Inside You’ll Find:

- Family Powers Car with Sun: Page 3
- What Can You Do to Decrease Pollution?: Page 5
- Local Restaurants Serve Local Foods: Page 9

Be a good environmental steward. Please share this newsletter with a friend!
Center Wins N.C. Mobile CARE Award

The Center for the Environment at Catawba College received one of four 2012 N.C. Mobile Clean Air Renewable Energy (CARE) Awards from the N.C. Solar Center on April 20 at the 9th Annual Sustainable Energy Conference in Raleigh. The Center’s Campaign for Clean Air was the winner in the Policy/Organization Innovation category.

The awards recognize initiative and leadership efforts at improving North Carolina’s air quality through alternative fuel, advanced transportation technologies and fuel economy practices. The N.C. Department of Transportation sponsored the sixth annual Mobile CARE awards.

Elaine Lojack, program coordinator of Triangle Air Awareness, nominated the Center for the award. She noted that the Center “serves as a leading example of how an organization dedicated to improving air quality can have a considerable impact through varied and innovative educational initiatives and the facilitation of emission reduction programs.

The Center’s “intentional effort to help others replicate programs is particularly noteworthy,” she said in the nomination document.

Center Executive Director John Wear said it was gratifying to learn that the Campaign for Clean Air had received statewide recognition for its extraordinary efforts. “Former Air Quality Outreach Coordinator Sheila Armstrong and our staff have worked tirelessly to educate our citizens about the causes and effects of air pollution and to show them how they can help mitigate this pollution,” he said. “To receive recognition from other professionals in the field is a tribute to our staff’s innovative ideas and ability to tailor programs to various audiences.”

Juanita Teschner

Campaign for Clean Air Website Now Contains Toolkit for Gas Cap Events

A Gas Cap Check and Replacement Event is a great way for organizations and community groups to save money on fuel and help people reduce harmful emissions that pollute the air.

One leaking gas cap can release up to 30 gallons of gasoline — equal to more than $140 based on current fuel costs — along with 200 pounds of evaporative emissions. Vehicle emissions are the main cause of ground-level ozone, which is a significant air pollutant.

A new toolkit on the Center for the Environment’s campaignforcleanair.org gives instructions on holding a Gas Cap Check and Replacement Event for organizations that have the resources to purchase their own cap tester equipment as well as community groups interested in partnering with the Center’s Campaign for Clean Air staff to schedule one and receive training on using the equipment.

The estimated cost of equipment and information on how to order and operate it is also included in the toolkit posted on the Campaign’s website — www.campaignforcleanair.org — under the tab, “Check It Out.”

Kathy Chaffin
Our Cumulative Actions Will Make a Difference in the Quality of our Air

By John E. Wear, Jr.

People often approach me with questions about what they can do to live on this earth with a lighter footprint. I usually tell them it will depend on their particular situation or stage in life, but essentially it’s a matter of taking one step at a time.

Solving the air pollution problem—or any problem, for that matter—never has just one solution. For some, bicycling or walking to work is a way to contribute to reducing harmful emissions. For others, it may be using solar power to heat their businesses. For still others, it is a commitment to support a neighborhood design that is more efficient and less likely to cause traffic congestion, which contributes to air pollution.

The point is if we all do something, the cumulative effect really will make a difference. All of our small steps begin to solve the problems. I like what Duane Elgin wrote in his book, Voluntary Simplicity: “Small things that may seem unimportant in isolation are of transformative significance if adopted by an entire society.”

Let’s look at 10 ways you can reduce harmful emissions that cause air pollution.

1. Install better insulation in your home.
2. If you’re building a new home, go green from the start.
3. Use less hot water when you shower.
4. Drive a hybrid or electric vehicle.
5. Bike or walk to work.
6. Purchase energy-efficient appliances.
7. Support your municipality’s efforts to design neighborhood roads for more efficient vehicular passage.
8. Support easy access to bus service or ride the bus.
9. Set your thermostat higher in the summer and lower in the winter to save energy.
10. Don’t idle your car when you are picking up your children at school or when you go to establishments that have drive-through lanes.

All of these—and more—play a significant role in lightening our footprint and helping curb air pollution. The choices are not going to be the same for everybody, but all are important. And the cumulative effect of all these small steps can create the change we need to see in the world. They all contribute to living more sustainably and lessening our impact on our air and the living things around us.

For more, visit campaignforcleanair.org

Campaign for Clean Air
Kathryn Clifton of Salisbury are sold on electric cars and solar power. That combination allows them to run their Nissan Leaf with sunshine. “If we were buying the electricity to run the car, it would be between 2 and 3 cents a mile,” Ken Clifton says. “That would mean we could go 250 miles and it would cost us $5.”

But savings on fuel was not the only reason Clifton decided to purchase an electric car. Actually, make that two electric cars. His wife commandeered the first so he ordered a second Nissan Leaf, which arrived early this year.

He and Kathryn, who graduated from Catawba College with a degree in environmental science, know that the Charlotte-Salisbury-Gastonia metropolitan area is ranked 10th worst in the nation for ozone pollution so they wanted to get a non-polluting vehicle.

“I don’t think there’s anything we do on the planet that’s worse than a car,” Clifton says. “It’s so resource intensive. You’ve got oil to change, oil filters, air filters, spark plugs, wires, belts, hoses, antifreeze. It’s this hole that you keep throwing money down.”

The owner’s manual for the Leaf noted that the only thing the electric car requires between 0 and 98,000 miles is to measure the brake pads, rotate the tires and check the cabin air filter.

Granted, electric cars require charging stations, but the Cliftons took advantage of Duke Energy’s pilot program to install a charging station for free. Had they paid for it themselves, it would have cost $2,700.

Their 24 solar panels made the deal even sweeter. “We make our electricity for the whole house,” Clifton says. By using net metering, they send any electricity they don’t use back to Duke Energy during the day, making their meter run backward. Then at night, they use the stored energy.

The day they brought the car home, they plugged it into the charging station. “The house was drawing 600 watts of electricity, the car was drawing 3,700 watts of electricity and my solar panels were producing 4,700 watts, so we were running the house, charging the car and still sending power out to other customers here in the neighborhood that are hooked up to Duke Energy,” he says.

Clifton figures that nine-to-10 solar panels would provide enough electricity to power an electric car. A full charge, which takes 3 ½ hours, lasts about 100 miles.

Juanita Teschmer
High Ozone Levels in Seven Piedmont Counties

The more than 100 people who attended a January presentation at the Center for the Environment facility learned they had something in common: high ozone levels.

They heard about the results of a Piedmont Carolina summer air monitoring study conducted by the Center for the Environment through its Campaign for Clean Air and Dr. Cindy DeForest Hauser, associate professor of chemistry at Davidson College.

The team analyzed data from sample collectors placed in the backyards of homes in Rowan, Cabarrus, Iredell, Davidson, Mecklenburg and Gaston counties in North Carolina and York County in South Carolina over an eight-week period from May 31 to July 26.

Dr. John Wear, the Center’s executive director, noted that the Center engaged in the study to determine if counties that currently do not have N.C. Division of Air Quality (NCDAQ) ozone monitors have ozone levels similar to the levels in Rowan and Mecklenburg, which do have monitors.

“Often people in the surrounding counties are under the misconception that ozone is a local issue and not a regional issue,” he said. “What we found was that generally the [ozone levels] were very similar if not higher in the counties without NCDAQ monitors. I think that’s really important because, in our own outreach, we find that a lot of people in these surrounding counties don’t realize there is an issue.”

The American Lung Association (ALA) has listed Rowan and Mecklenburg as having some of the worst ground-level ozone in the nation. The ALA’s 2011 State of the Air Report identified Rowan as being 17th in the nation for ozone pollution in the counties monitored. Those rankings might have been different if the other counties in the study had NCDAQ ozone monitors. Charlotte-Gastonia-Salisbury ranked as the 10th worst metropolitan area for ozone pollution.

While the study revealed that ozone levels were on average the same in all seven counties, a week-by-week analysis demonstrated that ozone levels in Cabarrus appear to be higher than levels in Rowan – and ozone levels in Iredell appear to be higher than levels in Rowan and Davidson. So when people in the counties without monitors hear of ozone level warnings for residents of Rowan and Mecklenburg counties, they need to take the same precautions.

Kathy Chaffin

---

Center Offers Numerous Gas Cap Checks

The Center for the Environment’s Campaign for Clean Air has offered gas cap checks at numerous area events during the past two years. Cars with leaking gas caps receive new caps free of charge. Campaign for Clean Air staff and volunteers offered both an informational display and gas cap check at the 2012 Viva Verde Earth Fest on April 14.
What Can You Do to Decrease Air Pollution and Live Sustainably?

Five panelists shared ideas early this year on what residents can do to decrease health risks caused by high ozone levels. They represented many of the counties in the summer air quality study the Center conducted with Davidson College.

Dr. Chris Magryta:

*Eat healthy to combat the harmful effects of pollutants.*

Dr. Chris Magryta of Salisbury Pediatrics noted that people need to eat healthier foods to detoxify their bodies, which removes pollutants. There are supplements and medicines that people can take to help with this, he said, “but they’re not nearly as effective as eating things that are healthy and will help our bodies through this.”

Robert Van Geons of RowanWORKS:

*Take steps daily to live sustainably.*

Robert Van Geons of RowanWORKS, the Salisbury-Rowan Economic Development Commission, described the effort to improve air quality as “a journey of many steps.”

“If we each did one thing to be more energy-efficient this week,” he said, “if we had one conversation with someone about these issues each week, if you voted with your pocketbook one time to support green technology or a better alternative …” People can take small steps toward making their homes more sustainable.

“As we start down the path [of sustainability] we need to do it together.”

Dakeita Vanderburg-Johnson of Healthy Cabarrus:

*Help others become change agents.*

Dakeita Vanderburg-Johnson of Healthy Cabarrus compared teaching people to eat healthier foods and working to improve air quality to educating a child. “The child will try something and maybe even succeed one time,” she said, “and then the next time, the child is not successful.”

Using herself as an example, Vanderburg-Johnson said she has been speaking to organizations about the importance of not idling their vehicles for the past year in her role as chair of the Cabarrus Sustainability Council.

“And I pull up in my driveway and I’m on my cell phone,” she said. “I’m sitting there and I’m finishing my conversation and who drives up? My husband, who already says I’m a tree hugger, and he busts me because I’m sitting there idling.”

“But you know what? I think about it now, and when I pull into the driveway on the cell phone, I turn the car off. So it’s just about education, I think particularly when it comes to air quality.”

Rebecca Yarbrough of the Centralina Council of Governments:

*Committed citizens can change the world.*

Rebecca Yarbrough of the Centralina Council of Governments quoted the late Margaret Mead, an American cultural anthropologist, who said, “Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.”

Yarbrough said turning off your engine when you’re waiting for your child or walking instead of driving are examples of the kinds of actions everyone can take to help improve air quality. “You know, we are so wired to do certain things certain ways,” she said. “If you just start to interrupt that wiring at certain key points and be very intentional about it, pretty soon those habits will change.”

Dr. Cindy DeForest Hauser of Davidson College:

*Ask questions and seek solutions.*

Dr. Cindy DeForest Hauser, the associate professor at Davidson College who presented the results of the summer air monitoring study, shared what she tells her students as they walk out of the door at the end of each semester: “The main thing is I want them to ask lots and lots of questions of everybody ... of everything, regardless of what the topic is,” she said. “The other thing I tell them ... is to always be looking for solutions.”

*Kathy Chaffin*
Center and GEO Team Showcase Alternative-Fuel Vehicles at CatawbaPalooza

Hundreds of Catawba College students, faculty and staff had the opportunity April 20 to view alternative-fuel and energy-efficient vehicles as well as a plug-in station for electric cars and trucks. It was part of the students' week-long spring celebration called CatawbaPalooza.

The Center for the Environment's Green Education Outreach (GEO) Team of Ambassadors and the Center's Campaign for Clean Air hosted the Vehicle Showcase, highlighting Earth Day and ways to live more sustainably.

The exhibit included a Ford Fusion and Toyota Prius owned by Cloning Toyota, two electric Nissan LeafS owned by Ben Mynott Nissan and Freirich Foods and a Chevy Volt owned by Digna Freirich. Paul Freirich, president of Freirich Foods and a 1994 Catawba graduate, gave rides to students who expressed an interest in electric cars.

Air Quality the Centerpiece for Many Student Programs

The Center for the Environment takes an active role in the education of area young people by providing multiple opportunities for learning.

The Center's programming coordinator, Amanda Lanier, and others often speak to school groups. These recent examples demonstrate the types of programs the Center offers:

- Lanier taught middle and high school students about current environmental issues during the annual Envirothon, which brings students from 12 area counties to the college.

- She talked to third and fourth graders at Overton Elementary School about creating renewable energy by drawing on examples in the natural world.

- She also spoke to students at Salisbury Academy about how the preservation of habitat, like Catawba's 189-acre ecological preserve, helps improve air quality.

Amanda Lanier teaches Envirothon students about current environmental issues.
Solar Panels on City of Concord Parking Deck

Three solar panel canopies installed on top of the City of Concord’s Downtown Municipal Parking Deck are expected to generate enough electricity each year to power six 3,000-square-foot homes.

Funding for the $475,500 project was provided by a $245,482 grant from the N.C. Energy Office and private investor Stefan Gleason, owner of Hyperion Energy LLC.

Hyperion Energy will pay the city $600 for the first year and $300 every year thereafter for allowing the more than 250 solar modules that make up three carport-style units on the parking deck.

Steve Osborne, deputy director for planning and neighborhood development, described the solar panel canopy as “a laboratory for renewal energy.” He noted that it reduces greenhouse gases by producing renewable energy from the sun instead of using fossil fuel.

The system was installed by Argand Energy Solutions LLC of Charlotte. Chatham Olive, vice president of Business Development and Community Relations for Argand, said the price of installing solar energy has dropped dramatically, making it more feasible than ever.

When compared to the never-ending rise of prices for energy produced from polluting fossil fuels,” he said, “solar is now a no-brainer. Why not invest in clean energy from the sun when you can lock in your energy cost for 30 years at today’s prices?”

Kathy Chaffin

Seniors Express Concern over Air Quality

“We breathe, it’s a concern.”

That’s what Fran Duggan of southern Cabarrus County had to say about local air quality at the annual Senior Health & Wellness Day on March 14 at the Cabarrus Arena and Events Center.

Her friend, Nancy Paris of Concord, said she was also concerned about air quality when she stopped by the Center for the Environment’s Campaign for Clean Air display.

Paris, who has asthma and allergies, said she stays inside on days with high ozone warnings and doesn’t understand why the government is not being more proactive about improving air quality.

“They keep saying, ‘Well, we need to let industries do what they need to do so we’ll have more jobs,’” she said. “Well, it doesn’t do any good to have more jobs if we’re dying because we can’t breathe and have poor quality of life.”

Frances Bingham of Concord also looked over the air quality information at the Campaign for Clean Air exhibit table. She was diagnosed with asthma in 1982 and said she restricts her outdoor activities on high ozone days. “I have to worry about breathing,” she said. “When it’s hotter, I’m more guarded.”

Center for the Environment interns Erin Blackburn and June McDowell noted that more than 200 people stopped by the exhibit table.

Kathy Chaffin
Bread Riot Connects Farmers with People Who Want Local Foods

A Rowan County local food advocacy group helps connect farmers with people who want to buy locally grown food, thereby boosting the local economy and improving air quality by reducing the amount of fuel emissions released when transporting food longer distances.

Capri Briexy, president of the board of directors of Bread Riot, says the group also does educational outreach in the county. Started several years ago, Bread Riot reorganized a few years back and has grown considerably since receiving its nonprofit status last year. About 400 people have signed up to receive regular emails. One of the services offered by Bread Riot is bulk meat purchases. The group negotiates with a local farmer to purchase a beef cow or hog and then sells shares to people.

The organization also offers an egg subscription program with varying prizes depending on the number of dozens ordered and a winter harvest program. This could include vegetables, bread, eggs, goat cheese, “anything that we can find locally that is available during that time,” says Briexy.

The cost averages about $25 a basket, she said, and the program usually runs from the end of November through the beginning of March. The organization does not offer a summer program because people can purchase locally grown produce at the local farmers’ markets.

Bread Riot also partners with the Center for the Environment on events, such as the March local food tasting and screening of “Dirt! The Movie” followed by a panel discussion at the Center facility.

The local food tasting included: lettuce and tomatoes from Fiddlehead Farms in Faith; carrots, onions, collards and kale from Muddy Boots Farm in Mount Pleasant; popcorn from Barbee Farms in Concord; cheese from Goat Lady Dairy in Lexington, Sandy Creek Farms in Lexington and Ashe County Cheese in West Jefferson; flour from Hoffner Organic Farms in Mount Ulla; organic pizza from Fair Meadow Bakes in Mount Pleasant; berries and green peppers from Wilson Family Farm in Salisbury; eggs from Barne Farms in Salisbury; elk from Tom Dixon of Charlotte; and chicken broth from Laughing Owl Farm in Richfield.

For more information on Bread Riot, log onto its website at breadriot.org.

Kathy Chaffin

Farm-to-Table Restaurants Part of Local Foods Movement

The growing number of restaurants that promote their farm-to-table menu is an indication of more and more North Carolinians want to eat locally grown food.

This is all part of the “locavore” – a term describing someone who wants to buy food that is grown locally and not transported long distances – movement, which helps local farmers and the local economy while reducing the fuel costs of transporting produce and meat. This, in turn, helps local air quality by reducing the amount of fuel emissions.
More and more restaurants in Rowan and Cabarrus counties are making efforts to serve locally grown food.

Heather Hopkins-Teeter, owner/chef of Sweet Meadow Café in Salisbury, and John Blumreich, executive chef of Restaurant Forty Six at the North Carolina Research Campus in Kannapolis, both say they try to buy locally grown food whenever possible and that more and more customers seem to want locally grown food.

"I think it's something that people are starting to think about more often these days," Hopkins-Teeter said, "so I think it does have an effect on my business."

Blumreich said he thinks people prefer locally grown food "not from a flavor standpoint or a taste standpoint but from a 'support the community' standpoint and doing your best to reduce gas emissions from transportation."

**Sweet Meadow Café**

Hopkins-Teeter says she buys 75 percent of produce locally during the growing season. The produce is usually grown within a 50-mile radius. "I have an opportunity to buy something that's North Carolinian vs. Floridian, I'm going to buy North Carolinian inside that 50-mile radius," she says.

Though she typically purchases vegetables and fruits from the Salisbury Farmers’ Market, Hopkins-Teeter said she plans to reach out to local farmers to discuss purchasing produce in larger quantities.

When purchasing fruits and vegetables, Hopkins-Teeter said quality is a big factor. "But so is 'How easy is it for me to get it?' and 'How much is it going to cost?'" she says.

**Restaurant Forty Six**

Blumreich says the percentage of locally grown produce used by the restaurant is not that high at this point, but he hopes to use more depending on what is available at local farmers' markets.

"The price will drive a good bit of what we do," Blumreich says.

The certified Angus beef used by the restaurant is purchased regionally, he says, though Forty Six has on occasion purchased meat from a farm in Rowan County.

Forty Six has a reputation for its healthy food (the restaurant’s unique name comes from the number of chromosomes in the human genome). Dale Food Company chairman/owner David H. Murdock - the visionary behind the N.C. Research Campus - decided to open the restaurant to serve healthy food not only to its employees, but the people of Kannapolis and surrounding areas as well.

At present, Blumreich purchases more locally grown collards and sweet potatoes than anything else. He also purchases local tomatoes and squash and plans to purchase even more.

Says he: "It's definitely a trend."

*Kathy Chaffin*
North Carolina is one of 16 states to receive a grant from the U.S. Department of Energy for plug-in electric vehicles and charging stations.

The $500,000 grant — administered by the Centralina Council of Governments in Charlotte — will fund the development of plug-in electric vehicle readiness plans in four regions across the state: Charlotte (which includes Rowan and Cabarrus counties), Asheville, the Research Triangle and the Piedmont-Triad.

“North Carolina is a leader in plug-in electric vehicle technologies,” said Sean Flaherty, who will oversee the state’s development of the plans. “Investing in plug-in electric vehicles and alternative fuels is not only good for our environment, but also improves the state’s local economies by creating jobs and attracting manufacturers…”

The cost of fueling electric vehicles is literally pennies per gallon, according to Flaherty.

Charlotte Purchases Electric Cars, Installs Charging Stations

The city of Charlotte has purchased seven electric cars and one hybrid for use in some of its departments and has installed 26 electric vehicle charging stations at seven locations around the city.

The pilot project is being undertaken to determine the practicality of adding electric vehicles to the city’s fleet and the level of public demand for charging stations in the city.

The city now has seven all-electric Nissan Leaf vehicles and one Chevrolet Volt, a hybrid with a gasoline engine that kicks in when the electric battery runs low. Officials estimate that the city will save 480 gallons of fuel per year on each vehicle.

Paula Thomas explains Project Get Ready:

Solar electric-vehicle charging station

Raleigh a National Leader in Preparing for Electric Vehicles

When it comes to electric vehicles, Raleigh is not only leading the state of North Carolina; it was one of three cities in the nation selected four years ago to set the trend in preparing for the new mode of transportation.

Rocky Mountain Institute in Boulder, Colo., [an internationally known organization that is partnering with the Center for the Environment on its National Environmental Summit for High School Students] approached city officials in Raleigh, Indianapolis, Ind., and Portland, Ore., to begin exploring and promoting electric vehicles (EVs), according to Paula Smith Thomas, sustainability manager for Raleigh.

Today, Raleigh has nine converted Toyota Prius cars, two electric vehicles, one hybrid bucket truck, several hybrid electric buses and numerous Neighborhood Electric Vehicles. The city has 18 public charging stations with a total of 31 plugs. Thomas said EV owners can locate available charging stations across the nation on their smart phones. “In some of the cars,” she said, “you can push a button in the car and it identifies where the nearest stations are.”

What is happening with EVs now, Thomas said, can be compared to what happened when Ford introduced the first internal combustion engines. “There were no gas stations back then,” she said. “There were no roads. These cars displaced horses and buggies, and people were laughing at them, saying, ‘Those horseless carriages are never going to catch on.’”

“That whole culture, that whole infrastructure developed on the change in transportation, the evolution and revolution of it back in the late 1800s, early 1900s, that’s what’s happening now.”

Four Solar-Powered Charging Stations in Asheville Area

Of the million electric vehicles (EVs) projected to be on American roads and highways by 2015, 2,000 are expected in the five-county Asheville metropolitan area, according to Stan Cross, co-founder and principal of BioWheels

(For more on Promoting Electric Vehicles, go to page 11.)
The Center for the Environment Team Participates in Earth Day at Delhaize America

By Dolly Farrell

We were pleased to be among the 40 vendors and non-profit organizations that participated April 20 in the first Salisbury-based Earth Day celebration for Delhaize America. (Food Lion is a subsidiary of the Delhaize Group.) The Food Lion Charitable Foundation has long supported the Campaign for Clean Air’s efforts and recently completed their multi-year pledge of $10,000.

The Center distributed materials on the Campaign for Clean Air, including ozone season magnets, brochures and bookmarks.

A Sustainability Manager for Delhaize America, Gina Rye, and her team developed the theme for the event: “Healthier Products, Healthier People, and Healthier Planet.”

The event was held on the lawn of the Customer Support Center in Salisbury and was designed to provide a fun and educational experience to get more corporate associates engaged and active in promoting better health for themselves, their families and the planet. Several hundred people were in attendance.

To honor the spirit of Earth Day, it was a Zero Waste event, which means exhibitors were encouraged to avoid creating non-recyclable waste by using reusable, recyclable or compostable utensils/products (no plastic was used for serving).

Our congratulations to Delhaize and Food Lion for their commitment to people and the planet.

Delhaize America Sustainability Managers Gina Rye and George Parmenier

Promoting Electric Vehicles

(Continued from page 10)

Responsible Transportation Solutions (RTS). “There’s forecasted to be about 20,000 EVs statewide,” he says.

His company – plus the North Carolina Green Business Fund, Advanced Energy, City of Asheville, Buncombe County, the University of North Carolina at Asheville and the Land of Sky Regional Council of Governments, which serves Buncombe, Henderson, Madison and Transylvania counties – collaborated on a project that installed four solar-powered charging stations last winter in the Asheville metropolitan area.

Keith Bamberger, information and communications specialist for the N.C. Division of Air Quality’s regional office in Asheville, said the solar integrated stations – called “Brightfields” – annually collect enough energy to offset 90,000 miles of gasoline-powered vehicle travel by generating the electricity and sending it back to the grid.

Kathy Chaffin

EVs Help Mitigate Air Pollution
Electric vehicles (EVs) emit no tailpipe pollutants. Therefore, they help our air quality.