BOARD:
Elizabeth M. Hagood
Chairman

Edwin H. Cooper, III
Vice Chairman

Steven G. Kisner
Secretary

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment

BOARD:
Henry C. Scott

Paul C. Aughtry, III

Glenn A. McCall

Coleman F. Buckhouse, MD

December 18, 2006

Mr. J. I. Palmer, Jr., Regional Administrator
U.S. EPA, Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, GA 30303

RE: December 2006 Early Action Progress Report

Dear Mr. Palmer:

South Carolina continues to be committed to the 8-hour Ozone Early Action Process. Partnership opportunities have been developed and the awareness of local officials about air quality issues has resulted in proactive, voluntary and regulatory actions that would not have occurred without the Early Action Compact (EAC) process. In South Carolina we continue to see activities that remain a part of the EAC process, above and beyond that required of an area with a "traditional" nonattainment designation.

Data from the EPA's Air Quality System (AQS) reveals South Carolina's were in attainment of the 8-hour ozone standard over the 2004-2006 ozone seasons. The table in Enclosure 2 gives the 4th highest 8-hour averages for each of the 21 monitors for the years 2002, 2003, 2004, 2005 and 2006 as well as the three year average for 2003-2005 and 2004-2006. These numbers are based on data validated through October 2006. Once all of the 2006 data has been verified any necessary updates will be provided. No violations of the 8-hour ozone standard for 2004 – 2006 are expected.

South Carolina EAC's identify "key" milestones that are required for the continued deferral of the effective date of nonattainment designations and also milestones that track the progress being made by the state and local areas toward adoption and implementation of emission reduction measures. The attached document includes the table provided by EPA's guidance document of October 17, 2005, for each participating county identifying each of the local measures included in their respective local early action plan. Additionally, a narrative description of activity from the five deferred nonattainment areas is included in Enclosure 3. Information regarding stakeholder meetings and other activities that have occurred since June 2006, as well as specific details documenting the progress toward measures included in the local early action plans is included for each county and is grouped by the following areas:

Appalachian: Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg
Catawba: Chester, Lancaster, Union, York
Pee Dee: Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro
Waccamaw: Georgetown, Horry, Williamsburg
Santee Lynches: Clarendon, Kershaw, Lee, Sumter
Berkeley-Charleston-Dorchester: Berkeley, Charleston, Dorchester
Low Country: Beaufort, Colleton, Hampton, Jasper
Lower Savannah: Aiken, Allendale, Bamberg, Barnwell, Calhoun, Orangeburg
Central Midlands: Fairfield, Lexington, Newberry, Richland
Upper Savannah: Abbeville, Edgefield, Greenwood, Laurens, Saluda

While the emission reduction strategies submitted by the local areas contain both quantifiable and directionally sound measures, it should be noted that none of them were used to demonstrate attainment in 2007. Nonetheless, it is expected that these measures will assist the counties in achieving and or maintaining compliance with the 8-hour ozone standard. A table and narrative description identifying statewide activities and progress made toward each is included. South Carolina looks forward to continuing to work with EPA and other stakeholders in additional future activities.

South Carolina also committed to an annual review of growth (highway mobile and stationary NO_x sources) to ensure emission reduction strategies and growth are adequate as well as identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates. The Departments' review found that for both areas designated nonattainment with the effective date deferred, the actual emissions were lower than the forecasted modeled data and the 2005 VMT was well below the action trigger. Additionally, the local and state transportation plans for the deferred nonattainment areas shows a tremendous decrease in emissions over the next 25 years. Detailed information with supporting graphs is included in Enclosure 2.

The Department continues to be pleased with the energy of the participants in the EAC process including counties, agencies, universities, organizations, businesses, industries and environmental groups. The continuing effort of these groups is a marvelous example of partnerships in many directions. Each of these diverse parties has come together for a worthy common goal of providing cleaner air sooner to the citizens of South Carolina. The Early Action Compact Summit, held August 16 and 17, 2006 was a great success. As the first of its kind, it attracted nearly 300 stakeholders from 5 different states including representatives from 24 counties and 7 Councils of Government. Topics covered included energy conservation, diesel retrofits, land use planning, alternative fuels, commuting options and multi-modal transportation, innovative education and outreach, health impacts/lifestyle and finding the funding. Key speakers included Bill Wehrum, Acting Assistant Administrator for Air & Radiation, U.S. Environmental Protection Agency, and Mark MacLeod, the Director for Special Projects in Environmental Defense's Climate and Air program working out of the Washington DC office. For additional information see Enclosure 4 Statewide EAC Activities.

Thank you for the continued assistance and support EPA has provided in this process. We look forward to continuing to work with EPA and other stakeholders as we implement measures to achieve cleaner air sooner for our citizens. Should you have questions or desire additional information, please do not hesitate to contact me at (803) 896-8940 or Myra Reece, Chief of the Bureau of Air Quality at (803) 898-4123.

Sincerely,

Robert W. King, Jr., P.E.
Deputy Commissioner
Environmental Quality Control

Enclosures

cc: Kay Prince, EPA Region 4
County Officials (no attachments*)
Ron Methier, GA Dept. of Natural Resources (no attachments*)
Keith Overcash, NC Dept. of Environmental and Natural Resources (no attachments*)
Myra Reece (no attachments*)
EQC Regional Directors (no attachments*)

*All those not receiving attachments will be notified when materials are placed on our website.

South Carolina's Ozone Early Action Compact
December 2006 Progress Report
Enclosures
December 18, 2006

1. 3-Year Ozone Average Summary to Date, AQS Data
2. South Carolina's Comprehensive Maintenance Plan
3. Local EAC Activities for Participating Areas
4. Statewide EAC Activities
5. Federal Facilities Survey Results

Enclosure 1

December 2006 Progress Report Document
3-Year Ozone Average Summary to Date, AQS Data

D H E C

PROMOTE PROTECT PROSPER

County	Monitoring Site	2000 4th 8-hr Average	2001 4th 8-hr Average	2002 4th 8-hr Average	2003 4th 8-hr Average	2004 4th 8-hr Average	2005 4th 8-hr Average	**2006 4th 8-hr Average**	2003-2005 Design Values	**2004-2006 Design Values**
Abbeville	**Due West**	0.085	0.082	0.088	0.077	0.075	0.082	0.079	0.078	0.079
Aiken	**Jackson**	0.093	0.081	0.092	0.069	0.080	0.077	0.073	0.075	0.077
Anderson	**Powdersville**	0.084	0.088	0.093	0.078	0.076	0.082	0.069	0.079	0.076
Barnwell	**Barnwell**	0.090	0.074	0.086	0.073	0.072	0.074	0.074	0.073	0.073
Berkeley	**Bushy Park**	0.080	0.071	0.074	0.070	0.073	0.069	0.064	0.071	0.069
Charleston	**Cape Romain**	0.076	0.068	0.074	0.074	0.071	0.077	0.078	0.074	0.075
Cherokee	**Cowpens**	0.088	0.080	0.093	0.079	0.068	0.078	0.076	0.075	0.074
Chester	**Chester**	0.078	0.083	0.093	0.078	0.069	0.083	0.075	0.077	0.076
Chesterfield	**Chesterfield**			0.092	0.075	0.074	0.078	0.074	0.076	0.075
Colleton	**Ashton**	0.080	0.076	0.085	0.069	0.071	0.072	0.078	0.071	0.074
Darlington	**Pee Dee**	0.087	0.081	0.090	0.075	0.076	0.079	0.076	0.077	0.077
Edgefield	**Trenton**	0.079	0.077	0.094	0.068	0.071	0.071	0.068	0.070	0.070
Oconee	**Long Creek**	0.082	0.078	0.094	0.079	0.075	0.075	0.065	0.076	0.072
Pickens	**Clemson**	0.081	0.088	0.088	0.078	0.074	0.081	0.081	0.078	0.079
Richland	**Cong. Swamp/ Bluff**	0.073	0.076	0.082	0.074	0.067	0.078	0.072	0.073	0.072
Richland	**Parklane**	0.096	0.082	0.084	0.075	0.082	0.082	0.082	0.080	0.082
Richland	**Sandhill**	0.097	0.091	0.093	0.083	0.082	0.086	0.078	0.084	0.082
Spartanburg	**N. Spartan. FD**	0.089	0.090	0.093	0.079	0.082	0.082	0.085	0.081	0.083
Union	**Delta**	0.079	0.079	0.085	0.078	0.072	0.078	0.077	0.076	0.076
Williamsburg	**Indiantown**	0.077	0.067	0.077	0.069	0.069	0.068	0.073	0.069	0.070
York	**York**	0.076	0.080	0.096	0.076	0.071	0.079	0.078	0.075	0.076

Updated 12/01/06

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

South Carolina - 2006 Ozone Summary

(Validated through October 2006)

County	Monitoring Site	Total Hits	Date	1st 8-hr Average	Date	2nd 8-hr Average	Date	3rd 8-hr Average	Date	4th 8-hr Average	Date	5th 8-hr Average
Abbeville	Due West	2	21-Jun	0.092	24-Apr	0.086	25-Apr	0.084	11-Jun	0.079	17-Aug	0.078
Aiken	Jackson	0	7-Jun	0.075	24-Apr	0.074	4-Oct	0.074	10-Jun	0.073	17-Aug	0.073
Anderson	Powdersville	0	19-Jul	0.083	24-Apr	0.070	30-May	0.069	17-Jul	0.069	24-May	0.067
Barnwell	Barnwell	0	8-Jun	0.078	10-Jun	0.078	7-Jun	0.076	25-May	0.074	24-Apr	0.073
Berkeley	Bushy Park	0	7-Apr	0.076	30-Jun	0.069	24-Apr	0.066	18-Jul	0.064	1-Aug	0.064
Charleston	Cape Romain	1	30-Jun	0.089	24-Apr	0.083	9-Jun	0.082	3-Aug	0.078	7-Apr	0.077
Cherokee	Cowpens	1	30-May	0.090	17-Jul	0.081	19-Jul	0.079	24-May	0.076	21-Jul	0.076
Chester	Chester	1	19-Jul	0.086	17-Aug	0.079	24-Apr	0.076	16-Jun	0.075	30-May	0.073
Chesterfield	Chesterfield	0	9-Jun	0.083	30-May	0.075	24-Apr	0.074	24-May	0.074	8-Jun	0.074
Colleton	Ashton	0	7-Apr	0.081	6-Apr	0.079	24-Apr	0.079	7-Jun	0.078	14-Apr	0.073
Darlington	Pee Dee	0	24-Apr	0.078	8-Jun	0.078	25-Apr	0.076	18-Jul	0.076	10-Jun	0.075
Edgfield	Trenton	0	24-Apr	0.072	14-Apr	0.069	25-Apr	0.069	15-Apr	0.068	30-May	0.068
Oconee	Long Creek	0	30-May	0.068	16-Jun	0.068	24-Apr	0.065	17-Jul	0.065	19-Jul	0.065
Pickens	Clemson	1	19-Jul	0.091	16-Jun	0.082	17-Aug	0.082	24-May	0.081	24-Apr	0.080
Richland	Congaree Bluff	0	25-Apr	0.081	24-Apr	0.079	3-May	0.074	24-May	0.072	14-Apr	0.071
Richland	Parklane	2	1-Aug	0.089	4-May	0.086	24-May	0.083	20-Apr	0.082	1-Jul	0.079
Richland	Sandhill	1	1-Aug	0.091	21-Jun	0.081	4-May	0.080	11-Jun	0.078	1-Jul	0.078
Spartanburg	N. Spartanburg	4	19-Jul	0.094	21-Jul	0.087	18-Jul	0.086	17-Jul	0.085	20-Jul	0.084
Union	Delta	0	24-Apr	0.081	17-Aug	0.081	25-Apr	0.079	14-Apr	0.077	10-Jun	0.076
Williamsburg	Indiantown	0	7-Apr	0.081	25-Apr	0.080	24-Apr	0.078	8-Jun	0.073	4-May	0.070
York	York	1	19-Jul	0.092	21-Jun	0.084	24-Apr	0.080	30-May	0.078	25-Apr	0.073

2006	Total Hits for all of the Ozone monitors	14
	Total days above the Ozone standard statewide	10

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

Enclosure 2

December 2006 Progress Report Document
South Carolina's Comprehensive Maintenance Plan

D H E C

PROMOTE PROTECT PROSPER

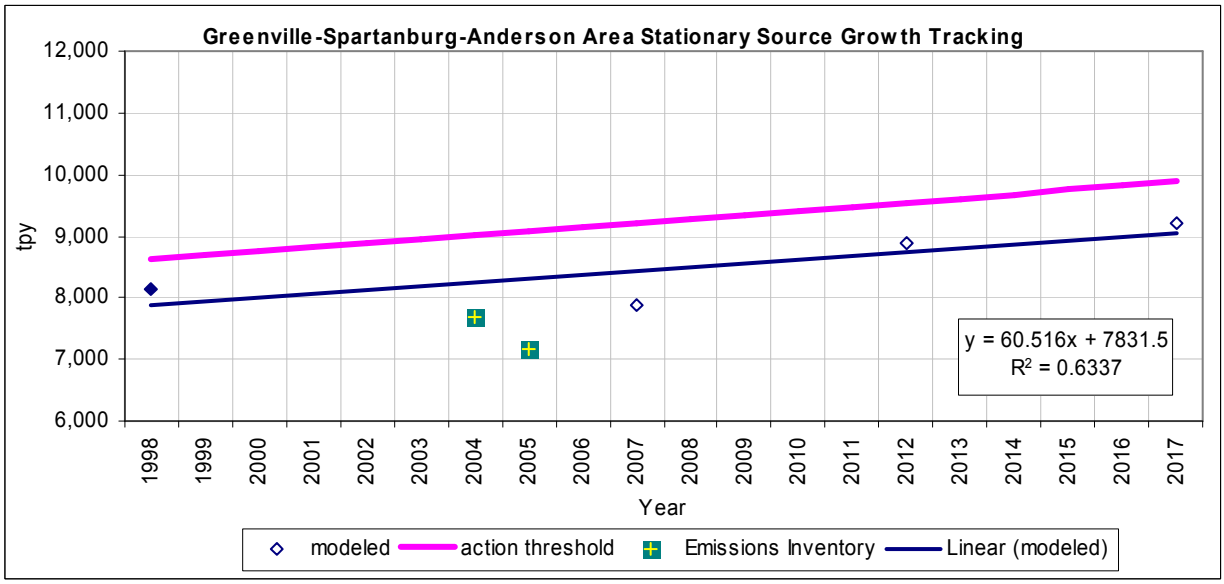
Enclosure 2
South Carolina's Ozone Early Action Compact
December 2006 Progress Report
Comprehensive Maintenance Plan

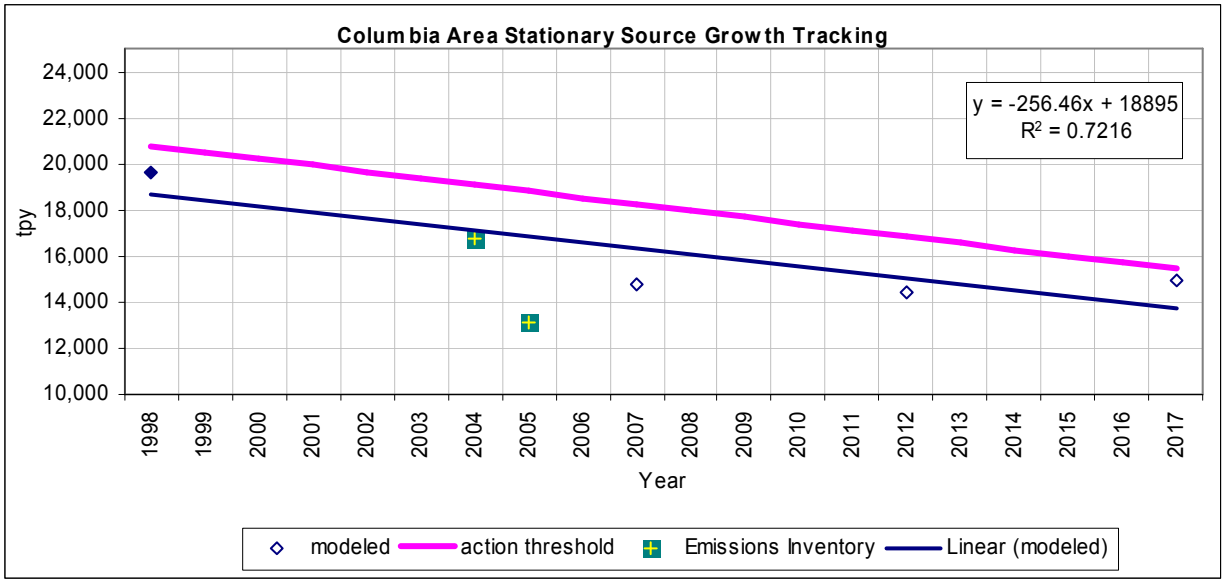
South Carolina has committed to a comprehensive maintenance plan. This commitment far exceeds the maintenance requirements in the EAC protocol. The South Carolina EAC maintenance plan is similar to the requirements for section 175A of the Clean Air Act, none of which are required for EAC areas. A Notice of General Public Interest was published in the *State Register* on May 27, 2005, scheduling a thirty-day public notice and comment period. A public hearing was held on June 30, 2005.

South Carolina's commitment included an annual review of growth (highway mobile and stationary NOx sources) to ensure emission reduction strategies and growth are adequate as well as identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates. Results of the first annual review, (December 2005) revealed that for both areas designated nonattainment with the effective date deferred, the actual emissions were lower than the forecasted modeled data and the 2004 VMT was well below the action trigger. The second annual review (December 2006) for both deferred areas, revealed the actual emissions remained lower than the forecasted modeled data and the 2005 VMT remained well below the action trigger.

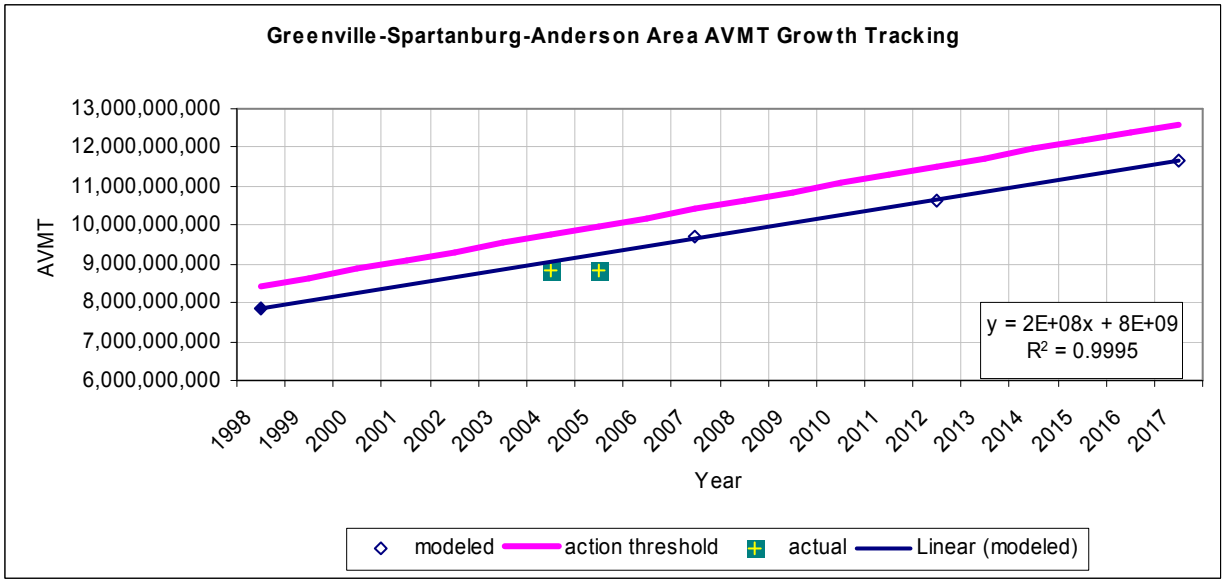
Annual Review of Growth

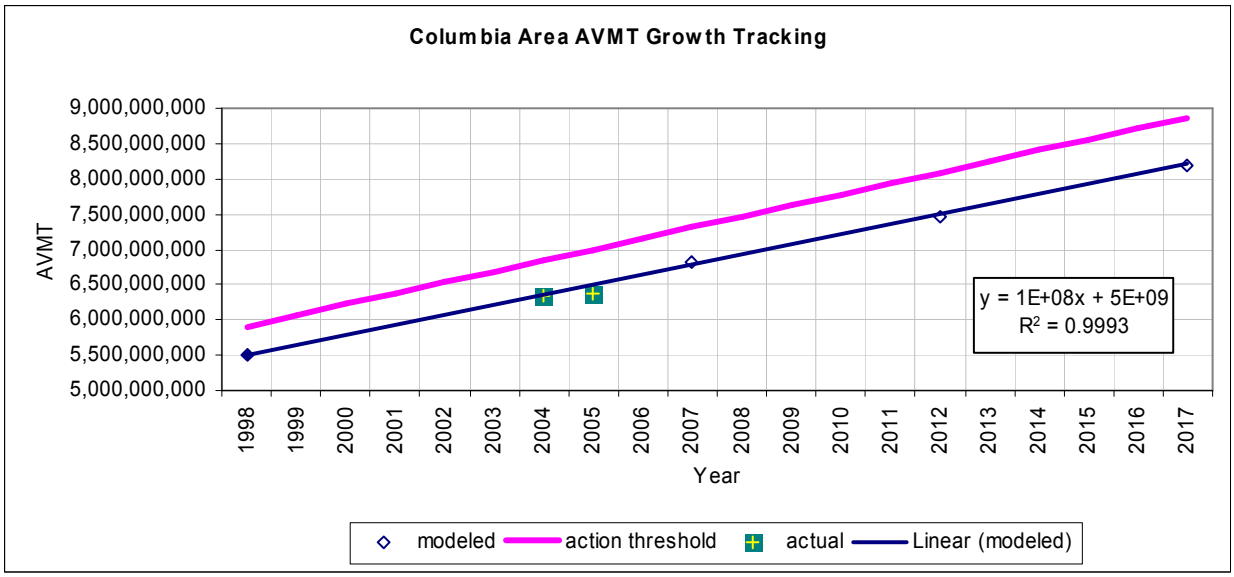
The most recent emissions inventory (2005) was compared to the emissions used in the ozone modeling analysis with a base year of 1998. In order to compare the annual emissions to the assumptions made in the model, a regression equation for each deferred area was developed in order to forecast the emissions for years not modeled. The modeled data, forecasted data, the 10 percent "action level" and actual emissions for 2004 and 2005 were then plotted in order to determine whether the actual emissions were still comparable to the ozone modeling assumptions. For both deferred areas, the actual emissions were lower than the forecasted modeled data. The ozone modeling analysis could not be run on partial counties, so for the Columbia deferred area, the review of growth took the county wide emissions into account. Therefore, the number for the Columbia deferred area represents a conservative estimate of the emissions.





The most recent annual VMT (2005) was compared with the projected VMT from the ozone modeling analysis with a base year of 1998. The VMT for analysis years 1998, 2007, 2012 and 2017 for Greenville, Spartanburg and Anderson Counties was combined and a trend line established. The actual 2004 and 2005 VMT for the three-county was slightly below the trend line and well below the action trigger. Because full -county VMT data was used for the ozone modeling analysis, it was necessary to use combined full county data from Richland and Lexington Counties to represent the Columbia nonattainment area. For the Columbia and Greenville-Spartanburg-Anderson deferred areas, the review revealed that the 2004 and 2005 VMT was slightly below the modeled trend line.




Columbia Area AVMT Growth Tracking
9,000,000,000
8,500,000,000
8,000,000,000
7,500,000,000
7,000,000,000
6,500,000,000
6,000,000,000
5,500,000,000
5,000,000,000
AVMT
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Year
y = 1E+08x + 5E+09
R² = 0.9993
modeled
action threshold
actual
Linear (modeled)

Attachment 1

Appalachian Area

December 2006 EAC Progress Reports

D H E C

PROMOTE PROTECT PROSPER

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
11 South Carolina State Measures							
Comments: Modeling for 2007, shows attainment without including measures beyond national and regional measures already finalized.. 2012 and 2017 also shows attainment.							
11 Appalachian, SC (Effective date of nonattainment designation deferred) - Anderson County							
Truck Stop Electrification Project	51 spaces outfitted with Idle Aire Technology	In process of identifying additional truck stops that are willing to install technology.	February 2005	1.836 tons/year	36.21 tons/year	State Grant	CO reductions 15.3 tons/year December 2004 EAC SIP - Appendix 16 December 2004 Progress Report June 2005 Progress Report
School Bus Retrofit Project	Approximately 47 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expeted)	Seeking funding to equip additional buses with technology.	2006 and beyond	391 lbs/year	N/A	N/A	CO reductions 2,737 lbs/year December 2004 EAC SIP - Appendix 16
Gas Can Exchange Project	On September 10, 2005, Anderson County in conjunction with SC DHEC and several corporate sponsors such as Michelin, Wal-Mart and Sonic, held a gas can exchange for the residents of Anderson County. Anderson County intends to periodically hold these events throughout the county to promote the use of ventless gas cans.	83 gas cans that vents VOC into the atmosphere were traded in for ventless gas cans. Seeking additional funds to hold additional exchanges in 2006.	2005	355 lbs/year	N/A	N/A	
News release, PSA, and web page awareness tools	Comments #7 and 8	All news releases concerning items relating to the Early Action Compact are released on the county website and sent to local news outlets	2006-2007	N/A	N/A	N/A	http://andersoncountysc.org
DECEMBER 2006 PROGRESS REPORT FOR ANDERSON COUNTY **Based on stakeholder consultation and taking into consideration resource and political constrains, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.**							
Air Quality Awareness and Improvement Policy	Memorandum sent to all County departments for the purpose of establishing certain principles that will guide the recurring activities of County government. Purpose of policy is to extablish certain principles that will guide the recurring activities of Anderson County government. 1. Encourage employee car-pooling opportunities, when feasible, especially when travel in County vehicles is involved. 2. Purchase the lowest-emission vehicles practical to meet County needs. This may include the purchase of Tier II compliant vehicles, alternative fueled vehicles or hybrids. It is the goal of this county, that where practicable, to purchase hybrid or AFV's when conditions warrant and allow. 3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications. 4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, trafic/weather conditions, and vehicles being repaired, maintained, or inspected. 5. Where feasible and practicable, restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days. 6. Restrict all County-sponsored outdoor burning on Ozone Action Days. 7. Practice energy conservation in all County facilities. The County will set a goal of reducing energy use by encouraging 8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to 9. Departments are encouraged to Refuel vehicles where possible at times of the day that will have the least impact on o SEE Comment #6	County staff is currently implementing portions of the memo applicable to each division.	Effective immediately - October 12, 2004	N/A	N/A	N/A	The commitment to address these activities has been assured by the County Administrator by establishing the Air Quality Awareness and Improvement Policy for County Government. 1. See comment #6.
1. Support SCDHEC statewide efforts to reduce ozone levels.	Stakeholder group to support and participate in modeling efforts. Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning).	December 2004 EAC SIP did include Appendix 16 - 1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste 2. SC61-62.5, Std. 5.2 "Control ofOxides of Nitrogen) reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW. See Comment #4.	1. June 25, 2004 2. June 25, 2004	28.04 tons/season N/A	5.90 tons/season 234.1 tons/yr	N/A	See Comments #1, #2, #3, #6
2. Designate an Ozone Action Coordinator	Designate a staff person in each County who will be responsible for coordination of counties ozone programs	Vic Carpenter and David Scott	March 2003	N/A	N/A	N/A	
3. Seek low sulfur fuels as early as possible	Continue to coordinate with representatives of Colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.	We continue to coordinate with the aforementioned entities, and eagerly await the date at which we will receive low-sulfur fuels. The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006. Anderson County started using low sulfur fuels (less than 15 parts per million) in all of its diesel equipment starting September 1, 2006.	June 1, 2006	N/A	N/A	N/A	
4. Design and implement congestion management and Intelligent Transportation System (ITS) measures.	Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles; Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles. Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.	County in the process of implementing congestion management plan on several major thoroughfares; cameras and variable message boards have been installed on I-85 through Anderson, Greenville and Spartanburg Counties. Anderson County Council, at its December 6, 2005 meeting, passed a resolution creating a committee to investigate capital funding projects for roads and bridges; within that commission, they will also be looking at funding for projects to relieve congestion on county roads and the addition of bike lanes on county roads. Report will be completed by July 2006. In March 2006, Anderson County, in conjunction with the City of Anderson, completed a traffic synchronization project on East Greenville Street, one of the busiest streets in Anderson. The synchronization will reduce the idling time of vehicles along East Greenville Street, reducing the amount of VOCs entering the atmosphere. The Greenville-Pickens Area Transportation Study	Implementation began in 2005. Synchronization project was completed March 2006. • SCDOT is installing an ITS billboard between mile marker 37 and 38 in Anderson County. Installation should be completed in early 2007.	N/A	N/A	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
5. Use of hybrid vehicles	Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.	June 2005 Progress Report - countywide resolution to purchase cars alternatively fueled or hybrid vehicles. On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads: An act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle. Credits allowed against a taxpayer's federal income tax liability.	Completed in 2005 and continuing. County will purchase hybrid vehicles as they become feasible to the job performance.	N/A	N/A	N/A	See measure 12 for additional information.
6. Use higher efficiency engines for school buses	Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA. Promote an Adopt-A-School-Bus Program. Endorse a statewide recommendation for the State to take the lead	In 2006, approximately 47 diesel buses will be retrofitted with particulate filters, which will create additional PM reductions. The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type. The South Carolina Department of Education (SDE) has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles. The benefits from these SDE funding sources will be distributed throughout the	Completed. Implementation began in 2006 and is continuing.	N/A	N/A	N/A	Reductions accounted for under School Bus Retrofit Project
7.a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes. Establish intermodal connections with an emphasis on mass transit	WALKING/BIKING Encourage local government to increase pedestrian/bicycle infrastructure spending (the Upstate spends 2 cents per person compared to SC spending 22 cents per person). Establish safer bike routes with better signs marking lanes and routes. Increase highway funding for bike paths, walking or mass transit including high-speed rail. Support the federal transportation enhancement program. Install bike racks on all transit vehicles toencourage intermodal transportation. New buses purchased through the state's bus purchase program will have bike racks. PARK and RIDE Establish mass transportation between a plant and a park-and-ride site. CARPOOLING Work with local government to offer incentives employees to car pool. MASS TRANSIT Offer a free trolley service running in a loop in downtown areas and nearby restaurants, especially during lunch hours; Research past feasibility studies on free downtown shuttles. Potential for sponsorship with local area restaurants and busineses for a lunch time shuttle coul defer the operational costs of the endeavor. Support mass transit (transportation choices and alternatives): While the oly local mass transit choice that is currently ava is the transit bus, example of future options such as bus rapid transit, commuter passenger service offered by trains on existing rail systems, a diesel multiple unit or "light rail" should be supported.	• Clemson Area Transit (CAT) bus lines include the Anderson 4U Route with service to Tri-County Tech and the City of Anderson. This route connects with Electric City Transit. The CAT buses are equipped with bicycle racks for easier transport of bicyclists within the various CAT bus routes. The CAT bus system is a free option, and Electric City Transit offers free rides during the Christmas holiday season (late November-December.) • Anderson County has attempted to work with owners of vacant stores for use of their parking lot, and with industries to shuttle employees; however each owner does not wish for the potential liability in their parking lot. Industries seem amenable, no definitive answer was given. • The County is currently working with the City of Anderson to possibly reserve parking spaces in the downtown lots for carpooling people. • In October 2006, the Clemson Area Transit, a free bus service serving Anderson and Pickens Counties, expanded its service area to Oconee County, providing free service to those people traveling to Anderson County for school and recreation purposes.	Completed in 2005 and continuing.	N/A	N/A	N/A	
7.b. Offer free or reduced transportation cost on high ozone days.	MASS TRANSIT: Implement a coordinated high ozone day alert action plan to include public notification and free or reduced ozone fares from the transportation providers.	As funding is acquired for the incentives, the programs will be implemented. • Since 2002 Clemson Area Transit has provided a free shuttle system connecting Anderson University, Tri-County Technical College, Southern Wesleyan University and Clemson University in addition to the City of Clemson, the City of Anderson, and the Towns of Central and Pendleton. Clemson Area Transit has the largest ridership for a fare-free bus line in the United States. It is also South Carolina's most frequently used transit system. The fare-free system is funded through federal grants and matching funds from the city and University. CAT has the most modern fleet of buses east of the Mississippi River. • Electric City Transit provides discount fares to senior citizens, the disabled, Medicare card holders, students, and children (free). • Since free and discount fares are already available, when county funding is acquired for the incentives, the programs will be further implemented or expanded. • At its May 11, 2006 meeting, business leaders in the Air Quality Advisory Committee recommended contacting the Chamber of Commerce and request assista	Completed in 2005 and continuing.	N/A	N/A	N/A	
7.c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems.	Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility; Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.	The Clemson Area Transit (CAT) system coordinates with the Electric City Transit (ECT) system to provide free or low cost public transportation to Anderson and Pendleton, SC. • CAT buses are equipped with wheelchair ramps and bicycle racks. CAT also provides personal escorts by appointment to aid new passengers in finding their way around and learning to read the bus map. CAT has partnered with C.U. Parking Services to coordinate a shuttle service from the Park and Ride lot. • All ECT buses are permitted to leave their regular route at the request of riders who live outside the regular routes. • In September 2006, Anderson County officials asked state officials for $44,000 to look at whether the area's transit system should be expanded to offer residents more options to get to work. A $40,000 grant could pay for the feasibility study. Officials from local transit providers and social service agencies have identified that available transportation as a "primary barrier" to finding a job. Creating a more comprehensive transit system will be the first step	Some actions have been completed prior to 2006. Implementation of additional actions will take place as funding is acquired.	N/A	N/A	N/A	
8. Review and update air emission inventory for the Upstate	Ensure all industrial sources still operating. Review industrial sources for plant closures. Identify major sources of NOx Map the locations of point sources (10% of point sources cannot be found). Map the specific locations and the area sources where coal is burned.	Completed. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.	Completed in 2003	N/A	N/A	N/A	SCDHEC

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling	Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plan Coordinate with the Williams Company to determine what NOx reductions are planned for the TRANSCO Pipeline. Support NOx reduction strategies in the State Implementation Plan Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emissions NOx sources)	See info on Duke Power included in Appendix 16 of EAC SIP (link in Comment #6)June 2004: • Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004. • The Williams Company has received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continued until late 2005. This will result in a significant NOx reduction for the Upstate. • NOx reduction at the Duke Power Lee Steam Plant: Coal fired Unit #2 is now operating with the new NOx burners and final manufacture set up for acceptance is to be conducted in June 2006. Monitoring data indicates that the burner should at	Implementation began in 2004 and was completed May 2006.	N/A	40%	N/A	
10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers).	Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals. Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, Salvation Army when they have been donated as charitable gifts. Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.	• During its August 5, 2003, the AQ Staff Advisory Committee discussed this strategy: A high emission vehicle buyback or repair program appears to be cost effective for VOC emissions, but is less clear for NOx emissions. It is hard to quantify the success rate of the program in the various states the program has been implemented, but the program seems to make intuitive sense. This type of program will become increasingly more important as the new vehicle pollution control systems increase the gap between the new vehicle's emissions and the "smoking" vehicle's emissions. Recommendation: funding the high emission vehicle buyback or repair program as a pilot program with a set yearly target for the number of vehicles that will be either repaired or scraped. A follow-up study on this pilot program would need to be implemented to determine the impact on emissions (ozone) for the upstate. • In the summer 2006, staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to	Implementation began in 2003. Completion of this measure will depend on discussions with the non-profit organizations.	N/A	N/A	Use funds from license plate sales	
11. Ban open burning of on-site commercial clearing debris during ozone season (April - October)	Use SCDHEC model to detrmine the most effective method to ban open burning. Discuss modeling results with all local governments to consider adoption.	• At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round. • DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishable by law. • A DHEC press release was issued to the upstate on November 8, 2005 See Comment #6.	Completed on June 25, 2004 with the passage of regulation SC 61-62.2 "Prohibition of Open Burning".	N/A	N/A	N/A	
12. Create incentives for the purchase of high efficiency and low emissions vehicles.	Offer tax credits for vehicles with high efficiency gas consumption or low emissions. Offer tax credits for low mileage vehicles instead of high mileage vehicles	• Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles. • A bill titled; An act concerning the promotion Of alternative use fuel, and hybrid propulsion System For transportation purposes was submitted to the SC House of representatives in January 2005. • On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads: AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.	Implementation began in 2005 and was completed June 1, 2006.	N/A	N/A	N/A	
****Develop air quality best management practices (BMPs)_ for construction sites	Develop a generic list of BMPs Develop management practices for construction debris. Develop management practices for emissions from construction vehicles. Develop management practices for traffic controls during construction.			N/A	N/A	N/A	….not included in March 2004 submittal was included in December 2003….
13. Use land-use and transportation planning to improve air quality	Include air quality measures as a part of the land-use and transportation planning process.	• Highlights of the Anderson County Land Use and Development Standards include items that develop standards with respect to landscaping and open space, promote public health and safety through the reduction of noise pollution, storm water runoff and air pollution. Also included are development standards with "Greenways" defined which link residential areas with other open space areas. These Greenways may contain bicycle paths, footpaths, and bridle paths. Additionally, intensity standards (designed principally to regulate land use in accordance with the design function and carrying capacity of the road on which it is located) are being developed. • In the review process, Transportation staff does employ traffic thresholds that require various levels of congestion mitigation to reduce idling times, and they have been using the internal thresholds for two years. However, these thresholds are not defined in the ordinance, and so the review is intended as guidance for future use to show where potential problems are most likely to occur in the future.	Completed in 2004.	N/A	N/A	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
14. Implement a program to encourage use of green power.	Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant. Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.	In 2005, Blue Ridge Electric Cooperative in Anderson County has begun offering the purchase of "Green Power" to its members. The Green Power is Generated by Santee Cooper, who is the source of power for all of the electric cooperatives in South Carolina. Santee Cooper is constructing a Green Power station at the Anderson Regional Landfill that will enter commercial operation in 2006.	Completed in 2005 and continuing.	N/A	N/A	N/A	Please go to http://www.santeecooper.com/greenpower/newsroom/newsletters/gpnews_fall2005.pdf for the Fall newsletter and http://www.santeecooper.com/greenpower/newsroom/letters.html for the "Green Power" newsletter.
15. Promote route efficiency for delivery vehicles, trash collection etc.	Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.	• The Solid Waste Division, since 2003, has encouraged and continues to encourage all its trash haulers to use the most direct route to pick up trash. This will reduce driving time and reduce emissions. • Delivery companies currently use GPS mapping programs to map the most cost effective route to save gasoline. The local public transportation system have designated routes, but they take steps to reduce idling time of the buses, such as reducing speeds and an 2 minute tardy schedule to make sure no one is left behind at a bus stop. They have been implementing these gas saver items since 2000.	Completed in 2003 and continuing.	N/A	N/A	N/A	
16. Establish a clean air partnership with business and industry.	Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments. Establish park and ride lots serving perimeter counties along major corridors. Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available. Encourage carpooling/vanpooling as an option where employees living in the same area argree to ride to work together rather than to drive their individualvehicle to work. Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc. Encourage telecommuting. Adopt a Bus Program. Develop funding to be used for matching grants fund for several EAP strategies. Develop a core competency and assisting the Upstate EAP group in writing grant proposal.	• In 2004 staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties. • Michelin North America, on November 29, 2005 announced that their two Anderson County plants have qualified for membership in the National Environmental Performance Track program. They are among 400 facilities nationwide that have met the stringent requirements. Michelin is also investing $80 million to expand and upgrade the two plants to reduce environmental impacts within Anderson County. • Duke Power has agreed to reduce the idling time for their vehicles during ozone season. During ozone season, all vehicles will not idle for more than 30 seconds before the vehicle is shut down. With the 88 diesel trucks and 265 gasoline trucks in use in Anderson County, that equates to a reduction of 530 pounds VOC	Completed in 2005 but progress and improvements will continue on this strategy.	530 lbs/year	765 lbs/year	N/A	http://greenvilleonline.com/apps/pbcs.dll/article?AID=/20051129/BUSINESS/511290340
17. Establish an active public awareness campaign.	Develop an editorial board to discuss air quality issues an development of a relationship with media. Use alert messages year round, not only during ozone season; Utilize public service announcement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days; Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles.	• Anderson County held a gas can exchange program on September 10, 2005, taking in 83 old cans. • Anderson County Staff sent out a news release (03/28/05) on Ground-level Ozone (GLO) Awareness Week and promoted this week on a local radio station, WRIX 103.1 FM. An article on GLO was also placed on their county webpage: www.andersoncountysc.org . Anderson County received and distributed 200 Ozone and Your Health brochures. June 2006: An Ozone-No-zone seminar was held as a local education program teaching how ground level ozone affects our daily lives. • 4-U Transit system connecting Anderson, Pendleton, Clemson and Central; Anderson's Electric City Transit "FARE Free" program; light rail project; • Tree legacy program, Tree I.D. program; Arbor Day plantings; City of Iva continual member of "Tree City USA" Ozone Awareness Week; • Earth camp, offered at the Anderson Co. Recycling Education Center covered Air Quality, Recycling, and Trees. • July 31, 2006, Greenville News published "More air woes could blow Upstate's way." • July 16, 2006, Greenville News published "Emissions levels suit creates cloud of uncertainty for industry."	Completed in 2005. Education and outreach are continuing.	N/A	N/A	N/A	
18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality.	Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University. Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase or upgrade of furnaces and boilers.	• Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities. (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts.ALTERNATIVE FUELS: In 2005, Clemson University Chemical engineering professor Mark C. Thies received an $856,000 award from the Department of Energy (DOE) to develop more efficient processes for the centralized production of hydrogen by splitting water.The award wa	Completed November 2003 but will continue monitoring progress of ongoing research.	N/A	N/A	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
19. Use of alternate fuels.	Direct local Planning Commissions to identify areas where alternative fuels will be best suited. Encourage the use of alternate fuels; Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to pwoer on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas. Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles. Anderson county owns 37 alternative fuel vehicles and purchased 1,520 gallons of biodiesel in 2004.	• There were 1,520 gallons of biodiesel purchased in 2004 in Anderson County. • Currently there are no ethanol refueling facilities in Anderson County, but plans call for the construction of one by the end of 2005. • There is currently one Spinx station that offers Ethanol 85% fuel in Anderson County. There are 5 other Ethanol 85% stations and 5 biodiesel stations within a 25 mile radius of downtown Anderson. Stations can be located using the U.S. Department of Energy Alternative Fuels Data Center Website at http://www.eere.energy.gov/afdc/infrastructure/locator.html ALTERNATE FUELS: In 2005, Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification. Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy	Completed in 2005 and continuing.	N/A	N/A	N/A	
20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes.	Evaluate use of HOV on three (3) lane interstate highways; Show the advantages of designating HOVs; Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (fush hour). Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.	• During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. The Committee concluded that "HOV lanes work best where an interstate or a limited access arterial lead directly to major employment centers, usually within a central business district (CBD). With the exception of I-385 leading to the Greenville CBD, Upstate interstates (especially I-85) generally link the cities of Anderson, Greenville, and Spartanburg via peripheral routes, not conducive to the addition of HOV lanes. In addition, inter-county work trends do not show major volumes that would support car-pooled trips. Making the third lane of I-85 an HOV lane would severely increase congestion, emissions, and future accidents. The addition of new lanes would be cost prohibitive, and would not be allowed to revert to a single occupancy vehicle (SOV) status without reimbursement to the federal government." • Traffic engineers with SCDOT indicate that because traffic volumes on I-85 exceed 100,000 vehicles daily on the 3 lanes of the interstate it would be unwise to convert one of the three lanes to a HOV lane. The offsetting increase in congestion i	Completed in 2004.	N/A	N/A	N/A	
21. Modify speed limits for optimum fuel efficiency.	Direct SCDHEC and SCDOT to take the lead role. Direct Planning Commissions to assist SCDHEC in modeling.	The ANATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways for the majority of Anderson County has been established at 60 mph. No further action is planned.	Completed in 2005.	N/A	N/A	N/A	
22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.	Study impact of post construction traffic flow. Study impact of construction activities.	• If land is zoned for the intended use of the property, the traffic impacts are monitored via trip monitors that measure the traffic flow through a particular stretch of roadway to use in future planning of road widening projects. • If land is not zoned for the type of land use a developer wishes to use it for, he or she must petition the County Council to change the zoning for the new purpose. • Planning officials will also inform Council whether it approves of or disapproves of the zoning request, depending on the current population density, the current condition of the road, and the potential for increase in congestion. Although the Planning division can disapprove of a project, the developer can still make the request of the Council. • At the Council meeting, residents in the affected areas can also state their wishes for the development. The Council takes all this information under consideration, bit ultimately it will be up to the Council to approve or deny. • These policies were enacted July 20, 1999, and revised April 15, 2003.	Completed in 2003.	N/A	N/A	N/A	
23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods	Eliminate minimum acreage requirements for school sites. Cap student populations per facilities. Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals. Favor restoration and construction of community-based small schools over new construction of remote mega schools.	• Anderson County encourages the State to modify the state law that dictates minimum acreage for schools, and also encourages the school districts to refurbish existing schools. If the school districts and the state ever decided this would become policy, Anderson County would not have any hesitation to wholeheartedly back all the school districts within the county in their efforts to create community schools to reduce traffic • The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_2005-2006/bills/4488.htm • Anderson County is awaiting the committee's recommendations and the manner in which they may take effect if this bill is enacted.	Completed in 2006 and continuing.	N/A	N/A	N/A	• SECTION 203 SCHOOL SITES 203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties. 203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI).

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.
2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....
3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp
4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp
5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp
6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html
7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html
8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

December 2006 - Early Action Compact Progress Report
Anderson County

In an effort to keep your contact information updated we have provided the following information for our county:

	Name	Telephone	E-mail Address
Administrator/Manager	Joey R. Preston	(864) 260-4031	jpreston@andersoncountysc.org
EAC contact	Vic Carpenter	(864) 260-1001	vcarpenter@andersoncountysc.org
	David Scott	(864) 260-1001	dscott@andersoncountysc.org

The following measures were not included in the South Carolina Early Action Compact SIP but are directionally sound and are anticipated to assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

Anderson, Greenville, and Spartanburg Resolution

Anderson County, Greenville County, and Spartanburg County each entered into a resolution as a cooperative means of improving air quality to meet applicable state and federal air quality standards. By entering into this resolution, the Counties agreed to the following:

1. Each County will provide individuals to serve on a Steering Committee. The Steering Committee will strive to finalize an Upstate Air Quality Action Plan. The Air Quality Action Plan is intended to be a guide for implementation of proactive measures that will bring the Participating Counties into compliance with the 8-hour ozone standard consistent with DHEC's Early Action Plan. The Steering Committee will consist of no more than 21 voting members (7 from each county). Advisory (non-voting) members may be appointed up to a maximum of seven from each county.

2. Implementation costs of the air Quality Action Plan will be specified and quantified by the Steering Committee including ongoing direct and indirect costs that will be incurred by state and local governments, businesses, and individual taxpayers.

3. The Steering Committee will prepare a report detailing and quantifying the economic impact and costs associated with non-attainment status that have been incurred by the four geographic non-attainment areas most closely located near Anderson, Greenville and Spartanburg.

4. Once an Air Quality Action Plan is developed by the Steering Committee, each of the Participating Counties will consider adoption of the Air Quality Action Plan within the boundaries of the respective participating Counties consistent with the goals of the Early Action Program.

Air Quality Awareness and Improvement Policy

Memorandum sent to all County departments for the purpose of establishing certain principles that will guide the recurring activities of County government.

Purpose of policy is to establish certain principles that will guide the recurring activities of Anderson County government.

1. Encourage employee car-pooling opportunities, when feasible, especially when travel in County vehicles is involved.

2. Purchase the lowest-emission vehicles practical to meet County needs. This may include the purchase of Tier II compliant vehicles, alternative fueled vehicles or hybrids. It is the goal of this county, that where practicable, to purchase hybrid or AFV's when conditions warrant and allow.

3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications.

4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, trafic/weather conditions, and vehicles being repaired, maintained, or inspected.

5. Where feasible and practicable, restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days.

6. Restrict all County-sponsored outdoor burning on Ozone Action Days.

7. Practice energy conservation in all County facilities. The County will set a goal of reducing energy use by encouraging the wise use of electronically powered equipment, HVAC systems and lighting.

8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to purchase Energy Star equipment.

9. Departments are encouraged to Refuel vehicles where possible at times of the day that will have the least impact on ozone levels.

News release, PSA, and web page awareness tools

All news releases concerning items relating to the Early Action Compact are released on the county website and sent to local news outlets, as well as our county web site, www.andersoncountysc.org.

Truck Stop Electrification Project

Fifty-one spaced have been outfitted with Idle Aire Technology in Anderson County.

Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

ATTACHMENT 1

To South Carolina Department of Health and Environmental Control
Environmental Protection Administration
From: Anderson County, South Carolina
Date December, 2006

Reference: Summary of progress in implementing air quality strategies adopted by Anderson County and included in our Early Action Compact.

1. **Support SCDHEC statewide efforts to reduce ozone levels** **Priority A**

Description of Measure

Stakeholder group to support and participate in modeling efforts; Develop stakeholder group to participate in development of regulations (NOx-BACT (Best Available Control Technology), restrict open burning.

June 2004:

- Members of the Upstate Air Quality Staff Advisory Committee participated with SCDHEC in the development of new regulations aimed at reducing NOx emissions (June 2005 Progress Report).
- June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW.
- The county supported SCDHEC in the promulgation of the following regulations: SC 61-62.2 "Prohibition of Open Burning" and SC 61-62.5 Std. 5.2 "Control of Oxides of Nitrogen. These regulations were published in the State Register on June 25, 2004. Estimated reductions are for both existing and new sources combined across Anderson, Greenville, and Spartanburg counties for the 2007 calendar year with additional reductions expected past 2007. The expected reductions from SC61-62.2 "Prohibition of Open Burning" are 13.73 tons per ozone season of NOx and 65.23 tons per ozone season of VOCs. In addition, 58.37 tons per year of PM will also be reduced. The expected reductions from SC 61-62.5 Std. 5.2 "Control of Oxides of Nitrogen are 234.1 tons per year of NOx.

June 2006:

- On May 11, 2006, the Upstate Air Quality Staff Advisory Committee recommended developing a business partnership plan to involve local industries in announcing ozone alerts and participating in ride share programs. Local Chambers of Commerce will be contacted by members of the Committee to request their assistance.

Estimate of Emission Reductions (if available)

Equivalent to removing 359,500 cars from the road or 7190 tons of VOC. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed June 25, 2004.

2. Designate and Ozone Action Coordinator Priority A

Description of Measure
Designate a staff person in each County who will be responsible for coordination of counties ozone programs.

March 2003:

- Anderson County will designate a staff person responsible for coordination of counties ozone programs. This measure was completed in March 2003.

June 2006:

- The current Air Quality Contacts are Vic Carpenter and David Scott. SCDHEC maintains a current list of all EAC contacts and it is available on their website: http://www.scdhec.gov/eqc/baq/pubs/EAP/EACcontacts.xls.

Estimate of Emission Reductions (if available)
Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed March 2003 and continuing.

3. Seek low sulfur fuels as early as possible **Priority A**

Description of Measure
Continue to coordinate with representatives of Colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.

A date has not been given to us by the aforementioned entities, but we continue to coordinate with the aforementioned entities, and eagerly await the date at which we will receive low-sulfur fuels.

December 2004:

- The Committee has continued to coordinate with representatives of Colonial and Plantation pipelines, refiners. Based upon an unofficial status report from Kay Clamp width the SC Petroleum Institute ". We are fortunate in the Southeast because we receive much of our supply from the Gulf Coast, and 60% of the nation's refineries are in that area. A simple translation of that fact is that we are not dependant on one or two refineries for our fuel, and reap the benefits of a large number of refineries producing lower sulfur fuels.

- The maximum allowable sulfur level in gasoline for 2004 is 350 ppm with a corporate average of 120 ppm. Plantation Pipeline tests product entering their pipeline from every refinery, every day...their average from this testing has been and is 150 ppm in gasoline. Colonial Pipeline is also testing product from its shippers; the average sulfur levels for gasoline batches entering their pipeline YTD 2004 are 145 ppm for fungible regular gasoline and 62 ppm for fungible premium. Colonial did note that these averages are not volume weighted; they did not, however, think there would much difference if it were volume weighted. They also assumed that the regular and premium are averaged together for compliance.

- Both of the pipelines had the lower sulfur fuel in their facilities by late 2003; the fuel was at terminals serving South Carolina by January 2004, and was "on the street" by March 1, 2004".

June 2006:

- The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.

December 2006

- Anderson County started using low sulfur fuels (less than 15 parts per million) in all of its diesel equipment starting September 1, 2006.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Using the EPA's Diesel Emission quantifier (http://cfpub.epa.gov/quantifier/), it is estimated that the switch will reduce nitrogen oxide emissions by 191,200 pounds (95.6 tons) per year and reduce particulate matter emissions by 8090 pounds (4.04 tons) per year.

Implementation Date
Implementation began in 2004 and was completed in 2006.

4. **Design and implement congestion management and Intelligent Transportation System (ITS) measures** **Priority A**

Description of Measure

Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles; Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles; Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.

June 2005:

- County in the process of implementing congestion management plan on several major thoroughfares; cameras and variable message boards have been installed on I-85 through Anderson, Greenville and Spartanburg Counties.

December 2005:

- Anderson County Council, at its December 6, 2005 meeting, passed a resolution creating a committee to investigate capital funding projects for roads and bridges; within that commission, they will also be looking at funding for projects to relieve congestion on county roads and the addition of bike lanes on county roads. Report will be completed by July 2006.

June 2006:

- In March 2006, Anderson County, in conjunction with the City of Anderson, completed a traffic synchronization project on East Greenville Street, one of the busiest streets in Anderson. The synchronization will reduce the idling time of vehicles along East Greenville Street, reducing the amount of VOCs entering the atmosphere.

- The Greenville-Pickens Area Transportation Study (GPATS) held two public workshops June 1 & 6, 2006. The workshops included a brief presentation and provided an opportunity for citizens to influence which projects would be implemented in the region. The GPATS study area includes areas in Anderson, Greenville, Laurens, Pickens and Spartanburg Counties.

December 2006

- SCDOT is installing an ITS billboard between mile marker 37 and 38 in Anderson County. Installation should be completed in early 2007.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2005 and was completed in 2006.

5. Use of hybrid vehicles **Priority A**

Description of Measure
Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet. Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.

December 2004:

- There are approximately 109 alternative fuel vehicles operating within federal, state, county and municipal government. Of that amount 37 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or Alternative Fuel Vehicles, if practicable.

June 2005:

- Anderson County Administrator Joey R. Preston authorized a countywide resolution to purchase cars alternatively fueled or hybrid vehicles. County will purchase hybrid vehicles as they become feasible to the job performance. Vehicles that will be used primarily for transport of persons and light goods will be the first to be equipped with the flex and/or alternative fuel designations, as the demand on these vehicles are less than diesel and other heavy-duty vehicles. As more heavy duty vehicles are placed on the State contract for bids, preferential choices should and will go to vehicles that can perform the same task, but also has a flex/alternative fuel as an option.

June 2006:

- On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads: An act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle. Credits allowed against a taxpayer's federal income tax liability.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

Additional Information
See measure 12 for additional information on hybrid vehicle incentives.

6. Use higher efficiency engines for school buses **Priority A**

Description of Measure
Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA. Promote an Adopt-A-School-Bus Program. Endorse a statewide recommendation for the State to take the lead.

December 2005:

- In 2006, approximately 23 diesel buses will be retrofitted with particulate filters, which will create additional PM reductions. The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type.

June 2006:

- The South Carolina Department of Education (SDE) has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot.
- State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles.
- The benefits from these SDE funding sources will be distributed throughout the state. The SDE has agreed to make York County and the five deferred areas the top priority in assigning new and retrofitted buses to service. SDE is also partnering with private companies and local school districts to provide specific funding for school bus retrofits and clean air programs.

Estimate of Emission Reductions (if available)
VOC reduction is expected to be 355 lbs/yr. CO reductions of 2,737 lbs/year are expected, according to the December 2004 EAC SIP – Appendix 16.

Implementation Date
Completed. Implementation began in 2006 and is continuing.

7.a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes; Establish inter-modal connections with an emphasis on mass transit. Priority A

Description of Measure

WALKING/BIKING

Encourage local government to increase pedestrian/bicycle infrastructure spending (the Upstate spends 2 cents per person compared to SC spending 22 cents per person).

Establish safer bike routes with better signs marking lanes and routes.

Increase highway funding for bike paths, walking or mass transit including high-speed rail.

Support the federal transportation enhancement program. Install bike racks on all transit vehicles to encourage inter-modal transportation. New buses purchased through the state's bus purchase program will have bike racks.

PARK and RIDE

Establish mass transportation between a plant and a park-and-ride site.

CARPOOLING

Work with local government to offer incentives employees to car pool.

MASS TRANSIT

Offer a free trolley service running in a loop in downtown areas and nearby restaurants, especially during lunch hours;

Research past feasibility studies on free downtown shuttles. Potential for sponsorship with local area restaurants and businesses for a lunchtime shuttle could defer the operational costs of the endeavor.

Support mass transit (transportation choices and alternatives): While the only local mass transit choice that is currently available in some areas is the transit bus, example of future options such as bus rapid transit, commuter passenger service offered by trains on existing rail systems, a diesel multiple unit or "light rail" should be supported.

June 2006:

- Clemson Area Transit (CAT) bus lines include the Anderson 4U Route with service to Tri-County Tech and the City of Anderson. This route connects with Electric City Transit. The CAT buses are equipped with bicycle racks for easier transport of bicyclists within the various CAT bus routes. The CAT bus system is a free option, and Electric City Transit offers free rides during the Christmas holiday season (late November-December.)
- Anderson County has attempted to work with owners of vacant stores for use of their vacant parking lot, and with industries to use the parking lot as a point to shuttle workers to and from an industry; however each owner does not wish for the potential liability in their parking lot, and although industries seem amenable, no definitive answer was given from any of the industries..
- The County is currently working with the City of Anderson to possibly reserve parking spaces in the downtown lots for carpooling people. We have not received a response as of yet.

December 2006

- In October 2006, the Clemson Area Transit, a free bus service serving Anderson and Pickens Counties, expanded its service area to Oconee County, providing free service to those people traveling to Anderson County for school and recreation purposes.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed prior to 2005 and continuing.

7.b. Offer free or reduced transportation cost on high ozone days **Priority A**

Description of Measure
MASS TRANSIT:
Implement a coordinated high ozone day alert action plan to include public notification and free or reduced ozone fares from the transportation providers.

June 2005:
- A staff person from the South Carolina Department of Transportation (SCDOT) has been designated to receive SCDHEC's Ground-level Ozone Forecast and to distribute it via email to approdimately 5,000 staff. SCDOT also plans to utilize the SCDHEC Ozone Forecast Internet link for the forecast on their webpage. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. Anderson has 1 sign.

June 2006:
- Since 2002 Clemson Area Transit has provided a free shuttle system connecting Anderson University, Tri-County Technical College, Southern Wesleyan University and Clemson University in addition to the City of Clemson, the City of Anderson, and the Towns of Central and Pendleton. Clemson Area Transit has the largest ridership for a fare-free bus line in the United States. It is also South Carolina's most frequently used transit system. The fare-free system is funded through federal grants and matching funds from the city and University. CAT has the most modern fleet of buses east of the Mississippi River.
- Electric City Transit provides discount fares to senior citizens, the disabled, Medicare card holders, students, and children (free).
- Since free and discount fares are already available, when county funding is acquired for the incentives, the programs will be further implemented or expanded.
- At its May 11, 2006 meeting, business leaders in the Air Quality Advisory Committee recommended contacting the Chamber of Commerce and request assistance with conducting fundraising activities to support this program

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

7.c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems. Priority A

Description of Measure
Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility;
Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.

June 2006:

- The Clemson Area Transit (CAT) system coordinates with the Electric City Transit (ECT) system to provide free or low cost public transportation to Anderson and Pendleton, SC.
- CAT buses are equipped with wheelchair ramps and bicycle racks. CAT also provides personal escorts by appointment to aid new passengers in finding their way around and learning to read the bus map. CAT has partnered with C.U. Parking Services to coordinate a shuttle service from the Park and Ride lot.
- All ECT buses are permitted to leave their regular route at the request of riders who live outside the regular routes.

December 2006

- In September 2006, Anderson County officials asked state officials for $44,000 to look at whether the area's transit system should be expanded to offer residents more options to get to work. A $40,000 grant could pay for the feasibility study. Officials from local transit providers and social service agencies have identified that available transportation as a "primary barrier" to finding a job. Creating a more comprehensive transit system will be the first step towards a more regional transit authority. Such a regional system would then fit in well with a high-speed rail system that the state transportation department is looking at to connect South Carolina cities and other cities in the Southeast.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Some actions have been completed prior to 2006. Implementation of additional actions will take place as funding is acquired.

8. Review and update air emission inventory for the Upstate **Priority A**

Description of Measure
Ensure all industrial sources still operating. Review industrial sources for plant closures. Identify major sources of NOx; Map the locations of point sources (10% of point sources cannot be found); Map the specific locations and the area sources where coal is burned.

December 2003:

- Requested list of all NOx emitting sources from Emission Inventory to verify they are still in operation in Anderson County.

Estimate of Emission Reductions (if available)
Not available.

Implementation Date

Completed. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.

9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling. Priority A

Description of Measure
Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plant. Coordinate with the Williams Company to determine what NOx reductions are planned for the TRANSCO Pipeline. Support NOx reduction strategies in the State Implementation Plan. Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emissions NOx sources) See info on Duke Power included in Appendix 16 of EAC SIP located at www.scdhec.gov/eqc/baq/html/eap_sip.html.

June 2004:

- Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004.

December 2004:

- The Williams Company has received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continued until late 2005. This will result in a significant NOx reduction for the Upstate.

June 2006:

- NOx reduction at the Duke Power Lee Steam Plant: Coal fired Unit #2 is now operating with the new NOx burners and final manufacture set up for acceptance is to be conducted in June 2006. Monitoring data indicates that the burner should at least meet the 0.23 #NOx/MMBTU's.
- Unit #2 will operate this entire NOx season with the Low NOx burners. Coal fired Unit #1 is currently off line. It will be coming back on line in July 2006 with new NOx burners installed. If the results are similar to Unit #2 Duke Power will also operate this unit the entire NOx season at the 0.23 #NOx/MMBTU's rate or lower. This unit will operate approximately 4-6 weeks and final set up will be conducted.
- Both units will complete final construction permit testing during June, July and August 2006. Duke Power has commitment to install the Low NOx burners on the 2 remaining coal fired units at the Lee Steam Plant. Unit #1 burners were installed April-May 2006 and start-up with Low NOx burners was May 19, 2006. Unit #2 burners were installed March-April 06 and start-up with Low NOx burners was April 15, 2006.

Estimate of Emission Reductions (if available)
Not available.

Implementation Date
Implementation began in 2004 and was completed May 2006.

10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers). Priority A

Description of Measure
Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals.
Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, Salvation Army when they have been donated as charitable gifts. Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.

- The reduction of the vehicle tax has hampered all efforts to stimulate the beginnings of this program. County Council has stated several times that they as a body will not increase the tax burden on its constituents, and any effort to implement a increase of revenue via millage or tax increase would be voted down.

December 2003:
- During its August 5, 2003, the AQ Staff Advisory Committee discussed this strategy: A high emission vehicle buyback or repair program appears to be cost effective for VOC emissions, but is less clear for NOx emissions. It is hard to quantify the success rate of the program in the various states the program has been implemented, but the program seems to make intuitive sense. This type of program will become increasingly more important as the new vehicle pollution control systems increase the gap between the new vehicle's emissions and the "smoking" vehicle's emissions. Recommendation: funding the high emission vehicle buyback or repair program as a pilot program with a set yearly target for the number of vehicles that will be either repaired or scraped. A follow-up study on this pilot program would need to be implemented to determine the impact on emissions (ozone) for the upstate.

June 2006:
- In the summer 2006, staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to re-selling clunker vehicles donated to these organizations.
- As funding is acquired for the incentives, the programs will be implemented.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Implementation began in 2003. Completion of this measure will depend on discussions with the non-profit organizations.

11. Ban open burning of on-site commercial clearing debris during ozone season (April - October) Priority A

Description of Measure
Use SCDHEC model to determine the most effective method to ban open burning. Discuss modeling results with all local governments to consider adoption.

December 2005:
- At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round.
- DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishable by law.
- A DHEC press release was issued to the upstate on November 8, 2005

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed on June 25, 2004 with the passage of regulation SC 61-62.2 "Prohibition of Open Burning".

12. Create incentives for the purchase of high efficiency and low emissions vehicles. Priority A

Description of Measure
Offer tax credits for vehicles with high efficiency gas consumption or low emissions.
Offer tax credits for low mileage vehicles instead of high mileage vehicles December 2004 –SC State led developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles. See below

****Develop air quality best management practices (BMPs)_ for construction sites - Develop a generic list of BMPs
Develop management practices for construction debris.
Develop management practices for emissions from construction vehicles.
Develop management practices for traffic controls during construction.

December 2004:

- Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles.

June 2005:

- A bill titled; An act concerning the promotion Of alternative use fuel, and hybrid propulsion System For transportation purposes was submitted to the SC House of representatives in January 2005. The bill is now in committee. In summary, the bill provides tax credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel.

June 2006:

- On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads: AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Implementation began in 2005 and was completed June 1, 2006.

13. Use land-use and transportation planning to improve air quality Priority A

Description of Measure
Include air quality measures as a part of the land-use and transportation planning process.

December 2004:

- Highlights of the Anderson County Land Use and Development Standards include items that develop standards with respect to landscaping and open space, promote public health and safety through the reduction of noise pollution, storm water runoff and air pollution. Also included are development standards with "Greenways" defined which link residential areas with other open space areas. These Greenways may contain bicycle paths, footpaths, and bridle paths. Additionally, intensity standards (designed principally to regulate land use in accordance with the design function and carrying capacity of the road on which it is located) are being developed.

June 2006:

- In the review process, Transportation staff does employ traffic thresholds that require various levels of congestion mitigation to reduce idling times, and they have been using the internal thresholds for two years. However, these thresholds are not defined in the ordinance, and so the review is intended as guidance for future use to show where potential problems are most likely to occur in the future.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2004.

14. Implement a program to encourage use of green power. Priority A

Description of Measure
Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant. Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.

December 2005:

- In 2005, Blue Ridge Electric Cooperative in Anderson County has begun offering the purchase of "Green Power" to its members. The Green Power is generated by Santee Cooper, who is the source of power for all of the electric cooperatives in South Carolina.
- Santee Cooper is constructing a Green Power station at the Anderson Regional Landfill that will enter commercial operation in 2006.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

15. Promote route efficiency for delivery vehicles, trash collection etc. Priority A

Description of Measure
Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.

June 2006:

- The Solid Waste Division, since 2003, has encouraged and continues to encourage all its trash haulers to use the most direct route to pick up trash. This will reduce driving time and reduce emissions.
- Delivery companies currently use GPS mapping programs to map the most cost effective route to save gasoline. The local public transportation system have designated routes, but they take steps to reduce idling time of the buses, such as reducing speeds and an 2 minute tardy schedule to make sure no one is left behind at a bus stop. They have been implementing these gas saver items since 2000.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2003 and continuing.

16. Establish a clean air partnership with business and industry. Priority A

Description of Measure
Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments. Establish park and ride lots serving perimeter counties along major corridors. Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available. Encourage carpooling/vanpooling as an option where employees living in the same area agree to ride to work together rather than to drive their individual vehicle to work. Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc. Encourage telecommuting.
Adopt a Bus Program. Develop funding to be used for matching grants fund for several EAP strategies. Develop a core competency and assisting the Upstate EAP group in writing grant proposal.

June 2004:
- Staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties.

December 2005:
- Michelin North America, on November 29, 2005 announced that their two Anderson County plants have qualified for membership in the National Environmental Performance Track program. They are among 400 facilities nationwide that have met the stringent requirements. Michelin is also investing $80 million to expand and upgrade the two plants to reduce environmental impacts within Anderson County.
- Duke Power has agreed to reduce the idling time for their vehicles during ozone season. During ozone season, all vehicles will not idle for more than 30 seconds before the vehicle is shut down. With the 88 diesel trucks and 265 gasoline trucks in use in Anderson County, that equates to a reduction of 530 pounds VOC reduced and 765 pounds NOx reduced during ozone season.
- Michelin, Wal-Mart and Sonic were corporate sponsors for the gas can exchange event that was held in Anderson County on September 10, 2005.
- In the November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season.

June 2006:
- In early 2006, Associated Fuel Pump Systems Corporation (AFCO) announced that they also have qualified for membership in the National Environmental Performance Track program.
- Businesses and industry have established its own production schedule, based upon the demands placed upon them by their customers, and have not, to this point, determined that an alternative work schedule will keep them in business. As of yet, we have not received word from them to note that telecommuting would be a beneficial act for their businesses as well. As far as carpooling, Michelin NA does have stenciled parking spots for carpoolers, but in other cases it is individual drivers wishing to carpool that are driving the efforts.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 but progress and improvements will continue on this strategy.

17. Establish an active public awareness campaign. Priority A

Description of Measure
Develop an editorial board to discuss air quality issues and development of a relationship with media. Use alert messages year round, not only during ozone season; Utilize public service announcement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days; Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles.

December 2005:
- Anderson County held a gas can exchange program on September 10, 2005, taking in 83 old cans.
- Anderson County Staff sent out a news release (03/28/05) on Ground-level Ozone Awareness Week and promoted this week on a local radio station, WRIX 103.1 FM. An article on Ground-level Ozone was also placed on their county webpage: www.andersoncountysc.org . Anderson County received and distributed 200 Ozone and Your Health brochures.

June 2006:
Anderson County continues to keep its citizens aware of the importance of having good air quality. Here is a list of things we have done and are currently doing:
- An Ozone-No-zone seminar with Keep America Beautiful of Anderson County and Anderson County Environmental Services Division held a, a local education program teaching how ground level ozone affects our daily lives.
- 4-U Transit system connecting Anderson, Pendleton, Clemson and Central; Anderson's Electric City Transit "FARE Free" program; light rail project;
- Tree legacy program, Tree I.D. program; Arbor Day plantings; City of Iva continual member of "Tree City USA" Ozone Awareness Week;
- Earth camp, offered at the Anderson Co. Recycling Education Center, provides children with stimulating outdoor learning experiences about the ecology of soils, water, forests and wildlife and the stewardship of these important resources. Topics covered include Air Quality, Recycling, and Trees.

December 2006
- On July 31, 2006, the Greenville News published an article titled “More air woes could blow Upstate’s way.”
- On July 16, 2006 the Greenville News published an article titled “Emissions levels suit creates cloud of uncertainty for industry.”

Estimate of Emission Reductions (if available)

VOC reductions of 355 lbs/year are expected from the gas can exchange program.
No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005. Education and outreach are continuing.

18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality. Priority A

Description of Measure
Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University. Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase or upgrade of furnaces and boilers.

June 2004:

- Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities. (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts.

December 2005:

- ALTERNATIVE FUELS: In 2005, Clemson University Chemical engineering professor Mark C. Thies received an $856,000 award from the Department of Energy (DOE) to develop more efficient processes for the centralized production of hydrogen by splitting water. The award was one of only three made nationwide under DOE's Nuclear Hydrogen initiative. In addition to Thies, the project team includes fellow Clemson David Bruce, John O'Connell from the University of Virginia and Max Gorensek from Savannah River National Lab. The Clemson team will interact not only with U. S. engineers and scientists but also with those in France, Italy, and Japan, all of whom have teams working on related processes.
- Clemson University is developing the International Center for Automotive Research (Clemson-ICAR) in Greenville, SC. The ICAR project will be the premier automotive and motorsports research and educational center in SC. Research will emphasize development of innovative materials and processing technologies, which will enable the development of more efficient and environment friendly vehicles, as well as electrical power generators.

June 2006:

- Clemson University chemical engineering professor Mark C. Thies continues investigating the centralized production of hydrogen via water splitting.
  (Source: http://www.ces.clemson.edu/chemeng/research.html)

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed November 2003 but will continue monitoring progress of ongoing research.

19. Use of alternate fuels. Priority B

Description of Measure
Direct local Planning Commissions to identify areas where alternative fuels will be best suited. Encourage the use of alternate fuels; Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to power on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas. Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles. Anderson County owns 37 alternative fuel vehicles and purchased 1,520 gallons of biodiesel in 2004.

December 2004:
- There were 1,520 gallons of biodiesel purchased in 2004 in Anderson County.
- Currently there are no ethanol refueling facilities in Anderson County, but plans call for the construction of one by the end of 2005.

December 2005:
- ALTERNATE FUELS: In 2005, Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification. Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy Office, North Carolina's Research Triangle Institute, Rentech and Sud-Chemie Inc. This grant reflects $875,499 in DOE-STAC funds and $294,499 in cost sharing by the industrial and governmental participants. Anderson County is presently applying for a grant from the EPA to fund a E85 gasoline pump at a gas station within Anderson to promote alternative fuel usage within the county.
- There is currently one Spinx station that offers Ethanol 85% fuel in Anderson County. There are 5 other Ethanol 85% stations and 5 biodiesel stations within a 25 mile radius of downtown Anderson. Stations can be located using the U.S. Department of Energy Alternative Fuels Data Center Website at http://www.eere.energy.gov/afdc/infrastructure/locator.html

June 2006:
- There are currently 2 public Spinx stations that offer E85 in Anderson County. Both Spinx stations currently offer Biodiesel. Stations can be located using the U.S. Department of Energy Alternative Fuels Data Center Website at http://www.eere.energy.gov/afdc/infrastructure/locator.html

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes.
Priority B

Description of Measure
Evaluate use of HOV on three (3) lane interstate highways; Show the advantages of designating HOVs; Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (rush hour); Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.

December 2003:

- During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. The Committee concluded that "HOV lanes work best where an interstate or a limited access arterial lead directly to major employment centers, usually within a central business district (CBD). With the exception of I-385 leading to the Greenville CBD, Upstate interstates (especially I-85) generally link the cities of Anderson, Greenville, and Spartanburg via peripheral routes, not conducive to the addition of HOV lanes. In addition, inter-county work trends do not show major volumes that would support car-pooled trips. Making the third lane of I-85 an HOV lane would severely increase congestion, emissions, and future accidents. The addition of new lanes would be cost prohibitive, and would not be allowed to revert to a single occupancy vehicle (SOV) status without reimbursement to the federal government."

December 2004:

- Traffic engineers with SCDOT indicate that because traffic volumes on I-85 exceed 100,000 vehicles daily on the 3 lanes of the interstate it would be unwise to convert one of the three lanes to a HOV lane. The offsetting increase in congestion in the two remaining lanes would predictably increase NOx emissions by an amount exceeding the any reductions gained from traffic moving in the HOV lane. HOV lanes work best when they are paralleled by at least 4 or more free-flow lanes. No further actions are planned.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2004.

21. Modify speed limits for optimum fuel efficiency. Priority B

Description of Measure
Direct SCDHEC and SCDOT to take the lead role. Direct Planning Commissions to assist SCDHEC in modeling.

December 2005:

- The ANATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways for the majority of Anderson County has been established at 60 mph. According to the Department of Energy, gas mileage decreases rapidly at speeds above 60 mph.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005.

22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.
Priority B

Description of Measure
Study impact of post construction traffic flow. Study impact of construction activities.

June 2006:

- If land is zoned for the intended use of the property, the traffic impacts are monitored via trip monitors that measure the traffic flow through a particular stretch of roadway to use in future planning of road widening projects.
- If land is not zoned for the type of land use a developer wishes to use it for, he or she must petition the County Council to change the zoning for the new purpose.
- Planning officials will also inform Council whether it approves of or disapproves of the zoning request, depending on the current population density, the current condition of the road, and the potential for increase in congestion. Although the Planning division can disapprove of a project, the developer can still make the request of the Council.
- At the Council meeting, residents in the affected areas can also state their wishes for the development. The Council takes all this information under consideration, bit ultimately it will be up to the Council to approve or deny.
- These policies were enacted July 20, 1999, and revised April 15, 2003.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2003.

23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods Priority B

Description of Measure
Eliminate minimum acreage requirements for school sites. Cap student populations per facilities. Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals. Favor restoration and construction of community-based small schools over new construction of remote mega schools.

June 2006:

- Anderson County encourages the State to modify the state law that dictates minimum acreage for schools, and also encourages the school districts to refurbish existing schools. If the school districts and the state ever decided this would become policy, Anderson County would not have any hesitation to wholeheartedly back all the school districts within the county in their efforts to create community schools to reduce traffic

- The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_2005-2006/bills/4488.htm

- Anderson County is awaiting the committee's recommendations and the manner in which they may take effect if this bill is enacted.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2006 and continuing.

Additional Information

- SECTION 203 SCHOOL SITES
  203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties.
  203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI).

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Appalachia, SC (Designated - Attainment)							
DECEMBER 2006 CHEROKEE COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
Support SCHDEC statewide efforts to reduce ozone levels	DHEC representatives met with Cherokee County EAC to present grant funding and other information about public awareness and promoting ozone educational efforts.	Completed.	Feb-06	Related.	Related.	n/a	
Public Awareness efforts.	Dennis Fowler, manager, WAGI Radio, agreed to broadcast ozone alert messages for Cherokee County.	Completed.	March 10, 2006	Related.	Related.	n/a	
Public Education	Chairman and staff advisor to Cherokee County EAC Committee travelled to Columbia, SC for information about monitoring sites in SC.	Completed.	15-Mar-06	n/a directionaly sound	n/a directionaly sound	n/a	
Public Awareness efforts.	Presented news release for Ozone Awareness Week.	Completed.	15-May-06	Related.	Related.	n/a	

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
11 South Carolina State Measures							
Comments: Modeling for 2007, shows attainment without including measures beyond national and regional measures already finalized.. 2012 and 2017 also shows attainment. *Our continuing EAC programs are also related to maintenance.*							
11 Appalachian, SC (Effective date of nonattainment designation deferred) - Greenville County							
Gas Can Exchange Event	June 28, 2003; 115 cans exchanged	115 old gas cans exchanged for new environmentally safe cans.	June 28, 2003	711 lbs/year	N/A	Resources were obtained from several local vendors	See Comment #6
School Bus Retrofit Project	Approximately 47 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expected)		2006	799 lbs/year	N/A	N/A	CO reductions 5,593 lbs/year December 2004 EAC SIP - Appendix 16
GREENVILLE COUNTY, SC DECEMBER 2006 EAC PROGRESS REPORT **Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.**							
Air Quality Awareness and Improvement Policy	Memorandum sent to all County departments for the purpose of establishing certain principles that will guide the recurring activities of County government. Purpose of policy is to establish certain principles that will guide the recurring activities of Anderson County government. Memorandum sent to all County employees for the purpose of establishing certain principles that will guide the recurring activities of County government in the following areas: 1. Ensure that all county employees are notified of upcoming alerts for Ozone Action Days during ozone season (April – October) of each year. 2. Ensure that County residents are aware of the new State's restrictions on outdoor burning, especially during ozone season. 3. Greenville County will explore and adopt, when feasible DHEC's Take a Break from the Exhaust Program or a program with a similar purpose, and Flex-scheduling and car-pooling opportunities. 4. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications. 5. Ensure preventative maintenance schedules are timely performed. Vehicles and equipment, which operate in construction are 6. Avoid long idling. The worst mileage a vehicle can get is zero (0) miles per gallon, which occurs when the engine idles. Unnec 7. Continue considering purchasing low-emission vehicles to meet County needs according to the vehicle replacement plan. Thi 8. Fill fuel tanks in the morning, or when the temperature is coolest. Unleaded gasoline is densest when cold. Do not overfill tank 9. Clean out the trunk or storage area. Every 200 lbs. Of unnecessary weight reduce one mile of fuel efficiency. 10. Operate vehicles with the speed limit and eliminate hasty starts. Driving too fast wastes gas. Traveling at 65 mph uses 15% 11. Develop efficient routing plans. Utilize routes with minimal traffic lights, when possible. This decreases engine idling at stopl 12. Encourage carpooling when appropriate. Utilize fuel-efficient vehicles or motor pool vehicles when traveling out of town to m 13. Greenville County has been improving landscaping at all County facilities with the goals of improving the environment by mir 14. Greenville County is committed to energy conservation programs and practices, which will result in less energy consumption 15. Greenville County partnered with the SC Energy Department in 2003 with the goal of reducing energy consumption at Count 16. The following measures will continue to be implemented and reminders will be sent to all County employees and tenants: · Turn OFF all office lights when leaving every day, · Electric space heaters are not allowed in County facilities (exceptions are made only for medical reasons with a written statem · Ensure that electric equipments such as lamps, coffee pots, monitors, printers, copy machines, etc. are turned OFF when leavi · To further increase energy conservation, the County will encourage, when practical, to make environmental considerations in p See Comment #6.	· Greenville County is preparing a grant application due to USEPA Region 4 on December 23, 2005, in advance of the 2006 Ozone Season. The County is planning on conducting an extensive public awareness campaign should the grant application be approved. Items would include: radio and TV advertisements, informational wheels, brochures, involvement in community activities, and funds to enable the Greenville Transit Authority to provide free transit services during high ozone alert days.	Effective immediately - October 12, 2004	directionally sound	directionally sound	N/A	The commitment to address these activities has been assured by the County Administrator by establishing the Air Quality Awareness and Improvement Policy for County Government. 1. See comment No. 6.
1. Support SCDHEC statewide efforts to reduce ozone levels.	Stakeholder group to support and participate in modeling efforts. Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning). · Members of the Upstate Air Quality Staff Advisory Committee participated WITH dhec in the development of new regulations aimed at reducing NOx emissions. As a result, new regulations requiring Nox- BACT (Best Available Control Technology Economically Achievable) were adopted in mid 2004.	December 2004 EAC SIP did include Appendix 16 - 1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste 2. SC61-62.5, Std. 5.2 "Control ofOxides of Nitrogen) reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year 3. June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW. See Comment #4. 4. November 2004 - Greenville County submitted letter supporting SIP. See Comment #5. 5. Greenville County implemented the following measures during 2004 and 2005: purchased alternate fuel vehicles (Greenville purchased 19 such vehicles since November 2004); published and distributed brochures about improving air quality ; sent out notices on high ozone days and developed audio commercials for local radio stations to broadcast during ozone awareness week and ozone season; broadcasted radio announcements and information through the County's Cable TV channel, a	June 25, 2004	65.23 tons/season N/A	13.73 tons/season 234.1 tons/yr	N/A N/A	Upstate Air Quality Staff Advisory committee will be developing a business partnership plan to involve local industries in announcing ozone alerts, participating in ride share programs and adopting the same or similar list of initiatives that Greenville County adopted from the SELC. See Comments #1, #2, #3, #5, #6, #8

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
		• Met with Carol Kemker (Deputy Director for Air, Pesticides and Toxics Management Division, USEPA Region 4) and Myra Reece (Chief, Bureau of Air Quality, SCDHEC) on October 11, 2006, to discuss improved coordination and cooperation between DHEC, EPA and the Upstate counties. • Met with Myra Reece (Chief, Bureau of Air Quality, SCDHEC) and other SCDHEC representatives on November 8, 2006 for an update on air quality issues (ground level ozone and PM2.5). EPA and SCDHEC committed additional staff assistance to local governments. Local DHEC staff has been added to our EAC staff committee. • Air quality committee members attended and participated in the Environmental Issues Briefing on November 2, 2006. Beverly Banister, Director of Air, Pesticides and Toxics Management Division, USEPA Region 4 and Robert King from SCDHEC, among other speakers, discussed air quality issues facing the Upstate and the need for greater public awareness.					
2. Designate an Ozone Action Coordinator	Designate a staff person in each County who will be responsible for coordination of counties ozone programs	Completed. County has 2 Ozone Coordinators. Ozone Action Coordinators were designated in 2003, John Owings and Sandra Yudice.	March 2003	N/A	N/A	N/A	See Comment #5
3. Seek low sulfur fuels as early as possible	Continue to coordinate with representatives of Colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.	Committee continues to coordinate with representatives of Colonial and Plantation pipelines, refiners. During 2005, Colonial Pipeline conducted studies that indicates that S.C., as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. • M Grades: Average 139 High 330 • V Grades: Average 74 High 300. Ultra Low Sulfur Diesel will be available at retail stations beginning summer 2006.	Implementation began in 2004 and was completed in 2006.	directionally sound	directionally sound	N/A	See Comment #5. • Committee continues to coordinate quarterly with representatives of Colonial and Plantation pipelines, refiners. During 2005, Colonial Pipeline conducted studies that indicates that South Carolina are receiving sulfur levels that should help many of the non-attainment areas. • The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.
4. Design and implement congestion management and Intelligent Transportation System (ITS) measures.	Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles; Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles. Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.	Greenville County completed implementing the congestion management plan on several major thoroughfares; cameras and variable message boards have ben installed on I-85 through Anderson, Greenville and Spartanburg Counties. In December 2005, the Greenville County Planning Commission retained the services of a transportation consultant to update the Long Range Transportation plan including an updated congestion management plan and a bicycle and pedestrian plan. The current long range transportation plan may be found at www.greenvilleplanning.com. • The Greenville-Pickens Area Transportation Study (GPATS) held two public workshops June 1 & 6, 2006. The workshops included a brief presentation and provided an opportunity for citizens to influence which projects would be implemented in the region. The GPATS study area includes areas in Anderson, Greenville, Laurens, Pickens and Spartanburg Counties.	Completed in 2005. Suplementary Projects are continuing.	directionally sound	directionally sound	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
5. Use of hybrid vehicles	Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.	• In October 2004, principles were issued guiding County operations to improve air quality including considering low-emission vehicles. June 2005:The Administrator signed a document with intent to purchase low emitting vehicles. Greenville has purchased 19 alternative fuel vehicles since November 2004, bringing the total number to 56 (ethanol). There are approximately 122 alternative fuel vehicles operating within federal, state, county and municipal government. June 2006: Members of the Upstate EAC counties and other stakeholders worked on statewide legislation to provide tax incentives for purchase and construction of alternative and hybrid vehicles and fuels. The Governor signed Hybrid vehicle bill H4312 on June 1, 2006. • Information on hybrid vehicles will be included in the "Improving Air Quality Public Awareness Campaign". • The County implemented measures to procure higher fuel efficient vehicles. On July 18, 2006, ozone coordinators contacted the UPS Fleet Manager to discuss UPS utilizing delivery hydraulic hybrid vehicles in Upstate SC.	Initiated in 2004 and completed June 1, 2006. The Governor signed Hybrid vehicle bill H4312 on June 1, 2006.	directionally sound	directionally sound	N/A	See Comment #5
6. Use higher efficiency engines for school buses	Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA. Promote an Adopt-A-School-Bus Program. Endorse a statewide recommendation for the State to take the lead	• School Bus Retrofit Project: approximately 47 diesel buses will be retrofitted with particulate filters during 2006. The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available. • The South Carolina Department of Education (SDE) purchased 61 new buses to be on the road in late 2005. • The SDE has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. • Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. • On June 20, 2006, the SC Education Department Transportation Director announced that in the fall of 2006, all South Carolina buses will use a blend of 20 percent biodiesel ultra low-sulfur fuel, which reduces soot emissions about 10 percent from standard diesel fuel. The state is also using $1 million to purchase 140 particulate traps.	Completed in 2006	N/A	N/A	N/A	Reductions accounted for under School Bus Retrofit Project
7.a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes. Establish intermodal connections with an emphasis on mass transit	WALKING/BIKING Encourage local government to increase pedestrian/bicycle infrastructure spending (the Upstate spends 2 cents per person compared to SC spending 22 cents per person). Establish safer bike routes with better signs marking lanes and routes. Increase highway funding for bike paths, walking or mass transit including high-speed rail. Support the federal transportation enhancement program. Install bike racks on all transit vehicles to encourage intermodal transportation. New buses purchased through the state's bus purchase program will have bike racks. PARK and RIDE Establish mass transportation between a plant and a park-and-ride site. CARPOOLING Work with local government to offer incentives employees to car pool. MASS TRANSIT Offer a free trolley service running in a loop in downtown areas and nearby restaurants, especially during lunch hours; Research past feasibility studies on free downtown shuttles. Potential for sponsorship with local area restaurants and businesses for a lunch time shuttle could defer the operational costs of the endeavor. Support mass transit (transportation choices and alternatives): While the only local mass transit choice that is currently available	1. December 2004 Park and Ride: Staffs of Greenville County Planning Commission, Greenville Transit Authority (GTA) and Greater Greenville Chamber of Commerce have begun joing effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties. 2. June 2005 - County contract with consultant to prepare a Transit Development Plan for the most rapidly growing portion of Greenville County, toinclude a Park and Ride and Rideshare Feasibility study. The transit development plan may be viewed at www.greenvilleplanning.com See Comment #8. 3. November 2005, the transportation consultant completed the transit study for Mauldin and Simpsonville and recommended alternatives for providing transit to this portion of Greenville County. Currently the cities of Mauldin and Simpsonville are considering the recommendations included in the transit study. June 2006: Increased transit offered by GTA and Phase I of interim use plan for G&N rail walking trail.	Implementation begain in 2004 and was completed in 2006. Supplementary projects are continuing.	directionally sound	directionally sound	N/A	See Comment #5

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
		Greenville County Economic Development Corporation (GCEDC) is negotiating with a contractor to salvage the rail track on the Greenville and Northern (G&N) Railroad to convert the rail bed to a tram/trail. The former G&N Railroad runs between the cities of Travelers Rest and Greenville. The GCEDC initiated discussions with the Greenville Transit Authority (GTA) to determine if GTA could develop a funding mechanism to purchase and operate a hybrid or fuel efficient tram. • The downtown trolley that the City of Greenville began operating in June 2006 (see June 2006 updated above) was such a success that the City began operating a second trolley in September 2006. The trolleys hold 37 passengers each and the service is free. • The Greenville Transit Authority is considering the five-year plan completed in January 2006 concerning coordinating with Pickens County to provide service in the vicinity of Easley, SC. The City of Easley will begin in late November 2006 a $50,000 state-federal-funded study of public transportation.					
7.b. Offer free or reduced transportation cost on high ozone days.	MASS TRANSIT: Implement a coordinated high ozone day alert action plan to include public notification and free or reduced ozone fares from the transportation providers.	Greenville County is working on a grant application due to USEPA Region 4 on December 23, 2005, in preparation for the 2006 Ozone Season. The County is planning on including a request for funds to enable the Greenville Transit Authority to provide free transit services during high ozone alert days. Grant application did not include funding for this type of activity. Business leaders will conduct fundraising activities to support this program. December 2006: The Greenville Transit Authority and staff have determined the approximate cost of providing free transit services during high ozone days; however, funds have not been secured.	Implementation began in 2005. Completion of this measure will depend on the fundraising activities.	directionally sound	directionally sound	N/A	
7.c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems.	Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility; Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.	1. December 2004 - Greenville County (GC) Planning Commission completed update to county Zoning Ordinance - adopted November 30, 2004. New provisions will eliminate minimum lot size requirements, encourage cluster developments, grant density bonuses for developments with access to public transportation, allow some commercial developments to include housing within the development. 2. June 2005 - county council passed ordinances updating Zoning Ordinance and Land Development Regulations; changes focus on adding flexibilities to encourage cluster developments, neo-traditional development and mixed-use developments. See Comment #8 Planning Commission on behalf of the City of Mauldin and The City of Simpsonville has retained Day Wilburn Associates to prepare a Transit Development Plan for the Mauldin-Simpsonville (MS) Urbanized Area. See update on strategy 7.a. The MS transit study has been completed and the GC Planning Commission met with the cities to seek matching funds to begin additional public transit services. Recommendations are currently being considered.	Zoning Ordinance complete June 2005 and Transit Study completed in January 2006.	directionally sound	directionally sound	N/A	Comments #7
8. Review and update air emission inventory for the Upstate	Ensure all industrial sources still operating. Review industrial sources for plant closures. Identify major sources of NOx Map the locations of point sources (10% of point sources cannot be found). Map the specific locations and the area sources where coal is burned.	This was completed and forwarded to SCDHEC on a previous updated progress report. The information allowed DHEC to having more accurate emissions inventory.	Completed. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.	directionally sound	directionally sound	N/A	SCDHEC

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling	Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plan Coordinate with the Williams Company to determine what NOx reductions are planned for the TRANSCO Pipeline. Support NOx reduction strategies in the State Implementation Plan Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emissions NOx sources)	See info on Duke Power included in Appendix 16 of EAC SIP (link in Comment #6). · The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continue until late 2005. This will result in a significant Nox reduction for the Upstate. Duke Power Lee Steam Plant coal fired Units #1 and #2 will complete final construction and permit testing for new low NOx burners during June, July and August 2006. Duke Power has commitment to install Low NOx burners on the 2 remaining units at Lee Steam Plant. Unit #1 burners were installed April-May 2006 and start-up with Low NOx burners was May 19, 2006. Unit #2 burners were installed March-April 06 and start-up with Low NOx burners was April 15, 2006.	Implementation began in 2005 and was completed in May 2006.	N/A	40%	N/A	
10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers).	Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals. Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, Salvation Army when they have been donated as charitable gifts. Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.	During its August 5, 2003, the AQ Staff Advisory Committee discussed this strategy: A high emission vehicle buyback or repair program appears to be cost effective for VOC emissions, but is less clear for NOx emissions. Recommendation: funding the high emission vehicle buyback or repair program as a pilot program with a set yearly target for the number of vehicles that will be either repaired or scraped. In the summer of 2006, staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to re-selling clunker vehicles donated to these organizations. December 2006: Met with Goodwill Industries and Miracle Hills executive directors to discuss air quality efforts and the "cash for clunkers" strategy. Conference call with the Kidney Foundation (Kidney Car Program) to discuss air quality efforts and the "cash for clunkers" strategy.	2005. Completion of this measure will depend on discussion with the non-profit organizations.	directionally sound	directionally sound	Use funds from license plate sales	
11. Ban open burning of on-site commercial clearing debris during ozone season (April - October)	Use SCDHEC model to detrmine the most effective method to ban open burning. Discuss modeling results with all local governments to consider adoption.	DHEC adopted regulations in mid 2004 restricting open burning. See Comment #6.November 2005 Air Quality Steering Committee meeting, staff directed to coordinate with local governments to enforce burning ban year-round. Greenville County notified local business and government about the ban at monthly subdivision review team meetings. The County is running a PSA on the County's Cable TV channel permanently. As part of the "Improving Air Quality Public Awareness campaign" the County will distribute brochures/information about open burning regulations locally. November 7, 2006, staff presented to the Fire Chief Association (FCA) outlining problems and solutions to air quality issues in the Upstate. Staff distributed "Learn Before You Burn" brochures to the FCA and the Library System for public distribution. The Fire Chiefs requested information on approaching County Council about a more restrictive open burning ordinance. Began radio broadcasting a PSA on open burning and air quality information during the month of November 2006 in an effort to make citizens aware and minimiz	Completed in 2004.	directionally sound	directionally sound	N/A	See Comment #6

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
12. Create incentives for the purchase of high efficiency and low emissions vehicles.	Offer tax credits for vehicles with high efficiency gas consumption or low emissions. Offer tax credits for low mileage vehicles instead of high mileage vehicles	December 2004 - developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles. A Bill titled "An act concerning the promotion of alternative use fuel, and hybrid propulsion system for transportation purposes" was submitted to the SC House of Representatives in January 2005. On June1, 2006 the Governor signed the H*4312(Rat #0371) General Bill to allow state income tax credit equal to 20% of certain new hybrid, fuel cell, alternative fuel or lean burn technology motor vehicle credits allowed against a taxpayers federal income tax liability. This information and its positive effects on air quality will be included in the "Improving Air Quality Public Awareness Campaign" currently under enhancement.	Implementation began in 2004 and was completed June 1, 2006.	directionally sound	directionally sound	N/A	See Comment #5
****Develop air quality best management practices (BMPs)_ for construction sites	Develop a generic list of BMPs Develop management practices for construction debris. Develop management practices for emissions from construction vehicles. Develop management practices for traffic controls during construction.			directionally sound	directionally sound	N/A	See Comment #2
13. Use land-use and transportation planning to improve air quality	Include air quality measures as a part of the land-use and transportation planning process.	1. June 2005 - County Council passed ordinances updating Zoning Ordinance and Land Development Regulations; changes focus on adding flexibilities to encourage cluster developments, neo-traditional development and mixed-use developments. A copy of this ordinance may be viewed at www.greenvilleplanning.com.	Completed in 2005.	directionally sound	directionally sound	N/A	See Comment #8
14. Implement a program to encourage use of green power.	Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant. Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.	BMW Manufacturing Corp. and its partners launched a $12 million methane gas-to-energy project. Methane from the Palmetto Landfill is used to power four onsite turbines and cogenerate electricity and hot water for the plant. December 2004, green power options are limited to the north-western portion of Greenville County served by Blue Ridge Electric Cooperative. The Enoree Landfill is scheduled for closure during 2007. Greenville County will advertise in the summer 2006 for a developer to capture and recover methane gas at the Enoree Landfill. • In early November 2006, Greenville County began installing the active methane gas collection system. About 10 of the 50 well-heads have been installed. Once the well-heads have been installed and connected to the blower system, the County will install a flare. When the flare system is up and running, the developer has six months to find a green power use. If the contractor fails to find a partner, Greenville County will own the gas rights and can partner with another company.	##################	directionally sound	directionally sound	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
15. Promote route efficiency for delivery vehicles, trash collection etc.	Encourge business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.	In June 2004, Fleet Management Division sent memorandum to all department managers outlining actions to maximize fuel efficiency including: Ensure tires are properly inflated. Fill fuel tanks in the morning, or when temperature is coolest, do no overfill tank and stop pumping when the nozzle cuts off. Clean out the trunk or storage area. Avoid long idling. Operate vehicles within the speed limit and eliminate "jackrabbit" starts. Ensure preventative maintenance schedules are timely performed. Develop efficient routing plans. Encourage carpooling when appropriate for meetings and training. In February 2006 a consultant for the GTA completed the transit development plan. An element of that plan was an efficiency analysis of public trasport routes which were determined to be the most efficient considering budget limitations. The School District of Greenville County requested the SC Department of Education to conduct a school bus routing efficiency study. The study began in early 2006 and should be completed in early 2007. Source: http://www.greenville.k12.sc.us/district/news	Completed in June 2006 but progress and improvements will continue.	directionally sound	directionally sound	N/A	See Comment #5
16. Establish a clean air partnership with business and industry.	Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments. Establish park and ride lots serving perimeter counties along major corridors. Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available. Encourage carpooling/vanpooling as an option where employees living in the same area argree to ride to work together rather than to drive their individualvehicle to work. Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc. Encourage telecommuting. Adopt a Bus Program. Develop funding to be used for matching grants fund for several EAP strategies. Develop a core competency and assisting the Upstate EAP group in writing grant proposal.	1. June 2004 - Staffs of Greenville County Planning Commission (GCPC), Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties. See Comment #5. In the November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season. The GCPC contracted a consulting firm to assist staff in updating the Long Range Transportation Plan (LRTP) for the Greenville Pickens Area Transportation Study (GPATS). The consultant began in February 2006 and will complete study in February 2007. This plan update will provide a comprehensive evaluation of regional transportation system, land use patterns, congestion, public transportation and related environmental issues in the GPATS study area. The study will also update the travel demand forecast model, and will provide staff training. The result of the study will be the 2030 LRTP for the GPATS to gu	Implementation began in 2004 and was completed in 2006 but progress and improvements will continue.	directionally sound	directionally sound	N/A	See Comment #4
17. Establish an active public awareness campaign.	Develop an editorial board to discuss air quality issues an development of a relationship with media. Use alert messages year round, not only during ozone season; Utilize public service announement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days; Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles.	1. June 2004 Progress Report - Complete list of strategies for public review and comments were made available through the Greenville County Library system and the Greenville County Planning Commission from March 29, 2004 to May 31, 2004. Responses positive, but limited - less than 25 people called or sent letters. 2. December 2004 - DHEC Ozone forecase updated daily on county cable TV Channel; TV Weather channel announces Ozone Forecasts; county posted DHEC's link on County's webside - front page; alerts for 2005 will resume; reviewing and considering materials to be used during 2005 public awareness campaign; Develop editorial board to discuss air quality issues and development of a relationship with media; encourage health organizations to sponsor ozone alerts in media;, enhance ozone awareness; develop campaign to encourage things such as refueling vehicles during evenings, not topping off tanks, using lawnmowers during evenings, using electric lawn mowers; develop license plate program to generate revenue to implement public awareness campaign; develop a	Completed Fall 2004 but will continue with implementation, progress and improvements.	directionally sound	directionally sound	N/A	See Comment #4

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality.	Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University. Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase orupgrade of furnaces and boilers.	ALTERNATIVE FUELS:In 2005, Clemson University Chemical engineering professor Mark C. Thies received an $856,000 award from the Department of Energy (DOE) to develop more efficient processes for the centralized production of hydrogen by splitting water. In addition to Thies, the project team includes fellow Clemson David Bruce, John O'Connell from the University of Virginia and Max Gorensek from Savannah River National Lab. The Clemson team will interact not only with U. S. engineers and scientists but also with those in France, Italy, and Japan, all of whom have teams working on related processes. Clemson University is developing the International Center for Automotive Research (Clemson-ICAR) in Greenville, SC. The ICAR project will be the premier automotive and motorsports research and educational center in SC. Summer 2003: Members of the Air Quality Staff Advisory Committee met with staff from the SC Indstitute for Energy Studies (SCIES) from Clemson University. SCIES made a presentation to the Committee November 18, 2003.	Completed November 2003 but will continue monitoring progress of ongoing research.	directionally sound	directionally sound	N/A	See Comment #5
19. Use of alternate fuels.	Direct local Planning Commissions to identify areas where alternative fuels will be best suited. Encourage the use of alternate fuels; Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to pwoer on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas. Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.	June 2005 - local company began selling E-85 at 2 stations along Interstate 85; sub-committee of Upstate Air Quality Staff Advisory Committee develop wording for bill concerning the promotion of alternative use fuel. By the end of 2005, there will be at least 12 additional distribution stations. ALTERNATE FUELS: In 2005, Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification. June 2006 - There are currently 12 public Spinx stations that offer E85 in Greenville County. Eight Spinx stations in the county offer Biodiesel. December 2006: • The number of stations offering E85 and other alternative fuels has increased from 12 in June to 26 in October.	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	See Comment #5 See Comment #8
20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes.	Evaluate use of HOV on three (3) lane interstate highways; Show the advantages of designating HOVs; Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (fush hour). Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.	• During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. • In June 2004, Planning Commission staff met with traffic engineers from SCDOT to discuss this strategy. Traffic engineers indicated that because traffic volumes on I-85 exceed 100,000 vehicles daily on the three lanes of the interstate, it was recommended that the Upstate consider converting one of the three lanes on I-85 or I-385 to a HOV lane. The offsetting increase in congestion in the two remaining lanes would predictably increase NOx emissions by an amount exceeding the any reductions gained from traffic moving in the HOV lane. HOV lanes work best when they are paralleled by at least 4 or more free flow lanes.	Completed in 2004.	directionally sound	directionally sound	N/A	
21. Modify speed limits for optimum fuel efficiency.	Direct SCDHEC and SCDOT to take the lead role. Direct Planning Commissions to assist SCDHEC in modeling.	• In Summer 2005, the speed limits on the interstate highways in Greenville County have been established at 60 mph because the county is defined as urban by the US Census and the FHWA. • The GPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Greenville and Pickens Counties (GPATS MPO BOUNDARY) have been established at 60 mph. According to the Department of Energy, gas mileage decreases rapidly at speeds above 60 mph. No further actions are planned.	Completed in 2005.	directionally sound	directionally sound	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.	Study impact of post construction traffic flow. Study impact of construction activities. Greenville County Plannin Commission (GCPC)	• In August 16, 2005, the GCPC staff met the City of Greenville Traffic Engineering Department staff. • In late 2005, the GCPC staff presented to the Planning Commission. • In April 2006, the GCPC approved a staff proposal to develop an ordinance requiring a traffic impact studies. • In May 2006, the GCPC approved a staff proposal to develop an amendment to the County Land Development Regulations. • Planning staff will meet with the Traffic Impact Study Advisory Committee on June 28, 2006, to begin reviewing a proposed ordinance. It is expected that the proposed ordinance will be presented to County Council before the end of 2006.• In September 2006 the GCPC recommended to GC Council: a set of design standards for big box retail development, the adoption of a traffic impact ordinance that will require a traffic impact study must be completed before issuing a building permit, and the adoption of criteria that will require inter-connectivity between residential subdivisions and commercial developments. Public hearings will be held in early 2007.	Implementation began in 2005 and is continuing.	directionally sound	directionally sound	N/A	See Comment #5
23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods	Eliminate minimum acreage requirements for school sites. Cap student populations per facilities. Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals. Favor restoration and construction of community-based small schools over new consturction of remote mega schools.	June 2005 - Greenville County's Land Development Regulations were amended in January 2005 to require sidewalks to be installed in all new subdivisions. Greenville County's Zoning Ordinance was amended in January 2005 to allow cluster type developments, multifamily developments as part of commercial and office developments and to encourage Neo-traditional developments. Increased design flexibilities were added as incentives to develop pedestrian friendly designs. June 2006: The Greenville County Schools (S.C.) implemented an aggressive school construction program that completely rebuilt or constructed 70 schools (80% of schools in the District). The program will be completed by December 31, 2006. Schools not included were renovated or built prior to this construction program. Information on the School District's construction plan may be found at http://www.institutionalresources.com/ The Greenville County School District is scheduled to complete the $800+ million construction program by the end 2006. There will be no further action on this strategy.	Completed in 2006 and continuing.	directionally sound	directionally sound	N/A	• The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_2005-2006/bills/4488.htm • SECTION 203 SCHOOL SITES 203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

December 2006 - Early Action Compact Progress Report
GREENVILLE COUNTY
Prepared by Sandra Yudice and John Owings

In an effort to keep our contact information updated we have provided the following information for the county:

	Name	Telephone	E-mail Address
Administrator/Manager	Joseph Kernell	(864) 467-7105	jkernell@greenvillecounty.org
EAC contact	John Owings	(864) 467-7270	jowings@greenvillecounty.org
	Sandra Yudice	(864) 467-7409	syudice@greenvillecounty.org

Anderson, Greenville, and Spartanburg Resolution

Anderson County, Greenville County, and Spartanburg County each entered into a resolution as a cooperative means of improving air quality to meet applicable state and federal air quality standards. Greenville County adopted its resolution on November 19, 2002. By entering into this resolution, the Counties agreed to the following:

1. Each County will provide individuals to serve on a Steering Committee. The Steering Committee will strive to finalize an Upstate Air Quality Action Plan. The Air Quality Action Plan is intended to be a guide for implementation of proactive measures that will bring the Participating Counties into compliance with the 8-hour ozone standard consistent with DHEC's Early Action Plan. The Steering Committee will consist of no more than 21 voting members (7 from each county). Advisory (non-voting) members may be appointed up to a maximum of seven from each county.

2. Implementation costs of the air Quality Action Plan will be specified and quantified by the Steering Committee including ongoing direct and indirect costs that will be incurred by state and local governments, businesses, and individual taxpayers.

3. The Steering Committee will prepare a report detailing and quantifying the economic impact and costs associated with non-attainment status that have been incurred by the four geographic non-attainment areas most closely located near Anderson, Greenville and Spartanburg.

4. Once an Air Quality Action Plan is developed by the Steering Committee, each of the Participating Counties will consider adoption of the Air Quality Action Plan within the boundaries of the respective participating Counties consistent with the goals of the Early Action Program.

Air Quality Awareness and Improvement Policy for County Government

In June 2004, the Fleet Management Division sent a memorandum to all department managers outlining several actions to maximize fuel efficiency. These actions included:
1. Ensure tires are properly inflated.
2. Fill fuel tanks in the morning, or when temperature is coolest, do no overfill tank and stop pumping when the nozzle cuts off.
3. Clean out the trunk or storage area.
4. Avoid long idling.
5. Operate vehicles within the speed limit and eliminate "jackrabbit" starts.
6. Ensure preventative maintenance schedules are timely performed.
7. Develop efficient routing plans.
8. Encourage carpooling when appropriate for meetings and training.

In addition, in October 2004, a memorandum was sent to all County departments for the purpose of establishing certain principles that will guide the recurring activities of County government to improve air quality. The purpose of the policy is to establish certain principles that will guide the recurring activities of

the Greenville County government. The memorandum was sent to all County employees for the purpose of establishing certain principles that will guide the recurring activities of County government in the following areas:

1. Ensure that all county employees are notified of upcoming alerts for Ozone Action Days during ozone season (April – October) of each year.
2. Ensure that County residents are aware of the new State's restrictions on outdoor burning, especially during ozone season.
3. Greenville County will explore and adopt, when feasible DHEC's Take a Break from the Exhaust Program or a program with a similar purpose, and Flex-scheduling and car-pooling opportunities.
4. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications.
5. Ensure preventative maintenance schedules are timely performed. Vehicles and equipment, which operate in construction areas or off-road, require additional maintenance to ensure fuel efficiency.
6. Avoid long idling. The worst mileage a vehicle can get is zero (0) miles per gallon, which occurs when the engine idles. Unnecessary idling causes additional engine wear and premature engine failure. Additionally, idling with air conditioning turned "ON" reduces fuel efficiency by 20% and produce emissions that pollute the air unnecessarily.
7. Continue considering purchasing low-emission vehicles to meet County needs according to the vehicle replacement plan. This may include purchasing Tier II compliant vehicles.
8. Fill fuel tanks in the morning, or when the temperature is coolest. Unleaded gasoline is densest when cold. Do not overfill tank and stop pumping when the nozzle cuts off automatically. Overfilling causes contamination to the fuel purge system and heat causes fuel to expand and overflow. Overfilling also causes fuel vapors to evaporate into the atmosphere causing air pollution.
9. Clean out the trunk or storage area. Every 200 lbs. Of unnecessary weight reduce one mile of fuel efficiency.
10. Operate vehicles with the speed limit and eliminate hasty starts. Driving too fast wastes gas. Traveling at 65 mph uses 15% more fuel than driving at 55 mpg. It makes good sense, when possible, to set the cruise control at the speed limit when traveling on highways. Using cruise control reduces fuel consumption, lowering emissions.
11. Develop efficient routing plans. Utilize routes with minimal traffic lights, when possible. This decreases engine idling at stoplights. Eliminate more than one vehicle traveling to the same location, when possible.
12. Encourage carpooling when appropriate. Utilize fuel-efficient vehicles or motor pool vehicles when traveling out of town to meetings, conferences, and training sessions.
13. Greenville County has been improving landscaping at all County facilities with the goals of improving the environment by minimizing turf areas and replacing them with shrubs, bed areas, and trees; enhance appearance; and reducing maintenance and associated costs. The County has accomplished these efforts at four (4) sites and will expand and continue implementing them as funding becomes available or facilities are renovated.
14. Greenville County is committed to energy conservation programs and practices, which will result in less energy consumption and reduction of emissions from power plants. The goal is to expand these programs and practices to all County facilities.
15. Greenville County partnered with the SC Energy Department in 2003 with the goal of reducing energy consumption at County facilities and stabilizing energy cost. The County initiated the lighting retrofit program at County Square and conducted an energy study at four (4) other County facilities. The study identified areas of improvements in three major facilities.
16. The following measures will continue to be implemented and reminders will be sent to all County employees and tenants:

- Turn OFF all office lights when leaving every day,
- Electric space heaters are not allowed in County facilities (exceptions are made only for medical reasons with a written statement from a doctor),
- Ensure that electric equipments such as lamps, coffee pots, monitors, printers, copy machines, etc. are turned OFF when leaving every day.
- To further increase energy conservation, the County will encourage, when practical, to make environmental considerations in purchasing decisions for goods and services such as Energy Star equipment.

Smart Growth America has said about the City of Greenville, "The city has the right idea about how communities should be designed." It has chosen Greenville as one of four cities and counties nationwide to work with to turn smart growth ideas into better development for Greenville. Efforts include spreading the kind of development happening downtown to its more suburban edges including more sidewalks, buildings closer to the street, smaller parking lots and more landscaping.

December 2006:

- On September 1, 2006, the County Administrator released a memorandum and two presentations to all county employees to increase awareness of air quality issues. The presentations provide helpful and important information about why education on these pollutants is important, not just health wise but also for the region's economic development future. The Improving Air Quality in Greenville County, SC – The Challenge: Air Pollution provides background information such as what ground level ozone and $PM_{2.5}$ are and how they form. The Improving Air Quality in Greenville County, SC – The Solution: Awareness address the type of health problems these pollutants cause, what we can do individually to help reduce their formation, how to prevent exposure and take precautions, and where additional information and daily air quality forecasts may be found. The presentations are posted on our websites, Intranet and Internet, for the public and employees to gain this valuable knowledge. The presentations may be found under "County Highlights/Air Quality" at "http://www.greenvillecounty.org"

- The fleet manager for Greenville County in cooperation with the GCEMS director reminded crews that whenever possible to stop engines and avoid idling when it is not necessary.

Smart Highways - An Innovation as the Result of the EAC Process

The Smart Highways effort through the EAC process addresses transportation planning and any impact transportation might have on air quality. This approach is not a requirement of the EAC and is not being done in any other EAC area in the country. It is an example of the commitment by air quality and transportation agencies at the local, state, and federal level. As a result of this effort, each of the four Metropolitan Planning Organizations (MPOs) in deferred nonattainment areas (Greenville, Anderson, Spartanburg, Richland and Lexington counties) demonstrated that their respective long-range transportation plan eliminates or reduces violations of the national ambient air quality standards (NAAQS). Copies of the four MPO reports may be found at http://www.scdhec.gov/eqc/baq/html/eap_Smart_Highways.html . Preliminary indications are that federal requirements (Tier II/low sulfur) coupled with transportation improvements to the respective networks will result in approvable long-range plans. For example, in Greenville County between the years of 2002 and 2007 the emission reductions are modeled to be approximately 3,151 tons/year for NOx and 2,054 for VOC. The out years beyond 2007 are even greater.

Although not part of these efforts, the private sector is locally advertising a campaign called "Live Green, Go Yellow." This campaign aims to increase consumer knowledge on ethanol (E85) as an alternate fuel, which reduce greenhouse gas emissions.

The following pages detail those measures under consideration as described in the Early Action Compact adopted by the Upstate Air Quality Steering Committee on December 2, 2003.

ATTACHMENT 1

To South Carolina Department of Health and Environmental Control
Environmental Protection Administration
From: Greenville County South Carolina
Date June 23, 2006

Reference: Summary of progress in implementing air quality strategies adopted by Greenville County and included in our local Early Action Plan.

1. Support SCDHEC statewide efforts to reduce ozone levels. Priority A

Description of Measure

- Stakeholder group to support and participate in modeling efforts.
- Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning).

June 2004:
- June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW.

December 2004:
- Members of the Upstate Air Quality Staff Advisory Committee participated with DHEC in the development of new regulations aimed at reducing NOx emissions. As a result, new regulations requiring NOx- BACT (Best Available Control Technology Economically Achievable) were adopted in mid 2004.

- SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste. Emissions reduction: VOC: 65.23 tons/season; NOx: 13.73 tons/season.

- SC61-62.5, Std. 5.2 "Control of Oxides of Nitrogen" reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year. Emissions reduction of NOx: 234.1 tons/yr.

- November 2004 - Greenville County submitted letter supporting SIP.

- Greenville County implemented the following measures during 2004 and 2005: purchased alternate fuel vehicles (Greenville purchased 19 such vehicles since November 2004); published and distributed brochures about improving air quality ; sent out notices on high ozone days and developed audio commercials for local radio stations to broadcast during ozone awareness week and ozone season; broadcasted radio announcements and information through the County's Cable TV channel, and alerted all stakeholders of DHEC's high ozone alerts.

June 2006:
- During its May 11, 2006, the Upstate Air Quality Staff Advisory Committee recommended to develop a business partnership plan to involve local industries in announcing ozone alerts and participating in ride share programs. Members of the Committee will contact and request the assistance from the Greater Greenville Chamber of Commerce.

December 2006:
- Met with Carol Kemker (Deputy Director for Air, Pesticides and Toxics Management Division, USEPA-Region 4) and Myra Reece (Chief, Bureau of Air Quality, SCDHEC) on October 11, 2006, to discuss improved coordination and cooperation between DHEC, EPA and the Upstate counties.
- Met with Myra Reece (Chief, Bureau of Air Quality, SCDHEC) and other SCDHEC representatives on November 8, 2006 for an update on air quality issues (ground level ozone and PM2.5). EPA and SCDHEC committed additional staff assistance to local governments. Local DHEC staff has been added to our EAC staff committee.
- Air quality committee members attended and participated in the Environmental Issues Briefing on November 2, 2006. Beverly Banister, Director of Air, Pesticides and Toxics Management Division, USEPA-Region 4 and Robert King from SCDHEC, among other speakers, discussed air quality issues facing the Upstate and the need for greater public awareness.

Estimate of Emission Reductions (if available)

Equivalent to removing 359,500 cars from the road or 7190 tons of VOC. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed June 25, 2004.

2. Designate an Ozone Action Coordinator Priority A

Description of Measure

- The County will designate a staff person who will be responsible for coordination of the county's ozone programs.

March 2003:

- Ozone Action Coordinators were designated in 2003, John Owings and Sandra Yudice.

Estimate of Emission Reductions (if available)

Not applicable. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in March 2003.

Additional Information

Since appointed, the ozone action coordinators have assisted with facilitating air quality meetings, preparing progress reports, resolutions, correspondence, developing a public awareness campaign. Other activities related to improving air quality involvement include, but are not limited to, preparing proposals for the zoning ordinance, procurement of traffic consultant services, planning sessions for community activities, grant writing, attending conferences on air quality, and planning activities for the 2006 EAC Summit.

3. Seek low sulfur fuels as early as possible. Priority A

Description of Measure

- Continue to coordinate with representatives of Colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.

December 2004:

- The Committee has continued to coordinate with representatives of Colonial and Plantation pipelines, refiners. Based upon an unofficial status report from Kay Clamp width the SC Petroleum Institute ". We are fortunate in the Southeast because we receive much of our supply from the Gulf Coast, and 60% of the nation's refineries are in that area. A simple translation of that fact is that we are not dependant on one or two refineries for our fuel, and reap the benefits of a large number of refineries producing lower sulfur fuels.

- The maximum allowable sulfur level in gasoline for 2004 is 350 ppm with a corporate average of 120 ppm. Plantation Pipeline tests product entering their pipeline from every refinery, every day...their average from this testing has been and is 150 ppm in gasoline. Colonial Pipeline is also testing product from its shippers; the average sulfur levels for gasoline batches entering their pipeline YTD 2004 are 145 ppm for fungible regular gasoline and 62 ppm for fungible premium. Colonial did note that these averages are not volume weighted; they did not, however, think there would much difference if it were volume weighted. They also assumed that the regular and premium are averaged together for compliance.

- Both of the pipelines had the lower sulfur fuel in their facilities by late 2003; the fuel was at terminals serving South Carolina by January 2004, and was "on the street" by March 1, 2004".

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2004 and was completed in 2006.

Additional Information

- Committee continues to coordinate quarterly with representatives of Colonial and Plantation pipelines, refiners. During 2005, Colonial Pipeline conducted studies that indicates that South Carolina, as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. M Grades: Average 139, High 330. V Grades: Average 74, High 300.
- The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.

4. Design and implement congestion management and Intelligent Transportation System (ITS) measures. Priority A

Description of Measure

- Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles;
- Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avoid congestion, which minimize emissions from idle vehicles.
- Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.

June 2005:

- Greenville County completed implementation of phase 1 of the congestion management plan. Wade Hampton Boulevard, Woodruff Road and Pelham roads now have cameras, fiber optic cables and computer linked traffic signals in place. The consultant will conduct air quality sampling to determine if the system improved air quality along the corridors. Several more roads are scheduled for completion in 2006 and 2007. In July 2005, the Planning staff will select a consultant to update the congestion management study

- Cameras and variable message boards have been installed on I-385 in Greenville County and along I-85 through Anderson, Greenville and Spartanburg counties.

December 2005:

- Greenville County completed implementing the congestion management plan on several major thoroughfares; cameras and variable message boards have been installed on I-85 through Anderson, Greenville and Spartanburg Counties. In December 2005, the Greenville County Planning Commission retained the services of a transportation consultant to update the Long Range Transportation plan including an updated congestion management plan and a bicycle and pedestrian plan. The current long range transportation plan may be found at http://www.greenvilleplanning.com/transportation_planning/grats/LRTP%20Amendment%20desc%20w%20tables%20map.pdf

June 2006:

- The Greenville-Pickens Area Transportation Study (GPATS) held two public workshops June 1 & 6, 2006. The workshops included a brief presentation and provided an opportunity for citizens to influence which projects would be implemented in the region. The GPATS study area includes areas in Anderson, Greenville, Laurens, Pickens and Spartanburg Counties.
- SCDOT District Traffic Engineer for the Upstate has coordinated with SCDHEC to utilize the variable message boards on I-85 and I-385 to notify motorists of high ozone days.

December 2006:

- The development of the Long Range Transportation Plan for GPATS continued. The Regional Bicycle element of the Plan was presented to GPATS in November 2006. Some of the recommendations of the Plan were to develop four types of bicycle facilities:
    - Off-street trails – through parks, along creeks and rivers, or on abandoned rail lines,
    - Bicycle lanes – four-foot wide on-street lanes at the shoulder of the road,
    - Wide outside lanes – a 14-foot wide lane that can be shared by autos and bikes,
    - Paved shoulders – not a designated bicycle facility, but provides some extra space and margin of safety for those who ride with traffic.

  Source: http://www.greenvilleplanning.com/land_development/Newsletter_Summer06.pdf
- Community leaders are developing plans to connect a trail system from Lake Conestee in southern Greenville County through the City of Greenville and connect with the tram/trail (see strategy #7a below) currently being developed along the Reedy River through the Furman University campus to

the City of Travelers Rest in northern Greenville County. The tram/trail system provides opportunities for both recreation and transportation. FHWA enhancement funds have been approved for the Lake Conestee trail link.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005. Supplementary efforts are continuing.

Additional Information
Although not part of these efforts, the Southern Connector (I-185 toll road) opened in 2001 "in order to relieve congestion on main traffic arteries" in I-85 and I-385. The Southern Connector links I-385 to I-85 in the southern part of Greenville County. (Source: http://www.southernconnector.com/home.htm).

5. Use of hybrid vehicles. Priority A

Description of Measure

- Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet.
- Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel).
- Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.

December 2004:

- In October 2004, the Greenville County Administrator issued principles to guide County operations to improve air quality which include considering purchasing low-emission vehicles.

June 2005:

- The Greenville County Administrator signed a document that sets forth the intent to purchase low emitting vehicles for the county fleet. To follow that commitment Greenville has purchased 19 alternative fuel vehicles since November 2004, bringing the total number of alternative fuel vehicles operated by the county government to 56 (ethanol). There are approximately 122 alternative fuel vehicles operating within federal, state, county and municipal government.

June 2006:

- Members of the Upstate EAC counties (Anderson, Greenville, and Spartanburg) in coordination with the Palmetto State Clean Fuels Coalition and the South Carolina Chapter of the Sierra Club, worked on statewide legislation that will provide tax incentives for purchase of alternative fuel and hybrid-propulsion vehicles and help reduce costs and provide tax credits for production and infrastructure for alternative fuels. The goal was to have it introduced to South Carolina General Assembly during the 2005 legislative session. The Governor signed Hybrid vehicle bill H4312 on June 1, 2006.
- The purchase of hybrid vehicles and how their use helps to clean the air and tax incentives available state wide will be included in the "Improving Air Quality Public Awareness Campaign," which is currently under enhancement.
- The County implemented the following measures to procure higher fuel efficient vehicles:
  - Downsized fleet by 87 pursuit vehicles from full size (V-8) to mid-size (V-6) vehicles.
  - Downsized fleet by 31 from SUVs and full size pick up trucks to intermediate size Chevy S10 Pickups and Ford Ranger Pickups.
  - Downsized law enforcement support and administrative vehicles from full size V8 Engines to intermediate size V6 Engine vehicles.

December 2006:

- On July 18, 2006, ozone coordinators contacted the United Parcel Service (UPS) Fleet Manager to discuss the possibility of UPS utilizing delivery hydraulic hybrid vehicles in Upstate SC. However, the use of these experimental vehicles has been limited to the area where the vehicles are being manufactured. We will follow up in spring 2007 to find out if UPS plans to expand the use of these vehicles to other areas and the possibility of using them in Upstate SC.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Initiated in 2004 and completed June 1, 2006. Efforts will continue to encourage delivery services to use hybrid or fuel efficient vehicles for their deliveries in the Upstate.

Additional Information

Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads:

An act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle. Credits allowed against a taxpayer's federal income tax liability.

6. Use higher efficiency engines for school buses. Priority A

Description of Measure

- Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA.
- Promote an Adopt-A-School-Bus Program.
- Endorse a statewide recommendation for the State to take the lead.

December 2005:

- School Bus Retrofit Project: approximately 47 diesel buses will be retrofitted with particulate filters during 2006. Additional reductions of PM are also expected. The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type.

- The South Carolina Department of Education purchased 61 new buses that should be on the road in late 2005.

June 2006:

- The South Carolina Department of Education (SDE) has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot.
- State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles.
- The benefits from these SDE funding sources will be distributed throughout the state. The SDE has agreed to make York County and the five deferred areas the top priority in assigning new and retrofitted buses to service. SDE is also partnering with private companies and local school districts to provide specific funding for school bus retrofits and clean air programs.

December 2006:

- On June 20, 2006, the SC Education Department Transportation Director announced that in the fall of 2006, all South Carolina buses will use a blend of 20 percent biodiesel ultra low-sulfur fuel, which reduces soot emissions about 10 percent from standard diesel fuel. The state is also using $1 million to purchase 140 particulate traps. These filters will help capture emissions coming out of the bus engines according to an environmental health manager with the SCDHEC. Source: http://ed.sc.gov/news/more.cfm?articleID=671

Estimate of Emission Reductions (if available)

799 lbs/year. CO reductions 5,593 lbs/year. December 2004 EAC SIP - Appendix 16

No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2006.

Additional Information

Santee Cooper provided $1 million for a Supplemental Environmental Project which will provide diesel retrofit technology, specifically diesel particulate filters, for York County school buses. Greenville will receive an unspecified portion of "spillover" from the retrofitting technology provided to York County.

7a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes. Establish intermodal connections with an emphasis on mass transit. Priority A

Description of Measure

WALKING/BIKING:

- Encourage local government to increase pedestrian/bicycle infrastructure spending (the Upstate spends 2¢ per person compared to SC spending 22¢ per person).
- Establish safer bike routes with better signs marking lanes and routes.
- Increase highway funding for bike paths, walking or mass transit including high-speed rail. Support the federal transportation enhancement program.
- Install bike racks on all transit vehicles to encourage intermodal transportation. New buses purchased through the state's bus purchase program will have bike racks.

PARK and RIDE:

- Establish mass transportation between a plant and a park-and-ride site.

CARPOOLING:

- Work with local government to offer incentives for employees to car pool.

MASS TRANSIT:

- Offer a free trolley service running in a loop in downtown areas and nearby restaurants, especially during lunch hours;
- Research past feasibility studies on free downtown shuttles. Potential for sponsorship with local area restaurants and businesses for a lunch time shuttle - could defer the operational costs of the endeavor.
- Support mass transit (transportation choices and alternatives): While the only local mass transit choice that is currently available in some areas is the transit bus, example of future options such as bus rapid transit, commuter passenger service offered by trains on existing rail systems, a diesel multiple unit or "light rail" should be supported.

December 2004:

- Park and Ride: Staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce began joining efforts to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties.

June 2005:

- Mass Transit: County contracted with consultant to prepare a Transit Development Plan for the most rapidly growing portion of Greenville County, to include a Park and Ride and Rideshare Feasibility study. The transit development plan may be viewed at http://www.greenvilleplanning.com/transportation_planning/TDP%20FINAL%20DOCUMENT.pdf

December 2005:

- In November 2005, the transportation consultant completed the transit study for Mauldin and Simpsonville and recommended several alternatives for providing transit services to this area of Greenville County.

June 2006:

- The Greenville Transit Authority extended bus service between downtown Greenville, County Square, and nearby vicinities.
- During baseball games, the Downtown Greenville Trolley runs between the Drive Stadium located at the West End near downtown and County Square. In addition, the Trolley operates back and forth on Main Street (downtown business district) on Fridays (6 p.m. to 11 p.m.), Saturdays (10 a.m. to 11 p.m.), and Sundays (1 p.m. to 6 p.m.). Information may be found at http://www.greatergreenville.com/visitors/forms/TrolleySchedule.pdf
- The Greenville County Planning Commission presented proposals to the cities of Mauldin on February 20, 2006, and Simpsonville on February 28, 2006, to establish the additional bus service

recommended by the consultant in the Mauldin/Simpsonville Transit Plan. Currently the cities of Mauldin and Simpsonville are considering the recommendations included in the transit study.

- Greenville County Economic Development Corporation (GCEDC) is preparing a request for proposals to salvage the railroad tracks, ties, and other property to initiate Phase I of an interim use plan for Greenville and Northern (G&N) Railroad. The G&N line runs between the cities of Travelers Rest and Greenville. Interim use is permitted and required under the US Department of Transportation's Surface Transportation Board regulations for "railbanking" to preserve railroad rights-of-way. The plan offers many benefits to the community, including improving air quality. The interim use plan calls for the conversion of the G&N rail line into a walking trail initially followed by bicycles and a passenger tram as soon as funding is available. The trail would remain in place until such time the demand and need of a light rail exist for people to commute between the cities of Travelers Rest and Greenville.
- The Greenville County Planning Commission developed the Greenville County Long Range Transportation Plan – Bike Routes in April 2006. The bike plan may be viewed at http://www.greenvilleplanning.com/transportation_planning/Bike_Routes/Bike%20Routes.pdf

December 2006:

- Greenville County Economic Development Corporation (GCEDC) is negotiating with a contractor to salvage the rail track on the Greenville and Northern (G&N) Railroad to convert the rail bed to a tram/trail. The former G&N Railroad runs between the cities of Travelers Rest and Greenville. If negotiations are successful, the contractor is expected to begin removing the rails in early 2007 and complete the task in about six months.

  The GCEDC and the Greenville County Recreation District (GCRD) entered into an agreement for the GCRD to operate and maintain the trail. The GCEDC initiated discussions with the Greenville Transit Authority (GTA) to determine if GTA could develop a funding mechanism to purchase and operate a hybrid or fuel efficient tram.

- The downtown trolley that the City of Greenville began operating in June 2006 (see June 2006 updated above) was such a success that the City began operating a second trolley in September 2006. The trolleys hold 37 passengers each and the service is free. (Source: http://www.greatergreenville.com/city_government/newsreleases/archive/2006/2ndTrolley.pdf)

- The Greenville Transit Authority is considering the five-year plan completed in January 2006 concerning coordinating with Pickens County to provide service in the vicinity of Easley, SC. The City of Easley will begin in late November 2006 a $50,000 state-federal-funded study of public transportation. GTA is awaiting the outcome of this study to determine opportunities to provide transit services.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed 2006.

Additional Information
Ozone coordinators will continue working with the GCEDC on the interim use rail-to-tram/trail project.

7b. Offer free or reduced transportation cost on high ozone days. Priority A

Description of Measure

- Implement a coordinated high ozone day alert action plan to include public notification and free or reduced ozone fares from the transportation providers.

December 2005:

- Greenville County is working on a grant application due to USEPA Region 4 on December 23, 2005, in preparation for the 2006 Ozone Season. The County is planning on including a request for funds to enable the Greenville Transit Authority to provide free transit services during high ozone alert days.

June 2006:

- Because resources were limited the grant application did not include funding for this type of activity.
- At its May 11, 2006 meeting, business leaders in the Air Quality Advisory Committee recommended contacting the Chamber of Commerce and request assistance with conducting fundraising activities to support this program.

December 2006:

- The Greenville Transit Authority and staff have determined the approximate cost of providing free transit services during high ozone days; however, funds have not been secured.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completion of this measure will depend on securing funds to implement this strategy.

7c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems. Priority A

Description of Measure

- Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility;
- Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.

December 2004:

- The Greenville County Planning Commission has completed an update of the County Zoning Ordinance. The updated County Zoning Ordinance was adopted by Greenville County Council on November 30, 2004. New provisions will eliminate minimum lot size requirements, encourage cluster developments, grant density bonuses for developments with access to public transportation, and allow some commercial developments to include housing within the development among many other changes. This shift in the land use plan should reduce vehicle miles traveled and encourage use of transit services. Copy of the updated County Zoning Ordinance may be viewed at http://www.greenvilleplanning.com/land_development/Z-Ord-Final-with%20Ord%204004%20included-Apr2006.pdf

June 2005:

- Greenville County Council passed ordinances updating Zoning Ordinance and Land Development Regulations; changes focus on adding flexibilities to encourage cluster developments, neo-traditional development and mixed-use developments.
- Planning Commission on behalf of the City of Mauldin and the City of Simpsonville has retained a consultant to prepare a Transit Development Plan for the Mauldin-Simpsonville Urbanized Area. See update on strategy 7.a.

June 2006:

- The transit study has been completed and the GC Planning Commission met with the cities of Mauldin February 20, 2006, and Simpsonville on February 28, 2006, to seek the matching funds to begin the additional public transit services. Currently the cities of Mauldin and Simpsonville are considering the recommendations included in the transit study. The study may be viewed at http://www.greenvilleplanning.com/transportation_planning/TDP%20FINAL%20DOCUMENT.pdf

December 2006:

- See update on strategies Nos. 4 for the bicycle study and 7a for the tram/trail and trolley services expansion.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Zoning Ordinance complete June 2005 and Transit Study completed in January 2006.

8. Review and update air emission inventory for the Upstate

Description of Measure

- Ensure all industrial sources still operating. Review industrial sources for plant closures.
- Identify major sources of NOx.
- Map the locations of point sources (10% of point sources cannot be found).
- Map the specific locations and the area sources where coal is burned.

Implementation Date

Fall 2003. Completed December 2003. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.

9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling. Priority A

Description of Measure

- Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plant.
- Coordinate with the Williams Company to determine what NOx reductions are planned for the Transco Pipeline.
- Support NOx reduction strategies in the State Implementation Plan.
- Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emission NOx sources)

December 2003:
- The Early Reduction Program was completed and forwarded to SCDHEC on a previous updated progress report. The information allowed DHEC to having more accurate emissions inventory.

June 2004:
- The Williams Company has received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors will begin in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the upstate.
- Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004.

December 2004:
- The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan, SC. Replacement of the compressors began in late 2004 and will continue until late 2005. This will result in a significant NOx reduction for the Upstate.

June 2006:
NOx reduction at the Duke Power Lee Steam Plant
- Coal fired Unit #2 is now operating with the new NOx burners and final manufacture set up for acceptance is to be conducted in June 2006. Monitoring data indicates that the burner should at least meet the 0.23 #NOx/MMBTU's. Unit #2 will operate this entire NOx season with the Low NOx burners.
- Coal fired Unit #1 is currently off line. It will be coming back on line in July 2006 with new NOx burners installed. If the results are similar to Unit #2 Duke Power will also operate this unit the entire NOx season at the 0.23 #NOx/MMBTU's rate or lower. This unit will operate approximately 4-6 weeks and final set up will be conducted.
- Both units will complete final construction permit testing during June, July and August 2006. Duke Power has commitment to install the Low NOx burners on the two remaining coal fired units at the Lee Steam Plant. Unit #1 burners were installed April-May 2006 and start-up with Low NOx burners was May 19, 2006. Unit #2 burners were installed March-April 06 and start-up with Low NOx burners was April 15, 2006.

Estimate of Emission Reductions (if available)
- 2,000-4,000 tpy NOx from SIP Call
- Potential 500-1000 tpy NOx (Tier Two)

No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Implementation began in 2005 and was completed May 2006.

10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers). Priority A

Description of Measure

- Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals.

- Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, and Salvation Army when they have been donated as charitable gifts.

- Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.

December 2003:
During its August 5, 2003, the AQ Staff Advisory Committee discussed this strategy: A high emission vehicle buyback or repair program appears to be cost effective for VOC emissions, but is less clear for NOx emissions. It is hard to quantify the success rate of the program in the various states the program has been implemented, but the program seems to make intuitive sense. This type of program will become increasingly more important as the new vehicle pollution control systems increase the gap between the new vehicle's emissions and the "smoking" vehicle's emissions. Recommendation: funding the high emission vehicle buyback or repair program as a pilot program with a set yearly target for the number of vehicles that will be either repaired or scraped. A follow-up study on this pilot program would need to be implemented to determine the impact on emissions (ozone) for the upstate.

2004 and 2005:
- Development of this program did not take place due to lack of funding.

June 2006:
- In the summer 2006, staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to re-selling clunker vehicles donated to these organizations.

December 2006:
- Met with Goodwill Industries and Miracle Hills executive directors to discuss air quality efforts and the "cash for clunkers" strategy included in the air quality list of strategies to improve air quality. The executive directors were receptive to the proposal to scrap rather than resell vehicles that could exacerbate air quality problems. They indicated that most of the donated vehicles are scrapped and sold for parts rather that being put back on the road.
- Conference call with the Kidney Foundation (Kidney Car Program) to discuss air quality efforts and the "cash for clunkers" strategy included in the air quality list of strategies to improve air quality.
- Goodwill reported statistics through the fiscal year ending on June 30, 2006, that of the 1,756 vehicles donated 588 were likely put back on the road and the remaining 1,198 were sold for parts or salvage. For the prior fiscal year, 2,672 vehicles were donated, 908 were likely back on the road and 1,764 were sold for parts or salvage.
- Staff will request statistics from the other non-profit organizations indicating the total number of vehicles donated, the number that were put back on the road, and the number that were salvaged.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2003. Completion of this measure will depend on discussions with the non-profit organizations.

Additional Information
No SIP credit has been taken for this measure.

11. Ban open burning of on-site commercial clearing debris during ozone season (April to October). Priority A

Description of Measure

- Use SCDHEC model to determine the most effective method to ban open burning.
- Discuss modeling results with all local governments to consider adoption.
- DHEC adopted regulations in mid 2004 restricting open burning.

2004:

- SCDHEC adopted regulations in mid 2004 restricting open burning.

June 2005:

- Greenville County has notified all fire departments, all municipal and county codes departments, the Greenville Home Builders Association and others about the ban
- Greenville County is running a public service announcement in the County's Cable TV channel permanently.
- DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishable by law.

December 2005:

- At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round. Greenville County has notified all fire departments, all municipal and county codes departments, the Greenville Home Builders Association and others about the ban at the monthly subdivision review team meetings. The County is running a public service announcement in the County's Cable TV channel permanently.

June 2006:

- As part of the enhanced "Improving Air Quality Public Awareness Campaign," the County will distribute brochures and information about DHEC's regulations concerning open burning to all local fire departments, the Home Builders Association, and the Association of General Contractors.
- The County continues running a public service announcement on the County's website and the Cable TV channel.

December 2006:

- On November 7, 2006, staff met and presented to the Fire Chief Association a PowerPoint presentation outlining the problems and solutions to the air quality issues facing the Upstate region. Also staff distributed the "Learn Before You Burn" brochure to the Association and to the Library System for distribution to the public. The Fire Chiefs requested information on how they can approach County Council to make the open burning ordinance more restrictive.
- The County continues running a public service announcement on the County's website and the Cable TV public access channel.
- Began radio broadcasting a PSA on open burning and air quality information during the month of November 2006 in an effort to make citizens aware and minimize the burning of leaves or yard debris.
- In October 2006, SCDHEC Chief Air Quality Bureau Myra Reece, through a state-wide press release, encouraged homeowners to consider composting as an alternative to burning their yard waste this fall.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2004 and further efforts conducted in 2006.

12. Create incentives for the purchase of high efficiency and low emissions vehicles. Priority A

Description of Measure

- Offer tax credits for vehicles with high efficiency gas consumption or low emissions.
- Offer tax credits for low mileage vehicles instead of high mileage vehicles

December 2004:

- Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles.

December 2005:

- A bill titled "An act concerning the promotion of alternative use fuel, and hybrid propulsion system for transportation purposes" was submitted to the SC House of Representatives in January 2005. The bill is now in committee. In summary, the bill provides tax Credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel.

June 2006:

- On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. Act 312, R371, H4312 Bill may be viewed at http://www.scstatehouse.net/sess116_2005-2006/bills/4312.htm and its caption reads:
  AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.
- The purchasing of hybrid vehicles and how their use helps to clean the air and tax incentives available state wide will be included in the "Improving Air Quality Public Awareness Campaign" currently under enhancement.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed June 1, 2006.

13. Use land-use and transportation planning to improve air quality. Priority A

Description of Measure

- Include air quality measures as a part of the land-use and transportation planning process.

June 2005:

- County Council passed ordinances updating Zoning Ordinance and Land Development Regulations; changes focus on adding flexibilities to encourage cluster developments, neo-traditional development and mixed-use developments. A copy of this ordinance may be viewed at http://www.greenvilleplanning.com/land_development/Z-Ord-Final-with%20Ord%204004%20included-Apr2006.pdf

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed the revised Land Development Regulations in December 2004 and the revised Zoning Ordinance in June 2005.

14. Implement a program to encourage use of green power. Priority A

Description of Measure

- Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant.
- No local action has taken place on this strategy Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.

2003:

- BMW Manufacturing Corp. and its partners launched a $12 million methane gas-to-energy project. Methane from the Palmetto Landfill will be used to power four onsite turbines and cogenerate electricity and hot water for the manufacturing plant in Spartanburg.

December 2004:

- Currently, green power options are limited to the north-western portion of Greenville County served by Blue Ridge Electric Cooperative. Indications are that additional opportunities may be available in 2006.

June 2006:

- The Enoree Landfill is scheduled for closure during 2007. Greenville County will advertise in the summer 2006 for a developer to capture and recover methane gas at the Enoree Landfill. Depending upon responses, the County could install a system during the summer 2006 or wait until the spring 2007 when the final cover is constructed at the landfill.

December 2006:

- In early November 2006, Greenville County began installing the active methane gas collection system. About 10 of the 50 well-heads have been installed. Once the well-heads have been installed and connected to the blower system, the County will install a flare. When the flare system is up and running, the developer has six months to find a green power use. If the contractor fails to find a partner, Greenville County will own the gas rights and can partner with another company. The system should be flaring gas by the end of January 2007. It is expected that the Enoree Landfill would be producing green power by the summer 2007. However, if the current developer can not perform, the process would begin again.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2003 but continue exploring implementation (see June 2006 update above).

15. Promote route efficiency for delivery vehicles, trash collection etc. Priority A

Description of Measure

- Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets.
- Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.

December 2004:

- In June 2004, the Fleet Management Division sent a memorandum to all department managers outlining several actions to maximize fuel efficiency. These actions included:
  - Ensure tires are properly inflated.
  - Fill fuel tanks in the morning, or when temperature is coolest, do no overfill tank and stop pumping when the nozzle cuts off.
  - Clean out the trunk or storage area.
  - Avoid long idling.
  - Operate vehicles within the speed limit and eliminate "jackrabbit" starts.
  - Ensure preventative maintenance schedules are timely performed.
  - Develop efficient routing plans.
  - Encourage carpooling when appropriate for meetings and training.

June 2006:

- In February 2006, a consultant for the Greenville Transit Authority (GTA) completed the transit development plan. An element of that plan was an efficiency analysis of public transportation routes. The consultant concluded that GTA's routes are the most efficient considering budget limitations.
- The School District of Greenville County requested the SC Department of Education to conduct a school bus routing efficiency study. The study began in May 2006 and should be completed before the next school year.

December 2006:

- The Greenville County School District's Transportation Department is working with the State Department of Education to study school bus routes efficiency. State representatives will ride each route with the bus driver to evaluate the bus route. Rider counts will be incorporated to determine if there is a better way of routing the bus. The study began in early 2006 and should be completed in early 2007. Source: http://www.greenville.k12.sc.us/district/news/release/2006a/progress.pdf

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

June 2006 but progress and improvements will continue.

16. Establish a clean air partnership with business and industry. Priority A

Description of Measure

- Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments.
- Establish park and ride lots serving perimeter counties along major corridors.
- Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available.
- Encourage carpooling/vanpooling as an option where employees living in the same area agree to ride to work together rather than to drive their individual vehicles to work.
- Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc.
- Encourage telecommuting.
- Adopt a Bus Program.
- Develop funding to be used for matching grants fund for several EAP strategies.
- Develop a core competency and assisting the Upstate EAC group in writing grant proposals.

June 2004:

- Staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties.

June 2005:

- Ozone coordinator contacted an automobile support industry company and requested assistance with funding to print a 27'x 9' "Spare the Air in Greenville County" banner. The banner was paid for with private funds and it will be displayed during ozone season at the Recycling Center located at County Square at the intersection of University Ridge and Church Street in downtown Greenville (SC). Thousands of vehicles travel by this intersection every day.

December 2005:

- In the November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season.

June 2006:

- The Greenville County Planning Commission (GCPC) has contracted with a consulting firm to assist staff in the update of the Long Range Transportation Plan (LRTP) for the Greenville Pickens Area Transportation Study (GPATS). The consultant began work in February 2006 and will complete the study in February 2007. GCPC provides staff support for GPATS, which is the Metropolitan Planning Organization (MPO) for the Greenville Urbanized Area. This plan update will provide a comprehensive evaluation of the regional transportation system, land use patterns, congestion, public transportation and related environmental issues in the GPATS study area. The study will also update the travel demand forecast model, and will provide staff training. The result of the study will be the 2030 Long Range Transportation Plan for the GPATS to guide the development of the Transportation Improvement Plan (TIP), e.g. park-and-ride, carpooling, mass transit, and other multi-modal transportation options.
- Greenville City's new baseball team operates the Downtown Greenville Trolley to facilitate transportation in the downtown area. During baseball games, the Trolley runs between the Drive Stadium located at the West End near downtown and County Square (Greenville County Government Complex), which has a designated parking area during baseball games. In addition, the Trolley operates back and forth on Main Street (downtown business district) on Fridays (6 p.m. to 11 p.m.), Saturdays (10 a.m. to 11 p.m.), and Sundays (1 p.m. to 6 p.m.). Information may be found at http://www.greatergreenville.com/visitors/forms/TrolleySchedule.pdf

- In June 2006, the Ozone Coordinator contacted a few county employees to find out about their interest in carpooling. Employees' response was positive and carpooling among these employees will begin in July 2006.

December 2006:

- Responses to a carpooling pilot program for County employees were positive; however, it was discovered that a "guarantee ride" back home element was needed to fully implement a program. Staff will continue working on this concept.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.
Implementation Date
Completed in 2004 but progress and improvements will continue on this strategy.

17. Establish an active public awareness campaign. Priority A

Description of Measure

- Develop an editorial board to discuss air quality issues and development of a relationship with media.
- Use alert messages year round, not only during ozone season; Utilize public service announcement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days.
- Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens.
- Encourage health organizations to sponsor ozone alerts in media.
- Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.).
- Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers.
- Develop a license plate program to generate revenue to implement the public awareness campaign.
- Develop awareness program on tax savings for purchasing high efficiency vehicles.

June 2004:

- Complete list of strategies for public review and comments were made available through the Greenville County Library System and the Greenville County Planning Commission from March 29, 2004 to May 31, 2004. Responses positive, but limited - less than 25 people called or sent letters.
- Greenville County requested 200 Ozone and Your Health brochures, 200 Learn Before You Burn brochures, 100 Spare the Air Coloring books, 150 Pencils, 1 Display and 1 Air Quality PSA to distribute during the 2004 Ozone Season.

December 2004:

- Conducted a gas can exchange in June 2003: 115 old gas cans exchanged for new environmentally safe cans.
- DHEC Ozone forecast updated daily on county cable TV Channel; TV Weather channel announces Ozone Forecasts; county posted DHEC's link on County's website - front page; alerts for 2005 will resume; reviewing and considering materials to be used during 2005 public awareness campaign.
- On August 26, 2004, the Greenville News published an article titled “Worst air sets bar that may choke growth.”
- Memorandum sent to all County departments in October 2004 for the purpose of establishing certain principles that will guide the recurring activities of County government. The areas addressed are listed in the introductory paragraph Air Quality Awareness and Improvement Policy for County Government.

June 2005:

- In April 2005, County staff and members of the staff advisory committee met with Channel 4 representatives to discuss coverage of air quality stories during the 2005 Ozone season.
- Greenville County conducted an educational campaign during Ozone Awareness Week which was held March 28 – April 1, 2005 and included: radio commercials, a display in the main lobby of Greenville County Square, presentations in schools and 27’x 9’ banners displayed in the windows of the recycling center located in downtown Greenville. This educational campaign will continue throughout the current Ozone Season. The DHEC Ozone Forecast is updated daily on the County Cable TV Channel (except for Sundays). The TV Weather channel announces the Ozone Forecasts. Greenville County has posted DHEC's link on the County's home (front) page for Ozone Forecast. Greenville County printed and distributed air quality informational brochures to the public through schools and the Greenville County Library System. The County set up a display at County Square during Ozone Awareness Week Distributed bookmarks to public at Greer Track Club Event on Earth

Day. Distributed bookmarks to public at Greer Track Club Event on Earth Day. Update daily the ozone forecast on County's Cable TV Channel.

- On June 24, 2005, Channel 4 broadcast an interview with an Air Quality Staff Advisory Committee member discussing the Ozone Orange Level Alert issued by SCDHEC for that date.

December 2005:

- Updated the ozone forecast daily on the County's Cable TV Channel and Radio ads. Sent an e-mail to employees and Air Quality Steering Committee when DHEC forecast Orange Alerts.
- Broadcast air quality related radio ads.
- Send e-mails to employees when DHEC forecast Orange Alerts and to Air Quality Steering Committee.
- On November 16, 2005, the Greenville News published an article titled "Upstate's hazy record on air could cloud business climate."
- Greenville County is preparing a grant application due to USEPA Region 4 on December 23, 2005, in advance of the 2006 Ozone Season. The County is planning on conducting an extensive public awareness campaign should the grant application be approved. Items would include: radio and TV advertisements, informational wheels, brochures, involvement in community activities, and funds to enable the Greenville Transit Authority to provide free transit services during high ozone alert days.

June 2006:

- On February 9, 2006, the Greenville News published an editorial titled "Upstate must fix pollution."
- County staff is actively participating with SCDHEC in the planning of the 2006 SC Early Action Compact Summit, which will be held in Columbia, SC on August 16 and 17, 2006.
- USEPA notified in April 2006 that Greenville County was selected to submit a final grant application. The final application was submitted in May 2006. The County is expecting an award notice by July 2006 to begin developing public awareness materials and the campaign. Funding will be from July 2006 through June 2008.
- The 27'x 9' "Spare the Air in Greenville County" banner is being displayed during ozone season at the Recycling Center located at County Square at the intersection of University Ridge and Church Street in downtown Greenville (SC). The traffic count for this intersection is approximately 23,000 vehicles per day.
- On May 22, 2006, County administration notified and requested all department heads, appointed and elected officials their assistance in distributing information to employees on USEPA's EnviroFlash forecast delivery system services.
- On June 22, 2006, the Greenville News published an article titled "Ozone alert issued for today" on its website.
- On June 23, 2006, the Greenville News published an article titled "Ozone levels near danger zone."
- On June 23, 2006, the Greenville News published an article titled "Air quality expected to improve today" on its website.
- Continue updating ozone information on website, air quality forecasts on the County's Cable TV Channel, and sending e-mail alerts to employees when DHEC forecast Yellow and Orange Alerts.

December 2006:

- EPA approved grant on July 24, 2006.
- Submitted request to purchasing on July 26, 2006 for air quality PSAs.
- Continued broadcasting air quality forecast and information on Cable TV public access channel and website.
- Met with Goodwill Industries Executive Director to discuss air quality efforts and the "cash for clunkers" strategy included in the air quality list of strategies to improve air quality.
- Published air quality articles in "La Opinión" a Hispanic newspaper in Upstate SC.
- Greenville News continued covering air quality efforts and published articles in print media and website. As a result of an increased coverage of the print media about our efforts to make the public aware, citizens are becoming more concerned about air quality problems and solutions in the Upstate. This is evidenced by calls received, letters to the editor, and quotes in news articles.

- Four County employees attended the 2006 Early Action Compact (EAC) Summit held on August 16 – 17, 2006 in Columbia, SC
  - John Gardner, Kimberly Grissop, John Owings, and Sandra Yudice
- Continued advertising in radio, TV Channel, website, newspapers (both stories on air quality and editorial) in English and Spanish.
- Continued broadcasting alerts to County employees during Ozone Action Days.
- Met with volunteers to design outreach materials.
- Met with School District's and SCDHEC's representatives to discuss the Breathe Better Air at School (B^2@School) pilot program and school district "no idling" policy.
- Met with Miracle Hills Executive Director to discuss air quality efforts and the "cash for clunkers" strategy included in the air quality list of strategies to improve air quality.
- Conference call with the Kidney Foundation (Kidney Car Program) to discuss air quality efforts and the "cash for clunkers" strategy included in the air quality list of strategies to improve air quality.
- Greenville News continued covering air quality efforts and published articles in print media and the newspaper's website.
- Released presentations to County employees and to the general public (posted on website and broadcast on TV public access channel):
  - Improving Air Quality in Greenville County, SC – The Challenge: Air Pollution
  - Improving Air Quality in Greenville County, SC – The Solution: Awareness
- Mailed letters explaining air quality efforts to municipalities, local chambers of commerce, school superintendent, non-profit organizations, media (TV and print), public and private schools. Included CDs with information and PowerPoint presentations.
- Ordered EPA and SCDHEC brochures and pencils.
- Began designing information wheel and t-shirts.
- Continued discussions with school district on the B2@School program.
- Greenville News continued covering air quality efforts and published articles in print media and website.
- Mailed letters explaining air quality efforts to Greenville County Library System and 30+ fire chiefs. Included CDs with information.
- Continued designing information wheel, t-shirts, and other materials and ordered pencils.
- Began making community presentations: Fountain Inn Planning Commission and City Council.
- Provided additional information to school district on the B2@School program.
- Distributed brochures through library system, meetings, and other venues.
- Attended the Environmental Issues Briefing sponsored by private businesses.
- Made presentations to the Greenville County Fire Chief Association, Fountain Inn City Council, and Planning Commission and Fountain Inn Rotary Club.
- Completed design of information wheels, t-shirts, bookmarks, and other materials.
- Submitted request to purchasing to order information wheels, t-shirts, radio PSA, and bookmarks.
- Broadcasted air quality/open burning PSA on radio.
- Continued broadcasting air quality information on Cable TV public access channel.
- Distributed brochures through library system and meetings.
- Provided letter of support for a grant application to EPA from the Greenville Hospital System - Children's Hospital. Greenville County committed to collaborate in building a broad-based stakeholder group to educate the public on air quality issues and children's health. This initiated discussions with Greenville Hospital Systems representatives to form a coalition to educate the public on air quality issues, especially how they affect children who suffer from asthma and other respiratory illnesses.
- After a presentation on air quality by the Greenville County Planning Commission staff, the City of Fountain Inn agreed that the issue is very important. In December 2006, City Council began considering issuing a city-wide policy statement or resolution. The City is also drafting a flyer that will be distributed to all City residents.

Estimate of Emission Reductions (if available)
711 lbs/year. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed Fall 2004 but will continue with implementation, progress and improvements.

Additional Information

- Greenville responded to the 8-hour Ozone Early Action Tool sent by SCDHEC in March of 2006. The Ozone coordinators indicated that the County had already implemented eight of the 18 listed action strategies. The county contacts also indicated they planned to implement three additional action items: promoting Car Care Awareness, adopting the Governors proclamation, and suggesting to the local NPR/ETV station to do a story covering ozone awareness. Greenville requested information on four other action items: SmartRide, Breathe Better at School, GreenScaping, and Energy Star.
- With the grant received from EPA, the enhanced public awareness campaign will include information on tax savings measures approved on June 1, 2006 by the State Legislature and the Governor for purchasing high efficiency vehicles.
- The grant received from EPA will provide funding for an enhanced public awareness campaign from July 2006 to June 2008. Therefore, the license plate program to generate revenue will not be pursued.

18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality. Priority A

Description of Measure

- Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University.
- Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase or upgrade of furnaces and boilers.
- Encourage fuel cell and other hydrogen based research.

June 2004:

- Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities. (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts.

December 2005:

- Alternative fuels: Clemson University chemical engineering professor Mark C. Thies has received an $856,000 award from the Department of Energy (DOE) to develop more efficient processes for the centralized production of hydrogen by splitting water. The award was one of only three made nationwide under DOE's Nuclear Hydrogen initiative. In addition to Thies, the project team includes fellow Clemson David Bruce, John O'Connell from the University of Virginia and Max Gorensek from Savannah River National Lab. The Clemson team will interact not only with U. S. engineers and scientists but also with those in France, Italy, and Japan, all of whom have teams working on related processes.

- Clemson University is developing the International Center for Automotive Research (Clemson-ICAR) in Greenville, SC. The ICAR project will be the premier automotive and motorsports research and educational center in SC. Research will emphasize development of innovative materials and processing technologies, which will enable the development of more efficient, and environment friendly vehicles, as well as electrical power generators.

June/December 2006:

- Clemson University chemical engineering professor Mark C. Thies continues investigating the centralized production of hydrogen via water splitting.
  (Source: http://www.ces.clemson.edu/chemeng/research.html;

http://www.ces.clemson.edu/chemeng/facultypages/thies/research_ProducingHydrogenCarbonFree.html)

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed November 2003 but will continue monitoring progress of ongoing research.

19. Use of alternate fuels. Priority B

Description of Measure

- Direct local Planning Commissions to identify areas where alternative fuels will be best suited.
- Encourage the use of alternate fuels.
- Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to power on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas.
- Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.

December 2004:

- 2,700 gallons of biodiesel were purchased in 2004 in Greenville County.

June 2005:

- In April 2005, Michelin North America located in Greenville County applied for special projects funding to add biodiesel at their test track (Laurens Proving Grounds). Biodiesel would be used in test vehicles and would be available to others using the test facility. There is the possibility for expanding fuel use throughout their fleet. The project would begin December 2005. The Laurens Proving Grounds operates 12 to 14 diesel-powered vehicles for the purposes of 1) testing tires, 2) maintaining the 3000-acre site, and 3) transporting test tires to and from the site.

- April 22, 2005 was the grand opening of the first ethanol-refueling station within Greenville County that is open to the general public. There are plans for one more location by the end of 2005.

December 2005:

- Alternate Fuel: Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, has also received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification.
- Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy Office, North Carolina's Research Triangle Institute, Rentech and Sud-Chemie Inc. This grant reflects $875,499 in DOE-STAC funds and $294,499 in cost sharing by the industrial and governmental participants. (Source: http://cworld.clemson.edu/archive/2005/spring05/worldview.htm)

June 2006:

- There are currently 12 public Spinx stations that offer E85 in Greenville County. Eight Spinx stations in Greenville currently offer Biodiesel. Stations can be located using the U.S. Department of Energy Alternative Fuels Data Center Website at http://www.eere.energy.gov/afdc/infrastructure/locator.html

December 2006:

- The number of stations offering E85 and other alternative fuels has increased from 12 in June to 26 in October. (Source: http://www.palmettocleanfuels.org/Station%20Locations%20by%20City%20October%202006.pdf)

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

Additional Information

- A private sector company undertook efforts to offer alternative fuels network in Greenville County, SC. Therefore, there was no need for the Greenville County Planning Commission to undertake these efforts.
- Due to budget constraints, Greenville County has not used alternate fuels for its fleet due to the high differential cost between alternate fuels and gasoline/diesel.

20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes. Priority B

Description of Measure

- Evaluate use of HOV on three (3) lane interstate highways.
- Show the advantages of designating HOVs.
- Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (rush hour).
- Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.

December 2003:

- During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. The Committee concluded that "HOV lanes work best where an interstate or a limited access arterial lead directly to major employment centers, usually within a central business district (CBD). With the exception of I-385 leading to the Greenville CBD, Upstate interstates (especially I-85) generally link the cities of Anderson, Greenville, and Spartanburg via peripheral routes, not conducive to the addition of HOV lanes. In addition, inter-county work trends do not show major volumes that would support car-pooled trips. Making the third lane of I-85 an HOV lane would severely increase congestion, emissions, and future accidents. The addition of new lanes would be cost prohibitive, and would not be allowed to revert to a single occupancy vehicle (SOV) status without reimbursement to the federal government."

December 2004:

- In June 2004, Planning Commission staff met with traffic engineers from SCDOT to discuss this strategy. Traffic engineers indicated that because traffic volumes on I-85 exceed 100,000 vehicles daily on the three lanes of the interstate, it was recommended that the Upstate consider converting one of the three lanes on I-85 or I-385 to a HOV lane. The offsetting increase in congestion in the two remaining lanes would predictably increase NOx emissions by an amount exceeding the any reductions gained from traffic moving in the HOV lane. HOV lanes work best when they are paralleled by at least 4 or more free flow lanes. No further actions are planned.

December 2005: no further actions are planned.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2004.

21. Modify speed limits for optimum fuel efficiency. Priority B

Description of Measure

- Direct SCDHEC and SCDOT to take the lead role.
- Direct Planning Commissions to assist SCDHEC in modeling.

December 2005:

- In Summer 2005, the speed limits on the interstate highways in Greenville County have been established at 60 mph because the county is defined as urban by the US Census and the FHWA.
- The GPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Greenville and Pickens Counties (GPATS MPO BOUNDARY) have been established at 60 mph. According to the Department of Energy, gas mileage decreases rapidly at speeds above 60 mph. No further actions are planned.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005.

22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions. Priority B

Description of Measure

- Study impact of post construction traffic flow.
- Study impact of construction activities.

December 2004 - No local action has taken place on this strategy.

December 2005:

- In August 16, 2005, the GC Planning Commission staff met the City of Greenville Traffic Engineering Department staff to learn about developing requirements for new developments to complete a traffic impact study before receiving a building permit in the City of Greenville.
- In late 2005, the Planning Commission staff presented to the Planning Commission a proposal to consider developing requirements for traffic impact studies in the unincorporated areas of Greenville County.

June 2006:

- In April 2006, the Greenville County Planning Commission approved a staff proposal to develop an ordinance requiring a traffic impact study be prepared for all new commercial, industrial and residential developments.
- In May 2006, the Greenville County Planning Commission approved a staff proposal to develop an amendment to the County Land Development Regulations which would require interconnectivity between residential subdivisions and also to develop "access management" policies to ensure interconnectivity between commercial developments. It is expected that the proposed ordinance will be presented to County Council before the end of 2006.
- Planning staff will meet with the Traffic Impact Study Advisory Committee on June 28, 2006, to begin reviewing a proposed ordinance. It is expected that the proposed ordinance will be presented to County Council before the end of 2006.

December 2006:

- Big Box design standards:
  - In September 2006 the Greenville County Planning Commission recommended to Greenville County Council a set of design standards for big box retail development. According to State legislation a big box development is one in which at least one structure contains at least 40,000 square feet. These design standards regulate parking, landscaping, and improved pedestrian access. Public hearings will be held in early 2007.
- Traffic impact studies:
  - In September 2006 the Greenville County Planning Commission recommended to Greenville County Council the adoption of a traffic impact ordinance that will require a traffic impact study must be completed before issuing a building permit. Public hearings will be held in early 2007.
- Street connectivity:
  - In September 2006 the Greenville County Planning Commission recommended to Greenville County Council the adoption of criteria that will require inter-connectivity between residential subdivisions and commercial developments. Public hearings will be held in early 2007.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Implementation began in 2005 and is continuing.

23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods. Priority B

Description of Measure

- Eliminate minimum acreage requirements for school sites.
- Cap student populations per facilities.
- Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals.
- Favor restoration and construction of community-based small schools over new construction of remote mega schools.

June 2005:

- Greenville County's Land Development Regulations were amended in January 2005 to require sidewalks to be installed in all new subdivisions.

- Greenville County's Zoning Ordinance was amended in January 2005 to allow cluster type developments, multifamily developments as part of commercial and office developments and to encourage Neo-traditional developments. Increased design flexibilities were added as incentives to develop pedestrian friendly designs.

June 2006:

- The Greenville County Schools (S.C.) implemented an aggressive school construction program. This construction program, completely rebuilt or constructed 70 schools (80% of all schools in the District). The construction program will be completed by December 31, 2006. Schools not included in this plan were renovated or built prior to this construction program. Information on the School District's construction plan may be found at http://www.institutionalresources.com/
- The Greenville County School District is scheduled to complete the $800+ million construction program by the end 2006. Therefore, there will not be further action on this strategy.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2006.

Additional Information

- The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_2005-2006/bills/4488.htm

- SECTION 203 SCHOOL SITES
  203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties.
  203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI).

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Appalachia, SC (Designated - Attainment)							
DECEMBER 2006 OCONEE COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
Appointment of Ozone Action Coordinator	Designation of county staff person to coordinate education efforts and dissmenination of zone related information	Completed	Jun-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Ozone Reduction Meetings	Coordination of meetings with municipalities, stakeholder goups, the public, and other entities	Continuing	Fall 2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Lower Emissions in County Fleet	County will utilize Capital Improvement Plan to initiate annual review of vehicle and equipment fleet, upgrading and replacing older and less fuel efficient as budget allows; replacing improperly operating catalytic converters.	Continuing	2004	n/a directionally sound	n/a directionally sound	n/a	
Energy-Efficient Buildings	County will utilize Capital Improvement Plan to initate annual review of needed upgrades to county-owned buildings, performing construction and maintenance to achieve highest level of energy-efficiency practical	Continuing	2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Support of Traffic Division	County shall support efforts by County Sheriff to emphasize speed and traffic control (this may or may not include expansion of Traffic Control Division of Sherill's Department)	Continuing	2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Greenspace Requirements	County will amend Land Development and Subdivision Chapter of the Unified Performance Standards Ordinance to mandate minimum greenspace areas in all residential and commercial subdivisions subject to the requirements	Minimum greenspace requirements for parking areas have been recommended by Planning Commission as part of amendment package to be considered by County Council in 2006	2006	n/a directionally sound	n/a directionally sound	n/a	
Comprehensive Plan	County will amend appropriate elements of the Comprehensive Plan to insure consideration of emission reduction in future planning efforts	Completed	2004	n/a directionally sound	n/a directionally sound	n/a	
Inter-Governmental Cooperation	County will encourage and assist municipalities in partnership efforts to reduce emissions	Continuing	2004	n/a directionally sound	n/a directionally sound	n/a	
ADDITIONAL MEASURE: 4-Day Work Week	County adjusted working schedule to 4-day workweek from October 2005 to May 2006 to save on energy consumption. Currently, most departments have returned to a 5-day schedule	Completed	October 2005-May 2006	n/a directionally sound	n/a directionally sound	n/a	
ADDITIONAL MEASURE: Vegetative Buffer Requirement	County adopted ordinance requiring a 25' natural vegetative waterfront buffer for parcels with new residential and commercial projects	Completed	May-06	n/a directionally sound	n/a directionally sound	n/a	
ADDITIONAL MEASURE: Possible Expansion of Vegetative Buffer Requirement	Planning Commission currently considering possibility of expanding 25' natural vegetative waterfront buffer to parcels with existing residential and commercial construction	Continuing	Unknown	n/a directionally sound	n/a directionally sound	n/a	
ADDITIONAL MEASURE: Breathe Better Air at School Program	School District of Oconee County adopted the "Breathe Better Air at School" program, instituting a 'no-idle' policy in pick-up lines	Completed		n/a directionally sound	n/a directionally sound	n/a	

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
Appalachia, SC (Designated - Attainment)							
DECEMBER 2006 PICKENS COUNTY Based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies remain under consideration. The County will continue to evaluate the air quality within the county and may implement one or more of the following measures under consideration.							
Ozone Public Relations Program	Production of education materials, media alerts, and cooperation with industry/private sector to promote ozone objectives.	program temporarily ceased when air program not funded	July, 2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Ozone Advisory Committee	Develop Local EAP	completed	March, 2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Participate in Voluntary Heavy-Diesel Retrofit Program	-Select a cleaner fuel by April 2004—Low-sulfur diesel or bio-diesel. -· Evaluate the cost-effectiveness of diesel particulate filters (catalyst coated vss. Low-sulfur catalytic filter vss. fuel-borne catalyst filter). -· Evaluate efficiency of County's emissions control program, and budget, if necessary, to maintain existing and future equipment. -· Prioritize vehicles for retrofitting -· Develop specifications for the purchase of heavy equipment that will assure low emitting diesel engines in future purchases. -· Develop bid specifications that give preference to bidders who utilize low-emission equipment. -· Share this program with other fleet owners in the County (including local school bus maintenance). -· Determine if Pickens County could be eligible for federal funds to retrofit equipment. -· Seek to develop a sponsorship program with private sector to retrofit bus emission systems	no action - air program not funded	Apr-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Catalytic Converter Replacement in Light Duty Vehicles	-Evaluate existing maintenance procedure for the County fleet and modify maintenance procedures to assure vehicles are properly assessed for emissions at a frequency to assure minimal emissions. -· Inspect vehicle fleet and replace as needed. -· Develop a public education program to encourage private fleet owners and individual car owners on how to properly maintain catalytic converters and emission systems.	opt to retire older vehicles	2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Implement a program to capture methane from landfills.	Methane gas emissions from Easley Landfill will be flared.	completed	Apr-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Park and Ride Program	County may wish to develop a park and ride on "emply" sites at the Hwy 123 Industrial Part that may eventually provide parking for prospective industry.	no action - air program not funded	Apr-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Contract Specifications	Standard language in service contracts that emphasize/require environmentally friendly equipment and methods to complete contractual task.	no action - air program not funded	July, 2003	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Carpooling Programs for Students	Improve ridership of students delivered to schools by private automobiles.	no cation-air program not funded	Aug-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Implement a No-Idling Policy for County Fleet Vehicles	County Administration will develop a policy to prohibit idling of vehicles	completed	Apr-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Re-evaluate the property tax rules for 1) low-mileage, older vehicles, 2) high efficiency gas consumption vehicles, or 3) ultra-low emissions vehicles	Consideration for fuel economy is not currently considered with the automobile property tax.	no action - program not funded	Jan-05	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Provide incentives that increase ridership on the Clemson Area Transit System.	Evaluate the fees during peak ozone season	no action - program not funded	Apr-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
11 South Carolina State Measures							
Comments: Modeling for 2007, shows attainment without including measures beyond national and regional measures already finalized.. 2012 and 2017 also shows attainment. Our continuing EAC programs are also related to maintenance.							
11 Appalachian, SC (Effective date of nonattainment designation deferred) Spartanburg County							
School Bus Retrofit Project	Approximately 20 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expeted)		2006	340 lbs/year	N/A	N/A	CO reductions 2,380 lbs/year December 2004 EAC SIP - Appendix 16
SPARTANBURG COUNTY, SC DECEMBER 2006 EAC PROGRESS REPORT **Based on stakeholder consultation and taking into consideration resource and political constraints, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.**							
Air Quality Awareness and Improvement Policy	Memorandum sent to all County department head as well as elected and appointed officials for the purpose of establishing certain principles that will guide the recurring activities of County government. Effective immediately: 1. Encourage that all county employees are notified of upcoming Ozone Action Days. 2. Encourage car-pooling opportunities. 3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications. 4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, trafic/weather conditions, and vehicles being repaired, maintained, or inspected. 5. Restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days. 6. Restrict all outdoor burning on Ozone Action Days. 7. Energy energy conservation in all County facilities. 8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to purchase Energy Star equipment. SEE Comment #6	Policy remains in effect.	Effective immediately - October 6, 2004	directionally sound	directionally sound	N/A	The commitment to address these activities has been assured by the County Administrator by establishing the Air Quality Awareness and Improvement Policy for County Government. 1. See comment….
1. Support SCDHEC statewide efforts to reduce ozone levels.	Stakeholder group to support and participate in modeling efforts. Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning). · Members of the Upstate Air Quality Staff Advisory Committee participated WITH dhec in the development of new regulations aimed at reducing NOx emissions. As a result, new regulations requiring Nox- BACT (Best Available Control Technology Economically Achievable) were adopted in mid 2004.	December 2004 EAC SIP did include Appendix 16 - 1. SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste 2. SC61-62.5, Std. 5.2 "Control ofOxides of Nitrogen) reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year 3. June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW. See Comment #4. 4. November 2004 - Greenville County submitted letter supporting SIP. See Comment #5. 5. Greenville County implemented the following measures during 2004 and 2005: purchased alternate fuel vehicles (Greenville purchased 19 such vehicles since November 2004); published and distributed brochures about improving air quality ; sent out notices on high ozone days and developed audio commercials for local radio stations to broadcast during ozone awareness week and ozone season; broadcasted radio announcements and information through the County's Cable TV channel,	Completed June 25, 2004	43.01 tons/season N/A	9.06 tons/season 234.1 tons/yr		Upstate Air Quality Staff Advisory committee will be developing a business partnership plan to involve local industries in announcing ozone alerts, participating in ride share programs and adopting the same or similar list of initiatives that Greenville County adopted from the SELC.
2. Designate an Ozone Action Coordinator	Designate a staff person in each County who will be responsible for coordination of counties ozone programs	Spartanburg County Council appointed one Ozone Action Coordinator in March of 2003: Jim D'Amato. Jim D'Amato continues to serve as the Ozone Action Coordinator.	March 2003	N/A	N/A	N/A	See Comment #5
3. Seek low sulfur fuels as early as possible	Continue to coordinate with representatives of colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.	Committee continues to coordinate with representatives of Colonial and Plantation pipelines, refiners. See Comment #5. During 2005, Colonial Pipeline conducted studies that indicates that S.C., as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. • M Grades: Average 139 High 330 • V Grades: Average 74 High 300. The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at	Completed in 2004 and continuing.	directionally sound	directionally sound	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
4. Design and implement congestion management and Intelligent Transportation System (ITS) measures.	Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles; Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles. Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.	• Cameras and variable message boards have been installed on I-26 in Spartanburg County, I-385 in Greenville County, and along I-85 through Anderson, Greenville and Spartanburg counties. • Spartanburg County is working to implement the design for a complete and coordinated signal system within the City of Spartanburg and its immediate urban environs. This includes utilizing new fiber optic cables, new signal heads, and a new computer system controlled by the city. The cost of this effort is over $5 million, and when complete will fully coordinate approximately 100 signals. Once this effort is complete, traffic flow within the urban area of Spartanburg County will be much improved, and congestion leading to ozone emissions will, hopefully, be reduced. • The SCDOT is currently doing preliminary engineering on a SPATS-funded project to coordinate traffic signals along the busy SC 9 corridor in Boiling Springs. The design of the system is currently funded in the amount of $110,000 by the SPATS MPO, and when construction is complete, signals along SC 9 will be c	Initiated in 2005 and continuing.	directionally sound	directionally sound	N/A	Information about SPATS programs are available at www.spartanburgcounty.org
5. Use of hybrid vehicles	Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel). Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.	• There are approximately 70 alternative fuel vehicles operating within federal, state, county and municipal government. Of that amount 16 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or Alternative Fuel Vehicles, if practicable • Spartanburg County is currently performing a cost-benefit analysis for the purpose of ascertaining whether new vehicle purchases should include hybrids. The county has already begun to implement a program to purchase flexible fuel vehicles for its fleet. • On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. The ratified title is AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	
6. Use higher efficiency engines for school buses	Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA. Promote an Adopt-A-School-Bus Program. Endorse a statewide recommendation for the State to take the lead	• School Bus Retrofit Project: approximately 20 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expected) The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type. • The South Carolina Department of Education purchased 61 new buses that should be on the road in late 2005. • The Department of Education has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. • State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels • The buses from these funding sources will be distrib	Completed in 2006 and continuing.	directionally sound	directionally sound	N/A	Reductinos accounted for under School Bus Retrofit Project

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
7.a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes. Establish intermodal connections with an emphasis on mass transit	WALKING/BIKING Biking and pedestrian pathways are being added to all new SPATS widening projects. SC 295 Phase 2 will include an offset shared use path along most of the length of the road improvement. In addition, the upcoming widening of SC 9 will include both bike and pedestrian facilities, where appropriate.	• In 2003 the SPATS Policy Committee began including alternative mobility projects in its transportation projects. To encourage walking and biking, all Spartanburg Area Transportation Study (SPATS) projects will, where possible, have dedicated bike lanes and sidewalks offset from the curb by a grass buffer. This will allow pedestrians to feel safer and will better encourage walking. • The SPATS (Spartanburg Area Transportation Study) Metropolitan Planning Organization (MPO) is one of thirteen areas across the nation selected by the National Center for Bicycling and Walking (NCBW) for the 2004-2005 "Walkable Community Workshops" program. • This shared-cost workshop project, pledging staff and financial resources in exchange for technical assistance and training from NCBW, featured workshops in eight different areas* of the SPATS MPO during the week of May 23-27, 2005. Workshops were held in the city of Spartanburg, Boiling Springs, Pacolet, Duncan, Cowpens,	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	Information about SPATS programs are available at www.spartanburgcounty.org
7.b. Offer free or reduced transportation cost on high ozone days.	MASS TRANSIT: Staff will work with SPARTA to disuss implementing a program to offer free or reduced fares on ozone action days.	A staff person from the South Carolina Department of Transportation (SCDOT) has been designated to receive SCDHEC's Ground-level Ozone Forecast and to distribute it via email to approximately 5,000 staff. SCDOT also plans to utilize the SCDHEC Ozone Forecast Internet link for the forecast on their webpage. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. Spartanburg has 7 variable message signs along its interstate system. The SPARTA website includes information on Commuter Choice, a nationwide partnership designed to help employers create customized solutions to their employees' commuting challenges. Commuter Choice can also include communities working with residents, schools working with students, and even developers working with future tenants to provide and promote choices for travelers. http://www.spartabus.com/Commuter%20Choice.htm .	Implementation began in 2005 and is continuing. Completion of this measure dependent upon SPARTA financial status.	directionally sound	directionally sound	N/A	
7.c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems.	Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility; Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.	• An executive summary of the Intermodal Element addendum of the 2005-2025 Long-Range Transportation Plan is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/excsum.pdf . The Plan includes a Bicycle and Pedestrian Plan as well as an Alternate Mobility Master Plan. • Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions.	Implementation began in 2005 and is continuing. Completion of this task dependent upon elected officials' willingness to incorporate more rigid land use regulations.	directionally sound	directionally sound	N/A	Comments #7
8. Review and update air emission inventory for the Upstate	Ensure all industrial sources still operating. Review industrial sources for plant closures. Identify major sources of NOx Map the locations of point sources (10% of point sources cannot be found). Map the specific locations and the area sources where coal is burned.	This was completed and forwarded to SCDHEC on a previous updated progress report. The information allowed DHEC to having more accurate emissions inventory.	Completed. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.	directionally sound	directionally sound	N/A	SCDHEC

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling	Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plan Coordinate with the Williams Company to determine what NOx reductions are planned for the TRANSCO Pipeline. Support NOx reduction strategies in the State Implementation Plan Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emissions NOx sources)	See info on Duke Power included in Appendix 16 of EAC SIP (link in Comment #6). •• The Williams Company has received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors will begin in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the upstate. • Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004. • The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the Upstate. NOx reduction at the Duke Power Lee Steam Plant • Coal fired Unit #2 is now operating with the new NC	Implementation began in 2004 and was completed in 2006.	N/A	40%	N/A	
10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers).	Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals. Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, Salvation Army when they have been donated as charitable gifts. Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.	staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to re-selling clunker vehicles donated to these organizations.	Completed in 2006. No action taken due to budget constraints.	directionally sound	directionally sound	Use funds from license plate sales	
11. Ban open burning of on-site commercial clearing debris during ozone season (April - October)	Use SCDHEC model to detrmine the most effective method to ban open burning. Discuss modeling results with all local governments to consider adoption.	DHEC adopted regulations in mid 2004 restricting open burning. See Comment #6. DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishible by law. At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round. Staff will schedule meetings with Administration and pertinent departments to discuss this measure, and how Spartanburg County and help to implement it.	Completed on June 25, 2004 with the passage of regulation SC 61-62.2 "Prohibition of Open Burning" and continuing.	directionally sound	directionally sound	N/A	See Comment #6
12. Create incentives for the purchase of high efficiency and low emissions vehicles.	Offer tax credits for vehicles with high efficiency gas consumption or low emissions. Offer tax credits for low mileage vehicles instead of high mileage vehicles	• Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles. • A bill titled "An act concerning the promotion of alternative use fuel, and hybrid propulsion system for transportation purposes" was submitted to the SC House of Representatives in January 2005. The bill is now in committee. In summary, the bill provides tax Credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel. • On June 1, 2006 the Governor signed the H*4312(R	Implementation began in 2005 and was completed June 1, 2006.	directionally sound	directionally sound	N/A	See Comment #5

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
13. Use land-use and transportation planning to improve air quality	Include air quality measures as a part of the land-use and transportation planning process.	Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include: • Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants. • Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development. • Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended ¼ acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, ope • An executive summary of the Intermodal Element a	Completed in 2005.	directionally sound	directionally sound	N/A	
****Develop air quality best management practices (BMPs)_ for construction sites	Develop a generic list of BMPs Develop management practices for construction debris. Develop management practices for emissions from construction vehicles. Develop management practices for traffic controls during construction.	• Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions. In addition, developers are beginning to see the interest in neo-traditional development, and some new developments are being built that incorporate several of these features.		directionally sound	directionally sound	N/A	See Comment #2
14. Implement a program to encourage use of green power.	Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant. Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.	BMW , located in Spartanburg County, is using Spartanburg County's Palmetto Landfill's emissions to produce energy for its plant. A Green Power station will be constructed at the Anderson Regional Landfill in 2006. Santee Cooper, through Blue Ridge Electric Cooperative, recently began offering the purchase of Green Power to Anderson, Greenville, Oconee, Pickens and Spartanburg County residents. Residential customers who increased their purchase of Green Power by 2 blocks were offered a free energy analysis between October 1 and December 31, 2005.	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	
15. Promote route efficiency for delivery vehicles, trash collection etc.	Encourge business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets. Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.	Delivery companies currently use GPS mapping programs to map the most cost effective route to save gasoline.	Completed. No action taken by local government. Private sector fleets already maximizing fleet movement.	directionally sound	directionally sound	N/A	See Comment #5
16. Establish a clean air partnership with business and industry.	Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments. Establish park and ride lots serving perimeter counties along major corridors. Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available. Encourage carpooling/vanpooling as an option where employees living in the same area argree to ride to work together rather than to drive their individualvehicle to work. Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc. Encourage telecommuting. Adopt a Bus Program. Develop funding to be used for matching grants fund for several EAP strategies. Develop a core competency and assisting the Upstate EAP group in writing grant proposal.	Staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties. In November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season.	Completed in 2004 and continuing.	directionally sound	directionally sound	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
17. Establish an active public awareness campaign.	Develop an editorial board to discuss air quality issues an development of a relationship with media. Use alert messages year round, not only during ozone season; Utilize public service announement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days; Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens. Encourage health organizations to sponsor ozone alerts in media. Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.). Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers. Develop a license plate program to generate revenue to implement the public awareness campaign. Develop awareness program on tax savings for purchasing high efficiency vehicles.	• Spartanburg County requested an Air Public Service announcement from SCDHEC. • Berry Shoals Elementary School in Spartanburg County requested educational materials and held special science awards in March 2005. • Distributed bookmarks to public at Spartanburg County libraries, and disseminated DHEC-supplied material in information kiosk in main Spartanburg County Administration Building. • Spartanburg County plans to add $30,000 to fund an Air Quality Coordination Effort (AQCE) in the Public Works Department. This proposal supports the County's efforts to cooperatively work with the State DHEC in the conservation and enhancement of air resources in a manner that promotes quality of life. Funding for the AQCE will permit the County to fully participate in particulate matter compliance efforts including the Early Action Ozone Compliance Compact. This project will be supported with fund balance for FY07, and supported as part of the operating budget in future years.	Completed in 2004 and ongoing.	directionally sound	directionally sound	N/A	
		o Spartanburg received a $47,650 grant from the state Department of Health and Environmental Control to promote its recycling program. The campaign will use newspaper, radio, internet, cable television, and outdoor advertising to promote recycling. Promotions will point out that all city residents have to do to participate is call for a free bin. o The new Spartanburg County Air Quality Committee met on October 26, 2006. Department of Health and Environmental Control employees were present and have since been given a request for 10 actions/activities that are 'reasonable' for Spartanburg to pursue and will clearly demonstrate a meaningful effort to improve air quality.					
18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality.	Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University. Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase orupgrade of furnaces and boilers.	• Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities. (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts. • Alternative fuels: Clemson University chemical engineering professor Mark C. Thies has received an $856,000 award from the Department of Energy (DOE) to develop more efficient processes for the ce • Clemson University is developing the International (	Completed in 2005.	directionally sound	directionally sound	N/A	

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
19. Use of alternate fuels.	Direct local Planning Commissions to identify areas where alternative fuels will be best suited. Encourage the use of alternate fuels; Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to pwoer on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas. Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.	• Alternate Fuel: Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, has also received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative. • Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification. • Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy Office, North Carolina's Research Triangle Institute, Rentech and Sud-Chemie Inc. This grant reflects $875,499 in DOE-STAC funds and $294,499 in cost sharing by the industrial and governmental participants. • Spartanburg County will begin purchasing alternative fuel vehicles for its fleet as older vehicles are replaced. • There are currently 10 stations that offer Ethanol 85% and 6 stations that offer biodiesel within 25 miles of downtown Spartanburg. Stations can be located using the U.S. Department of Energy Alterna	Completed in 2005 and continuing.	directionally sound	directionally sound	N/A	
20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes.	Evaluate use of HOV on three (3) lane interstate highways; Show the advantages of designating HOVs; Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (fush hour). Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.	• During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. The Committee concluded that "HOV lanes work best where an interstate or a limited access arterial lead directly to major employment centers, usually within a central business district (CBD). With the exception of I-385 leading to the Greenville CBD, Upstate interstates (especially I-85) generally link the cities of Anderson, Greenville, and Spartanburg via peripheral routes, not conducive to the addition of HOV lanes. In addition, inter-county work trends do not show major volumes that would support car-pooled trips. Making the third lane of I-85 an HOV lane would severely increase congestion, emissions, and future accidents. The addition of new lanes would be cost prohibitive, and would not be allowed to revert to a single occupancy vehicle (SOV) status without reimbursement to the federal government." • In June 2004, Planning Commission staff met with traffic engineers from SCDOT to discuss this strategy. Traffic engineers indicated that because tra	Completed in 2004.	directionally sound	directionally sound	N/A	No further action planned
21. Modify speed limits for optimum fuel efficiency.	Direct SCDHEC and SCDOT to take the lead role. Direct Planning Commissions to assist SCDHEC in modeling.	The SPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Spartanburg County have been established at 60 mph.	Completed in 2005.	N/A	N/A	N/A	No further action planned
22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.	Study impact of post construction traffic flow. Study impact of construction activities.	Traffic impacts are monitored, both during and post construction, but process is not formalized.	Completed in 2005 and continuing.	N/A	N/A	N/A	See Comment #5
23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods	Eliminate minimum acreage requirements for school sites. Cap student populations per facilities. Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals. Favor restoration and construction of community-based small schools over new consturction of remote mega schools.	• The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_2005 2006/bills/4488.htm • Spartanburg County is awaiting the committee's recommendations and the manner in which they may take effect if this bill is enacted.	Completed in 2006 and continuing.	N/A	N/A	N/A	• SECTION 203 SCHOOL SITES 203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties. 203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI). See Comment #5

A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information

Comments:

1. December 2004 - SC EAC SIP - activity not quantified for several reasons (first) in accordance with EAC Protocol, after all adopted Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas)- See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

December 2006 - Early Action Compact Progress Report
Spartanburg County

In an effort to keep your contact information updated we have provided the following information for our county:

	Name	Telephone	E-mail Address
Administrator/Manager	Glenn Breed	(864) 596-2526	gbreed@spartanburgcounty.org
EAC contact	Jim D'Amato	(864) 596-2460	jdamato@spartanburgcounty.org

The following measures were not included in the South Carolina Early Action Compact SIP but are directionally sound and are anticipated to assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

Anderson, Greenville, and Spartanburg Resolution
Anderson County, Greenville County, and Spartanburg County each entered into a resolution as a cooperative means of improving air quality to meet applicable state and federal air quality standards. By entering into this resolution, the Counties agreed to the following:

1. Each County will provide individuals to serve on a Steering Committee. The Steering Committee will strive to finalize an Upstate Air Quality Action Plan. The Air Quality Action Plan is intended to be a guide for implementation of proactive measures that will bring the Participating Counties into compliance with the 8-hour ozone standard consistent with DHEC's Early Action Plan. The Steering Committee will consist of no more than 21 voting members (7 from each county). Advisory (non-voting) members may be appointed up to a maximum of seven from each county.

2. Implementation costs of the air Quality Action Plan will be specified and quantified by the Steering Committee including ongoing direct and indirect costs that will be incurred by state and local governments, businesses, and individual taxpayers.

3. The Steering Committee will prepare a report detailing and quantifying the economic impact and costs associated with non-attainment status that have been incurred by the four geographic non-attainment areas most closely located near Anderson, Greenville and Spartanburg.

4. Once an Air Quality Action Plan is developed by the Steering Committee, each of the Participating Counties will consider adoption of the Air Quality Action Plan within the boundaries of the respective participating Counties consistent with the goals of the Early Action Program.

Air Quality Awareness and Improvement Policy
Memorandum has recently been sent to all County department heads as well as elected and appointed officials for the purpose of establishing certain principles that will guide the recurring activities of County government.

Effective immediately, the county will:
1. Encourage that all county employees are notified of upcoming Ozone Action Days.

2. Encourage car-pooling opportunities.
3. Ensure that all County vehicles and equipment are operating according to the manufacturer's specifications.
4. Restrict vehicle idling to no more than 5 minutes. Exceptions include emergency vehicles, traffic/weather conditions, and vehicles being repaired, maintained, or inspected.
5. Restrict mowing and use of gas powered lawn equipment on County property on Ozone Action Days.
6. Restrict all outdoor burning on Ozone Action Days.
7. Energy conservation in all County facilities.
8. Include environmental considerations in purchasing decisions for goods and services. An example of such would be to purchase Energy Star equipment.

Based on stakeholder consultation and taking into consideration resource and political constrains, the following control measures are under consideration pending modeling that demonstrates compliance in 2007 by SCDHEC. It is anticipated these measures under consideration will assist the County of Anderson, Greenville, Spartanburg, South Carolina, in achieving and/or maintaining the 8-hour ozone standard by 2007.

ATTACHMENT 1

To South Carolina Department of Health and Environmental Control
Environmental Protection Administration
From: Spartanburg County, South Carolina
Date December, 2006

Reference: Summary of progress in implementing air quality strategies adopted by Spartanburg County and included in our Early Action Compact.

1. Support SCDHEC statewide efforts to reduce ozone levels. Priority A

Description of Measure

- Stakeholder group to support and participate in modeling efforts.
- Develop stakeholder group to participate in development of regulations (NOx - BACT (Best Available Control Technology Economically Achievable), restrict open burning).
- Members of the Upstate Air Quality Staff Advisory Committee participated with DHEC in the development of new regulations aimed at reducing NOx emissions. As a result, new regulations requiring NOx- BACT (Best Available Control Technology Economically Achievable) were adopted in mid 2004.

December 2004:
EAC SIP did include Appendix 16 -

- SC61-62.2 "Prohibition of Open Burning" regulation with reductions for 2007 calendar year - reductions expected during the ozone season for residential construction waste. Emissions reduction: VOC: 43.01 tons/season; NOx: 9.06 tons/season; PM 38.48 tons/yr
- SC61-62.5, Std. 5.2 "Control of Oxides of Nitrogen) reduction amount for both existing and new sources combined across Anderson, Greenville, Spartanburg for 2007 calendar year. Emissions reduction of NOx: 234.1 tons/yr.
- June 24, 2004 - Participated in Upstate Air Quality Steering Committee meeting held at BMW.
- November 2004 - Upstate Air Quality Staff Advisory committee will be developing a business partnership plan to involve local industries in announcing ozone alerts, participating in ride share programs and adopting the same or similar list of initiatives that Greenville County adopted from the SELC.

June 2006:

- Spartanburg County distributed DHEC supplied material informing residents of air quality problems, and acquainting them with possible solutions presently being discussed by DHEC and by the Upstate Air Quality Committee.

Estimate of Emission Reductions (if available)
Equivalent to removing 359,500 cars from the road or 7190 tons of VOC.

Implementation Date
Completed June 25, 2004.

2. Designate an Ozone Action Coordinator — Priority A

Description of Measure

- Spartanburg County Council appointed one Ozone Action Coordinator in March of 2003: Jim D'Amato. Jim D'Amato continues to serve as the Ozone Action Coordinator.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed March 2003 and continuing.

3. Seek low sulfur fuels as early as possible. Priority A

Description of Measure

The Committee has continued to coordinate with representatives of Colonial and Plantation pipelines, refiners. Based upon an unofficial status report from Kay Clamp width the SC Petroleum Institute ". We are fortunate in the Southeast because we receive much of our supply from the Gulf Coast, and 60% of the nation's refineries are in that area. A simple translation of that fact is that we are not dependant on one or two refineries for our fuel, and reap the benefits of a large number of refineries producing lower sulfur fuels.

December 2004:

- The maximum allowable sulfur level in gasoline for 2004 is 350 ppm with a corporate average of 120 ppm. Plantation Pipeline tests product entering their pipeline from every refinery, every day...their average from this testing has been and is 150 ppm in gasoline. Colonial Pipeline is also testing product from its shippers; the average sulfur levels for gasoline batches entering their pipeline YTD 2004 are 145 ppm for fungible regular gasoline and 62 ppm for fungible premium. Colonial did note that these averages are not volume weighted; they did not, however, think there would much difference if it were volume weighted. They also assumed that the regular and premium are averaged together for compliance.

- Both of the pipelines had the lower sulfur fuel in their facilities by late 2003; the fuel was at terminals serving S.C. by Jan. 2004, and was "on the street" by March 1, 2004".

- Continue to coordinate with representatives of colonial and Plantation pipelines, refiners, and State representatives to ensure that the upstate has the opportunity to receive low sulfur fuels at the earliest date as they can be provided.

December 2005:

- Committee continues to coordinate with representatives of Colonial and Plantation pipelines, refiners. During 2005, Colonial Pipeline conducted studies that indicates that S.C., as well as others along the Colonial Pipeline are receiving sulfur levels that should help many of the non-attainment areas. Specifically: M and V are the grades used in South Carolina. The sulfur content averages shown below are by batch not volumetric weighted values. M Grades: Average 139, High 330. V Grades: Average 74, High 300.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2004 and continuing.

Additional Information

- The Environmental Protection Agency's ultra-low sulfur diesel fuel requirements went into effect on June 1, 2006. Ultra-low sulfur diesel fuel will be available at retail stations beginning summer 2006.

4. Design and implement congestion management and Intelligent Transportation System (ITS) measures.
Priority A

Description of Measure

- Implement congestion management projects: intersection and signalization improvements to alleviate traffic congestion, therefore, reducing emissions from idling vehicles;
- Implement Intelligent Traffic Systems such as automated advisory/alert messages to drivers on interstate highways. For example: advise motorist about an accident ahead and the use of alternate routes to avid congestion, which minimize emissions from idle vehicles.
- Encourage and support improved traffic operational planning, engineering and maintenance for existing and future transportation infrastructure.

June 2005:
- Cameras and variable message boards have been installed on I-26 in Spartanburg County, I-385 in Greenville County, and along I-85 through Anderson, Greenville and Spartanburg counties.

June 2006:
- Spartanburg County is working to implement the design for a complete and coordinated signal system within the City of Spartanburg and its immediate urban environs. This includes utilizing new fiber optic cables, new signal heads, and a new computer system controlled by the city. The cost of this effort is over $5 million, and when complete will fully coordinate approximately 100 signals. Once this effort is complete, traffic flow within the urban area of Spartanburg County will be much improved, and congestion leading to ozone emissions will, hopefully, be reduced.

- The SCDOT is currently doing preliminary engineering on a SPATS-funded project to coordinate traffic signals along the busy SC 9 corridor in Boiling Springs. The design of the system is currently funded in the amount of $110,000 by the SPATS MPO, and when construction is complete, signals along SC 9 will be completely coordinated and integrated along the urban region of the corridor to its tie-in with the city system outline above. As SC 9 is the number one transportation priority and congested road in Spartanburg County, the signalization system will both improve traffic flow, and reduce emissions.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Initiated in 2005 and continuing.

Measure under Consideration

5. Use of hybrid vehicles. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Encourage people, public and private organizations to purchase hybrid vehicles as they replace vehicles/fleet.
- Encourage that 10% of public agencies fleet have hybrid vehicles (use of hybrid vehicles does not require changes in infrastructure for dispensing fuel).
- Encourage public agencies to require purchasing hybrid electric vehicles (HEVs) through the State vehicle contract.

June 2005:

- There are approximately 70 alternative fuel vehicles operating within federal, state, county and municipal government. Of that amount 16 belong to the county. As directed by the County Administrator all future purchases will be either Hybrids or Alternative Fuel Vehicles, if practicable
- Spartanburg County is currently performing a cost-benefit analysis for the purpose of ascertaining whether new vehicle purchases should include hybrids. The county has already begun to implement a program to purchase flexible fuel vehicles for its fleet.

June 2006:

- On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. The ratified title is AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

Measure under Consideration

6. Use higher efficiency engines for school buses. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Require purchase of high efficiency engines for school buses as they are replaced. In South Carolina, the SC Department of Education is in charge of maintenance of school buses. DHEC is working with SC Department of Education to obtain grants from EPA.
- Promote an Adopt-A-School-Bus Program.
- Endorse a statewide recommendation for the State to take the lead.

December 2005:

- School Bus Retrofit Project: approximately 20 diesel buses will be retrofitted particulate filters during 2006. (additional reductions of PM are also expected) The school buses may not be retrofitted until 2007 when ultra-low sulfur diesel is more widely available since the retrofitting technology being applied works best with this new fuel type.

- The South Carolina Department of Education purchased 61 new buses that should be on the road in late 2005.

June 2006:

- The Department of Education has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot.
- State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles.
- The buses from these funding sources will be distributed throughout the state. The South Carolina Department of Education (SDE) has agreed to make York County and the five deferred areas the top priority in assigning new and retrofitted buses to service. SDE is also partnering with private companies and local school districts to provide specific funding for school bus retrofits and clean air programs.

Estimate of Emission Reductions (if available)

VOC 340 lbs/year.
CO reductions 2,380 lbs/year
Additional reductions of PM are also expected.
December 2004 EAC SIP - Appendix 16

Implementation Date

Completed in 2006 and continuing.

Measure under Consideration

7a. Develop incentive programs and opportunity for citizens to choose alternative transportation modes.
Establish intermodal connections with an emphasis on mass transit. Priority A

Description of Measure

WALKING/BIKING:

- Encourage local government to increase pedestrian/bicycle infrastructure spending (the Upstate spends 2¢ per person compared to SC spending 22¢ per person).
- Establish safer bike routes with better signs marking lanes and routes.
- Increase highway funding for bike paths, walking or mass transit including high-speed rail. Support the federal transportation enhancement program.
- Install bike racks on all transit vehicles to encourage intermodal transportation. New buses purchased through the state's bus purchase program will have bike racks.

PARK and RIDE:

- Establish mass transportation between a plant and a park-and-ride site.

CARPOOLING:

- Work with local government to offer incentives for employees to car pool.

MASS TRANSIT:

- Offer a free trolley service running in a loop in downtown areas and nearby restaurants, especially during lunch hours;
- Research past feasibility studies on free downtown shuttles. Potential for sponsorship with local area restaurants and businesses for a lunch time shuttle - could defer the operational costs of the endeavor.
- Support mass transit (transportation choices and alternatives): While the only local mass transit choice that is currently available in some areas is the transit bus, example of future options such as bus rapid transit, commuter passenger service offered by trains on existing rail systems, a diesel multiple unit or "light rail" should be supported.

December 2004:

- In 2003 the SPATS Policy Committee began including alternative mobility projects in its transportation projects. To encourage walking and biking, all Spartanburg Area Transportation Study (SPATS) projects will, where possible, have dedicated bike lanes and sidewalks offset from the curb by a grass buffer. This will allow pedestrians to feel safer and will better encourage walking.

December 2005:

- The SPATS (Spartanburg Area Transportation Study) Metropolitan Planning Organization (MPO) is one of thirteen areas across the nation selected by the National Center for Bicycling and Walking (NCBW) for the 2004-2005 "Walkable Community Workshops" program.
- This shared-cost workshop project, pledging staff and financial resources in exchange for technical assistance and training from NCBW, featured workshops in eight different areas* of the SPATS MPO during the week of May 23-27, 2005. Workshops were held in the city of Spartanburg, Boiling Springs, Pacolet, Duncan, Cowpens, Chesnee, and on the Spartanburg eastside. Approximately 170 people participated. SPATS staff continues to be active in ongoing educational efforts aimed at encouraging alternate modes of travel.

June 2006:

- Nine "Walkable Community" workshops were held in Spartanburg County during the week of May 23-26, 2005. They identified bicycle and pedestrian facility projects (i.e. crosswalks), developed pedestrian and cyclist-friendly policies for their local government (i.e. mixed use development allowed), and chose creative programs to bring awareness to others in the benefits of walking and biking (i.e. bike to shop incentive program). These plans will continue to be an ongoing program of action to change the walking environment in the Spartanburg community, with critical buy-in from local city officials. Information on the workshops can be found at http://www.spartanburgcounty.org/govt/depts/pln/spats/wcw.htm
- The Hub City Connector is a 12-mile path of greenways, bicycle lanes and safe, signed sidewalks through the heart of Spartanburg. Visit http://hubcityconnector.org/ and click on the maps link to see portions of the trail currently open and others that are under construction. Upon completion, it will connect schools with neighborhoods, customers with shops and seniors with health clubs. As our local passage of the Palmetto Trail, the state's Mountains to the Sea Trail, it serves as the spine for Spartanburg's growing network of parks, trails and bike lanes.
- The Mary Black Foundation has given $700,000 for a soon-to-be-completed two-mile section of the Palmetto trail. The section is part of the Hub City Connector, a 12-mile piece of the Palmetto Trail, which could end up becoming the backbone of the area's trail system.
- A Bicycle/Pedestrian Planning Strategies workshop was offered by SPATS via teleconference on May 4, 2006. More information is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/BicycleAndPedestrianTraining.pdf

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

Measure under Consideration
7b. Offer free or reduced transportation cost on high ozone days. Priority A

- Work with SPARTA to implement a reduced cost structure for high ozone days.

Description of Measure (A more detailed description will be included in the Early Action Plan.)
Implement a coordinated high ozone day alert action plan to include public notification and free or reduced ozone fares from the transportation providers.

June 2005:
A staff person from the South Carolina Department of Transportation (SCDOT) has been designated to receive SCDHEC's Ground-level Ozone Forecast and to distribute it via email to approximately 5,000 staff. SCDOT also plans to utilize the SCDHEC Ozone Forecast Internet link for the forecast on their webpage. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. Spartanburg has 7 variable message signs along its interstate system.

June 2006:

- The SPARTA website includes information on Commuter Choice, a nationwide partnership designed to help employers create customized solutions to their employees' commuting challenges. Commuter Choice can also include communities working with residents, schools working with students, and even developers working with future tenants to provide and promote choices for travelers. http://www.spartabus.com/Commuter%20Choice.htm .

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Implementation began in 2005 and is continuing. Completion of this measure dependent upon SPARTA financial status.

Measure under Consideration
7c. Reduce vehicle miles traveled by developing efficient user-friendly transit systems. Priority A

- Integrate transportation planning with land use planning so public transit can make a comprehensive contribution to economic development and mobility;
- Remove local barriers to densification in downtowns, infill areas, and transit stations and corridors.

Description of Measure (A more detailed description will be included in the Early Action Plan.)

December 2005:

- An executive summary of the Intermodal Element addendum of the 2005-2025 Long-Range Transportation Plan is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/excsum.pdf . The Plan includes a Bicycle and Pedestrian Plan as well as an Alternate Mobility Master Plan.

June 2006:

- Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Implementation began in 2005 and is continuing. Completion of this task dependent upon elected officials' willingness to incorporate more rigid land use regulations.

Measure under Consideration

8. Review and update air emission inventory for the Upstate.

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Ensure all industrial sources still operating. Review industrial sources for plant closures.
- Identify major sources of NOx
- Map the locations of point sources (10% of point sources cannot be found).
- Map the specific locations and the area sources where coal is burned.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed. This information was included in the December 10, 2003 Early Action Compact Milestone on pages 20 through 37.

Measure under Consideration
9. Support SCDHEC in evaluating and seeking reductions from major sources based on modeling. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Support NOx reduction strategies in the State Implementation Plan.
- Develop an Early Reduction Program with incentives for industrial facility (Tier Two Type emission NOx sources). This was completed and forwarded to SCDHEC on a previous updated progress report. The information allowed DHEC to having more accurate emissions inventory.
- Coordinate with Duke Power to determine what NOx reductions are planned for the Lee Steam Plant.

June 2004:
- The Williams Company has received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors will begin in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the upstate.
- Transcontinental Gas Pipe Line Corporation (Ttransco) Station 140, Moore, SC; Operating Permit 2060-0179. Transco has 14 natural gas fired internal combustion (IC) engines that collectively accounted for 3,822 tons of ozone season NOx emissions during 1997. Transco has submitted a construction permit application to put on NOx controls that will result only 1,261 tons of ozone season NOx emissions. The permit was approved on April 27, 2004.

December 2004:
- The Williams Company received DHEC permits to replace outdated "uncontrolled" compressors on the pipeline located in Duncan. Replacement of the compressors began in late 2004 and continue until late 2005. This will result in a significant NOx reduction for the Upstate.

June 2006:
NOx reduction at the Duke Power Lee Steam Plant
- Coal fired Unit #2 is now operating with the new NOx burners and final manufacture set up for acceptance is to be conducted in June 2006. Monitoring data indicates that the burner should at least meet the 0.23 #NOx/MMBTU's. Unit #2 will operate this entire NOx season with the Low NOx burners.
- Coal fired Unit #1 is currently off line. It will be coming back on line in July 2006 with new NOx burners installed. If the results are similar to Unit #2 Duke Power will also operate this unit the entire NOx season at the 0.23 #NOx/MMBTU's rate or lower. This unit will operate approximately 4-6 weeks and final set up will be conducted.
- Both units will complete final construction permit testing during June, July and August 2006. Duke Power has commitment to install the Low NOx burners on the 2 remaining coal fired units at the Lee Steam Plant. Unit #1 burners were installed April-May 2006 and start-up with Low NOx burners was May 19, 2006. Unit #2 burners were installed March-April 06 and start-up with Low NOx burners was April 15, 2006.

Estimate of Emission Reductions (if available)
- 2,000-4,000 tpy NOx from SIP Call
- Potential 500-1000 tpy NOx (Tier Two)

Implementation Date
Implementation began in 2004 and was completed in 2006.

Measure under Consideration

10. Develop a program to offer to purchase or repair smoking vehicles (known as cash for clunkers). Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Use funds generated from a license plate sales, registration fees, or license plate tax program to buy or repair high emitting vehicles from individuals.
- Purchase such vehicles from non-profit groups such as the Kidney Foundation, Goodwill, and Salvation Army when they have been donated as charitable gifts.
- Consider accelerated vehicle retirement (scrappage) programs to encourage vehicle owners to voluntarily retire their vehicles sooner than they would have otherwise.

2004 and 2005: no local action has taken place on this strategy.

June 2006: staff from the Air Quality Staff Advisory Committee will meet with Goodwill Industries, Salvation Army and Kidney Foundation representatives to discuss alternatives to re-selling clunker vehicles donated to these organizations.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2006. No action taken due to budget constraints.

Measure under Consideration

11. Ban open burning of on-site commercial clearing debris during ozone season (April to October). Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Use SCDHEC model to determine the most effective method to ban open burning.
- Discuss modeling results with all local governments to consider adoption.
- DHEC adopted regulations in mid 2004 restricting open burning.

December 2005:

- At the November 2005 Air Quality Steering Committee meeting, the Committee directed staff to coordinate with local governments to enforce DHEC's burning ban year-round.

June 2006:

- Spartanburg County will notify all fire departments, all municipal and county codes departments, the Spartanburg Home Builders Association and others about the ban.
- DHEC encourages Anderson, Greenville, and Spartanburg to actively notify all residents that the statewide ban is now in force and violations are punishable by law.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed on June 25, 2004 with the passage of regulation SC 61-62.2 "Prohibition of Open Burning" and continuing.

Measure under Consideration
12. Create incentives for the purchase of high efficiency and low emissions vehicles. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Offer tax credits for vehicles with high efficiency gas consumption or low emissions.
- Offer tax credits for low mileage vehicles instead of high mileage vehicles

December 2004:
- Developing draft bill to offer reduced tax incentives for those purchasing low emitting vehicles.

December 2005:
- A bill titled "An act concerning the promotion of alternative use fuel, and hybrid propulsion system for transportation purposes" was submitted to the SC House of Representatives in January 2005. The bill is now in committee. In summary, the bill provides tax Credit for vehicles using alternative fuel or hybrid propulsion vehicles. The credit is allowed against the tax imposed by for the purchase of vehicles licensed in South Carolina which use, or which are converted within 120 days of purchase to use, clean-burning fuel. Specifically the intent of the bill will apply for income tax years beginning on or after January 1, 2004, but prior to January 1, 2013. The tax credit will be allowed for the purchase of an alternative fuel or hybrid propulsion vehicle, and for a motor vehicle that is converted to use alternative fuel, for the replacement of the power source with a power source that uses alternative fuel.

June 2006:
- On June 1, 2006 the Governor signed the H*4312(Rat #0371) General Bill. The ratified title is AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTION 12-6-3377 SO AS TO ALLOW A STATE INCOME TAX CREDIT EQUAL TO TWENTY PERCENT OF CERTAIN NEW HYBRID, FUEL CELL, ALTERNATIVE FUEL, OR LEAN BURN TECHNOLOGY MOTOR VEHICLE CREDITS ALLOWED AGAINST A TAXPAYER'S FEDERAL INCOME TAX LIABILITY.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Implementation began in 2005 and was completed June 1, 2006.

Measure under Consideration
13. Use land-use and transportation planning to improve air quality. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)
- Include air quality measures as a part of the land-use and transportation planning process.

June 2005:
Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include:
- Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants.
- Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development.
- Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended ¼ acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, open character.

December 2005:
- An executive summary of the Intermodal Element addendum of the 2005-2025 Long-Range Transportation Plan is available at http://www.spartanburgcounty.org/govt/depts/pln/spats/docs/excsum.pdf . The Plan includes a Bicycle and Pedestrian Plan as well as an Alternate Mobility Master Plan.

June 2006:
- Spartanburg County has no zoning regulations in its non-incorporated areas, so influencing land use decisions is relatively difficult. However, the city of Spartanburg is actively attempting to increase residential development downtown, which would lead to less incoming traffic during the work week. In addition, the Spartanburg County Planning Commission staff is examining its subdivision regulations for the purpose of facilitating easier cross access between neighboring subdivisions. In addition, developers are beginning to see the interest in neo-traditional development, and some new developments are being built that incorporate several of these features.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005.

Measure under Consideration
14. Implement a program to encourage use of green power. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Capture emissions from landfills to produce green power, e.g., BMW is utilizing Palmetto Landfill emissions to produce energy for its plant.
- No local action has taken place on this strategy Implement a Purchase Green Power program when available. Green power is electricity generated by renewable resources like solar, wind, and even decomposing garbage in selected landfills. These resources are replenished naturally and minimize harm to the environment.

2003:

- BMW Manufacturing Corp. and its partners launched a $12 million methane gas-to-energy project. Methane from the Palmetto Landfill will be used to power four onsite turbines and cogenerate electricity and hot water for the manufacturing plant in Spartanburg.

December 2005:

- In 2005, Blue Ridge Electric Cooperative in Anderson County has begun offering the purchase of "Green Power" to its members. The Green Power is generated by Santee Cooper, who is the source of power for all of the electric cooperatives in South Carolina.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

Measure under Consideration
15. Promote route efficiency for delivery vehicles, trash collection etc. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Encourage business to consolidate distribution and collection routes to improve efficiency and reduce emissions from their fleets.
- Maximize route efficiency for public services such as garbage collection, delivery vehicles, and other vehicle trips to reduce fuel usage.

June 2006:

- Delivery companies currently use GPS mapping programs to map the most cost effective route to save gasoline.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed. No action taken by local government. Private sector fleets already maximizing fleet movement.

Measure under Consideration
16. Establish a clean air partnership with business and industry. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Encourage and coordinate alternate work schedules such as staggered work hours for business, industry and local governments.
- Establish park and ride lots serving perimeter counties along major corridors.
- Make the public aware of the park-and-ride concept: media could assist in publicizing which programs are available.
- Encourage carpooling/vanpooling as an option where employees living in the same area agree to ride to work together rather than to drive their individual vehicles to work.
- Consider parking facility controls that can include employers offering a tax-free transit/vanpool benefits and which limit the amount of parking and encourage carpooling, mass transit, etc.
- Encourage telecommuting.
- Adopt a Bus Program.
- Develop funding to be used for matching grants fund for several EAP Strategies.

June 2004:

- Staffs of Greenville County Planning Commission, Greenville Transit Authority and Greater Greenville Chamber of Commerce have begun joining effort to develop a feasibility study for Park-n-Ride program and/or Ride-Share program for Greenville County. Information will be shared with Anderson and Spartanburg counties.

December 2005:

- In November 2005, the Air Quality Steering Committee directed staff to begin addressing this strategy before the 2006 ozone season.

Estimate of Emission Reductions (if available)
Significant in the area of grants and local non- local tax funds generation.
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2004 and continuing.

Measure under Consideration

17. Establish an active public awareness campaign. Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Develop an editorial board to discuss air quality issues and development of a relationship with media.
- Use alert messages year round, not only during ozone season; Utilize public service announcement, newspapers, weather channels, and other media outlets to notify citizens of high ozone days.
- Utilize TV Channels to issue high ozone alerts using the crawl bar at bottom of TV screens.
- Encourage health organizations to sponsor ozone alerts in media.
- Enhance ozone awareness (Outreach-communication): assign a local agency to develop and implement a program to educate and motivate individuals to take actions to minimize ozone pollution. Includes a focused distribution of educational materials, dissemination of SCDHEC ground-level ozone forecast, increased media alerts to specific audiences, and includes action oriented components (i.e. ridesharing, telecommuting, etc.).
- Develop a campaign to encourage things such as refueling vehicles during evenings, not topping off tanks when refueling, using lawnmowers during evenings instead of during high ozone hours, using of electric lawn mowers.
- Develop a license plate program to generate revenue to implement the public awareness campaign.
- Develop awareness program on tax savings for purchasing high efficiency vehicles.

December 2004:

- Spartanburg County requested an Air Public Service announcement from SCDHEC.

June 2005:

- Berry Shoals Elementary School in Spartanburg County requested educational materials and held special science awards in March 2005.

June 2006:

- Distributed bookmarks to public at Spartanburg County libraries, and disseminated DHEC-supplied material in information kiosk in main Spartanburg County Administration Building.

- Spartanburg County plans to add $30,000 to fund an Air Quality Coordination Effort (AQCE) in the Public Works Department. This proposal supports the County's efforts to cooperatively work with the State DHEC in the conservation and enhancement of air resources in a manner that promotes quality of life. Funding for the AQCE will permit the County to fully participate in particulate matter compliance efforts including the Early Action Ozone Compliance Compact. This project will be supported with fund balance for FY07, and supported as part of the operating budget in future years.

December 2006:

- Spartanburg received a $47,650 grant from the state Department of Health and Environmental Control to promote its recycling program. The campaign will use newspaper, radio, internet, cable television, and outdoor advertising to promote recycling. Promotions will point out that all city residents have to do to participate is call for a free bin.

- The new Spartanburg County Air Quality Committee met on October 26, 2006. Department of Health and Environmental Control employees were present and have since been given a request for 10 actions/activities that are 'reasonable' for Spartanburg to pursue and will clearly demonstrate a meaningful effort to improve air quality.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2004 and ongoing.

Measure under Consideration

18. Promote research in energy efficiency at local universities, industries, energy companies, federal government, and other institutions that improve air quality.
    Priority A

Description of Measure (A more detailed description will be included in the Early Action Plan.)

Establish programs to research energy efficiencies at local universities, e.g., Institute for Energy Studies at Clemson University.

Encourage business and industry to utilize the research from these programs to make the best decision concerning the purchase or upgrade of furnaces and boilers.

June 2004:

- Members of the Air Quality Staff Advisory Committee met with staff from the SC Institute for Energy Studies (SCIES) from Clemson University in late summer 2003. As a result, researchers from SCIES made a presentation to the Committee on November 18, 2003. The South Carolina Institute for Energy Studies (SCIES) based at Clemson University is a state-chartered research and development organization established in 1981. Its objectives are to promote energy research and development in and for the state; to transfer energy technology developed by others to South Carolina applications; to contribute to national energy issues in areas of excellence; and to promote statewide energy-education activities. (Source: http://www.clemson.edu/scies/AboutSCIES.htm). Researchers from SCIES became members of the Air Quality Staff Advisory Committee mailing list to transfer knowledge and latest undertakings on these efforts.

December 2005:

- Alternative flues: Clemson University chemical engineering professor Mark C. Thies has received an $856,000 award from the Department of Energy (DOE) to develop more efficient processes for the centralized production of hydrogen by splitting water. The award was one of only three made nationwide under DOE's Nuclear Hydrogen initiative. In addition to Thies, the project team includes fellow Clemson David Bruce, John O'Connell from the University of Virginia and Max Gorensek from Savannah River National Lab. The Clemson team will interact not only with U. S. engineers and scientists but also with those in France, Italy, and Japan, all of whom have teams working on related processes.

- Clemson University is developing the International Center for Automotive Research (Clemson-ICAR) in Greenville, SC. The ICAR project will be the premier automotive and motorsports research and educational center in SC. Research will emphasize development of innovative materials and processing technologies, which will enable the development of more efficient, and environment friendly vehicles, as well as electrical power generators.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005.

Measure under Consideration
19. Use of alternate fuels. Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Direct local Planning Commissions to identify areas where alternative fuels will be best suited.
- Encourage the use of alternate fuels.
- Assist with establishing alternative fuel infrastructure for private sector clean fuel fleets. Fuels other than gasoline and diesel that are used to power on-road vehicles. Examples of alternate fuels include bio-diesel, electricity, ethanol, hydrogen, liquefied petroleum gas, methanol, and natural gas.
- Encourage a clean-fuel fleet program for centrally fueled fleets of more than 10 vehicles.

December 2005:

- Alternate Fuel: Clemson University Professor James G. Goodwin, Jr., chair of the Clemson's chemical and bimolecular engineering department, has also received a DOE grant for energy research through DOE's State Technologies Advancement Collaborative.

- Goodwin's work focuses on the performance of iron-based bimetallic catalysts that are crucial to synthesis of clean fuels, additives and lubricants derived from coal and biomass gasification.

- Clemson will lead a partnership that includes Louisiana State University, the S.C. State Energy Office, the Louisiana State Energy Office, North Carolina's Research Triangle Institute, Rentech and Sud-Chemie Inc. This grant reflects $875,499 in DOE-STAC funds and $294,499 in cost sharing by the industrial and governmental participants.

June 2006:

- Spartanburg County will begin purchasing alternative fuel vehicles for its fleet as older vehicles are replaced.
- There are currently 10 stations that offer Ethanol 85% and 6 stations that offer biodiesel within 25 miles of downtown Spartanburg. Stations can be located using the U.S. Department of Energy Alternative Fuels Data Center Website at http://www.eere.energy.gov/afdc/infrastructure/locator.html

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005 and continuing.

Measure under Consideration
20. Evaluate the use of High Occupancy Vehicle (HOV) lanes using existing lanes. Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)
- Evaluate use of HOV on three (3) lane interstate highways.
- Show the advantages of designating HOVs.
- Pass laws establishing regulations on HOVs lanes such as the threshold in the number of passengers (perhaps two) in the vehicle using HOVs lanes and time of day for the lane to be designated as HOV (rush hour).
- Pass laws authorizing issuance of tickets for violations of HOVs lanes regulations, i.e., one-passenger vehicles using HOV lanes on designated hours.

December 2003:
- During its August 5, 2003, the AQ Staff Advisory Committee discussed and evaluated the implementation of this strategy. The Committee concluded that "HOV lanes work best where an interstate or a limited access arterial lead directly to major employment centers, usually within a central business district (CBD). With the exception of I-385 leading to the Greenville CBD, Upstate interstates (especially I-85) generally link the cities of Anderson, Greenville, and Spartanburg via peripheral routes, not conducive to the addition of HOV lanes. In addition, inter-county work trends do not show major volumes that would support car-pooled trips. Making the third lane of I-85 an HOV lane would severely increase congestion, emissions, and future accidents. The addition of new lanes would be cost prohibitive, and would not be allowed to revert to a single occupancy vehicle (SOV) status without reimbursement to the federal government."

December 2004:
- In June 2004, Planning Commission staff met with traffic engineers from SCDOT to discuss this strategy. Traffic engineers indicated that because traffic volumes on I-85 exceed 100,000 vehicles daily on the three lanes of the interstate, it was recommended that the Upstate consider converting one of the three lanes on I-85 or I-385 to a HOV lane. The offsetting increase in congestion in the two remaining lanes would predictably increase NOx emissions by an amount exceeding the any reductions gained from traffic moving in the HOV lane. HOV lanes work best when they are paralleled by at least 4 or more free flow lanes. No further actions are planned.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2004.

Measure under Consideration
21. Modify speed limits for optimum fuel efficiency. Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Direct SCDHEC and SCDOT to take the lead role.
- Direct Planning Commissions to assist SCDHEC in modeling.
- Speed limits on the interstate highways in Spartanburg County have been established at 60 mph because the county is defined as urban by the US Census and the FHWA.

December 2005:

- The SPATS MPO was designated as urban by the US Census following the 2000 census and as a result speed limits on the interstate highways in Spartanburg have been established at 60 mph. According to the Department of Energy, gas mileage decreases rapidly at speeds above 60 mph.

Estimate of Emission Reductions (if available)
Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date
Completed in 2005.

Measure under Consideration

22. Develop process for evaluating and minimizing impact of major projects such as shopping centers, schools, and subdivisions.
    Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Study impact of post construction traffic flow.
- Study impact of construction activities.

June 2006:
Traffic impacts are monitored, both during and post construction, but process is not formalized.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2005 and continuing.

Measure under Consideration

23. Community Schools to reduce vehicle miles traveled and encourage biking and walking for students and parents by encouraging smaller community-based schools that are integrated into neighborhoods. Priority B

Description of Measure (A more detailed description will be included in the Early Action Plan.)

- Eliminate minimum acreage requirements for school sites.
- Cap student populations per facilities.
- Require coordination among school boards and local governments to plan school sites and avoid conflicts with local planning goals.
- Favor restoration and construction of community-based small schools over new construction of remote mega schools.

June 2006:

- The South Carolina School District Reorganization and Realignment Act of 2006 was introduced in the House on January 24, 2006 and is currently residing in the House Committee on Education and Public works. This bill states that the Education and Oversight Committee shall study and examine the optimum size, including both geographic area and student population. A copy of this bill is available online at http://www.scstatehouse.net/sess116_2005-2006/bills/4488.htm
- Spartanburg County is awaiting the committee's recommendations and the manner in which they may take effect if this bill is enacted.

Estimate of Emission Reductions (if available)

Not available. No reduction credits were taken for this measure in the South Carolina Early Action Compact SIP.

Implementation Date

Completed in 2006 and continuing.

Additional Information

- SECTION 203 SCHOOL SITES
  203.1 South Carolina Code Ann. § 59-23-250 (to be codified at Supp. 2003) eliminates minimum acreage requirements for public school sites. However, school districts must receive approval from the South Carolina Department of Education prior to property acquisition or additions on existing properties.
  203.2 The State Department of Education encourages districts to consider acreage for school sites as established by the Council of Educational Facility Planners International (CEFPI).

Enclosure 4

December 2006 Progress Report Document
Statewide EAC Activities

D H E C

PROMOTE PROTECT PROSPER

Enclosure 4
South Carolina's 8-hour Ozone Early Action Compact
Statewide EAC Activities
December 2006

A Notice of Drafting (NOD) was published in the South Carolina *State Register* on August 23, 2002, expressing our desire to pursue an early action plan that provides for ambient air in South Carolina that meets the more restrictive federal standard prior to the deadline(s). The NOD requested those interested in participating in an early action plan for ground-level ozone provide that interest in writing to the Department. Due to the timing of events and the requirements of the State's Administrative Procedures Act, a second drafting notice was published in the *State Register* on April 25, 2003, the purpose of which was to extend the comment period.

The South Carolina Department of Health and Environmental Control (Department) established a large stakeholder group consisting of federal, state and local government officials, environmental groups, citizens groups, business, industry and private citizens. On August 26, 2002, correspondence was issued to the stakeholders seeking active participation in the development of an Early Action Plan (EAP) regarding ground level ozone reduction in South Carolina and providing a list of informational forums scheduled throughout the state. Surveys were a part of the informational forum and included an opportunity for attendees to request active participation in the EAP process. Copies of sign-in sheets, meeting agendas, and survey forms were included as Attachment 4 of the June 2003 Progress Report.

Local stakeholder participation was obtained through the involvement of the county administrators and/or county councils. On November 12, 2002, the South Carolina Association of Counties issued correspondence to each county council chairman and county chief administrative officer stating support of each county's participation in South Carolina's 8-hour Ozone Early Action Compact (EAC). Also on November 12, 2002, DHEC issued correspondence to county administrators seeking active stakeholders for participating in the EAC. This correspondence included a working draft copy of the EAC. As a result, Department staff participated in numerous county council meetings and other discussions (telephone and electronic mail) with county officials seeking local participation in the EAP process. On December 12, 2002, Department staff presented at the yearly meeting of county administrators sponsored by the South Carolina Association of Counties. At the request of several counties and the Association of Counties, the Department again issued correspondence to the county's seeking participation.

On December 20, 2002, the Department submitted to EPA the Early Action Compacts received as of that date, signed by the respective local participant and DHEC representative, R. Lewis Shaw, Deputy Commissioner for Environmental Quality Control. On December 27, 2002 and again on December 31, 2002, DHEC submitted additional compacts received from local participants. As of December 31, 2002, forty-

five of the forty-six counties in South Carolina elected to become active stakeholders in the South Carolina Early Action process.

One condition set by EPA Region 4 for York, Chester, and Lancaster counties participation in the EAC, requires South Carolina continue to actively participate in the Charlotte Region Integrated Air Quality Management Pilot Project. This project has since been renamed "Sustainable Environment for Quality of Life" (SEQL). In addition to the milestones established in the Early Action Compact, South Carolina and North Carolina were required to develop a specific memorandum of understanding (MOU) detailing how this requirement will be met. On March 14, 2003, Mr. R. Lewis Shaw, Deputy Commissioner for Environmental Quality Control at the Department and Mr. William G. Ross, Jr., Secretary for the North Carolina Department of Environmental and Natural Resources signed the MOU, included as Attachment 8 of the June 2003 Progress Report.

The Department continues to be an active partner in the SEQL project. As a part of the SEQL project, the Catawba Council of Government (COG) partnered with the Department and other stakeholder groups to compile sample ordinance language, policies, best management practices (BMPs) and program guidance for the development and implementation of SEQL action items geared to the local governments within the SEQL project area. This information should prove helpful to local governments in their 8-hour ozone early action efforts. In December 2004, a CD with these documents was provided to all participating areas. The information is also available on the Department's website.

South Carolina was not required to enter into a formal agreement with the state of Georgia in regards to emission reduction strategies for the Upper and Lower Savannah areas. However, representatives from the state of Georgia attended the Lower Savannah Council of Government meeting held on February 6, 2003. Representatives from EPA also attended this meeting. In addition, Department staff attended a meeting held on February 21, 2003, in Augusta, Georgia, with local and state government officials from Georgia and South Carolina and EPA to discuss the impact of the early action process and emission reduction strategies for that area.

Recently, South Carolina has joined forces with the State of Georgia to address air quality issues in the Augusta-Aiken-Edgefield area. While the area is attaining the 8-hour ozone standard there is much concern over the fine particulate matter standard. A stakeholder group consisting of representatives from the Georgia and South Carolina state environmental agencies as well as the Environmental Protection Agency Region 4 office, local government, industry and concerned citizens is being formed. The focus of this stakeholder group will be emission reduction efforts to address air quality. These efforts should help the area maintain the ozone attainment status as well as address fine particulate matter concerns.

The Department held a public meeting on the Early Action SIP submittal on August 18, 2004. The meeting was held in Columbia and broadcast around the state at local

Department Environmental Quality Control offices to allow participation from all over the state. The Draft Early Action SIP was published in the *State Register* on October 22, 2004, and the public hearing was held on November 22, 2004. As deemed appropriate, based on comments presented during the public comment period, the Department finalized the Early Action SIP and submitted it to EPA on December 29, 2004. A complete copy of the submittal may be found at http://www.scdhec.gov/eqc/baq/html/eap_sip.html.

The modeling analysis completed as a part of the EAC SIP submittal demonstrates that all monitors in South Carolina will be attaining the 8-hour standard without the inclusion of measures beyond the national and regional programs already finalized. The Protocol for Early Action Compacts endorsed by EPA states that "after all Federal and State controls that have been or will be implemented by December 31, 2007, are accounted for in the modeling, the local area will identify additional local controls, as necessary, to demonstrate attainment of the 8-hour ozone standard on or before December 31, 2007." While the early action process was developed to provide local areas the option to attain the 8-hour ozone standard by December 31, 2007, and obtain cleaner air sooner than federally mandated by implementing emission reduction strategies that make sense for their respective area, South Carolina also realized that statewide emission reduction efforts would be necessary to achieve and maintain the 8-hour ozone standard.

Among the key control strategies that were developed as part of the EAC process, were revisions to state wide regulations for the purpose of providing additional reductions in ozone precursors. R.61-62.5 Standard 5.2, Control of Oxides of Nitrogen, and R.61-62.2, Prohibition of Open Burning, were published in the South Carolina *State Register* on June 25, 2004, and became effective upon publication. For more information on these regulations refer to Number 4 – Regulatory Initiatives of the State Activities enclosure.

While information pertaining to the amount of NO_x and VOC reductions that are expected as a result of these regulations is available, it is important to note that modeling indicates that all monitors will be attaining the 8-hour standard by 2007 even without these additional measures. However, the reductions from these regulations are quantifiable, permanent and will ensure that South Carolina obtains cleaner air sooner and helps ensure continued maintenance of the 8-hour ozone standard in the future.

Another significant control strategy that was developed through this process is the voluntary commitments that the Department has negotiated with several of the state's largest existing industrial sources to reduce and/or limit their NO_x emissions. These negotiations were the direct result of the EAC process as are the NO_x reductions that will result from them. These voluntary commitments are described in more detail in Number 8 – Other Point Source Reductions of the State Activities enclosure.

The Department believes that the sum of all these efforts will have a very real and positive impact on the health and environment of South Carolina. The EAC process has allowed the state of South Carolina to achieve reductions in ozone precursors from a variety of sources that otherwise would not have occurred and this was all done on a

timeframe that was sooner than what would be required through the traditional nonattainment designation process. In addition, as a result of the local EAC plans and local efforts, awareness of air quality issues has been raised to a level that would not have been possible without the EAC process. People from around the state, who have never previously had any significant exposure to air quality issues, have participated in the EAC process and helped make decisions about improving air quality. This is perhaps, above all else, the reason why the South Carolina Wildlife Federation chose to honor the "SCDHEC Early Action Compact SIP" with their 2005 South Carolina Wildlife Federation Air Conservation Award, an award that has only been bestowed six times since 1970 (see Appendix 15 of the SC EAC SIP).

Beginning with June 2003 to present, this report represents the eighth bi-annual progress report. In addition, local plans identified the emission reduction measures under consideration by the participating county. The South Carolina EAC SIP was submitted December 2004 and supplemental information to the EAC SIP was submitted on April 20, 2005. Each of these submittals contains information updating local and state measures supporting the EAC process and can be found on the Department's website (http://www.scdhec.gov/eqc/baq/html/eap.html).

This document includes highlights of activities in the deferred nonattainment areas as well as statewide activities.

2006 Early Action Compact Summit - Participation in the recent 2006 Early Action Compact (EAC) Summit held in Columbia, South Carolina on August 16-17, 2006 was tremendous. As the first of its kind, it attracted nearly 300 stakeholders from 5 different states including representatives from 24 counties and 7 Councils of Government. Participants included representatives from federal, state and local governments as well as industry representatives, environmental organizations as well as private citizens.

Topics covered included energy conservation, diesel retrofits, land use planning, alternative fuels, commuting options and multi-modal transportation, innovative education and outreach, health impacts/lifestyle and finding the funding. Key speakers included Bill Wehrum, Acting Assistant Administrator for Air & Radiation, U.S. Environmental Protection Agency, and Mark MacLeod, the Director for Special Projects in Environmental Defense's Climate and Air program working out of the Washington DC office. As has been our experience with the EAC process over the past years, direct involvement by stakeholders is a critical key to overall success with initiatives for improving air quality. The EAC Summit initiative certainly proved this point again. The exchange of ideas, information and interest experienced during the sessions and other opportunities, including breaks and meals was very beneficial.

These benefits will help us all to reach our objective of attainment for the 8 hour ground-level ozone standard in the near future and reinforces a process for addressing other air quality issues. Our over-arching goal of "Cleaner Air Forever" for South Carolina will be achieved through the cooperation and collaboration of the very individuals and organizations that were represented at the EAC Summit.

To expand our outreach to those who did not make it to the EAC Summit we have created a website where electronic copies of the EAC Summit materials can be downloaded. Information on this site includes speaker bios, presentations, additional information, Department staff, registered attendee contact information, list of vendors and contact information, a list of sponsors and event photos.

Emission Reduction Strategies – As a result of the EAC process and the desire to ensure air quality in South Carolina meets the federal standards, the Department has expanded outreach activities to include both ozone and $PM_{2.5}$. The current focus is to maintain the 8-hour ozone standard through the 2007 Ozone Season, thereby returning the deferred nonattainment areas to attainment and to develop strategies to help reduce emissions that contribute to $PM_{2.5}$ levels. Local governments are being asked to be proactive (stay ahead of the standards); strengthen local measures; and, take action ("Kick things up a Notch"). Myra Reece, Renee Shealy, and John Litton, BAQ Bureau Chief and Assistant Bureau Chiefs, have met with Anderson, Greenville, Spartanburg, Richland and Lexington Counties over the last several months. As a result, work in progress is being recognized. Effort is being made to work with the EAC contacts in all counties to ensure that all activities are being captured for inclusion in future EAC progress reports.

Climate Change Discussions – The BAQ has been engaged in climate change discussions with air agencies in other southeastern states including North Carolina, South Carolina, Georgia, Tennessee and, more recently, Virginia since early 2006. Discussions between the states focus on climate change activities in the respective states, particularly North Carolina's Legislative Commission and Advisory Committee processes. BAQ has distributed some internal outreach with regard to climate change and is incorporating climate change into outreach materials and presentations.

Ground-level Ozone Awareness Week – The Governor of South Carolina declared May 1-7, 2006 as Ground-level Ozone Awareness Week. This is the 7th consecutive year this declaration has occurred.

Commuting Options – New Take a Break from the Exhaust participants for the 2006 Ground-level Ozone Season include:
The County of Lexington
Central Midlands Council of Governments
Winthrop University
York Technical College
Bowater – York County
Citi Group – York County
Springs Industries – York County.

In 2006 the goal for the Department's Bureau of Air Quality (BAQ) was to reduce over 125,000 miles. The BAQ exceeded the goal by almost 25,000 miles. The reductions

from the 2006 TABFTE program for participants within the State of South Carolina were:

Miles Reduced:	289,889 miles
VOC's Reduced:	1,076 pounds
NO_x Reduced:	684 pounds

Legislation - Members of the Upstate EAC counties (Anderson, Greenville, and Spartanburg) in coordination with the Palmetto State Clean Fuels Coalition and the South Carolina Chapter of the Sierra Club, supported statewide legislation that will provide tax incentives for purchase of alternative fuel and hybrid-propulsion vehicles and help reduce costs and provide tax credits for production and infrastructure for alternative fuels. On June 1, 2006, Governor Sanford signed an act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle credits allowed against a taxpayer's federal income tax liability.

Outreach Efforts – During the first 6 months of 2006, information was sent to the EAC contacts including:

- Governor's Proclamation and the Departments news release for Ozone Awareness Week
- Information on national bike month and related activities
- Information of Car Care Awareness Month and related activities
- Information for National Air Quality Awareness Week (May 15 – 19, 2006)
- Earth Day 2006
- EnviroFlash
- 2006 Ground Level Ozone Season (April 1 – October 31)
- Ozone Action Tool – survey to assess and promote measures that reduce ozone.

Information during the last 6 months of 2006 provided to the EAC contacts included:

- Information and news release on the 2006 SC EAC Summit held in Columbia, August 16 and 17, 2006
- Information and press release on open burning alternatives
- Information on an Emissions Reduction Campaign
- Information on the Energy Star Change a Light, Change the World Campaign 2006
- Climate Change 101: Understanding and Responding to Global Climate Change
- Information on the free showing of Kilowatt Ours: A Plan to Re-Energize America – shown in Clemson, Columbia, Florence and Charleston in September 2006
- Information on grant opportunities to include an EPA grant workshop that will be held in January 2007 in Greenville, Columbia and Augusta.

Outreach Efforts - Car Care Awareness Month (April 2006) – In recognition of Car Care Awareness Month, the Department and Richland and Lexington counties organized a vehicle maintenance check event in April. The State Museum, Ben Satcher Ford and Pope Davis Tires helped sponsor this free event on April 1, from 10 a.m. until 2 p.m. at the State Museum on Gervais Street. A team of certified technicians made suggestions for improving vehicle safety and gas mileage. The technicians also performed vehicle checks and raised citizens' awareness about how proper maintenance of a vehicle can help to reduce air pollution and protect the public's health.

Mass Transit - The Central Midlands Council of Governments (CMCOG) is taking on a planning study for commuter rail transit services in the Central Midlands region. It will examine three potential commuter lines from Batesburg-Leesville, Camden and Newberry into downtown Columbia. The CMCOG region being studied includes the counties of Richland, Lexington, Newberry and Fairfield. Three public meetings were held during the first 6 months of 2006, to present preliminary planning and receive public feedback. Feedback was also accepted by mail fax, website and email.

School Busses – In the spring of 2006, the S.C. Department of Education announced a $500,000 Clean School Bus USA grant to help reduce school bus pollution. The state plans to replace a dozen 22 year old school buses, upgrade 132 other buses and convert 1,220 buses to B-20 fuel. Idle reduction devices will be installed on 200 buses.

In 2006, the S.C. Department of Education contracted to purchase 630 - 2006 model buses and 82 - 2007 model buses to replace 25 percent of the 1989 and older buses in the fleet. The Department of Education also ordered two - 2007 model plug-in diesel-electric hybrid buses that will be delivered in April 2007. The Department of Education has agreed to work with the Department to assign these new buses to routes in areas of the state where they will have the most benefit to air quality.

Through funding from a Supplemental Environmental Project, the Department of Education awarded a contract in 2006 for diesel particulate filters to be installed on approximately 100 school buses.

Southeast Diesel Collaborative – The Southeast Diesel Collaborative (SEDC) is a new partnership between US EPA Region 4, State and local air quality programs, and other public and private entities and is intended to promote opportunities to reduce diesel emissions. The collaborative is modeled after other regional diesel collaboratives, which have proven beneficial for addressing a significant source of mobile source air pollution. On April 26, 2006, a Memorandum of Understanding (MOU) in support of the Southeast Diesel Collaborative was signed by Mr. William G. Gallardi, Assistant Bureau Chief, BAQ.

Throughout 2006, the Southeast Diesel Collaborative continued to create partnerships and disseminate information for reductions of diesel emissions. The SEDC held a South Carolina stakeholders meeting in August 2006 in Columbia. A SEDC emerging fuels conference was held in Atlanta in December 2006. Through the SEDC the Department

has been contacted by equipment vendors to exchange ideas on increasing sales for diesel retrofit devices. The Department is made aware of the products offered and the manufacturers gain insight into what areas of the state the equipment will have the most benefit to air quality.

Community Outreach - The State of South Carolina agreed to conduct the project and submitted a request for funding which was included in their Performance Partnership Grant (PPG). Region 4 approved their request and awarded the funds ($142,500) in the PPG for the community activities in Greenville. South Carolina has conducted four community meetings (10/27/05, 11/14/05, 12/05/05, and 01/09/06) to establish and start the Greenville project. The next meeting is scheduled for February 13, 2006. There are five communities or neighborhoods involved in the meetings and project (Greater Sullivan Community Neighborhood Association, Sterling Neighborhood Association, West End Neighborhood Association, Haynie-Sirrine Neighborhood Association, and the Green Avenue Area Civic Association). The participants have selected a name for themselves – "Breathing for Life Community Coalition (BfLCC)." There is a good exchange of information and interaction between the participants at the meetings. This is due in large part to the organizational and community relationship skills of the State's staff and the active participation of the residents, community liaisons and pastors in the communities. State staff participating are from Greenville's environmental quality control and health department offices, the Bureau of Air Quality (BAQ) and EQC Administration.

While there is a wide range of possible projects which would include reducing toxic pollutants (e.g., diesel retrofits, indoor air quality projects), household hazardous waste reduction projects, anti-idling campaigns, integrated pest management programs, and or other projects from which the community can select, they have elected to start by having an essay, logo and drawing competition with the children in the five neighborhoods. The subject of the competition is "Breathing for Life – Your Health and the Environment." In addition to this project, the community would like to hold an "educational forum" (date to be announced). The forum will highlight winners of the environmental essay, logo and drawing contest. It was suggested that a Region 4 representative, possibly Beverly Banister, be present at the forum. She is a champion of the project would be an inspiration to the children who would be participating. The long term purpose of BfLCC is to find funding to implement the selected projects and to establish a permanent, ongoing effort to continue reductions of toxics risks to the community.

The Air Toxics Assessment and Implementation Section of the BAQ is overseeing the performance under the PPG related to the effort for the Greenville Project. When BfLCC determines that they want or need the Region to actively participate, the Section will provide information, technical support, training, and risk analysis as requested. In addition, EPA Region 4 as a primary author of the "How To" manual that walk communities step by step through performing an environmental project, has provide information on the availability of this document so that it can be used when it is determined that the concepts and processes should be applied in this project.

Additional meetings that have been held are February 13, February 27, March 13, March 27, April 24 and May 22 and June 19, 2006. Extra meetings were held in February and March 2006 to plan for the education forum.

An educational forum was held on April 8, 2006. Winners of the essay and drawing contests were announced and presented their prizes. A logo is being developed for the Coalition as a result of the logo drawing contest. In addition, education was provided on asthma, weatherization and air pollution. Guest speakers were Carol Kemker from EPA and Miss Crystal Garrett, Miss Lexington, SC, who gave her testimony on how she has managed living with asthma. A community member gave the history of the BfLCC. A feedback questionnaire was used for evaluation of the event. Comments were very positive and the community would like to have more informative events like this.

Future projects that are being planned are a household hazardous waste collection day in conjunction with a gas can exchange and providing EPA-certified woodstoves in homes that are using old woodstoves. Preliminary discussions have taken place with a school official about implementing school bus anti-idling programs in Greenville schools. Other partners that are helping with these projects are Greenville City and County officials.

Additional BfLCC meetings were held on July 31, August 28 and September 25, 2006. Knowing this project funding would end on September 30, 2006, discussion began at the June meeting on sustainability of the "Breathing for Life Community Coalition." BfLCC members agreed to remain organized and continue working as a group on other projects. Sustainability discussion continued at the July meeting where members discussed concerns they have about their community and what is good about their community. They also discussed what they see as "accomplishments" since the beginning of the project and what would they like to see accomplished. This discussion continued at the August and September meetings. The local health and environmental offices will continue to facilitate meetings and/or discussion as requested by the BfLCC. The BAQ will continue to provide assistance as needed.

With the goal of reducing air toxics, the BAQ entered into a contract with the City of Greenville to assist with air toxic reduction projects. The following projects were completed:

- August 12, 2006, a Household and Hazardous Waste (HHW) Collection day and gas can exchange were held. The Solid Waste Division and Recycling Coordinator for the City of Greenville were instrumental in organizing this event. This was the first HHW Collection day for the City of Greenville and it was possible through this EPA funding. Ray Gregory from Region 4 EPA attended the event. It was very successful with the following results:
    - 250 cars came and dropped off items;
    - Approximately 5,000-6,000 cans containing gasoline, paint, household cleaners, pesticides, etc. were collected. Other items collected were batteries, used tires, propane cylinders, and a container of mercury;
    - 200 environmentally-free gas cans were distributed; and,
    - Residents appreciated the effort and hope to have another event.

- City of Greenville staff met with the five neighborhood association presidents to identify homes in their neighborhood that needed their heating source repaired or replaced to a more efficient and less polluting one. Criteria used in identifying the homes were those using wood or coal, low-income elderly and disabled, and those who have medical conditions that warrant a different heating system. As a result, 20 homes were selected to have their heating source repaired or changed out. The City of Greenville contracted with local companies to assist with the work. These homes were also weatherized with storm windows, insulation and weather stripping and smoke and carbon monoxide detectors were installed. The following list provides details of the heating source repairs and/or change outs:
    - Two homes were heating with wood and had EPA-approved gas packs installed.
    - Two homes heating with kerosene because the gas furnace was broken had EPA-approved heat pumps installed.
    - One home was heating with kerosene because the oil furnace was broken and had a new EPA-approved oil furnace installed.
    - Two homes were heating with a small inefficient gas heater and had EPA-approved Rinnai vented heaters installed.
    - One home was using several kerosene heaters and had a Rinnai vented heater installed.
    - Two homes were heating with kerosene because their gas pack was broken and new gas packs were installed.
    - Five homes were using a gas or oil unit that needed servicing and all were serviced to be more efficient.
    - Two homes with old gas furnaces that ran a lot and did not heat well had new gas furnaces installed.
    - One home with an old gas unit that was not efficient had a new gas heater installed.
    - One home had an old woodstove that was changed out to an EPA-certified woodstove.
    - One home using a gas pack that did not work well and could not be repaired had a new gas pack installed.

- 115 self-venting kerosene cans were ordered and distributed in the five neighborhoods to homes still using kerosene for heat.

In addition to the PPG funding for this community outreach project, Greenville County government applied for a grant and was awarded funding to pilot an anti-idling program in a local school as well as other outreach programs on improving air quality.

Department Activities – The Department continues to leading by example:

a. BAQ staff for the past few years has adopted a strip of lawn in front of the Sims/Aycock Department Headquarters building and use an electric mower for cutting. Working in coordination with the facilities maintenance staff from the State Budget and Control Board, cutting this area with a gas-powered mower is discontinued during the ground-level ozone forecast season. A fact sheet has

been made and often distributed to customers who inquire about our activity. In addition a sign is placed in the area to convey the message of this lawn area being adopted by staff using an electric lawn mower.

b. BAQ staff worked with the EAC contacts from Lexington County to create a sign that has been placed in front of the main Department Headquarters building to advertise the ground-level ozone forecast. Motorists traveling the busy corridor of Bull Street to I-277 are able to view the forecast sign each week day.

c. Inter-bureau workgroup on open burning. Staff from the Department's Bureau of Land and Waste Management and Bureau of Air is collaborating on the development of training tools for staff to improve consistency in dealing with open burning issues around the state. This includes interpretation of the current Agency regulations for both bureaus, messages regarding alternatives to open burning and communication/coordination with other agencies that may have some involvement with open burning (e.g., SC Forestry Commission, Fire Marshalls, etc.). Also, another objective of this workgroup is the development of an awareness campaign to convey messages regarding open burning regulations and alternatives for disposal (e.g., recycling, composting, etc.). These messages will be tailored to specific audiences based on waste streams. The Bureau Chiefs for the BLWM and BAQ have been presented this outline and are going to help identify resources for implementing these objectives. Additional information may be found in Number 4 – Regulatory Initiatives of the State Activities enclosure.

d. Project Discovery - Working with the state Public Education Television (ETV) agency, staff from all EQC bureaus, including the BAQ worked to develop an information segment on various aspects of the environment. BAQ staff, along with region staff developed a script and message related to alternatives to open burning. This series of messages aired on May 5, 2006 and was broadcast to students in schools statewide over the ETV channel. Here is a part of the message communicated regarding this show:

Project Discovery - A special program to highlight how students can help take better care of our environment will be our May 2006 edition of Project Discovery. Presented from Hilton Head Island as part of the ETV Road Show, Project Discovery host Tabitha Lewis and co-host, Paula Randler of SC DHEC leads students on a behind-the-scenes view of the waste water treatment plant located there to see just how this important life-sustaining resource is cleaned and returned to the environment. In addition, students will learn about the importance of keeping a healthy coastline. Picking up after a day at the beach is more than just a beautification issue and something everyone can do to help. We'll also learn about the importance of recycling and how we can take better care of our air by not burning trash. And, a trip to the landfill is also on tap to see where all that stuff we cannot recycle actually ends up.

Presented in cooperation with the Department, this program is designed for grades 1-8 and our toll-free phone line (1.800.763.ETV1) will be open for calls from students during the program. Join Project Discovery for the last program for this school year and be more prepared to enjoy clean water and air this summer as we

pay more attention to how we impact our world around us and how we can help keep it clean for all to enjoy and appreciate both today and in the future. Please alert your teachers to this special program and plan to tape it for your school.

e. Emissions Reduction Campaign for 2007 - To further encourage the development and promotion of local initiatives, BAQ Outreach staff began researching the possibility of implementing a combined media and community outreach campaign focused on ground-level ozone in May 2006. The objectives were to engage local government in the priority areas (Anderson, Spartanburg, Greenville, Aiken, Richland, Lexington and York Counties) to develop local air quality initiatives with a significant potential to reduce ground-level ozone; to assist the efforts of local government entities who already have such plans in place; to promote ozone awareness and/or related events through television and radio announcements; and to encourage the public, through outreach events as well as media promotions, to voluntarily reduce vehicle emissions throughout the ozone season beginning in 2007.

   Prior to the EAC Summit in August 2006, all the South Carolina COG contacts received a message informing them of the campaign and encouraging them, as well as their county and municipal governments, to participate. Activities which followed the EAC Summit included a conference call to discuss strategies and activities and follow-up discussions, via telephone and email, to those who were unable to participate. A sample radio script about proper vehicle maintenance, which the Department would produce internally at little or no cost, was also sent out for feedback from stakeholders interested in holding a car care event.

   More recently, a Clean Air Initiative has gone into effect at the BAQ level which entails fostering relationships with local governments and working proactively with all regions of the state to improve air quality and to prevent significant deterioration. BAQ staff members have been assigned to specific COG areas for this purpose. As this initiative has gained momentum and staff members are becoming more closely involved with their assigned areas, re-evaluation of the campaign has shown that the Clean Air Initiative has the potential to accomplish virtually all of the same goals as the campaign. As such, the campaign planning is being suspended until further developments under the Clean Air Initiative demonstrate potential for the campaign to enhance the statewide effort now underway.

Press Coverage – Recent coverage includes:

- On March 25, 2005, WIS-TV in Columbia aired a feature story highlighting alternative fueled vehicles. The story specifically covered the actions that the Department and local government were taking to utilize alternative fuels.
- On Friday, April 15, 2005, The State newspaper wrote a story on one TABFTE partner and his decision to give up his car for a bike and public transportation. This generated interest in more bike and pedestrian paths and public transportation in the Columbia area.

Additional listings of press releases may be found in Number 1 – Outreach and Education of the State Activities enclosure.

1. Outreach and Education

Public involvement through education and outreach plays a major part in the success of an early action program whether it is a statewide program or a local program. The Air Education and Outreach Section is responsible for increasing awareness, educating, and encouraging behaviors for improving air quality among various segments of the population in South Carolina. As a result of the early action process, several fact sheets were updated and new fact sheets created. This information is available by contacting the office and is also available on the Department website (www.scdhec.net/baq/eap.html). This information has been provided to local areas to assist in the local education and outreach efforts.

School aged youth have been targeted with programs such as the following:

- Ozone Action Class – An interactive program focusing on how to reduce ground-level ozone forming air pollution through the outreach efforts of local schools; and,
- B2 @ School (Breathe Better Air at School)- a project designed to involve students, their parents, teachers and administrators in assessing idling activity on school grounds, and determining mechanisms for reducing idling by vehicles and/or school buses. Mechanisms include awareness activities, policy support/development and tools such as no-idling signs.

Resource materials in place or that have been developed for public outreach, include the following:

"Driving Smarter for Tomorrow" brochure
"Ozone Action Class" brochure
"Care About Air" coloring book
"Spare the Air" bookmark
"Share the Road: Getting around in South Carolina" brochure (08/06)
"Clean the Air*Save Gas: Turn the Key Be Idle Free!" poster (10/06)

The "GreenScene Magazine" published by the Department's EQC Outreach Committee, provides a one-stop shop of the environmental education programs offered by the Department. The first issue published in the fall of 2002, contained an article entitled "Ozone is Not Just Another Season." This committee is responsible for numerous projects that promote environmental education, both internal and external to the Department. One of the projects is a series of monthly environmental e-mails sent to all Department staff. The May 2003 message was "Clean Air Month" and informed staff that Governor Sanford proclaimed May 1-7 as **Ozone Awareness Week**. A copy of the magazine, the message, and the proclamation were included in a previous progress report. Other activities include Earth Today Broadcast, Earth Camp, and, Kids Day events.

New graphics were introduced on the BAQ's web site May 1, 2003. The existing ozone forecast web page was revised to reflect all four forecasted regions in South Carolina and color coded to align with EPA's Air Quality Index. The new graphics makes the Air Quality Index easier to read and understand by the public who use this web site.

Website - One of the first outreach activities of the EAC process included the establishment of a website (www.scdhec.net/baq/eap.html) for stakeholders to obtain updated information regarding the early action process. The website address was given in the initial press release (August 28, 2002) and continues to be included on correspondence and presentations.

Ozone Events – The Department has sponsored Ozone Awareness events to educate areas on the ozone standard, forecasting and measures that can be taken to reduce ground-level ozone. Following, is a schedule and summary of the 2003 Ozone Events:

April 26, 2003 - Central Savannah River Area

"Kids Earth Day" held on Saturday, April 26, 2003, was attended by approximately 1,000 children residing in the Aiken/North Augusta area. The Department's Central Office and District Bureau of Air Quality (BAQ) staff assisted children in playing Air Jeopardy as well as leading them through an educational exhibit on ground-level ozone. Prizes were also distributed.

April 29, 2003 - Pee Dee Area

A community meeting was held at the Pee Dee Regional Council of Governments office in Florence. Various community members and media were invited to attend this meeting for an educational program on ground-level ozone and health implications due to ground-level ozone exposure. This event was well attended and received excellent media coverage.

May 1, 2003 - Central Midlands Area

A partnership with WACH 57 TV was formed with BAQ staff to promote the Bureau's "Ozone Action Class." This is a web-based program encouraging students to find solutions to reduce ground-level ozone pollution. Spears Street Elementary School in Newberry County was the first recognized Ozone Action Class by weatherman Cary Allen and BAQ staff member, Amy Curran. WACH 57 incorporated the day's events, along with promoting Ozone Awareness Week, on their nightly weather segment that evening.

June 28, 2003 - Upstate

The BAQ and Recycling Office of the Bureau of Land and Waste Management partnered with the Upstate Air Quality Advisory Committee (Anderson, Greenville and Spartanburg Counties) to hold a gas can exchange event in this three county region. This was the first of a kind event for South Carolina. As well as new environmentally friendly gas cans, educational materials were distributed. Results of the Gas Can Exchange Event are included with the individual county reports.

Public Presentations - Numerous public presentations by Department staff regarding the 8-hour ozone standard and the early action process have been held. Since the process started there have been over 75 meetings in which Department staff promoted the benefits of the EAC process.

Greenscapes – The Department partnered with the South Carolina State Budget and Control Board's (B&CB) Horticulture services to implement a tree planting and environmental landscape project at the Department's central office and to conduct workshops on environmental benefits of trees for representatives of local and state government agencies. Funding for this effort was through a grant from the Urban and community Forestry Grant Assistance program administered through the South Carolina Forestry Commission and funded by the USDA Forest Service. Planting trees and reducing grass area results in less lawn mowing which helps reduce the emission of NO_x and VOC from gas powered equipment. For example, this project decreased the mowing area by 39 percent (original turf area was 24,816 sq. ft.; new mulch area 9,684 sq. ft., new turf area 15,132 sq. ft.). The time to mow this area has been cut in half, to less than 45 minutes.

To assist in promoting the incorporation of landscape planning to support the health of the environment, each EAC contact was invited to attend a presentation on May 25, 2005, to be provided by David J. Nowak, Ph.D. Dr. Nowak is a Project Leader with the USDA Forest Service, Northeastern Research Station in Syracuse, NY. Dr. Nowak is a principal scientist on the Chicago Urban Forest Climate Project and is a recipient of the American Forests Urban Forest Medal recognizing outstanding national contributions in urban forest research and the Distinguished Science Award of the Northeastern Research Station. His presentation is designed to provide an understanding of urban forests and their benefits and regulatory effects related to air and water quality.

a. Ozone forecast/outreach, education

The Department began forecasting for the 8-hour ozone standard in 1998 for the Upstate and Central Midlands areas of South Carolina. In 1999, the Central Savannah River area was added in the forecast and in 2003 the Pee Dee area was added. The Catawba area, including Chester, Lancaster and York counties is included in North Carolina's forecast through a cooperative partnership. A link for the Catawba forecast is included on the Department's website. The forecast serves as a public health advisory to protect those persons who are most at risk to the effects of ozone.

Prior to 2006, the Division of Air Planning, Development and Outreach was responsible for disseminating the ozone forecast to interested individuals and groups across the state.

Most counties participating in the EAC have assigned an air quality contact person that receives the daily forecast and is responsible for disseminating the ozone forecasts and related information on Ozone Action Days to stakeholders.

The Department and the SC Department of Transportation (DOT) have an agreement during the ground level ozone season. When an Ozone Awareness Day is forecasted in a particular region, Department staff contact DOT staff to activate the DOT Intelligent Transportation System (ITS) message board in the affected area. The ITS boards alert drivers that an Ozone Awareness Day has been forecasted for the next day and provides drivers with options and suggestion on how to deal with the upcoming Ozone Awareness Day. The Department's website is also included as a part of the message.

In 2004, the Department established a toll free telephone line for persons to call and receive the ground-level ozone forecast for the four areas of the state involved. Listed here is the number of calls for this "Ozone Hotline" for 2004 – 2006.

2004: 45 (only 3 months)
2005: 197
2006: 10 (thru May, 2006)
2006: 187 (June thru September 2006)

The number of contacts for the e-mail distribution for the 2005 ground-level ozone season was over 130 contacts.

Beginning with the 2006 ground-level ozone forecast season, the Department and the Bureau of Air Quality began participation in a new program that will make getting the forecast easier and more reliable. **EnviroFlash** is a program, sponsored by the EPA with State and local air quality agencies. **EnviroFlash** provides important air quality information such as forecasts and action day notifications via email or pager notification. The email includes the same local air quality forecast information which is coordinated through the news media, like television and radio.

EnviroFlash provides instant information that may be customized for individual needs. Subscribers can choose to receive the forecast everyday or only on forecasted Ozone Action Days. Air quality information allows subscribers to adjust lifestyle activities when necessary on unhealthy air quality days.

Participants in the BAQ's forecast system were provided information to an on-line subscription page and requested users to sign up, edit the reported information, or cancel the service. Subscribers are able to choose the type and frequency of service desired. **EnviroFlash** will be sent to your email or pager as soon as the ground level forecast is made. Persons are able to select from the Central Midlands, Upstate, Central Savannah River, or Pee Dee area. Subscribers to this free service may also receive the forecast for all four regions. See below for **EnviroFlash** subscriber statistics as of June 2006, for each zone. This information is split into categories, whereby "Green" level subscribers receive forecasts every day, "Yellow" level subscribers receive forecasts for "Yellow" forecasts and higher, etc.

Midlands - 81 subscribers
"Green" Level Subscribers: 12

"Yellow" Level Subscribers: 16
"Orange" Level Subscribers: 53

Upstate - 81 subscribers
"Green" Level Subscribers: 16
"Yellow" Level Subscribers: 11
"Orange" Level Subscribers: 51
"Red" Level Subscribers: 2
"Maroon" Level Subscribers: 1

CSRA - 19 subscribers
"Green" Level Subscribers: 5
"Yellow" Level Subscribers: 2
"Orange" Level Subscribers: 12

Pee Dee - 12 subscribers
"Green" Level Subscribers: 5
"Yellow" Level Subscribers: 0
"Orange" Level Subscribers: 7

The total number of subscribers, 193, may reflect more than just individuals receiving the forecast. Some subscribers may forward the email **EnviroFlash** delivers, to other employees at a worksite. The forecast may be utilized by local meteorologists to share with their TV audiences.

Subscribers for the 2006 Ground-level Ozone season through EnviroFlash (December 2006):

Midlands - 90 subscribers
"Green" Level Subscribers: 13
"Yellow" Level Subscribers: 18
"Orange" Level Subscribers: 58
"Red" Level Subscribers: 1

Upstate - 84 subscribers
"Green" Level Subscribers: 17
"Yellow" Level Subscribers: 10
"Orange" Level Subscribers: 53
"Red" Level Subscribers: 3
"Maroon" Level Subscribers: 1

CSRA - 25 subscribers
"Green" Level Subscribers: 6
"Yellow" Level Subscribers: 3
"Orange" Level Subscribers: 16

Pee Dee - 13 subscribers
"Green" Level Subscribers: 5
"Yellow" Level Subscribers: 0
"Orange" Level Subscribers: 8

2006 Ozone Awareness Proclamation
For the seventh year in a row, the governor of South Carolina has signed a proclamation regarding ground-level ozone awareness week. This year, Governor Sanford signed a proclamation declaring May 1-7, 2006, as "Ozone Awareness Week." A news release was developed to help announce this proclamation and was distributed electronically to all EAC contacts for their use locally. A copy of this year's proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/OzoneAwarenessWeek.pdf.

b. Developed Outreach Projects / Provided Outreach Materials

While the Department has not had the resources to track the education and outreach activities performed by non-Agency personnel in the recent past (i.e., no baseline data) to make comparisons, the EAC process has improved information regarding such activities. Because of the reporting requirements involved with the local participants towards meeting the EAC milestones, there have been numerous updates concerning outreach activities that have been initiated in the local areas. Material resources such as posters, brochures and radio and television Public Service Announcements (PSAs) developed by the Department have been requested for use by these local contacts.

- Gas Can Exchange - Using the BAQ's protocol developed for Gas Can Exchange events, Anderson County organized and planned its own gas can exchange (09/01/2005) with some limited assistance from BAQ staff. 200 new, environment friendly gas cans were distributed and 79 used gas cans collected. Results from Gas Can Exchange events held in other counties include:
  Georgetown – 334 pounds VOC reductions
  Greenville – 711 pounds VOC reductions
  Greenwood – 334 pounds VOC reductions
  Lexington – 348 pounds VOC reductions
  Richland – 475 pounds VOC reductions

- Car Care Awareness (April 2006) - The BAQ has drafted a protocol for hosting a Car Care Awareness Project. The draft protocol outlines planning activities associated with this inaugural Car Care Awareness Project and will be shared with the EAC contacts for information and planning consideration.

- BAQ - Education and Outreach – School related activities

December 1, 2006 - Buck Station meeting/Duke Energy, Salisbury, NC - This was the second meeting with Duke Energy to discuss the Lee Station site for the outdoor education center in Anderson County. We visited this well used/established site to get an idea of where the project could be heading. Present at this meeting was a representative

from Clemson University for a program called South Carolina Maps and Aerial Photographic Systems (SC MAPS), and a representative from the State Department of Education (Ed Falco). The site will initially be open to all middle school students from Anderson school districts.

November 1-3, 2006 - SC^2 Convention, Myrtle Beach, SC - Staff provided a booth for educators at the conference as well as a presentation on Breathe Better Air at School (B^2@ school) during one of the break out sessions (about 25 attended the session). There were at least 200 educators from all over the state at the conference. Over 60 pledges for the EPA program "Change a Light" Campaign were collected.

November 14, 2006 - Project consult/presentation on Global Climate Change, Rosewood Elementary Rock Hill, SC - Staff presented to an audience of 102 5th grade students facts about global climate change, discussed impacts, contributions, and solutions for the school to present in a project locally, state wide, and globally.

October 3, 2006 - B2@ school district meeting, Chapin Middle School - Staff met with the approximately 45 science teachers from Lexington School District 5 to present the B^2@ school program.

October 5 and 19, 2006 – Using the Environment as the Integrating Context for Learning (EIC) Workshop, Gilbert, SC - Staff worked with the students from Gilbert Middle school that are participating in the EIC model. Field studies and investigations on air and water quality in the school's nearby wetland area were conducted. The total number of students in the model for this year is approximately 140.

October 10, 2006 - Lee Station meeting/Duke Energy, Anderson, SC - Staff met with Duke Energy to discuss the plans for the outdoor education center at Lee Station in Anderson County. Palmetto Middle School (an EIC school) will serve as the "host" school for the project. The center will initially be open to all middle school students from Anderson school districts.

August 29, 2006 - EAC Greenville meeting Greenville, SC - Staff met with Sandra Yudice and John Owings from Greenville County as well as several school district personnel to discuss implementation of an anti-idling campaign in the schools using B^2@ school as a model. The initial focus will be the middle schools, approximately 18 in the Greenville area.

July 27-28, 2006 - EIC teacher training, Kelly Mill Middle School, Columbia, SC - This two day teacher workshop focused on project ideas for the EIC schools in order to expand existing projects. Staff offered advice on how to keep the projects on track with the EIC model. Teachers that were new to the EIC program attended the workshop which included Gilbert Middle School in Lexington 1 and Kelly Mill Middle School in Richland 2.

June 21, 2006 - Take Action Today, Columbia, SC - This summer workshop provided information, demonstrated lesson plans/ideas, and provided several field trips for educators. All participants received an "Action for a Cleaner Tomorrow" CD to use in their classroom. The workshop is open to all educators in the state. There were 142 teachers attending this workshop.

June 22, 2006 - Museum of York County summer camp, Rock Hill, SC - The one day class focusing on ground-level ozone. There were approximately 16 students in the class that day ranging from third to fifth grade.

May 5, 2006 - Project Discovery, Hilton Head, South Carolina – In collaboration with the South Carolina Educational Television (SCETV) several segments were taped on environmental issues pertaining to the Beaufort area. The segments included a live broadcast where callers could call in with questions on the issues. The BAQ segment focused on open burning. The SCETV viewing area includes the entire state.

April 19, 2006 - York County - Rosewood Elementary - worked with an Environmental Club on understanding and investigating environmental issues.

July 18, 2005 - Bethel Christian Camp - Gaston, SC. Guest speaker/presentation at the camp for "Environmental Day"

March 24, 2006 - Satchel Ford Elementary School - Presentation for Science Day

March 2006 - Central Carolina Technical College (Sumter County), Education and Outreach Support, Environmental Symposium

March 2006 - Keep Beaufort County Beaufort, Local Schools (Beaufort County), Education and Outreach Support, Earth Day Events

March 2006 - Southeast Elementary (Richland County), Presentation for Career Day, Education and Outreach Support

March 2006 - Hampton Conservation District (Hampton County), Education and Outreach Support – Environmental Activity Books, Local Schools

Congaree-Wood Elementary (Lexington County) Education and Outreach Support – Earth Day Activities

Mauldin Middle School (Greenville County) Education and Outreach Support – Earth Day Activities

May 7, 2005 - Earth Fair Irmo, (Saluda Shoals, Lexington County), exhibit for state wide Earth Fair

December 2004 – Present - air pollution reduction program at Crossroads Middle School (Lexington County), Education and Outreach support, environmental school project for SCDHEC pilot program

February 2005 - Pine Grove Elem. School (Richland County), presentation for Science Day

April 15, 2005 - Forest Heights Elem. School (Richland County), presentation for Science Day

October 2004 – March 2005 Sanders Middle School (Richland County), Education and Outreach support

Provide approximately 100 "Driving Smarter" brochures every other month to be placed at the Richland County Administration building.

March 2005 - Berry Shoals Elem. School, (Spartanburg County), educational materials, Special science awards

April 30, 2005 - Museum of York County (York County), exhibit, Earth Day Birthday

2002-present, focus on air pollution reduction strategies - Rawlinson Road Middle School (York County), education and outreach support, environmental school project through the South Carolina Department of Education

- **EAC Ozone Action Needs Assessment Tool -** A survey tool for the 2006 Ozone Season was developed and sent to EAC contacts to: 1) assess their current initiatives, 2) determine their needs for education/information resources and activities and 3) identify how BAQ staff could best support their efforts. Contact was made by BAQ staff with all responders via email and/or telephone for follow-through. A copy of this tool is available.

c. *Breathe Better @ School* Program

The*B^2@ school* (Breathe Better Air at School) program's main focus is reducing air pollution around school campuses so everyone can breathe better. Solutions to reduce air pollution are made possible through the efforts of students, faculty, staff, community and local agencies. The *B^2@ school* has many accomplishments to be proud of its first year in existence, the first, receiving the EPA Children's Environmental Health Recognition Award for 2006! Research shows that children, especially those with respiratory conditions, are more sensitive to air pollution. A key component of the *B^2@ school* program is policy change within the school. A good example of this is a local school's new policy included in the student/ parent handbook that reads, "We request/advise that any individual in a vehicle that is waiting on a student or adult please turn their car off if weather is permitting. We hope to reduce respiratory problems for our students, staff and

improve the air quality in our environment." The school has "No Idling" signs around the campus which were purchased as a result of winning a $750.00 **"Champions of the Environment"** award. The number of visits to the office for asthma incidences has decreased since the implementation of the "No Idling" policy, and the *B^2@ school* coordinator was inducted into the "GreenSteps" Hall of Fame for her commitment to environmental education.

Another accomplishment of the *B^2@ school* program is that it is a component of an EPA Clean School Bus grant awarding the state $500,000 targeted for reducing air pollution through anti-idling programs, retrofitting old school buses and building new ones. As the *B^2@ school* program expands, the goal is to continue reducing air pollution around school campuses and improving children's health in South Carolina. Information is available at http://greenstepschools.com/page1.html

Future plans include working with the Lexington County EAC contact to implement the *B2@ school* program at three Lexington County middle schools. The plans include providing "No Idling signs for those three middle schools as well.

d. SC Educators trained with Action for a Cleaner Tomorrow

In FY05, 28 educators were trained on the Department's environmental curriculum, Action for a Cleaner Tomorrow. There have been 26 trainings with 724 teachers trained from July 2005 through June 2006.

e. Car Care Awareness Month (April) Project

In recognition of Car Care Awareness Month, the Department and Richland and Lexington counties organized a vehicle maintenance check event in April. The State Museum, Ben Satcher Ford and Pope Davis Tires helped sponsor this free event on April 1, from 10 a.m. until 2 p.m. at the State Museum on Gervais Street. A team of certified technicians made suggestions for improving vehicle safety and gas mileage. The technicians also performed vehicle checks and raised citizens' awareness about how proper maintenance of a vehicle can help to reduce air pollution and protect the public's health.

The goal of the event, held on April 1, 2006, was to increase the target audience's awareness about the importance of car maintenance in preserving good air quality. To reach this goal, several objectives were set, and our ability to meet those objectives is documented herein. The objectives were: to have 100 cars come through the car check lanes, create a replicable project that can be implemented in other areas across the state, and to educate drivers and volunteers who participated in the event about the importance role vehicle maintenance plays in preserving good air quality. The target audience was drivers local to the downtown Columbia area.

This event was on a large scale, and approximately 60 cars were assessed during the four-hour event. At least 2 more technicians would have been needed to have reached the first objective. This is based on the average time per car was approximately 15 minutes, from the time the pre-survey was taken to the time the post- survey was collected and information was provided to the participant.

To help promote this event, a news release was issued by *The State* on April 1, 2006, titled – DHEC helps drivers focus on car care with expert advice.

Statistical information for this project:
Tire issues:

- **5 vehicles**, or 8 percent, had at least one tire with low tread. Most states recommend tire tread to be 3/32 inches or higher.
- Since each vehicle varies on tire pressure, stats on how many vehicles had low tire pressure are not available. Over half of the vehicles at the event needed tire pressure adjustments in at least one tire or more.

The level of:

- **C**O_2 (standard is: 14-16 percent) 0 vehicles, or 0 percent, exceeded the standard
- HC (standard is: 100) 10 vehicles, or 17 percent, exceeded the standard
- CO (standard is: 1.0 percent) 7 vehicles, or 12 percent, exceeded the standard
- O_2 (standard is: 1.0 percent) 13 vehicles, or 22 percent, exceeded the standard

OBD light on: 6 vehicles, or 10 percent, exceeded the standard

Air Filter: Air filters in 15 vehicles, or 25 percent, needed attention

The BAQ has drafted a protocol for hosting a Car Care Awareness Project. The draft protocol outlines planning activities associated with this inaugural Car Care Awareness Project and will be shared with the EAC contacts for information and planning consideration.

f. Earth Week

Governor Sanford signed a proclamation declaring April 16-22, 2006 as "Earth Week" in support of the efforts described above. A copy of this proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/earthweek.pdf

Earth Day 2006 included DHEC celebrating **Earth Day** with participating schools all around the state with help from volunteer staff. Throughout the month of April staff visited with registered schools and watched DHEC's Emmy-award winning *Earth Today* video with students. Following the video, staff held question and answer sessions, lead environmental projects, and distributed promotional items such as wildflower seed packets, activity booklets, recycled pencils and posters.

With an initial target goal to reach 6,000 students, volunteers extended outreach to over 11,000 general audience members in twenty (20) of the forty-six (46) counties. In addition, The *Earth Today* video was among the top 100 videos, among 3,406, requested from SCETV's Streamline Program for the month of April.

Staff found students enthused about the video and eager to participate in the follow-up questions. Several schools have already expressed the desire to participate in next year's Earth Day events while the Department anticipates hearing of the environmental efforts initiated by participating school in the coming months.

Many adults were also excited about their newfound environmental concepts such as alternate fuels and the display of hybrid vehicles at events around the state. Many onlookers stated that they planned or hoped to make a hybrid car their next vehicle of purchase. Information that was collected through an evaluation tool is still being collated at this time, but will be available.

Earth Day Activities – Friday, April 21, 2006
The Department set a goal for 2006 to send employees into more than 200 classrooms across the state to help raise environmental awareness among our students. Employees viewed the Department's three year running, Emmy-winning video *Earth Today* with students and answering questions afterward. The Agency's Earth Day materials were available for staff visiting with classrooms.

Via the S.C. Dept of Education, Science teachers and Media Specialist around the state were invited to register and participate. The Department's website included Earth Day plans and information for teachers to register: http://www.scdhec.gov/earthtoday/.

Additional information on the agency's plans for Earth Day and Education and Outreach services was available during the following briefings scheduled for March at the Department's Central Office in Columbia on the following dates:
Friday, March 3, 2006 - 10 a.m.
Friday, March 10, 2006 - 10 a.m.
Friday, March 17, 2006 - 2 p.m.
Friday, March 24, 2006 - 10 a.m.
Friday, March 31, 2006 - 10 a.m.

The following are Earth Day 2006 participants in which Education and Outreach Support was provided:

McLees Elem	Anderson
Starr Elem	Anderson
Wren Elem	Anderson
Grove Elem	Greenville
Armstrong Elem	Greenville

Liberty Elem	Pickens
Greenview Elem	Greenville
Calvary Christian Central	Greenville
Lone Oak Elem School	Spartanburg
Cannons Elem	Spartanburg
Inman Elem	Spartanburg
DR Hill Middle	Spartanburg
West View Elem	Spartanburg
USCS Upstate	Spartanburg
Great Falls Middle	Chester
Rosewood Elem	York
Andrew Jackson Middle School	Lancaster
Jefferson Elem	York
Gold Hill Elem	York
Indian Land Elem/Middle School	Lancaster
Chester Park Elem School of Arts	Chester
Cotton Belt Elem	York
A R Rucker Middle	Lancaster
Chester Park Elem School of Arts	Chester
Heath Springs Elem	
Bethel Hanberry Elem	Richland
Lexington Elem	Lexington
Plainview Elem	Chesterfield
Schofield Middle	Aiken
Paul Knox Middle	Aiken
Warrenville Elem	Aiken
N. Augusta Earth Day	Aiken
Aiken's Earth Day	Aiken
Carolina Forest Middle	Horry
Jasper County High	Jasper
Cottageville Elem	Colleton
Rosewood Elem	Richland
North Springs Elem	Richland
H.B. Rhame Elem	Richland
Forest Lake Elem	Richland

North Springs Elem	Richland
Montessori School of Camden	Kershaw
Forest Heights Elem	Richland
White Knoll Middle	Lexington
Rice Creek Elem	Richland
Lake Murray Elem	Lexington
Congaree-Wood Elem	
Sandhills Intermediate	Lexington
Lake Murray Elem	Lexington
Bethel Academy	Richland
St. Peter Academy	Richland
Earth Fare Earth Day	Richland

Currently, plans for Earth Day 2007 are underway. An outline of the Department's Environmental Quality Control Earth Day committee's plans is available.

g. Small, Gas-powered Engine Exchange Project

- Staff is currently meeting with EAC contacts in Greenville, Richland and Lexington counties to discuss the development of a small gas engine exchange project. Specifically, the project is targeting the exchange of gas-powered lawn mowers for electric mowers. A copy of the logic model for planning this event is available**.** Also available is a draft needs assessment tool to assist the planners in gathering information to help identify support/barriers to supporting this project. It is tentatively planned to be utilized with a sample of the target audience prior to finalizing planning for implementation of this project.

- December 2006 - EAC contacts in Richland and Lexington Counties are continuing to plan for a small gas-powered lawn equipment exchange. A survey tool has been developed and is being utilized at various events held in these two counties to gauge citizen interest for such an event. The notes from the most recent meeting of the planning committee for this project are available. Here is the memorandum language being utilized with the survey tool:

"The following message is brought to you by a partnership of Lexington County, Richland County, Keep the Midlands Beautiful, and SC DHEC.

As part of South Carolina's 2007 Emissions Reduction Campaign, you have been selected to participate in a voluntary survey to help us improve our community's Air Quality. The link below will take you to a survey that will ask you questions about your lawnmower use. We will use your answers to help us plan a **"Trade It In For Cleaner Air"** lawn mower exchange, currently scheduled for March/April 2007 for Lexington and Richland Counties.

The **"Trade It In For Cleaner Air"** Event will offer participants a great discount on a new electric lawn mower when they bring in their old gas-powered mower to be recycled. *A trade-in will not be required.*

Operating a lawn mower releases chemicals that create Ground Level Ozone, a federally regulated criteria air pollutant. This is especially true of old lawn mowers, and includes leaf blowers, weed trimmers, chainsaws, and other gas-powered lawn equipment. By participating in the event, residents will be able to get a great deal on a new electric mower, AND promote good Air Quality *at the same time*!

For more information about the **"Trade It In For Cleaner Air"** Event, please call 803-898-2233. For more information about South Carolina's 2007 Emissions Reduction Campaign, please call… More information about Ground Level Ozone, including it's impact on your health, please visit www.scdhec.gov".

Press Coverage

Over the last several years, numerous press releases, news publications and television reports have been done on the early action process. Additional articles for specific areas may be found in the local progress reports submitted by the participating areas.

Alternatives to Open Burning (November 2006)
http://www.scdhec.gov/administration/news/2006/nr20061108-03.htm

Citizens Encouraged to Reduce Open Burning (October 2006)
http://www.scdhec.gov/administration/news/2006/nr20061009-02.htm

Ground-Level Ozone Alert (August 2006)
http://www.scdhec.gov/administration/news/2006/nr20060802-01.htm

Ground-Level Ozone Alert (August 2006)
http://www.scdhec.gov/administration/news/2006/nr20060801-01.htm

SmartRide (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060731-01.htm

Ground-Level Ozone Alert (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060720-03.htm

EAC Summit (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060720-02.htm

Ground-Level Ozone Alert (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060719-02.htm

Ground-Level Ozone Alert (June 2006)
http://www.scdhec.gov/administration/news/2006/nr20060718-01.htm

Ground-Level Ozone Alert (June 2006)
http://www.scdhec.gov/administration/news/2006/nr20060621-01.htm

Ground-Level Ozone Awareness Week/Proclamation (Aril 2006)
http://www.scdhec.net/administration/news/2006/nr20060428-01.htm

Earth Day (April 2006)
http://www.scdhec.net/administration/news/2006/nr20060420-01.htm

Car Care Event (March 2006)
http://www.scdhec.net/administration/news/2006/nr20060320-04.htm

Open Burning (November 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200511/nr11BurningGreenville05.htm

Open Burning (October 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200510/nr10OpenBurning05.htm

Ozone Warning (July 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200507/nr07OzoneMidlands05.htm

Ozone Warning (July 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200507/nr07OzoneUpstate05.htm

Ozone Warning (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06OzoneAlert6-23-05.htm

SmartRide/Free Ride-OAC (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06FreeRide05.htm

SmartRide (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06SmartRide05.htm

Ozone Forecasting (April 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200404/nr04OzoneSeason04.htm

Gas Can Exchange (June 2004)
http://www.scdhec.net/administration/news_archive/releases/pdf_files/2004GasCanExch.jpg

Gas Can Exchange (June 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200406/nr06GreenwoodCans04.htm

Non-Road Diesel Rule (May 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200405/nr05DieselRule04.htm

Ozone Alert (May 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200405/nr05-06Ozone%20alert04.htm

Ozone Hotline (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07OzoneHotline04.htm

Cutting Diesel Emissions (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07DieselEmissions04.htm

New OB Regulations (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07BurningRules04.htm

Truck Stop Electrification (October 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200410/nr10MAElectric04.htm

Gas Can Exchange (October 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200410/nr10MidlandsCans04.htm

GreenScapes Project (November 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200411/nr11GreenScape04.htm

August 28, 2002 – DHEC press release – "Planning for Cleaner Air Sooner"

September 3, 2002 – Bureau of National Affairs Daily Environment out of Atlanta announced South Carolina's decision to take advantage of EPA's offer to implement early measures to meet the 8-hour ozone standard.

September 5, 2002 – Greenville News – "Upstate will meet new clean air standards before deadline, DHEC says"

Fall 2002 – The Palmetto Planner – A Publication of the South Carolina Chapter of the American Planning Association – included article titled "The Bureau of Air Quality's Early Action Plan for the 8-Hour Ozone Standard.

September 25, 2002 – DHEC press release – "Meeting on air quality plan set for Oct. 1"

October 1, 2002 – The State – "Groups oppose state's ozone plan"

October 4 – Greenville News – "Early air effort could keep EPA at bay"

October 4 – Spartanburg Herald-Journal - "DHEC outlines clean-air proposal; State health officials on Thursday explained to an Upstate audience a proposal they say is a common-sense approach to cleaning up South Carolina's air sooner."

October 8, 2002 – Morning News – "Pee Dee air quality not up to par of EPA"

October 17, 2002 – Charleston Post and Courier – "State asked to get a jump on tougher ozone standards" – Article summarizing public meeting held in Charleston by DHEC.

November 14, 2002 – Anderson Independent-Mail – "Government agrees to ozone deadline"

November 22, 2002 – Spartanburg Herald-Journal – "Air quality resolution wins support"

November 27, 2002 – Clean Air Today – "SC Officials Discuss Air Quality Plans at Summit"

December 2002 – Spartanburg Herald Journal – "Council votes to join 3-county compact to improve air quality"

December 2002 – Augusta Chronicle – "City considers air-quality plan"

January 2003 – The Charlotte Observer – "York County is trying to get jump on upcoming new standards"

January 30, 2003 – Darlington News and Press – "Ozone problem threatens local economy, DHEC reps, local industry meet to help county avert federal penalties"

February 21, 2003 – DHEC press release – "Ozone early action update meeting Feb. 26"

February 27, 2003 – Anderson Independent Mail – "State wants ideas to clean the air"

February 27, 2003 – The State – “S.C. making plans to clean up its air”

April 28, 2003 – DHEC press release – “Ozone forecasting begins in Pee Dee”

April 28, 2003 – Morning News – “Pee Dee counties added to ozone program”

April 29, 2003 – The Post and Courier – “4 counties to be added to S.C.’s ozone forecast”

April 30, 2003 – Morning News – “Greater ozone awareness brought to Pee Dee”

May 13, 2003 – Anderson Independent Mail – “Group creates plan to reduce Upstate Ozone”

May 15, 2003 – DHEC press release – “Meeting set to discuss air quality proposal”

June 9, 2003 – Anderson Independent Mail – “State warns of sun’s rays and ozone today”

June 9, 2003 – DHEC press release – “Legislators support air quality early action plans”

June 11, 2003 – DHEC press release – “Gas can trade will help air quality” (also includes Public Service Announcements)

2. Commuting Reduction Programs

a. Take A Break From The Exhaust (TABFTE)

The "Take a Break from the Exhaust" (TABFTE) project developed by the Department, is an interactive alternative commute program in which employees are asked to take voluntary actions to help reduce emissions from mobile sources, such as cars and trucks to help improve air quality. Some examples of these actions include: carpooling to work, staying in for lunch, working an alternate work schedule, telecommuting, using mass transit, bicycling or walking to work. The TABFTE project was awarded the *Governor's 2003Pollution Prevention Award for State Agencies*. The project's software tracking tool was important in supporting the Bureau of Air Quality's (BAQ) application to participate in the U.S. Environmental Protection Agency and U.S. Department of Transportation's *Best Workplace for Commuters* voluntary program, which as of 2005 the BAQ holds the only designation in South Carolina.

Prior to 2004, the Department focused on behavior changes including, carpooling, riding a bicycle to work and staying in for lunch. In 2004, the Department began estimating emission reductions.

Reductions for 2004 Ozone Season:
BAQ reduced just over 100,000 miles in 2004
598 pounds of VOC's reduced
393 pounds of NO_x reduced
5,494 pounds CO reduced

The utilization of the TABFTE grew in 2005, with the Bureau of Water (BOW), Bureau of Land & Waste Management (BLWM), the SC State Energy Office (SCEO) and the Wisconsin Department of Natural Resources using this program. The BAQ also partnered with the SC Department of Transportation and the SCEO to promote rider ship on the SmartRide alternative transportation project during Ground-level Ozone Season.

On Friday, April 15, 2005, *The State* newspaper wrote a story on one TABFTE partner and his decision to give up his car for a bike and public transportation. This generated interest in more bike and pedestrian paths and public transportation in the Columbia area.

In 2005 the goal for BAQ was to reduce over 100,000 miles. Staff within the BAQ surpassed this goal by almost 40,000 miles! Another goal was to have the TABFTE program reduce 150,000 miles overall. Results program wide showed that the goal was almost DOUBLED!

2005 TABFTE participants included:
Bureau of Air Quality
Bureau of Water
Bureau of Land and Waste Management
South Carolina Energy Office

Wisconsin Department of Natural Resources

Total Reductions for 2005 Ozone Season for South Carolina only:
286,889 miles reduced
1,076 pounds of VOC's reduced
684 pounds of NO_x reduced

Individual reductions for 2005 Ozone Season:

Bureau of Air Quality, SCDHEC: In 2005, BAQ had 111 participants and reduced 139,264 miles during the season. This season the BAQ has reduced 248,700 grams **(548 pounds)** of VOC's and 172,786 grams **(318 pounds)** of NO_x.

Bureau of Water (BOW), SCDHEC: 2005 was BOW's first year of participation. 1n 2005, BOW had 98 participants and reduced 100,881 miles during the season. This season, BOW reduced 178,948 grams **(395 pounds)** of VOC's and 124,127 grams **(274 pounds)** of NO_x.

Bureau of Land and Waste Management, SCDHEC: BLWM expressed an interest in TABFTE about half way through the season. Even though BLWM plans to participate in full in 2006, the thirty-two participants reduced over 25,852 miles. This season, BLWM reduced 46,086 grams **(102 pounds)** of VOC's and 31,650 grams **(70 pounds)** of NO_x.

South Carolina Energy Office: SCEO provided the grant that enabled TABFTE to come into existence back in 2000. This year, SCEO decided to participate in TABFTE after we made a presentation to their group in February. Even though they are a small group, SCEO reduced 7,892 miles this year. This season, SCEO reduced 14,172 grams **(31 pounds)** of VOC's and 9,798 grams **(22 pounds)** of NO_x.

Wisconsin Department of Natural Resources (WDNR): While attending a National Air Quality Conference in San Francisco, staff spoke with a few people about TABFTE. WDNR expressed an interest, and since TABFTE is a web-based program, we added them to our list of users. In 2005 the twenty participants reduced over 15,513 miles and had a reduction of 18,304 grams **(40 pounds)** of VOC's and 15,266 grams **(34 pounds)** of NO_x.

2006 TABFTE participants:
Bureau of Air Quality
Bureau of Water
Bureau of Land and Waste Management
South Carolina Energy Office
Wisconsin Department of Natural Resources
Lexington County Government
Central Midlands Council of Governments
Winthrop University - York County
York Technical College

Bowater - York County
Citi Group - York County
Springs Industries - York County

Results for the 2006 Ground-Level Ozone Season will be provided with the December 2006 Progress Report. As of the date of this submittal, 7 participants have joined the program for the 2006 ground-level ozone season bringing the total number of TABFTE participants to 12.

The following table is an updated list of all participants for the 2006 TABFTE project. It should be noted that participation for TABFTE in 2006 was mixed. Some of the groups that participated in the past did not have as high a turnout as before, while groups added for 2006 may not have had a very high participation rate the first season. As noted in the table below, a number of local governments were added during the 2006 season. The Department hopes to encourage more local governments to participate during the 2007 ground-level ozone season, with an emphasis on counties in nonattainment deferred areas of the state.

Entity Name	City	State	AQI Region
Bowater	Catawba	SC	NA
Bureau of Air Quality	Columbia	SC	Midlands
Bureau of Land and Waste Management	Columbia	SC	Midlands
Bureau of Water	Columbia	SC	Midlands
Central Midlands Council of Governments	Columbia	SC	Midlands
Citigroup	Ft. Mill	SC	NA
Clean Air Works	Charlotte	NC	NA
Florence County	Florence	SC	PeeDee
County of Lexington	Lexington	SC	Midlands
Jefferson County Department of Health	Birmingham	AL	NA
Kentucky Division for Air Quality	Frankfort	KY	NA
Madison Environmental Group, Inc.	Madison	WI	NA
South Carolina Energy Office	Columbia	SC	Midlands
Springs Industries	Fort Mill	SC	NA
Wisconsin DNR	Milwaukee	WI	NA
Winthrop University	Rock Hill	SC	NA
York Technical College	Rock Hill	SC	NA

The Department as a whole posted impressive numbers but involvement in BOW and BLWM was off for 2006. One of the goals for 2007 is to establish a permanent contact in each of those areas to help encourage participation. This was discussed at the Environmental Quality Control (EQC) Outreach meeting on November 8, 2006. In 2006,

the Department reduced almost 150,000 miles traveled, over 590 pounds of VOC's and over 400 pounds of NO_x.

Total Reductions for 2006 Ozone Season for South Carolina only:
162,000 miles reduced
609 pounds of VOC's reduced
387 pounds of NO_x reduced

A number of companies in the upstate were added during the 2006 season as well. While their reductions were not as impressive due to their limited involvement for the season, it is expected that they will contribute more in the 2007 season. Hopefully with the "Clean Air Forever" effort underway the TABFTE project will add many more companies prior to the 2007 ground-level ozone season.

b. SmartRide Program

In October 2003, the South Carolina Department of Transportation (SCDOT) conducted the SmartRide Research Project. For four weeks, the SCDOT provided commuter focused transit service and gathered information regarding the use of alternative forms of transportation. The project was a temporary mass transit service that focused on the needs, concerns and preferences of working commuters. Between October 6th and October 31st, 2003, the SmartRide Research Project served an average of 68 riders daily and provided a total of 2,730 passenger trips to and from work. The Smart Ride Research Project represents a strategy that can potentially improve traffic congestion and air quality conditions in South Carolina. The effective utilization of an expanded network of commuter-focused transit operations could result in the reduction of vehicle miles traveled each year.

As a result of the SmartRide Research Project, in June 2004, "SMARTRIDE" returned to the Central Midlands area and continues today. Santee Wateree Regional Transportation Authority began commuter service originating from Camden to the Columbia area and the Central Midlands Regional Transportation Authority began commuter service from the City of Newberry with stops in Little Mountain and Chapin and then on to Columbia. The development of similar "SMARTRIDE" projects in other areas of the State is anticipated.

During the 2005 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides were offered for those days designated as Ozone Action Days. The BAQ helped promote this effort by providing posters and public service announcements. In addition, the BAQ provided $500.00 to help off-set the cost. During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered.

<u>SmartRide Statistics for 2005:</u>
Passenger Boardings:
Total Newberry – Columbia:
January - November 2005

4,932 boardings
Increase of 200 percent starting with 338 in January and 659 in November

Total Camden – Columbia:
July1 - October 30, 2005
4,770 boardings
The number of boarding approximately doubled per month from July 2004 to June 2005.

Emissions Reductions (Lexington, Newberry, Kershaw, and Richland):
207 pounds NO_x
153 pounds VOC
3,166 pounds CO

SmartRide Statistics for June 2006:
Passenger Boardings:
Total Camden – Columbia:
November 2005 – May 2006
7,514 boardings

Emissions Reductions (Kershaw and Richland):
684 pounds NO_x
943 pounds VOC

SmartRide Statistics for December 2006:
Passenger Boardings:
Total Camden – Columbia:
November 2005 – November 2006
14,301 boardings

Emissions Reductions (Kershaw and Richland):
1,368 pounds NO_x
2,152 pounds VOC

Passenger Boardings:
Total Newberry – Columbia:
November 2005 – October 2006
6,408 boardings

Emissions Reductions (Newberry and Richland):
613 pounds NO_x
964 pounds VOC

Again for the 2006 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides were offered for those days designated as Ozone Action Days.

c. SIGIS carpool matching program

The Department initiated a web-based, map based carpooling program in December 2005. The Shared and Integrated Geographic Information System (SIGIS) program facilitates ridesharing opportunities throughout the state by allowing interested employees to map their commute trip information and view the trips entered by other employees. The program is available to 4,987 Department employees in eight environmental quality control offices, eight regional public heath offices, four Ocean and Coastal Resources Management Offices, and eight office locations in Columbia. At this time there are approximately forty-five participants. The program has undergone some recent refinements. A second agency-wide email notification about the program was sent out on June 27, 2006 from Earl Hunter, Commissioner of the Department.

As of December 2006 the total number of participants in the SIGIS program is 54. A total of 34 employees added their names to the list this year.

d. Best Workplace for Commuters

The Bureau of Air Quality was designated as a "Best Workplace for Commuters" on February 3, 2005. Currently, the BAQ holds the only designation in South Carolina. However, BAQ continues to promote this program to EAC areas and to other program areas within the Department.

As of December 2006, the BAQ continues to maintain the "Best Workplaces for Commuters" (BWC) status, based on records from the TABFTE project. BAQ staff continue to promote BWC to local stakeholders as a part of our general outreach campaign. A recent presentation to Lexington County included information on BWC. An insert to be included in the EPA "Best Workplaces for Commuters" brochure has been developed. This insert is more closely tailored to target South Carolina business professionals, local governments, and other organizations. Initial feedback has been positive however there are a number of organizations that are still unaware of the benefits possible by participating in this program. A goal for 2007 is to continue to promote this opportunity to other programs within the Department as well as any other organization looking for a voluntary measure proven to benefit employees and air quality alike.

e. Audio-conferencing

The Department offers employees 3 audio-conferencing choices based on the number of participants (up to 6, up to 30, or up to 144 lines). Department employees as well as other state agency employees were faced with travel restrictions in the late summer months of 2005. Employees were notified via e-mail of the audio-conferencing capability.

The Department continued to offer audio-conferencing capabilities for 2006.

f. Duke Energy

Duke Energy is sponsoring a pilot program to subsidize public transportation costs for Charlotte-area employees. The pilot program, September 1 through December 31, 2006 will provide subsidies and incentives around bus transit, carpools and vanpools for full-time and part-time employees, including the Catawba Nuclear Station located in York, South Carolina. Company executives recognize that environmental stewardship is a shared responsibility and that along with the company investment in emission controls at power plants, transit subsidy is also an important piece of the effort to reduce ozone-related emissions.

3. Ground Level Ozone Awareness Week Proclaimed

2005

Governor Mark Sanford proclaimed **March 28 – April 1, 2005** as Ozone Awareness Week in South Carolina. The EAC areas used the proclamation to launch their 2005 Ozone Awareness efforts. Some of these efforts included:

• *The State* newspaper (which is widely circulated in Richland and Lexington Counties) ran an article recognizing Richland County staff's effort to promote Ground-level Ozone Awareness Week, their work to provide alternative fuel for county flex-fuel vehicles and the link of their county web page for the SCDHEC ozone forecast.

• Richland County staff sent out a press release (03/25/05) to promote Ground-level Ozone Awareness Week and provided additional information on their web page: www.rcgov.us. An email was sent (03/29/05) to almost 900 county employees promoting the week.

• Lexington County EAC contact distributed (03/23/05) Ground-level Ozone Awareness information in paychecks to 1,300 employees.

• Anderson County staff sent out a news release (03/28/05) on Ground-level Ozone Awareness Week and promoted the week on a local radio station, WRIX 103.1FM. An article on Ground-level Ozone was also placed on their county web page: www.andersoncountysc.org.

• SCDHEC staff provided interviews on Ground-level Ozone Awareness Week to two radio stations: News Talk for Charleston 1250AM (03/29/05) and Columbia WVOC 560AM (03/30/05).

• SCDHEC staff provided an interview for WIS-TV in Columbia for Ground-level Ozone Awareness Week. Information may be found at this link: http://www.wistv.com/Global/story.asp?S=3132984&nav=0RaMXyjF.

• The Charleston County Administrator sent an email (03/28/05) to county employees regarding Ground-level Ozone Awareness Week and staff set up a display in their Public Services Building to provide more information.

• Laurens County EAC contact distributed (03/22/05) news release to two local newspapers, and included tips on cleaner air and the Governor's proclamation for Ground-level Ozone Awareness Week. A similar package of information was distributed to 300 county employees.

• The York County EAC contact worked with the York County Council to declare March 28-April 1, Ground-level Ozone Awareness Week. Ground-level Ozone Awareness bookmarks were mailed, along with the county council agenda, to 300 citizens.

The following includes materials that were requested by the EAC areas:

County/COG	Item	Number
Chester	Spare the Air – paycheck inclusions	250
Cherokee	Ozone and Your Health	50
Greenville	Ozone and Your Health	200
	Learn Before You Burn	200
	Coloring Books – Spare the Air	100
	Pencils	150
	PDF of Display	1
	Air PSA	1
Charleston	Learn Before You Burn	200
Georgetown	Air is Everywhere Posters	5
Lexington	Air PSA	6
Anderson	Air PSA	1
Spartanburg	Air PSA	1
Appalachian COG	Air PSA	1
Richland	Air PSA	1
Central Midlands COG	Air PSA	1
York	Air PSA	1
Catawba	Air PSA	1
Abbeville	Air PSA	1
Abbeville	Ozone and Your Health (for Paycheck)	200
Allendale	Ozone and Your Health	200
York	Learn Before You Burn	500
	Gas Can Exchange Brochures	100
Aiken	Ozone and Your Health	100
	Coloring Books – Spare the Air	450
	CO2 Brochures 150	150
	Driving Smarter 450	450
	Learn Before You Burn 150	150
	Learn Before You Burn Spanish	100
	Pencils	1 Box (500)
Pickens	Notepads	25
	Pencils	25
	Air Fresheners	25
	Ozone Posters	25
	Care About Air coloring books	25

All counties received:

Coloring Book
Bookmarks (*It All Adds Up To Cleaner Air*)
Posters (*Ozone, Air is Everywhere, Good Up High*)
Ozone and Your Health Brochure and Electronic Version
Instructions to link to the SCDHEC Bureau of Air Quality website
Note Pad
Pencil
Information on EPA website
Draft Press Release
Electronic Version of Proclamation
25 Things To Improve Air Quality flyer and Electronic Version

Department contributions:

Letters and 2,000 posters to doctors' offices statewide regarding ozone
Distributing 5,000 flyers in paychecks
Press releases
E-mail about Ozone and Proclamation sent to Air Program staff

2006

Governor Mark Sanford proclaimed **May 1 – May 7, 2006** as Ozone Awareness Week in South Carolina. This was the seventh consecutive year for this proclamation. A news release was issued by the Department on April 28, 2006.

An **Ozone Action Needs Assessment Tool** (Tool) was sent to all of the EAC contacts. The Tool was developed to assist local areas in promoting awareness of the 2006 8-hour Ozone Season and the Early Action Compact (EAC) process. Local areas were encouraged to promote and implement measures that will reduce ozone precursors within their county. The Tool offered suggestions for strategies that will increase awareness and thereby create a positive impact on public health and the environment. Local areas were asked to review the list of activities/strategies and indicate if they have already implemented; will implement in 2006; request additional information/assistance; or are not interested. The Tool was returned by nineteen EAC contacts. Staff within the division contacted those counties that returned the Tool and are providing additional information and assistance.

An example of a request from an EAC regarding this follow-up:
Spartanburg County requested a number of outreach materials and was provided:
150 Clean Air Kid Bookmarks
10 Ozone Action Class Brochures
10 DHEC Environmental Outreach Booklets
100 Drive Smarter for tomorrow
10 Good Up High, Bad Nearby Posters (Small)
10 Good Up High, Bad Nearby Posters (Large)

4. Regulatory Initiatives

In early 2003, the Department began meeting with industry representatives, environmentalists, local governments, and other interested parties to develop state-wide regulations for the purpose of getting additional Oxides of Nitrogen (NO_x) and Volatile Organic Compounds (VOC) reductions to assist us with the EACs. NOx reductions were focused on during these meetings because modeling indicates that, with respect to ozone formation, NO_x is the critical pollutant. Furthermore, sensitivity analysis has demonstrated that VOC reductions have very little impact on ozone in South Carolina. The EAC process resulted in the promulgation of one new statewide regulation to control NO_x from stationary sources. In addition, the existing open burning regulation was revised to add more stringent restrictions. Upon publication in the June 25' 2004 issue of the *State Register*, the EAC regulations became effective. (It is important to note that local officials and industrial leaders supported the Department's promulgation of the Control of NO_x Regulation and the amendments to the open burning regulation.)

Regulation 61-62.5, Standard 5.2, Control of Oxides of Nitrogen

The Control of Oxides of Nitrogen NO_x Regulation (R.61-62.5, Standard 5.2), while not needed to demonstrate attainment, will help ensure the areas attain and maintain the 8-hour ozone standard. The Control of NO_x Regulation requires Best Available Control Technology (BACT)-level controls on all stationary sources that emit or have the potential to emit NO_x. Many of these sources would not otherwise be required to control their NO_x emissions. For example, under the Clean Air Act requirements, the preconstruction review program referred to as New Source Review (NSR) only applies to larger sources (generally those with potential emissions greater than 100 tons per year or more). For sources with emissions below these levels, there are generally no controls for NO_x required.

This newly-developed regulation is applied statewide to new and existing stationary sources of NOx emissions. Larger sources that have undergone a BACT review for NO_x are exempt from the regulation; however, larger sources that have taken limits to opt out of a Prevention of Significant Deterioration (PSD) review will still be required to comply with this regulation, which covers sources ranging from boilers and turbines to fluidized bed combustors and lime kilns. For existing sources, the regulation only applies when an applicable unit undergoes a burner replacement, at which time the burner must be replaced with a low burner or equivalent technology capable of achieving a 30% reduction from uncontrolled levels.

Appendix 13 of the December 2004 EAC SIP submittal provides estimated NO_x reductions that are expected as a result of the implementation of this new regulation. These estimates have also been included in Appendix 16 of the December 2004 EAC SIP as part of the county-level emission reductions for the EAC areas. The tables are divided into three groups (two of the tables provide expected NO_x from regulation 61-62.5, Standard 5.2; the third table provides reductions expected from the revisions to the open

burning regulation). The first table in Appendix 13 of the December 2004 EAC SIP provides estimates based on the percent reduction to be achieved for new sources. The reductions for new sources vary greatly depending on the source type. For instance, new combined-cycle natural gas turbines of less than 50 megawatts capacity must have controls installed that will achieve the equivalent of a 94% reduction from uncontrolled levels. The control requirements will help ensure that the growth of NO_x emissions is controlled. The second table in Appendix 13 of the December 2004 EAC SIP pertains to estimated reductions from existing sources. As this regulation will be triggered upon the replacement of burners at existing sources, it may take a number of years for these reductions to be realized. However, these estimates, based on the number of applicable sources in the inventory, indicate that when fully implemented, the regulation has the potential to reduce NO_x emissions by 2,913.51 tons per year. It is important to note that these reductions were not used to support the modeling demonstration. Even without these additional control measures, which will apply statewide rather than just in select areas, modeling analysis indicates that all monitors will be attaining the standard by 2007. However, the reductions from these regulations are quantifiable, permanent, and will ensure that South Carolina gets cleaner air sooner.

Regulation 61-62.2, Prohibition of Open Burning

The most significant revisions to this regulation are as follows: deleting the exception for the burning of household trash, revising the exception for the burning of construction waste, and revising the exception for fires set for the purpose of firefighter training. The burning of household trash presents health and environmental concerns for many communities. The smoke generated from these activities is a nuisance to some and a health threat to others with asthma or other respiratory problems. Furthermore, the Department spends a lot of staff time and resources responding to complaints related to these activities. Regulation 61-62.2 had previously prohibited the burning of household waste except where other disposal options were not available. This activity is now clearly prohibited, which should provide the clarity necessary to help us enforce this restriction.

With respect to the exception for the burning of construction waste, the Department has revised this provision to allow only residential construction waste to be burned. Residential construction waste can only be burned outside of the ozone season (which runs April 1 through October 30), between the hours of 9:00 a.m. and 3:00 p.m., and must be conducted at least five hundred feet from any occupied structure. Furthermore, only certain "clean" wastes are allowed to be burned. ("Clean" wastes would be residential construction waste free of heavy oils, wood treatment products, asphaltic materials, natural or synthetic rubber, or any other trade wastes which would produce smoke in excess of forty percent capacity.) Again, the Department believes that the burning of construction waste presents health and environmental concerns for many; prohibiting a significant portion of this waste from being burned will alleviate some of these concerns and provide additional NO_x reductions.

Finally, the exception for the purpose of firefighter training has been revised to ensure that minimum health, environmental and safety concerns are addressed. Prior Department

approval is required in order to obtain the exemption as a permanently established training site. Fires set for the purpose of fire-fighter training at non-permanent locations must receive Department approval prior to the initiation of any burning activity.

Based on the Department's 1999 emissions inventory, residential burning of household waste generates 2,379 tons of NO_x and 11,896 tons of VOCs in the state annually. Such emissions reductions can be realized with the Department's implementation of the ban on burning of household waste. Emissions inventory data also indicate that an annual reduction of 147 tons of NO_x and 625 tons of PM would be realized under the revisions to the residential construction waste burning provision (see Appendix 13 of the December 2004 EAC SIP for further information). Although information on the reduction of NO_x and VOCs resulting from the ban on burning commercial construction waste is not available, it is presumed that substantial reductions of those pollutants will occur with the implementation of this prohibition. Additionally, Appendix 16 of the December 2004 EAC SIP includes county-level emission reductions and descriptions for the EAC areas.

On April 14, 2005, the Department issued a news release reminding citizens in SC of the revised regulations. Additional news releases were sent out during the fall of 2005 to encourage citizens to use alternatives for disposing of yard trash.

On October 9, 2006, the Department issued a news release encouraging citizens to reduce open burning of yard debris. Additional news releases during the fall of 2006 included October 15, 2006, "Open burning poses threats" in the Anderson County – Independent Mail; October 2006 and "Alternatives to burning waste urged" in the Greenville News. Lexington County officials are working with stakeholders to reduce open burning within the County. On October 25, 2006, The State published an article on officials considering restricting fires in subdivisions and construction sites. For additional information regarding the discussions in Lexington County see Enclosure 3 – Local EAC Activities.

A workgroup was established in 2005 that includes staff representation from the Department's Bureau of Land and Waste Management (BLWM) and the Bureau of Air Quality (BAQ). The intent of this workgroup has been to develop a tool for staff, especially regional inspectors, to more clearly outline the regulations the two Bureaus have related to Open Burning regulations. This is an effort to enable staff to more effectively use these regulations in the response to complaints on open burning. Accompanying the work of this group will be training of staff in the use of this new tool and the development of an outreach plan to increase awareness of the public regarding open burning, and alternatives to this action. A plan (DRAFT Open Burning Campaign Logic Model; June 2006) is attached. Workgroup meeting notes are available. The resource tool mentioned above has been developed and is awaiting management approval as of December 1, 2006.

Open Burning Campaign Logic Model

Draft June 6, 2006

a. Create a Program Logic Model
    i. Identify the impacts (outcomes) of the project on the intended audience and/or issue. Start with the broadest, or long-term outcome, then add the steps (mid- and short-term outcomes) needed to get there.
    ii. List the activities and outputs needed to achieve the outcomes.
    iii. List the resources needed and/or available.
    iv. Read the model left-to-right as a series of "If…then…" statements.
    v. Restate the outcomes as SMART objectives.
        1. Specific
        2. Measurable
        3. Audience-directed
        4. Ambitious
        5. Realistic
        6. Time-bound

Impacts:

1. Public Awareness
    a. Gain knowledge about the pollution caused by open burning various materials
    b. Positive experience
        i. Positively affect attitude toward DHEC, counties, partners
        ii. Realize there is something each person or contractor can contribute to the pollution solution
        iii. Positive feeling about alternatives to open burning waste products from various sources
    c. Behavior Change
        i. Recycling materials where possible
        ii. Reducing the amount of materials burned
        iii. Transporting materials to appropriate landfill
    d. Spreading the word
        i. Participants will spread the word about the event to their families, friends, business associates
            1. It must be well organized
2. Short Term Outcomes
    a. Positive reaction
    b. Increased awareness of open burning as source of air pollution
    c. Increased awareness of options
3. Mid term Outcomes
    a. Use of recycling alternatives (curb side, drop-off stations)
    b. Spread the word
4. Long term outcomes

    a. User begins to realize impact of daily activities on environment
    b. Word spreads and project grows, impact more people
        i. Message about air quality spreads with project, begins to take hold in people's minds, making it easier to reach them with future projects
    c. Reduction in open burning complaints to regional staff
5. Resources
    a. DHEC staff
    b. Early Action Compact Partners (local government)
    c. Art Studio/BLWM-Office of Recycling/Air Education & Outreach Section
        i. Development of brochures (including Spanish versions); Also utilize existing materials where appropriate.
        ii. PSA (both TV and Radio) development; General message: "Open burning is bad for your health, the environment and it is illegal in many instances. Reduce, Re-use, And Recycle. Specific messages may be developed dependent upon resources.
    d. Development of a web-page specific to open burning issues that is linked by both BLWM and BAQ.
    e. Partners- Forestry Commission, Fire Stations, Fire Marshall
    f. Partner contacts
    g. Knowledge of other states who have done this project before
6. Activities
    a. Gather information from other states for prototype
    b. Identify and Inform partners
    c. Identify locations for possible press conference(s) - major urban areas?
    d. Identify funding (PPA)
    e. Utilize access to teachers to utilize lessons to share with students regarding open burning messages.
    f. Document project
    g. Meet with team to organize details
    h. Advertise messages via TV/Radio; conferences/meetings
    i. Host press conference(s)- Release PSAs and informational materials
    j. Document and publicize results
7. Impacts
    a. If we can properly reach the various segment audiences, and we may be able to affect the issue of open burning.
    b. If we garner the involvement and leadership of the EACs, we can build and strengthen our relationship and our joint commitment to improving air quality.
    c. If we can find funding, we can more broadly disseminate our message(s) to the appropriate audiences.
8. Objectives
    a. Utilize TV PSAs in the Upstate, Central Midlands, York County and Central Savannah River Area, and Coast areas.
    b. Ensure significant involvement from local government leadership, especially EAC partners.

   c. Begin campaign in mid-March 2007.

9. Planning
   a. Identify primary target audiences
   b. Identify partners to help with planning and execution
   c. Identify evaluation methods
   d. Identify sponsors to help with funding
   e. Identify appropriate message(s) for audiences
   f. Secure funding
   g. Develop necessary media tools
   h. Advertise
   i. Report planning and progress
   j. Identify weak spots
   k. Address weak spots
   l. Host news conference event(s)
   m. Analyze results
   n. Final report
   o. Meet to discuss outcome and follow-up work

5. Assist local areas in determining emission reductions

South Carolina has been and will continue to work with EPA to assist local areas in determining the emission reduction strategies that will assist the area in achieving emission reductions needed for maintaining the 8-hour ozone standard within their respective area. The emission reduction strategies submitted by the local areas contain both quantifiable and directionally sound measures, it should be noted that none of them were included in the attainment demonstration model for 2007.

The EAC process encourages state and local areas to design control strategies that best fit their specific needs. As part of this process the Department began meeting in 2002 with local governments, industry representatives, environmental groups, and other state and federal agencies in an effort to develop state and local control strategies to reduce ozone precursors as part of the commitments under the compacts. The Department tackled these requirements from many different perspectives. The Department met with the local EAC areas to consult with them and provide them with assistance on developing the local plans. The Department formed stakeholder groups and conducted meetings in an effort to develop statewide regulations to achieve additional reductions in ozone precursors to support the EAC process.

This effort continues and as a result of the 2006 SC Early Action Compact Summit has expanded. Bureau of Air Quality (BAQ) staff have been assigned to work with local government officials based on the State Council of Governments (COG) structure. This is a recent shift in our strategy for outreach to local and state government. BAQ staff will work with local contacts, assess their planning and determine how the BAQ may offer assistance. Recent examples of this type of work has been the "Motor Vehicle Maintenance Project," expansion of the "Take a Break for the Exhaust Project," and the potential expansion for the "Breathe Better Air at School Project."

6. Clean Air Initiatives for Government Entities

Bureau of Air Quality (BAQ) staff were charged with the task of developing, implementing and marketing a plan for reducing precursors to ground-level ozone emissions by state government that supports the Early Action State Implementation Plan initiative. Bureau staff solicited participation from other state government agencies to include the transportation sector and property maintenance agencies. Also included were local Council of Governments and the Palmetto State Clean Fuels Coalition. A major accomplishment of the group is the passing of a Concurrent Resolution by the South Carolina State Legislature on May 14, 2003. This resolution supports the activities of the Department's establishment and implementation of the state's early action approach for complying with the 8-hour ozone standard and provides for the establishment of an intergovernmental workgroup for the purpose of promoting behaviors and policies to reduce air pollution throughout the state of South Carolina.

In 2005, three policies (telecommuting, alternate work schedules and variable work hours) in the Department's Administrative Policy Manual were updated to encourage these activities to help protect ambient air quality.

Other accomplishments through April 2005 included the following:
• Richland County requested air quality articles for use in their staff newsletter and information regarding the EPA *Energy Star* Power Management program to share with county administration.
• A staff person from the South Carolina Department of Transportation (SCDOT) was designated to receive the Department's Ground-level Ozone Forecast and to distribute it via e-mail to approximately 5,000 staff. SCDOT utilizes the Department's Ozone Forecast Internet link for the forecast on their web page. SCDOT roadside emergency signs in the Upstate and Midlands will be utilized for Ground-level Ozone Action Alerts. The number of signs by county (April 2005) is: Anderson (1), Greenville (5), Spartanburg (7), Oconee (1), Richland (5), Lexington (2), and Orangeburg (10).
• The South Carolina State Energy Office implemented "Take a Break from the Exhaust" in their office during the 2005 Ozone Season.

The utilization of the TABFTE grew in 2005, with the Bureau of Water, Land & Waste Management and the SC State Energy Office using this program. (Detailed information on the TABFTE program may be found under Commuting Reduction Options (2.a.) of this report.) The BAQ also partnered with the SCDOT and the Energy Office to promote ridership on the SmartRide Alternative Transportation project during Ground-level Ozone Season.

In 2006, the utilization of the TABFTE continued to increase. New partners included Bowater, CitiGroup, Springs Industries, Winthrop University and York Technical College all located within York County. In addition, Lexington County Government and the Central Midlands Council of Governments offered the program to employees. (Detailed information on the TABFTE program may be found under Commuting Reduction Options (2.a.) of this report.) Partnerships with the SCDOT and the Energy

Office to promote ridership on the SmartRide Alternative Transportation project continued for 2006. SCDOT includes messages on the Intelligent Transportation System (ITS) Boards around the State encouraging citizens to car-pool on Ozone Action Days.

Work with both state and local governments to develop activities in support of "Cleaner Air Sooner" is on-going, although not in the formal workgroup called CAIGE. BAQ staff has determined that outreach activities need to be developed on a local and individual need basis. Thus, at this time staff has been assigned to work with local government officials based on the State Council of Governments (COG) structure.

This is a recent shift in our strategy for outreach to local and state government. BAQ staff will work with local contacts, assess their planning and determine how the BAQ may offer assistance in terms of resources and project development. Recent examples of this type of work has been the "Motor Vehicle Maintenance Project," expansion of the "Take a Break for the Exhaust Project," and the potential expansion for the "Breathe Better Air at School Project."

BAQ staff offer consultation services for exploring, developing, implementing and evaluating these types of projects based on local and state agency interests and initiative. This approach, rather than a formal, central based workgroup, offers more flexibility and support to these entities based on individual organizational need and plans.

7. Smart Highways

The Smart Highways effort through the EAC process addresses transportation planning and any impact transportation might have on air quality. This approach is not a requirement of the EAC and is not being done in any other EAC area in the country. It is an example of the commitment by air quality and transportation agencies at the local, state, and federal level. In the event that deferral of the effective date of the nonattainment designation is withdrawn, these areas will be fully prepared to address the full regulatory requirements of Transportation Conformity. In addition, South Carolina already has in place the necessary consultation procedures to address traditional transportation conformity requirements for all pollutants in any nonattainment area. Again, this initiative is something no other state has accomplished.

The parties involved in the interagency meetings developed a Smart Highways checklist to be used in transportation planning. This checklist is intended solely as an informational guideline to be used in reviewing Long Range Transportation Plans and Transportation Improvement Programs for adequacy of their documentation and will be used during long range transportation plan updates as required by 23 CFR 450.322. A copy of the Smart Highways Checklist is attached in Appendix 12 of the December 2004 EAC SIP. Air quality and transportation officials engaged in these interagency meetings include the Metropolitan Planning Organizations (MPOs) from the deferred nonattainment EAC areas (Anderson Area Transportation Study (ANATS), Greenville-Pickens Area Transportation Study (GPATS), Spartanburg Area Transportation Study (SPATS) and the Columbia Area Transportation Study (COATS)), the South Carolina Department of Transportation, Federal Highway Administration South Carolina Division, EPA Region 4, Federal Transit Administration, and the South Carolina Department of Health and Environmental Control.

As a result of this effort, each of the four Metropolitan Planning Organizations (MPOs) in deferred nonattainment areas (Greenville, Anderson, Spartanburg, Richland and Lexington counties) demonstrated that their respective long-range transportation plan eliminates or reduces violations of the national ambient air quality standards (NAAQS). Copies of the four MPO reports may be found at http://www.scdhec.gov/eqc/baq/html/eap_Smart_Highways.html.

The documentation in the reports was the subject of interagency consultation. Interagency consultation began in January 2003, and continued through completion of the emissions analysis with regular meetings to discuss and agree upon schedules, model parameters, latest planning assumptions, horizon years, exempt projects, and regionally significant projects. In addition, each of the MPOs provided public review of this report in accordance with the respective MPOs public involvement policy. A key element of the public involvement process is a public review of transportation planning documents including the Long-Range Transportation Plan.

Using 2002 as the base year, the following table shows that the emissions expected from implementing the proposed MPO long-range transportation plan(s) are less than

emissions from either the baseline case or the no-build case for 2007. Further emission reductions are forecasted for the longer term. The specific numbers can be found in each MPOs report.

	ANATS		GPATS		SPATS		COATS	
	NO_x	VOC	NO_x	VOC	NO_x	VOC	NO_x	VOC
2002	7.703	4.354	30.213	19.276	17.96	10.58	45.295	27.135
2007	5.507	2.94	21.58	13.648	11.86	6.83	32.017	18.962
Reduction tpd	2.196	1.414	8.633	5.628	6.1	3.75	13.278	8.173
Reduction tpy	801.54	516.11	3151.045	2054.22	2226.5	1368.75	4846.47	2983.145

tpd = tons per day
tpy = tons per year

EAC Reinforcement of Planning Initiatives at the Local Level

The EAC process has allowed contact with counties at a critical time in their comprehensive planning process. Many are in the midst of updating their 5 and 10-year plans. The dates for completing these do not coincide with EAC dates but improving air quality does not have a "sunset" provision. Many counties have already begun or completed changes to their land use plans that reduce sprawl and traffic congestion.

Anderson County

Highlights of the Anderson County Land Use and Development Standards include items that develop standards with respect to landscaping and open space, promote public health and safety through the reduction of noise pollution, storm water runoff and air pollution. Also included are development standards with "Greenways" defined which link residential areas with other open space areas. These greenways may contain bicycle paths, footpaths, and bridle paths. Additionally, intensity standards (designed principally to regulate land use in accordance with the design function and carrying capacity of the road on which it is located) are being developed.

Greenville County

Smart Growth America has said about the City of Greenville, "The city has the right idea about how communities should be designed." It has chosen Greenville as one of four cities and counties nationwide to work with to turn smart growth ideas into better development for Greenville. Efforts include spreading the kind of development happening downtown to its more suburban edges including more sidewalks, buildings closer to the street, smaller parking lots and more landscaping.

Greenville County's Comprehensive Plan encourages the development of industrial parks so aesthetics, design, screening and land use impacts can be better managed. Plans are being worked on to revise the county Zoning Ordinance to create new residential zoning classifications that permit design innovations such as open space, varying setbacks, cluster development, varying lot sizes, and mixed uses with extensive landscaping. Through incentives, it would also encourage developers to build in the urban area of the

county. Transit goals in the Comprehensive Plan encourage residents to use alternative modes of transportation for travel.

Greenville County Planning Commission, on behalf of the City of Mauldin and the City of Simpsonville, retained Day Wilburn Associates to prepare a Transit Development Plan for the Mauldin-Simpsonville Urbanized Area. Information regarding the results of this study can be found in the Greenville County portion of this document.

Spartanburg County

Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include:

- Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants.
- Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development.
- Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended 1/4 acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, open character.

To address transit needs Spartanburg County is working to provide convenient, coordinated, accessible and affordable transit service under the administration of a single transit agency, controlled by a Joint Transit Commission appointed by city and county government. This includes interfacing the transit system with other transportation modes including highways, airports, rail, intercity bus, school buses, and bikeway/trail systems. Components of this approach include developing alternative funding sources to promote public transit as a low cost alternative to the automobile and as a means of lessening traffic congestion.

To promote bicycle and pedestrian facilities, a governmental committee composed of local officials whose mission is to promote alternative transportation systems in the county has been created. The committee is also responsible for the procurement of funding for the implementation of such facilities. Securing a public and private partnership to oversee the implementation of proposed improvements and promote the use of alternative transportation through educational, promotional and incentive programs is also being addressed.

Lexington County

On January 22, 2005, Lexington County Council received statewide recognition from the

South Carolina Wildlife Federation for its landscape ordinance. The Federation's Forestry award was in recognition of leadership and vision through comprehensive urban forestry programs recently implemented. Due to the variety of issues involved in a project of this magnitude, the county sought input from experts in landscaping and urban forestry as well as the public in developing the Ordinance. While the County's Ordinance is directed primarily at commercial development, it actually focuses on six different categories. The most important aspect of the *Lexington County Landscape Ordinance* is that its format enables it to be duplicated in any community regardless of location, political environment, or intensity of development. Air quality benefits of this ordinance are that it will help reduce emissions because of reduced use of gas powered yard equipment and the use of canopy trees in parking lots to cut down on evaporative emissions.

Components of the Lexington County Comprehensive Plan encourage the development of traffic-intensive commercial, industrial and higher density residential land uses near existing major roads, railroads and interstate highways. It discourages low-density residential development near existing major roads and interstate highways and encourages development patterns such that future growth can be effectively served by public transportation. It also provides for safe transportation facilities for bike and pedestrian usage and promotes the compatibility of different land uses as an alternative to completely segregating residential, commercial, industrial, agricultural and other uses from one another. Another effort includes working within the Central Midlands Council of Governments to ensure that the Columbia Area Transportation Plan (COATS) assists in the reversal of the "sprawl" development pattern.

Per an October 5, 2006 article in *The State* newspaper, Lexington Town Council approved spending $14,000 to install equipment to synchronize traffic flow in the downtown Lexington area. The equipment will monitor traffic at 20 intersections and allow state traffic officials to adjust the length of lights to improve traffic movement on the roads. This is one of several changes implemented to reduce traffic congestion.

Richland County

Effective July 1, 2005, Richland County began using a vastly updated Land Development Code (LDC) to address a number of issues that citizens have brought to the attention of the county over the years such as transportation, community appearance, conservation, water quality and affordable housing. The central reason for drafting the updated LDC was to revise the county's land development regulations as needed to make certain they accomplish the goals and objectives of the comprehensive plan.

Among its many purposes, the LDC specifies planning requirements that seek to "lessen congestion in the roads." For the first time, site plans for major land development must include a traffic management plan: "An evaluation of the effect of traffic generated by a development on the operation and safety of the adjacent public roads. Such analysis shall include an identification of traffic impact mitigation measures needed to improve the safety, operation, and flow of vehicular and pedestrian movement into and out of the development."

Richland County Council sponsored a neighborhood meeting on April 16, 2005, to share information on planning, design, and development of livable communities. Dr.
Chuck Bohl, an internationally recognized expert on this topic is scheduled to speak.
Richland County has also contracted with the Palmetto Conservation Foundation (PCF) to address how land use, transportation, parks, and trails can be incorporated into a greenway network that builds on the Three Rivers Greenway and Palmetto Trail and promote integrating physical activity into daily routines. The primary activities of focus are bicycle/pedestrian transportation, safe routes to school, and community planning. In combination with Bicycle/Pedestrian planning now underway at the Columbia Metropolitan Planning Organization, car commuters will have additional commuter options. PCF has already participated in a successful active living campaign in Spartanburg, South Carolina, which brings, in part, an air quality benefit that Columbia and Richland County want to emulate.

As part of its temporary funding solution to the Central Midlands Regional Transit Authority (CMRTA) crisis, Richland County Council established a Transportation Study Commission to study public transit, road improvements, and walking and bicycle trails. The 33 member commission is expected to release a final report in Spring 2008, as well as a recommendation for funding high-priority transportation projects. The commission will study transportation issues that are regional in nature. As a result, members will be made up of appointments from Richland and Lexington County Councils, the City Councils in Columbia, Cayce, and West Columbia.

On December 6, 2006, Councilwomen Val Hutchinson and Joyce Dickerson held an informational meeting with residents and leaders from the rapidly growing Northeast area of Richland County. The meeting included a presentation by Norm Whitaker, head of the Central Midlands Council of Governments, regarding the transportation priorities and funding mechanisms for roads in the Northeast. Mr. Whitaker explained the correlation between congestion, growth, and air quality in the Northeast, and informed attendees that that ozone monitor located at Sandhill has the potential to draw the entire two-county region into non-compliance. The committee resolved to meet on a quarterly basis in an effort to centralize the often fractured discussion of transportation needs on this rapidly growing area of the county. Councilwomen Dickerson and Hutchinson also received suggestions from the group as to how Council can better plan for transportation needs in the Northeast, including accelerating an update of the county's comprehensive plan, as well as a comprehensive countywide transportation plan.

8. Other Point Source Reductions

As noted in the June 2003 EAC Progress Report, Bureau of Air Quality staff met with individual industry representatives in an effort to negotiate emission reductions. The intent was to focus on several large NO_x emitters, particularly those with few existing NO_x controls that are impacting potential nonattainment areas, to negotiate reductions through the permitting process or consent agreement. This was done in lieu of developing statewide regulations on existing industrial sources. Meetings with various industry were held on May 1, 2003, June 2, 2003, and June 11, 2003.

Appendix 10 of the December 2004 EAC SIP included copies of the agreements with these facilities. As part of the EAC process, several of the largest existing industrial sources in the Upstate and Midlands areas of South Carolina have voluntarily committed to reduce and/or limit their NO_x emissions. These negotiations were the direct result of the EAC process as are the NO_x reductions that will result from them. SCE& G - Wateree in Richland County installed Selective Catalytic Reduction (SCR) on two coal-fired boilers to comply with the NO_x SIP Call and has agreed to take permit limits on these units as their commitment to the EAC process. International Paper in Richland County agreed to take an annual allowable NO_x emission reduction of 1000 tons, facility wide.

In addition, Duke Power in Anderson County has committed to install and operate low NO_x combustion controls on two coal-fired boiler units (controls were installed in 2001 on the other boiler at the facility) and to limit the NO_x emissions from these units to an emission rate of 0.27lbs/MMBtu. This is a $7 million investment by Duke Power that will result in approximately 850 tons of NO_x reduced annually. As part of this process, Transcontinental Gas Pipeline Corporation (Transco), which operates the internal combustion engines at Station 140 in Spartanburg County, began early implementation of the NO_x emission reductions required by Phase II of EPA's NO_x SIP Call regulation. In accordance with the federal requirements, Phase II is required to be fully implemented by 2007. As part of the EAC process, Transco performed engine overhauls and engine combustion modifications on 13 engines during the 2005 calendar year so that these NO_x emission reductions were captured well ahead of the federal timeline. The goal is to have all NO_x reductions quantified and certified before the end of the 2006 calendar year, allowing Transco to take credit for NO_x reductions prior to the start of the 2007 Ozone Season. August 2006 testing reports of the 13 units at Transco revealed emissions were significantly below the control period emissions limit established in the facility's permit. The South Carolina Electric and Gas installed NO_x reducing technology on some of its coal-fired boilers at the Canadys, McMeekin, and Urquhart plants. All units have NO_x continuous emission monitors in place. These actions are permanent and quantifiable and were not required by any federal or state regulation. These actions were taken to demonstrate the facility's commitment to the EAC process.

9. Palmetto State Clean Fuels Coalition Initiatives

The Palmetto State Clean Fuels Coalition (PSCFC) is part of the Clean Cities program and is one of 88 designated coalitions in the United States. The Department of Energy approved the application for PSCFC's designation in 2003, recognizing the commitment of the stakeholders to building an alternative fuels market in South Carolina. http://www.palmettocleanfuels.org

Prior to receiving the official designation, stakeholders were involved in a number of alternative fuel activities. On October 17, 2001 – a station supplying ethanol and biodiesel opened in the Aiken area. The station is privately owned and sells fuels to both the government and the public and was the first of its kind in the United States. In conjunction with the opening, on October 18, 2001 – Governor Hodges signed an Executive Order supporting the use of alternative fuels and requiring state agencies, when feasible to utilize alternative fuels when operating alternative fuel vehicles.

On April 2, 2002, the Department held a ceremony to officially announce the availability of E85 at the 2600 Bull Street location in Columbia. The fueling site consists of a 10,000 gallon E85 tank. The Department spent $105,000 for modifications to existing tanks and was the first state agency to offer E85 in Columbia to county, federal and state governments.

There are currently 33 publicly accessible E85 refueling infrastructure stations in the Columbia, Greenville, and Aiken areas. Two more stations will come on-line in 2006 in the Rock Hill/Fort Mill area. During 2005, South Carolina opened more publicly accessible E85 refueling sites than the State of Iowa.

A recent survey (2005) identified a total of 1,232 alternative fuel vehicles actually operating on alternative fuel in the nine-county PSCFC service area. Of these vehicles, 691 (56.1%) were E-85 flex fuel, 461 (37.4%) were operating on B20 biodiesel, 42 (3.4%) were operating on propane, 20 (1.62%) operating on compressed natural gas, and 18 (1.5%) are electric vehicles. Many of these vehicles are owned by PSCFC stakeholders.

Survey respondents indicated that they planned to buy and operate more AFVs in the next five years. Taken together, these stakeholders will add 2,005 operational AFVs to the road through 2008. This represents an annual increase of approximately 21.5% or roughly 401 vehicles annually.

Other activities involving the PSCFC include:

Columbia CNG Initiative - In 2000, the PSCFC worked closely with the Central Midlands Regional Transit Authority (RTA) Board of Directors as they made decisions regarding the fate of Columbia's bus fleet. The Board decided to purchase 7 new compressed natural gas (CNG) transit buses when they replaced SCE&G's aging bus fleet. These buses were delivered in December 2002 and are running successfully on

CNG. They are expected to reduce nitrogen dioxide and hydrocarbon emissions by 6,296 pounds per year over a ten-year period, which will result in a cleaner downtown area.

Because of the RTA's commitment to alternative fuels, the Energy Office worked with others to expand the capacity of Columbia's only CNG refueling station. This station is located on the corner of Flora Street and Assembly Street, right across from the Capital City Bombers baseball stadium. This station refuels not only the buses, but also federal, state and local government fleets. It is also open to the public, and accepts both Visa and Master Card.

Ethanol Refueling Infrastructure - In April 2005, six fueling stations in the Columbia and Greenville areas kicked off their sale of ethanol (E85) with E85 for $.85 events. E85 is the term for motor fuel blends of 85 percent ethanol and 15 percent gasoline and is an alternative fuel as defined by the U.S. Department of Energy. Besides its superior performance characteristics (octane=105), ethanol burns cleaner than gasoline, and it is a completely renewable, domestic, environmentally friendly fuel that enhances the nation's economy and energy independence.

PSCFC and Stakeholders Receive Funding for Two Special Project Proposals in 2005:

1. York Technical College: Ethanol Refueling Infrastructure: The SCEO received $25,191 in federal funds with a cost share of $18,500 for a total project cost of $43,691 to establish an ethanol (E-85) fueling station in Rock Hill, S.C. to support the use of E-85 in the existing and future fleets of the City of Rock Hill, York County Natural Gas, the City of Clover, Palmetto Clean Fuels Coalition and York Technical College. The E-85 fueling station will be located at the main Rock Hill maintenance facility and will consist of a 12,000 gallon below ground tank converted from an existing unleaded fuel tank. The refueling station will support 59 ethanol flex fuel vehicles currently using gasoline in the fleets of Rock Hill, Palmetto Clean Fuels Coalition, York County Natural Gas Authority, the City of Clover and York Technical College.

2. PSCFC - Clean Cities Coalition Support - Palmetto State Clean Fuels Coalition: The SCEO received $20,000 in federal funds with a cost share of $27,822 for a total project cost of $47,822 for a coordinator support grant for the Palmetto State Clean Fuels Coalition (PSCFC). The purpose of this project is to ensure continued coordination and staffing of the PSCFC by the Catawba Regional Council of Governments. Funding will ensure continued momentum in the nine-county PSCFC region for projects, marketing, and increased use of alternative fuel and alternative fuel vehicles. Funding will enable promotion and building of infrastructure to support increasing use of alternative fuels by state and local government in the PSCFC region.

Biofuels Showcase - The Palmetto State Clean Fuels Coalition (PSCFC) hosted a Biofuels Showcase on November 18, 2005. This event showcased ethanol and biodiesel and featured a Ride and Drive event where participants had a chance to drive the

alternative fueled vehicles on display. Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvement, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges. On October 14, 2005, the PSCFC hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.

Billion Gallon Celebration - Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvements, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges. On October 14, 2005, the Palmetto State Clean Fuels Coalition hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.

Southeastern Alternative Fuels Task Force Workshop
Department staff along with Palmetto Cities Clean Fuel Coalition coordinator, Wendy Bell and South Carolina Energy Office, Chantal Fryer participated in and helped to support the planning and implementation of this workshop held in Tennessee, June 6-7, 2005. Website for the SEAFTF is: http://www.sealtfuels.org/. Evaluation results for this workshop are available.

As of the December 2005 Progress Report, there were 23 public E85 refueling sites in South Carolina with 4 additional stations planned with the next 6 months. In addition to the E-85 refueling sties located at the Department's Bull Street office in Columbia, there were 5 other refueling sites that are not open to the public (2 in Aiken County at the Savannah River Site; 1 in Berkeley County at Santee Cooper; and 2 in Horry County). In 2006, the University of South Carolina and the City of Rock Hill each have plans to install an E85 refueling site; bringing the total number of non-public refueling sites to 8 during 2006. In addition to E85, there were 3 biodiesel public sites in South Carolina. B2 at Spinx and 2 United Energy Sites.

As of June 2006, there were 34 public E85 refueling sites in South Carolina. In addition, there are 14 public biodiesel (B20) refueling sites in South Carolina.

As of December 2006, there were 40 public E85 and 42 public B20 refueling sites in South Carolina. Two sites, one of which will be located in the City of Rock Hill (York County) will be opening soon. Under a recent grant award, PSCFC received funding for 2 additional E85 sites and a B20 site in the Rock Hill area.

The 2006 calendar-year survey should be available for the June 2007 EAC Progress Report. The survey will include information such as the City of Rock Hill converting their entire diesel fleet, on-road and off-road to B20; the City of Union and Union County both are now using B20; and, Fort Jackson is using E85 in non-tactical vehicles.

On August 15, 2006, Bell Exxon in Union opened E85 and B20 dispensers that will service the City of Union and Union County AFVs. Southeast Biodiesel hosted a grand opening for their Charleston facility on October 27, 2006. Production at this facility is expected to being in January 2007.

A grand opening was held on December 6, 2006 for Carolina Soya located in the City of Estill, Hampton County. The facility is expected to be operational in March 2007 and will produce up to 30 million gallons of soybean-based biodiesel fuel per year.

PSCFC provided a moderator/speaker for the 2006 SC EAC Summit held in Columbia on August 16 and 17. A presentation on alternative fuels by the PSCFC was also given at the Southeast Governmental Fleet Managers Association meeting in October 2006.

Legislation - Members of the Upstate EAC counties (Anderson, Greenville, and Spartanburg) in coordination with the Palmetto State Clean Fuels Coalition and the South Carolina Chapter of the Sierra Club, supported statewide legislation that will provide tax incentives for purchase of alternative fuel and hybrid-propulsion vehicles and help reduce costs and provide tax credits for production and infrastructure for alternative fuels. On June 1, 2006, Governor Sanford signed an act to amend the Code of Laws of South Carolina, 1976, by adding Section 12-6-3377 so as to allow a state income tax credit equal to twenty percent of certain new hybrid, fuel cell, alternative fuel, or lean burn technology motor vehicle credits allowed against a taxpayer's federal income tax liability.

October 10, 2006 - National AFV Day Odyssey: Showcasing Cleaner More Energy-Efficient Choices in Transportation - hosted by York Technical College. This public event enables Americans to learn about the benefits of alternative fuel and hybrid electric cars, vans, trucks, and buses. The event was an opportunity for the public to get close-up look at a number of alternative fuel and hybrid electric vehicles—including vehicles from Honda, Ford and Toyota—and to meet experts who can answer questions about the future of transportation. Workshops were conducted throughout the day on AFV and hybrid electric vehicles to include what makes hybrids different, how they came about, and how they operate. Participants will also be able to view natural gas, bio-diesel and electric fueled vehicles from the City of Rock Hill and a hybrid lineman's truck from Duke-Energy. National AFV Day Odyssey is coordinated by the National Alternative Fuels Training Consortium, headquartered at West Virginia University, and includes a group of 27 higher-education institutions dedicated to educating technicians and the public about clean, cost-effective vehicles. York Technical College's partners include the South Carolina Energy Office, South Carolina Department of Health and Environmental Control, Palmetto Clean Fuels Coalition, Centralina Clean Fuels Coalition, the City of Rock Hill and Duke Energy.

These combined efforts continue to exhibit the State's dedication to renewable energy.

10. Tree City USA

Tree City USA encourages municipalities and areas to have strong urban forestry programs. In the fall of 2005, the Bureau of Air Quality sent an electronic mail message to all 45 EAC areas in South Carolina asking the counties to encourage municipalities within their county to help participate in this program that can benefit air quality.

As of June 2006, there were 39 designated areas in South Carolina, an additional 2 from the December 2005 Progress Report.

The Tree City USA program is sponsored by The National Arbor Day Foundation in cooperation with the USDA Forest Service and the National Association of State Foresters. According to the National Arbor Day Foundation website (http://www.arborday.org/programs/treecities.cfm?chosenstate=South_Carolina) as of December 2006 there are 40 designated areas in South Carolina.

11. Energy Efficiency

a. ENERGY STAR

Energy Benchmarking/Portfolio Manager Report January 2005-September 2005

The Department received $5,000 in additional Section 105 grant monies to promote the ENERGY STAR Energy Benchmarking program in our area. Below is a summary of the Bureau of Air Quality's (BAQ) efforts in promoting this program through September of 2005.

Efforts were made on two fronts to promote Energy Star. The first effort was to install Energy Star with the BAQ and then expand the program throughout the rest of the Department. The second front was to involve other state agencies and local governments through outreach efforts to try to get them to utilize Energy Star.

South Carolina Department of Health and Environmental Control

The BAQ already had 80% of its computers installed with monitor power management enabled. However, all of the monitors had longer shutdown times than the Energy Star default of 10 minutes. Therefore, the BAQ saved five minutes on 25% of the monitors, 15 minutes on 45% of the monitors, and over 20 minutes on 30% of the monitors that had power management engaged.

The numbers calculated from EPA's calculator program are below:

RESULTS--Savings Per Year

Energy	
Current Use	25,216 kWh
Future Use	18,127 kWh
Savings	7,089 kWh
Dollars	
Current Cost	$2,169
Future Cost	$1,559
Savings	$610
Percent	
Savings	28%

Since the BAQ's successful installation of Energy Star, other Bureau's within the Department are now starting the process of installing Energy Star. Once the Information Technology (IT) staff has completed the necessary installation on the respective servers, the Bureau of Water and the Bureau of Land and Waste Management will be joining the Energy Star team. With the addition of these two Bureaus, the number of computer monitors will increase from around 150 to over 500.

Other State Agencies and Local Governments

During the reporting period BAQ staff met with staff at other state agencies to provide them information about Energy Star. Staff met with the South Carolina Energy Office, the South Carolina Department of Transportation, and the South Carolina Department of Education. At least one Agency (South Carolina Energy Office) has expressed an interest in implementing Energy Star and BAQ staff will be working with them to do so.

As part of the EAC process Energy Star is being used as an example of how local governments can save money, and also help reduce air pollution. Staff have provided flyers and used PowerPoint presentation to demonstrate local government contacts the benefits of Energy Star and how to implement the program.

Department staff created and distributed Energy Star pledge postcards at the South Carolina Science Council Conference in November 2006. Participants returned 54 pledge cards, with pledges to replace over 200 incandescent bulbs with compact fluorescents. The cards were also distributed to 5th graders at Rosewood Elementary School.

Plans for the upcoming year

BAQ staff plan to finish installing Energy Star at the Bureau of Water and the Bureau of Land and Waste Management. We also plan on expanding Energy Star to the rest of the Department. Along with the installation to the South Carolina Energy Office, staff plans to revisit the Energy Star issue with the South Carolina Department of Transportation and the South Carolina Department of Education in hopes of convincing them to install Energy Star.

We will also continue using outreach materials and presentations to inform counties and local governments about the advantages of Energy Star and assist them with implementing the program.

Over the past 6 months (June – December 2006) the BAQ has continued to work with local and state contacts to promote EPA "Energy Star" products. Recently, in addition to promoting and encouraging the use of computer monitor power saving software, staff are responding to requests for assistance to draft responses to grants. A recent request from a partner in a state Council of Government (COG) area prompted BAQ to develop the following proposal. While this proposal may or may not be introduced by this COG, the information will be made available by BAQ staff to other contacts interested in pursuing energy efficiency reduction strategies. Also developed and available is the project design and evaluation along with the project logic model.

Energy Star Upgrade Proposal - October 2006:
We propose to upgrade local facilities in the area to demonstrate the ease and effectiveness with which energy reductions can be made. At the core of our proposal are

the ideas suggested by the national Energy Star Campaign. We propose the following upgrades to participating facilities:

- Upgrade incandescent light bulbs with CFL light bulbs
  - At a cost of $10 per unit
  - With an energy savings of 66% per bulb
- Upgrade any existing T 12 fluorescent light fixtures with T8 ballasts and bulbs
  - At an average cost of $25 per unit
  - With an energy savings of about 30% per fixture
- Upgrade computer system with automatic sleep modes
  - At no cost
  - With an energy savings of about $10-$50/computer annually

In addition, we propose to investigate and report where additional savings could be realized. In particular, we plan to look at exit sign efficiency and upgrade costs, overhead diffuser and reflector efficiency and upgrade costs, automatic shut-off savings and installation costs, as well as other items such as interior paint color and occupant behavior patterns.

Every participating facility will first be analyzed to determine baseline energy consumption. Gains in energy efficiency as a result of the upgrades will be measured against this baseline. Upgrades should be extensive enough to demonstrate a real energy savings, while leaving room for improvement should the facility take the initiative to complete the upgrades and invest in further improvements as suggested in the report. The analysis conducted to establish the energy consumption baseline for the facility will also be useful in encouraging that facility to sign-up as an Energy Star Partner.

Energy Conservation and Air Quality Awareness shall be promoted through informational presentations, brochures, and displays at the participating facility throughout the upgrade process. In this way, we hope to impact employee energy conservation behaviors at home, as well as at the workplace. Sponsor and partner logos will be displayed along with or on these informational fliers, kiosks, and presentations.

Finally, the improvements, suggestions for additional upgrades, energy savings, and emission reductions will all be documented in the project report. The report findings shall be made known to the participating management and employees, and shall be used to promote similar campaigns in other areas across the state. Bulbs containing mercury that are replaced as a part of the upgrade will be recycled and/or disposed of properly, and mercury awareness will be a sub-set of the awareness campaign.

Change a Light and Change the World with Energy Star

The BAQ also promoted the **Change a Light and Change the World with Energy Star** in October 2006 to staff within the Department via email. The informational message utilized (listed below) was also shared with EAC contacts statewide. Staff also developed a pledge card and utilized a small inventory of CFLs during a conference with

school science teachers (South Carolina Science Council) in October. For this conference, 60 teachers returned the pledge card to take the action of changing a light bulb to a CFL to help reduce Global Climate Change, and 45 signed to buy recycled products and support recycling efforts.

Informational Message:
ENERGY STAR Change a Light, Change the World Campaign 2006
Need a Bright Idea? Here's One:
There is a National effort underway to Change a Light and Change the World with Energy Star, beginning on October 4, 2006 with the National Change a Light Day.

At the campaign's heart, the ENERGY STAR Change a Light pledge is a simple, but vital method of forming a community of inspired individuals across the nation, committing to help reduce the risks of global climate change and to save energy. The pledge asks the individual to change a light in his or her home to an energy-efficient (ENERGY STAR qualified) one.

It couldn't be easier to participate at www.naco.org/changealight. Employees are even then offered a $1.50 off coupon to purchase their light bulb from Office Depot if they so choose! Just indicate the county in which you live, along with the other information requested in the pledge. You will then be directed to the coupon site for the light bulb.

The goal is to encourage at least 500,000 people nationwide to take the ENERGY STAR Change a Light Pledge over the course of the campaign year.

This is an effort to help save energy, money, and reduce greenhouse emissions. Citizens across our nation are being encouraged to pledge to change one light at home to an energy-efficient model.

You typically spend more to light your home than you do to operate your refrigerator all year long. If you're still using traditional incandescent bulbs and inefficient fixtures, a lot of energy and money is being wasted. As we all are aware, pollution, albeit controlled, is an environmental side effect of energy generation. Reducing energy generation needs through conservation measures, thereby, minimizes emission levels of pollutants.

Please do your part to "Help Spare the Air!"

b. South Carolina Energy Office

The SC Energy Office released an Annual Report for 2005. Four items addressed in the report include:

1. The SC Energy Office promotes energy efficiency in government agencies and public schools by encouraging them to measure their energy use, analyze their building envelopes and mechanical systems, incorporate energy improvements

into their master plans, and implement energy-saving measures. The SC Energy Office also provides grants and loans to encourage installation of energy efficient equipment and capital improvements in state agencies.

2. The SC Energy Office promotes the use of renewable energies and sustainable development practices throughout the state to offset and replace traditional methods of energy generation and consumption and to mitigate environmental degradation and the loss of economic investment. Renewable technologies such as solar, biomass, wind, hydrogen, and geothermal energy sources can help South Carolina depend less and spend less on imported energy while improving the state's environment. A description of projects such as landfill gas to energy, solar technology, biomass renewable energy, green power and hydrogen.

3. Transportation – This section discusses the SC Energy Office role in Palmetto State Clean Fuels Coalition; Alternative Fuel Refueling Infrastructure; Alternative Fuel Vehicles; Take a Break from the Exhaust; and Truckstop Electrification**.**

4. Public Information – This section discusses the ways in which the SC Energy Office reaches a variety of audiences in the state.

c. Energy Wise

Pilot program sponsored by the Office of Economic Opportunity (OEO) on behalf of the South Carolina Governor's Office. Energy Wise is an adult energy education initiative coupled with low-cost energy efficiency measures and agency staff training. All program participants received energy education from a local community action agency as well as a kit of energy efficiency measures to install in their homes. Data was collected and analyzed to determine energy and cost savings generated by participants and the program. www.state.sc.us/energy/PDFs/AR_V_3.doc

e. Michelin Energy Reductions in Spartanburg, SC

Michelin Spartanburg Manufacturing in Spartanburg, SC plans to reduce water usage by four million gallons and its energy use by more than 40,000MM Btu's.

South Carolina State Measures							
A. Control Measure under Consideration	B. Summary Description of Measure	C. Program/Measure Status	D. Specific Implementation Date	E. VOC Reduction	F. NOx Reduction	G. Resources (FTE's, $$)	H. Additional Information
1. Outreach and Education							
a. Ozone forecast/outreach,education	To make South Carolinians aware of daily air quality forecasts for ozone season to alert sensitive groups and increase awareness to motivate more people towards lifestyle changes, especially on ozone action days.	Beginning with the 2006 ground-level ozone forecast season, the Department and the BAQ began participation with EnviroFlash, sponsored by the EPA with State and local air quality agencies. EnviroFlash provides important air quality information such as forecasts and action day notifications via email or pager notification. The email includes the same local air quality forecast information which is coordinated through the news media, like television and radio.	July 2004	directionally sound	directionally sound	n/a	
b. Developed Outreach Projects / Provided Outreach Materials	Gas Can Exchange	Anderson County organized and planned its own gas can exchange (09/10/2005) with some limited assistance from SCDHEC/BAQ staff. 200 new, environment friendly gas cans were distributed, and 79 used gas cans collected.	9/10/2005	355 lbs/year	n/a	n/a	Reductions reflected in Anderson County Progress Report for December 2005
	Car Care Awareness	The BAQ has drafted a protocol for hosting a Car Care Awareness Project.	April 2006	directionally sound	directionally sound		
	BAQ - Education and Outreach – School related activities	BAQ staff participated in a number of meetings and provided trainings at various meetings and schools. See Enclosure 4 Section 1 b. for specific events	2006	directionally sound	directionally sound		
c. Breathe Better @School Program	Program seeking reductions in air pollution around schools.	Working with a middle school in the Midlands area of Columbia, SCDHEC/BAQ staff helped initiate education materials to support no idling for school buses and car pool drivers. The school developed and implemented a no-idling policy for the grounds. This school was recognized by the Agency's "Champions of the Environment" program. Information is available at http://greenstepschools.com/page1.html	2005	directionally sound	directionally sound	n/a	Information is available at http://greenstepschools.com/page1.html
d. SC Educators trained with Action for a Cleaner Tomorrow	Environmental Education training for teachers	FY 05 saw 28 educators trained From July 2005 through June 2006 - there have been 26 trainings with 724 teachers trained.	yearly training opportunities	directionally sound	directionally sound	n/a	www.scdhec.net/recycle/html/action.html

e. Car Care Awareness Month Project	Increase the target audience's awareness about the importance of car maintenance in preserving good air quality	The Department and Richland and Lexington counties organized a vehicle maintenance check event in April. The State Museum, Ben Satcher Ford and Pope Davis Tires helped sponsor this free event on April 1, from 10 a.m. until 2 p.m. at the State Museum on Gervais Street. A team of certified technicians made suggestions for improving vehicle safety and gas mileage.	2006	n/a	n/a		
f. Earth Week 2006 Activities	Governor Mark Sanford proclaimed April 16 - 22, 2006 as Earth Week in South Carolina.	Earth Day 2006 included DHEC celebrating Earth Day with participating schools all around the state with help from volunteer staff. Plans for Earth Day 2007 are underway. An outline of the Department's Environmental Quality Control Earth Day committee's plans is available.	April 2004	directionally sound	directionally sound		
g. Small, Gas-powered Engine Exchange Project	Project targeting the exchange of gas-powered lawn mowers for electric mowers.	EAC contacts in Richland and Lexington Counties are continuing to plan for a small gas-powered lawn equipment exchange. A survey tool has been developed and is being utilized at various events held in these two counties to gauge citizen interest for such an event.	2006	directionally sound	directionally sound		
2. Commuting Reduction Programs							
a. Take A Break From The Exhaust (TABFTE)	Computer based Commuter program that encourages reductions by using a point system 2005 Ozone Season Reductions: 286,889 miles reduced 1,076 pounds of VOC's reduced 684 pounds of Nox reduced 2006 Ozone Season Reductions: 162,000 miles reduced 609 pounds of VOC's reduced 387 pounds of NOx reduced	2006 Participants Bureau of Air Quality Bureau of Water Bureau of Land and Waste Management South Carolina Energy Office Wisconsin Department of Natural Resources Lexington County Government Central Midlands Council of Governments Winthrop University - York County York Technical College Bowater - York County Citi Group - York County Springs Industries - York County	Yearly April - September	1,076 pounds 2006: 609 pounds	684 pounds 2006: 387 pounds	n/a	www.scdhec.gov/takeabreak/login.asp Total of 286,889 miles reduced

b. SmartRide Program	SC DOT sponsored program giving commuters mass transit service to/from Columbia area. During the 2005 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides were offered for those days designated as Ozone Action Days. The BAQ helped promote this effort by providing posters and public service announcements. In addition, the BAQ provided $500.00 to help off-set the cost. During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered.	Passenger Boardings: Total Camden – Columbia: November 2005 – May 2006 7,514 boardings Emissions Reductions (Kershaw, and Richland): 684 pounds NOx 943 pounds VOC During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered. December 2006: Passenger Boardings: Total Camden – Columbia (1): November 2005 – November 2006 14,301 boardings Passenger Boardings: Total Newberry – Columbia (2): November 2005 – October 2006 6,408 boardings	2004	943 lbs. Dec. 2006 (1) 2,152 pounds Dec. 2006 (2) 964 pounds	684 lbs. Dec. 2006 (1) 1,368 pounds Dec. 2006 (2) 613 pounds	n/a	www.scdot.org/getting/SmartRide/smartride.shtml
c. SIGIS carpool matching	The Department initiated a web-based, map based carpooling program in December 2005. The program facilitates ridesharing opportunities throughout the state by allowing interested employees to map their commute trip information and view the trips entered by other employees.	The program has undergone some recent refinements and a second agency-wide email notification about the program was sent on June 27, 2006. December 2006 total number of participants - 54 total of 34 employees added their names to the list	December 19, 2005	directionally sound	directionally sound	n/a	The program is available to 4,987 Department employees in eight environmental quality control offices, eight regional public heath offices, four Ocean and Coastal Resurces Management Offices, and eight office locations in Columbia. At this time there are approximately forty-five participants.
d. Best Workplace for Commuters	Bureau of Air Quality designated as a "Best Workplace for Commuters" Febuary 3, 2005. SCDHEC - Bureau of Air Quality currently holds the only designation in South Carolina	Completed Bureau continues to promote this program to EAC areas and within the Department. December 2006 -BAQ continues to maintain the "Best Workplaces for Commuters" (BWC) status	February 3, 2005	directionally sound	directionally sound	n/a	www.scdhec.gov/eqc/baq/html/bwc.htm www.commuterchoice.gov
e. Audioconferencing	Opportunity to hold meetings through audioconferencing or teleconferencingy. SCDHEC offers employees 3 choices based on the number of participants (up to 6, up to 30, or up to 144 lines)	SCDHEC employees as well as other state agency employees were faced with travel restrictions in the late summer months of 2005. Employees were notified via e-mail of the audioconferencing capability.	employees notified in 2005	directionally sound	directionally sound	n/a	

3. Ground Level Ozone Awareness Week Proclaimed	To increase awareness of ozone pollution on the lifestyle changes needed to see more reductions in ozone pollution levels	2006 - Governor Mark Sanford proclaimed May 1 - May 7, 2006 as Ozone Awareness Week. A survey tool for the 2006 Ozone Season was developed and sent to EAC contacts to: 1) assess their current initiatives, 2) determine their needs for education/information resources and activities and 3) identify how BAQ staff could best support their efforts. Contact was made by staff with all responders via email and/or telephone for follow-through.	2000 and continues yearly	directionally sound	directionally sound	n/a	See comments #7 and #8
4. Regulatory Initiatives							
a. Open Burning-ban household trash burning	Reduce pollution from unnecessary burning	April 14, 2005, DHEC issued a news release reminding citizens in SC of the revised regulations. The revision to the regulation was made in 2004 as a part of the EAC process to improve air quality. Additional news releases were sent out during the Fall to encourage citizens to use alternatives for disposing of yard trash. October 9, 2006, DHEC issued a news release encouraging citizens to reduce open burning of yard debris. Subsequent releases were included in Anderson and Greenville county local papers.	2005	698 TPY	147 TPY	n/a	Comments #6, and 7. See the December 2005 Progress Report Document for detailed information.
b. SC NOx Control Reg - new sources	Reduce new sources of Oxides of Nitrogen, a precursor to Ozone pollution	on-going	2005	n/a	2913 TPY	n/a	Comments #6, and 7 See the December 2005 Progress Report Document for detailed information.
5. Assist local areas in determining emission reductions	The Department supports local solutions to local problems. December 2006 - Effort continues and has been expanded as a result of the 2006 SC Early Action Compact Summit. BAQ staff will work with local government officials based on the SC COGs. Staff will assess the local planning activities and offer assistance as needed.	SC will continue to work with EPA to assist local areas in determining the emission reduction strategies that will assist the area in achieving emission reductions needed for maintaining the 8-hour ozone standard within their respective area. Dec. 2006 - Examples of this type of work has been the "Motor Vehicle Maintenance Project," expansion of the "Take a Break for the Exhaust Project," and the potential expansion for the "Breathe Better Air at School Project."	2003	directionally sound	directionally sound	n/a	See comments 1-8

6. Clean Air Initiatives for Gov Entities	Provide forum for Government Entities to meet and seek reductions in air pollution.	The utilization of the TABFTE continued to grow in 2006, with Winthrop University (York County), Central Midlands Council of Governments and York Technical College, Lexington County, Bowater, CitiGroup and Springs Industries. The SCDHEC/BAQ continues the partnership with the SCDOT and the Energy Office to promote ridership on the SmartRide Alternative Transportation project during Ground-level Ozone Season.	2003	directionally sound	directionally sound	n/a	Comment #7, CAIGE website www.scdhec.gov/eqc/baq/html/eap_caige.html
7. Smart Highways	Provide improvement in air quality by means of transportation planning	A checklist was developed to be used in transportation planning. The checklist will serves as an informational guideline to be used in reviewing Long Range Transportation Plans and Transportation Improvement Programs for adequacy of their documentation and will be used during long range transportation plan updates as required by 23 CFR 450.322.	2005	6,922 TPY	11,025 TPY	n/a	Reductions reflect difference between 2007 and 2002 for deferred nonattainment areas. Comment #6 A copy of the Smart Highways Checklist is attached in Appendix 12 of the December 2004 EAC SIP.
8. Other Point Source Reductions							
a. NOx reduction-large facilities	Reduce Oxides of Nitrogen As a part of their commitment to the EAC process, four facilities are voluntarily revising their permits to incorporate the following requirements as federally enforceable permit limits. These actions are permanent and quantifiable and would not have occurred had it not been for the EAC process. (See Executive Summary, Section D.4. and Appendix 10 of the December 2004 EAC SIP.)	1. Transco Pipeline - (Spartanburg County) - IC Engine Facility will begin early implementation, fully implemented by December 2005, of NOx emission reductions required by the Phase II of NOx SIP Call.	April 2005	n/a	2,561 tons	n/a	Comments #6, and 7
		2. International Paper - Eastover (Richland County) agreed to take a 1,000-tpy reduction in its permit limit.	April 2005	n/a	1,000 tons allowable NOx limit	n/a	Comments #6, and 7
		3. Duke Power - Lee Steam Station (Anderson County) – will install and operate advanced low NOx combustion controls on the smaller two coal-fired boilers (Units 1 and 2). The NOx limits on these units will be incorporated in the Title V permits and incorporated into the SIP. This is a $7 million investment that will limit NOx emissions to a rate of 0.27lbs/MMBtu.	April 2005	n/a	850 tons	n/a	Comments #6, and 7
		4. SCE&G Wateree - (Richland County) agreed to take Title V permit limits on coil fired boilers subject to the NOx Call Requirements.	April 2005	n/a	40% reduction	n/a	Comments #6, and 7

9. Palmetto State Clean Fuels Coalition Initiatives							
a. Biofuels Showcase	The Palmetto State Clean Fuels Coalition hosted a Biofuels Showcase on Friday, November 18, 2005. This event showcased ethanol and biodiesel. Invited speakers were from the National Ethanol Vehicle Coalition, National Biodiesel Board, and Georgia Power. The event also featured a Ride and Drive Event where participants had a chance to drive the alternative fuel vehicles (AFV's) on display.	Biofuels Showcase was held on November 18, 2005.	Nov. 18, 2005	directionally sound	directionally sound	n/a	www.palmettocleanfuels.org/
b. Billion Gallon Celebration	Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvements, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges.	On October 14, 2005, the Palmetto State Clean Fuels Coalition hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.	Oct. 14, 2005	directionally sound	directionally sound	n/a	www.palmettocleanfuels.org/
c. Ethanol Refueling Infrastructure	There are currently 20 publicly accessible E85 refueling infrastructure stations in the Columbia, Greenville, and Aiken areas	· Currently 33 public E85 refueling sites in SC · In addition to E85, There are currently 14 biodiesel public sites in SC. December 2006 - 40 public E85 and 42 public B20 refueling sites in SC. Two sites, one York Co. will be opening soon. Recent funding for 2 additional E85 sites and a B20 site in the Rock Hill area.	October, 2001	directionally sound	directionally sound	n/a	See comments 1-8 www.palmettocleanfuels.org/
National AFV Day Odyssey: Showcasing Cleaner More Energy-Efficient Choices in Transportation	Public event enables Americans to learn about the benefits of alternative fuel and hybrid electric cars, vans, trucks, and buses.	October 10, 2006 - hosted by York Technical College.					
Southeastern Alternative Fuels Task Force-Workshop	BAQ and Wendy Bell/Chantal Fryer participated in and helped to support the planning and implementation of this workshop held in Tennessee, June 6-7, 2005.	Website for the SEAFTF is: http://www.sealtfuels.org/. Evaluation results for this workshop is available.	June 6-7, 2005	directionally sound	directionally sound	n/a	
10. Tree City USA	Tree City USA encourages municipalities and areas to have strong urban forestry programs. BAQ sent an email to all 45 EAC areas in SC asking the counties to encourage municipalities within their county to help participate in this program that can benefit air quality.	June 2006 - Currently there are 39 designated areas in SC - this is an increase of 2 from the December 2005 Progress Report December 2006 - 40 designated areas in SC	2005	directionally sound	directionally sound	n/a	www.arborday.org/programs/treecity/map.cfm

11. Energy Efficiency							
a. Energy Star	SCDHEC BAQ experienced an estimated 28% energy savings in 2005 using the computer monitor power management software.	Completed. BAQ Information Technology staff have completed the necessary installation on the respective servers, and the Bureau of Water and Bureau of Land & Waste Management will be participating. This will increase the number of monitors from 150 to over 500. Oct 2006 - BAQ promoted Change a Light and Change the World with Energy Star to DHEC staff via email Nov. 2006 - DHEC staff created and distributed Energy Star pledge postcards at the SC Science Council Conference. 54 pledge cards were returned to replace over 200 incandescent bulbs with compact fluorescents; cards were also distributed to 5th graders at Rosewood Elementary School	January 2005 - September 2005	directionally sound	directionally sound	SCDHEC received $5,000 in additional Section 105 grant monies to promote the ENERGY STAR Energy Benchmarking program.	During the reporting period, SCDHEC/BAQ staff met with other state agencies to provide information about Energy Star. These agencies include the SC Energy Office, SC Department of Transportation, and the SC Department of Education. Staff also provided flyers and PowerPoint presentations to EAC counties to demonstrate the benefits of Energy Star to local governments. Future plans include installing Energy Star in other areas of SCDHEC and encourage other state agencies to install Energy Star. Outreach materials and presentations will continue to be made available.
b. SC Energy Office	The SC Energy Office released an Annual Report for 2005. Four items addressed in the report include: 1. The SC Energy Office promotes energy efficiency in government agencies and public schools 2. The SC Energy Office promotes the use of renewable energies and sustainable development practices throughout the state 3. Transportation – This section discusses the SC Energy Office role in Palmetto State Clean Fuels Coalition; Alternative Fuel Refueling Infrastructure; Alternative Fuel Vehicles; Take a Break from the Exhaust; and Truckstop Electrification. 4. Public Information – This section discusses the ways in which the SC Energy Office reaches a variety of audiences in the state.		2005	directionally sound	directionally sound	n/a	For additional information….www.state.sc.us/energy/
c. Energy Wise	Pilot program sponsored by the Office of Economic Opportunity (OEO) on behalf of the South Carolina Governor's Office. Energy Wise is an adult energy education initiative coupled with low-cost energy efficiency measures and agency staff training. All program participants received energy education from a local community action agency as well as a kit of energy efficiency measures to install in their homes. Data was collected and analyzed to determine energy and cost savings generated by participants and the program as a whole. www.state.sc.us/energy/PDFs/AR_V_3.doc		2005	directionally sound	directionally sound	n/a	For additional information….www.state.sc.us/energy/

d. Michelin Energy Reductions in Spartanburg, SC	Michelin Spartanburg Manufacturing in Spartanburg, SC plans to reduce water usage by four million gallons and its energy use by more than 40,000MM Btu's.		2005	directionally sound	directionally sound	n/a	
12. School Bus Retrofit							
a. Santee Cooper SEP	Provide installation and maintenance for approximately 157 diesel particulate filters for school buses in the non-attainment and deferred counties	Requests for proposals have been submitted but uncertainty of availability of ULSD will delay the project until June 2007.	2006	2669 lbs/yr	n/a	$1,000,000.00	
b. Weyerheuseur and Duke Energy Project	Provide installation and maintenance for approximately 10 diesel oxidation catalysts and crankcase filtration systems for school buses in Marlboro and Oconee counties.	Application and implementation is delayed until January 2006 pending announcements of the CSBUSA grant recipients.	2006	n/a		$18,000.00	
c. Clean School Bus USA Grant	The Department of Education has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles. The benefits from these funding sources will be distributed throughout the state.		June 2006	n/a		$499,099.00	

Comments: Modeling for 2007shows attainment of the 8-hour Ozone standard without including measures beyond national and regional measures already finalized. The years 2012 and 2017 also show attainment.

In accordance with the Protocol for Early Action Compacts, after all Federal and State controls were accounted for in the modeling, it was determined that local controls were not necessary to demonstrate attainment of the 8-hour ozone standard. Measures were submitted by the local areas to show their continued support and commitment to the EAC process. (second) this activity is directionally sound and should provide air quality benefits and in some cases measurable results. The progress toward implementing this activity and the benefits derived will be documentd as a part of the ongoing reporting requirements.

2. December 2003 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac.html - additional information provided by the county to include "findings", "advantages/disadvantages", "recommendations", "costs", etc....

3. March 2004 - Local Early Action Plan - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0304.asp

4. June 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0604.asp

5. December 2004 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_1204.asp

6. December 2004 - SC EAC SIP - Including Appendix 8 (Local Early Action Plans and the Air Quality Awareness and Improvement Policy) and Appendix 16 (County Level Emission Reductions and Descriptions for the Ozone EAC Areas) - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

7. April 20, 2005 - Correspondence to Mr. Palmer including clarifying supplemental information to the EAC SIP submittal of December 2004. - See - http://www.scdhec.gov/eqc/baq/html/eap_sip.html

8. June 2005 - Progress Report - See - http://www.scdhec.gov/eqc/baq/html/eap_dpr_eac_0605.asp

Enclosure 5

December 2006 Progress Report Document
Federal Facility Survey Results

D H E C

PROMOTE PROTECT PROSPER

Enclosure 5
South Carolina's 8 hour Ozone Early Action Compact
Federal Facility Survey Results
December 2006

In May of 2006, the Department sent nine federal facilities located in South Carolina a survey aimed at gathering information on what environmental efforts are planned or currently taking place at federal facilities. So far six federal facilities have responded and the results of those surveys follow.

Aiken County Savannah River Site (SRS) This federal facility has made a commitment to convert its fleet to run on renewable fuels. In recent years the fleet has replaced more than 521 gasolinefueled vehicles with flexfuel, ethanol (E85) vehicles. To ensure adequate refueling infrastructure, two E85 stations were constructed on the site, and electronic card readers were programmed to ensure that flexfuel vehicles only be fueled with E85. Since the stations were opened in FY 2000, they have dispensed 356,943 gallons of ethanol fuel. In its pledge to use renewable fuels, SRS also began to operate all dieselpowered vehicles and stationary equipment (such as generators) on B
20. Since the biodiesel program began in FY 2001, more than 480,000 gallons of B20 have been consumed by vehicles and equipment at Savannah River and this site generated 136 of the 158 biodieseluse credits earned by the Department in FY 2001.
http://www.eere.energy.gov/vehiclesandfuels/epact/pdfs/2001_doe_fleet_afv_report.pdf

SRS has long been a leader in alternative fuel use, using between 150,000 and 200,000 Gasoline Gallon Equivalents annually since FY 2001.
http://www.eere.energy.gov/vehiclesandfuels/epact/pdfs/2005_doe_afv_report.pdf

SRS has replaced almost 521 gasoline fueled vehicles with flexfuel, ethanol vehicles, including 136 vehicles (98 percent of covered acquisitions) in FY 2003 alone, to achieve 131 percent EPAct compliance. This commitment has resulted in the fleet replacing over 30 percent of its FY 2003 covered petroleum use with E85.
http://www.eere.energy.gov/vehiclesandfuels/epact/pdfs/2003_doe_afv_report.pdf

Aiken County SRS U.S. Department of Energy (survey summary)
The SRS has an inhouse energy conservation program that implements measures to meet the energy efficiency goals established by the Department of Energy (DOE) and Executive Order.

There are currently 521 Alternative Fuel Vehicles (AFV) in the fleet. The total number of vehicles in the fleet is 1055. Four AFVs will be added to the fleet in FY06. SRS will maintain a relative proportion of AFVs in fleet in FY07 and FY08. There are two E85 stations at SRS. SRS used 292,000 gallons of E85 in 2005.
The SRS is currently in the planning stages of a new project to replace the coal-fired AArea Powerhouse with a new, smaller plant that would use alternative fuel (wood products/biomass) for the primary boiler and fuel oil for the backup boiler. The benefits of the project are that it will greatly reduce emissions and meet all Maximum Achievable Control Technology (MACT) requirements that have been mandated by the EPA. Construction of the new plant is scheduled to start in February of 2007, with startup in April of 2008.

SRS has an extensive car pool network where employees can hook up electronically to find individuals seeking to car pool throughout the Aiken/Augusta area.

Energy Star programs have been implemented at SRS. Most Site computers are leased and the lease contract specifically states that all computers must be Energy Star compliant. In 2005, an initiative was implemented to obtain an Energy Star rating for a 3story 100,000 square foot building located onsite. This building was chosen because a building control system was already installed. Control system upgrades and enhancements were made so the building chilled water pumps and air handlers could be monitored and controlled. After monitoring metering and trending data system adjustments were made and the pumps and air handling units were placed in shutdown modes for 10hours each day without compromising personnel comfort. First year energy savings are estimated to be $20,497.00 which will be validated in 2006 following the obtainment of 11months of system monitoring data.

SRS implemented two energy retrofit programs in 2005. Boiler controls for the #2 AArea boiler were upgraded from old pneumatic controls to new stateoftheart multiloop digital controls. The installation for the new controls saves approximately $200,000/year. In 2005, SRS implemented an ultraviolet lighting improvement project at the Central Sanitary Waste Treatment Facility that will reduce the number of UV lamps needed. UV lighting is used to disinfect the wastewater stream. The project will be completed in 2006 with savings of over $10,000/year and a simple payback of about 4years.

SRS uses small photovoltaic arrays to power traffic signals, railroad crossing signals and environmental monitoring stations primarily for convenience.

A SRS Peak Alert Program checklist has been issued to all SRS employees during 2005. Peak alerts are announced during the summer months requesting energy conservation on those Peak Alert checklist items, e.g., adjusting thermostats and turning off lights.

Areas of the site are planted with species of trees best suited to grow in the soil being reforested. Trees are not being planted as part of the air quality program. It is estimated that SRS planted 800,000 trees during 2005.

Richland County Fort Jackson
Fort Jackson follows the Comprehensive Energy Conservation Policy 4207 (regulation) and the Installation Management Agency (IMA) Southeast Region Energy Program's Long Range Energy Management Plan http://www.pnl.gov/imaseroenergy/
Fort Jackson's fleet is 22.9 percent alternative fuel vehicles. There are 137 alternative fuel vehicles in the 598 vehicle fleet. Fort Jackson plans to purchase as many alternative fuel vehicles as they are able when they become available from the manufacturer. One E85 station is planned for installation in 2006 and work continues on bringing Biodiesel to the facility. There are future plans for diesel retrofitting of the bus system at this facility.

Energy Star programs include electronic devices and appliances as well as a Green Procurement program. Energy efficiency retrofitting programs include converting traffic lights to LED, installing geothermal HVAC systems in 1275 family housing units, a central energy plant cooling system, and demand limiting control systems. Fort Jackson will implement $20mm of energy conservation projects within 3 years beginning with FY 2007.

"A 2.25Mgal CWS cooling system has been in operation at Central Energy Plant No. 2 at Fort Jackson since May 1996. The measured system performance includes a shift of 3,450 kW from onpeak to offpeak hours, resulting in annual electrical savings of $430,000 during the 199697 year. Central Energy Plant No. 2 at Fort Jackson, designed by the U.S. Army Corps of Engineers, has been designated as a 1997 Federal Energy Saver Showcase facility."
http://www.erdc.usace.army.mil/pls/erdcpub/!www_fact_sheet.CAPABILITY_PAGE?ps_capability_numb=46496&tmp_Main_Topic=&page=All

Fort Jackson plans to subscribe to the Enviroflash Ozone forecast. Mixed land use and landscaping requirements are currently practiced at Fort Jackson. They also have a very active reforestation and forest management program. Fort Jackson has upgraded the Palmetto Trail across the installation. They have installed and upgraded numerous walking trails on the post by paving paths and facilitated their use by installing picnic shelters and publishing maps.

Charleston County Naval Weapons Station Charleston
Air Quality: The Navy's goal is to maintain compliance with existing air quality standards. Emission sources are to be maintained in good operating condition to minimize the emission of air pollution. Alternative fuel sources are pursued when possible to reduce the overall emissions of pollutants.

Energy Conservation: The Navy's goal is to reduce energy consumption by 2

percent per year through 2010.

Currently the Naval Weapons Station has 34 E85/gas vehicles, 155 biodiesel, 21 CNG/gas, and 7 gas micro trucks. (These are small engine trucks used primarily on property with limited use away from immediate tenant command.) There are 384 total vehicles in the fleet. The Navy requires that alternative fuel equipment be purchased if available whenever new equipment is ordered. There is one biodiesel station at this facility and 96,000 gallons of B20 blend is used annually. Bus service is provided to tenant commands on an as needed basis. The buses are used in support of official duties.

New and replacement appliances are required to be Energy Star certified. Energy retrofits have included installation of: programmable thermostats, low water use toilets and showers, electronic ballasted fluorescent fixtures, interior storm windows, replacement of old AC units, vending machine motion sensors, relamping incandescent lights fixtures with fluorescent lamps, and adding ceiling insulation. Solar panels are used to power certain river navigation lights along the Cooper River. The power consumption is not measured.

The facility has an Energy Conservation Council that meets quarterly. Each building has a person designated as the Energy Monitor that is responsible to reduce energy consumption at their building.

This facility practices mixed land use and infilling. Remote grassy areas are cut on a limited basis. Trees are planted routinely. About 250 trees are planted annually for Tree City USA recertification. The facility added 0.45 miles of Hiking/biking/riding trials in the past three years.

Retrofitted lighting, HVAC, controls, motors, windows and water fixture in 53 buildings to improve energy use. Project began in 2000, and is complete.

The government plans to retrofit an additional 72 buildings pending completion of the Base Realignment and Closure (BRAC) process.

The payback period for implementation of the energy conservation is estimate at less than 10 years.

Energy conservation projects begun this year are:

Install programmable thermostats and direct digital control in 22 buildings.

Install Variable Frequency Drive controller and motor in administrative building.

Install Air Curtains for rollup doors in a specific heated/cooled warehouse.

Charleston County Charleston Air Force Base

Uses $60,000 gal/yr of Biodiesel at government fueling station for government diesel vehicles.

Energy Saving Performance Contract Initiated in FY04 – Renewable energy geothermal ground source heat pump systems and decentralization of Air force Base central steam plant. Removes base steam plant and replaces with smaller natural gas boilers and geothermal heat. Base steam plant currently major source or potential air emissions as is capable of burning No. 6 fuel oil. Changed the cleaner used to wash aircraft in Aircraft WAshrack from PD680 (with fairly high VOC content) to new produce that is VOCfree to eliminate a major source of air pollution.

Tree City USA recipient for each of the last 10 years.

The Base added approximately 2.5 miles of jogging trails and upgraded their 0.5 mile nature trail with boardwalks and bike racks.

Sumter County Shaw Air Force Base (AFB)
This AFB's goal is to reduce energy consumption by 2 percent from FY03 baseline. There are currently 288 biodiesel Government Owned Vehicles and 21 E85 Government owned vehicles. There are also 28 E85 General Services Administration government leased vehicles. These vehicles are all used by civilian workers. E85 is not used because there is no available source of E85. Shaw AFB plans to purchase more E85 vehicles. Shaw AFB used 54,000 gallons of B20 in 2005. Shaw AFB provides a base shuttle bus for military personnel.

Shaw AFB, operating under the GSA Area Wide Utilities Energy Services Contract (UESC) and through its partnership with Energy Systems Group (ESG), has established a successful program to address energy reduction and operations improvements to over 158 buildings and more than 1.9 million square feet of facilities without impacting existing budgets and base operations.

In 2001, ESG was selected to design and implement energy efficiency upgrades to base facilities and infrastructure through lighting improvements, HVAC enhancements, steam system and boiler upgrades. This first phase of work provided over $500,000 in annual energy savings that: Financed the entire project Improved energy security and efficiency Reduced both energy and O&M costs Established a comprehensive strategy that addressed future energy and equipment needs

In December 2005, Shaw AFB and ESG proceeded with its next phase of energy conservation work by implementing new lighting technologies and major mechanical system upgrades that will provide an additional $200,000+ in annual energy savings. This current phase of work is scheduled to be completed in September 2006.

As an added benefit, ESG's program has helped Shaw AFB leverage energy efficiency to reduce environmental emissions and increase air quality without spending any additional funds. Based upon this successful partnership with ESG,

additional phases of energy conservation work are expected.

Shaw AFB will subscribe to the Ozone forecast. The base posts/distributes onsite awareness materials. The base has added 1.5 miles to the outdoor recreation trail and 1.25 miles to the trail at Chapel Pond.
Shaw AFB has reduced VOC's from 703 tons/yr in 1993 to 10 tons/yr in 2004.

Beaufort County Marine Air Corp Station Beaufort (MCAS)

Energy conservation goal for MCAS Beaufort was to reduce energy consumption per square foot to 35 percent below the FY85 baseline. The new goal is to reduce energy consumption even further to 20 percent below the FY2003 baseline.

MCAS Beaufort has 20 ethanol (E85) capable and 91 biodiesel vehicles out of a total of 265 vehicles in their fleet. There are no alternative fuels available for these vehicles. As vehicles are replaced as dictated in the GSA replacement cycle, alternative fuel vehicles are being purchased.

Energy Star programs have been implemented on the computer systems. 1236 water source heat pumps were installed in the military housing which has reduced energy consumption by 30 percent. Microturbins were installed to replace the central boiler plant. MCAS Beaufort installed new energy efficient chilled water plant and an energy management system for peak load reduction. There are also 38 solar powered security lights.

This facility currently subscribes to the Ozone forecast. Awareness materials are posted onsite through the building energy monitoring program which assigns personnel to daily monitor the energy conservation practices within every Air Station building. Awareness materials are distributed offsite during the Earth Day Fair.

Landscaping requirements include Zero Scape no extra watering required. Pedestrian walk trails were extended on Station during the past 3 years.

MCAS Beaufort follows Air Station Order (ASO) 11000.2A. This order details many energy saving techniques including:

Walk when time, distance, weather conditions and purpose of the trip will allow.

Do not allow engines to idle for longer than a minute, except in emergencies.

Encourage car pools.