

CAMPAIGN FOR CLEAN AIR

Winter 2009/2010

A Newsletter of the Center for the Environment at Catawba College

Large Population of Asthma Sufferers in Rowan

Fact: The American Lung Association lists Rowan County as the 13th worst county in the nation for ozone pollution, based on three-year averages.

Fact: The Asthma Clinic at Salisbury Pediatric Associates treats between 600 and 800 children.

Those two unfortunate facts are related. "Ozone pollution irritates the tissue of the lungs and causes them to release proteins that increase the inflammation and reactivity," says Dr. Christopher Magryta, the pediatrician who treats children in Salisbury Pediatrics' Asthma Clinic. "During ozone action days, the volume of people who go to the emergency department and primary care clinics goes up pretty dramatically."

Magryta notes that children with asthma who spend time near heavily trafficked areas often need medical attention. "The more exposure the child has to ozone and pollutants, the more likely the child is to have symptoms," he says.

While he does not think parents should keep their children inside during the summer months, he recommends keep-



ing the windows closed and turning on the air conditioner. And on serious ozone-action days, he says it's better to engage in indoor activities. ■

(For more on asthma, go to page 3.)

Businesses & Governments Taking Steps to Clean Up Air

A number of businesses and local governments have been working for years to lower their ecological footprint. The steps they have taken are having a positive impact on our air quality. Food Lion, which has 19 stores in Rowan and Cabarrus counties, has made significant green strides, as has the Salisbury-based international corporation Power Curbers. Squeaky Kleen Laundry in Kannapolis now uses solar panels to pre-heat the water its customers use to wash their clothes. (For more on the cities' efforts, read "Cities on Board to Clean Up the Air" on page 5.)

The cities of Concord, Salisbury and Granite Quarry have also made commitments to sustainable practices. (For more on what the businesses are doing, turn to page 6.)



Center Partners with Salisbury Post

The Center for the Environment has partnered with the Salisbury Post to provide the latest news on the Campaign for Clean Air on the newspaper's website.

Visit salisburypost.com and click on "environment."

campaignforcleanair.org



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Health Impacts on Children Prompts Effort to Clean Up Air

By John E. Wear, Jr.

As a parent and grandparent, I have a special concern that I suspect many of you share: the realization that ozone could have lasting effects on our children. I first heard about this back around 2003, and it was a factor that caused me, along with our Center for the Environment staff and partners, to begin working on this issue.



But the effects are not just related to children. They impact us all. According to the American Lung Association, there are more than 19,000 people in Rowan and Cabarrus counties that suffer from asthma, and on ozone-alert days, these people often have to go indoors.

This happened to be a good year for air quality, but we should be cautious. Many great works instituted earlier this decade are helping to improve our air quality. But other factors had an impact on this summer's positive ratings. Cooler summer temperatures, increased rainfall and the recession played an important role, too.

In recent months, the economic recession and high fuel prices have led to a reduction in vehicle miles traveled. Simply put, we're driving less, so we're polluting less, which is positive. Similarly, industries used less energy because the recession forced them to eliminate shifts or sometimes close altogether. Thus power plants, which are a source of ozone-creating chemicals, were not required to produce as much.

Our Campaign for Clean Air is designed to educate people about the air quality challenges we still face and things we can do to improve our air. It is not about an "Ivory Tower" sending out directions for how people should live their lives. It is about giving people information from credible sources and especially spotlighting success stories in this area and in other parts of the country that are working for their citizens. It is also about giving people opportunities to come together to discuss these issues with forums and events.

Our first objective has been to work toward developing a means of communicating with the citizens of Rowan and Cabarrus -- the geographical focus of our efforts. We have done this by looking for ways to get the word out to a diverse population. One important portal has been through news media. We are currently partnering with the Salisbury Post to provide the most up-to-date Campaign for Clean Air information and news. You can access this through the Post's website, salisburypost.com.

In addition, we have developed a website for the Campaign (CampaignforCleanAir.org) with information about ways businesses, institutions and individuals can have an impact through their own actions. Fortunately, most of these actions actually save businesses and individuals money. In the pages of this newsletter, you will find stories that demonstrate how others are working to solve our air quality problem.

In truth, our air quality issue is a regional problem, and for this reason we are providing the information, including videotapes of speakers, on the web. This allows other communities in the area to benefit from this information and will hopefully help them in their efforts to improve the air for the whole region.

We hope you will join in this Campaign for Clean Air! ■

Air Pollution Impacts Asthma Sufferers

Environment Pulls the Trigger

“For asthma, genetics loads the gun, but environment pulls the trigger,” says the Environmental Defense Fund (EDF). “Once a person develops asthma, factors like dirty air can trigger an attack.”

Asthma is the fastest-growing chronic disease in the United States. More than 22 million individuals suffer from the ailment. The incidence of asthma among small children soared 160 percent from 1980 to 1996. The number of Americans with asthma has more than doubled in the past 15 years.

Some evidence suggests that ozone and diesel exhaust particles may even cause asthma in some cases, according to EDF. The organization notes that nearly 2/3 of those suffering from asthma live in an area that does not meet federal air quality standards. Both Rowan and Cabarrus counties fall

into that category.

Any actions that individuals, governments and businesses can do to lower traffic congestion and save energy will help reduce air pollution. That includes everything from riding public transportation or carpooling to supporting walkable communities and energy efficiency at home and at work.

Traffic & Asthma

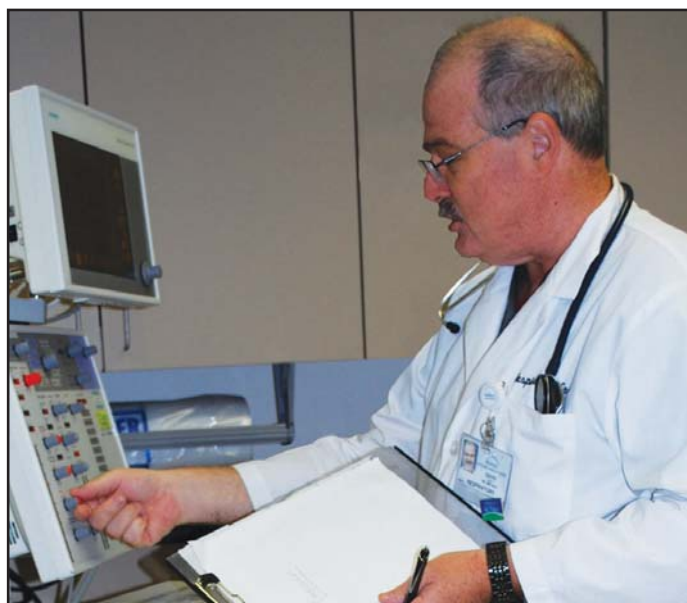
- A key EDF study in 2005 revealed that the risk of asthma increased 89 percent for each quarter-mile closer children lived to a major roadway.
- A follow-up study in 2007 found that children who lived within about 1500 feet of a major roadway suffered from decreased lung air flow.

Breathing is Difficult on Bad Air Days

David Bass remembers well the gentleman who resigned himself to staying indoors from early summer to late fall because poor air quality made breathing too difficult. Bass, the interim manager of respiratory therapy at Rowan Regional Medical Center, says air pollution has an adverse effect on people who suffer from various respiratory illnesses.

Patients with asthma are particularly vulnerable because of their reactive airways. “The irritants you find in air pollution can simply push them over the edge into an asthma attack and the bronchial spasm that goes with that,” Bass says. People with chronic respiratory diseases like emphysema or COPD (chronic obstructive pulmonary disease) are sensitive to even mild changes in the humidity, so increased levels of air pollution have a serious impact on them.

Rowan Regional sees a high volume of respiratory patients. “It’s

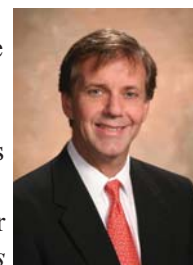


a tremendous number and it’s seasonal,” Bass says. “When you have a period with a lot of bad air quality days, you definitely see a rise in the number of respiratory patients that come in.” ■

Health of Our Citizens & Our Economy

The Campaign for Clean Air addresses two vitally important concerns: first and foremost, the health of our citizens but also the health of our economy. From an economic development perspective, companies aren’t going to be interested in locating in areas that the EPA has labeled unhealthy, and that has a direct impact on jobs and on the economic prospects of Rowan and Cabarrus counties. This initiative to improve our air quality is crucial for our community, so I am pleased to lend my support to the Campaign for Clean Air.

Dyke Messinger
President, Power Curbers



Mass Transit Cleaner & Greener

Mass transit in Rowan and Cabarrus counties makes traveling cleaner and greener. An infusion of monies from CMAQ (Congestion Mitigation & Air Quality) grants has allowed the counties to increase services and encourage ridership.

Rowan Express

The Rowan Express, which links the transit systems in Concord/Kannapolis with Salisbury, allows riders to go from the Kannapolis Train Station to the Salisbury Depot for \$1 or 50 cents for senior citizens and the handicapped. (Children under 5 ride free.)

Rowan Express served 2,043 passengers during the 63 days it operated in August, September and October 2009, for an average of 32.4 passengers a day. The average rose to 35 passengers a day during November.

Salisbury Transit

Salisbury has offered free fares on its buses during ozone-action days for nearly three years. Any time ozone levels reach the orange or red level, citizens can ride the public buses free. "Our city strives to be a good steward of the environment, and the use of our public transit system to reduce emissions is a vital means to improving air quality in Salisbury," says Salisbury Mayor Susan Kluttz.

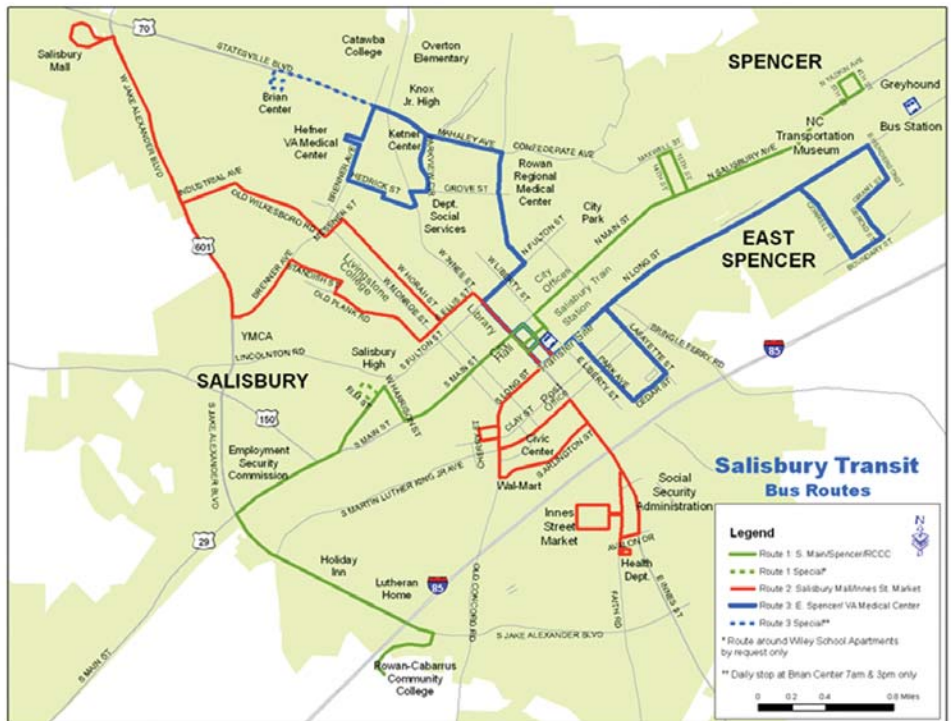
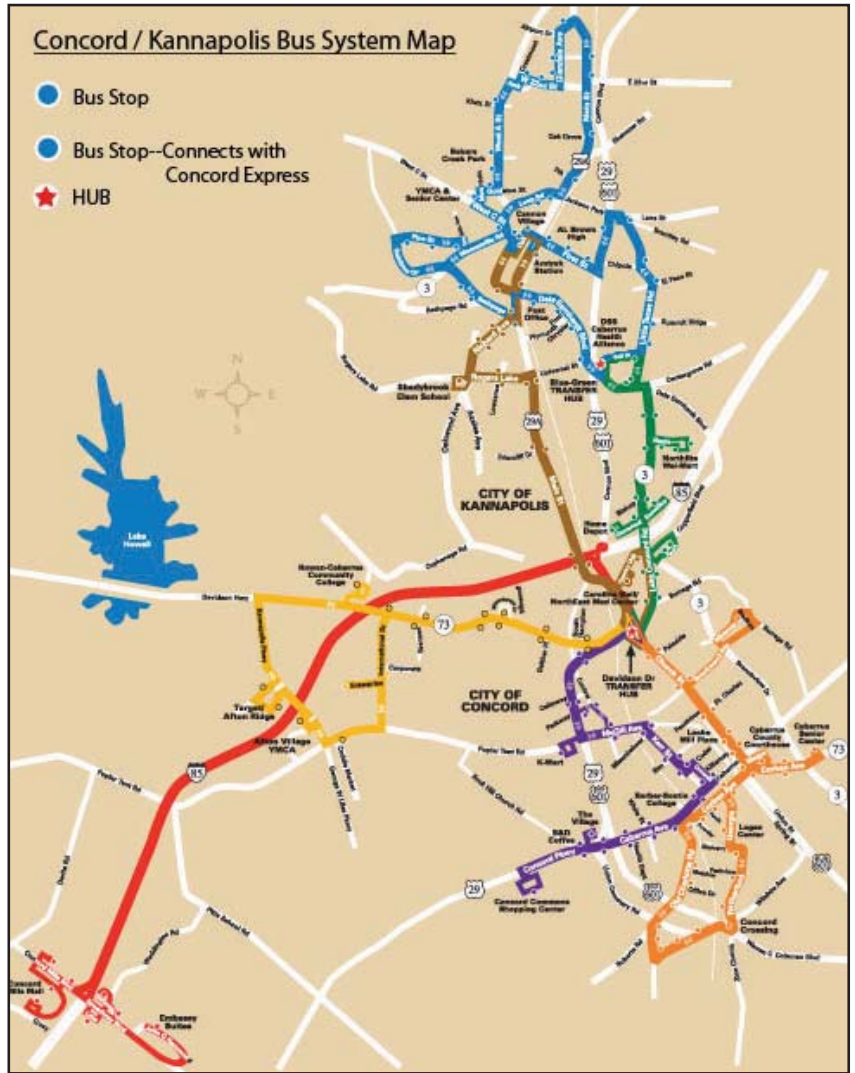
CK RIDER

The CK RIDER Transit System in Concord and Kannapolis offers free rides during NASCAR race weeks in May and October. Ridership spiked to 1,700-2,100 each day during the week last May, compared to an average of 1,000-1,100, according to Connie Cunningham of the Cabarrus-Rowan Metropolitan Planning Organization.

When gas was nearly \$4 a gallon in October 2008, 6,620 more passengers rode the buses. "We carried 42,620 passengers in that month, compared to 36,000 the month before," Cunningham says.

The N.C. Research Campus in Kannapolis is attracting a host of highly skilled professionals from larger cities who are accustomed to using public transit, according to Cunningham. "As the Research Campus gets up and running, I think we're going to see an explosion in that area," she says.

She notes that a number of commuters ride the Charlotte Area Transit System from Concord and Kannapolis each day, further increasing the number of mass transit riders in the area.



Cities on Board to Clean Up the Air

Municipalities in Rowan and Cabarrus counties are taking multiple steps to clean up the air. They are building sidewalks and adding dual left-turn lanes at congested intersections. They are using hybrid and electric vehicles and developing bike lanes.

Here are just a few of the projects.

Concord

The City of Concord will add dual left-turn lanes at two of its busiest intersections to relieve traffic congestion: Poplar Tent Road at U.S. Highway 29 and N.C. Highway 3 at U.S. Highway 601. The first will be completed by July of 2010, and the second is scheduled for the 2010-2011 fiscal year. "Any time you improve efficiency and reduce congestion, you enhance air quality," says Joe Wilson, transportation director.

All the fleets in Concord adhere to fueling restrictions during ozone-action days. "We don't fuel between 9 a.m. and 2:30 p.m.," Wilson says, because air pollution is worse in the middle of the day. The Concord fleets also have a no-idling policy, which reduces emissions.

Concord has added three new greenways in the past four years, which provide an alternative to driving. Reducing congestion enhances air quality.

Salisbury

The City of Salisbury has adopted a Land Development Ordinance that encourages mixed-use development, which means that businesses may be located near housing. That makes it easier for people to walk or ride their bikes. The ordinance also requires recreational open space for new residential development; and it requires new streets to be developed with high connectivity and short block lengths.

The city is in the design phase for the installation of new sidewalks in three different areas: around the Sports Complex on

Martin Luther King Jr. Boulevard; around Salisbury High School; and on Statesville Boulevard.

It has also developed a comprehensive bicycle plan that recommends physical improvements, policy changes, enforcement, education and outreach programs to promote safer bicycling in Salisbury. The Planning Board is currently studying the comprehensive plan. "These projects will increase people's transportation options," says Dan Mikkelsen, director of Engineering & Development Services.



Other clean-air projects include: the use of biodiesel in fleet vehicles; the use of a tree canopy analysis that measures carbon sequestration for small-area planning; neighborhood tree plantings; and increased energy efficiency in building operations and maintenance.

Granite Quarry

The Town of Granite Quarry is in the process of planning for additional sidewalks that will connect residential areas to its Main Street. The town also initiated a program to recycle brush and leaves, which prevents burning; installed more energy-efficient street lighting; and created a walking trail. In addition, Salisbury Transit has extended service to the town. ■

Websites for Local Transit

Rowan Express

<http://www.rowancountync.gov/rowanexpress>

Salisbury Transit

Free Rides on Ozone Action Days

<http://www.ci.salisbury.nc.us/transit/>

Charlotte Area Transit

<http://www.charmeck.org/Departments/CATS>

Share the Ride NC

<http://www.sharetheridenc.com/>

CK Rider

<http://www.ckrider.com>

Salisbury Train Station

<http://www.amtrak.com>

Kannapolis Train Station

<http://www.amtrak.com>

HYBRIDS REDUCE CARBON FOOTPRINT

Cabarrus County estimates that the use of 23 hybrids, which replaced Crown Victorias, reduced the county's annual carbon dioxide emissions by more than 96 tons. That's a savings of 9,925 gallons of fuel. The hybrids are used for staff travel in between county facilities, training, out-of-town trips and by the Department of Social Services. ■

Food Lion Receives Multiple Awards for Energy Efficiency

Food Lion has made a significant commitment to save energy and protect our environment. In fact, half of its 1,300 stores bear the U.S. Environmental Protection Agency's ENERGYSTAR label for superior energy efficiency. About 335 of the stores are located in North Carolina.

To earn an ENERGYSTAR rating, commercial buildings must use an average of 40 percent less energy than typical buildings and release 35 percent less carbon dioxide into the atmosphere.

The Salisbury-based grocery store chain has received a Distinguished Partner Award from the Environmental Protection Agency for its GreenChill program. It does everything from retrofitting lighting fixtures and bulbs, which increases a store's lighting efficiency, to capturing the heat expelled from the motors of its refrigeration cases and using it to warm the cold-food aisles.

Food Lion opened its first LEED-certified store this year in Columbia, South Carolina. It meets the high standards of the U.S. Green Building Council's Leadership in Energy and Environmental Design program.

Company-wide in 2008, Food Lion reduced its energy consumption by 45 billion BTUs and its carbon emissions by more than 18 million pounds. That's the equivalent of planting more than 4,000 acres of trees, powering more than 1,300 American homes for one year or taking nearly 3,000 cars off the road.

Power Curbers is Committed to Lessening its Ecological Footprint

Power Curbers, headquartered in Salisbury, has moved in many sustainable directions in recent years.

The international corporation manufactures concrete paving equipment for curbs, sidewalks and roads. One of the first supporters of the Center's Clean Air Initiative in 2004, Power Curbers hosted a Catawba student intern in 2005 to provide guidance on ways to make the company more environmentally friendly.

Since moving to its new location on Bendix Drive, it has streamlined its operation, eliminating waste; begun a substantial recycling effort; replaced its propane-powered forklifts with electric ones; invested in a state-of-the-art paint system, which is environmentally friendly; and purchased recycled car-



pet and furniture for its facility.

"Our idea is to make as small an environmental footprint as we can," says CEO Dyke Messinger. He looks to the Subaru company, a model of environmental sustainability, for inspiration. "They recycle almost everything in their facility," he says. "It would be great if Power Curbers could one day be more like that."

Here Comes the Sun

Doug Steadman now employs the sun to help him heat the water for the Squeaky Kleen Laundry in Kannapolis. His new solar thermal hot water system uses solar energy to preheat the water before it goes into the laundry's boiler. That saves energy which, in turn, means less air pollution from power plants.

Ten solar collectors mounted on top of the building collect and transfer the sun's heat to a liquid that circulates between the collectors and the laundry's 600-gallon pre-heat storage tank. On a sunny day, the liquid can reach temperatures of 100 degrees and more.



"The cost of energy was the motivating factor," for installing the system, says Steadman, "although I do what I can to be a good steward of the environment." He is also exploring the use of a photovoltaic system to provide electricity for his facility.

Argand Energy of Charlotte installed the system. Its president, Erik Lensch, points out that federal and state tax credits allow the payback for installing the system to take as little as three or four years. "After that, a solar system owner will be getting half of the energy used to heat water for free," he says. ■

Center to Share its Resources

The Center has entered into discussions with other organizations in the region to determine how we can work together on improving our air quality. The Center's web-based resources and videos may be used by other groups that share our common mission. In addition, we will explore other ways we can pool our resources for the common good. ■

One Key to Improving the Air: the Car Key

One key to improving air quality in Rowan County and the region may lie in the use of our car keys. Dr. Viney Aneja, professor and director of air quality research at N.C. State University, told a large audience at the Center for the Environment Sept. 17 that automotive emissions are the main source of ground-level ozone in the Piedmont. Visit campaignforcleanair.org for a video of Aneja's presentation. ■



The Center offers air quality education programs both at the Center and in the classroom for school-age children.

Regional Program Replaces Leaking Gas Caps for Free

Thirty gallons of gasoline and about 200 pounds of evaporative emissions can be released every year from a leaking gas cap. That contributes to air pollution.

The Mecklenburg County Air Quality Program has initiated a Gas Cap Replacement Project that tests gas caps and replaces those that fail the test with new ones free of charge. Officials have tested nearly 20,000 vehicles and replaced nearly 900 failing gas caps since 2007. That amounts to a savings of 28,000 gallons of fuel and prevents 86 tons of evaporative emissions from being released into the atmosphere.

Businesses and organizations in Rowan, Cabarrus, Mecklenburg, Gaston, Lincoln, Iredell, Union and York, S.C., counties may request a Gas Cap Testing event by call-



ing Alan Giles of Mecklenburg County Air Quality at 704.336.5836. Individuals may go to charmec.org and click on "air quality" to find information on which N.C. inspection stations are testing gas caps. ■

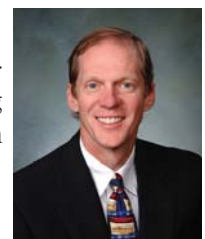
Center Researching Grants to Improve Air Quality

The Center is researching grant and rebate opportunities that will help communities, businesses and industries lower their energy use. Such a reduction will not only help improve our air quality; it has the added benefit of reducing operating costs.

For information on everything from diesel engine auxiliary power units and new diesel truck purchases to tax credits for qualified electric vehicles, please contact Air Quality Coordinator Shelia Armstrong at sarmstro@catawba.edu or visit our Campaign for Clean Air website: campaignforcleanair.org. ■

Campaign Vital for Rowan & Cabarrus Counties

The Campaign for Clean Air is vital for Rowan County and Cabarrus counties. Our local communities depends on economic growth, which is driven by favorable conditions for locating and expanding companies. We support this great effort toward creating and maintaining clean air.

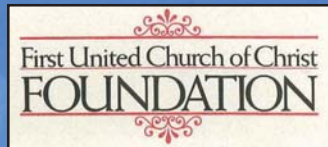


Greg Alcorn
President & CEO, Global Contact Services

2009 Campaign for Clean Air Sponsors

THE BLANCHE & JULIAN
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Campaign for Clean Air Fund-Raising Effort off to Good Start

Twelve companies or foundations have contributed a total of \$121,600 to the Center for the Environment's Campaign for Clean Air. Sponsor gifts range from \$1,000 to \$25,000 with the average gift slightly more than \$11,000.

"We are most grateful to these sponsors," says Jay Laurens, the Center's director of resource development. "They clearly understand the importance of clean air to the health of our citizens and the health of our local economy. These generous gifts reflect their endorsement of the Center and its efforts."

The Center must raise an additional \$150,400 in matching funds to secure a reimbursement grant from the North Carolina Department of Transportation. If the matching dollars are secured, the NCDOT will reimburse the Center for 80 percent of the four-year \$1.2-million air quality improvement initiative designed to address the significant air quality issues affecting our region.

The Center's partnership with the Salisbury Post, which includes a Center for the Environment microsite on the newspaper's website, offers Campaign for Clean Air sponsors complimentary online, print advertising and marketing opportunities in recognition of their support. If you are interested in being a sponsor of the Campaign for Clean Air, please contact Jay Laurens at 704-637-4295 or jlaurens@catawba.edu.

Great Investment

The new Campaign for Clean Air, now underway by the Center for the Environment and supported by many friends and businesses, is a great investment with an excellent return. Dollars raised are being matched by a N.C. Department of Transportation grant on a four-to-one ratio. We now have another chance to make a huge impact in improving air quality.



F&M Bank is pleased to partner with the Center for the Environment and others as we tackle one of the world's most important and challenging concerns -- air quality.

Paul Fisher
Chairman & CEO, F&M Bank

What is Ozone?

What is ground-level ozone and why is it bad for us?

For answers, visit campaignforcleanair.org.