‘This is What I Want To Do’

Junior Sarah Simmons takes a personal interest in the Clean Air Initiative spearheaded by the Center for the Environment.

She has served as an intern for the project, researching other initiatives throughout the country, talking with officials in North Carolina about the issue, going to conferences and coordinating student efforts at the Clean Air Lecture Series. "I have gained so much," she says. "I have never been a part of anything that has brought so many people together."

She heard Sheila Holman of the N.C. Division of Air Quality speak about the life-long damage that children can suffer from repeated respiratory infections brought on by air pollution. That fact made the initiative seem even more important to Simmons.

The internship has clarified what she wants to do with her life. "I definitely want to work in air quality and bring people together to combat the problem," she says.

An internship also set Sean Bloom on his career path. He worked for the N.C. National Estuarine Research Reserve in Beaufort where he did GPS mapping of the Rachel Carson Estuarine Reserve, conducted educational tours at Currituck Banks and Zekes Island and did research on horseshoe crabs and tamarisk trees.

"I knew going in that I had two conflicting interests, education and research," Bloom says. "This helped me decide what I want to do."

Research emerged as his preference as the internship progressed.

The issue of the Salisbury Post (continued from page 4)

Center for the Environment Launches Clean Air Initiative

The Catawba College Center for the Environment recently launched a Clean Air Initiative for Rowan and the Central Piedmont.

The Catawba College Center for the Environment Launches Clean Air Initiative

McCrory: ‘We’re In This Together’

Fresh from his trip to the Super Bowl to pull for his home team, Charlotte Mayor Pat McCrory said don’t go there — Houston, that is.

He and a friend drove from one side of the city to the other, and it took an hour-and-a-half. "I don't want us to become another Atlanta," he said.

McCrory gave his description of Houston as a reminder for his Salisbury audience at Catawba College Wednesday night.

John Wear, Susan Klutiz, Bob Knott, Gus Andrews, Pat McCrory

See CLEAN AIR, page 7

See McCrory, page 9
Message from the Director

If you want to see the mission of the Center for the Environment in action, come to the campus and watch our environmental science students. I cannot tell you the number of times that visiting students have commented on how they work together, how they welcome and include everyone in their team efforts. Other faculty have noticed it, too. It’s impressive and very gratifying.

The newly established Campus Greening Committee, which is a part of NatureSAFE (Student Activists for the Environment), has opened its doors to the entire student body - a good example of broadening the base, welcoming all in this important effort.

I asked a couple of students recently why they thought this collaborative and inclusive atmosphere permeated all their endeavors. They were quite clear about it: “Because we’re all working together to protect and improve the environment.” That, of course, gets to the heart of the mission of the Center. Protecting and improving the environment is a good stewardship. It means working to preserve open space or improve water quality or foster strategies to improve the air we breathe - all efforts in which the Center has assumed a leadership role.

The reason the Center has been so successful with partnerships rests in that unifying force: We are all working to be good stewards.

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Preserve...

(continued from page 3)
The Greening of Catawba

These freshmen mean business. As members of Catawba's environmental activist club NatureSAFE, Shannon Mayo of Emerald Isle and Erica Mitchell of Wilmington, Del., want the college to get greener and greener. "We are working on creating a more environmentally friendly campus," says Mayo.

And they want everyone to get involved—not just environmental science majors. "One of the major reasons we are trying to get the entire student body involved is so they can pass on that information to others. Then others can get involved and passionate about the environment as well," Mayo says.

Mayo and Mitchell are investigating a number of ways to make the campus greener. One is the Lug-a-Mug campaign whereby students take their own mugs to McCorkle's, thereby avoiding the use of cars. A third is to promote energy-efficient light bulbs throughout the campus. Other students are spearheading a recycling program and an effort to compost waste from the cafeteria.

Catawba President Robert Knott says the students should be applauded for their efforts to promote green initiatives on campus. "It is part of the example that the college should be setting as an educational institution that takes seriously the environmental concerns with which we are confronted," he says. "I am personally excited about what the students are beginning to do and look forward to working with them to help make Catawba College a model for others to emulate."

Mitchell notes she came to Catawba expecting to get involved in issues like this. "It is necessary to get everyone else passionate about making this campus greener and cleaner and more environmentally friendly," she says. "I believe this is a great way to do it."

Catawba College recently approved an endowment campaign that promises to significantly impact the Center for the Environment.

The impetus for the effort, which is now in its exploratory stage, was the college's renewed commitment to upgrade its academic program and the opportunities it offers its students. Catawba President Robert Knott select- ed nine colleges in the Southeast—instances like Presbyterian and Wofford in South Carolina, Roanoke in Virginia and Rhodes in Tennessee.

The consensus was that Catawba would like to be on a par with these institutions. Their endowments, however, average about $120 million, compared to Catawba's current endowment of $30 million. "Clearly, if we are going to have the rich academic program we want and need and if we are going to be able to recruit the students we want, we must grow the endowment," Knott says.

He points to four centers on the cam- pus that would benefit greatly from an endowment campaign. All are not only parts of academic programs but also links between the college and the community: the Center for the Environment, the Lilly Center for Vocation and Values, which has received initial funding, Center for Foreign Study and Travel, and a Center for the Arts. "They clearly provide enrichment opportunities for our students, such as the ecological preserve and the sustainable facility that houses the Center for the Environment," Knott says. "But they also connect what the college has to offer with what the community needs."

Knott calls the Clean Air Initiative "a wonderful example" of such an effort. "We do not have the resources to sup- port projects like this, but we can serve as a catalyst to help energize the com- munity around environmental issues," he says. "We would like to endow the Center for the Environment so we are not placed in the position of taking resources away from our instructional program or other services. An endowment for the Center would sup- port its projects and therefore contribute to the undergraduate education rather than drawing resources away from it."

While the goal for the endowment campaign will not be set until May of 2005, the sum of $5 million has surfaced as a possible sub-goal for the Center for the Environment's portion of the effort. Knott is hopeful that individuals will be interested in endowing particular pro- grams within the Center. These include scholarships, maintenance of the sus- tainable facility, community initiatives, public education through both print and online publications, travel and study opportunities for students and campus initiatives, such as the Greening of Catawba.

Center Director John Wear echoes Knott's hopes that people will see the endowment campaign as an opportunity to support efforts that both enrich the students' education and improve the environment.

"Our Center and our students have been privileged to work in this commu- nity and this region on efforts that have a far-reaching effect," he says. "Through our partnerships, we have already accomplished a great deal. With addi- tional funds provided through an endowment, we can have an even greater impact on issues involving the stewardship of the environment."

Endowment Effort to Impact Center Activities

The Delights of the Preserve

The clicking of chorus frogs. The call of the prothonotary warbler. The sight of a Falco ararutus butterfly. A casual stroll on Catawba's 189-acre ecological preserve nets a host of sights and sounds for the discern- ing visitor.

Before the first tender green leaf appears on the trees, thousands of chorus frogs assault the ears with their Geiger-counter clicks at every pond and puddle. Yellow-bellied sap-suckers and brown creepers flit through the trees in the winter and early spring just as blue-headed vireos and blue-gray gnatchatchers return from the tropics.

"We have the greatest diversity in the spring," says Dr. Steve Coggin, chair of the Biology Department. "You can see both the winter birds and those that are passing through." Dr. Joe Poston, assistant professor of biology, hopes to see a protho- notary warbler this year. "They are cav- ity nesters, which is unusual in war- blers," he says. "They specialize in swamp habitat, and our swamp forest in the preserve is just getting old enough to support and attract them."

With the bright yellow on their head and breast and dark green on...
Students Learn about Air Quality Issues

The Center for the Environment's leadership role in the Clean Air Initiative for Rowan and the Central Piedmont has prompted the Environmental Science Department to offer a class on air quality.

Students are learning about the effect of poor air quality on people's health, but that's not all. They are also learning how to develop an action plan in the community to change public policy and human behaviors in ways that will improve the quality of the air. And they get to see an action plan take place as the Center for the Environment spearheads a county-based Clean Air Initiative.

Dr. George Drum, chair of the Environmental Science Program, and Dr. John Wear Jr., director of the Catawba Center for the Environment, are team teaching the course, which integrates the vision of the college with the mission of the college. "This has been our vision all along," says Wear, "to bring together education and opportunities for making a difference in the community, the region and beyond."

Sarah Simmons, a senior environmental science major, notes that the class is a real-life example of how to have a positive impact in the community.

"We realize that just because we live in a rural community doesn't mean we are not being affected by ozone pollution," she says.

The class focuses on the science of the issue -- how poor air quality affects the immune system, why the region is experiencing an epidemic of asthma, what the consequences are for heart disease, cancer and pregnancy. It also shows the students how air quality commissions are formed, who the stakeholders are and how the public can be educated about environmental issues.

"This is not air quality from a textbook," Wear says. "The students get to witness how to mobilize forces in a community. They get a firm, well-grounded and well-rounded background that can help them in their communities when they graduate."

In addition, the students attend lectures by some of the leading experts in the field. The Center is hosting a Clean Air Lecture Series and is making plans for an Air Quality Conference next year.

"I can't imagine a better kind of class experience," Drum says. "I am just amazed at the way the discussions go and the opportunities the students have for learning. This is something they can really get their teeth into."

Opportunities Abound for Funding Center Initiatives

While Center Director John Wear is energized by the multiple projects the Center for the Environment has undertaken in recent months, he is keenly aware that it will take more than a stalwart commitment on the part of the Center's staff, students and volunteers. It will also take money.

"A number of people have asked me how they can support the program," he says. "Making contributions to particular initiatives or projects is clearly an important way to show support."

Individuals who wish to support a particular project may direct their contributions to any number of projects, including the Clean Air Initiative, need-based scholarships for ecological study trips, environmental science scholarships, ongoing efforts on the ecological preserve and wildlife refuge, maintenance endowment for the Center facility, greening of Catawba projects and general fund for Center for the Environment ongoing operations.

Anyone wishing further information may contact Wear at 704-637-4727 or jwear@catawba.edu.

Tree Canopy Important for Air, Water Quality

A healthy tree canopy can positively impact the quality of our air and water. That was the message Gary Moll, vice president of American Forest's Urban Forest Center, brought to the Catawba Center for the Environment April 7. He was the featured speaker in the Center's Clean Air Lecture Series.

The message was reinforced in April by the Charlotte/Mecklenburg area's Grant's Creek. A 2003 ecosystem analysis by American Forests revealed that Mecklenburg's urban forest removes 17.5 million pounds of pollutants from the air each year. American Forests calculated that amounts to $43.8 million in annual monetary benefits.

However, the Central Piedmont and the Charlotte/Mecklenburg urban forest removes 17.5 million pounds of pollutants from the air each year.

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Of Morays and Manatees: Studying Coral Ecosystems

The study of coral reef ecology goes far beyond the textbook at Catawba College. It goes into the depths where yellow-tailed snappers and glassy sweepers glide around the coral reefs. It brings proficiency in identifying species through real, live, see-for-yourself experience. It brings amazement as well as understanding.

Students left March 5 for the Florida Keys to witness an ecosystem that few ever see. All had to be certified as scuba divers so they could swim among the fish that inhabit the reefs.

Some who had been on the trip before talked recently about their experiences. A three-foot-long moray eel shadowed Krista Yantis, a senior from Casstown, Ohio, as she explored the reefs. The different species came to life for her as she swam among them. "By learning the fish and animals, it gives you a better appreciation for what you're seeing," she says. "Seeing the sea turtle was awesome."

Yantis notes that she had an appreciation for coral reef ecology before she went on the trip. "But being able to see it opens your eyes more," she says. "It makes you realize that this is really important. When I see someone standing on coral, I think, 'Oh, no,' because just touching the coral makes it die."

Junior Sarah Simmons served with David Burman as a teaching assistant for the course this year. On previous trips, she and others helped the Reef Ecological Education Foundation (REEF) survey different species in that ecosystem. Their discoveries were added to the REEF database, which is accessible to people all over the world.

Many images stand out in her mind from her previous trips, but her five-minute encounter with a baby manatee in the Crystal River will last for a very long time. The size of the fish she saw was also memorable. "When I saw the fish in the book, I didn't always think to look at the length," she says. "Witnessing the long and slender trumpet fish brought that fact home. "I wasn't expecting it to be two feet long."

Senior Stephen Long found the Everglades fascinating as well. "Tourists obviously enjoy the area, but you really appreciate it from the scientific point of view," he says. "The wildlife there is untouched. It's an awesome experience."

ENERGY CONSERVATION...

Shirley and John Wear Jr., director of the Center for the Environment, took time Tuesday to recognize Salisbury-based Food Lion, which will receive an Environmental Protection Agency Energy Star Sustained Excellence Award in March for its efforts to conserve energy:

The company has made energy improvements in more than 100 stores through changes in refrigeration, lighting, heating, cooling and tracking of utility uses.

The 550 billion BTUs the company has saved translates to taking more than 40,000 cars off the road, Wear said. It is a big picture concept that involves a unique partnership," says Wear, director of the Catawba Center for the Environment. "It includes a land trust and a college working together, and that partnership allows us to do a better job at both acquisition and also the management of the property."

The Catawba Center for the Environment – in conjunction with the LandTrust – manages the property, which was placed under permanent conservation easement at its acquisition in December of 1999. "It benefits the community and the region while at the same time providing an outdoor laboratory for training Catawba students in wildlife biology and in land conservation and resource management," Wear says. "This land once was a great example of the abundance of wildlife. We would like to restore these sites along the river to what they used to be – a bountiful habitat for all types of wildlife."

The LandTrust has exercised an option to purchase 235 acres south of the original refuge. "We are continuing to work toward closing on that tract by 2007," Walser says. It is separated from the original property by fewer than 50 acres that ALCOA manages for game lands. "We are also having productive conversations with owners of 725 acres of land on the Davie County side of the river. Another 440 acres will be subject to a permanent conservation easement, likely by the end of the year. "Our ultimate vision is that all these properties could in some way contribute towards the refuge idea," Walser says. "We believe there is another 2,000-2,500 acres in that Two Rivers Corridor that could complement what is happening at the original 300-acre site."

This ambitious dream involves a number of partners. Andy Abramson, associate director of the LandTrust, notes that the U.S. Fish and Wildlife Service has assisted with developing long-term management strategies. "The state's Clean Water Management Trust Fund has been a significant partner in assisting with funding for the purchase of multiple tracts," Abramson says. "We are trying to hold the line on water quality in the South Yadkin and Yadkin basin and eventually to improve it through better management practices upstream."

The plan is to restore some natural wetlands to their full health, to replant buffers where necessary and to promote greater sensitivity toward water quality with future timber harvests. "The water we are all drinking is directly affected by the land use on these properties adjacent to the Yadkin and South Yadkin and upstream," Walser says. "We are also having productive conversations with owners of multiple tracts," Abramson says. "We are trying to hold the line on water quality in the South Yadkin and Yadkin basin and eventually to improve it through better management practices upstream."

Eventually, the hope is to incorporate parts of the area into a tri-county greenway. "Our dream is to have a greenway system that runs through Davison, Cabarrus and Yadkin counties lightly touch this area. We can bring people to the edge of the refuge to experience it as part of the greenway."

Wildlife Refuge is first step in preserving as much as 2,500 acres

Some people look at the South Yadkin Wildlife Refuge and see a 300-acre piece of land. Not Jason Walser or John Wear. They see a vision, an idea that may one day encompass 2,500 acres of preserved land. "It is a vision for a corridor and a region that will be conducive to wildlife propagation and will serve the needs of migratory wildlife," says Walser, executive director of the LandTrust for Central North Carolina.

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The N.C. Wildlife Resources Commission, the N.C. Department of Water Quality and the newly created Ecosystem Enhancement Program have also been involved in the project.

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Energy Conservation Means Cleaner Air

(This is an abbreviated version of a story by Mark Wineka which appeared in the Feb. 25 issue of the Salisbury Post.)

The state's energy director says local communities have the power to change how they use and produce energy and doing so will save them money and improve the environment. So what's that have to do with cleaner air? Everything, Larry Shirley told a large gathering at Catawba College Center for the Environment Tuesday night.

If Rowan County plans to grapple with the problem of its poor air quality, it better be prepared to deal with energy issues. The two are inseparable, Shirley said.

Shirley served as the second guest speaker in the Center for the Environment's Clean Air Lecture Series. He focused on how saving energy and tapping renewable energy sources translate to less pollution from things such as smokestacks and cars.

Shirley, relying on audio-visuals throughout his presentation, had suggestions for some of the things local government or business might try to save energy, reduce costs and improve the environment:

- Hire an "energy manager." The savings he identifies through conservation and renewable energy sources will easily pay for his salary and benefits.
- Issue bonds to finance energy improvements.
- Convert fleets to alternative fuels and hybrid vehicles.
- Devise a community energy program.
- Use performance contracting, which uses energy savings to finance more energy efficiency improvements.
- Require the purchase of only "Energy Star" appliances.
- Tap city and county landfills for their methane gas.
- Buy "green electricity" through the NC Green Power program. Businesses, governments and individuals can make monthly contributions on their utility bills to go toward development of renewable energy sources such as the sun and wind.
- Require all government and corporate buildings to use high performance energy efficient guidelines.
- "We've got a lot of challenges ahead of us," Shirley said. But the biggest challenge, he added, is making the connection for people between energy and the environment.

Shirley, former director of the N.C. Solar Center at N.C. State University, spoke often Tuesday of developing solar and wind power, both with zero emissions.

All of the state's utilities are participating in NC Green Power as a way to develop these "green" sources, used to supplement the power coming from nuclear plants, hydroelectric, coal-powered and natural gas-powered facilities.

Shirley said the best way to grow green power is for consumers to demand it. He highlighted a program called the Million Roofs Initiative, which hopes to get a million solar systems on roofs by 2010, and using the coastal and mountain areas to expand wind power.

Farmers could receive lease payments for having wind machines on their land, Shirley said, as an example. Nationwide, wind power is one of the fastest growing energy sources, and its costs are coming down to where it's becoming competitive with coal.

North Carolina also has great potential for using animal waste, through anaerobic digesters in which the methane gas could be tapped as an energy source, Shirley said.

Shirley also spoke at length on "sustainable construction."

Communities must realize energy efficiency doesn't fit with low-bid concepts. Instead, builders should be looking at the See ENERGY CONSERVATION, page 12

Campus Recycling Undergoes a Revival

The campus recycling program got a major boost this spring when students in NatureSAFE, the environmental activism club, labeled and distributed nearly 50 recycling bins throughout the residence halls and Hedrick Hall. The bins will hold aluminum cans and plastics.

Sean Bloom, a junior environmental science major from Snellville, Ga., says the students involved in the program hope to get a recycling center set up on campus so they can recycle mass quantities and expand the recycled materials to include batteries, ink cartridges and computers.

Recycling coordinator Connor Coleman notes that recycling is good for the environment because it decreases the amount of waste that has to be hauled away, and it's good for the pocketbook because the college will not have to pay for as much waste removal. "Instead of having the dumpsters behind the school picked up once a week, we can cut it down to once every other week," he says.

Coleman and Bloom know that the success of the project will depend in large part on the education of the students. This includes meetings in the residence halls, an event with an environmental theme, a forum and the use of the school newspaper to disseminate information.

Momentum for a campus greening program seems to be growing. Says Coleman: "Students are realizing how important it is to the environment and how it can help us in the future."

FRIENDLY DRIVEWAY...

(continued from page 10)

hosing down the surface. "You can have the fire department come out and let them practice on the surface," he says. "As long as you don't spray high pressure right at the surface, simple washing will remove a lot of material."

Placing the material in areas where the ground water table is close to the surface is another cause for concern, according to some critics. "Those are issues that can be addressed by a registered professional engineer," he says. Good design is critical to the performance of the material.

Leming offers two bits of advice: 1) Placement of the pervious concrete should be done by a person who knows what he is doing. "If you go out and get the low-bid contractor, there are going to be problems," he says. 2) Contractors must take special care if they place the product on a slope. "We have seen some situations where people didn't think through the process, and the water just poured out the bottom of the driveway," he says. The solution is to dig deeper on the down-drain side and use clean stone to fill up the hole.

Cribb notes that the pervious surface seems to be doing well, and he is hopeful that it will perform well over time. If so, Catawba's driveway can be used as a teaching tool for engineers all over the country.

"It will also reduce the amount of stormwater runoff we have in the creeks," he says. "The water will actually go back into the ground like it's supposed to and be purified and cleaned."

The environment is the beneficiary, according to Cribb: "It's good for our environment and it's good for our water quality."
Catawba Hosts NC Academy of Science Meeting

Catawba College hosted the 101st annual meeting of the North Carolina Academy of Science March 26-28. It was the first time in 40 years that the Academy has met at Catawba.

The man responsible for the conference is Dr. Michael Baranski, longtime Catawba professor and president-elect of the organization. He orchestrated the event with the help of other science faculty and students.

Founded in 1902, the North Carolina organization is one of the oldest academies of science in the United States. "It is the only organization that officially speaks for all the sciences in North Carolina," Baranski says.

Nearly 300 participants were expected for the spring meeting, which gave scientists an opportunity to present their research. While professors and students from colleges and universities make up the lion’s share of the organization, it is also open to scientists from government, business and industry. "In recent years, probably half of our attendance has been undergraduate and the other half senior academy people," Baranski says.

Twelve Catawba students in biology, chemistry, environmental science, and psychology presented papers at the meeting. "This is probably the best venue available for undergraduates in the state to get experience" in presenting their research, he says.

The weekend schedule included a workshop on graduate school admissions; a bird walk on the ecological preserve; a green building design lecture and tour; and a visit to North Carolina's largest WILD education site.

CLEAN AIR... (continued from page 1)

Association's 2003 report which cited Rowan as the 16th worst county in the nation for air quality.

The ALA report and the subsequent announcement from the Environmental Protection Agency that Rowan would be recommended as a non-attainment area sparked the Center's commitment to help people understand the situation and do something to lessen the pollution. The non-attainment designation indicates that a county does not meet federal air quality standards.

Thousands Affected

The number of people affected by ground-level ozone surprised many people. The ALA estimates that about 45 percent of Rowan's population is particularly susceptible to ozone pollution. This includes 14,000 who have existing respiratory illness and 45,235 children and citizens who are over 65.

Dr. Clay Ballantine, an Asheville physician and expert on the health effects of ozone and particulate matter, reported to a U.S. Senate Subcommittee in 2002 that 1/3 to 1/2 of the asthmatics in North Carolina is caused by air pollution. "Every summer in North Carolina, air pollution causes an extra 240,000 asthma attacks, 6,300 emergency room visits and 1,900 hospital admissions," he said.

Sheila Holman of the N.C. Division of Air Quality told the Rowan County commissioners that children may suffer lifetime effects if they are exposed to air pollution over significant periods of time. They are subject to frequent respiratory infections caused by ozone, and these infections can stunt the growth of their lungs so that they have sub-normal lung function later in life.

"That fact alone was enough to convince me that we need to place a high priority on this issue," says Wear. "We don't want our children and our grandchildren to suffer because we sat on our hands and did nothing."

Wear points out that health problems are not the only concern. Air pollution can also have a negative effect on the local economy. "The non-attainment designation could impair our ability to attract new industry or to encourage expansion of industries that are already here," Wear says. "It will also mean the loss of federal funds to build roads."

Cooperative Effort

The Center is spearheading the effort in concert with the Rowan Sustainable Community Development Corporation (SCDC), which Wear leads as the founding chair, and regional organizations like the Sustainable Environment for Quality of Life program (SEQL).

Rowan is uniquely positioned to take on this challenge, according to Andrews. "We have an environmental center and Dr. John Wear with his reputation, background, experience and knowledge to head this up for us," he says. "And we already have in place the SCDC, a unique organization in itself, which is a plus."

The SCDC has established an Air Quality Commission to focus on the issue. "The commission covers a cross section of the county," Andrews says. "We're trying to tie in the private sector that has an interest in the situation, specialists that can deal with the problems we face and people who will represent some of the concern areas."

"This is not going to be 'us against them,'" he says. "It has to be a total cooperative effort."

Andrews notes that it will take a monumental effort from a lot of people to make a difference. "Five years from now, instead of saying that Rowan has the worst air in the state, we want people to say, 'That's the most progressive county I've seen in trying to solve the problem and create an environment where the kids can go out and play every day and not have to worry if the ozone code is red, green or orange.'"

Wear is convinced that the problem can be solved if everyone works together. "Everyone needs to be involved," he says, from individual citizens to the largest industries, from large metropolitan areas to the smallest towns.

"If we own the problem and make changes now, we can improve the quality of our air for ourselves and for our children and grandchildren. The situation is clearly a call for action. Our future depends on it."

The Center is currently raising funds for the Clean Air Initiative. Initial sponsors for the project include F&M Bank, Central Carolina Bank, Wachovia Bank, Rowan Bank, the Bank of North Carolina, Power Curbers, Image Concepts, the Z. Smith Reynolds Foundation, the County of Rowan, the City of Salisbury, Fred and Alice Stanback and Catawba College.

Friendly Driveway...

(continued from page 8)

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Pervious concrete also stores less heat than conventional parking lots. The open structure allows the cooler earth temperature below the frost line. Even if it's above the frost line, the existing water which would typically freeze is some-
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Center Installs Environmentally Friendly Driveway

Special projects coordinator Kurt Cribb pours a five-gallon bucket of water on the driveway behind the Catawba College Center for the Environment, and the water soaks in as fast as if the driveway were thirsty soil.

The driveway, which was installed in October 2003, is a pervious concrete surface, which allows water to percolate through it into the earth. "The Catawba Center for the Environment has worked to integrate lots of green aspects into both its sustainable building and the land surrounding it," says John Wear, the Center's director. "We are always looking for ways to demonstrate green techniques, and pervious concrete is one of the products we want to explore."

Wear notes that thousands of people visit the Center each year to learn about sustainable practices. "This gives us a good opportunity to demonstrate to others methods that appear to help protect our water resources," he says.

Ten companies associated with the Carolinas Ready Mixed Concrete Association installed the 94-foot pervious concrete driveway, according to Cribb. The companies donated labor and materials worth about $5,000 for the project.

Pervious concrete is made of coarse aggregate, cement and water with no sand. It is considered an environmentally friendly alternative to asphalt and impervious concrete surfaces because it has an open cell structure which allows water to pass through it. "If rain falls on asphalt pavement, it grabs all the oils and antifreeze and other pollutants and sends them down into our stormwater system," says Finley Messick, director of education and marketing for the Concrete Association. Pervious concrete, on the other hand, lets the earth naturally filter the pollutants. Bacteria that live within the pervious concrete even break down the pollutants before they reach the earth.

The association lists a number of environmental benefits associated with the porous pavement: 1) Vegetation is watered, reducing the need for irrigation; 2) ground water is recharged; 3) water resources are preserved; 4) stormwater runoff is reduced; and 5) stormwater runoff quality is improved.

Developers and companies use pervious concrete to reduce or eliminate the need for retention ponds to capture the stormwater runoff that occurs with conventional surfaces. South Carolina has approved the product on a limited basis as a stormwater management system, according to Messick. "It means you don't have to see FRIENDLY DRIVEWAY, page 10

Pervious concrete driveway installed at Center

McCRORY...

Protection Agency, in particular, says so. In this region, Rowan, Mecklenburg, Cabarrus, Iredell, Union, Gaston, Catawba, Lincoln, Davie and Davidson counties are among 32 counties statewide that the EPA has recommended for a non-attainment area in relation to air quality.

What that means, in simple terms, is that if those counties don't find a way to clean up their act and reduce hazardous levels of ozone pollution — much of it coming from cars — federal funds for building roads and transit alternatives will stop.

McCory said that will mean this area, Rowan included, won't be able to recruit new jobs, because businesses looking to locate their headquarters in this region or wanting to build manufacturing plants will go elsewhere — most likely competing counties and states that don't have our air quality issues.

Forget political boundaries, McCrory said. Government, private and academic sectors in this region will have to work together to solve the problems of so many bad air days.

McCrory kicked off a Clean Air Lecture Series being sponsored by the Catawba College Center for the Environment. A large crowd from several counties attended this first lecture.

McCrory, a 1978 Catawba graduate, has played a key role in establishing a 15-county, Charlotte metro region approach now dubbed Sustainable Environment for Quality of Life. SEQL is trying to address air, water and land-use issues in the region, all of which are connected and important to economic development and the quality of life here, McCrory said.

The American Lung Association tabbed Rowan County as having the worst air in North Carolina last year and the 16th worst in the country. The Charlotte mayor acknowledged that much of the bad ozone is imported, coming from places such as Charlotte.

But that's all the more reason for the regional approach, he said.

In giving his talk Wednesday night, McCrory quickly stepped from behind the podium and spoke the rest of the night without any notes, showing a passion for the subject. He connected air quality to things such as cul-de-sacs, shopping centers and SUVs.

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But McCrory contends land-use planning will have the biggest impact on air quality. In that respect, he thinks communities must do at least three things: develop a grid system of roads, provide pedestrian-friendly access and have an overall transit plan to complement road building.

The problem with many developers is they build subdivisions with only one way in and one way out to a country road, McCrory said. There's no grid system in place to disperse traffic and connect that subdivision to other developments.

Cities need more sidewalks and bike trails, alternatives for having to get in cars to make trips that are less than a mile, McCrory said.

Building transit alternatives is something for the next generation, but leaders should be working on a vision of how Salisbury and Charlotte will connect, McCrory said. Rock Hill, S.C., is already making plans on how to get its residents to Charlotte and its airport by light rail.

McCrory also spoke strongly against the clear-cutting of trees and described how his city put tree ordinances in place to prevent it. He's not anti-development, McCrory said, he just thinks growth should be designed for the future.

McCrory warned against no-growth policies, believing that they encourage sprawl, as developers skip over areas and go where they can build. The mayor said he favors traffic calming techniques over stop signs and traffic lights. It's better for air quality, he said, to keep traffic moving rather than bring it to a complete halt.

(continued from page 1)
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McCory predicts local governments will take harder looks at emissions from construction equipment and steps to make their own fleets of trucks more environmentally friendly.

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Put in the huge retention ponds that you see in new commercial buildings," he says. Pervious concrete also stores less heat than conventional parking lots. The open structure allows the cooler earth temperature from below to cool the pavement. It has been used in the United States for about 20 years and in North Carolina for about 10 years.

Dr. Michael Leming, an associate professor in the Department of Civil, Construction and Environmental Engineering at North Carolina State University, has done considerable research on the product and finds it promising. "We are always looking for new ways to do things a little bit better and smarter," he says, and I think this really has a lot of potential.

Leming's studies suggest that the product has good frost durability. "Even when we try hard to saturate it, it takes a lot to get every single one of the pores filled," he says. He found that the existing water which would typically freeze is sometimes below the frost line. Even if it's above the frost line, the research indicates that there is room to allow the ice to expand without causing disruption.

The parking lot at the Friday Center at UNC-Chapel Hill, which is made of pervious concrete, has weathered freezing rain and snow well, according to Leming. However, he recommends that if people use a snow plow on pervious concrete surfaces, they don't plow very deep because the material is more sensitive to shearing forces than regular concrete.

Some have voiced concern about the pores in the pervious concrete clogging if the surface experiences a heavy rain. "In most areas, we don't see a problem with that," Leming says. He and others recommend putting a filter fabric and stone base under the pervious concrete on clay soil to mitigate clogging.

Another option is to drill through the clay layer and create a well. "You fill it up with stone and then the water will move through the well into the underlying layers," Leming says. Messick notes that if the soil will perk for a septic tank, it will handle pervious concrete.

Maintenance of the surface is an issue that hasn't been formally settled. Leming recommends vacuum sweeping or See FRIENDLY DRIVEWAY, page 11.
Energy Conservation Means Cleaner Air

(This is an abbreviated version of a story by Mark Wineka which appeared in the Feb. 25 issue of the Salisbury Post.)

The state’s energy director says local communities have the power to change how they use and produce energy and doing so will save them money and improve the environment.

So what’s that have to do with cleaner air? Everything, Larry Shirley told a large gathering at Catawba College Center for the Environment Tuesday night.

If Rowan County plans to grapple with the problem of its poor air quality, it better be prepared to deal with energy issues. The two are inseparable, Shirley said.

Shirley served as the second guest speaker in the Center for the Environment’s Clean Air Lecture Series. He focused on how saving energy and tapping renewable energy sources translate to less pollution from things such as smokestacks and cars.

Shirley, relying on audio-visuals throughout his presentation, had suggestions for some of the things local government or business might try to save energy, reduce costs and improve the environment:

• Hire an "energy manager." The savings he identifies through conservation and renewable energy sources will easily pay for his salary and benefits.
• Issue bonds to finance energy improvements.
• Convert fleets to alternative fuels and hybrid vehicles.
• Devise a community energy program.
• Use performance contracting, which uses energy savings to finance more energy efficiency improvements.
• Require the purchase of only “Energy Star” appliances.
• Tap city and county landfills for their methane gas.
• Buy "green electricity" through the NC Green Power program. Businesses, governments and individuals can make monthly contributions on their utility bills to go toward development of renewable energy sources such as the sun and wind.
• Require all government and corporate buildings to use high performance energy efficient guidelines.

“We’ve got a lot of challenges ahead of us,” Shirley said. But the biggest challenge, he added, is making the connection for people between energy and the environment.

Shirley, former director of the N.C. Solar Center at N.C. State University, spoke often Tuesday of developing solar and wind power, both with zero emissions.

All of the state’s utilities are participating in NC Green Power as a way to develop these “green” sources, used to supplement the power coming from nuclear plants, hydroelectric, coal-powered and natural gas-powered facilities.

Shirley said the best way to grow green power is for consumers to demand it. He highlighted a program called the Million Roofs Initiative, which hopes to get a million solar systems on roofs by 2010, and using the coastal and mountain areas to expand wind power.

Farmers could receive lease payments for having wind machines on their land, Shirley said, as an example. Nationwide, wind power is one of the fastest growing energy sources, and its costs are coming down to where it’s becoming competitive with coal.

North Carolina also has great potential for using animal waste, through anaerobic digesters in which the methane gas could be tapped as an energy source, Shirley said.

Shirley also spoke at length on “sustainable construction.” Communities must realize energy efficiency doesn’t fit with low-bid concepts. Instead, builders should be looking at the environment is the beneficiary, according to Cribb: “It’s good for our environment and it’s good for our water quality.”

Campus Recycling Undergoes a Revival

The campus recycling program got a major boost this spring when students in NatureSAFE, the environmental activism club, labeled and distributed nearly 50 recycling bins throughout the residence halls and Hedrick Hall. The bins will hold aluminum cans and plastics.

Sean Bloom, a junior environmental science major from Snellville, Ga., says the students involved in the program hope to get a recycling center set up on campus so they can recycle mass quantities and expand the recycled materials to include batteries, ink cartridges and computers.

Recycling coordinator Connor Coleman notes that recycling is good for the environment because it decreases the amount of waste that has to be hauled away, and it’s good for the pocketbook because the college will not have to pay for as much waste removal. “Instead of having the dumpsters behind the school picked up once a week, we can cut it down to once every other week,” he says.

Coleman and Bloom know that the success of the project will depend in large part on the education of the students. This includes meetings in the residence halls, an event with an environmental theme, a forum and the use of the school newspaper to disseminate information.

 Momentum for a campus greening program seems to be growing. Says Coleman: “Students are realizing how important it is to the environment and how it can help us in the future.”

Connor Coleman and Erica Mitchell work on recycling project Undergoes a Revival
Of Morays and Manatees: Studying Coral Ecosystems

The study of coral reef ecology goes far beyond the textbook at Catawba College. It goes into the depths where yellow-tailed snappers and glassy sweepers glide around the coral reefs. It brings proficiency in identifying species through real, live, see-for-yourself experience. It brings amazement as well as understanding.

Students left March 5 for the Florida Keys to witness an ecosystem that few ever see. All had to be certified as scuba divers so they could swim among the fish that inhabit the reefs. Some who had been on the trip before talked recently about their experiences. A three-foot-long moray eel shadowed Krista Yantis, a senior from Casstown, Ohio, as she explored the reefs. The different species came to life for her as she swam among them. “By learning the fish and animals, it gives you a better appreciation for what you’re seeing,” she says. “Seeing the sea turtle was awesome.”

Yantis notes that she had an appreciation for coral reef ecology before she went on the trip. “But being able to see it opens your eyes more,” she says. “It makes you realize that this is really important. When I see someone standing on coral, I think, ‘Oh, no,’ because just touching the coral makes it die.”

Junior Sarah Simmons served with David Burman as a teaching assistant for the course this year. On previous trips, she and others helped the Reef Ecological Education Foundation (REEF) survey different species in that ecosystem. Their discoveries were added to the REEF database, which is accessible to people all over the world.

Many images stand out in her mind from her previous trips, but her five-minute encounter with a baby manatee in the Crystal River will last for a very long time. The size of the fish she saw was also memorable. “When I saw the fish in the book, I didn’t always think to look at the length,” she says. Witnessing the long and slender trumpet fish brought that fact home. “I wasn’t expecting it to be two feet long.”

Senior Stephen Long found the Everglades fascinating as well. “Tourists obviously enjoy the area, but you really appreciate it from the scientific point of view,” he says. “The wildlife there is untouched. It’s an awesome experience.”

ENERGY CONSERVATION...

Shirley and John Wear Jr., director of the Center for the Environment, took time Tuesday to recognize Salisbury-based Food Lion, which will receive an Environmental Protection Agency Energy Star Sustained Excellence Award in March for its efforts to conserve energy.

The company has made energy improvements in more than 100 stores through changes in refrigeration, lighting, heating, cooling and tracking of utility uses. The 550 billion BTUs the company has saved translates to taking more than 40,000 cars off the road, Wear said.

Shirley said the state has taken the last 18 months to focus on making its own energy-saving improvements in all state buildings. “And, boy, what a mess,” he added.

An early energy audit has shown that the state can save at least $25 million by just making no-cost or low-cost energy improvements. State employees also are receiving training on energy conservation, and the state has set a goal of 4 percent reductions in energy costs a year over the next five years.

Some people look at the South Yadkin Wildlife Refuge and see a 300-acre piece of land. Not Jason Walser or John Wear.

They see a vision, an idea that may one day encompass 2,500 acres of preserved land. “It is a vision for a corridor and a region that will be conducive to wildlife propagation and will serve the needs of migratory wildlife,” says Walser, executive director of the LandTrust for Central North Carolina.

“It is a big picture concept that involves a unique partnership,” says Wear, director of the Catawba Center for the Environment. “It includes a land trust and a college working together, and that partnership allows us to do a better job at both acquisition and also the management of the property.”

The Catawba Center for the Environment—in conjunction with the LandTrust—manages the property, which was placed under permanent conservation easement at its acquisition in December of 1999. “It benefits the community and the region while at the same time providing an outdoor laboratory for training Catawba students in wildlife biology and in land conservation and resource management,” Wear says. “This land once was a great example of the abundance of wildlife. We would like to restore these sites along the river to what they used to be—a bountiful habitat for all types of wildlife.”

The LandTrust has exercised an option to purchase 235 acres south of the original refuge. “We are continuing to work toward closing on that tract by 2007,” Walser says. It is separated from the original property by fewer than 50 acres that ALCOA manages for game lands.

“We are also having productive conversations with owners of 750 acres of land on the Davie County side of the river. Another 440 acres will be subject to a permanent conservation easement, likely by the end of the year.”

“Our ultimate vision is that all these properties could in some way contribute towards the refuge idea,” Walser says. “We believe that 2,000 to 2,500 acres in that Two Rivers Corridor that could complement what is happening at the original 300-acre site.”

This ambitious dream involves a number of partners. Andy Abramson, associate director of the LandTrust, notes that the U.S. Fish and Wildlife Service has assisted with developing long-term management strategies as has the USDA Natural Resources Conservation Service.

The N.C. Wildlife Resources Commission, the N.C. Department of Water Quality and the newly created Ecosystem Enhancement Program have also been involved in the project.

Walser’s Clean Water Management Trust Fund has been a significant partner in assisting with funding for the purchase of multiple tracts,” Abramson says.

Wear underlines the importance of this support plus that of individuals in the community. “Over 300 families have given donations to our Wildlife Refuge Two Rivers Preserve project,” he says. One of the most successful fund-raisers has been our annual River Dance held each July to support this.”

The stabilization and ultimate improvement of the water quality has been the prime focus for funding, says Walser. “We are trying to hold the line on water quality in the South Yadkin and Yadkin basin and eventually to improve it through better management practices upstream.”

The plan is to restore some natural wetlands to their full health, to replant buffers where necessary and to promote greater sensitivity toward water quality with future timber harvests. “The water we are all drinking is directly affected by the land use on these properties adjacent to the Yadkin and South Yadkin and upstream,” Walser says.

The LandTrust and Center for the Environment would also like to connect the public to these areas. “When we get enough of a critical mass established, we would like to manage it for wildlife with low-impact recreation,” Walser says.

Eventually, the hope is to incorporate parts of the area into a tri-county greenway. “Our dream is to have a greenway system that runs through Davidson, Cabarrus and Rowan counties lightly touch this area. We can bring people to the edge of the refuge to experience it as part of the greenway.”
Wildlife Refuge Offers Research Opportunities for Students

A 300-acre outdoor laboratory awaits Catawba students each semester. A 10-minute drive takes them to Catawba’s Wildlife Refuge where they conduct a variety of research projects.

Dr. George Drum, chair of the Environmental Science & Studies Program, takes his Field GIS (global positioning systems) class to the refuge to collect data. “We acquired late last fall a set of updated aerial photos of the entire county that are geographically referenced,” he says. “The quality is so good that you can zoom in and see individual trees.”

The students use these aerial photos as the background for their maps. With their GIS units, they mark structures, trails, landmark features, plant communities and animal habitats. “If we find nests or collect specimens in a particular place, we can use our GIS units to mark where that is,” Drum says. “The units identify the students’ coordinates and then bring that information back.” It goes into a database and becomes a layer in a Global Information Systems (GIS) map that other students can build on.

Dr. Joseph Poston, assistant professor of biology, uses the refuge to teach forestry techniques. “Even though it’s a modest size, it actually comprises several different types of forest habitats,” he says. “Students are able to measure forest communities in a couple of different places and see the differences in species composition that can occur over a short distance.”

Poston also takes his ornithology class to the refuge to give the students practice in identifying birds in the field. The class has been able to witness the brown-headed nuttall’s, which is restricted to pine habitats. “It requires pine trees for both food and nesting sites,” he says, “and we have some nice stands of pine trees out there.”

Dr. Michael Baranski, professor of biology, takes his vegetation analysis class to the refuge to gather quantitative data on selected communities in the area. “The students are learning while they are doing the data collection, but the results are good enough that I can keep it as real data for our database,” he says.

Senior Stephen Long took a wildlife class with Baranski that involved a small mammal study on the refuge. “We did a population density study to determine what small mammals were there and what species are most prominent,” he says.

Tree Canopy Important for Air, Water Quality

A healthy tree canopy can positively impact the quality of our air and water. That was the message Gary Moll, vice president of American Forests’ Urban Forest Center, brought to the Catawba Center for the Environment April 7. He was the featured speaker in the Center’s Clean Air Lecture Series.

The Charlotte/Mecklenburg area knows well the value of trees. A 2003 ecosystem analysis by American Forests revealed that Mecklenburg’s urban forest removes 17.5 million pounds of pollutants from the air each year. American Forests calculated that amounts to $43.8 million in annual monetary benefits.

However, the Central Piedmont and See TREE CANOPY, page 16

The Center for the Environment’s leadership role in the Clean Air Initiative for Rowan and the Central Piedmont has prompted the Environmental Science Department to offer a class on air quality.

Students are learning about the effect of poor air quality on people’s health, but that’s not all. They are also learning how to develop an action plan in the community to change public policy and human behaviors in ways that will improve the quality of the air. And they get to see an action plan take place as the Center for the Environment spearheads a county-based Clean Air Initiative.

Dr. George Drum, chair of the Environmental Science Program, and Dr. John Wear Jr., director of the Catawba Center for the Environment, are team teaching the course, which integrates the vision of the center with the mission of the college. “This has been our vision all along,” says Wear, “to bring together education and opportunities for making a difference in the community, the region and beyond.”

Sarah Simmons, a senior environmental science major, notes that the class is a real-life example of how to have a positive impact in the community. “We realize that just because we live in a rural community doesn’t mean we are not being affected by ozone pollution,” she says.

The class focuses on the science of the issue – how poor air quality affects the immune system, why the region is experiencing an epidemic of asthma, what the consequences are for heart disease, cancer and pregnancy. It also shows the students how air quality commissions are formed, who the stakeholders are and how the public can be educated about environmental issues.

“This is not air quality from a textbook,” Wear says, “The students get to witness how to mobilize forces in a community. They get a firm, well-grounded and well-rounded background that can help them in their communities when they graduate.”

In addition, the students attend lectures by some of the leading experts in the field. The Center is hosting a Clean Air Lecture Series and is making plans for an Air Quality Conference next year.

“I can’t imagine a better kind of class experience,” Drum says, “I am just amazed at the way the discussions go and the opportunities the students have for learning. This is something they can really get their teeth into.”

Opportunities Abound for Funding Center Initiatives

While Center Director John Wear is energized by the multiple projects the Center for the Environment has undertaken in recent months, he is keenly aware that it will take more than a stallwart commitment on the part of the Center’s staff, students and volunteers. It will also take money.

“A number of people have asked me how they can support the program,” he says, “Making contributions to particular initiatives or projects is clearly an important way to show support.”

Individuals who wish to support a particular project may direct their contributions to any number of projects, including the Clean Air Initiative, need-based scholarships for ecological study trips, environmental science scholarships, ongoing efforts on the ecological preserve and wildlife refuge, maintenance endowment for the Center facility, Greening of Catawba projects and general fund for Center for the Environment ongoing operations.

Anyone wishing further information may contact Wear at 704-637-4727 or jwear@catawba.edu.
Endowment Effort to Impact Center Activities

Catawba College trustees recently approved an endowment campaign that promises to significantly impact the Center for the Environment. The impetus for the effort, which is now in its exploratory stage, was the college's renewed commitment to upgrade its academic program and the opportunities it offers its students. Catawba President Robert Knott select-
ed nine colleges in the Southeast - insti-
tutions like Presbyterian and Wofford in South Carolina, Roanoke in Virginia and Rhodes in Tennessee. The consensus was that Catawba would like to be on a par with these institutions. Their endowments, howev-
er, average about $120 million, com-
pared to Catawba's current endowment of $30 million. "Clearly, if we are going to have the rich academic program we want and need and if we are going to be able to recruit the students we want, we must grow the endowment," Knott says. He points to four centers on the cam-
pus that would benefit greatly from an endowment campaign. All are not only parts of academic programs but also links between the college and the com-
munity: the Center for the Environment, the Lilly Center for Vocation and Values, which has received initial fund-
ing from Foreign Study and Travel; and a Center for the Arts. "They clearly provide enrichment opportuni-
ties for our students, such as the ecolog-
ical preserve and the sustainable facility that houses the Center for the Environment," Knott says, "but they also connect what the college has to offer with what the community needs." Knott calls the Clean Air Initiative "a wonderful example" of such an effort. "We do not have the resources to sup-
port projects like this, but we can serve as a catalyst to help energize the com-
munity around environmental issues," he says. "We would like to endow the Center for the Environment so we are not placed in the position of taking resources away from our instructional program and other services. An endowment for the Center would sup-
port its projects and therefore contribute to the undergraduate education rather than drawing resources away from it." While the goal for the endowment campaign will not be set until May of 2005, the sum of $5 million has surfaced as a possible sub-goal for the Center for the Environment's portion of the effort. Knott is hopeful that individuals will be interested in endowing particular pro-
grams within the Center. These include scholarships, maintenance of the sus-
tainable facility, community initiatives, public education through both print and online publications, travel and study opportunities for students and campus initiatives, such as the Greening of Catawba. Center Director John Wear echoes Knott's hopes that people will see the endowment campaign as an opportunity to support efforts that both enrich the student's education and improve the environment. "Our Center and our students have been privileged to work in this commu-
nity and this region on efforts that have a far-reaching effect," he says. "Through our partnerships, we have already accomplished a great deal. With addi-
tional funds provided through an endowment, we can have an even greater impact on issues involving the stewardship of the environment."
Message from the Director

If you want to see the mission of the Center for the Environment in action, come to the campus and watch our environmental science students. I cannot tell you the number of times that visiting students have commented on how they work together, how they welcome and include everyone in their team efforts. Other faculty have noticed it, too. It’s impressive and very gratifying.

The newly established Campus Greening Committee, which is a part of NatureSAFE (Student Activists for the Environment), has opened its doors to the entire student body - a good example of broadening the base, welcoming all in this important effort.

I asked a couple of students recently why they thought this collaborative and inclusive atmosphere permeated all their endeavors. They were quite clear about it: “Because we’re all working together to protect and improve the environment.”

That, of course, gets to the heart of the mission of the Center. Protecting and improving the environment is being a good steward. It means working to preserve open space or improve water quality or foster strategies to improve the air we breathe – all efforts in which the Center has assumed a leadership role.

The reason the Center has been so successful with partnerships rests in that unifying force: We are all working to be good stewards. This occurs by bringing people of diverse backgrounds together – a group that has increased significantly since the Center was established in 1995. It now includes faculty, businesses, financial institutions, concerned citizens, elected officials, individuals who work for partnering institutions and, of course, our students.

Something happens when all these people work together for a cause that can make such a difference. A synergy emerges from the partnerships and the collaborative efforts. The whole really does become greater than the sum of its parts.

Education is not the only outcome. Our students have ample opportunities to interface with community leaders and experts in the field. They look to these individuals as role models and learn how they, too, can work in their communities for a cause that impacts every citizen.

Hats off to the diverse individuals who are lending their considerable support to our efforts and to our students who are setting such a good example – who are embodying the mission of the Center in their actions and in their lives.

PRESERVE...

‘Earth Tub’ Could Close the Loop

Catawba College junior Connor Coleman is not one to set his sights too low. His goal is nothing less than propelling Catawba to one of the top three colleges in the nation in environmentally friendly practices.

“We want to be role models,” he says. “We want to educate the public and spread the word as well as set the example.”

Coleman, an environmental science major from Cleveland, Ohio, and the recycling/composting coordinator for the school, has a number of projects on his plate. One which is currently in the beginning stages involves composting all the food from the cafeteria for use on the flower beds and plantings throughout the campus. Dr. John Wear, director of the Center for the Environment, calls it “closing the loop.”

The campus is known for its beautiful landscape, Wear says. “This is a way we can benefit our landscape and at the same time close the loop by helping to reduce waste on campus.”

Coleman’s research has uncovered an “earth tub” that turns food scraps into compost. The three-cubic-yard container uses an auger on a sliding track to turn the food scraps and bulking agent, which absorbs moisture. “We have the support of the administration and the food staff,” he says. “Now we need to be approved by the state and get the money.” The earth tub costs about $7,000.

Environmental science majors are not the only ones supporting this measure. “Even non-majors are really interested in composting,” Coleman says. “A lot of people think it’s a good idea.”

(continued from page 3)
Junior Sarah Simmons takes a personal interest in the Clean Air Initiative spearheaded by the Center for the Environment.

She has served as an intern for the project, researching other initiatives throughout the country, talking with officials in North Carolina about the issue, going to conferences and coordinating student efforts at the Clean Air Lecture Series. "I have gained so much," she says. "I have never been a part of anything that has brought so many people together."

She heard Sheila Holman of the N.C. Division of Air Quality speak about the lifelong damage that children can suffer from repeated respiratory infections brought on by air pollution. That fact made the initiative seem even more important to Simmons.

The internship has clarified what she wants to do with her life. "I definitely want to work in air quality and bring people together to combat the problem," she says.

An internship also set Sean Bloom on his career path. He worked for the N.C. National Estuarine Research Reserve in Beaufort where he did GPS mapping of the Rachel Carson Estuarine Reserve, conducted educational tours at Currituck Banks and Zekke Island and did research on horseshoe crabs and tamarisk trees.

"I knew going in that I had two conflicting interests, education and research," Bloom says. "This helped me decide what I want to do." Research emerged as his preference as the internship progressed.

"Internships are very valuable," says Dr. John Wear, Center director. "I knew going in that I had two conflicting interests, education and research," Bloom says. "This helped me decide what I want to do." Research emerged as his preference as the internship progressed.

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