Sheets and flyers are also distributed upon request by the State and the Bureau.

In March 2006, the first cycle of automobile and light truck inspections in Hamilton County was completed. As of November 30, 2006, 274,670 automobiles and light trucks have been inspected. Of the vehicles inspected, 26,662 vehicles failed when tested, resulting in a 9.7% failure rate. (See Table 2.) Vehicles will continue to be required to be inspected annually.

Table 2. Vehicle Emissions Testing Information

Vehicles Registered in Hamilton County in 2005	261,273
Vehicles Registered in Hamilton County 01/01 to 11/30/06	226,409
Vehicles Tested from 01/01 to 11/30/06	274,670
Vehicles Failed from 01/01 to 11/30/06	26,662 (9.7%)

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) 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 the 2006 Ozone Season, twelve days were predicted to reach an Air Quality level greater than 100. On those days, a *Code Orange* alert was put into effect. Ozone concentrations actually reached the USG level on seven of those days. There were no *Code Red* alerts for the 2006 Ozone season.

For PM_{2.5} a *Code Orange* alert was put into effect six times with two of those days reaching the *Code Orange - Unhealthy for Sensitive Groups* range. There was one unpredicted day reaching the AQI level of 100 or more. There were no *Code Red - Unhealthy* alerts for PM_{2.5}.

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 For CARTA's Fixed Route Service

The public use of fixed route municipal buses continues to increase. CARTA's fixed route service increased 7% from 2005-2006, from 1,578,999 to 1,684,722. Increases in these figures are attributable to higher fuel prices and increased public awareness.

The downtown shuttle route uses electric and hybrid-electric buses. Since the shuttle began its service in 1992, CARTA estimates an excess of more than 2,002,768 pounds of emissions have been eliminated as a result. In FY 2005, ridership for the year totaled 1,006,489. Ridership for FY 2006 showed an 11% reduction to 897,328. Lower ridership is attributable to service reductions and decreased tourism in the downtown area.

CARTA's overall ridership decreased as a result of service reductions and decreased tourism in FY 2006, from 3,223,309 in FY 2005 to 3,171,623 in FY 2006.

Intelligent Transportation System

The Tennessee Department of Transportation began the installation of Hamilton County's SmartWay Intelligent Transportation System in 2005. Phase 1 of the project—installation of 66 freeway cameras—is underway and, while not finished by the projected spring 2006 date, will have 58 functional cameras by the end of 2006. These cameras are used to dispatch the HELP trucks.

This camera-dispatcher system will be used until mid-2009, 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 – Motorist Assist Trucks

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 Smart Way plan to address traffic congestion issues.

HELP has been operating in Chattanooga since June 2000. According to TDOT's website, 740,248 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

<u>Types of Service</u>	<u>Knoxville</u>	<u>Nashville</u>	<u>Chattanooga</u>	<u>Memphis</u>
Provided traffic control	20,752	37,311	33,494	15,073
Tagged abandon vehicles	10,449	16,278	7,879	23,704
Changed Tires	8,598	15,116	5,821	19,063
Provided Fuel	6,516	8,126	4,464	10,901
Relocated from travel lanes	3,372	8,402	6,580	4,597
Debris removal from lanes	8,883	5,812	6,751	6,892
Provided First Aid	602	480	692	657

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. The Air Pollution Control Bureau received a grant from the U.S. EPA which allowed them to “clean up” 105 school buses resulting in a significant reduction in pollution. 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.

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.

This measure is a voluntary measure which was not included in the Early Action Compact, but which was implemented to help up meet our emissions reductions target. This measure more than makes up for any deficiencies in the Air Quality Alert Program emissions reductions.

Bike Trails and Bike Racks at Work Sites

Chattanooga has once again been designated one of the five 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. The BTF hosted Bike2Work 2006 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. 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 addition to Bike2Work, a *Bike to Riverbend* night was held. Riverbend is summer music festival that is held downtown at Ross's Landing (on the riverfront). *Bike Night* resulted in 100 bikes to *Riverbend* this year.

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 through 2007. 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 and allows participants 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. Pedestrian and bicycle "find your way" signs have been installed.

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 E's," 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 one additional mile of bike lane was added to portions of East 3rd 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 installed at their facilities.

All mainline buses from the Chattanooga Area Regional 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, 2,656 bikes were transported on buses. In 2005, 2,788 bikes were transported on buses. In 2006, during the first 11 months of the year, 2,964 bicycles were transported on the buses. This figure is expected to exceed 3,000 by the end of 2006.

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 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.

Safe Routes to School

The *Safe Routes to School* program identifies safe walking and bicycling routes for elementary and middle school students to be able to walk or bike to school. This is an annual program encouraging students to walk or ride their bikes instead of taking the bus or car. It is an effort to teach children early on that it is good for health and the air quality.

The schools were ranked by safety conditions and those with the most dangerous walking and biking situations were contacted first. To kick off the program for each participating school, a school-wide "Walk to School" event was held where everyone met at a safe location near the school and walked to the school together. A grant will provide money for the improvements and each school will use the money to address their identified safety issues.

Accelerated Replacement of On-Road Vehicles

The Bureau has 3 hybrid-electric automobiles in its fleet. The City of Chattanooga has purchased 12 hybrid-electric automobiles and 155 flex-fuel Ford Taurus vehicles that are capable of running on the E-85 ethanol blends. The City has also ordered seven (7) 2007 garbage trucks with the new diesel air pollution controls 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 bio-diesel in East Tennessee continues to grow. No bio-diesel was used in East Tennessee in 2003. Starting in 2004 approximate bio-diesel use is as follows:

2004 approximately 90,000 gallons of B100
2005 approximately 750,000-800,000 gallons of B100
2006 goal of 1,000,000 gallons of B100

With the prices of bio-diesel and diesel fluctuating, bio-diesel consumption consistently depends on its price. Other local fleet users include the City of Chattanooga (20% bio-diesel in all diesel applications), Hamilton County (30% bio-diesel in all applications), Benton Oil Company, and Chattanooga Area Regional Transportation Authority (CARTA). Several fleets regularly purchase

a bio-diesel blend depending on the current price of fuel. 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.

Ultra-Low-Sulfur Fuel in City and County Fleets

Ultra-low sulfur diesel fuel is being used by the city and county. In addition to that, all 2007 vehicles need ultra-low sulfur diesel fuel to operate. The City of Chattanooga has ordered seven (7) 2007 diesel garbage trucks for delivery in 2007. The replacement of garbage trucks that date back to the 1990's will result in reductions of 4.67 tons per year of Carbon Monoxide; 17.88 tons per year of NOx and .48 tons per year of volatile organic compounds.

Accelerated Replacement of On- and Off-Road Diesel Vehicles

Chattanooga Area Regional Transportation Authority (CARTA) has a total of 82 buses in its fleet:

- 54 diesel buses (3 are using 20% bio-diesel)
- 14 Care-A-Vans (1 uses 20% 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, 49 buses in the mainline fleet have been replaced with new buses with cleaner technology. As of March 1, 2006 only 5 buses remain in the fleets that were manufactured between 1986 and 1988. 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.