

# AIR QUALITY ACTION PLAN

## CSRA Air Quality Alliance

The CSRA Air Quality Alliance was created as a proactive response to the potential threat of non-attainment within the Central Savannah River Area. The goal of the CSRA Air Quality Alliance is to coordinate and implement initiatives in the area that reduce air pollutants and maintain air quality within federal standards.

The CSRA Air Quality Alliance grew out of a series of meetings, the first of which was held in February 2007.

stakeholders from changes to air quality



These meetings brought together a variety of throughout the region to discuss pending standards for fine particulate matter and

identify steps that local stakeholders could take to improve air quality.

The CSRA Air Quality Alliance area includes Aiken, Edgefield, Columbia, Richmond, Burke and McDuffie counties. Involvement in the CSRA Air Quality Alliance is open to stakeholders from throughout the region. The current membership includes representatives from the following:

- Local businesses (large and small)
- Local governments
- Local boards of education
- Health care providers
- Local development authorities
- Local chambers of commerce
- State legislators
- Universities and technical colleges
- Utility companies
- Local and regional planning agencies
- Savannah River Site
- Fort Gordon
- State environmental protection agencies
- State transportation agencies
- State forestry commissions
- U.S. Environmental Protection Agency



The CSRA Air Quality Alliance has an organizational structure that is comprised of three technical groups - the Education and Outreach group, the Heavy-Duty Diesel group, and the Regulatory and Policy group. By focusing on these three areas, the CSRA Air Quality Alliance is working to improve air quality in the region.

### **Education and Outreach Initiatives**

Through the CSRA Air Quality Alliance, there have been numerous attempts to educate the public, and other individuals and entities, on ways to improve air quality. These initiatives include special meetings, website outreach, participation in special events, school presentations, newsletter articles, and other forums.

To date, the CSRA Air Quality Alliance has held meetings at least three times a year to discuss the status of air quality conditions, standards and federal and state regulatory actions. Most importantly, the meetings provide a forum for showcasing existing air quality initiatives in the region and reviewing potential new initiatives. These meetings also allow participants to network and exchange ideas on other ways to improve air quality in the region.

In addition to periodic meetings, the CSRA Air Quality Alliance maintains a website that is linked to the City of Augusta's website. This website provides useful information on how individuals and businesses can help reduce air pollution. It also provides links to information

(e.g. agendas, PowerPoint presentations) pertaining to Alliance meetings. Additionally, it highlights special events in the area, and provides links to other air quality websites.

Special events and school presentations also provide an excellent opportunity for the CSRA Air Quality Alliance to disseminate information to the general public and school age children on air quality issues

to Care” fair is one such

Augusta Commons in

are on-going to teach school



and protective measures. The “Time

event that is held every year at the

downtown Augusta. Similarly, efforts

age children about air quality through

special school presentations. By connecting with children, the information is often passed to the parents resulting in a secondary impact of the presentations. Air quality information is also made available at other public meetings.

Through its newsletter and special committee meetings, the activities of the Augusta Regional Transportation Study (ARTS) also provide another opportunity for the CSRA Clean Air Alliance to educate the public and area stakeholders. Special air quality articles are included in the quarterly ARTS newsletter and air quality issues are discussed at the ARTS Citizen Advisory and Policy Committee meetings that are part of the on-going transportation planning for the area. Both provide a forum to update citizens and regional partners on air quality initiatives and issues.

Another example of air quality education and outreach includes the annual news release sent out by the Georgia Forestry Commission to remind the public of the open burning ban that stays in affect from May 1 to September 30. The annual open burn restriction affects 54 counties in Georgia, including Richmond and Columbia counties. These restrictions are implemented to help alleviate high summer ozone levels. There is also a locally based effort to coordinate necessary prescribed burns through a prescribed burn committee that has been formed with partners from Richmond County, SCDHEC, Georgia EPD, Fort Gordon, SRS and others. This

committee will help ensure that prescribed burns are conducted during those times that are less hazardous to public health, and that the public is notified and properly educated about the necessity of prescribed burns.

### **Heavy-Duty Diesel Initiatives**

Other air quality initiatives that target heavy-duty diesel applications include anti-idling programs and policies, diesel retrofits and emission control devices, fleet replacements, tax incentives and the use of alternative fuels.

One local program that targets the reduction of idling in school zones is the Breathe Better (B2) program. This program educates and encourages anti-idling practices by school bus drivers and the parents that transport children to South Carolina schools. Currently, Redcliffe Elementary in Aiken County is participating in the program. Additionally, according to Myra Reece of SCDHEC, several other schools in Aiken County have also expressed interest.



Both formal and informal anti-idling policies as well as other initiatives have been implemented within local school districts in an effort to reduce air pollution on school grounds. These include a formal no-idling policy adopted for all Richmond County school buses. Additionally, Richmond County, through Diesel Emission Reduction Act (DERA) grant funding, is in the process of updating its school bus fleet with cleaner burning diesel engines. The Burke County school district has also applied for DERA grant funding. Although they have not adopted a formal policy, the Aiken County school district has established an informal no-idling policy for its school buses. Lastly, Columbia County has also adopted a formal no-idling policy and has installed GPS units on all the route buses to monitor speed, idling, delays, and early arrivals

through reports and actual real-time monitoring. GPS units have also been installed on Richmond County schools buses and will be installed on Aiken County school buses in the near future.

The education of local trucking fleets is another heavy-duty diesel initiative occurring in the area. The Clean Air Campaign of Georgia is working to educate local companies about the cost and air quality benefits of eliminating unnecessary idling. Their goal is to work with local companies to establish no-idle work policies and to provide signage designating company grounds as idle-free zones.



Other diesel reduction projects in the area include the Savannah River Site, which was awarded a grant to retrofit nine of its emergency vehicles with diesel oxidation catalyts. This grant was provided by the South Carolina Diesel Emission Reduction Act (DERA) program with funding from the American Recovery and Reinvestment Act (ARRA). The SC Forestry Commission was also awarded a grant to retrofit some of their bulldozers in the Aiken area. Additionally, the Department of Education was awarded a regional grant under the ARRA DERA program that will place a 2010 hybrid school bus in the Aiken area along with some idle reduction devices on school buses.

Access to tax incentives and available grants also help to encourage the reduction of diesel emissions in the local area. South Carolina offers tax incentives for public and private production and use of bio-diesel. Additionally, there are over 100 publicly accessible locations in South Carolina that offer E85 or Biodiesel. Eight of these locations are in Aiken County. South Carolina has also been recently awarded Clean Cities ARRA grant money specifically designated for alternative fuel vehicles and refueling infrastructure. Augusta Public Transit is programming federal funds to purchase a hybrid bus.

## Emission Reduction Initiatives

In addition to programs that focus on heavy-duty diesel emission reduction, there are also a variety of other emission reduction initiatives in the CSRA. These include the use of alternative fuels, such as solar, bio-mass and hydrogen, as well as other programs. South Carolina, for example, has increased its Solar Energy System tax credit and Georgia Power offers consumers the opportunity to purchase blocks of electricity produced by solar energy through its “Green Energy” program. Additionally, construction has begun on a new biomass steam plant at the Savannah River Site that will replace an aging coal-fired facility. Estimates indicate that the project will save \$34 million a year in energy, operation and maintenance costs. It will reduce air emissions, including 100,000 tons per year of greenhouse gas. Additionally, Bridgestone Firestone has recently purchased 43 hydrogen fuel-cell forklifts for use in their Aiken plant. Aiken County is also investing in a Center for Hydrogen research and has recently opened a hydrogen fueling station, which is the first on the East Coast.



Other programs that target emission reduction include the City of North Augusta which has implemented a lawn mower exchange program that offers a cash benefit toward the exchange of gas powered mowers for electric mowers, and the City of Augusta’s Vehicle Oversight Program. Through the Vehicle Oversight Program approximately 450 GPS units have been installed on the City’s vehicles. The first objective of to “provide management with a tool to better utilize resources”, which has a direct connection with energy the program is available savings. The GPS units can identify vehicles that idle for an excessive time. Within minutes of receiving an alert, management can take corrective action by contacting the driver. The system can also indentify those employees driving with excessive speed, which will initiate corrective action by management. The reduction of driver speed has the secondary affect of saving fuel.



The system accomplishes the second objective of the program “to provide management a tool to monitor employee productivity” which increases efficiency by producing various reports that can be used to change driver behavior or review processes for effective change. Each department has the capability of monitoring their own vehicles. This allows management the ability to observe driver patterns and determine if fuel is being wasted by unnecessary travel.

### **Regulatory Initiatives**

In addition to education and outreach and a focus on emission reduction strategies, the CSRA Clean Air Alliance, in conjunction with local governments and businesses, has also implemented regulatory initiatives that focus specifically on open and prescribed burning.



Since 2005 Richmond and Columbia County have issued a seasonal open burning ban during high ozone months. During potentially high ozone days, the Georgia Forestry Commission will also not issue prescribed burn permits in Richmond or Columbia County. Similarly, in an effort to comply with Federal Clean Air Regulations, the State of Georgia also restricts open burning in 54 counties from May 1 – September 30.

The South Carolina Forestry Commission also has Smoke Management Guidelines for Vegetative Debris Burning Operations that place restrictions on prescribed burns. General Burn limitations are based on the Smoke Management Forecast, which is determined by transport wind direction and speed, mixing height, ventilation rate, category day, surface inversion time, nighttime dispersion, and the next day’s dispersion outlook. Using this Smoke Management Forecast a Category Day number of one (1) thru five (5) will be assigned with a Smoke Management Category One (1) Day being the most restrictive. The types of vegetation that can be burned and the hours that a burn can be implemented will depend on the Category Day

assigned. In addition, a Category Day of one (1) will be assigned on any day that an Air Stagnation Advisory is issued or an Ozone Alert is orange or higher.

At the Savannah River Site, the USDA Forest Service-Savannah River adheres to the current South Carolina Forestry Commission Smoke Management Guidelines on every burn.

The USDA Forest Service - Savannah River does not burn on high ozone days or any day the South Carolina Forestry Commission and/or South Carolina Department of Health and Environmental Control restrict burning or declare a "Category "1 day. About 95% of the prescribed burning is conducted in the winter months (December through mid-April) when there is relatively low ozone potential.

Additionally, at Fort Gordon, prescribed burns are necessary to support the military mission of installation and to reduce the risk of wild fires that may be started as a result of training. They are also necessary for proper ecosystem management for endangered species. However, Fort Gordon is very concerned about smoke management from prescribed burns and takes several actions

management for every burn. policy as outlined by the US biological opinion issued to



associated with smoke They follow the prescribed burn Fish and Wildlife Service Fort Gordon on November 12,

2008. This policy requires that Fort Gordon burn the weapons firing ranges and upland pine areas on a 1 to 3 year rotation. This short return interval keeps fuel loads down and reduces the amount of pollutants generated when compared to longer burn rotations.

They also follow the Basic Smoke Management Plan of Georgia, which requires that they utilize current burn weather advice from the Georgia Forestry Commission and other sources, such as the National Weather Service, the day of a burn. They must also complete smoke management screening forms that identify smoke sensitive areas and smoke dispersion. They

must also collect fuel load estimates, and run “V” Smoke before each burn to determine plume trajectory

Ultimately, the planning and decision to burn is based on military and natural resource management requirements and weather conditions. If the weather conditions and burn plan requirements are met, they could conduct a prescribed burn any day of the year. This includes prescribed burns after the open burning ban that occurs between May 1 and September 30 of each year. However, when the Air Quality Index (AQUA) forecast for ozone exceeds 100, prescribed burning near populated areas and the cantonment is suspended. In addition, wild land fires would be suppressed and the "let burn" policy in place for some areas would be suspended. Generally, when the weather conditions are such that an ozone action day is forecast, the weather for burning would probably not meet planning criteria.

### **Transportation Related Initiatives**

The CSRA Clean Air Alliance also supports initiatives that target changing the transportation habits of the local population. One such initiative is the Clean Air Campaign, which is a Georgia program that works with businesses and others to encourage alternative forms of travel such as transit, carpooling and van pooling. This program also encourages telework, flexible work weeks, and

Currently, the Clean Air local business and their



the implementation of no-idle zones.

Campaign is working with a number of employees with the commuter awards

program. This program awards prizes and money to those employees that log commutes using alternative modes of travel. To date, the Clean Air Campaign has partnered with twelve companies in the local area, including the City of Augusta, that have implemented a four-day work week option for its employees.

Additional incentives that encourage alternative work and travel patterns include companies, such as Bridgestone Firestone, that provide preferred on-site parking for those employees that use alternative modes of travel for commuting, and the state of Georgia that recently extended and increased its telework tax credit.

The creation of park and ride facilities in the area also helps to encourage alternative modes of transportation. Currently, the City of North Augusta, in partnership with Richmond County, Augusta Public Transit, the Lower Savannah Council of Governments' Best Friend Express, local companies, and SCDOT, is seeking funding to build a park and ride facility near I-20 and Highway 25 in Aiken County that will serve employees traveling to work locations throughout the region. The South Carolina DOT plans to use this same partnership process in the creation of other park and ride facilities within South Carolina.

Another element that can encourage a change in local transportation patterns includes the expansion and improvement of bike lanes and pedestrian trails. As part of the ARTS 2035 Long Range Transportation Plan update, the bike and pedestrian plan will be reassessed to pinpoint areas that need expansion or improvement. As part of this improvement, bike racks will be added to Augusta Public Transit (APT) buses. The Best Friend Express, the transit system that serves Aiken County, with connections to APT routes, already has bike racks installed on its transit vehicles. Finally, the City of Aiken has been awarded a \$400,000 Safe Routes to School Grant to be used for infrastructure improvements to encourage more students to walk or bike to school.



In conclusion, there are multiple on-going initiatives in the area that seek to improve the air quality for those that live and work in the CSRA. Through education and outreach, heavy-duty diesel emission reduction programs, alternative fuel use, regulatory initiatives for open and prescribed burns, and programs that encourage a change in commuter patterns, the CSRA Clean

Air Alliance will continue to pursue its goal of clean air and a healthful environment for its residents.