Attachment 1

Appalachian Area

December 2006 EAC Progress Reports

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PROMOTE PROTECT PROSPER

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

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

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

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

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

Comments:

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

December 2006 - Early Action Compact Progress Report
Anderson County

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

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

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

Anderson, Greenville, and Spartanburg Resolution

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

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

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

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

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

Air Quality Awareness and Improvement Policy

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

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

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

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

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

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

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

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

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

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

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

News release, PSA, and web page awareness tools

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

Truck Stop Electrification Project

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

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

ATTACHMENT 1

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

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

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

Description of Measure

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

June 2004:

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed June 25, 2004.

2. Designate and Ozone Action Coordinator Priority A

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

March 2003:

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

June 2006:

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

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

Implementation Date
Completed March 2003 and continuing.

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

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

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

December 2004:

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

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

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

June 2006:

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

December 2006

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

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

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

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

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

Description of Measure

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

June 2005:

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

December 2005:

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

June 2006:

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

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

December 2006

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Implementation began in 2005 and was completed in 2006.

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

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

December 2004:

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

June 2005:

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

June 2006:

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

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

December 2005:

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

June 2006:

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

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

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

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

Description of Measure

WALKING/BIKING

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

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

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

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

PARK and RIDE

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

CARPOOLING

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

MASS TRANSIT

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

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

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

June 2006:

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

December 2006

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

Estimate of Emission Reductions (if available)

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

Implementation Date
Completed prior to 2005 and continuing.

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

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

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

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

June 2006:

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

December 2006

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

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

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

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

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

December 2003:

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

Estimate of Emission Reductions (if available)
Not available.

Implementation Date

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

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

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

June 2004:

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

December 2004:

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

June 2006:

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

Estimate of Emission Reductions (if available)
Not available.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

December 2004:

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

June 2006:

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

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

Implementation Date
Completed in 2004.

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

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

December 2005:

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

June 2006:

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

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

Implementation Date

Completed in 2003 and continuing.

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

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

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

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

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

Estimate of Emission Reductions (if available)

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

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

17. Establish an active public awareness campaign. Priority A

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

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

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

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

Estimate of Emission Reductions (if available)

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

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

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

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

June 2004:

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

December 2005:

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

June 2006:

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

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

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

19. Use of alternate fuels. Priority B

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

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

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

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

December 2003:

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

December 2004:

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

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

Implementation Date
Completed in 2004.

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

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

December 2005:

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

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

Implementation Date
Completed in 2005.

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

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

June 2006:

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

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

Implementation Date
Completed in 2003.

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

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

June 2006:

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

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

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

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

Implementation Date
Completed in 2006 and continuing.

Additional Information

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

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

Comments:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Comments:

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

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

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

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

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

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

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

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

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

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

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

Anderson, Greenville, and Spartanburg Resolution

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

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

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

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

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

Air Quality Awareness and Improvement Policy for County Government

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

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

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

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

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

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

December 2006:

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

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

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

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

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

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

ATTACHMENT 1

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

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

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

Description of Measure

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

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

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

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

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

- November 2004 - Greenville County submitted letter supporting SIP.

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

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

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

Estimate of Emission Reductions (if available)

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

Implementation Date
Completed June 25, 2004.

2. Designate an Ozone Action Coordinator Priority A

Description of Measure

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

March 2003:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in March 2003.

Additional Information

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

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

Description of Measure

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

December 2004:

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

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

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Implementation began in 2004 and was completed in 2006.

Additional Information

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

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

Description of Measure

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

June 2005:

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

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

December 2005:

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

June 2006:

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

December 2006:

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

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

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

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

Implementation Date
Completed in 2005. Supplementary efforts are continuing.

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

5. Use of hybrid vehicles. Priority A

Description of Measure

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

December 2004:

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

June 2005:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

Additional Information

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

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

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

Description of Measure

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

December 2005:

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

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

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

Implementation Date

Completed in 2006.

Additional Information

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

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

Description of Measure

WALKING/BIKING:

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

PARK and RIDE:

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

CARPOOLING:

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

MASS TRANSIT:

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

December 2004:

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

June 2005:

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

December 2005:

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

June 2006:

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

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

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

December 2006:

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

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

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

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

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

Implementation Date
Completed 2006.

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

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

Description of Measure

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

December 2005:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

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

Description of Measure

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

December 2004:

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

June 2005:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

8. Review and update air emission inventory for the Upstate

Description of Measure

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

Implementation Date

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

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

Description of Measure

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

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

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

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

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

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

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

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

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

Description of Measure

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

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

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

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

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

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

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

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

Implementation Date

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

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

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

Description of Measure

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

2004:

- SCDHEC adopted regulations in mid 2004 restricting open burning.

June 2005:

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

December 2005:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2004 and further efforts conducted in 2006.

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

Description of Measure

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

December 2004:

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

December 2005:

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed June 1, 2006.

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

Description of Measure

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

June 2005:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

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

Description of Measure

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

2003:

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

December 2004:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

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

Description of Measure

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

December 2004:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

June 2006 but progress and improvements will continue.

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

Description of Measure

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

June 2004:

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

June 2005:

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

December 2005:

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

June 2006:

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

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

December 2006:

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

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

17. Establish an active public awareness campaign. Priority A

Description of Measure

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

June 2004:

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

December 2004:

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

June 2005:

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

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

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

December 2005:

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

June 2006:

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

December 2006:

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

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

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

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

Additional Information

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

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

Description of Measure

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

June 2004:

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

December 2005:

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

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

June/December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

19. Use of alternate fuels. Priority B

Description of Measure

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

December 2004:

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

June 2005:

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

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

December 2005:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2005 and continuing.

Additional Information

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

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

Description of Measure

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

December 2003:

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

December 2004:

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

December 2005: no further actions are planned.

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2004.

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

Description of Measure

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

December 2005:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2005.

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

Description of Measure

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

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

December 2005:

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

June 2006:

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

December 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Implementation began in 2005 and is continuing.

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

Description of Measure

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

June 2005:

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

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2006.

Additional Information

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

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

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

Comments:

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

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

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

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

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

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

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

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

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

Comments:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Comments:

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

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

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

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

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

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

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

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

December 2006 - Early Action Compact Progress Report
Spartanburg County

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

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

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

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

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

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

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

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

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

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

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

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

ATTACHMENT 1

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

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

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

Description of Measure

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

December 2004:
EAC SIP did include Appendix 16 -

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

June 2006:

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

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

Implementation Date
Completed June 25, 2004.

2. Designate an Ozone Action Coordinator — Priority A

Description of Measure

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

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

Implementation Date
Completed March 2003 and continuing.

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

Description of Measure

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

December 2004:

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

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

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

December 2005:

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

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

Implementation Date
Completed in 2004 and continuing.

Additional Information

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

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

Description of Measure

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

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

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

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

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

Implementation Date
Initiated in 2005 and continuing.

Measure under Consideration

5. Use of hybrid vehicles. Priority A

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

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

June 2005:

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2005 and continuing.

Measure under Consideration

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

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

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

December 2005:

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

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2006 and continuing.

Measure under Consideration

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

Description of Measure

WALKING/BIKING:

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

PARK and RIDE:

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

CARPOOLING:

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

MASS TRANSIT:

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

December 2004:

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

December 2005:

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

June 2006:

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

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

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

June 2006:

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

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

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

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

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

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

December 2005:

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

June 2006:

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

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

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

Measure under Consideration

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

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

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

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

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

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

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

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

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

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

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

Measure under Consideration

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

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

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

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

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

Measure under Consideration

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

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

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

December 2005:

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Implementation Date
Completed in 2005.

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

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

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

2003:

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

December 2005:

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

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

June 2006:

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

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

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

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

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

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

June 2004:

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

December 2005:

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

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

Implementation Date
Completed in 2004 and continuing.

Measure under Consideration

17. Establish an active public awareness campaign. Priority A

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

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

December 2004:

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

June 2005:

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

June 2006:

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

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

December 2006:

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

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

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

Implementation Date
Completed in 2004 and ongoing.

Measure under Consideration

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

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

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

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

June 2004:

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

December 2005:

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

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2005.

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

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

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

December 2005:

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

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

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

June 2006:

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

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

Implementation Date
Completed in 2005 and continuing.

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

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

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

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

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

Implementation Date
Completed in 2004.

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

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

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

December 2005:

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

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

Implementation Date
Completed in 2005.

Measure under Consideration

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

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

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

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2005 and continuing.

Measure under Consideration

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

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

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

June 2006:

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

Estimate of Emission Reductions (if available)

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

Implementation Date

Completed in 2006 and continuing.

Additional Information

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