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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.

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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.

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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

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Enclosure 1

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

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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

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South Carolina Department of Health and Environmental Control

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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

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South Carolina Department of Health and Environmental Control

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Enclosure 2

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

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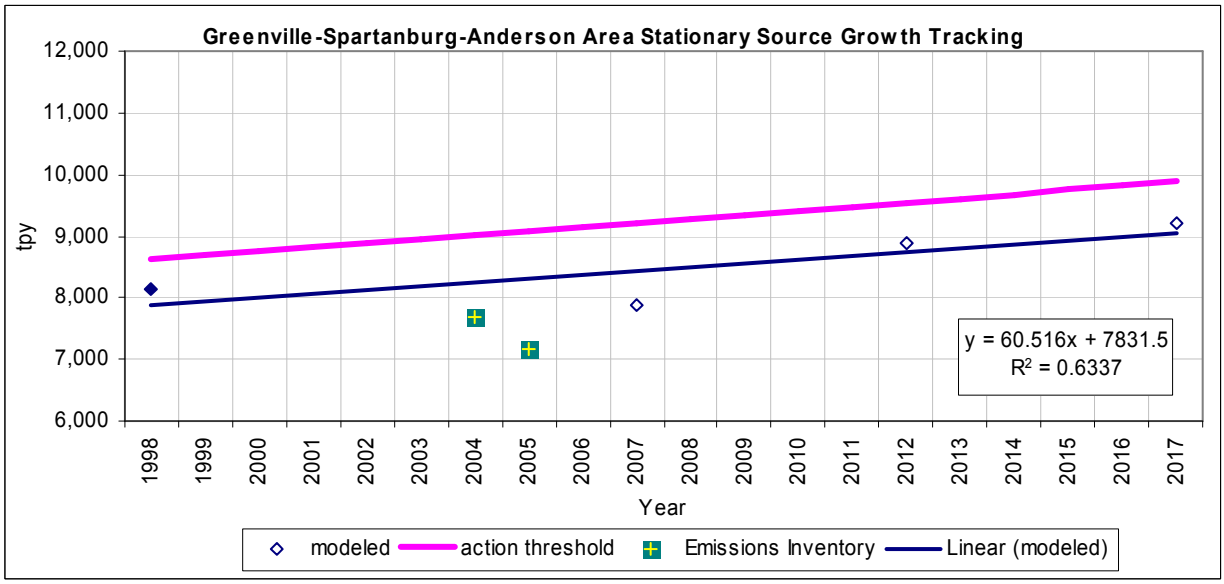
Enclosure 2
South Carolina's Ozone Early Action Compact
December 2006 Progress Report
Comprehensive Maintenance Plan

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.



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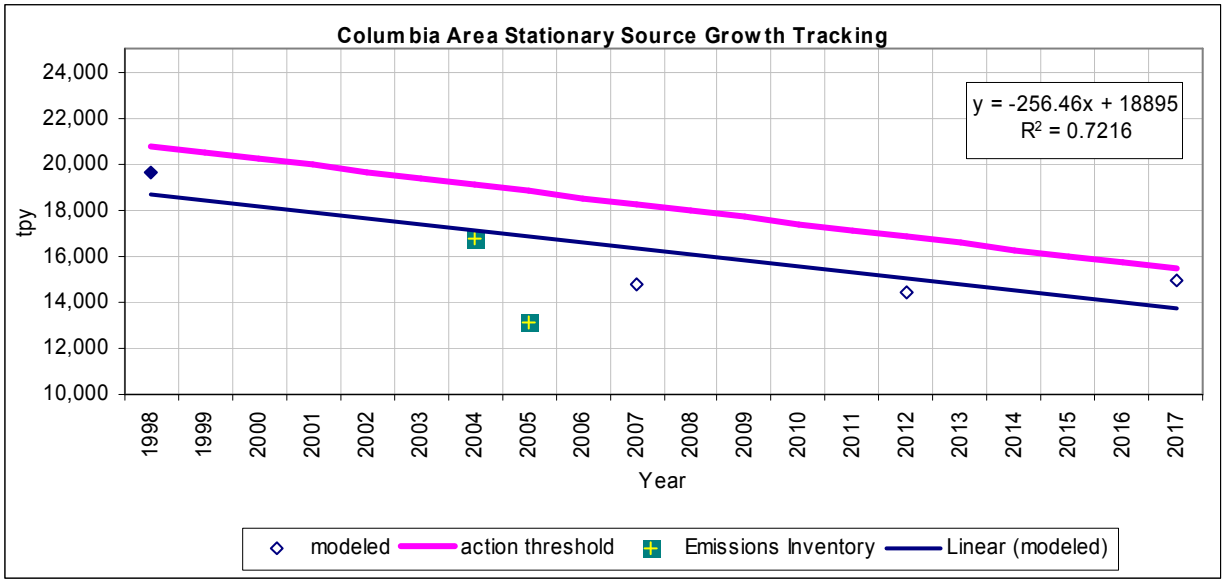
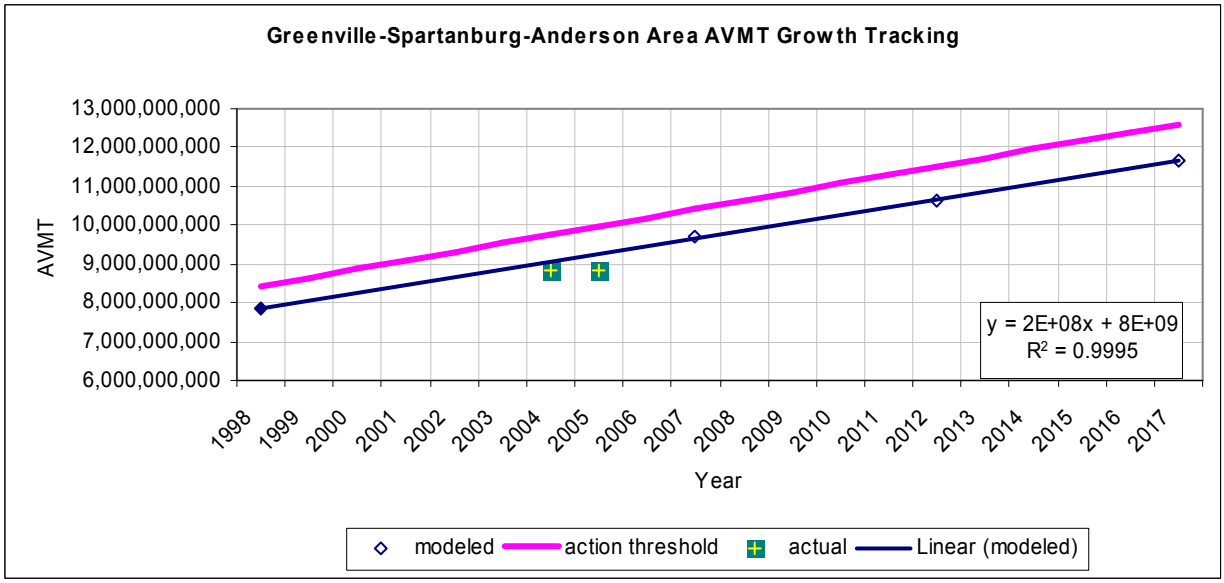


The most recent annual VMT (2005) was compared with the projected VMT from the ozone modeling analysis with a base year of 1998. The VMT for analysis years 1998, 2007, 2012 and 2017 for Greenville, Spartanburg and Anderson Counties was combined and a trend line established. The actual 2004 and 2005 VMT 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.



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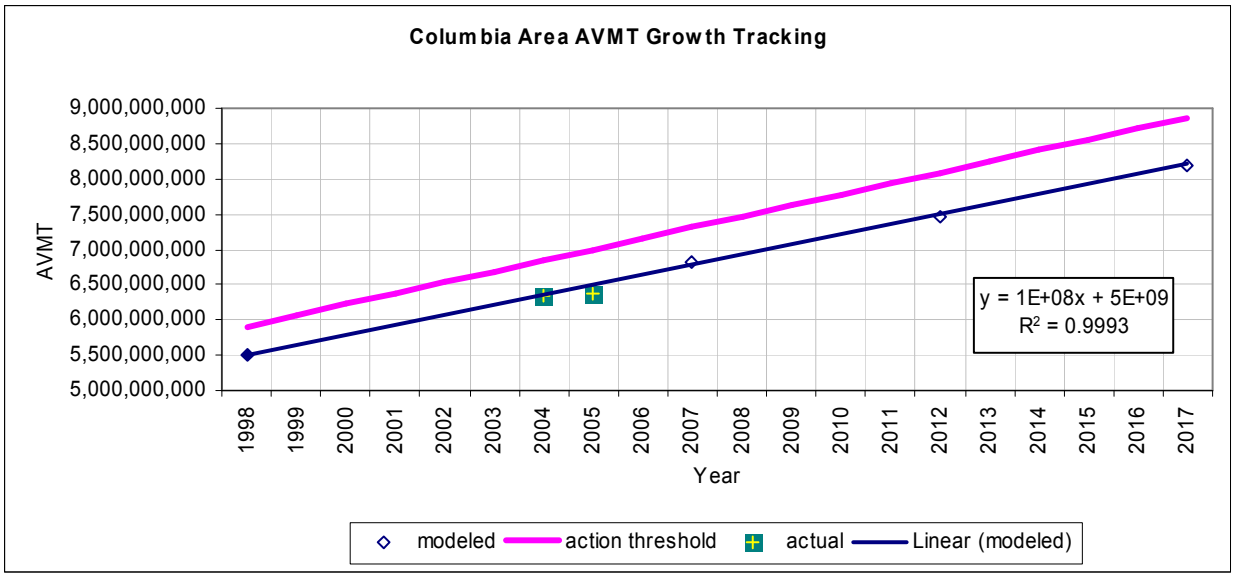

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Attachment 6

Berkeley-Charleston-Dorchester Area

December 2006 EAC Progress Reports

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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
B-C-D, SC (Designated - Attainment)							
DECEMBER 2006 BERKELEY 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.							
Awareness	Joined and currently participate in the SC Early Action Plan for 8-hour ozone standard	continuing	Dec-02	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness	Meet with SCDHEC staff and County staff to collect and disseminate information including ideas and suggestions that will attempt to maintain current attainment for County. Forwarded information to municipalities, the Water and Sanitation Authority and the School District within the County.	have not had any meetings in 2005	June and October 2003, February 2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness	Information for public available with applicable web links on the County's website	continuing	Jun-03	n/a directionally sound	n/a directionally sound	n/a	
Awareness - Energy	Current policy of turning off lights, computers and HVAC units daily of County equipment in accordance with Energy Management Guidelines.	continuing	Jun-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness - Energy	Best management practices in accordance with Energy Management Guidelines (HVAC control systems)	continuing	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness - Energy	Provide literature to County employees on how individually, people can improve air quality	as available	Spring, Fall 2005	n/a directionally sound	n/a directionally sound	n/a	
Ozone Action Coordinator	Designated County staff person responsible for ozone education/outreach and dissemination of ozone standard.	in place	Mar-03	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Land Use	Zoning ordinance requires landscaped buffers between unlike uses, including trees and shrubs	implemented	Aug .-01 and Nov. -04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Land Use	Endorse cooperative initiative between County, Conservation District and Conservation Trust of "Greenspace Initiative" that promotes the protection and conservation of recommended areas on a strictly voluntary basis.	continuing	Sep-00	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Conservation	Implement "Greenspace Initiative"; promote the protection and conservation of properties in accordance with the plan established in September 2000. Currently, 44% of the County is "green/blue space" (33% land, 11% water) in conservation.	continuing	Sep-00	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Land Use	Encourage the development of non polluting industries	continuing	As directionally sound for betterment of County	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Conservation	Promote and encourage increased activity of recycling goods (plastics, metal, glass, etc.) through the Berkeley County Water & Sanitation Authority	conitnuing	Specific date unknown - implemented	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Conservation	Berkeley County Water & Sanitation Authority actively involved in composting and educational programs for backyard composting.	continuing	Specific date unknown - implemented	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Conservation	Berkeley County Water & Sanitation Authority installed passive gas vents during the closure of the County's "Pre-Subtitle D Landfill".	implemented	Prior to 2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mobile Sources	Replaced gasoline golf cart with electric model.	will continue to consider regarding costs	June 24, 2005	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mobile Sources	Purchased two replacement vehicles for Sheriff's department with Flex Fuel (ethanol mixture or regular fuel) alternative.		Feb-04	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mobile Sources	Operate on scheduled maintenance of vehicles to ensure best management practices are being utilized to decrease the buildup of pollutants in engines.	conitnuing	Specific date unknown - implemented	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mobile Sources	Support staggered work schedules to mitigate commuter traffic congestion and provide citizen service	will consider as information available	When reasonably cost effective for County	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness - Energy	Purchase "Green Power"	will consider when reasonably cost effective	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness - Energy	Participate in "Rebuild South Carolina" (County has participated in the past)	will consider when reasonably cost effective	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Awareness- Energy	Install solar heat system in new County facilities or those to be renovated.	will consider when reasonably cost effective	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mobile Sources	Consider continued replacement of gasoline golf carts with electric golf carts (current concern is payload capacity)	will consider when reasonably cost effective	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Mobile Sources	Consider purchase of hybrid vehicles for departments that primarily utilize their vehicles for traveling on highways.	will consider when reasonably cost effective AND availability allows	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3

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
Mobile Sources	Support development of park and ride facilities within the tri-county region	will consider when reasonably cost effective	When reasonably cost effective	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Conservation	Extending current pilot program for the installation of flares (to burn and neutralize any potentially harmful emissions) at the closed “Pre-Subtitle D Landfill” and if successful, additional flares will be purchased and installed.	continuing	When program is determined and reasonably cost effective for expansion of program	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Conservation	Berkeley County Water & Sanitation Authority in preliminary planning stages of long range program for the installation of a landfill gas extraction system including a gas to energy (LFGTE) facility which would also help minimize potentially harmful emissions at its operational municipal solid waste landfill.	continuing planning efforts	When reasonably cost effective	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
DECEMBER 2006 CHARLESTON 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.							
Appoint an Ozone Action Coordinator to alert media and public on high ozone days.	Larry Hodge, Risk Manager, monitors DHEC website, and coordinates with County Public Information Office to notify county departments when local levels are elevated; and with Radio Communication Manager to alert field employees. (Note: currently DHEC does not do forecasts for the Lowcountry.) Information also is included on County website, for public access. When DHEC alerts are available for this area, PIO will coordinate media notifications. Ozone action alerts will be posted to the Amber Alert System, if local levels reach the warning or action stage.	No ozone forecasts provided for Charleston County	Begun with 2003 Forecast Season	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Add Ozone Alert to Emergency Information on County website.	Public Information Office has added Ozone Danger information to Emergency Information section of County web-site (www.charlestoncounty.org). Information links to DHEC Spare the Air Ozone Forecast and to EPA informational sites. Ozone reduction measures and information are included.		2003 Forecast Season - completed	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Increase opportunity for residents and businesses to conduct electronic transactions with the county, eliminating drive time.	The county website allows residents to conduct a great deal of County business on-line, thus eliminating vehicle trips to County office locations. E-business opportunities are being expanded constantly.	Now available: research property records, deeds/mortgages, tax records, court records, marriage license, estate/wills; pay taxes on-line; request building inspection; submit public work order request; apply for jobs; renew a business license; obtain county bid solicitations, and more. Links to hundreds of related websites.	Initial phase completed; on-line services added monthly	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Promulgate list of strategies to local government entities.	The County will share its strategies with local government entities within the county to promote regional efforts and encourage similar actions at the municipal level		FY 2004	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Develop and implement an ozone public education plan.	Charleston County, through its Public Information Office and Safety and Risk Management Office, has implemented a comprehensive public information campaign related to health impacts of ground-level ozone, and strategies to reduce ozone producing emissions. This addresses best driving practices, fueling, vehicle maintenance, lawn mowing, consumer education, healthy lifestyle and environmental changes, and other measures. If funding or private partnerships are identified, programs to test gas caps and provide replacements, or others, will be implemented. Information is disseminated through newsletters, website, public service announcements and public events, and at county facilities.	Distributed material made available by SCDHEC related to Driving Smarter and Things You Can Do For Cleaner Air; also Car Care Awareness, and seasonal bookmarks and flyers. Material provided to County employees, and to the public at the information desk of the Public Services Building. Participated in Bike to Work Week in May 2006. Coordinated an Earth Day Festival with other environmental agencies in May 2006. Made Energy Star Change a Light pledge information available to County employees during September, 2006. Two employees from our Fleet Management and Planning offices attended the 2006 SC EAC Summit in Columbia in August, 2006, and returned with helpful information on energy conservation, land use planning, and alternative fuels.	Efforts begun in 2004	n/a directionally sound	n/a directionally sound	n/a	
Expand use of hybrid cars.	Charleston County currently has one hybrid car in its fleet, a Honda Civic used by the Solicitor (1.3-liter 4-cylinder gasoline engine with a 10-kilowatt electric motor). Fuel efficiency is estimated at 46/51 city/highway miles per gallon. As funding allows, additional hybrid vehicles will be added to the fleet where use and mileage history provide a suitable fit. It is recognized such replacement would impact four cost centers: replacement, training, shop equipment and operating (parts) costs. Implementation will be dependent on commitment to and availability of funding.	In FY 2006 one additional hybrid Honda Civic was purchased for the Solicitor's Office. A **barrier** to growing our hybrid fleet is limited availability and omission of these vehicles on state procurement contracts. In April 2006 Charleston County submitted a grant application to the SC Budget and Control Board for sufficient funding to cover the cost difference between purchasing 15 standard gasoline-fueled vehicles on state contract, and the cost of 15 hybrid mid-size sedans. If funding is received, these hybrids will be provided to high-mileage users within the County work-force. (No grant funding received as of 12/06.) It is noted that the Ford Escape Hybrid is now available on state contract. Vehicle requests for FY08 will be evaluated to determine if this vehicle would be suitable for requested use.	FY2005	n/a directionally sound	n/a directionally sound	n/a	
Implement criteria to evaluate departmental vehicle requests.	Charleston County has developed criteria to evaluate vehicle requests, which include consideration of miles driven, and industry standards based on user requirements. The goal is to 'right-size' the county fleet, considering both the number of vehicles and the size and/or type of vehicle.	Criteria is in place and was utilized to evaluate requests for FY'07. For FY'06, 'pools' of multi-user vehicles replaced individually assigned vehicles; and home garaging has been restricted.	FY2005	n/a directionally sound	n/a directionally sound	n/a	
Include vehicle fuel economy and emission ratings in procurement	Fuel efficiency and emission ratings are included in specifications for procurement of vehicles.		FY2005	n/a directionally sound	n/a directionally sound	n/a	
Purchase vehicles and light trucks to meet new EPA standards on emissions.	The EPA has announced more protective tailpipe emission standards for all passenger vehicles, including sport utility vehicles, vans and pick-up trucks. The agency also has developed lower standards for sulfur in gasoline which will require passenger vehicles to be significantly cleaner. Both took effect beginning in 2004. Charleston County is complying with the new standards as they are phased in and as we replace vehicles.	Fleet focus is on flexible-fuel vehicles, to be staged to use ethanol when available (see below).	FY2004	n/a directionally sound	n/a directionally sound	n/a	
Purchase replacement diesel heavy-duty highway trucks, as needed, which comply with most recent EPA standards for PM and NOx emissions, and which utilize low sulfur diesel fuel.	The EPA has developed heavy-duty engine and vehicle emission standards and highway diesel fuel sulfur control requirements which took effect with the vehicle model year 2007. As replacements are needed, Charleston County is complying with the EPA requirements.		FY2004	n/a directionally sound	n/a directionally sound	n/a	
To meet EPA requirements, convert to use of low-sulfur gasoline.	The County has run its heavy equipment on low sulfur diesel fuel since it entered the supply stream. We elected to maintain only one fuel type rather than risk putting the incorrect fuel in the highway trucks.	As of October 1, 2006, the County has converted to exclusive use of Ultra Low Sulfur Diesel Fuel for all its diesel engines in vehicles and equipment.	FY2004	n/a directionally sound	n/a directionally sound	n/a	
Consider pilot/test of bio-diesel fuel for limited vehicle use.	In conjunction with area fleets and diesel users (ex.: CARTA, school district), County fleet staff may test a B20 bio-diesel fuel in designated vehicles. A tank for joint use would be established in the Azalea Road area, filled by a local supplier with a soy-diesel mix. Cost subsidies are being investigated to promote this project. It is recognized that bio-diesel fuels increase lubricity and engine efficiency; and also lower particulate matter although increasing NOx emissions.	In April 2006 Charleston County submitted a grant request to the SC Budget and Control Board for funding to create an above-ground tank and infrastructure to be dedicated to biodiesel/low sulfur diesel fuel; and also for supplemental funding for the higher cost of biodiesel in place of the 620,000 gallons of diesel fuel used by the County yearly. July 2006 newspapers reported that Southeast BioDiesel is developing a biofuels processing plant on the former Navy base in N.Charleston, to convert old vegetable oil into an alternative fuel.	FY2007	n/a directionally sound	n/a directionally sound	n/a	
Develop Best Practices for driving and fleet fueling.	Working with involved departments, staff formulated Best Operational Practices for driving and fueling County fleet. While these may be related to ozone reduction, they are applicable throughout the year. They encourage fueling early or late, limiting idling, frequent tire pressure checks, driving at the speed limit, no topping off gas tank, etc. Department heads incorporate BOPs into operating procedures to the extent feasible		FY2004	n/a directionally sound	n/a directionally sound	n/a	

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Addressing public transit options, pedestrian and bike lanes and other planning strategies in comprehensive land-use planning.	Charleston County has adopted a comprehensive land use plan, which is updated every five years. As appropriate, this plan encourages the development of mass transit opportunities, trip reduction, alternative transportation methods and mixed-use communities.	Related to the Charleston County Transportation Sales Tax (1/2 cent), the Transportation and Greenbelt Advisory Boards have completed their recommendations to County Council on projects to be funded by the tax. (Reports can be accessed through the county website: www.charlestoncounty.org.) Both boards found a high interest in walking and biking trails. These boards recommend spending plans for the $1.3 billion to be collected over 25 years for transportation, greenbelt and public transit. The Comprehensive Greenbelt Plan has been awarded the 2006 Outstanding Planning Award for Large Jurisdictions by the SC Chapter of the American Planning Association. In Fall 2006, the County Greenbelt Bank was created, to leverage the approximate $110 million in sales tax revenue dedicated to acquiring land in rural areas for conservation purposes, and to administer the rural grants program. Also, in November County voters approved two bond referenda to allow the county to borrow against the tax to provide immediate funding for sales tax projects.	FY2004	n/a directionally sound	n/a directionally sound	n/a	
		The Charleston Area Regional Transportation Authority (CARTA) has used the first infusion of Sales Tax money to purchase smaller buses for local routes, and has increased the number of routes. Ridership has increased significantly. The CARTA Board now is contracting for park/ride spaces to increase convenience for commuting. Over the 2006 summer, CARTA implemented Free Ride Fridays and hosted other rider appreciation events to promote ridership and entice new riders to try the system. According to Authority statistics, more than 58,000 people participated in the promotions.					
Modify lawn maintenance practices to discourage use of gas-powered engines during high ozone hours; and develop department guidelines to replace two-cycle small engines with four-cycle engine small equipment.	Charleston County will take measures to modify lawn maintenance practices and utilization of small engine equipment so as to limit ozone-producing emissions. Most County lawn maintenance is under private contract. The RFP will be amended to include clean air practices during the next bidding cycle. Many departments maintain small engine equipment for specific purposes. Two-cycle equipment will be replaced with four-cycle when practical.	Fall 2006, six large generators were purchased for the County, all required to run on ultra low sulfur fuel. Existing generators have been changed to this new fuel.	FY2007	n/a directionally sound	n/a directionally sound	n/a	
Employ building energy conservation measures.	With the use of technology, Charleston County's Facilities Management team currently employs energy conservation measures at its high use facilities (the Public Services Building, Judicial Center, County Office Building, Charleston Center, Main Library, and the Historic Courthouse) by scheduling down time of utilities when unoccupied or reducing utility services when not required. This program has been expanded to include all Regional Libraries and any new large facilities coming on line. An HVAC control system has been installed in the Otranto Regional Library and the new Johns Island Regional Library. Where ever possible, new energy efficient light bulbs (T-8s and low pressure sodium) are being used. Energy audits are conducted for our large facilities either in-house or by contract. We use premium efficient components when replacement parts are required for condensers, compressors, hot water heaters, motors, etc.	Fall 2006, exhaust fans have been installed in the County's two parking garages for better ventilation.	FY2004	n/a directionally sound	n/a directionally sound	n/a	
Study and implement flex hours.	Charleston County has expanded the practice of flexible hours, which is now utilized by many departments. This has reduced traffic congestion and vehicle emissions created by all employees arriving and leaving at the same time.	The final report of the independent Charleston County Commission on Management, Accountability and Performance, released in August 2005, recommended increased use of flex time as a way to extend public service hours and improve employee working environment. In response, both the Business License and Human Resources departments have implemented flex-time schedules, thus 'growing' the number of County offices utilizing this tool.	FY2004	n/a directionally sound	n/a directionally sound	n/a	
Encourage walking, biking, car-pooling	Bike racks are installed at County libraries, and at the Judicial Center complex in downtown Charleston. Additional racks will be installed at other facilities. As part of the ozone education program, employees will be encouraged to walk or bike to work, and/or to look for safe opportunities to ride-share or car-pool.	Our in-house survey of carpooling interest continues on the intranet, To date, there have been 55 responses. Respondents are matched by area, and encouraged to carpool. The County Wellness Committee met with our regional transportation authority (CARTA) to promote bus use through sale of bus passes. The Wellness Committee participated in Ride Your Bike to Work Week. Fall 2006, a bike rack is now in place at the Public Services Building, and is used regularly. The front of the building is now a CARTA bus stop.	FY 2005	n/a directionally sound	n/a directionally sound	n/a	
Other activities within the County	The City of Charleston is enrolled in the Cities for Climate Protection campaign, and has joined the U.S. Mayors Climate Protection Agreement, working with the Sierra Club to find ways to reduce greenhouse gases.	Energy saving improvements have reduced municipal carbon dioxide emissions by 15,219 tons over the first four years of the effort. During Fall 2006, the League of Women Voters of the Charleston Area hosted a viewing and discussion of Kilowatt Ours; and the Urban Land Institute held an 'Everything Coastal' Conference	FY2000				
Formation of regional stakeholders group.	Charleston County meets with BCD Council of Governments, Berkeley and Dorchester Counties, urban and rural transportation authorities, Clemson Extension, MUSC, school districts, area industry, environmental groups and others. Discussions center on education, transportation, intermodal/alternative transportation strategies, advanced technology vehicles, alternative fuels, car-pooling and use of public transit, development of park and ride facilities to complement public transit routes, etc. This group continues to evolve and grow. We have met on the following dates: July 24, August 14, September 18 and November 13. in 2003; and February 26 in 2004.	The regional stakeholder group has not met during this period. However, the in-house planning group continues to meet to plan implementation of our strategies to fulfill our requirements. Current focus is on an expanded hybrid fleet, use of clean fuels, and reducing fleet size and emissions.	FY2004	n/a directionally sound	n/a directionally sound	n/a	

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Comments:

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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

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B-C-D, SC (Designated - Attainment)							
DECEMBER 2006 DORCHESTER 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.							
Stakeholders Groups	Continue with Local and Regional Stakeholders Groups to remain current with citizen concerns and who may be experimenting with new ozone technology developments	Shareholder groups have not met this period.	These programs have been in existence since April 2003.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
CHATS support.	The Charleston Area Transportation Study Group continues to establish SCDOT priorities for the Tri-county area. Dorchester County will continue to support those programs to reduce ozone. e.g. Mass Transit initiatives, "Park & Ride" programs, more "walk and bike trails" and initiatives that promotes car pooling.	Charleston Area Transportation System CHATS support continues.	CHATS has been active for over a decade. It is not likely to change in the immediate future.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Government sets the example.	Study to promote more telecommute positions, provide incentives for car pooling when assigning parking spaces. Stagger work hours for employees to avoid rush hour traffic. Continue with flex-work schedules and 4 day work week. Establish policies to encourage pooling of lunch orders from same vender. Study County owned vehicle schedule to shuttle personnel between upper and lower county. Promote high-bred "alternative fuel" vehicles i.e. electric, bio-diesel, LP gas, ethanol etc. for vehicle fleet operations. Dorchester County Fleet Maintenance conducts routine scheduled maintnenance on County vehicles which in turn lowers the emissions of the vehicle.	County programs and future ordinances are geared to consider new ozone standards. Dorchester County took a big step forward in term's of Dorchester County's commitment to energy efficiency and environmental issues with alternative fuel vehicle. A 1995 Chevrolet Suburban, (French Fry One, which we call it) runs off of used cooking oil, this vehicle is not bio-diesel.	This measure is an attempt to modify regulations and behavior over a period of time. Some of these practices have already been adopted.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Solicit the schools to help in the education process.	There are short courses available to be introduced into the syllabus to discuss health hazards and other dangers of ground level ozone. Request Journalism students and/or English students to write articles about the dangers of ozone to be published in the local newspapers. Students encouraged to produce Educational video for television discussing the ozone issues.	Schools have ozone curriculum available when needed.	This program will be initiated when EPA designates Dorchester County as borderline attainment	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Schools to review existing policies.	Student Transportation policy to be reviewed: more sidewalks and fewer parking spaces. Driving privileges for those students making grades. Assigned parking for only those students with exceptional need to drive. Minimal fee should be charged for cost of security cameras and police personnel in the parking areas. All others must use bus. Construction of schools will include sidewalks and bike trails on all major arteries within a mile radius of the school. Establish rules for vehicle idle times for those waiting for students to be released. (Parents vehicles and busses.)	Schools consider reduced ozone standards when developing new policies.	This program will be initiated when EPA designates Dorchester County as borderline attainment	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Educate the Public as to "What is OZONE?"	TV News and Meteorologists will broadcast existing and forecast Ozone conditions. In addition, they will provide recommendations for their audience similar to their current hurricane readiness announcements.		This program is scheduled to start in May 2004.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Educate the Public as to "What is OZONE?"	An OZONE tent will become a part of the festivals and fairs in the local area to pass out brochures and tracts about ozone. Various contests and prizes can be awarded to stimulate interest.	Control programs to educate the Public will be initiated when conditions warrant. As a note of interest, Dorchester County residents continue to benefit from the public service announcements (Public Education) pertaining to Ozone from the local TV weatherman broadcast from Charleston County.	This program will be initiated when EPA designates Dorchester County as borderline attainment.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Educate the Public as to "What is OZONE?"	A traveling lecturer will visit hospitals, Nursing Homes, Senior Citizen Centers to educate those who are most at-risk. Recommend minimum outdoor activity during periods of high ozone. Dorchester County will work with the schools on safe ozone levels. We will work with school buses on idling issues in front of the schools with boarding and dropping off students.	Control programs to educate the Public will be initiated when conditions warrant. As a note of interest, Dorchester County residents continue to benefit from the public service announcements (Public Education) pertaining to Ozone from the local TV weatherman broadcast from Charleston County.	This program will be initiated when EPA designates Dorchester County as borderline attainment.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Educate the Public as to "What is OZONE?"	Publish brochure of house-hold tips to reduce ozone. Schedule mowing and fueling vehicles in early morning or late afternoon to avoid the high ozone period. Select electric operated equipment and avoid gas operated landscape equipment. We meet the EPA's requirements to convert to the use of low-sulfur gasoline in County vehicles. The County runs its heavy equipment on low sulfur diesel fuel since it became a EPA requirement. Dorchester County is complying with EPA requirements as it replaces old County vehicles too. Also, Dorchester County vehicles are not to sit in an idling position or left unattended in an idling position.	Control programs to educate the Public will be initiated when conditions warrant. As a note of interest, Dorchester County residents continue to benefit from the public service announcements (Public Education) pertaining to Ozone from the local TV weatherman broadcast from Charleston County.	This program will be initiated when EPA designates Dorchester County as borderline attainment.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Planning for future green spaces.	Tree and Landscape Ordinances should encourage use of more deciduous shade trees and fewer pine trees. SC DOT should be required to provide landscaped mediums. Industrial developers should be required to provide a landscape plan for the entire site. Commercial builders should landscape parking lots and entrances. Residential builders should avoid strip clearing and have a minimum landscape requirement for treed streets, landscaped entrances and a minimum landscape requirement for each lot.	New Planning & Zoning Ordinances consider reduced ozone standards.Due to the rapid growth in the Dorchester County we had to expand some of ourConvenience Sites, so in our expansions of sites we have paved sites and planted trees to cut down on the dirt/dust and emssions of vehicles in the air.	Some of these programs are currently in existence. We can do better	n/a directionally sound	n/a directionally sound	n/a	See Comment #3
Planning for a future with fewer vehicles.	Communities are planned with a grocery/drug/hardware stores within walking distance from homes. Promote mixed zoning, i.e. stores with residential spaces on the upper floors. Encourage more sidewalks and bike trails. Cluster development, Smart Growth, PUD's, mass transit, energy efficient building materials, fuel efficient vehicles, should be encouraged.	New Planning & Zoning Ordinances consider reduced ozone standards.	Comprehensive Plan for Government agencies already includes these ideas. Promote adoption of these ideas in future ordinances.	n/a directionally sound	n/a directionally sound	n/a	See Comment #3

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US EPA ARCHIVE DOCUMENT

Enclosure 4

December 2006 Progress Report Document
Statewide EAC Activities

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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-

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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

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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

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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.

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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

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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.

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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

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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.

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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.

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- 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

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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

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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.

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

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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.

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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.

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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.

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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

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"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

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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

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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.

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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

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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

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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.

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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.

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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

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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

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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.

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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

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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

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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.

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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"

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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)

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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

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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

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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,

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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

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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.

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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.

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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.

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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.

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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

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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)

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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

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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

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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.

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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

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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.

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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

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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."

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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

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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.

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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

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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

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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

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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."

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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.

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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.

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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

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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

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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.

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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.

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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.

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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.

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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

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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

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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

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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.

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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

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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

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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	

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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

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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

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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

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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/

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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

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Enclosure 5

December 2006 Progress Report Document
Federal Facility Survey Results

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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.

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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.

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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

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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.

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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,

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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.

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