

**Early Action Plan
for
Charleston County
List of Emission Reduction Strategies**

According to the latest 8-hour ozone monitoring data, Charleston County should remain attainment for the 8-hour ozone standard. However, in an effort to assist other areas in South Carolina and in the interest of public health and the environment, in December 2002, Charleston County agreed to participate in the 8-hour ozone early action process. Therefore, based on stakeholder consultation and taking into consideration resource and political constraints, the following emission reduction strategies will be implemented April 1, 2005

Measure under consideration	Detailed description of measure	Current assessment of emission reductions	Proposed date for implementation	Geographic area and/or local government
Appoint an Ozone Action Coordinator to alert media and public on high ozone days.	Larry Hodge, Risk Manager, will monitor DHEC website, and coordinate with Jamie Thomas, PIO, to notify county departments when local levels are elevated; and with Radio Communication Manager to alert field employees. (Note: currently DHEC does not do forecasts for the Lowcountry.) Information also will be included on County website, for public access. When DHEC alerts are available for this area, Jamie will coordinate media notifications. Ozone action alerts will be posted to the Amber Alert System, if local levels reach the warning or action stage.	Directionally sound	On-going beginning with 2003 Forecast Season	County-wide
Add Ozone Alert to Emergency Information on County website.	Public Information Office has added Ozone Danger information to Emergency Information section of County web-site (www.charlestoncounty.org). Information links to DHEC Spare the Air Ozone Forecast and to EPA informational sites. Ozone reduction measures and information are included.	Directionally sound	2003 Forecast Season - completed	County-wide
Increase opportunity for residents and businesses to conduct electronic transactions with the	The county website allows residents to conduct a great deal of County business on-line, thus eliminating vehicle trips to County office locations. E-business opportunities are being expanded constantly.	Directionally sound	On-going	County-wide

county, eliminating drive time.				
Promulgate list of strategies to local government entities.	The County will share its strategies with local government entities within the county to promote regional efforts and encourage similar actions at the municipal level	Directionally sound	FY 2004	County-wide
Develop and implement an ozone public education plan.	Charleston County, through its Public Information Office and Safety and Risk Management Office, will develop a comprehensive public information campaign related to health impacts of ground-level ozone, and strategies to reduce ozone producing emissions. This will address best driving practices, fueling, vehicle maintenance, lawn mowing, consumer education and other measures. If funding or private partnerships are identified, programs to test gas caps and provide replacements, or others, will be implemented. Information will be disseminated through newsletters, website, public service announcements and public events.	Directionally sound	On-going beginning FY2004	County-wide.
Expand use of hybrid cars.	Charleston County currently has one hybrid car in its fleet, a Honda Civic used by the Solicitor (1.3-liter 4-cylinder gasoline engine with a 10-kilowatt electric motor). Fuel efficiency is estimated at 46/51 city/highway miles per gallon. As funding allows, additional hybrid vehicles will be added to the fleet where use and mileage history provide a suitable fit. It is recognized such replacement would impact four cost centers: replacement, training, shop equipment and operating (parts) costs. Implementation will be dependent on commitment to and availability of funding.	Directionally sound	FY2005 and on-going	County government
Implement criteria to evaluate departmental vehicle requests.	Charleston County has developed criteria to evaluate vehicle requests, which include consideration of miles driven, and industry standards based on user requirements. The goal is to 'right-size' the county fleet, considering both the number of vehicles and the size and/or type of vehicle.	Directionally sound	FY2005 and on-going	County government
Include vehicle fuel economy and emission ratings in procurement	Fuel efficiency and emission ratings are included in specifications for procurement of vehicles.	Directionally sound	On-going	County government

specifications.				
Purchase vehicles and light trucks to meet new EPA standards on emissions.	The EPA has announced more protective tailpipe emission standards for all passenger vehicles, including sport utility vehicles, vans and pick-up trucks. The agency also has developed lower standards for sulfur in gasoline which will require passenger vehicles to be significantly cleaner. Both take effect beginning in 2004. Charleston County will comply with the new standards as they are phased in and as we replace vehicles.	Directionally sound	Phased in over five-year period	County government
Purchase replacement diesel heavy-duty highway trucks, as needed, which comply with most recent EPA standards for PM and NOx emissions, and which utilize low sulfur diesel fuel.	The EPA has developed heavy-duty engine and vehicle emission standards and highway diesel fuel sulfur control requirements which will take effect with the vehicle model year 2007. As funding is available, and as replacements are needed, Charleston County will comply with the EPA requirements	Directionally sound	Phased in as EPA requirements become effective and vehicles to meet them are available.	County government
To meet EPA requirements, convert to use of low-sulfur gasoline.	It is recognized that sulfur provides lubricity for engine operation and that low-sulfur gasolines currently cannot be used effectively fleet-wide. As low-sulfur fuel is available locally, and we acquire vehicles with the technology to utilize it, we will add or convert tanks and pumps to supply it to our fleet. Cost impacts will be factored in to any implementation plan.	Directionally sound	Phased in over five year period	County government
Consider pilot/test of bio-diesel fuel for limited vehicle use.	In conjunction with area fleets and diesel users (ex.: CARTA, school district), County fleet staff may test a B20 bio-diesel fuel in designated vehicles. A tank for joint use would be established in the Azalea Road area, filled by a local supplier with a soy-diesel mix. Cost subsidies are being investigated to promote this project. It is recognized that bio-diesel fuels increase lubricity and engine efficiency; and also lower particulate matter although increasing NOx emissions.	Directionally sound	FY 05 or later; timeline dependent on cost subsidies	Regional area
Develop Best Practices for driving	Working with involved departments, staff will formulate Best Operational Practices for driving and fueling County	Directionally sound	FY2004	County government

and fleet fueling.	fleet. While these may be related to ozone reduction, they would be applicable throughout the year. They would encourage fueling early or late, limiting idling, frequent tire pressure checks, driving at the speed limit, no topping off gas tank, etc. Department heads would incorporate BOPs into operating procedures to the extent feasible.			
Addressing public transit options, pedestrian and bike lanes and other planning strategies in comprehensive land-use planning.	Charleston County has adopted a comprehensive land use plan, which is updated every five years. As appropriate, this plan encourages the development of mass transit opportunities, trip reduction, alternative transportation methods and mixed-use communities.	Directionally sound	Ongoing	County-wide
Modify lawn maintenance practices to discourage use of gas-powered engines during high ozone hours; and develop department guidelines to replace two-cycle small engines with four-cycle engine small equipment.	Charleston County will take measures to modify lawn maintenance practices and utilization of small engine equipment so as to limit ozone-producing emissions. Most County lawn maintenance is under private contract. The RFP will be amended to include clean air practices during the next bidding cycle. Many departments maintain small engine equipment for specific purposes. Two-cycle equipment will be replaced with four-cycle when practical.	Directionally sound	Phased in over five years	County-wide
Expand in-house testing for gas and pollutant buildups in garages and other facilities; post signs in parking garages to discourage idling.	Charleston County Safety and Risk Management currently tests facilities for air quality. Testing will continue as appropriate. It is to be noted that as a result of such testing, diesel forklifts have been replaced by propane powered forklifts in our recycling center and other locations. Signs will be posted in County owned parking garages as an awareness and education measure, to ask users to limit idling. Fans are being installed in parking garages to improve air circulation.	Directionally sound	FY2004 and ongoing	County facilities
Employ building energy conservation measures.	With the use of technology, Charleston County's Facilities Management team currently employs energy conservation measures at its high use facilities (the Public Services Building, Judicial Center, County Office Building,	Directionally sound	FY2004 and ongoing	County facilities

	<p>Charleston Center, Main Library, and the Historic Courthouse) by scheduling down time of utilities when unoccupied or reducing utility services when not required. This program will be expanded to include all Regional Libraries and any new large facilities coming on line. We are currently installing an HVAC control system in the Otranto Regional Library. Also the new Johns Island Regional Library will have this capability when construction is completed. Where ever possible, new energy efficient light bulbs (T-8s and low pressure sodium) are being used. Energy audits will be conducted for our large facilities either in-house or by contract. We will use premium efficient components when replacement parts are required for condensers, compressors, hot water heaters, motors, etc.</p>			
<p>Study and implement flex hours.</p>	<p>Charleston County will investigate opportunities to expand the practice of flexible hours, which is currently utilized by some departments. This would reduce traffic congestion and vehicle emissions created by all employees arriving and leaving at the same time.</p>	<p>Directionally sound</p>	<p>On-going, beginning FY2004</p>	<p>Departments as appropriate</p>
<p>Encourage walking, biking, car-pooling</p>	<p>Bike racks will be installed where biking is safe and space allows around county buildings. As part of the ozone education program, employees will be encouraged to walk or bike to work, and/or to look for safe opportunities to ride-share or car-pool.</p>	<p>Directionally sound</p>	<p>FY 2005 and on-going with education program</p>	<p>County employees and facilities.</p>

<p>Formation of regional stakeholders group.</p>	<p>Charleston County is meeting with BCD Council of Governments, Berkeley and Dorchester Counties, urban and rural transportation authorities, Clemson Extension, MUSC, school districts, area industry, environmental groups and others. Ongoing discussions center on education, transportation, intermodal/alternative transportation strategies, advanced technology vehicles, alternative fuels, car-pooling and use of public transit, development of park and ride facilities to complement public transit routes, etc. This group continues to evolve and grow. We have met on the following dates: July 24, August 14, September 18 and November 13. in 2003; and February 26 in 2004.</p>	<p>Directionally sound</p>	<p>On-going, beginning FY2004</p>	<p>Tri-County area (Berkeley, Charleston, Dorchester)</p>
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