US EPA ARCHIVE DOCUMENT

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December 14, 2007

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 2007 Early Action Progress Report

Dear Mr. Palmer:

In the Fall of 2002, the Environmental Protection Agency (EPA) allowed areas the opportunity to enter into an 8-hour Ozone Early Action Compact (EAC). South Carolina led the nation with forty-five counties electing to participate in the EAC process. By signing the EAC, the counties agreed to implement emission reduction strategies in an effort to attain the 1997 8-hour Ozone standard by December 2007, three years earlier than federally required. In April 2004, when EPA issued boundary designations for the 8-hour Ozone standard, only three areas in South Carolina were designated nonattainment. The Rock Hill-Fort Mill Area Transportation Study (RFATS) Metropolitan Planning Organization (MPO) in York County was designated nonattainment due to their inclusion in the Charlotte Metropolitan Statistical Area. The Columbia Area (portions of Richland and Lexington counties) and the Greenville-Spartanburg-Anderson Area (all of the three counties) were designated nonattainment; however, as a result of their participation in the 8-hour Ozone EAC process, the effective date of their designation was deferred.

**As a requirement of the EAC, South Carolina is pleased to submit this EAC Progress Report including documentation showing attainment of the 1997 8-hour Ozone standard.** Strong commitments by local stakeholders, including local governments, as well as local industry and environmental groups working together, in conjunction with regional and state-wide efforts, have been successful in South Carolina, and we have the data to support the success of these efforts. Most recent data is evidence that at times when the meteorological patterns are conducive to the formation of ozone, the ozone monitors did not reveal elevated readings. While weather is definitely a factor in the formation of ozone, it is one component that we do not have the ability to control. However, local stakeholders given the flexibility to implement programs geared toward reducing oxides of nitrogen emissions do have an impact on the formation of ozone.

On December 6, 2007, Mr. Scott Reynolds, Director of the Division of Air Quality Analysis submitted documentation certifying that all South Carolina SLAMS ozone ambient monitoring and the associated quality assurance data for the 2007 Ozone Season (through October 2007) were completely submitted to AQS and are accurate to the best of his knowledge. The correspondence included a summary report generated through AQS to provide accurate 2007 ozone summary statistics for the State of South Carolina. A copy of this correspondence and report is included as Enclosure 1. Also included in Enclosure 1 is a table which gives the 4$^{th}$ highest 8-hour average for each of the monitoring sites for the years 2003, 2004, 2005, 2006 and 2007 as well as the three year design values for 2003-2005, 2004-2006 and 2005-2007.

In 2005, South Carolina 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. Review of this information indicates that for both areas designated nonattainment with the effective date deferred, the actual emissions were lower than the forecasted modeled data and the 2006 VMT was well below the action trigger. Detailed information with supporting graphs is included in Enclosure 2.

As per EPA guidance, the EAC identified eight key milestones that must be met for continued participation. All participating areas in South Carolina, including those areas designated attainment but electing to continue participation have met all milestones. In addition, each of these counties has submitted semi-annual progress reports every year, beginning with the June 2003 report. This document contains the tenth and final EAC progress report. Enclosure 3 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 counties in the deferred nonattainment areas is included. Information regarding activities that have occurred since June 2007 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

As pointed out in previous EAC progress reports, the emission reduction strategies submitted by the local areas contain both quantifiable and directionally sound measures. However, it should be noted that none of them were used to demonstrate attainment in 2007. A table and narrative description identifying statewide activities and progress made toward each is included as Enclosure 4 Statewide EAC Activities.

EPA should be commended for allowing areas the opportunity and flexibility to improve air quality by implementing local programs earlier than would be required under federal mandates and for rewarding these areas by deferring the prescriptive requirements of nonattainment. The partnership opportunities developed over the last several years and the awareness of the participants, including local officials, state agencies, universities, organizations, businesses, industries, environmental groups and other stakeholders about air quality issues have resulted in proactive, voluntary and regulatory actions that would not have occurred without the EAC process. 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. 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. These areas could be used as a model to show that implementation of emission reduction strategies earlier than required does bring cleaner air sooner.

**South Carolina respectfully requests that EPA review the documentation submitted and expeditiously take final action on the 8-hour Ozone EAC process by re-designating the Columbia Area and the Greenville-Spartanburg-Anderson Area to attainment for the 1997 8-hour Ozone standard.**

Thank you not only for the opportunity to participate in the 8-hour Ozone EAC process but for your assistance and support over the last several years. We look forward to continuing to work with EPA and other stakeholders as we continue to encourage implementing 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*)
Scott Reynolds (no attachments*)

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

**South Carolina's Ozone Early Action Compact**
**December 2007 Progress Report**
**Enclosures**
**December 14, 2007**

1. 3-Year Ozone Average Summary to Date, AQS Data
   South Carolina Certification Correspondence (December 6, 2007)
2. South Carolina's Comprehensive Maintenance Plan
3. Local EAC Activities for Participating Areas
4. Statewide EAC Activities

US EPA ARCHIVE DOCUMENT

# Enclosure 1

## December 2007

# FINAL EAC Progress Report Document
# 3-Year Ozone Average Summary to Date, AQS Data

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| County | Monitoring Site | 2003 4th 8-hr Average | 2004 4th 8-hr Average | 2005 4th 8-hr Average | 2006 4th 8-hr Average | 2007 4th 8-hr Average | 2003-2005 Design Values | 2004-2006 Design Values | 2005-2007 Design Values |
|---|---|---|---|---|---|---|---|---|---|
| Abbeville | Due West | 0.077 | 0.075 | 0.082 | 0.079 | 0.083 | 0.078 | 0.078 | 0.081 |
| Aiken | Jackson | 0.069 | 0.080 | 0.077 | 0.073 | 0.082 | 0.075 | 0.076 | 0.077 |
| Anderson | Powdersville | 0.078 | 0.076 | 0.082 | 0.069 | | 0.078 | 0.075 | |
| Barnwell | Barnwell | 0.073 | 0.072 | 0.074 | 0.074 | 0.073 | 0.073 | 0.073 | 0.073 |
| Berkeley | Bushy Park | 0.070 | 0.073 | 0.068 | 0.064 | 0.06 | 0.070 | 0.068 | 0.064 |
| Berkeley | Army Reserve | 0.070 | 0.067 | | | | | | |
| Charleston | Cape Romain | 0.074 | 0.070 | 0.077 | 0.078 | 0.069 | 0.073 | 0.075 | 0.074 |
| Cherokee | Cowpens | 0.079 | 0.068 | 0.078 | 0.076 | 0.067 | 0.075 | 0.074 | 0.073 |
| Chester | Chester | 0.078 | 0.069 | 0.083 | 0.073 | 0.074 | 0.076 | 0.075 | 0.076 |
| Chesterfield | Chesterfield | 0.075 | 0.074 | 0.078 | 0.074 | 0.073 | 0.075 | 0.075 | 0.075 |
| Colleton | Ashton | 0.069 | 0.071 | 0.072 | 0.078 | 0.072 | 0.070 | 0.073 | 0.074 |
| Darlington | Pee Dee | 0.075 | 0.076 | 0.079 | 0.076 | 0.073 | 0.076 | 0.077 | 0.076 |
| Edgefield | Trenton | 0.068 | 0.071 | 0.071 | 0.068 | 0.073 | 0.070 | 0.070 | 0.070 |
| Oconee | Long Creek | 0.079 | 0.075 | 0.075 | 0.065 | 0.076 | 0.076 | 0.071 | 0.072 |
| Pickens | Clemson | 0.078 | 0.074 | 0.081 | 0.081 | 0.081 | 0.077 | 0.078 | 0.081 |
| Richland | Cong. Swamp/ Bluff | 0.074 | 0.067 | 0.074 | 0.072 | 0.071 | 0.071 | 0.071 | 0.072 |
| Richland | Parklane | 0.075 | 0.082 | 0.082 | 0.082 | 0.077 | 0.079 | 0.082 | 0.080 |
| Richland | Sandhill | 0.083 | 0.082 | 0.086 | 0.078 | 0.084 | 0.083 | 0.082 | 0.082 |
| Spartanburg | N. Spartan. FD | 0.079 | 0.082 | 0.082 | 0.085 | 0.083 | 0.081 | 0.083 | 0.083 |
| Union | Delta | 0.078 | 0.072 | 0.078 | 0.077 | 0.076 | 0.076 | 0.075 | 0.077 |
| Williamsburg | Indiantown | 0.069 | 0.069 | 0.068 | 0.073 | 0.071 | 0.068 | 0.070 | 0.070 |
| York | York | 0.076 | 0.071 | 0.079 | 0.078 | 0.08 | 0.075 | 0.076 | 0.079 |

December 2007

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South Carolina Department of Health and Environmental Control

US EPA ARCHIVE DOCUMENT

# South Carolina - 2007 Ozone Summary

(Validated through November 2007)

| 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 | 3 | 16-Aug | 0.09 | 17-Aug | 0.087 | 15-Aug | 0.085 | 22-Jun | 0.083 | 14-Aug | 0.082 |
| Aiken | Jackson | 0 | 21-May | 0.084 | 22-Jun | 0.084 | 23-Jun | 0.083 | 6-Aug | 0.082 | 8-Aug | 0.082 |
| Barnwell | Barnwell | 0 | 13-Mar | 0.076 | 21-May | 0.076 | 14-Aug | 0.074 | 2-May | 0.073 | 3-May | 0.073 |
| Berkeley | Bushy Park | 0 | 22-Jun | 0.072 | 13-Jul | 0.07 | 21-May | 0.065 | 30-Apr | 0.06 | 1-May | 0.06 |
| Charleston | Cape Romain | 0 | 13-Jul | 0.079 | 21-Apr | 0.07 | 20-May | 0.07 | 13-Apr | 0.069 | 17-Apr | 0.069 |
| Cherokee | Cowpens | 0 | 16-Aug | 0.074 | 2-May | 0.068 | 22-May | 0.067 | 21-Jun | 0.067 | 22-Jun | 0.067 |
| Chester | Chester | 2 | 21-Jun | 0.086 | 14-Aug | 0.085 | 4-Sep | 0.083 | 2-May | 0.074 | 22-May | 0.074 |
| Chesterfield | Chesterfield | 0 | 6-Aug | 0.081 | 2-May | 0.079 | 14-Aug | 0.074 | 22-Jun | 0.073 | 17-Aug | 0.073 |
| Colleton | Ashton | 0 | 1-May | 0.076 | 14-Aug | 0.075 | 13-Mar | 0.073 | 2-May | 0.072 | 3-May | 0.071 |
| Darlington | Pee Dee | 0 | 1-May | 0.076 | 14-Aug | 0.076 | 22-Jun | 0.075 | 21-May | 0.073 | 22-May | 0.072 |
| Edgfield | Trenton | 0 | 18-Aug | 0.076 | 15-Aug | 0.075 | 24-Jun | 0.074 | 21-May | 0.073 | 14-Aug | 0.073 |
| Oconee | Long Creek | 1 | 1-May | 0.09 | 18-Aug | 0.0084 | 5-Sep | 0.084 | 8-Mar | 0.076 | 23-Apr | 0.074 |
| Pickens | Clemson | 2 | 5-Sep | 0.093 | 21-Jun | 0.086 | 1-May | 0.083 | 16-Aug | 0.081 | 1-Aug | 0.080 |
| Richland | Congaree Bluff | 1 | 29-Mar | 0.091 | 13-Mar | 0.076 | 23-Jun | 0.072 | 6-Aug | 0.071 | 22-Jun | 0.069 |
| Richland | Parklane | 1 | 21-May | 0.089 | 6-Jul | 0.084 | 17-Aug | 0.08 | 27-Jul | 0.077 | 15-Aug | 0.077 |
| Richland | Sandhill | 3 | 18-Jun | 0.09 | 21-May | 0.087 | 13-Mar | 0.085 | 6-Jul | 0.084 | 17-Aug | 0.084 |
| Spartanburg | N. Spartanburg | 3 | 31-May | 0.087 | 21-Jun | 0.086 | 5-Sep | 0.085 | 22-Jun | 0.083 | 16-Aug | 0.082 |
| Union | Delta | 0 | 14-Aug | 0.079 | 17-Aug | 0.079 | 21-Jun | 0.078 | 22-Jun | 0.076 | 11-Aug | 0.076 |
| Williamsburg | Indiantown | 0 | 1-May | 0.077 | 22-Jun | 0.074 | 21-May | 0.072 | 2-May | 0.071 | 22-Apr | 0.069 |
| York | York | 1 | 30-Aug | 0.085 | 21-Jun | 0.083 | 14-Aug | 0.082 | 4-Sep | 0.08 | 13-Mar | 0.074 |
| | 2007 | | Total Hits for all of the Ozone monitors | | | | | 17 | | | | |
| | | Total days above the Ozone standard statewide | | | | | | 14 | | | | |

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South Carolina Department of Health and Environmental Control

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2600 Bull Street
Columbia, SC 29201-1708

**Bureau of Environmental Services**
**Division of Air Quality Analysis**
8231 Parklane Road
Columbia, South Carolina 29223
(803) 896-0902 FAX (803) 896-0980

December 6, 2007

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

Mr. Palmer:

In order to allow all South Carolina Early Action Compact areas to meet the protocol timelines and consistent with the requirements in 40 CFR§ 58.15, with this letter I certify that all South Carolina SLAMS ozone ambient monitoring and the associated quality assurance data for the 2007 Ozone season (through October 2007) are completely submitted to AQS and are accurate to the best of my knowledge, taking into consideration the quality assurance findings. A summary report generated through AQS should provide accurate 2007 ozone summary statistics for the State of South Carolina.

Consistent with the 2006 revisions of §58 , I am also certifying of all South Carolina ozone Special Purpose Monitor (SPM) criteria pollutant data collected using reference or equivalent methods. All South Carolina SPM ozone monitors and sites are operated consistent with the requirements of 40 CFR §58 Appendix A.

Consistent with the requirements for submission for annual data and precision and accuracy summaries, I have attached copies of a recent Quick Look Report (AQS AMP 450 and AMP 450NC) and Precision and Accuracy Reporting Organization Summary (AQS AMP 240) for all SLAMS and SPM ozone monitors operated by South Carolina DHEC through the end of the 2007 ozone season. Please note the Precision and Accuracy Reporting Organization Summary (AQS AMP 240) does not show data for fourth quarter 2007 because that quarter is not yet complete. I have confirmed that all ozone precision and accuracy data for the 2007 ozone season has been correctly entered into AQS. The ozone summary statistics and precision and accuracy summaries for the full calendar year will be included in the submission accompanying the certification of the remainder of the South Carolina data.

Sincerely yours,

Scott A. Reynolds, Director
Division of Air Quality Analysis

Attachments
cc: Mr. David Lutz, Data Certification Contact
Ambient Air Monitoring Group, OAQPS (electronic)
Doug Neeley, Chief, APTMB, US EPA Region IV
Artra Cooper, EPA Region IV (w/o attachments)
Robert J. Brown, Director, DAPDOIS
SC DHEC BAQ (w/o attachments)

SC Ozone CERT 07.doc



US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

User ID: DSB

QUICKLOOK CRITERIA PARAMETERS

Report Request ID: 487314 Report Code: AMP450 Dec. 5, 2007

GEOGRAPHIC SELECTIONS

| Tribal | State | County | Site | Parameter | POC | City | AQCR | UAR | MSA | CMSA | EPA Region | Method | Duration | Begin Date | End Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 45 | | | 44201 | | | | | | | | | | 2007 | 2007 |

SELECTED OPTIONS

| Option Type | Option Value |
|---|---|
| EVENTS PROCESSING | EXCLUDE REGIONALLY CONCURRED EVENTS |
| MERGE PDF FILES | YES |

SORT ORDER

| Order | Column |
|---|---|
| 1 | PARAMETER_CODE |
| 2 | STATE_CODE |
| 3 | COUNTY_CODE |
| 4 | SITE_ID |
| 5 | POC |
| 6 | DATES |
| 7 | EDT_ID |

Dec. 5, 2007

EXCEPTIONAL DATA TYPES

| EDT | DESCRIPTION |
|---|---|
| 0 | NO EVENTS |
| 1 | EVENTS EXCLUDED |
| 2 | EVENTS INCLUDED |
| 3 | EXCEPTIONAL EVENTS EXCLUDED |
| 4 | NATURAL EVENTS EXCLUDED |
| 5 | EVENTS WITH CONCURRENCE EXCLUDED |
| 6 | EXCEPTIONAL EVENTS WITH CONCURRENCE EXCLUDED |
| 7 | NATURAL EVENTS WITH CONCURRENCE EXCLUDED |

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

1-HOUR

| SITE ID | POC | PQAO | CITY | COUNTY | ADDRESS | YEAR | METH | VALID DAYS MEAS | NUM DAYS REQ | 1ST MAX 1-HR | 2ND MAX 1-HR | 3RD MAX 1-HR | 4TH MAX 1-HR | DAY MAX>/= 0.125 | EST DAYS>/= .125 | MISS DAYS< 0.125 | CERT | EDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45-001-0001 | 1 | 0971 | Due West | Abbeville | 59 JIM SCOTT LANE | 2007 | 047 | 213 | 214 | .103 | .098 | .091 | .090 | 0 | 0.0 | 1 | | 0 |
| 45-003-0003 | 2 | 0971 | Jackson | Aiken | 8217 ATOMIC ROAD (INDIAN DRIVE - SCHOOL) | 2007 | 047 | 209 | 214 | .105 | .101 | .099 | .099 | 0 | 0.0 | 1 | | 0 |
| 45-011-0001 | 2 | 0971 | Not in a city | Barnwell | 5795 SEVEN PINES ROAD | 2007 | 047 | 213 | 214 | .084 | .081 | .081 | .080 | 0 | 0.0 | 1 | | 0 |
| 45-015-0002 | 1 | 0971 | Not in a city | Berkeley | River Oak Drive (Goose Creek) | 2007 | 047 | 196 | 214 | .104 | .081 | .080 | .076 | 0 | 0.0 | 0 | | 0 |
| 45-019-0046 | 1 | 0971 | Not in a city | Charleston | 390 BULLS ISLAND ROAD (AWENDAW) | 2007 | 047 | 209 | 214 | .090 | .078 | .076 | .076 | 0 | 0.0 | 5 | | 0 |
| 45-021-0002 | 1 | 0971 | Not in a city | Cherokee | MCGINNIS ROAD (OLD SC 110) | 2007 | 047 | 211 | 214 | .085 | .082 | .077 | .076 | 0 | 0.0 | 0 | | 0 |
| 45-023-0002 | 1 | 0971 | Not in a city | Chester | 100 LUSCOMBE DRIVE | 2007 | 047 | 210 | 214 | .093 | .092 | .090 | .084 | 0 | 0.0 | 2 | | 0 |
| 45-025-0001 | 1 | 0971 | Not in a city | Chesterfield | RT 2 BOX 100 MCBEE (SC145) | 2007 | 047 | 209 | 214 | .093 | .086 | .080 | .079 | 0 | 0.0 | 2 | | 0 |
| 45-029-0002 | 2 | 0971 | Not in a city | Colleton | Ashton Road (Islandton) | 2007 | 047 | 213 | 214 | .087 | .085 | .083 | .081 | 0 | 0.0 | 1 | | 0 |
| 45-031-0003 | 1 | 0971 | Not in a city | Darlington | 2200 POCKET ROAD (DARLINGTON) | 2007 | 047 | 211 | 214 | .085 | .084 | .084 | .083 | 0 | 0.0 | 3 | | 0 |
| 45-037-0001 | 1 | 0971 | Not in a city | Edgefield | 660 WOODYARD ROAD | 2007 | 047 | 212 | 214 | .088 | .083 | .081 | .081 | 0 | 0.0 | 2 | | 0 |
| 45-073-0001 | 1 | 0971 | Not in a city | Oconee | ROUND MOUNTAIN TOWER ROAD (Mountain Rest, SC) | 2007 | 047 | 208 | 214 | .104 | .093 | .091 | .082 | 0 | 0.0 | 1 | | 0 |
| 45-077-0002 | 1 | 0971 | Not in a city | Pickens | 106 HOPEWELL ROAD | 2007 | 047 | 212 | 214 | .102 | .096 | .093 | .089 | 0 | 0.0 | 2 | | 0 |
| 45-079-0007 | 1 | 0971 | Dentsville (Dents) | Richland | 8311 PARKLANE ROAD | 2007 | 047 | 210 | 214 | .101 | .094 | .091 | .089 | 0 | 0.0 | 4 | | 0 |

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

1-HOUR

| SITE ID | POC | PQAO | CITY | COUNTY | ADDRESS | YEAR | METH | VALID DAYS MEAS | NUM DAYS REQ | 1ST MAX 1-HR | 2ND MAX 1-HR | 3RD MAX 1-HR | 4TH MAX 1-HR | DAY MAX>/= 0.125 | EST DAYS>/= .125 | MISS DAYS< 0.125 | CERT | EDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45-079-0021 | 1 | 0971 | Not in a city | Richland | 1850 SOUTH CEDAR CREEK ROAD (GADSDEN) | 2007 | 047 | 202 | 217 | .237 | .088 | .084 | .084 | 1 | 1.1 | 3 | | 5 |
| 45-079-1001 | 1 | 0971 | Not in a city | Richland | 900 CLEMSON ROAD | 2007 | 047 | 206 | 214 | .106 | .098 | .098 | .097 | 0 | 0.0 | 3 | | 0 |
| 45-083-0009 | 1 | 0971 | Not in a city | Spartanburg | 1556 JOHN DODD ROAD | 2007 | 047 | 214 | 214 | .098 | .096 | .095 | .095 | 0 | 0.0 | 0 | | 0 |
| 45-087-0001 | 1 | 0971 | Not in a city | Union | 1121 DELTA ROAD (WHITMIRE) | 2007 | 047 | 213 | 214 | .091 | .086 | .086 | .086 | 0 | 0.0 | 1 | | 0 |
| 45-089-0001 | 2 | 0971 | Not in a city | Williamsburg | 4951 HEMINGWAY HIGHWAY | 2007 | 047 | 209 | 214 | .087 | .082 | .078 | .076 | 0 | 0.0 | 0 | | 0 |
| 45-091-0006 | 1 | 0971 | Not in a city | York | 2316 CHESTER HIGHWAY (US 321) | 2007 | 047 | 208 | 214 | .107 | .095 | .092 | .089 | 0 | 0.0 | 1 | | 0 |

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

8-HOUR

| SITE ID | POC | PQAO | CITY | COUNTY | ADDRESS | YEAR | METH | %OBS | VALID DAYS MEAS | NUM DAYS REQ | 1ST MAX 8-HR | 2ND MAX 8-HR | 3RD MAX 8-HR | 4TH MAX 8-HR | DAY MAX>/= 0.085 | CERT | EDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45-001-0001 | 1 | 0971 | Due West | Abbeville | 59 JIM SCOTT LANE | 2007 | 047 | 98 | 210 | 214 | .090 | .087 | .085 | .083 | 3 | | 0 |
| 45-003-0003 | 2 | 0971 | Jackson | Aiken | 8217 ATOMIC ROAD (INDIAN DRIVE - SCHOOL) | 2007 | 047 | 97 | 207 | 214 | .084 | .084 | .083 | .082 | 0 | | 0 |
| 45-011-0001 | 2 | 0971 | Not in a city | Barnwell | 5795 SEVEN PINES ROAD | 2007 | 047 | 99 | 211 | 214 | .076 | .076 | .073 | .073 | 0 | | 0 |
| 45-015-0002 | 1 | 0971 | Not in a city | Berkeley | River Oak Drive (Goose Creek) | 2007 | 047 | 91 | 194 | 214 | .072 | .070 | .065 | .060 | 0 | | 0 |
| 45-019-0046 | 1 | 0971 | Not in a city | Charleston | 390 BULLS ISLAND ROAD (AWENDAW) | 2007 | 047 | 95 | 204 | 214 | .079 | .070 | .070 | .069 | 0 | | 0 |
| 45-021-0002 | 1 | 0971 | Not in a city | Cherokee | MCGINNIS ROAD (OLD SC 110) | 2007 | 047 | 98 | 209 | 214 | .074 | .068 | .067 | .067 | 0 | | 0 |
| 45-023-0002 | 1 | 0971 | Not in a city | Chester | 100 LUSCOMBE DRIVE | 2007 | 047 | 98 | 210 | 214 | .086 | .085 | .083 | .074 | 2 | | 0 |
| 45-025-0001 | 1 | 0971 | Not in a city | Chesterfield | RT 2 BOX 100 MCBEE (SC145) | 2007 | 047 | 97 | 207 | 214 | .081 | .079 | .074 | .073 | 0 | | 0 |
| 45-029-0002 | 2 | 0971 | Not in a city | Colleton | Ashton Road (Islandton) | 2007 | 047 | 99 | 212 | 214 | .076 | .075 | .073 | .072 | 0 | | 0 |
| 45-031-0003 | 1 | 0971 | Not in a city | Darlington | 2200 POCKET ROAD (DARLINGTON) | 2007 | 047 | 99 | 212 | 214 | .076 | .076 | .075 | .073 | 0 | | 0 |
| 45-037-0001 | 1 | 0971 | Not in a city | Edgefield | 660 WOODYARD ROAD | 2007 | 047 | 99 | 212 | 214 | .076 | .075 | .074 | .073 | 0 | | 0 |
| 45-073-0001 | 1 | 0971 | Not in a city | Oconee | ROUND MOUNTAIN TOWER ROAD (Mountain Rest, SC) | 2007 | 047 | 97 | 207 | 214 | .090 | .084 | .084 | .076 | 1 | | 0 |
| 45-077-0002 | 1 | 0971 | Not in a city | Pickens | 106 HOPEWELL ROAD | 2007 | 047 | 99 | 212 | 214 | .093 | .086 | .083 | .081 | 2 | | 0 |
| 45-079-0007 | 1 | 0971 | Dentsville (Dents) | Richland | 8311 PARKLANE ROAD | 2007 | 047 | 98 | 210 | 214 | .089 | .084 | .080 | .077 | 1 | | 0 |
| 45-079-0021 | 1 | 0971 | Not in a city | Richland | 1850 SOUTH | 2007 | 047 | 93 | 202 | 217 | .091 | .076 | .072 | .071 | 1 | | 5 |

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

Ozone (44201) South Carolina Parts per million (007)

8-HOUR

| SITE ID | POC | PQAO | CITY | COUNTY | ADDRESS | YEAR | METH | %OBS | VALID DAYS MEAS | NUM DAYS REQ | 1ST MAX 8-HR | 2ND MAX 8-HR | 3RD MAX 8-HR | 4TH MAX 8-HR | DAY MAX>/= 0.085 | CERT | EDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45-079-1001 | 1 | 0971 | Not in a city | Richland | 900 CLEMSON ROAD | 2007 | 047 | 93 | 217 | 233 | .090 | .087 | .085 | .084 | 3 | | 0 |
| 45-083-0009 | 1 | 0971 | Not in a city | Spartanburg | 1556 JOHN DODD ROAD | 2007 | 047 | 100 | 213 | 214 | .087 | .086 | .085 | .083 | 3 | | 0 |
| 45-087-0001 | 1 | 0971 | Not in a city | Union | 1121 DELTA ROAD (WHITMIRE) | 2007 | 047 | 100 | 213 | 214 | .079 | .079 | .078 | .076 | 0 | | 0 |
| 45-089-0001 | 2 | 0971 | Not in a city | Williamsburg | 4951 HEMINGWAY HIGHWAY | 2007 | 047 | 97 | 208 | 214 | .077 | .074 | .072 | .071 | 0 | | 0 |
| 45-091-0006 | 1 | 0971 | Not in a city | York | 2316 CHESTER HIGHWAY (US 321) | 2007 | 047 | 94 | 202 | 214 | .085 | .083 | .082 | .080 | 1 | | 0 |

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

METHODS USED IN THIS REPORT

| PARAMETER | METHOD CODE | COLLECTION METHOD | ANALYSIS METHOD |
|---|---|---|---|
| 44201 | 047 | INSTRUMENTAL | ULTRA VIOLET |

Note: The * indicates that the mean does not satisfy summary criteria.

Dec. 5, 2007

PQAOS USED IN THIS REPORT

| PQAO | AGENCY DESCRIPTION |
|---|---|
| 0971 | South Carolina Department Health And Environmental Control |

Note: The * indicates that the mean does not satisfy summary criteria.

US EPA ARCHIVE DOCUMENT

User ID: DSB

QUICKLOOK ALL PARAMETERS

Report Request ID: 487321 Report Code: AMP450NC Dec. 5, 2007

GEOGRAPHIC SELECTIONS

| Tribal State | County | Site | Parameter | POC | City | AQCR | UAR | MSA | CMSA | EPA Region | Method | Duration | Begin Date | End Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 45 | | | 44201 | | | | | | | | | | 2007 | 2007 |

SELECTED OPTIONS

| Option Type | Option Value |
|---|---|
| EVENTS PROCESSING | EXCLUDE REGIONALLY CONCURRED EVENTS |
| MERGE PDF FILES | YES |

SORT ORDER

| Order | Column |
|---|---|
| 1 | STATE_CODE |
| 2 | COUNTY_CODE |
| 3 | SITE_ID |
| 4 | PARAMETER_CODE |
| 5 | POC |
| 6 | DATES |
| 7 | EDT_ID |

US EPA ARCHIVE DOCUMENT



EXCEPTIONAL DATA TYPES

| EDT | DESCRIPTION |
|---|---|
| 0 | NO EVENTS |
| 1 | EVENTS EXCLUDED |
| 2 | EVENTS INCLUDED |
| 3 | EXCEPTIONAL EVENTS EXCLUDED |
| 4 | NATURAL EVENTS EXCLUDED |
| 5 | EVENTS WITH CONCURRENCE EXCLUDED |
| 6 | EXCEPTIONAL EVENTS WITH CONCURRENCE EXCLUDED |
| 7 | NATURAL EVENTS WITH CONCURRENCE EXCLUDED |

QUICKLOOK ALL PARAMETERS

Dec. 5, 2007

| Parameter | Unit | POC | PQAO | Year | Meth | # Obs | 1st Max Value | 2nd Max Value | 3rd Max Value | 4th Max Value | Arith. Mean | Duration | EDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID: 45-001-0001 City: Due West | County: Abbeville | | | | | Address: 59 JIM SCOTT LANE | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 6014 | .103 | .098 | .091 | .090 | .0609 | 1 HOUR | 0 |
| Site ID: 45-003-0003 City: Jackson | County: Aiken | | | | | Address: 8217 ATOMIC ROAD (INDIAN DRIVE - SCHOOL) | | | | | | | |
| 44201 Ozone | Parts per million | 2 | 0971 | 2007 | 047 | 5910 | .105 | .101 | .099 | .099 | .0586 | 1 HOUR | 0 |
| Site ID: 45-011-0001 City: Not in a city | County: Barnwell | | | | | Address: 5795 SEVEN PINES ROAD | | | | | | | |
| 44201 Ozone | Parts per million | 2 | 0971 | 2007 | 047 | 5980 | .084 | .081 | .081 | .080 | .0541 | 1 HOUR | 0 |
| Site ID: 45-015-0002 City: Not in a city | County: Berkeley | | | | | Address: River Oak Drive (Goose Creek) | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 5312 | .104 | .081 | .080 | .076 | .0457 | 1 HOUR | 0 |
| Site ID: 45-019-0046 City: Not in a city | County: Charleston | | | | | Address: 390 BULLS ISLAND ROAD (AWENDAW) | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 7044 | .090 | .078 | .076 | .076 | .0517 | 1 HOUR | 0 |
| Site ID: 45-021-0002 City: Not in a city | County: Cherokee | | | | | Address: MCGINNIS ROAD (OLD SC 110) | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 7174 | .085 | .082 | .077 | .076 | .0526 | 1 HOUR | 0 |
| Site ID: 45-023-0002 City: Not in a city | County: Chester | | | | | Address: 100 LUSCOMBE DRIVE | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 6009 | .093 | .092 | .090 | .084 | .0572 | 1 HOUR | 0 |
| Site ID: 45-025-0001 City: Not in a city | County: Chesterfield | | | | | Address: RT 2 BOX 100 MCBEE (SC145) | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 7166 | .093 | .086 | .080 | .079 | .0570 | 1 HOUR | 0 |
| Site ID: 45-029-0002 City: Not in a city | County: Colleton | | | | | Address: Ashton Road (Islandton) | | | | | | | |
| 44201 Ozone | Parts per million | 2 | 0971 | 2007 | 047 | 7219 | .087 | .085 | .083 | .081 | .0522 | 1 HOUR | 0 |
| Site ID: 45-031-0003 City: Not in a city | County: Darlington | | | | | Address: 2200 POCKET ROAD (DARLINGTON) | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 5956 | .085 | .084 | .084 | .083 | .0558 | 1 HOUR | 0 |
| Site ID: 45-037-0001 City: Not in a city | County: Edgefield | | | | | Address: 660 WOODYARD ROAD | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 7236 | .088 | .083 | .081 | .081 | .0547 | 1 HOUR | 0 |
| Site ID: 45-073-0001 City: Not in a city | County: Oconee | | | | | Address: ROUND MOUNTAIN TOWER ROAD (Mountain Rest, SC) | | | | | | | |
| 44201 Ozone | Parts per million | 1 | 0971 | 2007 | 047 | 7143 | .104 | .093 | .091 | .082 | .0567 | 1 HOUR | 0 |

Note: The * indicates that the mean does not satisfy summary criteria.

QUICKLOOK ALL PARAMETERS

Dec. 5, 2007

| Parameter | Unit | PQAO | Year | Meth | # Obs | 1st Max Value | 2nd Max Value | 3rd Max Value | 4th Max Value | Arith. Mean | Duration | EDT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site ID: 45-077-0002 City: Not in a city | County: Pickens | | | | Address: 106 HOPEWELL ROAD | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 5907 | .102 | .096 | .093 | .089 | .0616 | 1 HOUR | 0 |
| Site ID: 45-079-0007 City: Dentsville (Dents) | County: Richland | | | | Address: 8311 PARKLANE ROAD | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 7227 | .101 | .094 | .091 | .089 | .0592 | 1 HOUR | 0 |
| Site ID: 45-079-0021 City: Not in a city | County: Richland | | | | Address: 1850 SOUTH CEDAR CREEK ROAD (GADSDEN) | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 6658 | .237 | .088 | .084 | .084 | .0556 | 1 HOUR | 5 |
| Site ID: 45-079-1001 City: Not in a city | County: Richland | | | | Address: 900 CLEMSON ROAD | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 5971 | .106 | .098 | .098 | .097 | .0608 | 1 HOUR | 0 |
| Site ID: 45-083-0009 City: Not in a city | County: Spartanburg | | | | Address: 1556 JOHN DODD ROAD | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 5719 | .098 | .096 | .095 | .095 | .0623 | 1 HOUR | 0 |
| Site ID: 45-087-0001 City: Not in a city | County: Union | | | | Address: 1121 DELTA ROAD (WHITMIRE) | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 5679 | .091 | .086 | .086 | .086 | .0579 | 1 HOUR | 0 |
| Site ID: 45-089-0001 City: Not in a city | County: Williamsburg | | | | Address: 4951 HEMINGWAY HIGHWAY | | | | | | | |
| 44201 Ozone | Parts per million | 2 0971 | 2007 | 047 | 5845 | .087 | .082 | .078 | .076 | .0516 | 1 HOUR | 0 |
| Site ID: 45-091-0006 City: Not in a city | County: York | | | | Address: 2316 CHESTER HIGHWAY (US 321) | | | | | | | |
| 44201 Ozone | Parts per million | 1 0971 | 2007 | 047 | 5814 | .107 | .095 | .092 | .089 | .0570 | 1 HOUR | 0 |

Note: The * indicates that the mean does not satisfy summary criteria.

QUICKLOOK ALL PARAMETERS

Dec. 5, 2007

METHODS USED IN THIS REPORT

| PARAMETER | METHOD CODE | COLLECTION METHOD | ANALYSIS METHOD |
|---|---|---|---|
| 44201 | 047 | INSTRUMENTAL | ULTRA VIOLET |

Note: The * indicates that the mean does not satisfy summary criteria.

PQAOS USED IN THIS REPORT

| PQAO | AGENCY DESCRIPTION |
|---|---|
| 0971 | South Carolina Department Health And Environmental Control |

Note: The * indicates that the mean does not satisfy summary criteria.

US EPA ARCHIVE DOCUMENT

User ID: DSB

P/A REPORTING ORG SUMMARY

Report Request ID: 487330 Report Code: AMP240 Dec. 5, 2007

GEOGRAPHIC SELECTIONS

| Tribal | State | County | Site | Parameter | POC | City | AQCR | UAR | MSA | CMSA | EPA Region | Method | Duration | Begin Date | End Date |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 45 | | | 44201 | | | | | | | | | | 2007 | 2007 |

SELECTED OPTIONS

| Option Type | Option Value |
|---|---|
| MERGE PDF FILES | YES |

SORT ORDER

| Order | Column |
|---|---|
| 1 | AGENCY_CODE |
| 2 | PARAMETER_CODE |
| 3 | DATES |

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SUBSYSTEM
P/A REPORTING ORG SUMMARY

Dec. 5, 2007

PLEASE NOTE: Data selection based upon geography may result in output including more reporting organizations than you would expect. When geographic selection is used, every reporting organization that has authority to submit data for the selected geography will be included in the output, if those reporting organizations submitted any precision or accuracy data for any monitors anywhere (not just the geographical selection) during the date range specified.

REPORT ORG: 0971 South Carolina Department Health And Environmental Control AGENCY TYPE: F

| PARAMETER CODE / DESCRIPTION / REC MODE / AUDIT CLASS | YEAR | Q | **** PRECISION DATA **** # OF | PRECIS | PROB LIM LO | PROB LIM UP | ACCURACY DATA LOC PRI STD | ACC TYPE | AUDIT TYPE | NO AUDITS L1-3 | NO AUDITS L4 | PROB LIM LO-L1-UP | PROB LIM LO-L2-UP | PROB LIM LO-L3-UP | PROB LIM LO-L4-UP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 44201 Ozone CONTINUOUS ANALYTICAL | 2007 | | 4 | 60 | - 5.6 | 11.5 | PHOTOMETER (VERIFIED) | PE | AUDIT ONLY BY RO | 446 | 0 | - 6.4 8.6 | - 5.2 7.2 | - 6.6 9.4 | |
| | | 1 | 4 | 7 | - 8.9 | 19.5 | PHOTOMETER (VERIFIED) | PE | AUDIT ONLY BY RO | 129 | 0 | - 8.8 8.8 | - 7.0 7.0 | - 8.2 9.5 | |
| | | 2 | 4 | 26 | - 5.7 | 11.2 | PHOTOMETER (VERIFIED) | PE | AUDIT ONLY BY RO | 212 | 0 | - 5.2 7.9 | - 4.6 7.4 | - 6.6 9.8 | |
| | | 3 | 4 | 27 | - 4.9 | 9.9 | PHOTOMETER (VERIFIED) | PE | AUDIT ONLY BY RO | 105 | 0 | - 4.6 8.8 | - 3.3 6.5 | - 4.7 8.1 | |

US EPA ARCHIVE DOCUMENT

# Enclosure 2

## December 2007

# FINAL EAC Progress Report Document
# South Carolina's Comprehensive Maintenance Plan

D H E C

PROMOTE PROTECT PROSPER

**Enclosure 2**
**South Carolina's Ozone Early Action Compact**
**December 2007 Progress Report**
**Comprehensive Maintenance Plan**

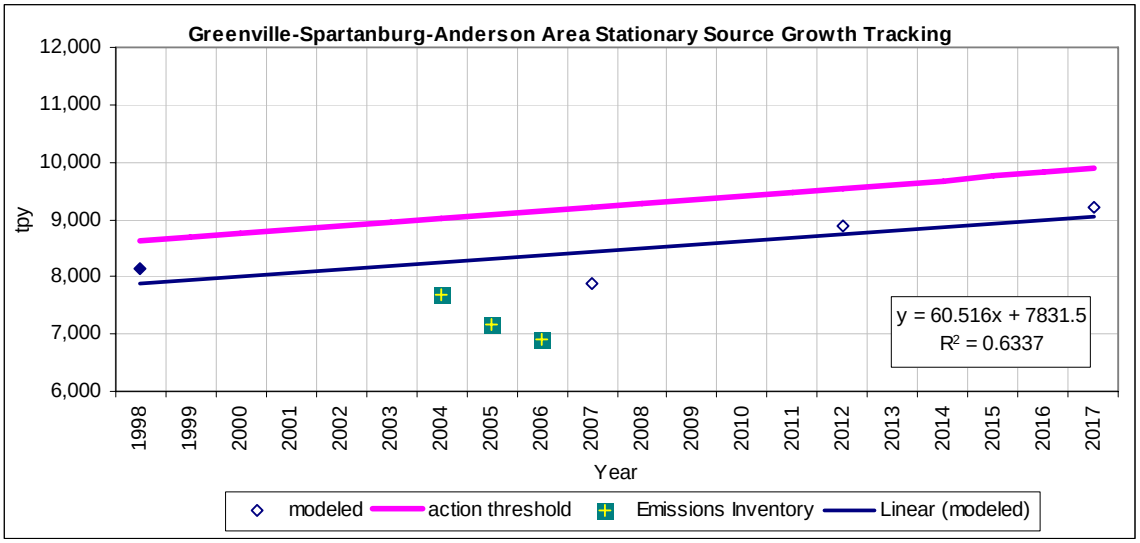
South Carolina has committed to a comprehensive maintenance plan. This commitment far exceeds the maintenance requirements in the EAC protocol. The South Carolina EAC maintenance plan is similar to the requirements for section 175A of the Clean Air Act, none of which are required for EAC areas. A Notice 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.

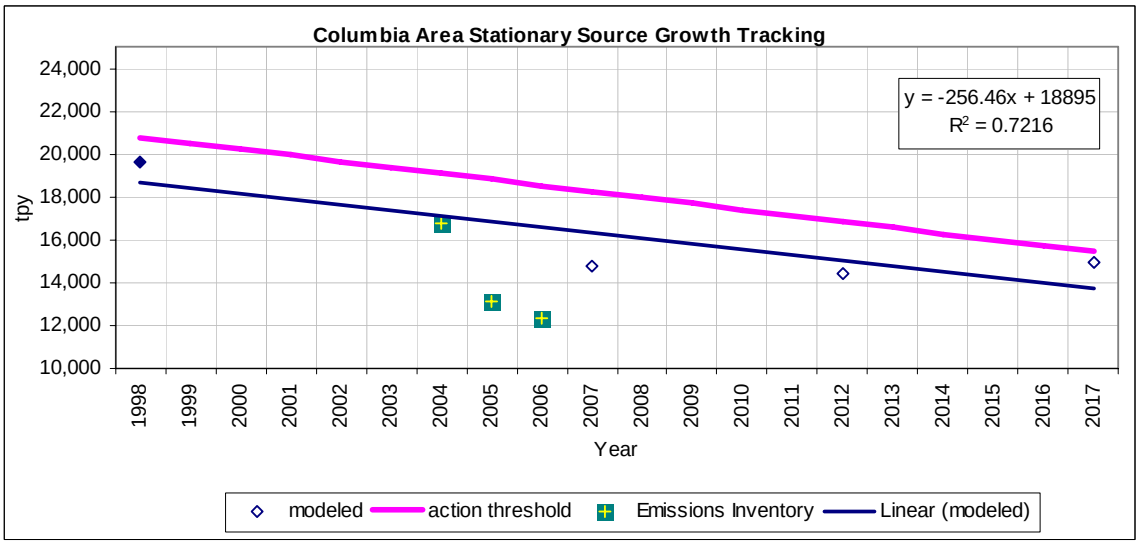
South Carolina's commitment included an annual review of growth (highway mobile and stationary $NO_x$ sources) to ensure emission reduction strategies and growth are adequate as well as identification and quantification of federal, state, and/or local measures indicating sufficient reductions to offset growth estimates. 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. The third annual review (December 2007) for both deferred areas, once again revealed that the actual emissions remained lower than the forecasted modeled data and the 2006 VMT remained well below the action trigger.

US EPA ARCHIVE DOCUMENT

## Annual Review of Growth

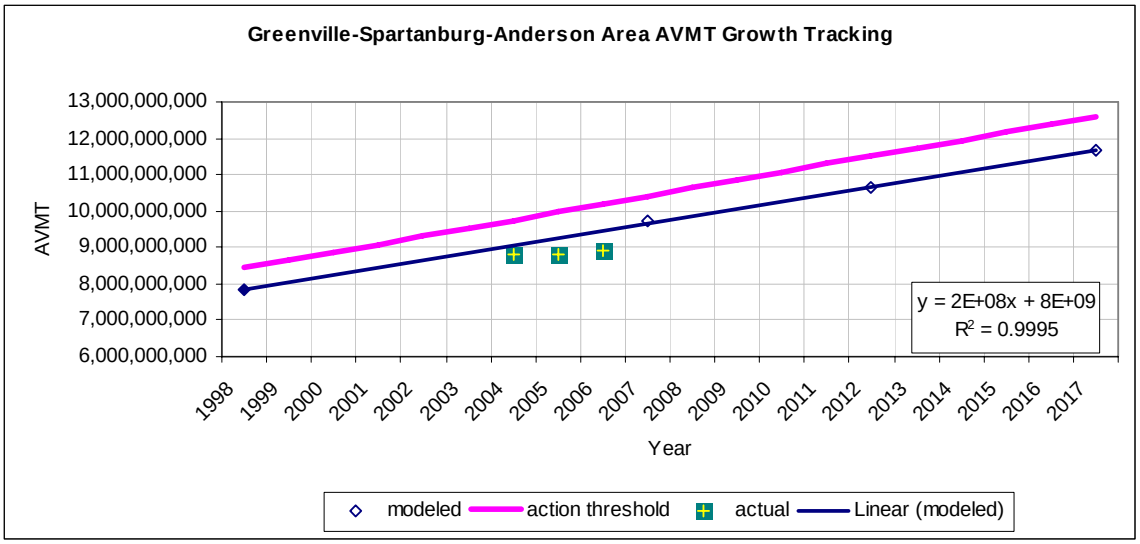
The most recent emissions inventory (2006) was compared to the emissions used in the ozone modeling analysis with a base year of 1998. In order to compare the annual emissions to the assumptions made in the model, a regression equation for each deferred area was developed in order to forecast the emissions for years not modeled. The modeled data, forecasted data, the 10 percent "action level" and actual emissions for 2004, 2005 and 2006 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.

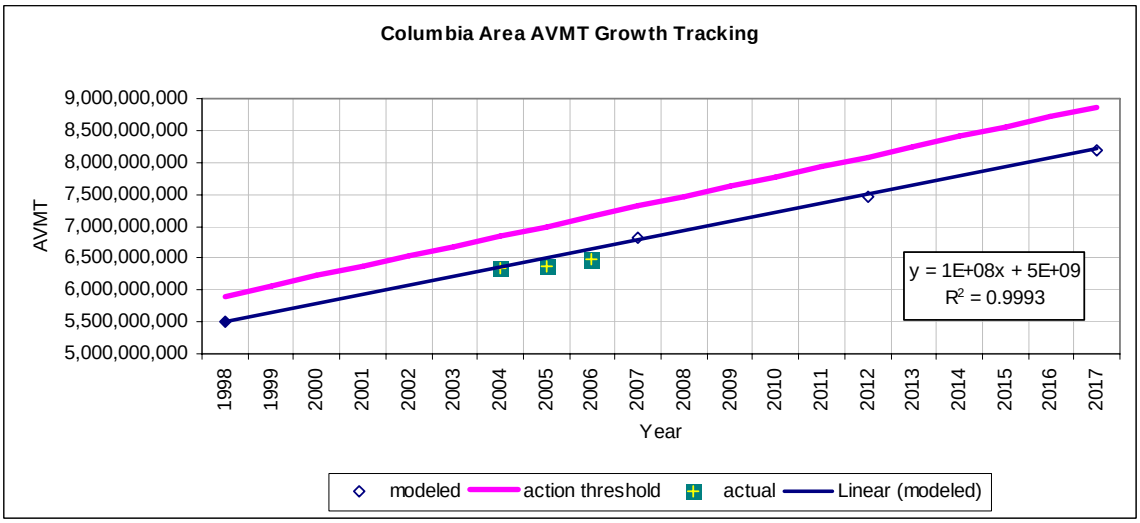



US EPA ARCHIVE DOCUMENT

The most recent annual VMT (2006) 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, 2005 and 2006 VMT for the three-counties 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 deferred areas, the review revealed that the 2004, 2005 and 2006 VMT was slightly below the modeled trend line.




US EPA ARCHIVE DOCUMENT

US EPA ARCHIVE DOCUMENT

# Attachment 5

# Santee Lynches Area

## December 2007
## FINAL EAC Progress Reports

D H E C

PROMOTE PROTECT PROSPER

| A. Control Measure under Consideration | B. Summary Description of Measure | C. Program/Measure Status | D. Specific Implementation Date | E. VOC Reduction | F. NOx Reduction | G. Resources (FTE's, $$) | H. Additional Information |
|---|---|---|---|---|---|---|---|
| **Santee-Lynches, SC (Designated - Attainment)** | | | | | | | |
| **DECEMBER 2007 CLARENDON 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.** | | | | | | | |
| Investigating County vehicle fleet | Review maintenance schedules and overall inspection program by County Vehicle Maintenance. | Observations of the County shop activities appear to be in keeping with proper operation and maintenance of County vehicles. | Nov. 1, 2003 | n/a directionally sound | n/a directionally sound | n/a | County Shop has been recently advised regarding vehicle maintenance with respect to air quality |
| Investigate nature of school district vehicle operation and maintenance. | Seek to work with school districts similarly as the County's fleet. | Have not been in contact with School officials on this matter. | Nov-Dec 2003 | n/a directionally sound | n/a directionally sound | n/a | Action has not been taken to undertake involvement with school bus facilities at this time. |
| Introduce ozone reduction as a part of school science curriculum. | Use ozone reduction as a part of physical science or earth science class. | Have contacted school districts on several occasions regarding inclusion of this topic in science curriculum. | Nov-Dec 2003 | n/a directionally sound | n/a directionally sound | n/a | All schol districts have been comtacted regarding this activeity. |
| Establish County spokesman for air quality. | Find the most logical point to disseminate ozone information and open burning requirements pursuant to air quality. | Farming community is noticed through news letter from Soil an Water Conservation District concerning ozone issues related to open burning and machinery operation. | Jan-Feb 2004 | n/a directionally sound | n/a directionally sound | n/a | News releases to both general public and the farming community promote County Engineer's office as source for information. |
| Develop open burning guidelines | Coordinate open burning with appropriate air quality constraints | General community advised to contact County Engineer's office if there are questions regarding appropriate actions for burning and other activities. | Jan-Feb 2004 | n/a directionally sound | n/a directionally sound | n/a | Each outreach carries the rider to contact the County Engineer or contact the Bureau of Air Quality regarding these and other questions. |
| | Additional | | | | | | Fliers were given to all department heads regarding the status of local air quality and measures that might be employed to protect it as well as protect county personnel. |

**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 |
|---|---|---|---|---|---|---|---|
| **Santee-Lynches, SC (Designated - Attainment)** | | | | | | | |
| **DECEMBER 2007 KERSHAW 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.** | | | | | | | |
| 1. Air Quality Contact | One person will be identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast. | The previous contact attended the August EAC Summit. Merri Siegler is the new contact. | 2004 | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| 2. Support Statewide efforts | The county will support the efforts of SCDHEC regarding statewide reduction strategies. | Information is shared as received at our weekly department head meetings. Related information such as energy savings, efficient lighting, etc. sent with paychecks | January 1, 2006 | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| Community Awareness and Education | Enhancing ozone awareness will be a vital part of Kershaw County's EAP. A/E will include public speaking, distribution of educational materials, and increased media alerts concerning ozone and clean air awareness. | Fire Marshal discourages burning while our Recycling Coordinator promotes compost recycling through our schools. | June 1, 2003 | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| Alternative Fuel Use | Plan for the use of alternative fuels where possible. | Will consider vehicles that run on alternative fuel as purchasing needs arise. Will be item for discussion for FY 2007-2008 budget | July 1, 2004 | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| Teleconferencing | Encourage the use of teleconferencing, and provide teleconferencing facilities and technologies. | Our County has teleconferencing and videoconferencing capabilities and use those as appropriate. | January 1, 2004 | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| Media | Utilize local media for education/outreach activities, ozone forecast, PSA's, etc. | The local radio station is used to promote recycling events and information. | January 1, 2004 | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| Fleet Scrappage | Implement a fleet scrappage or retirement program. | Plan has been implemented. | Existing | n/a directionally sound | n/a directionally sound | | See Comment #3 |
| Kershaw 10-Year Plan Addresses Growth | Steering development to the populated western part of Kershaw County and installing infrastructure before future growth arrives are priorities in a proposed 10-year comprehensive plan. | Residents will be able to voice their ideas on the proposed comprehensive plan at a Kershaw County Planning and Zoning Commission meeting May 3, 2007. | May, 2007 | n/a directionally sound | n/a directionally sound | | |
| School Attendance Zones | Meetings were held to give parents the opportunity to voice their concerns and criticisms about the school redistricting plan | The biggest issue was that parents wanted their children to walk to school. | March, 2007 | n/a directionally sound | n/a directionally sound | | |
| Compact Fluorescent Light (CFL) | Encourage the use of compact fluorescent lights to conserve energy use. | Proclamation to be presented to County Council in December. | December, 2007 | n/a directionally sound | n/a directionally sound | | |

**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 |
|---|---|---|---|---|---|---|---|
| **Santee-Lynches, SC (Designated - Attainment) - Lee County** | | | | | | | |
| Gas Can Exchange Event | | | | | | | |
| **DECEMBER 2007 LEE 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.** | | | | | | | |
| 1. Air Quality Contact | One person will be identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast. | William F. Conway has been the person identified and will be until 09/29/06. Dwayne Huggins has been identified as the new contact. | June 1, 2003 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| 2. Support Statewide efforts | The county will support the efforts of SCDHEC statewide efforts to reduce ozone levels. | Completed. Lee County will support the effords of SCDHEC in the promulgation of the following regulations. SC61-62.2 "Prohibition of open Burning, SC61-62.5 Std. 5.2 Control of oxides of Nitrogen | June 15, 2004 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Grass Cutting | Lee County Public Works will delay cutting grass till 6 p.m. on an Ozone Action Day. | Public Works was instructed again | May 1, 2006 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Education | Lee County will work with school Districts to educate the children about ozone reduction | Lee County has notified the schools that we help them with any educational problems they may have concerning air quality. | May 15, 2006 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Ozone reduction | Lee County is actively searching for new and better ways to reduce ozone emission that will be suitable for Lee County | Lee County has asked for sugestions from its employees on how to protect the air quality of Lee Conuty. | May 15, 2006 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Media | Utilize local media for education/outreach activities, ozone forecast, PSA's, etc. | Have checked with local papers to see if they would run a public service announcement when needed. | January 5, 2005 | 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 |
|---|---|---|---|---|---|---|---|
| **Santee-Lynches, SC (Designated - Attainment)** | | | | | | | |
| **DECEMBER 2007 SUMTER 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.** | | | | | | | |
| 1. Air Quality Contact | One person will be identified as the Air Quality Contact. At a minimum, this contact will be responsible for ozone education/outreach and dissemination of ozone forecast. | Amanda McNulty fills that position. | 2002 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| 2. Support Statewide efforts | The county will support the efforts of SCDHEC regarding statewide reduction strategies. | Adopted | 2002 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Fleet management | Sumter County and City governments will consider purchase of alternative fueled or more fuel efficient vehicles when buying replacement | No action taken. | N/A | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Alternative fuels | Sumter County and City governments will seek the latest information on low emission fuels for use in fleet vehicles | No action taken. | N/A | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Education | Air Quality Contact will promote use of "Action for a Cleaner Tomorrow" curriculum with Districts 17 and 2 | CD's provided | Mar-04 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Education | Air Quality Contact will develop list of speakers to make presentation on ozone reduction strategies | Two speakers identified | Apr-04 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Idle time reduction | County and City will develop education program to reduce idling time of fleet vehicles | County Public Works has implemented | April-04 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Varied maintenance hours | Cty. Dept. of Public Works will schedule maintenance activities to avoid peak time emissions during ozone alerts | County Public Works has implemented | April-04 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Tree ordinance | Strengthen existing tree ordinance to protect existing trees in new developments | City has strenghtened codes, County has not | Apr-05 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Ozone alert notification | Develop system to notify county and city government agencies of ozone alert days and encourage implementation of strategies | DHEC emails sent to local Gov't agencies | Apr-04 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Tree Planting | Sumter Soil and Water Conservation District will provide technical assistance in planting/replanting 500 acres in trees per year | Accomplished | Apr-04 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Development model | Sumter Cty. Development Board will continue to support mixed use developments | No new mixed use developments have occurred. | N/A | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Alternative transportation modes | Support construction of pedestrian and bicycle paths when new roadways are built or improved | Patriot Parkway has both features. | Apr-05 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Tree Planting | Continue activities necessary to remain a certified "Tree City" | City planted 40 canopy trees in 2006. | 2006 | n/a directionally sound | n/a directionally sound | n/a | See Comment #3 |
| Air Quality Education | Public Education Campaign "Do a Little Less for Cleaner Air" | displayed electric lawn mower and environmentally-friendly gas cans at Sumter County Fair with favorable response. | fall 2007 | n/a directionally sound | n/a directionally sound | n/a | |
| "Safe Routes to School" grant | SCDOT approved funding to develop comprehensive bicycle and pedestrian programs as part of the "Safe Routes to School Program." Partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. One of the purposes outlined in the funding legislation for this program includes facilitating the planning, development, and implementation of projects and activities that will reduce traffic congestions, fuel consumption and aire pollution in the vicinity of primary and middle schools.<br><br>Selected schools receive up to $200,00.00. | Willow Drive Elementary School in Sumter County was awarded the "Safe Routes to School" grant for the 2007 funding cycle. | 2007 funding cycle<br><br>Press release September 28, 2007 | *All Pollutants | | | |
| US Mayor's Climate Protection Agreement | The agreement urges state and federal governments to enact policies that would reduce greenhouse gas emissions to 7 percent below 1990 levels by 2012 and pledges to work toward the same goal on a local level. | Sumter Mayor Joe McElveen is among the 355 mayors across the country who have signed on to the U.S. Mayor's Climate Protection Agreement, initiated in 2005 by Seattle Mayor Greg Nickels. | 2007 | n/a directionally sound | n/a directionally sound | n/a | |

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

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# Enclosure 4

## December 2007

# FINAL EAC 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 2007**

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, the Department 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, the Department submitted additional compacts received from local participants. As of December 31,



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2002, forty-five of the forty-six counties in South Carolina elected to become active stakeholders in the South Carolina Early Action process.

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

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

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

In 2006, 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. For additional information on the stakeholder meetings refer to the Aiken and Edgefield local progress reports.



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In February 2007 another stakeholder group was formed in the Town of Irmo located in Lexington County. While Lexington County is currently attaining the 8-hour ozone standard, there is concern over the fine particulate matter standard. The goal of this effort is to involve local stakeholders in reviewing local monitoring data and surrounding activities in an effort to implement strategies to reduce emissions. The stakeholder group includes local industry, local government, and recreation and school officials and was expanded to include neighboring Richland County as well as the Central Midlands Council of Governments (COG). Other counties and local governments within the Central Midlands COG will be invited to participate. For additional information on the stakeholder efforts refer to the Lexington and Richland County local progress reports.

The Department held a public meeting on the Early Action State Implementation Plan (SIP) submittal on August 18, 2004. The meeting was held in Columbia and broadcast around the state at local Department Environmental Quality Control offices to allow participation from all over the state. The Draft Early Action SIP was published in the *State Register* on October 22, 2004, and the public hearing was held on November 22, 2004. As deemed appropriate, based on comments presented during the public comment period, the Department finalized the Early Action SIP and submitted it to EPA on December 29, 2004. A complete copy of the submittal may be found at http://www.scdhec.gov/eqc/baq/html/eap_sip.html.

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

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

While information pertaining to the amount of $NO_x$ and VOC reductions that are expected as a result of these regulations is available, it is important to note that modeling indicates that all monitors will be attaining the 8-hour standard by 2007 even without these additional measures. However, the reductions from these regulations are



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quantifiable, permanent and will ensure that South Carolina obtains cleaner air sooner and helps ensure continued maintenance of the 8-hour ozone standard in the future.

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

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

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

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

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

Topics covered included energy conservation, diesel retrofits, land use planning, alternative fuels, commuting options and multi-modal transportation, innovative education and outreach, health impacts/lifestyle and finding the funding. Key speakers



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included Bill Wehrum, Acting Assistant Administrator for Air & Radiation, U.S. Environmental Protection Agency, and Mark MacLeod, the Director for Special Projects in Environmental Defense's Climate and Air program working out of the Washington DC office. As has been our experience with the EAC process over the past years, direct involvement by stakeholders is a critical key to overall success with initiatives for improving air quality. The EAC Summit initiative certainly proved this point again. The exchange of ideas, information and interest experienced during the sessions and other opportunities, including breaks and meals was very beneficial.

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

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

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

**Climate Change Discussions** – The Bureau of Air Quality (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 have focused 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. BAQ's Education and Outreach Section has responded to numerous requests from teachers for classroom visits addressing climate change, and has addressed similar requests that have been received from community groups.



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State Planning for Greenhouse Gas Mitigation

On February 16, 2007, Governor Sanford issued an Executive Order creating the Climate, Energy and Commerce Advisory Committee (CECAC). Department staff compiled background materials to include studies, current actions, and a draft list of potential participants that will comprise five technical work groups and the decision-making body, the CECAC. The process will follow the Center for Climate Strategies-facilitated study and adoption of carbon reduction policies. It is anticipated to take a year or more to complete. The first CECAC meeting took place May 3, 2007.

To develop a Climate, Energy, and Commerce Action Plan as directed by the Governor's Executive Order, the CECAC is tasked with completion of the following specific planning recommendations:

1. Review and approval of a current and comprehensive inventory and forecast of greenhouse gas (GHG) emissions in South Carolina from 1990 to 2020;

2. Development and recommendation of a comprehensive set of specific policy recommendations and associated analyses to reduce GHG emissions and enhance energy and economic policy in South Carolina by 2020 and beyond;

3. Development and recommendation of a set of recommended statewide GHG reduction goals and targets for implementation of these actions; and

4. Issuance of recommendations in the form of a final report to the Governor by June 2008.

Governor Sanford's CECAC includes:
Sen. John Courson, South Carolina Senate / Chairman
Dana Beach, Executive Director, South Carolina Coastal Conservation League
Crandall Close Bowles, President and CEO, Springs Mills
Jim Byrd, Deputy Director, Market Services Division, South Carolina Department of Insurance
Lonnie Carter, President and CEO, Santee Cooper
John Clark, Director, South Carolina Energy Office
Barry Falin, Vice President and General Manager of Carolina Operations,Voridian
Bob Fledderman, Manager, Environment and Regulatory Assurance, MeadWestvaco
John Frampton, Director, South Carolina Dept. of Natural Resources
Reggie Gallant, Vice President, Southern Zone, State Farm
Dr. Paul Gayes, Director, Center for Marine and Wetlands Studies, Coastal Carolina University
Emerson Gower, VP, Southern Region, Progress Energy Carolinas
Rep. Ben Hagood, South Carolina House of Representatives
Ladd Hall, Vice President and General Manager, Nucor Steel
Rep. Bill Herbkersman, South Carolina House of Representatives
Joe James, CEO, Corporation for Economic Opportunity



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Bob King, Deputy Commissioner, South Carolina Department of Health and Environmental Control
E. Bruce Morgan, Mayor, City of Union
Dr. Marcus, Newberry Former Dean, MUSC College of Medicine
Mike Olbrich, Plant Manager, BP Chemical
James E. Rogers, Chairman, President and CEO, Duke Energy Corporation
Bob Scott, President, South Carolina Forestry Association
Lanneau Siegling, Past Chairman, Hospitality Association of South Carolina
David Smalls, President, Walterboro-Colleton Chamber of Commerce
Steve Smith, Executive Director, Southern Alliance for Clean Energy
John Tiencken, Former CEO, Santee Cooper
Bill Timmerman, CEO, SCANA
Sen. Danny Verdin, South Carolina Senate
Hugh Weathers, Commissioner, Department of Agriculture
Johnny Williamson, CEO, South Carolina Soya, LLC
Brad Wyche, Executive Director, Upstate Forever

The Climate Registry

South Carolina joined with 31 other states as a founding member of The Climate Registry (TCR). BAQ staff is setting out a strategy for recruiting participation by regulated and non-regulated entities. On August 3, 2007, BAQ gave a presentation on TCR to the state Chamber of Commerce Technical Committee. About 60 business representatives, including manufacturing, electric utilities, attorneys and consultants attended.

The Climate Registry was established by states, tribes and provinces in North America as a mechanism to measure greenhouse gas (GHG) emissions consistently across industry sectors and borders. The Climate Registry encourages voluntary early actions to increase energy efficiency and decrease GHG emissions. The Climate Registry accounting infrastructure supports a wide variety of programs that reduce GHG emissions including voluntary, regulatory and market-based programs.

On October 4, 2007, Joel Levin, California Climate Action Registry's Vice President for Business Development, provided an overview of the Climate Registry. Mr. Levin is the California Climate Action Registry's Vice President for Business Development. He is responsible for educating participants from all economic sections and regions to register and certify their greenhouse gas emissions. Representatives from state and local governments, including Lexington County, as well as business and industry attended the discussion. Eight businesses nationally have signed Statements of Intent to join the registry as of November 14, 2007, none in South Carolina. However, South Carolina has set a goal of having three businesses sign up by January 15, 2008.



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Local Government

BAQ is collecting data from the City of Columbia to determine base year emissions inventory. BAQ is also assisting the cities of Greenville and Rock Hill to implement their US Mayors Climate Protection Agreement.

The City of Columbia's Climate Protection Committee is drawing up sustainability protocol for businesses to earn "green" certification. On September 24, 2007, the committee sponsored a successful **Green Business Summit** that focused on waste- and emission-reducing best management practices. The Green Business Summit kicked off the development of a protocol for businesses requiring a step by step implementation of practices. Completion earns the certification decal and public listing. As a follow-up, a "Green Business Boot Camp" was held on November 29, 2007. In this intensive, interactive workshop, Midlands businesses and nonprofit organizations developed Green Business plans that met the membership requirements of the City of Columbia's Green Business Program.

Businesses that develop a Green Business plan and submit it to the City of Columbia's Green Business program are awarded with a "City of Columbia Green Business Member" window decal and recognized by the City as a member of the Green Business Program.

Business Initiatives

The Home Builders Association of Greater Columbia formed the "Green Business Council of Greater Columbia" in August 2007. The Green Business Council of Greater Columbia will work to educate the public and constructions companies about what makes a green home green. The council will offer home builders a process by which they can certify their houses as green.

**Energy Efficiency -** The South Carolina Summit on Energy Efficiency (EE Summit) was held on April 30, 2007, in Columbia, South Carolina. The EE Summit brought together 175 participants representing a broad range of interests – electric and gas utilities, regulators, legislators, consumer and environmental advocates, industry, universities, schools, and regional transmission organizations. For additional information, see Number 11 – Energy Efficiency of this document.

**Ground-level Ozone Awareness Week** – The Governor of South Carolina declared April 1-7, 2007 as Ground-level Ozone Awareness Week. This is the eighth 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



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York Technical College
Bowater – York County
Citi Group – York County
Springs Industries – York County.

In 2006 the goal for the Department's Bureau of Air Quality (BAQ) was to reduce over 125,000 miles. The BAQ exceeded the goal by almost 25,000 miles. The reductions from the 2006 TABFTE program for participants within the State of South Carolina were:

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

**The total reductions from the 2007 Ozone Season TABFTE program for the State of South Carolina only:**
146, 991 miles reduced
592 pounds of VOCs reduced
411 pounds of $NO_X$ reduced

**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.

Four bills were introduced into the 2007 South Carolina Legislature. These four bills are collectively known as "Energy Independence for South Carolina's Future." The bills address the dependence of foreign energy, the rising costs of energy on South Carolina, the effects of a building's indoor environment and protecting the environment.

Senate Bills 376 and 362 implement aggressive sustainable construction standards for public buildings and schools, using a high performance rating system known as LEED. The Sustainable Investment Act (Senate Bill 377) creates tax incentives for private developers to use "green" standards in constructing new or renovated commercial buildings. The bill also creates an expedited permitting process for developers employing LEED standards. The fourth bill (Senate Bill 368) requires the state's Fleet Management Program to select hybrid, plug-in hybrid, bio-diesel and Flex-Fuel Vehicles when price, performance and quality are comparable to traditional vehicles. This measure will reduce the state's spending while minimizing the vehicle emissions.



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In May 2007, a South Carolina Legislative House Transportation and Roadways Subcommittee amended and approved H. 3780 – "Transportation Performance and Accountability Act of 2007." This bill provides that the Department of Transportation will implement the Traffic Congestion Reduction Program whose purpose is to minimize traffic congestion along the state's highways in order to promote economic growth within South Carolina.

Also in May 2007, a South Carolina Legislative House Ways and Means Economic Development, Capitol Improvement, and Other Taxes Subcommittee approved H.3153. This bill establishes the Mass Transit Advisory Council to advise the Deputy Director for Mass Transit for the Department of Transportation on the mass transit needs and the specialized transportation needs of all areas of the State.

A school bus replacement law passed in June 2007 requires the state to provide funding to replace one-fifteenth of the school bus fleet each year. The law also requires the state to use biodiesel in the buses.

Senate Bill S243, The Hydrogen Infrastructure Act, was amended to include the key components of the Energy Freedom and Rural Development Act (H3649). S243 passed the South Carolina Senate and House of Representatives but was vetoed by the Governor; however, the Senate and House of Representatives overrode the Governor's veto. This bill advances the state's goal to create a thriving hydrogen and fuel cell cluster in South Carolina's economy and promotes the use and production of biofuels in South Carolina.

Alternative Fuels Bill (S.243)

On June 19, 2007, the SC House and Senate overruled the governor's veto of the Hydrogen Bill (S.243). The passage of this monumental energy bill will provide millions of dollars starting in 2008 for tax incentives, sales tax rebates, and incentive payments to encourage the development of renewable fuels and alternative energy in South Carolina. Additionally, H.3749 was passed that included a provision to establish a Renewable Energy Grants and Loans program. The following are a list of incentives:
Beginning July 1, 2007:

- The SC Renewable Energy Infrastructure Development Fund includes a grant program providing planning grants to aid in the time and resources required to submit grant proposals and matching grants for research and development and demonstration projects. The program will also include a low-interest revolving loan program designed to assist entities building renewable energy projects;
- The SC Hydrogen Infrastructure Development Fund provides grants to promote the development and deployment of hydrogen production, storage, distribution, and dispensing infrastructure and related products and services;
- The biofuels marketing program will promote public awareness;
- Free ethanol and biodiesel testing for SC producers became available;
- An expansion of the solar system tax credit to include electricity generation;



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- An increased tax credit for production of ethanol and biodiesel from alternative feedstocks, such as switchgrass, wood, waste cooking oil, animal fats, and algae;
- The requirement that school buses use B20 where feasible; and
- The requirement that construction of large state-owned buildings be "Green Buildings" and meet certain nationally recognized building standards.

Beginning October 1, 2007:

- Sales tax exemption for equipment operation, production, distribution, manufacture, or research of hydrogen or fuel cells. Also includes building materials and machinery used by a research district.

Beginning January 1, 2008:

- Income tax credit of up to $2,000 for plug-in hybrid vehicles purchases;
- Tax credits of up to $100,000 for research and development of renewable fuel feedstocks best suited for South Carolina, such as cellulosic ethanol and algae-based biodiesel;
- Income tax credits for contributions made by a taxpayer to the South Carolina Hydrogen Infrastructure Development Fund;
- Tax credits for the purchase and installation of equipment to produce electricity and gas from biomass resources including wood and wood waste, agricultural and animal waste, sewage, landfill gas, and other organic materials; and
- A requirement that all state-owned diesel pumps provide a minimum of five percent biodiesel.

Beginning July 1, 2008:

- Tax rebates up to $300 for the purchase or lease of vehicles that are flex-fuel (ethanol), hybrid, electric, or fuel efficient with an EPA city fuel economy of 30 mpg or greater;
- Incentive payments for biomass energy users ranging from one cent per kilowatt-hour or 9 cents per therm.

Beginning July 1, 2009:

- Five cents per gallon incentive payments will be available for retailers selling B20 biodiesel and E85 ethanol.

**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:



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- 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.

Information during the first 6 months of 2007 provided to the EAC contacts included:

- South Carolina Educational Television Explores South Carolina's Alternative Fuel Options - CNN's John King Hosts "Securing Our Future: From Farm to Fuel" on Friday, April 13, 2007 at 9 p.m.
- Information on April 22nd marking the 37th observance and celebration of Earth Day.
- Information and opportunities for the 2007 Ground-Level Ozone Season was sent to on March 29, 2007. Opportunities included the Mobile Source Outreach Assistance Grant offered by the EPA and the 2007 National Air Quality Awareness Week (April 30-May 4). Information was included on EPA and NOAA's National Weather Service compiling federal, state and local activities for inclusion on their website. The air quality project, "Mow Down Pollution" events, implemented by Richland and Lexington Counties on April 21, 2007, and hosted by York County on April 28, 2007, were included as opportunities. Attached to the e-mail was a copy of Governor Mark Sanford's proclamation for Ground Level Ozone Awareness Week (April 1-7).
- Information on the Ground-level Ozone Season and the new forecast region for SC sent February 27, 2007. Information included an announcement that forecasting for ground-level ozone will begin April 1 this year as a result of the Department observing elevated levels of ground-level ozone during the month of April 2006 and that the Department will be adding a new forecast region. The CATAWBA region will include York, Chester, and Lancaster counties. The Department is adding two counties to the existing PEE DEE forecast region. Marlboro and Dillon counties will join the other counties in the Pee Dee regional forecast in 2007.

**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



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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.

**Outreach Efforts – "**Mow Down Pollution" Event (April 21, 2007) - Lexington and Richland Counties in conjunction with local non-profit Keep the Midlands Beautiful, and the Department's Bureau of Air Quality (BAQ) planned and implemented the first lawn mower exchange in South Carolina. To encourage Columbia-area residents to do their part to "Spare the Air," the lawn mower exchange was held at the State Museum to Mow Down Pollution! The lawn mower exchange coincided with other activities the museum hosted to celebrate Earth Day. The event collected empty, functional gas powered lawn mowers and offered a discount between 30 percent and 55 percent off MSRP on Neuton cordless electric mowers. To compliment the lawn mower exchange, other partners were invited to exhibit Greenscaping information at the event. These partners helped extend the impact of the exchange by highlighting complimentary lawn and garden practices that help protect air quality.

**Outreach Efforts -** October 2007 - U.S. Walk to School Day - At 141 plus, South Carolina had more schools participating in this anti-obesity, enviro-friendly campaign than any other state except California.

**Outreach Efforts** – October 2007 - A push to educate consumers about the benefits and advantages of plug-in hybrid electric vehicles in North and South Carolina was kicked off in Charleston with the launch of the Plug-In Hybrid Coalition of the Carolinas. The Plug-In Hybrid Coalition of the Carolinas debuted at the annual meeting of the Southeastern Governmental Fleet Managers Association. During a session about plug-in hybrids attendees were asked to commit to the Plug-In Carolinas Challenge.

**Grant Assistance** – January 2007 - South Carolina and Georgia sponsored a timely opportunity, in cooperation with staff from the U.S. Environmental Protection Agency's (EPA) Region 4 Office. In advance of upcoming funding opportunities for various types of projects to address air quality issues through the EPA, a workshop was held for each of three areas of our state to provide information that may help local entities to improve their proposals for applying for these funding grants.

Staff from the Department's Bureau of Air Quality and the Georgia Environmental Protection Division worked with local government contacts in the Greenville, Columbia and Augusta/Aiken areas to host these workshops. The schedule for these workshops was as follows:



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1) January 16th.....1:00 - 4:00 p.m. for the Augusta/Aiken areas
Location: University Prompt Care Building - Suite 202
3121 Peach Orchard Road; Augusta, GA 30906
2) January 17th.....1:00 - 4:00 p.m. for the Central Midlands area
Location: Eau Claire Print Facility
3901 Ensor Avenue; Columbia, SC
3) January 18th.....9:00 a.m. - 12:00 p.m. for the Greenville/Spartanburg areas
Location: Greenville County Council Chamber
301 University Ridge; Greenville, SC

The workshop agenda included:

Explaining EPA's competitive grant process, to include
- -how to find EPA grant funding opportunities
- -how to prepare a strong project proposal
- -how to submit your proposal
- -how EPA selects projects
- -what happens after a project is selected.

The workshop was open to all interested parties. Organizations that are eligible to compete for EPA grant funds, includes state, local and tribal governments, universities and nonprofit organizations.

**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.

**Mass Transit - December 2007** - Mass transit is expected in South Carolina's Upstate under a plan by the city of Travelers Rest that would convert the abandoned 10-mile-long, northern segment of the Greenville & Northern Railroad into a "Carolina Swamp Rabbit Tram Trail." The plan is to convert the rail line, which runs from Greenville to Travelers Rest, into a multi-use trail that can be used for recreational and motorized transit. A 7-foot-wide microbus would travel a 10-foot wide asphalt strip constructed over the railroad bed, carrying passengers between downtown Greenville and downtown Travelers Rest. The plan is an intermediate step in response to U.S. Department of Transportation statistics showing that Georgia and South Carolina lead all states in the number of rural residents dependent on passenger rail as their only public transportation. The long-term goal of the plan is to preserve the integrity of the rail corridor for eventual conversion to a commuter rail line, while attempting to have the area's transportation infrastructure keep pace with expanding growth.



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**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.

The Department of Education has worked with the State Procurement Office to establish a statewide contract for B20 biodiesel. The biodiesel will be available to purchase at the state contract price for all political subdivisions in the State. The Department of Education plans to convert the entire State fleet of school busses (over 5,700 busses) to B20 in 2007.

A school bus replacement law passed in June 2007 requires the state to provide funding to replace one-fifteenth of the school bus fleet each year. The law also requires the state to use biodiesel in the buses.

**School Busses - December 2007 - South Carolina Department of Education - School Bus Initiative**
Two plug-in hybrid electric buses with a 2007 emission compliant diesel engine fueled with ultra-low sulfur diesel (soon to be ultra low sulfur 20% biodiesel) were placed into service in South Carolina. One bus was placed in Richland County and the other in York County. A press release was issued on September 27, 2007, and a press conference was held on October 11, 2007.

**School Busses - December 2007 Clean School Bus USA Grant -** The South Carolina Department of Education submitted a grant proposal for the 2007 U.S. Environmental Protection Agency Clean School Bus USA grant, in conjunction with the Southeast Diesel Collaborative. Initial review indicates with some minor modifications, the proposal will be accepted and the Department of Education will be awarded the grant. The grant will provide 500 school buses with crankcase ventilation filters and anti-idling hardwear. The grant will also allow the Department of Education to create a computer program that will use GPS data to identify areas of excessive idling. The Department of Education has also requested additional funding for anti-idling awareness education.

**School Busses - December 2007 School Bus Ridership Grant Proposal -** Staff in the BAQ's Division of Air Planning Development and Outreach submitted a proposal to



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EPA's Mobile Source Outreach Competition Grant for 2007. This proposal is intended to work with an elementary and middle school in local areas (up to 3 areas) of the State to determine mechanisms to increase the utilization of school buses and carpooling to and from school by students. This project will include working with parents, students, faculty, and school administration to encourage better use of school buses for transportation.

**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 SEDC continued to create partnerships and disseminate information for reductions of diesel emissions. The SEDC held a South Carolina stakeholders meeting in August 2006 in Columbia. A SEDC emerging fuels conference was held in Atlanta in December 2006. Through the SEDC the Department has been contacted by equipment vendors to exchange ideas on increasing sales for diesel retrofit devices. The Department is made aware of the products offered and the manufacturers gain insight into what areas of the state the equipment will have the most benefit to air quality.

In March 2007, the SEDC conducted a workshop for identifying available funding sources to implement clean diesel programs. Two Department employees attended the workshop and received the training materials and contacts to pursue funding for diesel emission reduction programs.

In June 2007, the SEDC held its second annual partners meeting in Atlanta, Georgia. The meeting provided an opportunity for the eight Region 4 state environmental commissioners, including South Carolina's, to establish a vision for future diesel emission reduction projects.

**December 2007** - BAQ staff continue to participate in routine conference calls with the SEDC partners.

**Alternative Fuels -** State Ports Authority (SPA) **-** The Department continues to work with the SPA to reduce diesel emissions. In March 2007, the SPA signed a memorandum of agreement with the Department to partner in reducing port-related diesel emissions. In late September 2007, the SPA switched to cleaner burning, ultra-low sulfur diesel fuel ULSD three years prior to the EPA mandate (2010).

**Alternative Fuels - Railroads –** Diesel Emissions - The Department has initiated programs to address diesel emissions from railroads in South Carolina. During October



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and November 2007, the Department participated in a national and a regional conference to seek reductions in diesel emissions. The Department is working with CSX Railroad to implement some of those strategies in Charleston. In November 2007, the Division of Public Railways (South Carolina Department of Commerce) announced that all locomotives will be using ultra low sulfur diesel (ULSD) fuel five years earlier than the EPA mandate (2012). The Division of Public Railways uses an estimated 26,000 gallons of diesel fuel annually.

**Alternative Fuels -** October 2007 - Washington Savannah River Co. gave $175,000 to the Center for Hydrogen Research in Aiken for a hydrogen-fueled truck to demonstrate the viability of the alternative fuel. The center also announced plans for a refueling station to provide hydrogen for the truck and other hydrogen-powered vehicles. The Hydrogen Internal Combustion Engine vehicle, or HICE, is based on a full-size 2007 Chevrolet Silverado 1500 pickup. The truck will be powered solely by hydrogen. Options for the refueling location include either the Savannah River Research Campus or at a site along I-20.

**Energy Efficiency -** July 2007 – S.C. Hydrogen Infrastructure Development Act
The S.C. Hydrogen Infrastructure Development Act, establishing a $15 million fund to promote the development of a hydrogen economy was passed by the Legislature. While funding for the Hydrogen Infrastructure Development Act was not included in the state budget, legislators did include other critical funds. Through the University of South Carolina budget, EngenuitySC will get $100,000 to help with preparations for the National Hydrogen Association meeting to be held in Columbia in the spring of 2009. A National Hydrogen Association forum, "Hydrogen Uses in the Military," was held in Columbia this October. USC also got $1 million for continued funding for hydrogen and fuel research. The S.C. Hydrogen and Fuel Cell Alliance got $367,640 in recurring funding. The Hydrogen Infrastructure Development Act is recognition by the Legislature that nurturing a hydrogen and fuel cell cluster in South Carolina can have tremendous economic impact.

**Energy Efficiency -** August 2007 – Bi-Lo to promote green grocery bags - Reusable market bags have been around for years however, this is new for Bi-Lo, the Mauldin (Greenville County)-based grocer. Bi-Lo is piloting its green bag effort in about 80 of its more than 220 stores here and in Georgia and Tennessee. The Super Bi-Lo at the Village at Sandhill (Richland County) is participating in the pilot. Bi-Lo sells two versions of the green bags: a woven recycled plastic for 99 cents and a canvas one, priced at $2.99. Store management at the Columbia Super Bi-Lo said each time shoppers use any reusable bag, they receive a 5-cent per bag credit when they check out each shopping trip. It doesn't seem like much at first - but after 20 uses, a woven plastic bag pays for itself.

**Energy Efficiency -** October 2007 - Santee Cooper announced they will quadruple to 40 percent by 2020 the amount of electricity made from non-greenhouse gas sources and created a new department to oversee the effort. The state-owned utility serves most of Horry and Georgetown counties either directly or indirectly, with about 2 million



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residents statewide receiving power from it. The company also began purchasing excess power from customers who make electricity with solar panels and other generators.

**Transportation Conformity –** Currently, the only area subject to transportation conformity in South Carolina is the Rock Hill-Fort Mill Area Transportation Study Metropolitan Planning Organization (RFATS MPO) in York County. EPA has promulgated and proposed a number of revisions to the Transportation Conformity Rule since the time that South Carolina's SIP revision incorporating the South Carolina Transportation Conformity MOA was published in the *Federal Register* (69 CFR 4245) on January 29, 2004. On May 2, 2007, EPA published in the *Federal Register* a proposal to amend the transportation conformity rule to make it consistent with the CAA, as amended by SAFETEA-LU. The Department has initiated the process for revising South Carolina's Transportation Conformity SIP to incorporate amendments to the CAA as a result of SAFETEA-LU. Interagency partners have been contacted and will be involved in drafting the necessary revisions. The process will encompass stakeholder meetings, to include involvement of MPOs, government entities, and the general public. The first meeting was held on November 2, 2007. Interagency partners participating, included EPA Region 4, US DOT (FHWA and FTA), SC DOT, DHEC, and several MPOs.

While only one area in South Carolina is subject to transportation conformity, involving all interagency partners provides the opportunity to discuss mobile source issues and concerns with areas that may face the tough challenge of meeting the proposed 8-hour ozone standard. The Department is using this opportunity to encourage continued partnerships focusing on emission reduction strategies.

**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



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other projects from which the community can select, they have elected to start by having an essay, logo and drawing competition with the children in the five neighborhoods. The subject of the competition is "Breathing for Life – Your Health and the Environment." In addition to this project, the community would like to hold an "educational forum" (date to be announced). The forum will highlight winners of the environmental essay, logo and drawing contest. It was suggested that a Region 4 representative, possibly Beverly Banister, be present at the forum. She is a champion of the project would be an inspiration to the children who would be participating. The long term purpose of BfLCC is to find funding to implement the selected projects and to establish a permanent, ongoing effort to continue reductions of toxics risks to the community.

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

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

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

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

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



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August and September meetings. The local health and environmental offices will continue to facilitate meetings and/or discussion as requested by the BfLCC. The BAQ will continue to provide assistance as needed.

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

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

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



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- One home with an old gas unit that was not efficient had a new gas heater installed.
- One home had an old woodstove that was changed out to an EPA-certified woodstove.
- One home using a gas pack that did not work well and could not be repaired had a new gas pack installed.

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

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

**Department Activities –** The Department continues to leading by example:

a. BAQ staff for the past few years has adopted a strip of lawn in front of the Sims/Aycock Department Headquarters building and use an electric mower for cutting. Working in coordination with the facilities maintenance staff from the State Budget and Control Board, cutting this area with a gas-powered mower is discontinued during the ground-level ozone forecast season. A fact sheet has been made and often distributed to customers who inquire about our activity. In addition a sign is placed in the area to convey the message of this lawn area being adopted by staff using an electric lawn mower.
b. BAQ staff worked with the EAC contacts from Lexington County to create a sign that has been placed in front of the main Department Headquarters building to advertise the ground-level ozone forecast. Motorists traveling the busy corridor of Bull Street to I-277 are able to view the forecast sign each week day.
c. Inter-bureau workgroup on open burning. Staff from the Department's Bureau of Land and Waste Management and Bureau of Air is collaborating on the development of training tools for staff to improve consistency in dealing with open burning issues around the state. This includes interpretation of the current Agency regulations for both bureaus, messages regarding alternatives to open burning and communication/coordination with other agencies that may have some involvement with open burning (e.g., SC Forestry Commission, Fire Marshalls, etc.). Also, another objective of this workgroup is the development of an awareness campaign to convey messages regarding open burning regulations and alternatives for disposal (e.g., recycling, composting, etc.). These messages will be tailored to specific audiences based on waste streams. The Bureau Chiefs for the BLWM and BAQ have been presented this outline and are going to help identify resources for implementing these objectives. Additional information may be found in Number 4 – Regulatory Initiatives of the State Activities enclosure.
d. Project Discovery - Working with the state Public Education Television (ETV) agency, staff from all EQC bureaus, including the BAQ worked to develop an information segment on various aspects of the environment. BAQ staff, along with region staff developed a script and message related to alternatives to open burning. This series of messages aired on May 5, 2006 and was broadcast to



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students in schools statewide over the ETV channel. Here is a part of the message communicated regarding this show:

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

Presented in cooperation with the Department, this program is designed for grades 1-8 and our toll-free phone line (1.800.763.ETV1) will be open for calls from students during the program. Join Project Discovery for the last program for this school year and be more prepared to enjoy clean water and air this summer as we pay more attention to how we impact our world around us and how we can help keep it clean for all to enjoy and appreciate both today and in the future. Please alert your teachers to this special program and plan to tape it for your school.

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

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



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More recently, a Clean Air Initiative has been implemented 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.

f. Bike to Work Events (2007) – May is National Bike Month, and Friday May 18, 2007, was "Bike-to-Work Day." The Department's State Nutrition and Physical Activity Consultants, Division of Injury and Violence Prevention, and Bureau of Air Quality encouraged Department staff in Columbia to participate in a "Bike-to-Work Day" ride coordinated by Central Midlands Council of Governments and the City of Columbia, and/or to bike to lunch together. The Columbia/CMCOG ride started at Boyd Plaza in Columbia (NW Corner of Hampton & Main). The ride took about 20 minutes for the average rider. Maps and routes were provided.

Because bicycle commuting helps reduce ground-level ozone pollution, global warming emissions and other pollutants, it is an air quality strategy being pursued around the state. Cycling has the potential to provide significant societal benefits in other aspects of life such as health, resource consumption, and the cost of transportation. Additional information may be found in Number 2 – Commuting Reduction Programs enclosure.

g. **"Safe Routes to School" Grant – 2007 funding cycle**

The South Carolina Department of Transportation (SCDOT) approved funding to develop comprehensive bicycle and pedestrian programs as part of the "Safe Routes to School Program." Partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. One of the purposes outlined in the funding legislation for this program includes facilitating the planning, development, and implementation of projects and activities that will reduce traffic congestions, fuel consumption and air pollution in the vicinity of primary and middle schools. The schools for the 2007 funding cycle are: College Park Elementary School, Berkeley County; Alston Middle School, Dorchester County; Willow Drive Elementary School, Sumter County; North Vista Elementary School, Florence County; Wren Elementary/Middle School, Anderson County; Lone Oak Elementary School and Pine Street Elementary School, both of Spartanburg County; Rosewood Elementary School, Richland County; College Park Middle School, Berkeley County; Fairfield Middle School, Fairfield County; Stono Park Elementary School and Hunley Park



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Elementary School, both of Charleston County. Each of the selected schools will receive up to $200,000.00.

h. The **Bull Street Partners Carpool Group** provides employees of the Bull Street area offices of three State Agencies (Department of Health and Environmental Control, Department of Mental Health and Department of Social Services) an opportunity to form carpools, thereby saving money and fuel, reducing pollution and reducing the stress of commuting.

Additional information may be found in Number 2 - Commuting Reduction Programs enclosure.

**Press Coverage** – Recent coverage includes:

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

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



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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 (AEOS) 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)
Facts about ethanol as an alternative fuel (05/07)
VEHICLE MAINTENANCE AND AIR QUALITY (05/07)

Refer to Enclosure 2-1 for the ethanol facts and vehicle maintenance document.

October 31 - November 2, 2007 - Two AEOS staff members participated in the Annual South Carolina Science Council conference held in Myrtle Beach, South Carolina. Staff presented information to teachers on an air lesson plan that may be utilized in the classroom, as well as staffed an exhibit where materials for use with school-aged youth were available. Information about AEOS programs (e.g., B2-an anti-idling project) was also made available.

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



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projects that promote environmental education, both internal and external to the Department. One of the projects is a series of monthly environmental e-mails sent to all Department staff. The May 2003 message was "Clean Air Month" and informed staff that Governor Sanford proclaimed May 1-7 as **Ozone Awareness Week**. A copy of the magazine, the message, and the proclamation were included in a previous progress report. Other activities include Earth Today Broadcast, Earth Camp, and, Kids Day events.

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

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

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

April 26, 2003 - Central Savannah River Area

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

April 29, 2003 - Pee Dee Area

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

May 1, 2003 - Central Midlands Area

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



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June 28, 2003 - Upstate

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

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

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

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

**a. Ozone forecast/outreach, education**

The Department began forecasting for the 8-hour ozone standard in 1998 for the Upstate and Central Midlands areas of South Carolina. In 1999, the Central Savannah River area was added in the forecast and in 2003 the Pee Dee area was added. The Catawba area, including Chester, Lancaster and York counties is included in North Carolina's forecast through a cooperative partnership. A link for the Catawba forecast is included on the



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Department's website. The forecast serves as a public health advisory to protect those persons who are most at risk to the effects of ozone.

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

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

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

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

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

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

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

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

Participants in the BAQ's forecast system were provided information to an on-line subscription page and requested users to sign up, edit the reported information, or cancel the service. Subscribers are able to choose the type and frequency of service desired.



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**EnviroFlash** will be sent to your email or pager as soon as the ground level forecast is made. Persons are able to select from the Central Midlands, Upstate, Central Savannah River, or Pee Dee area. Subscribers to this free service may also receive the forecast for all four regions. See below for **EnviroFlash** subscriber statistics as of June 2006, for each zone. This information is split into categories, whereby "Green" level subscribers receive forecasts every day, "Yellow" level subscribers receive forecasts for "Yellow" forecasts and higher, etc.

**Midlands - 81 subscribers**
"Green" Level Subscribers: 12
"Yellow" Level Subscribers: 16
"Orange" Level Subscribers: 53

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

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

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

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

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

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

**Upstate - 84 subscribers**
"Green" Level Subscribers: 17



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"Yellow" Level Subscribers: 10
"Orange" Level Subscribers: 53
"Red" Level Subscribers: 3
"Maroon" Level Subscribers: 1

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

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

**2007 Ozone Awareness Proclamation**
For the eighth year in a row, the governor of South Carolina has signed a proclamation regarding ground-level ozone awareness week. In 2007, Governor Sanford signed a proclamation declaring April 1-7, 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 the 2007 proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/OzoneAwarenessWeek.pdf.

**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



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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

March 15, 2007 – At a Department Environmental Quality Control (EQC) RegionVI meeting, staff discussed the needs of the region for EAC efforts. Two areas of focus were identified: 1) Anti-idling in the schools (using b2 to kick it off), and 2) Reduce opening burning. Help enforcing the regulations (staff numbers are limited) is needed. Discussion also included the possibility of using the local fire department to help with open burning enforcement actions.

March 21, 2007 – Staff met with Gilbert Middle School (an EIC school) and presented to them the "Air Quality" kiosk panels to be displayed at their outdoor learning center area. Staff worked with several groups at the learning center focusing on the importance of air quality and the state of South Carolina's air quality.

April 21, 2007 – Earth Day at the State Museum. Staff provided a booth that focused on the importance of using native plants for air quality. A local "Master Gardner" assisted with the booth to learn the importance of using native plants providing her with information to share with clients and colleagues.

April 28, 2007 – Earth Day Birthday at the Museum of York County - Staff assisted with a lawn mower exchange and provided a booth with various publications for the participants including information on energy conservation, native gardening, ozone, driving smarter and other environmental interests.

May 10, 2007 - "Air Quality and Trees" presentation - Staff presented to the Northeast Beautification committee about the importance of trees and using native plants and shrubs. The committee has several projects going on in the Northeast area of Columbia, all of which focus on planning greenways, tree planting, and beautification areas. Several BAQ staff is on the "Trees for Two Notch" sub-committee.

May 23 – 25, 2007 – South Carolina Public Health Association (SCPHA) conference - Staff conducted provided presentations on the b2 program and EPA's "Tool for Schools"



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air quality program. A booth that included several publications on air quality issues (ambient and indoor) focusing on the health effects of poor air quality was provided.

June 6, 2007 - Fountain Inn Elementary School meeting - The school has been working for several weeks with county and city planners to implement b2. The school has taken the program beyond its anti-idling focus. The school has plans to plant shade trees, build benches, landscape needed areas, and re-route bus/carpool traffic.

June 6, 2007 - Conference call with Richland and Lexington counties - The two counties are applying for the "Barrett Lawrimore Memorial Regional Cooperation Award" using the lawn mower exchange that took place at the SC State Museum April 21, 2007. BAQ staff will be providing information.

June 7, 2007 - EQC Education and Outreach committee meeting - The decision was made to move forward with the proposal to award the Duke Energy funds to Greenville County to expand the b2 efforts to other local schools and to help Anderson County with their open burning campaign.

Staff has been involved for the past 3 years with Gilbert Middle School. Several outdoor workshops with the students on air quality have been conducted.

Staff has taught the 7th grade at Northside Middle School the science curriculum incorporating the health and environmental issues of air quality.

Crossroads Middle School, Rosewood Elementary School in Rock Hill and Fountain Inn Elementary School have implemented a no idling policy.

Greenville County was the recipient of a 2006 EPA grant to raise public awareness about air quality, and implement an anti-idling campaign in one county school. The anti-idling campaign is called B2-Breathe Better, and the idea is to spread the program through out the county-wide school district.

December 1, 2006 - Buck Station meeting/Duke Energy, Salisbury, NC - This was the second meeting with Duke Energy to discuss the Lee Station site for the outdoor education center in Anderson County. We visited this well used/established site to get an idea of where the project could be heading. Present at this meeting was a representative from Clemson University for a program called South Carolina Maps and Aerial Photographic Systems (SC MAPS), and a representative from the State Department of Education (Ed Falco). The site will initially be open to all middle school students from Anderson school districts.

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



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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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



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

Provide approximately 100 "Driving Smarter" brochures every other month to be placed at the Richland County Administration building.

March 2005 - Berry Shoals Elem. School, (Spartanburg County), educational materials, Special science awards

April 30, 2005 - Museum of York County (York County), exhibit, Earth Day Birthday

2002-present, focus on air pollution reduction strategies - Rawlinson Road Middle School (York County), education and outreach support, environmental school project through the South Carolina Department of Education

- **EAC Ozone Action Needs Assessment Tool -** A survey tool for the 2006 Ozone Season was developed and sent to EAC contacts to: 1) assess their current initiatives, 2) determine their needs for education/information resources and activities and 3) identify how BAQ staff could best support their efforts. Contact was made by BAQ staff with all responders via email and/or telephone for follow-through. A copy of this tool is available.

**c. *Breathe Better @ School* Program**

The*$B^2$@ school* (Breathe Better Air at School) program's main focus is reducing air pollution around school campuses so everyone can breathe better. Solutions to reduce air pollution are made possible through the efforts of students, faculty, staff, community and local agencies. The *$B^2$@ school* has many accomplishments to be proud of its first year in existence, the first, receiving the EPA Children's Environmental Health Recognition Award for 2006! Research shows that children, especially those with respiratory conditions, are more sensitive to air pollution. A key component of the *$B^2$@ school* program is policy change within the school. A good example of this is a local school's new policy included in the student/ parent handbook that reads, "We request/advise that any individual in a vehicle that is waiting on a student or adult please turn their car off if weather is permitting. We hope to reduce respiratory problems for our students, staff and improve the air quality in our environment." The school has "No Idling" signs around the campus which were purchased as a result of winning a $750.00 **"Champions of the Environment"** award. The number of visits to the office for asthma incidences has decreased since the implementation of the "No Idling" policy, and the *$B^2$@ school* coordinator was inducted into the "GreenSteps" Hall of Fame for her commitment to environmental education.

Another accomplishment of the *$B^2$@ school* program is that it is a component of an EPA Clean School Bus grant awarding the state $500,000 targeted for reducing air pollution through anti-idling programs, retrofitting old school buses and building new ones. As the



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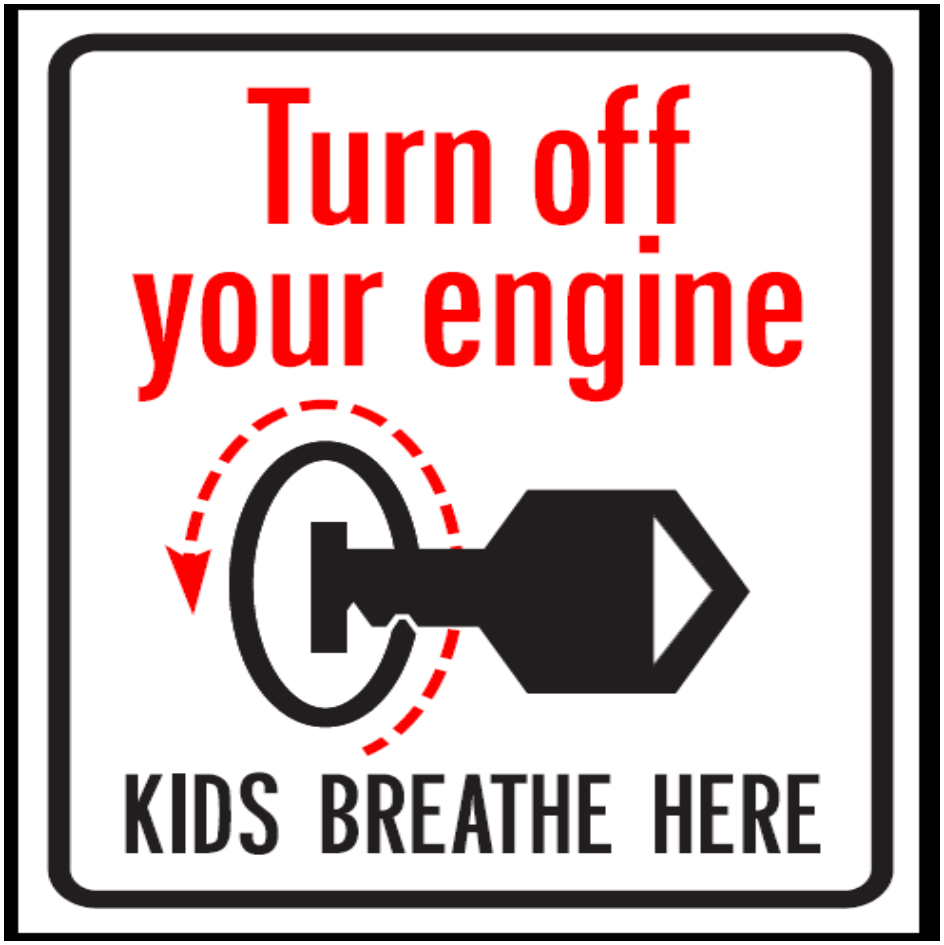
*B²@ school* program expands, the goal is to continue reducing air pollution around school campuses and improving children's health in South Carolina. Information is available at http://greenstepschools.com/page1.html

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.

June 2007 – The following sign is utilized at participating schools implementing anti-idling measures.




December 2007- To enable better access, a website for this project has been developed and is located at the following link:
http://www.scdhec.gov/environment/baq/docs/edu/B2/b2originalprotocol.pdf

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**d. South Carolina 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 Projects**

April 2007
Suddeth Automotive in Richland County offered Free National Car Care Month Inspections. The inspections were offered on Monday thru Friday between 9 AM and 4:30 PM during the entire month of April. In addition, Suddeth Automotive offered a Free Women's Car Care Seminar on Saturday April 28. Door prizes, drawings and refreshments were offered. The Department supplied "Driving Smarter For Tomorrow" brochures which included tips to save money, improve vehicle reliability, reduce air pollution, and maximize fuel economy.

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.

The goal of the event, held on April 1, 2006, was to increase the target audience's awareness about the importance of car maintenance in preserving good air quality. To reach this goal, several objectives were set, and our ability to meet those objectives is documented herein. The objectives were: to have 100 cars come through the car check lanes, create a replicable project that can be implemented in other areas across the state, and to educate drivers and volunteers who participated in the event about the importance role vehicle maintenance plays in preserving good air quality. The target audience was drivers local to the downtown Columbia area.

This event was on a large scale, and approximately 60 cars were assessed during the four-hour event. At least 2 more technicians would have been needed to have reached the first objective. This is based on the average time per car was approximately 15 minutes, from the time the pre-survey was taken to the time the post- survey was collected and information was provided to the participant.

To help promote this event, a news release was issued by *The State* on April 1, 2006, titled – DHEC helps drivers focus on car care with expert advice.



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**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

**2007** - Governor Sanford signed a proclamation declaring April 22-28, 2007 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.

The Department, with the help of volunteer staff, celebrated Earth Day 2007 throughout the state. During the month of April and the first part of May, staff participated in many community Earth Day events including grade schools, colleges, churches, hospitals, historic parks and private industry (BMW). Staff presented on topics such as air sampling, criteria pollutants, ozone formation, open burning, electric lawn mowers, hybrid electric vehicles, and greenscaping. Distributed information discussed particulate pollution and health, automobile emissions, spill-proof gas cans, the benefits of urban trees, and energy conservation. School aged children were enthused to receive promotional items such as environmental activity booklets, recycled pencils, and several themed posters included ways to help reduce air pollution.

Many adults were also excited about their newfound environmental concepts such as the use of native plants, compact florescent light bulbs, 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 and will be available.



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Earth Day Activities – 2007

Activities included:

Air sampling and monitoring presentation at Coker College
Lawn Mower Exchange at the S.C. State Museum
First Annual Kids Earth Day in Camden
Gas Can Exchange in Greenville
N. Augusta Kids Day in Aiken County
Earth Day at Park Circle in Charleston
Saluda Shoals Park Earth Fair

Over ten-thousand (10,000) environmental materials were distributed which included:

"Particulate Matter and Your Health" brochures
"Ozone and Your Health" brochures
"Drive Smarter" brochures
"Don't Spill When You Fill" brochures
"Good Up High, Bad Near By" ozone posters
"Air is Everywhere" posters
"Champions of the Environment" pencils
B2 @ School postcards
BLWM Recycling Posters
Spare the Air coloring books
Air Pollutants bookmarks
EPA 'No Idling Campaign" VHS video
"Earth Today" VHS video
Energy Conservation pamphlets
Hybrid Vehicles and Auto Emissions fact sheets
Fish's Wish Books
BOW pencils
BOW bookmarks
Petwaste magnets

Earth Day Website Resources were also identified and provided at this web address:
http://www.scdhec.gov/environment/earthtoday/schools.htm

**2006** - 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*



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video with students. Following the video, staff held question and answer sessions, lead environmental projects, and distributed promotional items such as wildflower seed packets, activity booklets, recycled pencils and posters.

With an initial target goal to reach 6,000 students, volunteers extended outreach to over 11,000 general audience members in twenty (20) of the forty-six (46) counties. In addition, The *Earth Today* video was among the top 100 videos, among 3,406, requested from SCETV's Streamline Program for the month of April.

Staff found students enthused about the video and eager to participate in the follow-up questions. Several schools have already expressed the desire to participate in next year's Earth Day events while the Department anticipates hearing of the environmental efforts initiated by participating school in the coming months.

Many adults were also excited about their newfound environmental concepts such as alternate fuels and the display of hybrid vehicles at events around the state. Many onlookers stated that they planned or hoped to make a hybrid car their next vehicle of purchase. Information that was collected through an evaluation tool is still being collated at this time, but will be available.

Earth Day Activities - Friday, April 21, 2006

The Department set a goal for 2006 to send employees into more than 200 classrooms across the state to help raise environmental awareness among our students. Employees viewed the Department's three year running, Emmy-winning video *Earth Today* with students and answering questions afterward. The Agency's Earth Day materials were available for staff visiting with classrooms.

Via the S.C. Dept of Education, Science teachers and Media Specialist around the state were invited to register and participate. The Department's website included Earth Day plans and information for teachers to register: http://www.scdhec.gov/earthtoday/.

Additional information on the agency's plans for Earth Day and Education and Outreach services was available during the following briefings scheduled for March at the Department's Central Office in Columbia on the following dates:
Friday, March 3, 2006 - 10 a.m.
Friday, March 10, 2006 - 10 a.m.
Friday, March 17, 2006 - 2 p.m.
Friday, March 24, 2006 - 10 a.m.
Friday, March 31, 2006 - 10 a.m.

The following are Earth Day 2006 participants in which Education and Outreach Support was provided:



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| | |
|---|---|
| McLees Elem | Anderson |
| Starr Elem | Anderson |
| Wren Elem | Anderson |
| Grove Elem | Greenville |
| Armstrong Elem | Greenville |
| Liberty Elem | Pickens |
| Greenview Elem | Greenville |
| Calvary Christian Central | Greenville |
| Lone Oak Elem School | Spartanburg |
| Cannons Elem | Spartanburg |
| Inman Elem | Spartanburg |
| DR Hill Middle | Spartanburg |
| West View Elem | Spartanburg |
| USCS Upstate | Spartanburg |
| Great Falls Middle | Chester |
| Rosewood Elem | York |
| Andrew Jackson Middle School | Lancaster |
| Jefferson Elem | York |
| Gold Hill Elem | York |
| Indian Land Elem/Middle School | Lancaster |
| Chester Park Elem School of Arts | Chester |
| Cotton Belt Elem | York |
| A R Rucker Middle | Lancaster |
| Chester Park Elem School of Arts | Chester |
| Heath Springs Elem | |
| Bethel Hanberry Elem | Richland |
| Lexington Elem | Lexington |
| Plainview Elem | Chesterfield |
| Schofield Middle | Aiken |
| Paul Knox Middle | Aiken |
| Warrenville Elem | Aiken |
| N. Augusta Earth Day | Aiken |
| Aiken's Earth Day | Aiken |

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| | |
|---|---|
| Carolina Forest Middle | Horry |
| Jasper County High | Jasper |
| Cottageville Elem | Colleton |
| Rosewood Elem | Richland |
| North Springs Elem | Richland |
| H.B. Rhame Elem | Richland |
| Forest Lake Elem | Richland |
| North Springs Elem | Richland |
| Montessori School of Camden | Kershaw |
| Forest Heights Elem | Richland |
| White Knoll Middle | Lexington |
| Rice Creek Elem | Richland |
| Lake Murray Elem | Lexington |
| Congaree-Wood Elem | |
| Sandhills Intermediate | Lexington |
| Lake Murray Elem | Lexington |
| | |
| Bethel Academy | Richland |
| St. Peter Academy | Richland |
| Earth Fare Earth Day | Richland |

**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 2007 -** Richland and Lexington Counties and BAQ staff are planning a lawnmower exchange event to be held in 2008. A planning meeting was held on September 11, 2007. The target date for the event is the Spring of 2008.

**November 2007** - The Education and Outreach section of the Department's BAQ will be coordinating a "Mow Down Pollution"- Lawn Mower Exchange event and promoting energy efficiency activities, particularly related to use of computer equipment, with local government in the Duke Energy service area in South Carolina. These activities will present opportunities to raise awareness of air quality issues in the Upstate of South Carolina and reduce emissions of air pollution. The funds ($6500.00) will be used for but not limited to: advertising and promotion, creating brochures and other written materials,



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providing promotional items and subsidizing the cost of the electric lawn equipment. This project will be completed by December 31, 2008.

**June 2007** – "Mow Down Pollution" Event (April 21, 2007) - Lexington and Richland Counties in conjunction with local non-profit Keep the Midlands Beautiful, and the Department's Bureau of Air Quality (BAQ) planned and implemented the first lawn mower exchange in South Carolina. To encourage Columbia-area residents to do their part to "Spare the Air," the lawn mower exchange was held at the State Museum to Mow Down Pollution! The lawn mower exchange coincided with other activities the museum hosted to celebrate Earth Day. The event collected empty, functional gas powered lawn mowers and offered a discount between 30 percent and 55 percent off MSRP on Neuton cordless electric mowers. To compliment the lawn mower exchange, other partners were invited to exhibit Greenscaping information at the event. These partners helped extend the impact of the exchange by highlighting complimentary lawn and garden practices that help protect air quality. The Columbia event collected 155 gas-powered mowers as trade-in. These mowers were recycled by Lexington County and thereby removed from operation. Our estimated emission reductions are 6.8665 tons VOC per year and 14.1205 tons CO per year (based on EPA emissions for 2 cycle gas mowers). Refer to Attachment 2-2 for the DRAFT "Mow Down Pollution" report and the participant survey.

- December 2006 - EAC contacts in Richland and Lexington Counties are continuing to plan for a small gas-powered lawn equipment exchange. A survey tool has been developed and is being utilized at various events held in these two counties to gauge citizen interest for such an event. The notes from the most recent meeting of the planning committee for this project are available. Here is the memorandum language being utilized with the survey tool:

*"The following message is brought to you by a partnership of Lexington County, Richland County, Keep the Midlands Beautiful, and SC DHEC.*

As part of South Carolina's 2007 Emissions Reduction Campaign, you have been selected to participate in a voluntary survey to help us improve our community's Air Quality. The link below will take you to a survey that will ask you questions about your lawnmower use. We will use your answers to help us plan a **"Trade It In For Cleaner Air"** lawn mower exchange, currently scheduled for March/April 2007 for Lexington and Richland Counties.

The **"Trade It In For Cleaner Air"** Event will offer participants a great discount on a new electric lawn mower when they bring in their old gas-powered mower to be recycled. *A trade-in will not be required.*

Operating a lawn mower releases chemicals that create Ground Level Ozone, a federally regulated criteria air pollutant. This is especially true of old lawn mowers, and includes leaf blowers, weed trimmers, chainsaws, and other gas-powered lawn equipment. By



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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.

2007

Upstate residents cautioned about ozone conditions (September 5, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070905-01.htm

Upstate residents cautioned about ozone conditions (August 3, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070803-02.htm

Upstate residents cautioned about ozone conditions (August 15, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070815-01.htm

Residents cautioned about ozone conditions (June 21, 2007)
http://www.scdhec.gov/administration/news/2007/nr20070621-03.htm

Climate Registry established (May 2007)
http://www.scdhec.gov/administration/news/2007/nr20070509-01.htm

Upstate residents cautioned about ozone conditions (May 2007)
http://www.scdhec.gov/administration/news/2007/nr20070501-02.htm

Lawn mower exchange program announced (April 2007)
http://www.scdhec.gov/administration/news/2007/nr20070409-02.htm

Fountain Inn Elementary School group named Champions of the Environment (April 2007)—Part of B2@School Effort
http://www.scdhec.gov/administration/news/2007/nr20070402-01.htm

Ground-level Ozone forecasts begin with new date and new areas (March 2007)
http://www.scdhec.gov/administration/news/2007/nr20070326-01.htm

2006



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Alternatives to Open Burning (November 2006)
http://www.scdhec.gov/administration/news/2006/nr20061108-03.htm

Citizens Encouraged to Reduce Open Burning (October 2006)
http://www.scdhec.gov/administration/news/2006/nr20061009-02.htm

Ground-Level Ozone Alert (August 2006)
http://www.scdhec.gov/administration/news/2006/nr20060802-01.htm

Ground-Level Ozone Alert (August 2006)
http://www.scdhec.gov/administration/news/2006/nr20060801-01.htm

SmartRide (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060731-01.htm

Ground-Level Ozone Alert (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060720-03.htm

EAC Summit (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060720-02.htm

Ground-Level Ozone Alert (July 2006)
http://www.scdhec.gov/administration/news/2006/nr20060719-02.htm

Ground-Level Ozone Alert (June 2006)
http://www.scdhec.gov/administration/news/2006/nr20060718-01.htm

Ground-Level Ozone Alert (June 2006)
http://www.scdhec.gov/administration/news/2006/nr20060621-01.htm

Ground-Level Ozone Awareness Week/Proclamation (Aril 2006)
http://www.scdhec.net/administration/news/2006/nr20060428-01.htm

Earth Day (April 2006)
http://www.scdhec.net/administration/news/2006/nr20060420-01.htm

Car Care Event (March 2006)
http://www.scdhec.net/administration/news/2006/nr20060320-04.htm

Open Burning (November 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200511/nr11BurningGreenville05.htm

Open Burning (October 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200510/nr10OpenBurning05.htm



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Ozone Warning (July 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200507/nr07OzoneMidlands05.htm

Ozone Warning (July 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200507/nr07OzoneUpstate05.htm

Ozone Warning (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06OzoneAlert6-23-05.htm

SmartRide/Free Ride-OAC (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06FreeRide05.htm

SmartRide (June 2005)
http://www.scdhec.net/administration/news_archive/releases/2005/200506/nr06SmartRide05.htm

Ozone Forecasting (April 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200404/nr04OzoneSeason04.htm

Gas Can Exchange (June 2004)
http://www.scdhec.net/administration/news_archive/releases/pdf_files/2004GasCanExch.jpg

Gas Can Exchange (June 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200406/nr06GreenwoodCans04.htm

Non-Road Diesel Rule (May 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200405/nr05DieselRule04.htm

Ozone Alert (May 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200405/nr05-06Ozone%20alert04.htm

Ozone Hotline (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07OzoneHotline04.htm

Cutting Diesel Emissions (July 2004)



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http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07DieselEmissions04.htm

New OB Regulations (July 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200407/nr07BurningRules04.htm

Truck Stop Electrification (October 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200410/nr10MAElectric04.htm

Gas Can Exchange (October 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200410/nr10MidlandsCans04.htm

GreenScapes Project (November 2004)
http://www.scdhec.net/administration/news_archive/releases/2004/200411/nr11GreenScape04.htm

August 28, 2002 – DHEC press release – "Planning for Cleaner Air Sooner"

September 3, 2002 – Bureau of National Affairs Daily Environment out of Atlanta announced South Carolina's decision to take advantage of EPA's offer to implement early measures to meet the 8-hour ozone standard.

September 5, 2002 – Greenville News – "Upstate will meet new clean air standards before deadline, DHEC says"

Fall 2002 – The Palmetto Planner – A Publication of the South Carolina Chapter of the American Planning Association – included article titled "The Bureau of Air Quality's Early Action Plan for the 8-Hour Ozone Standard.

September 25, 2002 – DHEC press release – "Meeting on air quality plan set for Oct. 1"

October 1, 2002 – The State – "Groups oppose state's ozone plan"

October 4 – Greenville News – "Early air effort could keep EPA at bay"

October 4 – Spartanburg Herald-Journal - "DHEC outlines clean-air proposal; State health officials on Thursday explained to an Upstate audience a proposal they say is a common-sense approach to cleaning up South Carolina's air sooner."

October 8, 2002 – Morning News – "Pee Dee air quality not up to par of EPA"

October 17, 2002 – Charleston Post and Courier – "State asked to get a jump on tougher ozone standards" – Article summarizing public meeting held in Charleston by DHEC.



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November 14, 2002 – Anderson Independent-Mail – “Government agrees to ozone deadline”

November 22, 2002 – Spartanburg Herald-Journal – “Air quality resolution wins support”

November 27, 2002 – Clean Air Today – “SC Officials Discuss Air Quality Plans at Summit”

December 2002 – Spartanburg Herald Journal – “Council votes to join 3-county compact to improve air quality”

December 2002 – Augusta Chronicle – “City considers air-quality plan”

January 2003 – The Charlotte Observer – “York County is trying to get jump on upcoming new standards”

January 30, 2003 – Darlington News and Press – “Ozone problem threatens local economy, DHEC reps, local industry meet to help county avert federal penalties”

February 21, 2003 – DHEC press release – “Ozone early action update meeting Feb. 26”

February 27, 2003 – Anderson Independent Mail – “State wants ideas to clean the air”

February 27, 2003 – The State – “S.C. making plans to clean up its air”

April 28, 2003 – DHEC press release – “Ozone forecasting begins in Pee Dee”

April 28, 2003 – Morning News – “Pee Dee counties added to ozone program”

April 29, 2003 – The Post and Courier – “4 counties to be added to S.C.’s ozone forecast”

April 30, 2003 – Morning News – “Greater ozone awareness brought to Pee Dee”

May 13, 2003 – Anderson Independent Mail – “Group creates plan to reduce Upstate Ozone”

May 15, 2003 – DHEC press release – “Meeting set to discuss air quality proposal”

June 9, 2003 – Anderson Independent Mail – “State warns of sun’s rays and ozone today”

June 9, 2003 – DHEC press release – “Legislators support air quality early action plans”

June 11, 2003 – DHEC press release – “Gas can trade will help air quality” (also includes Public Service Announcements)



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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 VOCs 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 | Pee Dee |
| 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.

Results for the 2007 ground-level ozone season will be provided in December 2007.

TABFTE has expanded from January 2007 to May 31, 2007. Florence County has expressed an interest in participating and has been set up on the program. Columbia: The Central Midlands Council of Governments (CMCOG) has also been signed up and is participating in the program. The TABFTE program has also been presented during these COG meetings to other State and Local agencies within the area. Plans are to have at least five more meetings with the CMCOG to promote TABFTE. Aiken: TABFTE was presented to stakeholders on two separate occasions in the Aiken area. Although no groups have formally signed up yet, there was interest expressed in the program and follow-up will be conducted to encourage more participation.

December 2007: The four major participants for the TABFTE program in SC for 2007 were: BAQ, BLWM, CMCOG, and the SCEO. The County of Lexington and the City of Columbia are planning on adopting the program for 2008. The BAQ also plans to focus on other state agencies, counties, and major companies prior to the 2008 season.

**Total Reductions for 2007 Ozone Season for South Carolina only:**
146, 991 miles reduced
592 pounds of VOCs reduced
411 pounds of $NO_X$ reduced

Outside of South Carolina, we had two major locations that participated. One was the Mid-America Regional Council in Kansas, Missouri which included a number of companies. The other was the Wisconsin Department of Natural Resources. **Total Reductions for 2007 Ozone Season for these two locations only:**
547,587 miles reduced
2,107 pounds of VOCs reduced
1,455 pounds of $NO_X$ reduced



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| TABFTE Reductions for 2007 | | | |
|---|---|---|---|
| | **Miles** | **VOC (grams)** | **$NO_x$ (grams)** |
| **Within South Carolina** | | | |
| Bureau of Air Quality | 140,326 | 255,904 | 178,004 |
| Bureau of Land and Waste Management | 12 | 525 | 356 |
| Central Midlands Council of Governments | 5,082 | 9,123 | 6,305 |
| SC Energy Office | 1,571 | 2,731 | 1,890 |
| | | | |
| | | | |
| **Outside of South Carolina** | | | |
| Mid America Regional Council | 525,810 | 923,358 | 637,835 |
| Wisconsin Dept of Natural Resources | 21,777 | 32,560 | 22,178 |

**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.



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**<u>SmartRide Statistics for 2005:</u>**
**Passenger Boardings:**
Total Newberry – Columbia:
January - November 2005
4,932 boardings
Increase of 200 percent starting with 338 in January and 659 in November

Total Camden – Columbia:
July1 - October 30, 2005
4,770 boardings
The number of boarding approximately doubled per month from July 2004 to June 2005.

**Emissions Reductions (Lexington, Newberry, Kershaw, and Richland):**
207 pounds $NO_x$
153 pounds VOC
3,166 pounds CO

**<u>SmartRide Statistics for June 2006:</u>**
**Passenger Boardings:**
Total Camden – Columbia:
November 2005 – May 2006
7,514 boardings

**Emissions Reductions (Kershaw and Richland):**
684 pounds $NO_x$
943 pounds VOC

**<u>SmartRide Statistics for December 2006:</u>**
**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



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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.

During the 2007 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides will be again be offered for those days designated as Ozone Action Days. BAQ staff met on June 12, 2007, with the new SCDOT project coordinator. Discussions included issuing a press release; updating the SmartRide website; increasing ridership; and, possible expansions.

December 2007 – BAQ staff plan on meeting with the SmartRide project coordinator later this year or early 2008 to assist with the development of expanding routes to other areas in the Midlands.

**SmartRide Statistics for December 2007:**
**Passenger Boardings:**
Total Camden – Columbia:
November 2006 – October 2007
12,332 boardings

**Emissions Reductions (Kershaw and Richland):**
1,642 pounds $NO_x$
2,269 pounds VOC

**Passenger Boardings:**
Total Newberry – Columbia:
November 2006 – October 2007
11,709 boardings

**Emissions Reductions (Newberry and Richland):**
1,584 pounds $NO_x$
995 pounds VOC

### 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



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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.

As of June 2007 the total number of participants in the SIGIS program is 64. Nine new employees have added their names to the list so far 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 continues 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.

June 2007 – EPA will no longer fund the BWC program. The Department will continue to promote best workplace practices to other programs within the Department as well as other organizations seeking voluntary measures proven to benefit employees and air quality.

December 2007 - EPA has since announced that the Center for Urban Transportation Research (CUTR) at the University of South Florida will assume responsibility for management of the program when the EPA relinquished it on October 1st. The Department continues to meet the minimum requirements.

**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



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months of 2005. Employees were notified via e-mail of the audio-conferencing capability.

The Department continued to offer audio-conferencing capabilities for 2006 and 2007.

**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.

Duke Energy has also provided funding in the amount of $5,000 to the County of Greenville, with the Department's BAQ as the administrator of this grant to implement activities to address air quality. The timeframe for this grant is March 1, 2007 to December 31, 2007. A copy of the grant agreement and authorization by the County of Greenville is attached in Enclosure 2-3.

**g. Bike to Work Events - 2007**

May is National Bike Month, and Friday May 18, 2007 was "Bike-to-Work Day." The Department's State Nutrition and Physical Activity Consultants, Division of Injury and Violence Prevention, and Bureau of Air Quality encouraged Department staff in Columbia to participate in a "Bike-to-Work Day" ride coordinated by Central Midlands Council of Governments and the City of Columbia, and/or to bike to lunch together. The Columbia/CMCOG ride started at Boyd Plaza in Columbia (NW Corner of Hampton & Main). The ride took about 20 minutes for the average rider. Maps and routes were provided.

Because bicycle commuting helps reduce ground-level ozone pollution, global warming emissions and other pollutants, it is an air quality strategy being pursued around the state. Cycling has the potential to provide significant societal benefits in other aspects of life such as health, resource consumption, and the cost of transportation.

Bike to Work Week biking events were held this year in Greenville, Columbia, Spartanburg and Rock Hill, and an awareness event was held in Summerville. The Department shared information about Bike to Work Day with all EAC contacts. The cities of Spartanburg and Columbia are working towards "Bicycle-Friendly Community" designations.

Eight people from the Department participated in the Bike to Work Day ride around the statehouse coordinated by the City of Columbia and the Central Midlands Council of



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Governments. They included Brandy Armstrong, Leslie Coolidge, Jay Daniels, Shawn Gerald, Michael Juras, Heinz Kaiser, Maeve Mason, and Paul Wojoski. The Department contingent made a substantial contribution to the ride. A group of ten biked to lunch at the Taste of China, including Brandy, Leslie, Shawn, Heinz, Michael, Paul, as well as Brian and Lynn Barnes, Debra Briggs-Monroe, and BAQ Chief Myra Reece! Amy Curran and Marian Nanney walked to join the group, to make a party of twelve.

A new commuter bike was on loan for the day, and was used for both the morning ride (by Maeve) and the lunch trip (by Myra). Amy Curran, Dianne Minasian and Marian Nanney rode the bike around Sims/Aycock campus in the afternoon.

**h. Bike Commuting for Air Quality**

Spartanburg has received a bronze level Bicycle Friendly Community designation in September 2007. Charleston, Greenville, Rock Hill and Columbia are also working towards designation. Columbia is holding twice-a-month meetings and a monthly lunchtime ride.

**i. Bull Street Partners Carpool Group (Organized late summer 2007)**

The Bull Street Partners Carpool Group provides employees of the Bull Street area offices of three State agencies (Department of Health and Environmental Control, Department of Mental Health and Department of Social Services) an opportunity to form carpools, thereby saving money and fuel, reducing pollution and reducing the stress of commuting.

The Department's Bureau of Air Quality sent an electronic mail message to contacts in the three state agencies located at the corner of Bull and Harden Streets. The e-mail encourages people interested in regular carpooling, occasional carpooling, or people who are willing to provide a ride home to sign up. The emails have very gone out to two of the three agencies, the third agency e-mail will be sent out shortly. Seven people have signed up to date, and feedback from the agencies about the program has been very positive. 'Goody Bags" of air quality promotional materials are being provided to people from the Department's sister agencies who sign up.

**j. September 2007 - "Safe Routes to School" Program is 100 percent Federally Funded**

The South Carolina Department of Transportation Commission approved funding for 12 schools to develop comprehensive bicycle and pedestrian programs as part of the newly established "Safe Routes to School Program." Selected schools and their respective communities will soon begin the planning phase of the Safe Routes to School funding process. By partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. Projects and programs will begin in early 2008. In addition to encouraging children to walk and bicycle to school and to



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make walking and bicycling safer, the Safe Routes to School Program recognizes this effort as an activity that will reduce traffic congestion, fuel consumption and air pollution.

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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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**2007**

Governor Mark Sanford proclaimed **April 1 – April 7, 2007** 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 March 26, 2007. The Department's BAQ has over the past two years observed elevated levels of ground-level ozone during the month of April. In 2007, management made the decision to begin forecasting for ground-level ozone a month earlier than in previous years to alert South Carolinians in the event elevated levels occur early. The forecast area was expanded this year to include a new region and the addition of two counties to an existing forecast region. Added is the Catawba region which includes York, Chester and Lancaster counties. Marlboro and Dillon counties have been added to the Pee Dee regional forecast.

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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.

On April, 26, 2007, the Waste Disposal Matrix Document tool described above was approved for use internally with staff in the BLWM and BAQ. A meeting of the inter-bureau workgroup is scheduled for June 28, 2007 to discuss the development of a training plan to use this tool with the appropriate staff.



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On September 28, 2007, the managers of the education and outreach sections for the BLWM and for the BAQ met with staff from the Agency Media Services to discuss the development of a statewide Open Burning information campaign. This campaign is tentatively set to begin in the Spring of 2008 and will include TV and radio PSAs, and print materials targeting various key audiences with messages on options to open burning materials.

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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.



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Using 2002 as the base year, the following table shows that the emissions expected from implementing the proposed MPO long-range transportation plan(s) are less than emissions from either the baseline case or the no-build case for 2007. Further emission reductions are forecasted for the longer term. The specific numbers can be found in each MPOs report.

| | **ANATS** | | GPATS | | SPATS | | COATS | |
|---|---|---|---|---|---|---|---|---|
| | $NO_x$ | VOC | $NO_x$ | VOC | $NO_x$ | VOC | $NO_x$ | VOC |
| 2002 | 7.703 | 4.354 | 30.213 | 19.276 | 17.96 | 10.58 | 45.295 | 27.135 |
| 2007 | 5.507 | 2.94 | 21.58 | 13.648 | 11.86 | 6.83 | 32.017 | 18.962 |
| Reduction tpd | 2.196 | 1.414 | 8.633 | 5.628 | 6.1 | 3.75 | 13.278 | 8.173 |
| Reduction tpy | 801.54 | 516.11 | 3151.045 | 2054.22 | 2226.5 | 1368.75 | 4846.47 | 2983.145 |

tpd = tons per day
tpy = tons per year

**EAC Reinforcement of Planning Initiatives at the Local Level**
The EAC process has allowed contact with counties at a critical time in their comprehensive planning process. Many are in the midst of updating their 5 and 10-year plans. The dates for completing these do not coincide with EAC dates but improving air quality does not have a “sunset" provision. Many counties have already begun or completed changes to their land use plans that reduce sprawl and traffic congestion.

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

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

Greenville County’s Comprehensive Plan encourages the development of industrial parks so aesthetics, design, screening and land use impacts can be better managed. Plans are being worked on to revise the county Zoning Ordinance to create new residential zoning classifications that permit design innovations such as open space, varying setbacks,



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cluster development, varying lot sizes, and mixed uses with extensive landscaping. Through incentives, it would also encourage developers to build in the urban area of the county. Transit goals in the Comprehensive Plan encourage residents to use alternative modes of transportation for travel.

Greenville County Planning Commission, on behalf of the City of Mauldin and the City of Simpsonville, retained Day Wilburn Associates to prepare a Transit Development Plan for the Mauldin-Simpsonville Urbanized Area. Information regarding the results of this study can be found in the Greenville County portion of this document.

**Spartanburg County**

Spartanburg County's land use efforts include strategies that are represented in the county's comprehensive plan or unified land management ordinance. Some important strategies include:

- Development of a comprehensive urban forestry plan to include local tree ordinances, protection policies of urban open spaces, and landscape ordinances that utilize native plants.
- Revisions of the county's subdivision regulations to include conservation provisions to help not only retain natural resources, but add to the value and marketability of rural residential projects. This will also maintain balance between the rural setting and future growth and development.
- Amending the county's subdivision regulations to promote cluster housing development in rural areas, thereby minimizing land coverage for residential use. Establishing maximum lot size (recommended 1/4 acre) for cluster subdivisions of a certain size, as opposed to minimum lot size, and allocating in perpetuity through lease, trust, common ownership, etc. up to 80 percent of such subdivisions to open, agricultural, or forested use, thus retaining rural, open character.

To address transit needs Spartanburg County is working to provide convenient, coordinated, accessible and affordable transit service under the administration of a single transit agency, controlled by a Joint Transit Commission appointed by city and county government. This includes interfacing the transit system with other transportation modes including highways, airports, rail, intercity bus, school buses, and bikeway/trail systems. Components of this approach include developing alternative funding sources to promote public transit as a low cost alternative to the automobile and as a means of lessening traffic congestion.

To promote bicycle and pedestrian facilities, a governmental committee composed of local officials whose mission is to promote alternative transportation systems in the county has been created. The committee is also responsible for the procurement of funding for the implementation of such facilities. Securing a public and private partnership to oversee the implementation of proposed improvements and promote the use of alternative transportation through educational, promotional and incentive programs is also being addressed.



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**Lexington County**
On January 22, 2005, Lexington County Council received statewide recognition from the *South Carolina Wildlife Federation* for its landscape ordinance. The Federation's Forestry award was in recognition of leadership and vision through comprehensive urban forestry programs recently implemented. Due to the variety of issues involved in a project of this magnitude, the county sought input from experts in landscaping and urban forestry as well as the public in developing the Ordinance. While the County's Ordinance is directed primarily at commercial development, it actually focuses on six different categories. The most important aspect of the *Lexington County Landscape Ordinance* is that its format enables it to be duplicated in any community regardless of location, political environment, or intensity of development. Air quality benefits of this ordinance are that it will help reduce emissions because of reduced use of gas powered yard equipment and the use of canopy trees in parking lots to cut down on evaporative emissions.

Components of the Lexington County Comprehensive Plan encourage the development of traffic-intensive commercial, industrial and higher density residential land uses near existing major roads, railroads and interstate highways. It discourages low-density residential development near existing major roads and interstate highways and encourages development patterns such that future growth can be effectively served by public transportation. It also provides for safe transportation facilities for bike and pedestrian usage and promotes the compatibility of different land uses as an alternative to completely segregating residential, commercial, industrial, agricultural and other uses from one another. Another effort includes working within the Central Midlands Council of Governments to ensure that the Columbia Area Transportation Plan (COATS) assists in the reversal of the "sprawl" development pattern.

Per an October 5, 2006 article in *The State* newspaper, Lexington Town Council approved spending $14,000 to install equipment to synchronize traffic flow in the downtown Lexington area. The equipment will monitor traffic at 20 intersections and allow state traffic officials to adjust the length of lights to improve traffic movement on the roads. This is one of several changes implemented to reduce traffic congestion.

**Richland County**
Effective July 1, 2005, Richland County began using a vastly updated Land Development Code (LDC) to address a number of issues that citizens have brought to the attention of the county over the years such as transportation, community appearance, conservation, water quality and affordable housing. The central reason for drafting the updated LDC was to revise the county's land development regulations as needed to make certain they accomplish the goals and objectives of the comprehensive plan.

Among its many purposes, the LDC specifies planning requirements that seek to "lessen congestion in the roads." For the first time, site plans for major land development must include a traffic management plan: "An evaluation of the effect of traffic generated by a development on the operation and safety of the adjacent public roads. Such analysis shall include an identification of traffic impact mitigation measures needed to improve the



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safety, operation, and flow of vehicular and pedestrian movement into and out of the development."

Richland County Council sponsored a neighborhood meeting on April 16, 2005, to share information on planning, design, and development of livable communities. Dr.
Chuck Bohl, an internationally recognized expert on this topic is scheduled to speak.
Richland County has also contracted with the Palmetto Conservation Foundation (PCF) to address how land use, transportation, parks, and trails can be incorporated into a greenway network that builds on the Three Rivers Greenway and Palmetto Trail and promote integrating physical activity into daily routines. The primary activities of focus are bicycle/pedestrian transportation, safe routes to school, and community planning. In combination with Bicycle/Pedestrian planning now underway at the Columbia Metropolitan Planning Organization, car commuters will have additional commuter options. PCF has already participated in a successful active living campaign in Spartanburg, South Carolina, which brings, in part, an air quality benefit that Columbia and Richland County want to emulate.

As part of its temporary funding solution to the Central Midlands Regional Transit Authority (CMRTA) crisis, Richland County Council established a Transportation Study Commission to study public transit, road improvements, and walking and bicycle trails. The 33 member commission is expected to release a final report in Spring 2008, as well as a recommendation for funding high-priority transportation projects. The commission will study transportation issues that are regional in nature. As a result, members will be made up of appointments from Richland and Lexington County Councils, the City Councils in Columbia, Cayce, and West Columbia.

On December 6, 2006, Councilwomen Val Hutchinson and Joyce Dickerson held an informational meeting with residents and leaders from the rapidly growing Northeast area of Richland County. The meeting included a presentation by Norm Whitaker, head of the Central Midlands Council of Governments, regarding the transportation priorities and funding mechanisms for roads in the Northeast. Mr. Whitaker explained the correlation between congestion, growth, and air quality in the Northeast, and informed attendees that that ozone monitor located at Sandhill has the potential to draw the entire two-county region into non-compliance. The committee resolved to meet on a quarterly basis in an effort to centralize the often fractured discussion of transportation needs on this rapidly growing area of the county. Councilwomen Dickerson and Hutchinson also received suggestions from the group as to how Council can better plan for transportation needs in the Northeast, including accelerating an update of the county's comprehensive plan, as well as a comprehensive countywide transportation plan.

Richland County's Transportation Study Commission will be hosting a series of public meetings to receive input from the citizens on ways that the county can improve all modes of transportation. A copy of the meeting announcement may be found in Enclosure 2-4. Each meeting will have three breakout sessions: Roads, Transit, and Greenways/Pedestrian/Bike Paths.



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While this commission will be looking at ways to improve the transportation network, it will also be looking at the impact of transportation on the air quality attainment status. The meetings were open to anyone who lives, works, or visits Richland County.

**October 2007 - Berkeley, Charleston and Dorchester counties**

Region 4 EPA and the Berkeley-Charleston-Dorchester Council of Governments (BCDCOG) provided a series of training workshops on how each of us can work with our elected officials and communities to coordinate on Smart Growth Strategies. The strategies included promoting better land use and transportation as well as improved bicycle and pedestrian facilities. EPA supports this strategic training as a way of reducing energy costs and protecting air and water quality.

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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 industries 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.

The 2006 calendar-year survey should be available for the June 2007 EAC Progress Report.

**June 2007**

The 2006 calendar-year survey is available through the PSCFC website. The survey revealed an overall increase in the number of alternative fueled vehicles. This in part is



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due to expanding the participation in the survey as well as additional fleets, including industry and government, turning to alternative fueled vehicles.

The 2006 survey identified a total of 6,916 alternative fuel vehicles actually operating on alternative fuel in the nine-county PSCFC service area. Of these vehicles, 3,754 were E-85 flex fuel, 2,709 were operating on B20 biodiesel, 356 were operating on propane, 72 operating on compressed natural gas, and 25 electric vehicles.

Other activities involving the PSCFC include:

**Columbia CNG Initiative -** In 2000, the PSCFC worked closely with the Central Midlands Regional Transit Authority (RTA) Board of Directors as they made decisions regarding the fate of Columbia's bus fleet. The Board decided to purchase 7 new compressed natural gas (CNG) transit buses when they replaced SCE&G's aging bus fleet. These buses were delivered in December 2002 and are running successfully on CNG. They are expected to reduce nitrogen dioxide and hydrocarbon emissions by 6,296 pounds per year over a ten-year period, which will result in a cleaner downtown area.

Because of the RTA's commitment to alternative fuels, the Energy Office worked with others to expand the capacity of Columbia's only CNG refueling station. This station is located on the corner of Flora Street and Assembly Street, right across from the Capital City Bombers baseball stadium. This station refuels not only the buses, but also federal, state and local government fleets. It is also open to the public, and accepts both Visa and Master Card.

**Ethanol Refueling Infrastructure -** In April 2005, six fueling stations in the Columbia and Greenville areas kicked off their sale of ethanol (E85) with E85 for $.85 events. E85 is the term for motor fuel blends of 85 percent ethanol and 15 percent gasoline and is an alternative fuel as defined by the U.S. Department of Energy. Besides its superior performance characteristics (octane=105), ethanol burns cleaner than gasoline, and it is a completely renewable, domestic, environmentally friendly fuel that enhances the nation's economy and energy independence.

**PSCFC and Stakeholders Receive Funding for Two Special Project Proposals in 2005:**

**1**. York Technical College: Ethanol Refueling Infrastructure: The SCEO received $25,191 in federal funds with a cost share of $18,500 for a total project cost of $43,691 to establish an ethanol (E-85) fueling station in Rock Hill, S.C. to support the use of E-85 in the existing and future fleets of the City of Rock Hill, York County Natural Gas, the City of Clover, Palmetto Clean Fuels Coalition and York Technical College. The E-85 fueling station will be located at the main Rock Hill maintenance facility and will consist of a 12,000 gallon below ground tank converted from an existing unleaded fuel tank. The refueling station will support 59 ethanol flex fuel vehicles currently using gasoline in the fleets of Rock Hill, Palmetto Clean Fuels Coalition, York County Natural Gas Authority, the City of Clover and York Technical College.



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**2. PSCFC - Clean Cities Coalition Support - Palmetto State Clean Fuels Coalition:** The SCEO received $20,000 in federal funds with a cost share of $27,822 for a total project cost of $47,822 for a coordinator support grant for the Palmetto State Clean Fuels Coalition (PSCFC). The purpose of this project is to ensure continued coordination and staffing of the PSCFC by the Catawba Regional Council of Governments. Funding will ensure continued momentum in the nine-county PSCFC region for projects, marketing, and increased use of alternative fuel and alternative fuel vehicles. Funding will enable promotion and building of infrastructure to support increasing use of alternative fuels by state and local government in the PSCFC region.

**Biofuels Showcase** - The Palmetto State Clean Fuels Coalition (PSCFC) hosted a Biofuels Showcase on November 18, 2005. This event showcased ethanol and biodiesel and featured a Ride and Drive event where participants had a chance to drive the alternative fueled vehicles on display. Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvement, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges. On October 14, 2005, the PSCFC hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.

**Billion Gallon Celebration** - Over the last decade, Clean Cities Coalitions have reported activities that have displaced more than a billion gallons of petroleum in transportation. By implementing projects that make use of alternative fuels, hybrid vehicles, truck idle reduction, fuel blends, and fuel economy improvements, Coalitions have helped build local and regional markets for non-petroleum solutions to our energy challenges. On October 14, 2005, the Palmetto State Clean Fuels Coalition hosted a variety of celebratory events in Rock Hill, Aiken, Columbia and Greenville.

**Southeastern Alternative Fuels Task Force Workshop**
Department staff along with Palmetto Cities Clean Fuel Coalition coordinator, Wendy Bell and South Carolina Energy Office, Chantal Fryer participated in and helped to support the planning and implementation of this workshop held in Tennessee, June 6-7, 2005. Website for the SEAFTF is: http://www.sealtfuels.org/. Evaluation results for this workshop are available.

As of the December 2005 Progress Report, there were 23 public E85 refueling sites in South Carolina with 4 additional stations planned with the next 6 months. In addition to the E-85 refueling sties located at the Department's Bull Street office in Columbia, there were 5 other refueling sites that are not open to the public (2 in Aiken County at the Savannah River Site; 1 in Berkeley County at Santee Cooper; and 2 in Horry County). In 2006, the University of South Carolina and the City of Rock Hill each have plans to install an E85 refueling site; bringing the total number of non-public refueling sites to 8



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during 2006. In addition to E85, there were 3 biodiesel public sites in South Carolina. B2 at Spinx and 2 United Energy Sites.

As of June 2006, there were 34 public E85 refueling sites in South Carolina. In addition, there are 14 public biodiesel (B20) refueling sites in South Carolina.

As of December 2006, there were 40 public E85 and 42 public B20 refueling sites in South Carolina. Two sites, one of which will be located in the City of Rock Hill (York County) will be opening soon. Under a recent grant award, PSCFC received funding for 2 additional E85 sites and a B20 site in the Rock Hill area.

The 2006 calendar-year survey should be available for the June 2007 EAC Progress Report. The survey will include information such as the City of Rock Hill converting their entire diesel fleet, on-road and off-road to B20; the City of Union and Union County both are now using B20; and, Fort Jackson is using E85 in non-tactical vehicles.

On August 15, 2006, Bell Exxon in Union opened E85 and B20 dispensers that will service the City of Union and Union County AFVs. Southeast Biodiesel hosted a grand opening for their Charleston facility on October 27, 2006. Production at this facility is expected to being in January 2007.

A grand opening was held on December 6, 2006 for Carolina Soya located in the City of Estill, Hampton County. The facility is expected to be operational in March 2007 and will produce up to 30 million gallons of soybean-based biodiesel fuel per year.

PSCFC provided a moderator/speaker for the 2006 SC EAC Summit held in Columbia on August 16 and 17. A presentation on alternative fuels by the PSCFC was also given at the Southeast Governmental Fleet Managers Association meeting in October 2006.

**December 2007** – There are currently 49 public E85 and 49 public B20 refueling sites in South Carolina. PSCFC is in the process of funding 7 more sites. An additional 12 E85 sites will be installed over the next 6-8 months.

**September 19, 2007 – South Carolina Biodiesel Fuel Quality Symposium**
The South Carolina Biodiesel Fuel Quality Symposium took an in-depth look at the latest regulatory, environmental, and technical developments impacting the fastest-growing renewable fuel industry in South Carolina. The event's technical program provided participants with a basic understanding of how biodiesel is produced, fuel management, fuel quality, component compatibility, regulatory issues, and incentives. Speakers include recognized experts in their respective fields including industry professionals, regulators, local and state officials, fleet managers, retailers, distributors, and producers.

**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



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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.

As of June 2007, there are still 40 designated areas in South Carolina.

As of December 2007, there are 39 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. Starting in October of 2006, BAQ began tracking energy consumption for the Bull Street office building, which is also home to the Bureau of Water, some Health Services offices and the Department's administration. This information will be used as a baseline to show progress in reducing energy consumption. Research has been done into energy conserving upgrades already completed. BAQ is developing a comprehensive energy efficiency program for the Bull Street building that will include identifying best practices for staff and tracking of energy use.

The second front was to involve other state agencies and local governments through outreach efforts to try to get them to utilize Energy Star. To assist with those efforts, BAQ registered as an Energy Star Driver in February 2007. Since September 2006, information about the benefits of energy conservation, including Energy Star, have been included in presentations to Spartanburg County, Greenville County, the City of Greenville, Oconee County, Lexington County, as well as various other stakeholder groups participating in Greenville County's public awareness campaign. To assist with these efforts, BAQ has developed an educational postcard that recipients can use to register for the "Change a Lightbulb" Pledge. These postcards and other informational brochures are distributed at all of the Department's public events.

**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.



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The numbers calculated from EPA's calculator program are below:

RESULTS--Savings Per Year

| | |
|---|---|
| Energy | |
| Current Use | 25,216 kWh |
| Future Use | 18,127 kWh |
| Savings | 7,089 kWh |
| Dollars | |
| Current Cost | $2,169 |
| Future Cost | $1,559 |
| Savings | $610 |
| Percent | |
| Savings | 28% |

Since the BAQ's successful installation of Energy Star, other Bureau's within the Department are now starting the process of installing Energy Star. Once the Information Technology (IT) staff has completed the necessary installation on the respective servers, the Bureau of Water and the Bureau of Land and Waste Management will be joining the Energy Star team. With the addition of these two Bureaus, the number of computer monitors will increase from around 150 to over 500.

**Other State Agencies and Local Governments**

During the reporting period BAQ staff met with staff at other state agencies to provide them information about Energy Star. Staff met with the South Carolina Energy Office, the South Carolina Department of Transportation, and the South Carolina Department of Education. At least one Agency (South Carolina Energy Office) has expressed an interest in implementing Energy Star and BAQ staff will be working with them to do so.

As part of the EAC process Energy Star is being used as an example of how local governments can save money, and also help reduce air pollution. Staff have provided flyers and used PowerPoint presentation to demonstrate local government contacts the benefits of Energy Star and how to implement the program.

Department staff created and distributed Energy Star pledge postcards at the South Carolina Science Council Conference in November 2006. Participants returned 54 pledge cards, with pledges to replace over 200 incandescent bulbs with compact fluorescents. The cards were also distributed to 5$^{th}$ graders at Rosewood Elementary School.



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**Recent Activities and Future Plans**

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 is responding to requests for assistance to draft responses to grants. A recent request from a partner in a state Council of Government (COG) area prompted BAQ to develop the following proposal. While this proposal may or may not be introduced by this COG, the information will be made available by BAQ staff to other contacts interested in pursuing energy efficiency reduction strategies. Also developed and available is the project design and evaluation along with the project logic model.

**Energy Star Upgrade Proposal - October 2006:**

We propose to upgrade local facilities in the area to demonstrate the ease and effectiveness with which energy reductions can be made. At the core of our proposal are the ideas suggested by the national Energy Star Campaign. We propose the following upgrades to participating facilities:

- Upgrade incandescent light bulbs with CFL light bulbs
  - At a cost of $10 per unit
  - With an energy savings of 66% per bulb
- Upgrade any existing T 12 fluorescent light fixtures with T8 ballasts and bulbs
  - At an average cost of $25 per unit
  - With an energy savings of about 30% per fixture
- Upgrade computer system with automatic sleep modes
  - At no cost
  - With an energy savings of about $10-$50/computer annually

In addition, we propose to investigate and report where additional savings could be realized. In particular, we plan to look at exit sign efficiency and upgrade costs, overhead diffuser and reflector efficiency and upgrade costs, automatic shut-off savings and installation costs, as well as other items such as interior paint color and occupant behavior patterns.



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Every participating facility will first be analyzed to determine baseline energy consumption. Gains in energy efficiency as a result of the upgrades will be measured against this baseline. Upgrades should be extensive enough to demonstrate a real energy savings, while leaving room for improvement should the facility take the initiative to complete the upgrades and invest in further improvements as suggested in the report. The analysis conducted to establish the energy consumption baseline for the facility will also be useful in encouraging that facility to sign-up as an Energy Star Partner.

Energy Conservation and Air Quality Awareness shall be promoted through informational presentations, brochures, and displays at the participating facility throughout the upgrade process. In this way, we hope to impact employee energy conservation behaviors at home, as well as at the workplace. Sponsor and partner logos will be displayed along with or on these informational fliers, kiosks, and presentations.

Finally, the improvements, suggestions for additional upgrades, energy savings, and emission reductions will all be documented in the project report. The report findings shall be made known to the participating management and employees, and shall be used to promote similar campaigns in other areas across the state. Bulbs containing mercury that are replaced as a part of the upgrade will be recycled and/or disposed of properly, and mercury awareness will be a sub-set of the awareness campaign.

**Change a Light and Change the World with Energy Star**

The BAQ also promoted the **Change a Light and Change the World with Energy Star** in October 2006 to staff within the Department via email. The informational message utilized (listed below) was also shared with EAC contacts statewide. Staff also developed a pledge card and utilized a small inventory of CFLs during a conference with school science teachers (South Carolina Science Council) in October. For this conference, 60 teachers returned the pledge card to take the action of changing a light bulb to a CFL to help reduce Global Climate Change, and 45 signed to buy recycled products and support recycling efforts.

**Informational Message:**

ENERGY STAR Change a Light, Change the World Campaign 2006
Need a Bright Idea? Here's One:
There is a National effort underway to Change a Light and Change the World with Energy Star, beginning on October 4, 2006 with the National Change a Light Day.

At the campaign's heart, the ENERGY STAR Change a Light pledge is a simple, but vital method of forming a community of inspired individuals across the nation, committing to help reduce the risks of global climate change and to save energy. The pledge asks the individual to change a light in his or her home to an energy-efficient (ENERGY STAR qualified) one.



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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!"

**December 2007** – The Department made a commitment to do our part to save energy, improve air quality and reduce greenhouse gas emissions. By joining the national ENERGY STAR Change a Light, Change the World Campaign as a pledge driver, the Department set a goal to encourage 500 employees to commit online to replace at least one inefficient incandescent light bulb at home with a highly efficient ENERGY STAR labeled option such as a compact fluorescent light bulb (CFL). As of November 30, 2007, the Department exceeded the goal of 500 pledges. Department employees made 751 pledges to replace incandescent light bulbs with a more energy efficient option such as a CFL. This is over 150 percent of our goal. The 751 participants pledged to replace 6,396 incandescent light bulbs which will save more than 1,803,672 kWh of energy and 2,615,964 pounds of greenhouse gas emissions.

**b. South Carolina Energy Office**

**2007**
South Carolina Summit on Energy Efficiency

The South Carolina Summit on Energy Efficiency (EE Summit) was held on April 30, 2007 in Columbia, South Carolina. The EE Summit brought together 175 participants representing a broad range of interests – electric and gas utilities, regulators, legislators, consumer and environmental advocates, industry, universities, schools, and regional transmission organizations. A complete list of the attendees is available. The goals of the EE Summit were:



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- To use the National Action Plan for Energy Efficiency as a springboard for discussion and action in South Carolina;
- To learn about and discuss the benefits of energy efficiency to South Carolina, including utilities, consumers (residential, commercial, and industrial), the state economy, and the environment;
- To share information on the key challenges to increased energy efficiency and consumer awareness in South Carolina; and
- To jointly discuss proposed initiatives that can begin to address challenges of increased energy efficiency and consumer awareness.

Over the course of the day three panels of stakeholders and experts addressed:
(1) Why energy efficiency makes economic and environmental sense for South Carolina;

(2) Challenges to increased energy efficiency and consumer awareness in South Carolina; and,

(3) A roundtable discussion of opportunities to address challenges and take energy efficiency to the next level in South Carolina.

For a summary of the speaker remarks and discussion following each of the panels as well as the full agenda a PowerPoint slides is available through the South Carolina Energy Office at http://www.energy.sc.gov/news.aspx.

**2006**
The South Carolina Energy Office (SCEO) released an Annual Report for 2006. Some items addressed in the report include:

1. The SCEO promotes energy efficiency in government agencies and public schools by encouraging the adoption of programs and procedures designed to capture and measure energy use, analyze key energy data for the development and implementation of energy saving measures, and incorporate these improvements into a master energy plan. In addition, the SCEO provides energy audits or assessments, special grants, or low interest loans to encourage installation of energy efficient equipment or systems improvements in public facilities.

2. The SCEO 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 may be found at the SCEO website: http://www.energy.sc.gov/index.aspx

3. Transportation – This section discusses the SCEO role in Palmetto State Clean Fuels Coalition; Alternative Fuel Refueling Infrastructure; Alternative Fuel Vehicles; Take a



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Break from the Exhaust; and Truckstop Electrification**.** The Palmetto State Clean Fuels Coalition (PSCFC) is a SCEO-sponsored group of public and private stakeholders. The PSCFC and its stakeholders continued to improve access to alternative fuels for the public by installing alternative fuels infrastructure and educating public and private sector fleet managers, the general public, fueling station owners, and government entities. In FY06 the SCEO partnered with the PSCFC for a DOE grant of $20,000 to promote and encourage growth of alternative fuel infrastructure.

4. Public Information - This section discusses the ways in which the SCEO reaches a variety of audiences in the state.

5. EarthCraft Houses - The SCEO continued its partnerships with the Home Builders Association of Greenville, Charleston Trident Home Builders Association, and Southface Energy Institute to pilot the EarthCraft House program for the Greenville and Charleston areas. In FY06 the partnership built 18 EarthCraft Houses and trained over 100 builders and other building industry professionals. Three leading builders in the low country have made a commitment to build 80 percent of their homes to EarthCraft House standards, and a leading Upstate builder has committed to building 100 percent of his houses to EarthCraft standards. One EarthCraft builder training was conducted this year for Crescent Resources, LLC, a low country development at Palmetto Bluffs, a large upscale residential project between Charleston and Savannah. The success of the EarthCraft House program in Charleston and Greenville has led to participation by developers and builders in Hilton Head, Bluffton, and other parts of the state.

6. Landfill Gas to Energy Projects - Landfill Gas to Energy Projects - Since 1999, the SCEO has partnered with the US EPA Landfill Methane Outreach Program (LMOP) to evaluate, reclaim and use landfill gas for energy in the state. Strong efforts on Landfill Gas to Energy (LFGTE) projects have resulted in significant energy and environmental benefits for South Carolina.

Santee Cooper has installed generating stations at Horry County Landfill near Conway which produce 3.3 megawatts (MW) of power and are expected to increase to 9 MW. A second facility located at Allied Waste's Lee County Landfill generates 5.4 MW of electricity and is expected to increase to 21 MW. In FY06, an energy project at Screaming Eagle Landfill in Richland County was completed. It is generating 5.5 MW of green power and is expected to increase to 11 MW. An energy facility at Anderson Regional Landfill will be completed in early FY07, generating 5.5 MW, eventually increasing to 13 MW. These facilities bring Santee Cooper's green power generation to a current total of 19.7 MW and a projected total of 54 MW. Three upcoming projects, including the Richland Northeast Landfill, Oak Ridge Landfill in Dorchester County, and the Hickory Hill Landfill in Jasper County, will bring the projected total to 71 MW by 2012.

The largest LFGTE project to date, the Palmetto Landfill in Spartanburg County produces the equivalent of 10 MW of electricity and will soon upgrade to 12 MW. The landfill gas produced at this site is sent to BMW's automotive manufacturing facility near Greer. The methane powers four turbines. BMW plans to retrofit the system in FY07 to supply 40 percent of the plant's electrical needs and 100 percent of thermal needs. BMW will be the



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first automotive manufacturing plant in the country to utilize landfill gas for its paint shop. The gas will fuel 23 oven burners and provide indirect heat for the area. This will greatly reduce the factory's reliance on natural gas and reduce carbon dioxide emissions by 17,000 tons per year. Another South Carolina factory, JW Aluminum, announced plans in FY06 to build a smeltering plant at the Berkeley County Landfill and derive most of its energy from landfill gas at the site. According to the US EPA, this $5 million project will be the first of its kind in the country.

At the end of the 2006 legislative session, the South Carolina General Assembly passed S.1245, which included a provision providing tax credits for manufacturers to use landfill gas. Beginning in FY07, a manufacturing facility can get 25 percent of the landfill gas energy equipment costs in a business income tax credit.

**2005**

The SC Energy Office released an Annual Report for 2005. Four items addressed in the report include:

1. The SC Energy Office promotes energy efficiency in government agencies and public schools by encouraging them to measure their energy use, analyze their building envelopes and mechanical systems, incorporate energy improvements into their master plans, and implement energy-saving measures. The SC Energy Office also provides grants and loans to encourage installation of energy efficient equipment and capital improvements in state agencies.

2. The SC Energy Office promotes the use of renewable energies and sustainable development practices throughout the state to offset and replace traditional methods of energy generation and consumption and to mitigate environmental degradation and the loss of economic investment. Renewable technologies such as solar, biomass, wind, hydrogen, and geothermal energy sources can help South Carolina depend less and spend less on imported energy while improving the state's environment. A description of projects such as landfill gas to energy, solar technology, biomass renewable energy, green power and hydrogen is included.

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



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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

**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.

**e. Duke Energy Efficiency Program**

Duke Energy Corporation asked the North Carolina Utilities Commission (NCUC) to consider new energy efficiency programs that would help the Charlotte-based utility continue to meet rising consumer demand for electricity. In what Duke Energy calls its "save-a-watt" model, the company would replace existing energy efficiency programs with new ones and shut down older coal plants. Duke Energy can reduce demand by 666 megawatts during the summer under its existing programs in North Carolina and South Carolina, according to the company. The new program proposes to reduce demand by up to 1,700 megawatts after four years, a key metric in meeting the company's expected customer demand growth. Under Duke Energy's proposal, customers would pay for the programs with an energy efficiency "rider" that would be included in their power bill and adjusted annually. The company asked the commission for a first year rider of $0.001129 per kilowatt-hour for residential customers and $0.000940 for nonresidential customers.

Duke Energy Carolinas has had an ongoing dialogue on the save-a-watt plan with customers, environmentalists, the NCUC Public Staff and other stakeholders in a collaborative group since last August. These conversations and feedback received played a key role in the development of the program.

The following are the save-a-watt energy efficiency programs Duke Energy Carolinas is proposing:

Residential Assessments – to help residential customers identify opportunities to use energy more efficiently through a mail-in analysis, on-line analysis and on-site energy audit. Participating customers will receive either an energy efficiency kit or compact fluorescent light bulbs at the time of the audit to begin their energy savings immediately.

Non-Residential Energy Assessments – to help commercial and industrial customers identify opportunities to use energy more efficiently through an on-line analysis, telephone interviews and on-site energy audits.

Smart $aver® – to provide residential customers with incentive payments to install more energy-efficient equipment, such as compact fluorescent light bulbs and high-efficiency air conditioners and heat pumps. The commercial and industrial customer program will



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provide incentives to install high-efficiency lighting, heating, ventilation, and air conditioning equipment, motors and pumps.

Low Income Service – to assist low income residential customers with energy efficiency measures using kits or assistance in purchasing equipment and weatherizing homes.

Power Manager – to enable residential customers to receive a monthly credit from July to October in exchange for allowing Duke Energy to cycle their central air conditioning in times of peak power demand.

PowerShare® – to enable commercial and industrial customers to receive a credit on their bills in exchange for reducing their electric use in times of peak power demand.
Residential Bill Check Pilot – to evaluate the use of new technology to provide customers with a monthly report analyzing their energy use and comparing it to weather patterns and other issues that relate to energy use. The pilot will initially test new technologies in up to 200 homes in the Charlotte area.

Efficiency Savings Plan Pilot – to evaluate allowing residential, commercial and industrial customers to install energy efficiency products with no up-front payment, allowing customers to save money by reducing their energy use. Customer would pay for these products through an added charge to their power bill.

Advanced Power Manager Pilot – to evaluate new technologies and advanced metering to study the feasibility of an energy management system that enables customers to participate in energy efficiency without disrupting their lifestyle or normal business practices.

### f. Computer Energy Use Audit - 2007

In an effort to improve energy efficiency in its own facilities, the Department performed an internal computer energy use audit. The study tracked computer energy use over a number of computer use test cases. It was determined that there was significant opportunity to decrease energy use, reduce emissions and save money through better computer power management. As a result, employee education is taking place and new policy is being considered.

### g. Town Hall Meeting - Conservation on Energy - June 27, 2007

Hosted by Conoco Phillips and the University of SC, invited panelists represented organizations active in renewable energy and energy efficiency, business and industry, the environment and conservation. John Litton with the BAQ was a panelist.



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### h. Green Power Solar Schools Program – August 2007

Aiken Electric Cooperative and Santee Cooper announced the formation of the Green Power Solar Schools program in the cooperative territory, and that New Ellenton Middle School has been selected as the Green Power Solar Schools program participant.

The initiative is designed to encourage interest in the environment and demonstrate the feasibility and limitations of renewable power generation. Each school will receive a 2 kilowatt solar power system, which will provide a teaching, research and hands-on demonstration opportunity for students. A focus of the project is the use of a new renewable energy curriculum endorsed by the South Carolina Department of Education.

The program continues the Electric Cooperatives of South Carolina's and Santee Cooper's efforts to promote renewable energy, and fulfill Santee Cooper's commitment to reinvest Green Power funds back into renewable resources across South Carolina.

### i. Want Discounts on Energy Efficient Light Bulbs? (September 2007)

Progress Energy is offering discounts on compact fluorescent light bulbs at 11 Home Depot stores in North and South Carolina. The energy efficient bulbs will be available with the 1 dollar discount from October first to December 30th. The companies say they plan to sell up to 200,000 of the 40, 60 and 100-watt bulbs. Progress Energy is trying to gauge consumer acceptance and awareness of the fluorescent bulbs. If the program is successful at the North and South Carolina stores, it could expand.

### j. Palmetto Clean Energy – September 2007

SCANA Corp., Duke Energy Corp. and Progress Energy Inc. will start selling "green power" to their South Carolina customers early next year through a nonprofit group established by the state. The three utilities will market the renewable energy to the 1.3 million homes and businesses that they serve in the state, while the newly formed organization, dubbed Palmetto Clean Energy, or PaCE, will buy the power from small Southeastern companies that generate electricity with wind turbines, solar panels and landfill gas.

### k. Waste Management - September 2007

In September, Waste Management, Inc. announced a major national initiative to expand the number of landfill gas to energy (LFGTE) facilities. The program will result in the creation of an additional 60 renewable energy facilities across the country -- including the potential of two additional facilities in South Carolina -- over the next five years.

Waste Management currently operates LFTGE facilities at Elgin and Wellford. The two LFGTE plants generate nearly 16 MW of electricity -- enough to power 15,000 homes per year. The company also has two other landfills in St. George and Ridgeland, which could host a LFGTE facility. As part of the national initiative, WM will generate more than 700 megawatts of clean renewable energy -- enough to power 700,000 homes or replace over eight million barrels of oil per year.

### l. South Carolina Electric Cooperatives Invest in Conservation and Renewable Energy – October 2007

South Carolina's 20 electric cooperatives plan to invest up to $10 million per year towards renewable energy and energy efficiency measures. The investment includes a three-pronged approach to improving the environment and saving energy. The following three measures represent the beginning of this process.
-Encouraging homegrown renewable energy (a pilot program for net metering.)
-Producing efficiencies to save energy and money (a program to place energy efficient compact fluorescent lights (CFLs) in the home of every cooperative member in the state, approximately seven million bulbs within 10 years).
-Investing resources in clean energy research (a partnership with the University of South Carolina to develop technology that reduces carbon dioxide and other emissions from coal-fired power plants).

### m. Alternative Energy Tax Credits – November 2007

This year, South Carolina began offering a number of new tax credits for people and businesses investing in alternative energy. A state tax credit that took effect in 2007 covers 25 percent of the cost of solar equipment for hot water, heating, cooling, or generating electricity, as an income tax credit worth up to $3,500 or half an individual's tax liability. The credit can be carried over for up to 10 years. For new homes, according to the U.S. Department of Energy, solar water heating systems can save money immediately, when the monthly energy savings are compared to the amount a system adds to the cost of a 30-year mortgage.

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| December 2007 | | | | | |
|---|---|---|---|---|---|
| **South Carolina State Measures** | | | | | |
| A.<br>Control Measure/Activity | B.<br>Control Measure/Activity Description | C.<br>Current Status | D.<br>Date Occurred | G.<br>Pollutants | H.<br>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. Enviroflash is being promoted in our priority areas and staff are working on an Enviroflash "icon link" to be added to partners' websites to faciliate access to the forecast. | July 2004 | | |
| | | Forecasting for ground-level ozone began April 1, 2007 as a result of the Department observing elevated levels of ground-level ozone during the month of April. The Department added a new forecast region. The CATAWBA region now includes York, Chester, and Lancaster counties. And, the Department is added two counties to the existing PEE DEE forecast region. Marlboro and Dillon counties joined the other counties in the Pee Dee regional forecast in 2007. In 2007, the BAQ partnered with the BLWM (each providing $35,000) to fund $70,000 worth of airtime for two 15 second PSAs, one dealing with Ozone Awareness and the other recycling yard debris. | February 2007 | | |
| 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 | | |
| | New materials developed | Facts about ethanol as an alternative fuel (05/07)<br>VEHICLE MAINTENANCE AND AIR QUALITY (05/07)<br>The Benefits of Using<br>Alternate Modes of Transportation<br>Refer to Enclosure 2 of the June 2007 EAC Progress Report for South Carolina | 5/1/2007<br><br>06/07 | | |
| | BAQ - Education and Outreach – School related activities | BAQ staff participated in a number of meetings and provided trainings at various meetings and schools. | 2006 | | |

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| c. Breathe Better Program | Program started focusing on seeking reductions in air pollution around schools. The program has been expanded to include business, industry and other places where idling may occur. | 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<br><br>To enable better access, a website for this project has been developed and is located at the following link: http://www.scdhec.gov/environment/baq/docs/edu/B2/b2originalprotocol.pdf | 2005<br><br>December 2007 | | |
| | | June 6, 2007 - Fountain Inn Elementary School The school has been working for several weeks with county and city planners to implement b2. The school has taken the program beyond its anti-idling focus. The school has plans to plant shade trees, build benches, landscape needed areas, and re-route bus/carpool traffic.<br><br>Crossroads Middle School, Rosewood Elementary School in Rock Hill and Fountain Inn Elementary School have implemented a no idling policy.<br><br>Greenville County was the recipient of a 2006 EPA grant to raise public awareness about air quality, and implement an anti-idling campaign in one county school. The anti-idling campaign is called B2-Breathe Better, and the idea is to spread the program through out the county-wide school district.<br><br>July 2007 - Two "Turn off your engine" signs were placed in the SCDHEC visitor parking lot to encourage anti-idling. A copy of the sign was submitted in the June 2006 EAC Progress Report. | 2007 | | |

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| d. Other School and Community Related Activities | BAQ - Education and Outreach – Staff provide education and outreach support to schools and community organizations. | March 21, 2007 – Gilbert Middle School - staff presented the "Air Quality" kiosk panels for display at their outdoor learning center area. Staff worked with several groups at the learning center focusing on the importance of air quality and the state of South Carolina's air quality.<br><br>May 10, 2007 - "Air Quality and Trees" presentation - Staff presented to the Northeast Beautification committee about the importance of trees and using native plants and shrubs. The committee has several projects going on in the Northeast area of Columbia, all of which focus on planning greenways, tree planting, and beautification areas. Several BAQ staff is on the "Trees for Two Notch" sub-committee.<br><br>May 23 – 25, 2007 – South Carolina Public Health Association (SCPHA) conference - Staff conducted provided presentations on the b2 program and EPA's "Tool for Schools" air quality program. A booth that included several publications on air quality issues (ambient and indoor) focusing on the health effects of poor air quality was provided.<br><br>Staff has taught the 7th grade at Northside Middle School the science curr<br><br>Staff has been involved for the past 3 years with Gilbert Middle School. S | | | |
| e. SC Educators trained with Action for a Cleaner Tomorrow | Environmental Education training for teachers | FY 05 saw 28 educators trained<br>From July 2005 through June 2006 - there have been 26 trainings with 724 teachers trained. | yearly training opportunities | | |
| f. 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 | | |
| | Increase the target audience's awareness about the importance of car maintenance in preserving good air quality | Suddeth Automotive,Richland County offered Free National Car Care Month Inspections on Monday thru Friday between 9 AM and 4:30 PM during the month of April; also offered was a Free Women's Care Care Seminar on Saturday April 28th. The Department supplied "Driving Smarter For Tomorrow" brochures which included tips to save money, improve vehicle reliability, reduce air pollution, and maximize fuel economy. | April 2007 | | |

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| g. 2006 SC EAC Summit | 2006 Early Action Compact (EAC) Summit held in Columbia, SC on August 16-17, 2006<br>*Attracted nearly 300 stakeholders from 5 different states including representatives from 24 counties and 7 Councils of Government<br>*Participants included representatives from federal, state and local governments as well as industry representatives, environmental organizations as well as private citizens | Topics 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 - Bill Wehrum, Acting Assistant Administrator for Air & Radiation, U.S. EPA, Mark MacLeod, Director for Special Projects in Environmental Defense's Climate and Air program of the Washington DC office. | August 2006 | | |
| h. Earth Week 2007 Activities | **2007** - Governor Sanford signed a proclamation declaring April 22-28, 2007 as "Earth Week"<br><br>The Department, with the help of volunteer staff, celebrated Earth Day 2007 throughout the state. During the month of April and the first part of May, staff participated in many community Earth Day events including grade schools, colleges, churches, hospitals, historic parks and private industry (BMW).<br><br>Over ten-thousand (10,000) environmental materials were distributed. | Staff presented on topics such as air sampling, criteria pollutants, ozone formation, open burning, electric lawn mowers, hybrid electric vehicles, and greenscaping. Distributed information discussed particulate pollution and health, automobile emissions, spill-proof gas cans, the benefits of urban trees, and energy conservation. School aged children were enthused to receive promotional items such as environmental activity booklets, recycled pencils, and several themed posters included ways to help reduce air pollution. 2007 Activities included:<br>Air sampling and monitoring presentation at Coker College<br>Lawn Mower Exchange at the S.C. State Museum<br>First Annual Kids Earth Day in Camden<br>Gas Can Exchange in Greenville<br>N. Augusta Kids Day in Aiken County<br>Earth Day at Park Circle in Charleston<br>Saluda Shoals Park Earth Fair | April 2004<br>and continues | | A copy of this proclamation is located at: http://www.scdhec.gov/eqc/baq/pubs/earthweek.pdf. |
| i. 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 | | |

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| | "Mow Down Pollution" Event (April 21, 2007) - Lexington and Richland Counties;Keep the Midlands Beautiful, and the BAQ planned and implemented the first lawn mower exchange in SC. To encourage Columbia-area residents to do their part to "Spare the Air," the lawn mower exchange was held at the State Museum to Mow Down Pollution!<br><br>Estimated emission reductions are 6.8665 tons VOC per year and 14.1205 tons CO per year (based on EPA emissions for 2 cycle gas mowers). A DRAFT "Mow Down Pollution" report and the participant survey was include with the June 2007 EAC Progress Report. | The event collected empty, functional gas powered lawn mowers and offered a discount between 30 percent and 55 percent off MSRP on Neuton cordless electric mowers. To compliment the lawn mower exchange, other partners were invited to exhibit Greenscaping information at the event. These partners helped extend the impact of the exchange by highlighting complimentary lawn and garden practices that help protect air quality. The Columbia event collected 155 gas-powered mowers as trade-in. These mowers were recycled by Lexington County and thereby removed from operation. Since most of the mowers appeared to be two stroke engines, our estimated emission reductions are 6.8665 tons VOC per year and 14.1205 tons CO per year. | 2007 | | |
| | Lawnmower Exchange Event - 2008<br><br>Richland and Lexington Counties and DHEC-BAQ are planning a lawnmower exchange event to be held in 2008. | A planning meeting was held on September 11, 2007. The target date for the event is the Spring of 2008. | 2007 | | |
| | "Mow Down Pollution"- Lawn Mower Exchange event to be held prior to Dec. 31, 2008 with local government in the Duke Energy service area. | The Education and Outreach Section of the BAQ will be coordinating a "Mow Down Pollution"- Lawn Mower Exchange event and promoting energy efficiency activities, particularly related to use of computer equipment, with local government in the Duke Energy service area in South Carolina. These activities will present opportunities to raise awareness of air quality issues in the Upstate of South Carolina and reduce emissions of air pollution. The funds ($6500.00) will be used for but not limited to: advertising and promotion, creating brochures and other written materials, providing promotional items and subsidizing the cost of the electric lawn equipment. This project will be completed by December 31, 2008. | November 2007 | | |
| j. Grant Assistance | Grant Workshop sponsored by South Carolina and Georgia, in cooperation with staff from the EPA Region 4.<br><br>January 16 - Augusta/Aiken area<br>January 17 - Central Midlands area<br>January 18 - Greenville/Spartanburg areas | In advance of upcoming funding opportunities for various types of projects to address air quality issues through the EPA, a workshop was held for each of three areas of SC to provide information that may help local entities to improve their proposals for applying for these funding grants. | January 2007 | | |
| k. U.S. Walk to School Day | At 141 plus, South Carolina had more schools participating in this anti-obesity, enviro-friendly campaign than any other state except California. | | October 2007 | | |
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| **2. Commuting Reduction Programs** | | ( | | | |
| a. Take A Break From The Exhaust (TABFTE) | Computer based Commuter program that encourages reductions by using a point system<br><br>2005 Ozone Season Reductions:<br>286,889 miles reduced<br>1,076 pounds of VOC's reduced<br>684 pounds of Nox reduced<br><br>2006 Ozone Season Reductions:<br>162,000 miles reduced<br>609 pounds of VOC's reduced<br>387 pounds of NOx reduced<br><br>2007 Ozone Season Reductions:<br>146, 991 miles reduced<br>592 pounds of VOCs reduced<br>411 pounds of NOX reduced | 2006 Participants<br>Bureau of Air Quality (BAQ)<br>Bureau of Water<br>Bureau of Land and Waste Management (BLWM)<br>South Carolina Energy Office (SCEO)<br>Wisconsin Department of Natural Resources<br>Lexington County Government<br>Central Midlands Council of Governments (CMCOG)<br>Winthrop University - York County<br>York Technical College<br>Bowater - York County<br>Citi Group - York County<br>Springs Industries - York County<br><br>The four major participants for the TABFTE program in SC for 2007 were: BAQ, BLWM, CMCOG, and the SCEO. | Yearly<br>April - September | | www.scdhec.gov/takeabreak/login.asp<br><br>Total of 286,889 miles reduced |
| | TABFTE update | Florence County has expressed an interest in participating and has been set up on the program. Columbia: The Central Midlands Council of Governments (CMCOG) has also been signed up and is participating in the program.<br>Staff has presented this program to two other groups of stakeholders and the SC DOT to encourage implementation at other agencies. The Mid-America Regional Council (Kansas City, MO) has implemented this program with their staff. | 2007 | | |

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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:<br>Total Camden – Columbia:<br>November 2005 – May 2006<br>7,514 boardings<br><br>Emissions Reductions (Kershaw, and Richland):<br>684 pounds NOx<br>943 pounds VOC<br><br>During the 2006 Ozone Season, free rides on Ozone Action Days will again be offered.<br><br>December 2006:<br>Passenger Boardings:<br>Total Camden – Columbia (1):<br>November 2005 – November 2006<br>14,301 boardings<br><br>Passenger Boardings:<br>Total Newberry – Columbia (2):<br>November 2005 – October 2006<br>6,408 boardings | 2004 | | |
| | SmartRide update | During the 2007 Ozone Season, to promote SmartRide and to encourage reductions of ozone precursors, free rides will be again be offered for those days designated as Ozone Action Days. BAQ staff met on June 12, 2007, with the new SCDOT project coordinator. Discussions included issuing a press release; updating the SmartRide website; increasing ridership; and, possible expansions.<br>The BAQ has committed to provide $500.00 during the 2007 Ozone Season, along with a matching amount from the SC Energy Office, to provide free rides on Ozone Action Days.<br><br>SmartRide Statistics for December 2007:<br>Passenger Boardings:<br>Total Camden – Columbia:<br>November 2006 – October 2007<br>12,332 boardings<br><br>Passenger Boardings:<br>Total Newberry – Columbia:<br>November 2006 – October 2007<br>11,709 boardings | 2007 | 2007 Reductions (Kershaw and Richland):<br>1,642 pounds NOx<br>2,269 pounds VOC<br><br>2007 Reductions (Newberry and Richland):<br>1,584 pounds NOx<br>995 pounds VOC | |

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| 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.<br><br>December 2006<br>total number of participants - 54<br>total of 34 employees added their names to the list<br><br>June 2007<br>total number of participants - 64 | December 19, 2005 | | 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.<br>SCDHEC - Bureau of Air Quality currently holds the only designation in South Carolina | Completed<br>Bureau continues to promote this program to EAC areas and within the Department.<br><br>December 2006 -BAQ continues to maintain the "Best Workplaces for Commuters" (BWC) status<br><br>June 2007 – EPA will no longer fund the BWC program.<br><br>October 2007 - EPA has since announced that the Center for Urban Transportation Research (CUTR) at the University of South Florida assumed responsibility for management of the program when the EPA relinquished it on October 1st. The Department continues to meet the minimum requirements. | February 3, 2005<br><br>December 2007 - The Department continues to meet the basic program requirements. | | The Department will continue to promote best workplace practices to other programs within the Department as well as other organizations seeking voluntary measures proven to benefit employees and air quality. |
| 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 | | |
| f. Bike to Work Events (2007) | May is National Bike Month, and Friday May 18, 2007 was "Bike-to-Work Day." | The Department's State Nutrition and Physical Activity Consultants, Division of Injury and Violence Prevention, and Bureau of Air Quality encouraged Department staff in Columbia to participate in a "Bike-to-Work Day" ride coordinated by Central Midlands Council of Governments and the City of Columbia, and/or to bike to lunch together. | May 1, 2007 | | |

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| g. Safe Routes to School Program | The South Carolina Department of Transportation (SCDOT) approved funding to develop comprehensive bicycle and pedestrian programs as part of the "Safe Routes to School Program." | Partnering with SCDOT, local governments, parents, local law enforcement and educators, each school and community will develop a plan that encompasses both infrastructure and non-infrastructure components. One of the purposes outlined in the funding legislation for this program includes facilitating the planning, development, and implementation of projects and activities that will reduce traffic congestions, fuel consumption and air pollution in the vicinity of primary and middle schools. | 2007 funding cycle | | The schools for the 2007 funding cycle are: College Park Elementary School, Berkeley County; Alston Middle School, Dorchester County; Willow Drive Elementary School, Sumter County; North Vista Elementary School, Florence County; Wren Elementary/Middle School, Anderson County; Lone Oak Elementary School and Pine Street Elementary School, both of Spartanburg County; Rosewood Elementary School, Richland County; College Park Middle School, Berkeley County; Fairfield Middle School, Fairfield County; Stono Park Elementary School and Hunley Park Elementary School, both of Charleston County. Each of the selected schools will receive up to $200,000.00. |
| h. Bull Street Partners Carpool Group | Bull Street Partners Carpool Group provides employees of the Bull Street area offices of three State agencies (Department of Health and Environmental Control, Department of Mental Health and Department of Social Services) an opportunity to form carpools, thereby saving money and fuel, reducing pollution and reducing the stress of commuting. | The Department's Bureau of Air Quality sent an electronic mail message to contacts in the three state agencies located at the corener of Bull and Harden Streets. The e-mail encourages people interested in regular carpooling, occasional carpooling, or people who are willing to provide a ride home to sign up. The emails have very gone out to two of the three agencies, the third agency emial will be shent out shortly. Seven people have signed up to date, and feedback from the agencies about the program has been very positive. 'Goody Bags" of air quality promotional materials are being provided to people from the Department's sister agencies who sign up. | Began late summer 2007, and is on-going | All Pollutants* | Richland and Lexington as well as other counties within South Carolina |
| i. Bike Commuting for Air Quality | Spartanburg has received a bronze level Bicycle Friendly Community designation in September 2007. Charleston, Greenville, Rock Hill and Columbia are also working towards designation. Columbia is holding twice-a-month meetings and a monthly lunchtime ride. | | September 2007 | | |
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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 | For the eighth year in a row, the governor of South Carolina has signed a proclamation regarding ground-level ozone awareness week. In 2007, Governor Sanford signed a proclamation declaring April 1-7, 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. | 2000 and continues yearly | | |
| | | | | | |
| **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.<br>Additional news releases were sent out during the Fall to encourage citizens to use alternatives for disposing of yard trash.<br><br>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.<br>2007 - The BAQ has committed funding of ~$600.00 to the Anderson County partners to support a billboard campaign to encourage citizens to call prior to burning materials outdoors. | 2005 | | See the December 2005 EAC 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 | | See the December 2005 EAC Progress Report Document for detailed information. |
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| **5. Assist local areas in determining emission reductions** | The Department supports local solutions to local problems.<br><br>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.<br><br>2007 - Department staff continue working with counties and COGs to develop partnerships implementing emission reduction strategies. | 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.<br><br>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 | | |
| | | | | | |
| **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.<br>The BAQ has committed to provide $500.00 during the 2007 Ozone Season, along with a matching amount from the SC Energy Office, to provide free rides on Ozone Action Days. | 2003 | | |
| | | | | | |
| **7. Smart Highways and Transportation Issues** | 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 | | Reductions reflect difference between 2007 and 2002 for deferred nonattainment areas.<br><br>A copy of the Smart Highways Checklist is attached in Appendix 12 of the December 2004 EAC SIP. |
| | Partnership with SC Department of Transportation | BAQ staff met with SCDOT to discuss air quality issues and concerns including PM and ground-level ozone. Discussion included partnerships with both agencies especially due to the potential impact on transportation and air quality from the PM standard and the upcoming release of the proposed ozone standard. | March 6, 2007 | | |

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| | Partnership with SC Metropolitan Planning Organizations and Council of Governments | Statewide MPO/COG meeting held in Clemson. Panel discussion with BAQ, FHWA and RFATS representatives discussed Transportation Conformity triggers, requirements, status, experiences in RFATS. Also discussed were the new PM standards as well as the expected release of the proposed ozone standard. | May 20-22, 2007 | | |
| | Transportation Conformity SIP revision including Memorandum of Agreement (MOA) | A meeting is planned for November 2, 2007 in Columbia of the transportation conformity interagency partners, including EPA Region 4, US DOT (FHWA and FTA) , SC DOT, DHEC, MPO's.<br><br>Transportation conformity ensures transportation planning considers air quality goals. | Began late summer 2007; a schedule for completion is being developed. | | |
| | Transportation Conformity SIP revision including MOA<br><br>**UPDATE** | Stakeholders met on November 2, 2007 to discuss proposed changes to South Carolina's current MOA for Transportation conformity. Stakeholders participating included SCDOT, FHWA Divison Office, EPA Region 4, Central Midlands COG/MPO, Rock Hill-Fort Mill MPO, Aiken-Augusta MPO, Greenville-Pickens MPO and the Department.<br><br>Stakeholders will provide additional comments to the Department for incorporation into the revised MOA. | November 2, 2007 | | |
| | Southern Transportation and Air Quality Summit | SCDHEC - BAQ participated in a three day planning meeting to discuss the regional effects of transportation planning on air quality in the southeast. | August 28-30, 2007 | | |
| | | | | | |
| **8. Land Use Planning and Smart Growth Initiatives** | The EPA and the BCDCOG are providing a series of training workshops on how each of us can work with our elected officials and communities to coordinate on Smart Growth Strategies such as promoting better land use and transportation including improved bicycle and pedestrian facilities. EPA supports this strategic training as a way of reducing energy costs and protecting air and water quality. We will be happy to meet with any group but have meetings set up in Charleston and Dorchester Counties as noted on the attached flyer. Meeting dates in Berkeley County are pending. | SCDHEC - BAQ provided this information to EAC contacts including other contacts from county and municipal governments in South Carolina. | October 2007<br><br>workshops began in Berkeley and Charleston counties | | |
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| **9. Other Point Source Reductions** | | | | | |

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| a. NOx reduction-large facilities | Reduce Oxides of Nitrogen<br>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 | | |
| | | 2. International Paper - Eastover (Richland County) agreed to take a 1,000-tpy reduction in its permit limit. | April 2005 | | |
| | | 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 | | |
| | | 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 | | |
| | | | | | |
| **10. 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 | | 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 | | www.palmettocleanfuels.org/ |

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| 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<br>· In addition to E85, There are currently 14 biodiesel public sites in SC.<br><br>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.<br><br>June 2007 - 42 public E85 and 45 public biodiesel refueling sites in SC.<br><br>December 2007 - 49 public E85 and 49 public B20 refueling sites in SC. PSCFC is in the process of funding 7 more sites. An additional 12 E85 sites will be installed over the next 6-8 months. | October 1, 2001 | | 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. | October 10, 2006 | | |
| 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 | | |
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| **11. 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<br><br>December 2006 - 40 designated areas in SC<br><br>June 2007 - 40 designated areas<br><br>November 2007 - 39 designated areas | 2005 | | www.arborday.org/programs/treecity/map.cfm |
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| **12. Homegrown Products campaign** | The state Department of Agriculture has launched a new campaign to promote homegrown products. The program will start with fruits, vegetables and ornamental plants, then phase in manufactured foods, then row crops like corn and soy beans, and finally livestock. Growers will use a "Certified SC Grown" logo on their packaging and stickers will identify fruits and other products. | The state's retail grocers, as well as roadside markets and farmers markets, have agreed to participate. The "Certified SC Grown" logo on packaging should be in supermarkets soon. | 2007 | | http://www.certifiedscgrown.com/ |
| | | | | | |
| **13. Energy Efficiency** | | | | | |
| a. Energy Star's Computer Power Management Software | 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. | January 2005 - September 2005 | | 2005-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. |

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| b. Energy Star's Change a Light Bulb, Change the World Campaign | SCDHEC BAQ promoted the Energy Star change a Light Bulb, Change the World campaign in the community.<br><br>SCDHEC made a commitment to energy efficiency and air quality by joining the national ENERGY STAR Change a Light, Change the World Campaign as a pledge driver. | Oct 2006 - BAQ promoted Change a Light and Change the World with Energy Star to DHEC staff via email. Staff promoted the campaign to the external community as well.<br><br>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<br><br>Feb. 2007 - The BAQ hopes to involve other state agencies and local governments through outreach efforts to get them to utilize Energy Star. To assist with these efforts, BAQ registered as an Energy Star Driver<br><br>October 2007 - SC DHEC has made a commitment to do our part to save energy, improve air quality and reduce greenhouse gas emissions. We have joined the national ENERGY STAR Change a Light, Change the World Campaign as a pledge driver and have set a goal to encourage 500 of our employees to commit online to replace at least one inefficient incandescent light bulb at home with a highly efficient ENERGY STAR labeled option such as a compact fluorescent light bulb (CFL). By reachi | 2006<br><br>November 2006<br><br>February 2007<br><br>October 2007 | | |
| | Update Continued: | November 2007 – SC DHEC is proud to report that they have exceeded their goal of 500 pledges in EPA's ENERGY STAR Change a Light, Change the World Campaign. At the time of this reporting, SC DHEC employees have made 751 pledges to replace incandescent light bulbs with a more energy efficient option such as a CFL. This is over 150% of our goal. The 751 participants pledged to replace 6,396 incandescent light bulbs which will save more than 1,803,672 kWh of energy and 2,615,964 pounds of greenhouse gas emissions. | November 2007 | | |

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| c. SCDHEC implements energy efficiency programs | SCDHEC BAQ implemented an energy efficiency program at its own office building. | October of 2006 - BAQ began tracking energy consumption for the Bull Street office building. This information will be used as a baseline to show progress in reducing energy consumption. Research has been done into energy conserving upgrades already completed. BAQ is developing a comprehensive energy efficiency program for the Bull Street building that will include identifying best practices for staff and tracking of energy use.<br><br>June of 2007 - BAQ consulted with the SC Energy Office to identify building updates and best practices for the Bull Street Building. The consultation included an energy use audit to review consumption history. Also, a building walk-through was performed by an energy auditor to identify potential energy savings. | October 2006 - Present | | |
| | SCDHEC performed computer Energy Use Audit | In an effort to improve energy efficiency in its own facilities, SC DHEC performed an internal computer energy use audit. The study tracked computer energy use over a number of computer use test cases. It was determined that there was significant opportunity to decrease energy use, reduce emissions and save money through better computer power management. As a result, employee education is taking place and new policy is being considered. | August 2007 | | |
| d. SC Energy Office | The SC Energy Office released an Annual Report for 2005. Four items addressed in the report include:<br>1. The SC Energy Office promotes energy efficiency in government agencies and public schools<br>2. The SC Energy Office promotes the use of renewable energies and sustainable development practices throughout the state<br>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.<br>4. Public Information – This section discusses the ways in which the SC Energy Office reaches a variety of audiences in the state. | | 2005 | | For additional information….www.state.sc.us/energy/ |

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| e. 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.<br>www.state.sc.us/energy/PDFs/AR_V_3.doc | | 2005 | | For additional information….www.state.sc.us/energy/ |
| f. 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 | | |
| g. Energy Efficiency Summit | South Carolina Summit on Energy Efficiency | The South Carolina Summit on Energy Efficiency (EE Summit) was held on April 30, 2007 in Columbia, South Carolina. | 2007 | | |
| h. Training Opportunities | Web training sponsored by EPA<br>Energy Star Challenge for local governments | Notification was provided to all EAC contacts regarding the web training opportunity. BAQ training staff are offering this training to BAQ staff as well. | July 12, 2007 | | |
| i. Local Meetings | Town Hall Meeting - Conservation on Energy | Hosted by Conoco Phillips and the University of SC. Invited panelists represented organizations active in renewable energy and energy efficiency, business and industry, the environment and conservation. John Litton with the BAQ was a panelist. | June 27, 2007 | | |
| j. S.C. Hydrogen Infrastructure Development Act | The act to establish a $15 million fund to promote the development of a hydrogen economy was passed by the South Carolina Legislature. | While funding for the Hydrogen Infrastructure Development Act was not included in the state budget, legislators did include other critical funds. Through the University of South Carolina budget, EngenuitySC will get $100,000 to help with preparations for the National Hydrogen Association meeting to be held in Columbia in the spring of 2009. A National Hydrogen Association forum, "Hydrogen Uses in the Military," was held in Columbia this October. USC also got $1 million for continued funding for hydrogen and fuel research. The S.C. Hydrogen and Fuel Cell Alliance got $367,640 in recurring funding. The Hydrogen Infrastructure Development Act is recognition by the Legislature that nurturing a hydrogen and fuel cell cluster in South Carolina can have tremendous economic impact. | July 2007 | | |

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| k. Bi-Lo to promote green grocery bags - | Bi-Lo is piloting its green bag effort in about 80 of its more than 220 stores here and in Georgia and Tennessee. | The Super Bi-Lo at the Village at Sandhill (Richland County) is participating in the pilot. Bi-Lo sells two versions of the green bags: a woven recycled plastic for 99 cents and a canvas one, priced at $2.99. Store management at the Columbia Super Bi-Lo said each time shoppers use any reusable bag, they receive a 5-cent per bag credit when they check out each shopping trip. It doesn't seem like much at first - but after 20 uses, a woven plastic bag pays for itself. | August 2007 | | |
| l. Santee Cooper efforts | Santee Cooper announced they will quadruple to 40 percent by 2020 the amount of electricity made from non-greenhouse gas sources and created a new department to oversee the effort. | The state-owned utility serves most of Horry and Georgetown counties either directly or indirectly, with about 2 million residents statewide receiving power from it. The company also began purchasing excess power from customers who make electricity with solar panels and other generators. | October 2007 | | |
| m. Aiken Electric Cooperative and Santee Cooper announce Green Power Solar Schools program<br>New Ellenton Middle School selected | Aiken Electric Cooperative and Santee Cooper announced the formation of the Green Power Solar Schools program in the cooperative territory, and that New Ellenton Middle School has been selected as the Green Power Solar Schools program participant.<br><br>The initiative is designed to encourage interest in the environment and demonstrate the feasibility and limitations of renewable power generation. Each school will receive a 2 kilowatt solar power system, which will provide a teaching, research and hands-on demonstration opportunity for students. A focus of the project is the use of a new renewable energy curriculum endorsed by the South Carolina Department of Education.<br><br>The program continues the Electric Cooperatives of South Carolina's and Santee Cooper's efforts to promote renewable energy, and fulfill Santee Cooper's commitment to reinvest Green Power funds back into renewable resources across South Carolina. | Four additional schools, served by Palmetto Electric Cooperative, Berkeley Electric Cooperative, Blue Ridge Electric Cooperative and Laurens Electric Cooperative will also begin the solar schools program the next calendar year. | August 1, 2007 | All Pollutants* | |

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| n. Want Discounts on Energy Efficient Light Bulbs? | Progress Energy is offering discounts on compact fluorescent light bulbs at 11 Home Depot stores in North and South Carolina. The energy efficient bulbs will be available with the 1 dollar discount from October first to December 30th. The companies say they plan to sell up to 200,000 of the 40, 60 and 100-watt bulbs. Progress Energy is trying to guage consumer acceptance and awareness of the flourescent bulbs. If the program is successful at the North and South Carolina stores, it could expand.<br>The North Carolina Utilities Commission approved the program this week. It will cost about $350,000 | This information was provided to all EAC contacts requesting they forward/share the information to all stakeholders. | September 20, 2007 | | |
| o. Palmetto Clean Energy | SCANA Corp., Duke Energy Corp. and Progress Energy Inc. will start selling "green power" to their South Carolina customers early next year through a nonprofit group established by the state. | The three utilities will market the renewable energy to the 1.3 million homes and businesses that they serve in the state, while the newly formed organization, dubbed Palmetto Clean Energy, or PaCE, will buy the power from small Southeastern companies that generate electricity with wind turbines, solar panels and landfill gas. | September 2007 | | |
| p. Waste Management - Landfill Gas to Energy | Waste Management, Inc. announced a major national initiative to expand the number of landfill gas to energy (LFGTE) facilities. The program will result in the creation of an additional 60 renewable energy facilities across the country -- including the potential of two additional facilities in South Carolina -- over the next five years. | | September 2007 | | Waste Management currently operates LFTGE facilities at Elgin and Wellford. The two LFGTE plants generate nearly 16 MW of electricity -- enough to power 15,000 homes per year. The company also has two other landfills in St. George and Ridgeland, which could host a LFGTE facility. As part of the national initiative, WM will generate more than 700 megawatts of clean renewable energy -- enough to power 700,000 homes or replace over eight million barrels of oil per year. |
| q. South Carolina Electric Cooperatives Invest in Conservation and Renewable Energy | South Carolina's 20 electric cooperatives plan to invest up to $10 million per year towards renewable energy and energy efficiency measures. | The investment includes a three-pronged approach to improving the environment and saving energy. The following three measures represent the beginning of this process.<br>-Encouraging homegrown renewable energy (a pilot program for net metering.)<br>-Producing efficiencies to save energy and money (a program to place energy efficient compact fluorescent lights (CFLs) in the home of every cooperative member in the state, approximately seven million bulbs within 10 years).<br>-Investing resources in clean energy research (a partnership with the University of South Carolina to develop technology that reduces carbon dioxide and other emissions from coal-fired power plants). | October 2007 | | |

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| r. Alternative Energy Tax Credits | South Carolina began offering a number of new tax credits for people and businesses investing in alternative energy. | A state tax credit that took effect in 2007 covers 25 percent of the cost of solar equipment for hot water, heating, cooling, or generating electricity, as an income tax credit worth up to $3,500 or half an individual's tax liability. The credit can be carried over for up to 10 years. For new homes, according to the U.S. Department of Energy, solar water heating systems can save money immediately, when the monthly energy savings are compared to the amount a system adds to the cost of a 30-year mortgage. | November 2007 | | |
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| **14. School Buses** | | | | | |
| 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.<br><br>The funding allowed for 105 installations that have been completed to date. | 2006<br><br>October 2007 | | |
| 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 | | |
| c. Clean School Bus USA Grant 2006 | The Department of Education has been awarded a Clean School Bus USA Grant for $499,099 to retrofit some buses in South Carolina with diesel oxidation catalysts and crankcase filters, replace some older buses and conduct a biodiesel pilot and an idle-reduction device pilot. State education superintendent Inez Tenenbaum signed an order on June 20, 2006 to buy 630 new school buses with roughly $36 million appropriated by the Legislature. These buses should be on South Carolina roads by the end of the year. These new buses will replace vehicles from 1984 and 1985 which are not fuel efficient and produce higher levels of polluted emissions than more modern vehicles. The benefits from these funding sources will be distributed throughout the state. | | June 2006 | | |
| d. State Owned School Buses | Legislation | A school bus replacement law June 2007 requires the state to provide funding to replace one fifteenth of the school bus fleet each year. The law also requires the state to use biodiesel in the buses. | June 2007 | | |

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| e. South Carolina Department of Education - School Bus Initiative | Two plug-in hybrid electric buses with a 2007 emission compliant diesel engine fueled with ultra-low sulfur diesel (soon to be ultra low sulfur 20% biodiesel) were purchased. One bus will be placed in Richland County and another in York County | Draft press release September 27, 2007<br><br>Press conference held on October 11, 2007 | October 11, 2007<br>Dated to be placed into service | All Pollutants* | |
| f. Clean School Bus USA Grant 2007 | The South Carolina Department of Education submitted a grant proposal for the 2007 U.S. Environmental Protection Agency Clean School Bus USA grant, in conjunction with the Southeast Diesel Collaborative. Initial review indicates with some minor modifications, the proposal will be accepted and the Department of Education will be awarded the grant. | The grant will provide 500 school buses with crankcase ventilation filters and anti-idling hardwear. The grant will also allow the Department of Education to create a computer program that will use GPS data to identify areas of excessive idling. The Department of Education has also requested additional funding for anti-idling awareness education. | 2007 | | |
| g. Ridership Grant Proposal 2007 | Staff in the BAQ's DAPDO (SCDHEC) submitted a proposal to EPA's Mobile Source Outreach Competition Grant for 2007. | This proposal is intended to work with an elementary and middle school in local areas (up to 3 areas) of the State to determine mechanisms to increase the utilization of school buses and carpooling to and from school by students. This project will include working with parents, students, faculty and school administration to encourage better use of school buses for transportation. | Proposal submitted | | |
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| **15. Southeast Diesel Collaborative (SEDC)** | | | | | |
| Southeast Diesel Collaborative (SEDC) | Partnership between US EPA Region 4, State and local air quality programs, and other public and private entities intended to promote opportunities to reduce diesel emissions. | SCDHEC - BAQ signed a MOU in support of the Southeast Diesel Collaborative (April 26, 2006)<br><br>*Created partnerships and disseminated information for reductions of diesel emissions.<br>*South Carolina stakeholders meeting in August 2006 in Columbia.<br>*Emerging fuels conference was held in Atlanta in December 2006. | 2006 | | |

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| | | March 2007 - workshop for identifying available funding sources to implement clean diesel programs. Two DHEC employees attended the workshop and received the training materials and contacts to pursue funding for diesel emission reduction programs.<br><br>June 2007 - second annual partners meeting in Atlanta, Georgia. The meeting provided an opportunity for the eight Region 4 state environmental commissioners, including South Carolina's, to establish a vision for future diesel emission reduction projects.<br><br>December 2007 - BAQ staff continue to participate in routine conference calls with the SEDC partners. | 2007 | | |
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| **16. Climate Change Discussions** | | | | | |
| Climate, Energy and Commerce Advisory Committee (CECAC) | Governor Sanford issued an Executive Order creating the CECAC. | Department staff compiled background materials to include studies, current actions, and a draft list of potential participants that will comprise five technical work groups and the decision-making body, the CECAC. The process will follow the Center for Climate Strategies-facilitated study and adoption of carbon reduction policies. It is anticipated to take a year or more to complete. The first CECAC meeting took place May 3, 2007.<br><br>Staff is working with stakeholders across the state in shaping GHG-reduction policies as part of the Governor's Climate Environmetnt & Commerce Advisory Committee. | February 16, 2007 | | |

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| | The Climate Registry (TCR) | South Carolina joined with 31 other states as a founding member of The Climate Registry (TCR). BAQ staff is setting out a strategy for recruiting participation by regulated and non-regulated entities. On August 3, 2007, BAQ will give a presentation on TCR to the state Chamber of Commerce Technical Committee.<br><br>BAQ is collecting data from the City of Columbia to determine base year emissions inventory. BAQ is also assisting the cities of Greenville and Rock Hill to implement their US Mayors Climate Protection Agreement.<br><br>Staff is beginning an outreach campaign to enlist regulated and non-regulated entities for participation in The Climate Registry.<br>Eight business nationally have signed Statements of Intent to join the registry as of November 15, 2007, none are in South Carolina. South Carolina has set a goal of having three businesses sign up before January 15, 2008. | 2007 | | |
| Founding member and supporter of the Climate Registry | The Climate Registry, established by states, tribes and provinces in North America as a mechanism to measure greenhouse gas (GHG) emissions consistently across industry sectors and borders. The Climate Registry encourages voluntary early actions to increase energy efficiency and decrease GHG emissions. The Climate Reigstry accountying infrastructure supports a wide variety of programs that reduce GHG emissions including voluntary, regulatory and market-based programs. | A meeting was held on October 4, 2007. Joel Levin provided an overview of the The Climate Registry. Mr. Levin is the California Climate Action Registry's Vice President for Business Development. He is responsible for educating participants from all economic sections and regions to register and certify their greenhouse gas emissions.<br><br>Representatives from state and local governments, including Lexington County, as well as business and industry attended the discussion. | October 4, 2007 | | |
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| **17. Open Burning Activities** | | | | | |

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| Established workgroup | 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) to develop a tool for staff, especially regional inspectors, to more clearly outline the regulations the two Bureaus have related to Open Burning regulations. | On April, 26, 2007, the Waste Disposal Matrix Document tool described above was approved for use internally with staff in the BLWM and BAQ. A meeting of the inter-bureau workgroup is scheduled for June 28, 2007 to discuss the development of a training plan to use this tool with the appropriate staff.<br><br>On September 28, 2007, the managers of the education and outreach sections for the BLWM and for the BAQ, met with staff from the Agency Media Services to discuss the development of a statewide Open Burning information campaign. This campaign is tentatively set to begin in the Spring of 2008 and will include TV and radio PSAs, and print materials targeting various key audiences with messages on options to open burning materials. | 2005<br><br>on-going activities | | |
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| **18. Railroads - Diesel Emissions** | | | | | |
| Education/Outreach<br>Conferences | Reduction in Diesel Emissions from Railroads | Railroads – Diesel emissions - The Department has initiated programs to address diesel emissions from railroads in South Carolina. During October and November 2007, the Department participated in a national and a regional conference to seek reductions in diesel emissions. The Department is working with CSX Railroad to implement some of those strategies in Charleston. | October and<br>November 2007 | | |
| SC Department of Commerce<br>Division of Public Railways | Ultra Low Sulfur Diesel (ULSD) | In November 2007, the Division of Public Railways (South Carolina Department of Commerce) announced that all locomotives will be using ultra low sulfur diesel (ULSD) fuel five years earlier than the EPA mandate (2012). The Division of Public Railways uses an estimated 26,000 gallons of diesel fuel annually. | November 2007 | | |
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| **19. State Ports Authority** | | | | | |

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| South Carolina State Ports Authority | Ultra Low Sulfur Diesel (ULSD) | In March 2007, the SPA signed a memorandum of agreement with the Department to partner in reducing port-related diesel emissions.<br><br>The Department is working with the State Ports Authority (SPA) to reduce diesel emissions. In September 2007, the SPA switched its off-road diesel equipment to ULSD three years prior to the EPA mandate (2010). | March 2007<br><br>'Fall 2007 | | |
| | | | | | |
| **20. Mass Transit** | | | | | |
| "Carolina Swamp Rabbit Tram Trail." | The plan is to convert an abandoned 10-mile-long rail line, from Greenville to Travelers Rest, into a multi-use trail for recreational and motorized transit. | A 7-foot-wide microbus would travel a 10-foot wide asphalt strip constructed over the railroad bed, carrying passengers between downtown Greenville and downtown Travelers Rest. The plan is an intermediate step in response to U.S. Department of Transportation statistics showing that Georgia and South Carolina lead all states in the number of rural residents dependent on passenger rail as their only public transportation. The long-term goal of the plan is to preserve the integrity of the rail corridor for eventual conversion to a commuter rail line, while attempting to have the area's transportation infrastructure keep pace with expanding growth. | December 2007 | | |
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| **21. Alternative Fuels** | | | | | |
| South Carolina Biodiesel Fuel Quality Symposium | The South Carolina Biodiesel Fuel Quality Symposium took an in-depth look at the latest regulatory, environmental, and technical developments impacting the fastest-growing renewable fuel industry in South Carolina. | The event's technical program provided participants with a basic understanding of how biodiesel is produced, fuel management, fuel quality, component compatibility, regulatory issues, and incentives. Speakers include recognized experts in their respective fields including industry professionals, regulators, local and state officials, fleet managers, retailers, distributors, and producers. | September 19, 2007 | | |

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| Hydrogen-fueled truck | Washington Savannah River Co. gave $175,000 to the Center for Hydrogen Research in Aiken for a hydrogen-fueled truck | The hydrogen-fueled truck will demonstrate the viability of the alternative fuel. The center also announced plans for a refueling station to provide hydrogen for the truck and other hydrogen-powered vehicles. The Hydrogen Internal Combustion Engine vehicle, or HICE, is based on a full-size 2007 Chevrolet Silverado 1500 pickup. The truck will be powered solely by hydrogen. Options for the refueling location include either the Savannah River Research Campus or at a site along I-20. | October 2007 | | |
| | | | | | |