Share the Ride: Save Money on Commuting Costs & Breathe Easier

A number of commuters in Rowan and Cabarrus counties have discovered a cost-effective, convenient alternative to the one-passenger, one-car commute to work. They have connected with ShareTheRideNC, a statewide service that matches people who have similar commutes. Even people with irregular schedules or those who work third shifts are taking advantage of the program.

Some partner with one or two people in a carpool, even if they don’t commute every day. Others start or join a vanpool which allows 7-15 people to ride together in a van that is leased from an organization like the Charlotte Area Transit System (CATS), which serves Rowan and Cabarrus commuters as well as others in the Greater Charlotte area. Similar programs are available in the Triad and Triangle areas.

(For more on Share the Ride, go to page 5.)

Vanpool Added Benefit: Savings on Parking Fees

Lori Falleni of Midland in southern Cabarrus County figures she has saved more than $6,000 in the two years she has participated in a CATS vanpool — and more than a third of that savings has been from not having to pay parking fees.

Falleni, a senior accounting coordinator with the Hearst Corporation in uptown Charlotte, notes that it would cost her $130 a month to park her car in the parking deck of the building where she works. She and the five others in her vanpool escape parking fees by riding the CATS van.

The benefits are many, Falleni says: The savings on gas, parking and wear and tear on her car plus being able to nap on the road and avoiding what she calls “the headache of driving.” The members of this vanpool pay $69 a month for the daily ride from Cloverleaf Plaza in Kannapolis to uptown Charlotte.

CATS Van: A Comfortable, Eco-Friendly Way to Travel

Just ask Joel Smeltzer. He’ll tell you the Charlotte Area Transit System (CATS) van is a good way to travel.

Smeltzer, school programs coordinator at the Mint Museum, commutes every work day from Salisbury to uptown Charlotte with nine other commuters in a 15-passenger van they lease from the Charlotte Area Transit System. In the 2 ½ years he has ridden—or driven—the van, his monthly fee has been less than $100. “It’s well below what you pay at the pump,” he says.

While the monthly fee fluctuates somewhat with the price of gas, it has always proved economical. “It saves on gas and wear and tear on the car,” Smeltzer says.

(For more on CATS Van, go to page 3.)
Creating a Hopeful Future

By John E. Wear, Jr.

Applied hope.

If I had to encapsulate the overarching theme of this newsletter, that’s what I would say: Applied hope.

In this publication you will find multiple examples of individuals, organizations, companies and communities that are committed to reducing air pollution which, in turn, improves our health and the health of our children and grandchildren. They are doing their part to create a future world in which children with asthma can play outside on hot, sunny days without fear of an attack and parents can send their children off on the school bus without concern about toxic diesel exhaust.

You will read about visionary Amory Lovins, the chairman of Rocky Mountain Institute (RMI), who spoke on our campus in February. He is known for his fierce dedication to “applied hope,” which he described in an essay published in the 2008 RMI Annual Report.

He explained the difference between an optimist and a hopeful person. “The optimist treats the future as fate, not choice, and thus fails to take responsibility for making the world we want,” he wrote. “Applied hope is a deliberate choice of heart and head. The person living in hope has her sleeves rolled up and is fighting hard to change or beat the odds.”

The people and organizations chronicled in these pages have rolled up their sleeves and made conscious choices that will clean up our air. They are sharing vans with other commuters, promoting pollution-free lawn mowers and installing photovoltaic systems that will reduce the demand for electricity made by coal-fired power plants. They are saving energy and designing walkable communities. They are putting legs on this vision and moving us into a world where we can all breathe easier.

So hats off to these and the thousands of others who have acknowledged the air quality challenges we face and have made a personal commitment to clean air. Our thanks to them and to you for doing your part and supporting the Center’s efforts to create a hopeful future.

Center Has ‘No Idling’ Signs for Businesses

The Center for the Environment has “No Idling” signs available from the North Carolina Department of Air Quality for area businesses. Businesses may order the signs free of charge by contacting Sheila Armstrong at sarmstro@catawba.edu or 704.640.8280.
Energy Leader: ‘It’s Cheaper to Save Energy than Buy It’

Energy leader Amory Lovins invited the nearly 700 people who attended his presentation at Catawba College Feb. 23 to imagine a world where business leaders and the heads of governments have abandoned oil, coal and nuclear energy in favor of alternatives that cost less and work better.

Lovins, Rocky Mountain Institute’s chairman and co-founder, said the world of efficient use and renewable energy is “available, practical and profitable now.” He noted that many companies are making billions of dollars’ profit substituting efficiency for fuel.

Transportation uses about 70 percent of the oil the United States consumes. “We can triple the efficiency of cars, trucks and planes with no compromise and better safety by making them light-weight and giving them advanced propulsion,” he said.

RMI partnered with two European engineering firms a decade ago to design a safe, high-performance mid-sized suburban vehicle that weighs half as much as a traditional vehicle. “It uses about 3.6 times less fuel than its steel equivalent and gets 67 miles per gallon,” Lovins said.

About 70 percent of the electricity in the U.S. is used in build-

ings, and 30 percent is used by industry, according to Lovins. He advocated integrative design, which offers multiple benefits from a single expenditure. Using his house in Colorado as an example, he noted that hardly any element of the building has fewer than three functions. It is 99 percent passive-solar heated with no furnace, even though outdoor temperatures can drop as low as minus 47 degrees Fahrenheit.

All the big thermal plants that use coal, gas or uranium have been pushed into minority market share and are shrinking because they have too high a cost and too high a financial risk to be attractive to investors, Lovins said. The U.S. added more wind power in 2007 than it had added coal power in the previous five years altogether. In 2008 for the first time in a century, the world invested more in renewable energy than in fossil-fueled power plants.

“This whole micro-power revolution, largely led by China, has already happened,” Lovins said. “It’s not too late to get in on it.”

For more, visit centerfortheenvironment.org.

CATS Van: A Comfortable, Eco-Friendly Way to Travel

(Continued from page 1)

“and it’s a more comfortable ride when you have someone to talk to.”

The riders meet off Jake Alexander Boulevard each work day, park their cars and board the van. They choose the arrival and departure time that suits their schedules best.

Smeltzer finds practical reasons for sharing the ride with other commuters. But that’s not all. “Philosophically, it feels good that you’re taking cars off the road and doing your small part to get rid of some of the pollution,” he says.
Reduced Emissions for Semi-Trailer Trucks

Remember when you felt like holding your breath when you got behind a semi-trailer truck on the highway? You felt as if the trail of emissions was too much for the lungs to handle.

Two companies in Rowan County have turned that reality on its head: Their semi-trailers are going green.

Freightliner in Cleveland manufactures the Class 8 Cascadia truck, which exceeds the Environmental Protection Agency’s SmartWay standards for improved fuel economy and reduced emissions. (For more on the standards, visit www.epa.gov/smartway.) First manufactured in 2007, its aerodynamic cab, which is made from aluminum, needs less fuel to propel itself down the highway. It is 7-10 percent more fuel-efficient, according to Melissa Clausen, director of product marketing for Freightliner trucks. The 2010 engine and emissions technology adds another 5-7 percent gain in fuel economy.

All its engines have idle-shutdown and clean-idle options, and the engines are essentially lead-free. In addition, the oil filters are combustible, which means no metal canning ends up in landfills. The fact that most of its materials are recyclable is an added environmental benefit.

Food Lion, headquartered in Salisbury, has also taken steps to green its corporate fleet. Timothy Lively, corporate fleet manager for Delhaize America, Food Lion’s parent company, notes that by increasing fuel economy, the trucks burn less fuel which, in turn, reduces overall emissions.

The Food Lion fleet uses eco-flaps, a type of mud flap that allows air to flow through it without creating wind drag. The trucks also use super single tires, which are lighter, reducing drag and increasing the number of miles per gallon. In addition, the fleet uses fuel-efficient tires, which are produced with a specific rubber compound that reduces drag, which increases miles per gallon.

The grocery store chain promotes minimum idling time and drive time, both of which reduce emissions. The equipment automatically shuts down if the road tractor is left idling for more than five minutes. The road tractors are also governed so they cannot travel over a certain speed, which improves fuel efficiency. Finally, the company works to reduce the amount of “air” they transport by trying to obtain backhauls, which reduces the times their tractor-trailers travel without a load.

In the Market for a New Car? Consider Going Green

Are you looking for a new car? This may be the year to go green.

The U.S. Environmental Protection Agency offers a Green Vehicle Guide to help you choose the cleanest and most fuel-efficient car that meets your particular needs. The guide gives information about the environmental performance of vehicles. It evaluates cars and trucks on emissions and fuel economy, both of which impact our air quality. Lower emissions and good fuel economy mean cleaner air.

You can compare environmental performance across vehicle classes. For the easiest comparisons, you should use the SmartWay and SmartWay Elite designations.

Visit www.epa.gov/greenvehicles/index.do.
Minivan services for 4-7 passengers are also available through CATS, which covers the cost of gas, maintenance and insurance, like the vanpool program.

Twelve CATS vanpools either begin or end in Rowan and Cabarrus counties. “In the last three years, we have seen an increase in the reverse commute,” says Dietrich Brown, CATS vanpool manager. “We have quite a few from Charlotte who go to Rowan.” A number go to the Food Lion headquarters, and one goes to the Veterans’ Administration Hospital, both in Salisbury.

Sharing the ride is not only kind to your pocketbook. It is also good for the air we breathe because auto exhaust is a major culprit in the production of air pollution. So the fewer cars on the road, the cleaner the air.

To learn more about commute options, visit www.sharetheridenc.com or call CATS at 704.336.RIDE.

What if I Have to Leave Early?
CATS offers a service to monthly pass holders of CATS Express buses and members of CATS vanpools called Guaranteed Ride Home. If you have an emergency, a medical appointment or an unplanned work schedule change, CATS will transport you back to your car free of charge. The program can be used once a month up to a maximum of six times a year.

Park & Ride
Concord has three Park & Ride lots where commuters can park their cars free of charge and catch their bus, vanpool or carpool. They are Target/Home Depot on Cloverly Parkway, Big Lots on Hwy. 29-S and Lowe’s Motor Speedway on Concord Parkway.

For more information, visit www.charmeck.org/Departments/CATS/Riding+CATS/home.html
New Emission Control Program for Lawn & Garden Equipment

The U.S. Environmental Protection Agency has finalized a new emission control program designed to reduce hydrocarbon emissions from small spark-ignition (SI) engines. The new standards apply to nonroad engines rated below 25 horsepower (19 kW), including lawn and garden equipment, utility vehicles, generators and other construction, farm and industrial equipment.

The new standards will take effect in 2011 or 2012, depending on the size of the engine. These standards will also reduce evaporative emissions from this equipment.

Small spark-ignition engines emit high levels of carbon monoxide, a colorless, odorless, poisonous gas. They also emit hydrocarbons and nitrogen oxides, both of which contribute to ground-level ozone. Studies show that ozone causes or exacerbates respiratory conditions and is implicated in heart disease, cancer and other serious diseases.

These reductions will reduce volatile organic compound (VOC) pollutants by 34 percent and carbon monoxide pollutants by 9 percent by 2030.

The EPA has also established emission standards for marine spark-ignition engines and vessels. The agency expects to see substantial health benefits from this new program. By 2030, the EPA says the emission reductions will prevent 230 particulate-matter-related premature deaths, 77-350 ozone-related premature deaths, about 1,700 hospitalizations and emergency room visits, 23,000 work days lost, 180,000 lost school days, 590,000 acute respiratory symptoms. This amounts to an annual savings of between $1.6 and $4.4 billion in 2030.

For more information, visit www.epa.gov/otaq/equip-Id.htm.

*Source: U.S. Environmental Protection Agency

What You Can Do to Prevent Air Pollution in Your Own Yard

The U.S. Environmental Protection Agency’s Office of Mobile Sources offers a number of helpful hints for reducing air pollution when you care for your lawn.

- **Mow before 10 a.m. or after 6 p.m.** to avoid peak ozone times.
- **Reduce mowing time:** Use low-maintenance turf grasses or grass/lower seed mixtures that grow slowly and require less mowing. Or decrease lawn area. Planting additional trees and shrubs can reduce the energy costs of heating and cooling your house.
- **Consider cleaner options:** Electric, battery-powered and propane equipment is cleaner than gasoline-powered equipment because these lawn and garden tools produce essentially no pollution from exhaust or fuel evaporation.
- **Recycle old equipment:** Take your old mowers to a recycling center that converts them into raw material for cleaner equipment.
- **Avoid gasoline spills:** Spilled gasoline pollutes the air. Use a funnel with an automatic stop device to prevent overfilling the gas tank on your lawnmower. Keep the cap and vent hole on gasoline containers closed tightly.
- **Maintain your equipment:** Follow the manufacturer’s guidelines for maintenance. Change the oil and clean or replace air filters regularly. Use the proper fuel-to-oil mixture in two-stroke equipment. Get periodic tune-ups.
- **Use manual tools:** Hand tools are available to meet a variety of lawn and garden needs, like light-weight, quiet, easy-to-use reel push mowers that generate no emissions.
Battery-powered Lawnmower ‘Spares the Air’

It’s a way to “spare the air.” That’s the way one company describes the environmental benefits of using a cordless, rechargeable battery-powered lawn mower.

Allison Cranmer of Neuron Lawn Mower Company notes that her company wanted to come up with technology that was cleaner and quieter. “We know that gas-powered mowers are huge polluters,” she says. The average gas-powered lawn mower releases as much emissions as 40-43 cars driven 12,000 miles a year.

“That’s just a lot of pollutants to put into the environment,” she says. “So we thought, ‘There’s got to be an easier, better way.’”

That easier, better way materialized when Neuron offered two battery-powered mowers: a 14-inch and a 19-inch-cut model. The life of the battery is typically 3-5 years with proper maintenance, according to Cranmer. The company sells directly to customers and provides free shipping with the special coupon. Regular shipping costs $30-$40.

For more information on the battery-powered mowers, visit www.neuronpower.com/CLEANAIR.

Model at Center

The Center for the Environment has a battery-powered Neuron model on site for people to examine. The Center also provides coupons that offer more than $100 off the purchase price. Contact Shelia Armstrong at sarmstro@catawba.edu or 704.640.8280.

Recycle Your Old Mower in Rowan & Cabarrus Counties

You may recycle your gas-powered lawn mower in Rowan County free of charge at the Julian Road recycling site across from the county fairgrounds. The site is open Monday through Saturday from 7 a.m. to 7 p.m.

Residents of Cabarrus County may take their old mowers to the Cabarrus Landfill at 4441 Irish Potato Road, but all oil and gas must be drained from the machine.

A second option in Cabarrus County is the Household Hazardous Waste Facility Recycling Convenience Center at 246 General Services Drive in Concord. This facility will take gasoline on the first Wednesday of the month from 8 a.m. to 4 p.m. and on the third Saturday of the month from 8 a.m. to 1 p.m. Mowers are accepted at both facilities from 8 a.m. to 5 p.m. Monday through Friday.

If you did not receive this newsletter by mail and would like to be on our mailing list, please contact Cathy Holladay at chollada@catawba.edu.
Straws & Asthma: Rowan-Salisbury PTA Learns about Health Risks of Dirty Air

It was the straws that really caught the attention of the 172 Parent-Teacher Association presidents, parents and school administrators at the Rowan/Salisbury PTA luncheon in February.

Amanda Lanier, coordinator of programming at the Center for the Environment at Catawba College, distributed two straws to everyone in the audience. She told members to take two deep breaths, hold their noses, and breathe through the full-sized straw. That, she said, simulates a healthy adult with somewhat constricted air passages on an ozone action day.

Then she asked participants to do the same thing with a significantly smaller straw typically used to stir coffee. That simulates the difficulty a child with asthma experiences, she said. As people struggled to breathe through the smaller straw, the hazards of dirty air took on new meaning.

N·Focus Design: Reducing Urban Sprawl, Helping to Improve Air Quality

N·Focus Design in Kannapolis promotes sustainable development, and that, in turn, has a significant impact on our air quality.

David Flowe, N·Focus Planning Associate II, explains that locating gas stations and grocery stores near residential space allows people to walk more and drive less. “With compact development, people typically go on fewer trips per day,” he says, noting that “trip” in traffic engineering terms denotes traveling from one destination to another. For example, if a mother drives to pick up her children at school, the round trip would be considered two trips.

The average household takes nine trips per day. In a compact development, the household trips range from three-to-five trips per day. “Since people are walking inside their communities, they are able to get into service, commercial and retail areas without firing up their car.” Flowe says. That reduces traffic congestion, which means less traffic-related air pollution and improved road conditions so people can travel faster between urban areas.

Gary Fankhauser, the firm’s principal designer, notes that N·Focus’ commitment to water quality also impacts the level of air pollution. Rain gardens, and other water quality filtration systems for surface water runoff, remove 90 percent of the pollutants before the stormwater drains into lakes and streams. That means fewer toxins are released into the air when the stormwater/water quality filtration systems are incorporated into developments. This is just another way local businesses are committing to sustainable operations.

For more, visit centerfortheenvironment.org.
Rowan-Salisbury Schools Take Steps to Reduce Emissions

owen Salisbury School System officials have taken significant steps to reduce emissions in their bus fleets, making the air cleaner for the children in their care.

The transportation staff has retrofitted 121 buses with diesel oxidation catalysts (DOCs), which reduce emissions by 25 percent, according to Environmental Defense. They have also retrofitted 24 buses with diesel particulate filters (DPFs), which can reduce tailpipe emissions by 85 percent or more.

In addition, the transportation staff is using a new Combi-Clean System, recently purchased with in-kind funds for a Clean Fuels Advanced Technology (CFAT) Grant. This system cleans the filters of buses outfitted with diesel particulate exhaust technology. Each year the school system retires about 12 buses.

Next year officials will purchase only buses that meet the 2010 standards set by the U.S. Environmental Protection Agency. That means an 83 percent reduction in nitrogen oxide emissions over 2007 levels with new technology—called Selective Catalytic Reduction—that emits cleaner air than it takes in.

Judy Burris, the transportation director for Rowan-Salisbury Schools, notes that her staff is investigating grant possibilities that would allow them to purchase hybrid vehicles for their driver’s education classes. Sheila Armstrong, Campaign for Clean Air outreach coordinator at the Center for the Environment, has provided the driver’s education trainers with information on air pollution and ways to address the challenge.

The Center staff will also work in concert with the schools on educating bus drivers about the causes and effects of air pollution and the steps they can take to reduce harmful emissions.

“I am very appreciative of the partnership that the school system has with the Center in the Campaign for Clean Air,” says Burris. “It is obvious that we are both on the same page regarding safety for our students, staff and community. I look forward to continuing this effort to help promote clean air for everyone.”

The Far-reaching Effects of Air Pollution

- Every year in North Carolina, air pollution causes dozens of infant deaths and hundreds of thousands of school absences because of illness.
- Soot pollution causes an estimated 200,000 asthma attacks each year with an additional 200,000 caused by smog.
- Air pollution leads to an estimated 6,000 hospital admissions for respiratory disease and 2,000 for cardiovascular disease annually.

*Source: 2006 Environment North Carolina study

How Can You Raise Awareness & Clean Up the Air?

- Fly Air Quality Action Flags at schools to raise awareness about air pollution.
- Enhance the school curriculum to educate students of all ages about the causes and impacts of air pollution and ways to mitigate it.
- Support local city efforts to build sidewalks and bike paths so children can walk or bike to school.
Energy management stands at the center of Square D in Salisbury, a part of the global Schneider Electric organization, which focuses on helping people make the most of their energy. “Our vision is a world where we can all achieve more while using less of our common planet.” says Mark Seifel, Square D’s general manager.

Schneider Electric estimates that its products are involved in 72 percent of all the energy used in the world. “We don’t transmit electricity, and we don’t make devices that use it, but we touch it in 72 percent of the cases where it is being consumed,” Seifel says. The organization does that through things like offering energy monitoring and control products, software and energy audit services.

“With our products and some of our services, we’ve found we can save about 30 percent of the energy utilized by making sure that devices are efficient and installed properly,” he says. Every unit of energy that is saved through efficiency reduces three times the amount of electricity power plants need to generate, and when power plants reduce their output, air quality improves.

Schneider Electric clearly practices what it preaches. The organization in the United States applied its solutions to its own companies, saving more than $6.7 million from 2004-2008. That management practice reduced its energy usage by 14 percent and lessened greenhouse gas emissions by 10 percent during the four-year period.

The organization sees energy conservation as the most cost-effective way to reduce carbon emissions now, but Seifel and others have also invested in renewable energy. “We have converters that help connect solar grids and wind generators to the electric system,” Seifel says, noting that the company sees benefits in multiple approaches to reducing the energy produced by coal-fired power plants.

With an eye to the future, Schneider Electric officials realize that demand for electricity will increase as more and more Third World countries develop. “Right now 1/3 of the people in the world don’t have access to energy at all,” Seifel says. “It’s only a matter of time before they starting using it. That will create an increase in demand to an unmanageable level unless something is done so that energy can be generated with a minimal impact to the environment.”

Wallace & Graham, Catawba Trustees, Set Example with Commitment to Solar Energy

Mona Wallace and William Graham, both trustees of Catawba College, have made a considerable commitment to using solar energy, setting an example for other businesses.

The Law Offices of Wallace & Graham in Salisbury recently installed one of the largest privately-owned photovoltaic systems in the region on the rooftop of the building that houses the law firm’s medical department. About 60 people attended a reception at the offices of Wallace & Graham Feb. 24 when the firm unveiled its new 173.25 kilowatt solar electric system.

“Bill Graham and I are very pleased that N.C. GreenPower has selected us to participate as a solar energy generator in their program,” Wallace said. “We have long desired to be involved in helping to find better energy alternatives, as much of the litigation that our firm handles involves the safety and health of employees and environmental contamination. We are investing in not only clean energy but safe energy for the community.”

The photovoltaic system was designed and installed by Sundance Power Systems of Weaverville. An estimated 132 tons of carbon will be offset each year the system is in production.

For more, visit campaignforcleanair.org and click on Breaking News.

Mark Seifel with a branch circuit monitoring panel, which is used in Data Center applications for monitoring and controlling electricity use.

Mona Wallace  William Graham
As children, we’re taught that when we make a mess, we are responsible for cleaning it up. I’m sure my own parents would say it took me longer than they would have preferred. What a mess! Do you think these toys will climb back on the shelf by themselves? Forty years later, as a father of four children, I find myself sounding frighteningly like my parents, as I chastise my own children for their lack of tidiness.

What could all of this possibly have to do with the Center for the Environment’s Campaign for Clean Air? Well, as a community and region dealing with significant problems related to ground-level ozone pollution, we find ourselves in a bit of a mess. Air pollution is negatively affecting our health and our economy, but who made this mess and who is responsible for cleaning it up?

In reality, we are all part of the problem and must all be part of the solution. In this newsletter and on our website at campaignforcleanair.org, you’ll find numerous success stories of people and businesses that have come to the realization that something must be done...and they are doing it! The electric utility companies are doing their part by reducing nitrogen oxide emissions from coal-burning power plants by 77%. They must do more. Industry is doing its part by upgrading facilities and equipment to comply with tighter federal emissions standards. They must do more. We, as citizens, are doing our part by driving less and driving more fuel-efficient vehicles. Still, we all must do more.

The mission of the Campaign for Clean Air is not only to educate the citizens of our community and region about prevalent air quality problems, but also to empower them to take steps to address the problem in their daily lives, business practices, and elsewhere. Together, we can clean up this mess!

For every dollar of support that you provide the Campaign for Clean Air, the Center for the Environment draws down four dollars of federal funding designated for air quality improvement for this important initiative. If you would like to invest in the fight for clean air by becoming a corporate sponsor of the Campaign for Clean Air (See logos of our sponsors on the left.) please contact Jay Laurens, Director of Resource Development at 704-637-4295 or jlaurens@catawba.edu. If you would like to make an individual donation, simply make your check payable to: The Center for the Environment at Catawba College - Campaign for Clean Air and mail to: Center for the Environment at Catawba College, 2300 W. Innes St., Salisbury, NC 28144. Thank you.