Biodiesel... (continued from page 15)

Conversations with City of Salisbury staff and with Raymond Coltrain of Piedmont Research Station prompted him to investigate the possibility of selling biodiesel. The City of Salisbury's willingness to serve as the "anchor tenant" for the fuel station was instrumental in Jarrett's securing the grant, according to Anne Tasewell, alternative fuels program manager with the N.C. Solar Center. The city will use B20 in all its diesel vehicles.

Tazewell, who helped Jarrett with the grant, notes that providing assistance to the private sector is important.

Connection... (continued from page 17)

sumers of non-renewable raw materials, generated clouds of pollution and created mountains of waste. Because synthetic carpet fibers such as rayon or nylon are petroleum based, it consumed a lot of oil.

But 10 years ago, Anderson's life and business philosophy abruptly changed when he picked up a copy of Paul Hawken's "The Ecology of Commerce," the ground-breaking book in which the Smith & Hawken co-founder warned of the environmental and economic ruin ahead if multinational corporations didn't become more conservation-minded. Hawken called for the adoption of sustainable business practices that reduce waste, shift to renewable energy sources and use recycled materials.

Anderson has described what happened as "an epiphany - it hit me like a spear in the chest." Rather than seeing his company as a business-school model of free-market capitalism, he realized "I was part of the problem ... a plunderer of the Earth."

He embarked a program to make Interface the world's first large "fully sustainable" company -- meaning it would use only renewable energy sources, such as solar power, and recycled materials while developing carpets that didn't use petrochemicals.

The company has reduced emissions of carbon dioxide -- a gas implicated in global warming -- by 46 percent through more efficient production processes and increased use of renewable fuel. One plant now gets most of its power from methane gas siphoned from a nearby landfill.

The company uses 78 percent less water at its modular carpet plants and 40 percent less in its broadloom plants. Not only that, Belland notes, but the water is "cleaner when it leaves the plant than when it came in."

For the full story, visit CenterForTheEnvironment.org and click on Clean Air Initiative.

Messinger: 'We Have To Protect the Environment'

CEO Dyke Messinger understands the value of the environment to Rowan County's economic health and quality of life.

The president of Power Curbers Inc., Messinger ranks quality of life as a top priority for the citizens of Rowan. "What has been given to us in our green spaces and our livability and our air and water is something we have to protect. Period," he says.

"We're only on this earth a short period of time so protecting it -- preserving it for generations to come -- has to be one of our major priorities."

Messinger notes that Americans have lived with excess for so long that they typically don't consider living in a sustainable way. "The building of the Center for the Environment is a perfect example" of sustainability, he says. Its use of recycled and recyclable products and environmentally friendly practices makes it a model "green" building.

He sees a direct correlation between air quality in Rowan and economic development. "There are companies that will not be able to locate in areas that have federal ozone restrictions," he says. "After all, who wants to move their company or set up another manufacturing facility where they're going to have restrictions because of the poor air quality?"

Center for Environment Receives Awareness Award

The Catawba College Center for the Environment has received an award for its contribution and dedication to improve the state's air quality during the 2004 ozone season.

The North Carolina Air Awareness Program in Charlotte and Mecklenburg County presented the award on Oct. 22, citing the importance of the Center's Clean Air Lecture Series, which brings authorities to the Center to speak to the community on air pollution, its effects and ways to combat it. The Center is spearheading the Clean Air Initiative for Rowan and the Central Piedmont in response to the fact that Rowan does not meet federal air quality standards. The American Lung Association listed the Charlotte-Gastonia-
Message from the Director
Center Provides Value-added Education

A recent Associated Press story reminded me of how important the Catawba Center for the Environment is to the education of our students. A young man in a northwestern state reacted to development's encroachment on the habitat of an endangered species. The result was not the preservation of the habitat, but a backlash of anger against his tactics. This young man - like graduates from so many colleges and universities - has the scientific knowledge necessary to analyze the situation and signal danger, but he obviously had not had a background in working with community members to bring about a satisfactory solution.

How different that is from the education that our students receive. We recognize that environmental science and studies is a complex field. It involves science, to be sure, but it also involves public policy and ethics. We know that successful outcomes can turn on an ability to work with community leaders and garner grassroots support.

That's why we are striving to provide so many real-world opportunities for our students through the Center. That's what sets us apart from the myriad environmental science programs throughout the country. We offer a value-added education that teaches students the complexities of effecting positive change that will create a sustainable future and enhance the quality of life for our citizens.

Consider the opportunities our students have as a result of their involvement in the community. The next phase of our Clean Air Initiative promises to offer students who plan to be educators internship opportunities to teach younger students and their parents about the causes of air pollution and ways of mitigating it.

Our students continue to work as interns at the LandTrust for Central North Carolina where they benefit from the Center's long-term partnership with that organization. They get firsthand experience in our joint project to conserve the Two Rivers Preserve and the South Yadkin Refuge. They also work with Horizons Unlimited on the N.C. WILD education site at Duke Power's Buck Steam Station near Salisbury. The goal of that program is to provide wildlife habitat and to involve students and the community in learning about and protecting the environment.

The Center, which was officially founded in 1996, actually grew out of community projects like these. The beauty of this approach is that both students and the community benefit.

We will focus much of our energy this year on environmental awareness on campus - reaching out to faculty, staff and students who are not in the Environmental Science Program. Thanks to a generous benefactor, we now have professional development stipends for faculty who wish to learn how to integrate environmental education into their classes.

In addition, we will create round-table discussions for faculty, staff and students on subjects like campus greening and environmental awareness. Catawba students will continue to work with the administration to facilitate campus greening and environmental projects, and they will take an active role in educating students in other disciplines about the importance of being good environmental stewards.

Because of the generosity of donors to the Catawba Center for the Environment, we are able to offer this value-added education to our Catawba students. The benefit to them, to our community and to the communities they will inhabit after graduation cannot be measured.

Dr. John E. Wear, Jr.
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EPA Honors Food Lion Stores

The Environmental Protection Agency recognized Salisbury-based Food Lion in December 2004 for its energy efficiency.

More than 200 stores in eight states have earned the EPA's Energy Star designation. Each of these stores saves as much as 86,000 kilowatt hours per year. The energy savings at each store prevents nearly 191,000 pounds of carbon dioxide from spewing into the atmosphere every year. This is the equivalent of removing pollution from 19 cars or planting nearly 26 acres of trees.

"Food Lion is one of the most energy-conscious corporations in our region," says John Wear, director of the Center for the Environment. "It sets the standard for energy efficiency. We are very glad the EPA has recognized our hometown grocery chain for its outstanding efforts."

Dr. John Wear

FISHER...

Concord, and I would ask them what they’ve done right and what they’ve done wrong and what they think they could have done had they started earlier.

I would do the same with Lake Norman, Fort Mill, Rock Hill, Monroe. They’re undergoing tremendous stresses in their infrastructure. Salisbury and Rowan County could learn much from those people.

Why wait until it comes upon us? Why not get out and see it and then prepare for it?

When you build something, it generally lasts for 50 years. Salisbury and Salisbury County not messed up yet. But if we allow the growth to come that we don’t want, we might end up with a county and a city that we won’t like 50 years from now, and we’ll be passing that misery on to our children.

We have a canvas that hasn’t been painted yet. If we move quickly, we might paint our own canvas. If we don’t, somebody’s going to paint it for us, and we might not like what we see.

Q: Do you have any ideas about specific things we could do to attract the kind of growth that we want? A: We’ve got to get serious about land use policies. That will help define what it is that we would like to have. If we could diversify our county into different businesses that were environmentally sensitive, that were not as polluting, that would not cause as much congestion – those friendly kind of industries, we should seek out.

Q: When would you say Salisbury-Rowan could be, what do you see, what would you like to see? A: I would like to see a community that reflects on the strength of the past and that builds on that strength. I’d like to see one that understands that growth for growth’s sake is not good for us. We’re going to have ample opportunities for growth. It’s going to be more than most people are going to want.

Q: How do you think all the growth in the northwest Cabarrus-Kannapolis area will affect Rowan County, long term? A: The growth has been so fast in Cabarrus that they’ve now declared a moratorium. Growth brings costs, and in order to help them with their infrastructure, they have put into place education impact fees of $4,000-plus dollars. Even Stanly County ... put in a $1,200-plus impact fee.

And Cabarrus County has put that impact fee in those counties and because they have put a moratorium in Cabarrus County, growth is going to come quicker than what maybe our county fathers and city fathers had anticipated. It’s here. You don’t see it yet, but as soon as the interstate cleans up, then I think you’re going to see a lot of farmland disappear because of growth. If we don’t consider some kind of impact fees, growth in this county is going to be at such a rate that the taxes that are spun off from this growth will not come close to paying for the infrastructure that is needed, and the tax rate will have to go up, and the stresses on people who have been here for a long time are going to be tremendously great.

Q: If we were overwhelmed with growth, wouldn’t that be good for banks and other businesses? A: As it would be good for a lot of businesses. But something that’s more important is quality of life. I think people would take a little less if their quality of life was great. Monetary enhancement is good, but carried to the extreme, it becomes a liability.
Urban designer David Walters told an audience at the Catawba Center for the Environment facility Nov. 29 that new development trends are really based on old development patterns.

By designing neighborhoods like those developed 100 years ago, where residents could walk on sidewalks from their homes to shops and neighborhood parks, communities can help clean up the air and create a sustainable future, Walters said.

He used Dartmouth, England -- the town of 14,000 where he grew up -- as an example. “It was built on the typical pattern of compact settlement and a lot of preserved landscape,” he said. “The land is working farmland so it’s an active piece of economic production and a part of the area’s tourism. It represents a massive injection of money into the local economy.”

The idea of thinking about the land as an economic resource, which has many layers of possibility and needs relatively sophisticated management, is at the heart of Walters’ work and the work of other urban designers. “We try to mesh the public interest and private development sector,” he said. The Dilworth neighborhood in Charlotte, where Walters currently lives, is a good example of a sustainable neighborhood that includes a range of housing opportunities, shops and preserved open space. The streets are relatively narrow with sidewalks on both sides, and the neighborhood is safe for pedestrians, motorists and cyclists.

“A connected network of streets is a fundamental requirement for a walkable neighborhood,” Walters said. “People will walk if it’s safe and attractive and there’s something place to walk to.”

The Dilworth community is how America was built until the 1940s, Walters said. “Once we emerged victorious from World War II, newness and innovation swept through our culture.” Older buildings were either demolished or the facades were covered with aluminum.

“We built our subdivisions and our retail centers around one criterion only: the automobile,” Walters said. Sidewalks were out, and cul-de-sacs were in. “There was no care or interest in the public realm. Our interest focused on ourselves, our own peace and our own automobiles.”

Now communities realize that building houses in one place, companies in another and shops in still another means that we have to drive everywhere. This contributes to air pollution, obesity and a lack of a sense of community.

The new patterns of development give people more choices, Walters said. They can walk or cycle or drive their cars, if they choose. Houses and businesses and parks are all part of the mix, just as they were 100 years ago.

“It’s interesting,” Walters said, “that this new development pattern is actually just America’s old development pattern rediscovered.”

Fred Stanback Involved from the Beginning

Fred Stanback’s involvement with the Catawba Center for the Environment precedes the establishment of the Center. In fact, it goes back to the 1980s when the current Catawba Ecological Preserve was just an idea in Professor Mike Baranski’s mind.

“Mike Baranski and Dan Kirk [retired chair of the Biology Department] and Bill Stanback [Center Advisory Board member] thought the land beside Catawba had special significance and should be protected,” Fred Stanback says. “They got me involved.”

The Conservation Trust of North Carolina subsequently declared a 45-acre tract jointly owned by Catawba and the Rowan-Salisbury Board of Education a Natural Heritage Area, and the college dug a lake -- named Baranski Lake -- on the 189-acre ecological preserve. “It’s an unusual lake in that it’s not an impoundment of a flowing stream but relies on ground-water,” says Stanback, a Catawba trustee and member of the Center’s Community Advisory Board.

In his characteristic understated style, Stanback says Center Director John Wear wanted “a little building” to use for the Environmental Sciences and Studies Program and the Center for the Environment, and the “plans grew dramatically.” He refers, of course, to the 21,000-square-foot sustainable facility that houses the Center.

His mother, Elizabeth Stanback, contributed $6 million to the construction of that building. She credited her son, Fred, and Wear as the inspiration for the gift. “I certainly endorse everything that is being done,” she said in 1998 when she made the initial gift.

It emerged as a three-dimensional incarnation of the Center’s sustainable curriculum. Everything about the facility -- from the site design to the environmentally friendly building materials, from energy and water conservation issues to recycling and waste management -- is grounded in principles of sustainability. It opened in January of 2001. A longtime benefactor of Catawba College and the environment in general, Stanback and his wife, Alice, have contributed generously to the Center and its initiatives. “Our Center would not be where it is today without the generosity of the Stanback family,” says Wear.

“Catawba’s Center for the Environment and Environmental Science Program have garnered national attention in education and environmental circles,” he says. “We are frequently lauded for the uncommon experience we offer our students through a combination of the academic program and the Center’s activities. The Stanbacks have provided significant funding to further our growth.”

Stanback has encouraged administrators to include an environmental awareness course for all students at the college. “We’re destroying our environment at a very rapid rate,” he says, “so I think it’s important to protect resources like the air, the water, the trees, and a teaching center like the one at Catawba can help train tomorrow’s leaders about why this is important and how to do something about it.”

“The future political and business and religious leaders can have a big effect on the environment,” Stanback says. “We need information from the scientists, but the ones who affect public policy may have the bigger impact. That’s why we need to involve as many students as possible in environmental awareness.”
More Funds Needed for Composting Project

With luck and generosity, three earth tubs will be churning out compost for the campus landscape by the fall.

The Catawba Center for the Environment has purchased the $7,000 tubs with gifts from Fred Stanback and Bill Graham, Catawba trustees and members of the Center’s Community Advisory Board. The Center has been able to acquire one of the tubs at a significantly reduced rate from a school in Durham which received it as a gift from DuPont. Now the Center must raise an additional $18,000 to cover the cost of installing the tubs.

Initially, student Connor Coleman researched the subject for the Center as a work-study student. The information he gathered prompted him to become a driving force behind the project. “We want to be role models,” he says. “We want to set the example.”

The dining service will put its food scraps into the three-cubic-yard tubs where the scraps will be turned into a bulking agent which absorbs moisture. After baking for three days at 130-degree temperatures, the material will be transformed into compost, which will be used in campus landscaping.

Don Nilson, the director of Food Services, notes that the cafeteria produces about 500 pounds of scrap each week. The process reduces the material to 1/3 of its original weight.

He was involved in a massive recycling program at Ithaca College and knows from experience how important it can be to support this 110 percent,” he says.

Kurt Cribb, the Center’s special projects coordinator, says the compost will enhance the plantings on campus. The Center will build a natural area to store the compost and let earthworms enrich it even more before it is placed on the planting beds.

“I foresee it adding beauty and nutrients to our current and future plantings,” Cribb says. “It should make our plants grow healthier and their root systems grow stronger.”

It will also save the college money because less material will have to be hauled away to the landfill. Henry Haywood, facilities director, estimates that the composting program will save Catawba more than $7,500 per year in disposal costs.

An Ecological Connection Underfoot

The Catawba College Center for the Environment is ratcheting up its efforts in the community. “We’re taking our mission to the next level,” says Dr. John Wear Jr., Center director.

The Center has taken a leadership role in the community and the region since its inception nearly 10 years ago. It was recognized for the construction of one of the first green buildings in the state. In addition, it has lent its expertise and assistance to everything from land conservation to watershed protection and greenway development.

Wear notes that the Center’s goal has never been to focus on what is wrong but rather to serve as a catalyst for positive action and to partner with other groups to effect positive change. “A good example of that is the way we work with the Sustainable Community Development Commission on the Clean Air Initiative,” he says. “That group is made up of people from many walks of life. They all add a valuable perspective to the discussions. Together, we are able to do so much more than if we acted separately.”

The Clean Air Initiative is the Center’s current focus. It involves an array of efforts — from promoting walkable communities and preserving the tree canopy to assisting the Rowan-Salisbury school system as it retrofits school buses with diesel oxidation catalysts and supporting the city of Salisbury as it explores funding to convert its fleet to ultra-low sulfur biodiesel.

“This county and a number of others in the region have been faced with the air quality issue,” Wear says, referring to the Environmental Protection Agency’s placing Rowan and seven other counties in the list of noncompliance.

Ordinarily, I don’t consider carpet a particularly interesting subject. Carpet is a utilitarian home furnishing that comes in many different textures and designs, but serves only one basic purpose — to cover floors and provide a little cushiony comfort underfoot.

Or so I thought until I heard the remarkable story of Interface, Inc., an Atlanta-based company that has turned the making and selling of carpet into an environmental mission.

Michell Belland, sales manager for Interface, related the company’s story in October when he gave a presentation on sustainable business practices as part of the Catawba College Center for the Environment’s Clean Air Lecture Series.

Like all good stories, this one begins with a compelling character — Ray C. Anderson, a Georgia Tech-trained engineer who founded Interface in 1973 and over the next three decades transformed it into the world’s largest producer of commercial floor coverings, a billion-dollar conglomerate with factories on four continents and sales in 110 countries.

To Anderson, it sounds like a typical business success story, and for its first two decades, Interface was a typical carpet maker. Its factories were voracious consumers of energy, resources and raw materials, and the carpet was a typical product, sold primarily on appearance and wear, that delivered little function or performance.

But Anderson saw that Interface was on the verge of a significant change. The industry was already acknowledging the growing importance of sustainability, but there was a decided lack of consensus on how to proceed.

For Anderson, the answer lay in carpeting that will improve users’ health and enhance their ability to live and work in balanced environments.

Belland added that Interface is pursuing goals that include reducing energy consumption, waste, and water use, and a commitment to reducing the lifecycles of its materials, some of which are renewable. Belland said that the company is aiming for a 20% reduction in its carbon footprint by 2010.

A new line of carpet, called Interface Base, is made from 70% recycled content and is the first carpet made from glass fiber, which is 100% recyclable and nonflammable. The company is also working on a line of carpet made from post-consumer recycled material.

Belland said that Interface is committed to producing 60% of its carpet from recycled content by 2013.

In addition to its efforts to create environmentally friendly products, Interface is also committed to reducing its environmental impact.

The company has reduced its energy consumption by 20% since 2000, and its water use by 30% since 1998. It has also reduced its waste by 20% since 2000.

Belland said that Interface is committed to reducing its environmental impact, and to using sustainable practices in all aspects of its business.

Interlace’s Michell Belland tells freshman Tara Millington about industry’s responsibility to the environment.

Air Pollution Like Living with a Smoker

Breathing polluted air is like living with a cigarette smoker, said Dr. Clay Ballantine, a nationally recognized authority on air pollution and health.

Ballantine, an Asheville physician who testified two years ago before a Senate subcommittee on the subject, spoke Sept. 14, 2004, to an audience at the Catawba Center for the Environment’s Clean Air Lecture Series.

“Lang-related deaths are increasing,” he said. “To put this in perspective, we probably lose about 23,000 people a year to air pollution-related health effects,” compared to 17,000 to drunk driving and 20,000 to murder.

He likened breathing polluted air to inhaling a fine mist of chlorine bleach. “It sets off an entire host of physiologic responses to this irritation.”

The last 20 years has seen a 50 percent increase in childhood asthma, according to Ballantine. A clear relationship exists between ground-level ozone and the number of asthma attacks. “The more ozone, the more asthma,” he said.

Even healthy people are affected by exposure to ozone. A study by AAT Associates indicates that between 1/3 and 1/2 of all asthma in North Carolina is due to air pollution. “This translates into a quarter of a million asthma attacks, 6,000 ER visits and almost 2,000 hospital admissions over the course of a year,” Ballantine said.

Particulate matter, which comes primarily from tailpipes and smokestacks, is another culprit. “The particulates interact with your immune system and actually get directly into your blood stream,” he said. “These things don’t stop at the door either; there’s a 100 percent penetration of buildings.”

Particulate matter also plays a role in sudden cardiac death. “We know from this gigantic study that two days after air pollution exposure, there will be an increase in the number of cardiac deaths,” Ballantine said. “They increase vascular inflammation markers and blood clotting proteins and tend to cause irregular heartbeats.”

Air pollution exposure also increases the rate of lung cancer and strokes.

Ballantine noted that Medicare expenditures increase by about $180 extra dollars per patient for every ten parts per billion of particulate exposure. “In Charlotte that’s $94 million every year extra in Medicare expenditures. In Rowan County, it’s about $6 million.”

Citizens can lessen air pollution through such things as purchasing more fuel-efficient cars, creating land-use plans that allow people to walk more and drive less, and retrofitting school buses, Ballantine said.

Center for Environment Takes Mission to Next Level

“ ‘The Center clearly provides enrichement opportunities for our students, such as the ecological preserve and the sustainable facility that houses the Center, but it also connects what the college has to offer with what the community needs.’

Dr. Robert Knott

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See CONNECTION, page 20
Environment, Truckers Benefit from New Equipment

EDITOR'S NOTE: This is an abbreviated version of a story by Mark Winika, which appeared in the October 13, 2004, issue of the Salisbury Post.

Rowan County took an electrifying step into the future Oct. 12 at The Derrick, Truck Stop off Interstate 85. The Environmental Protection Agency's top man, Mike Leavitt, presented the Centralina Council of Governments with a $100,000 check to help establish a truck stop electrification site at The Derrick.

An electrification site allows a driver to shut off his engine and plug into whatever he needs to stay comfortably inside his rig. The driver has everything at his fingertips: electrical outlets inside and outside the cab, satellite TV connections with on-demand movies, a built-in computer with wireless Internet, telephone jacks, ports for keyboards and mouse, filtered central heating and air and a credit card reader to pay for it all.

But the biggest benefit to those assembled Tuesday afternoon in The Derrick parking lot was what truck electrification stops mean for the environment. The Rowan County site will reduce pollution in a county rated worst in the state for its air quality.

Nationwide, extended truck idling contributes 11 million tons of carbon dioxide, 180,000 tons of nitrogen oxides and 5,000 tons of particulate matter to the atmosphere. It's an unhealthy, sometimes deadly mix.

Idling long-haul trucks consume more than a billion gallons of fuel a year, costing $2 billion.

Truck electrification will improve air quality.

Leavitt pulled a strand of hair from his head Tuesday to illustrate that particulate matter that embeds itself into lungs and causes respiratory problems for millions is just one-thirtieth the size of that hair. Taking steps to reduce the amount of particulate matter leads to longer, healthier, more productive lives and a better community, Leavitt said.

Former Rowan County Commissioner Leda Belk, who chairs the COG Board of Delegates, and Rebecca Yarbrough, regional initiatives program administrator for COG, played an instrumental role in identifying The Derrick as a site and winning the EPA grant.

MISSION...

(continued from page 4)

the Piedmont on the federal bad air list. "It's time that we reinforce our commitment to this community by playing a more active role in issues such as this."

Dyke Messinger, president of Power Curbers Inc. and a board member of the economic development group, the Committee of 100, notes that more and more people are realizing that economic development and the environment go hand in hand. "A company locates to a new area for two principal reasons," he says. "The first is incentives and the second is quality of life. Environmental matters are tied to our economic future."

Dr. Robert Knott, Catawba College president, is pleased that the Center is able to use its expertise for the benefit of the community. "The Center clearly provides enrichment opportunities for our students, such as the ecological preserve and the sustainable facility that houses the Center, but it also connects what the college has to offer with what the community needs," he says.

"The Clean Air Initiative is a good example," Knott says. "We're glad the Center can serve as a catalyst to help energize the community around environmental issues."

Center Partners with Simple Living TV Series

The Catawba College Center for the Environment has entered a partnership with the Simple Living TV Series that will bolster the work of both.

"Simple Living with Wanda Urbanska," which is produced by Urbanska and Frank Levering for public television stations nationwide, is the first major television series on simplicity. The series focuses on environmental stewardship, thoughtful consumption, community involvement and financial responsibility. Urbanska calls it "a paean to a more meaningful life with less debt, less clutter and less stress."

Catawba and the Center for the Environment will be recognized in the credit roll of the second run of the series, which will begin airing in the fall of 2005. The college will serve as the financial agent for the second complement of programs.

A number of activities are planned in cooperation with Simple Living, including a presentation by Urbanska at the Center for the Environment building in the spring.

"One of the reasons we decided to affiliate with Simple Living is the message it promotes," says John Wear, director of the Center and a member of the Simple Living National Advisory Board. "It's not only an environmental message but also a message about living in this world - about living in a way that uses fewer resources and about enjoying a lifestyle that gives us more time to be with our children and our families."

"Wanda and her staff put all this into a format that is really fun to watch and appeals to people in many walks of life," Wear says. "That's the reason it's available in 75 percent of homes across the United States."

The students agree. Megan Fulsom, a freshman from Mount Pleasant, S.C., recognized Urbanska when she visited campus. "I watch her show," Fulsom says. "It's a good idea. People need to be educated about the environment, and we as students need to learn about living simpler."

Urbanska calls the partnership "a really exciting opportunity for two organizations that are interested in making change, in bettering the quality of life and the quality of our environment.

"It's a natural fit," she says, "because Catawba is an educational institution, and we at the Simple Living Television Series are also seeking to educate the public. Many of the issues we are tackling in Simple Living also segue beautifully with the work that Dr. Wear and others at the Center are doing to raise awareness about the environment."

Volunteers Prepare Preserve for Fall Activities

About 30 volunteers gathered at the Catawba Center for the Environment Sept. 11, 2004, to prepare the college's 189-acre ecological preserve for fall activities.

Two teams worked on cleaning and repairing wood duck boxes for the fall migration, and two worked on trail maintenance and clean up in preparation for classes and student research projects.

Those who donated their time and effort included alumnus from the Environmental Science Program, high school students, Catawba students and staff and friends of the Center.

Marry Ettle, bibliographic instruction and reference librarian at the Corriller-Linn-Black Library on the college campus, helped locate and assess the state of wood duck boxes. "We were able to wear waders and splash around in the waters of the lake," she says. "It was so much fun."

She volunteered because she feels that the ecological preserve is one of the primary assets of the campus. "I was interested in exploring the preserve with many people and giving back to the environment through a clean-up," she says.

Andy Miller, district soil conservationist with the Davidson Soil and Water Conservation District and chair of the Area 8 Envirothon, says he and his wife volunteered because of the assistance he received from Center director John Wear and special projects coordinator Kurt Cribb during the Envirothon, which was held last March at the Center for the Environment facility and adjacent preserve.

See VOLUNTEERS, page 11
Seminar Uncovers ‘Tons & Tons of Ideas’

"Tons and tons of ideas." That was the phrase one student used when he talked recently about the Campus Greening Seminar offered last semester at Catawba College. More than 20 students gathered to research and explore ideas for making the Catawba campus more environmentally friendly.

They heard speakers on campus recycling and composting, on green purchasing and simple living. They divided into groups to research topics like building green and saving energy. Their next step is to compile all their information and present it to the administration and selected faculty and staff in the hope that their recommendations will be adopted throughout the campus.

The students examined what other colleges and universities are doing, adapting the ideas to Catawba’s particular situation.

Part of the appeal of the recommendations is that the practices will save the college money as well as benefit the environment. Compact fluorescent light bulbs, for example, last years longer than traditional bulbs. They also use less energy so utility companies have to produce less and therefore emissions are reduced.

Connor Coleman notes that recycling has a financial benefit as well. "Rowan will pick up the recycling for free," he says, "and it will cut down on the waste that the college has to pay to have removed."

He and junior Jay Johnson researched constructing only "green" structures for all future buildings on campus. Duke University has committed to meeting the silver standard of LEED (Leadership in Energy and Environmental Design) certification, a national green building rating system for See SEMINAR, page 11.

Ed & Nancy Clement Support the Work of the Center

Ed and Nancy Clement have followed the progress of the Catawba Center for the Environment since its inception. “We have seen its effect not only on Salisbury but on the entire region,” Clement says. “The Center reminds us of the importance of sustainability and helps promote land conservation in the region.”

The 189-acre ecological preserve, which is adjacent to the Center for the Environment facility, is an asset for the college and the community, says Clement. “I love the fact that the Catawba preserve is right in the middle of Salisbury. It’s the only preserve that I know owned by a college or university that is protected in perpetuity with a conservation easement.”

As founding president of the LandTrust for Central North Carolina and the Historic Salisbury Foundation, Clement believes strongly in the conservation of land and the preservation of our heritage. Nancy Clement, also a president of the Historic Salisbury Foundation, has been an active fund-raiser for various groups in the community. Their advocacy of the Center and related community causes prompted them to become Friends of the Center for the Environment the moment the organization was established.

"Ed and Nancy are stellar examples of Salisbury. Rowan residents care deeply about their community and are willing to lend their financial support to organizations that they feel are advancing causes that will benefit the community today and in the future," says John Wear, Center director. "We are grateful for their friendship and their advocacy."

Gifts Totaling $105,450 Support Clean Air Initiative

The Clean Air Initiative has received gifts totaling $105,450. Businesses, banks, foundations, local governments and concerned citizens have committed funds to the initiative.

The project, spearheaded by the Catawba College Center for the Environment, is educating people about air pollution and fostering strategies to mitigate that pollution. The catalyst for the project was the American Lung Association’s 2003 announce ment that Rowan was the 16th worst county in the nation for air quality. Subsequently, Rowan was placed on the Environmental Protection Agency’s non-attainment list, which means it does not meet federal air quality standards.

Five banks in Salisbury and Rowan County have contributed a total of $34,250. F&M Bank, Central Carolina Bank, Wachovia Bank, Rowan Bank and the Bank of North Carolina have all made commitments to the initiative.

The Z. Smith Reynolds Foundation gave $20,000 to the cause and the Blanche & Julian Robertson Family Foundation committed $5,000. In addition, Power Curbers Inc. has led the business community in supporting the initiative, and environmental advocates Fred and Alice Stanback have made a substantial contribution. The project has also received support from See GFTS, page 18.

City of Salisbury Takes Steps to Clean Up the Air

The city of Salisbury has put its commitment to clean air on the front burner.

Steps it took a year and a half ago are already producing results. The city switched from diesel, which contains about 3,000 parts per million of sulfur, to low-sulfur diesel fuel, which has about 500 parts per million, in its off-road equipment in December of 2002.

Now, however, the city is intent on making additional changes that will improve the quality of the air. For one thing, it is exploring grant possibilities to help defray the cost of ultra-low-sulfur fuels, says David Treme, city manager. "Not only would it improve the air quality, it would also improve the state of the environment."

Ed and Nancy Clement

Ed and Nancy Clement

Local Station Offers Biodiesel

Steve Jarrett has taken a bold step forward on behalf of the environment. His corporation, Superior Oil Co., became the fourth in the state -- and the only one west of the Triangle area -- to offer a blend of 20 percent biodiesel and 80 percent petroleum diesel (B20) to the public.

His Penn Mart station at the corner of Mooresville Road and South Main Street began selling B20 in mid-October, thanks to a $25,000 grant from the N.C. State Energy Office through the N.C. Solar Center. The grant allows Jarrett to sell biodiesel for the same price as regular diesel, which typically costs 20-30 cents less per gallon.

This renewable fuel, which can be used in any diesel vehicle without modification, is produced from organic feed sources like soybeans, cooking oil and animal fats. It produces lower emissions of particulate matter, carbon monoxide, toxic contaminants, sulfur dioxide and hydrocarbons than regular diesel. It does, however, increase nitrogen oxide emissions by about 2 percent. See BIODIESEL, page 20.

Salisbury Mayor Susan Klutz cuts ribbon at the grand opening of Steve Jarrett's biodiesel site.

Salisbury Mayor Susan Klutz cuts ribbon at the grand opening of Steve Jarrett's biodiesel site.

Biodiesel in its fleet, says Ted Phillips, the city’s fleet division manager. The city has already committed to using a biodiesel blend in a significant portion of its diesel fleet, with the plan to use the alternative fuel in all of its vehicles eventually.

Biodiesel is a renewable fuel that is manufactured from vegetable oils, animal fats and even used fryer oils. Since soybeans are typically used in producing biodiesel, the region and the state would benefit in two ways, says David Treme, city manager. "Not only would it improve the air quality, it would also improve the state of the environment."

See STEPS, page 19.

Penn Mart station in Salisbury is fourth in the state to offer 20 percent biodiesel fuel.
SUSTAINABILITY... (continued from page 13)

planned greenway system can offer walkers and cyclists opportunities to connect with one another as well as trails to get from one area to another.

Preserving Tree Canopy Good for Air
Does it really make sense? Here we are with air pollution on the rise, and we're removing the only filtering system we have.
That system is our tree cover. Trees serve as a natural air purification system because they absorb pollutants and draw carbon out of the air. So maintaining a healthy tree canopy makes sense from an air quality perspective. But it also makes good financial sense.
The Charlotte/Mecklenburg area has discovered both the health and monetary benefits 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 calculates that that amounts to $43.8 million in annual monetary benefits.
But what are we doing to our tree cover? The 35 counties in this region lost 390,000 acres of forest between 1990 and 2002. The state lost about 1.24 million acres, and 71 percent of that loss was caused by urbanization.

Saving Energy Saves Money, Reduces Pollution
If corporations and local governments made New Year’s resolutions, saving energy and money would be a great place to start, and Craig Gammarino with the North Carolina State Energy Office would be a terrific guide.
Craig recently shared some of the State Energy Office’s down-to-earth, practical ideas with the Catawba College Center for the Environment. The first step in any energy efficiency program is utilities accounting. This determines where and how efficiently energy is being used. Discovering billing data errors and switching electric rates can save a surprising amount of money. The state owns

Students, if you know you could learn so much
Talk with freshman Tara Millington for five minutes, and you’ll discover that her dragondolphins spend most of their lives underwater and the purity of a stream can be determined by monitoring the insects that live there.
“I never knew you could learn so much from the little things you find in a stream,” she says.
In one short semester, the Palatine Bridge, N.Y., native has become a champion of Catawba College’s Environmental Science Program and the Center for the Environment where she works as a work-study student. She has worked on the ecological preserve and helped with the Clean Air Lecture Series by transcribing presentations for the Center’s web site.
“I’ve already learned so much, just taking Fundamentals of Environmental Science and going out on the preserve,” she says.
A First Family Scholarship recipient, Millington chose Catawba for the one-on-one contact with the professors and the opportunities for hands-on learning. “I felt that a lecture learner,” she says, “so it works with my learning preferences.” She has been involved with the environmental club, NatureSAFE, and with the N.C. College Conservation Network, which allows environmental science students from colleges and universities across the state to share ideas. “It was exciting to learn that other colleges are doing the same kind of things that we’re doing,” she says.
Natural products for cleaning and personal hygiene are of particular interest to Tara and she intends to learn more about tree oil products so she can share her knowledge with other students.
Lectures "just blow my mind"
“Freshman Hayley Stafford of Fort Lauderdale, Fla., got involved immediately in the program for the Environmental Center in Millington. She arrived in the fall. “The first weekend I was backpakingc, and within the first two weeks I began attending speeches on campus,” she says.
The speakers in the Center’s Clean Air Lecture Series “just blow my mind,” she says. “Even in our Fundamentals of Environmental Science class, we talk about so many things that I’ve never even thought of.”
She is also a senior at South Charlotte High School before she decided on Catawba. The college’s strong Environmental Science Program was the main reason Catawba rose to the top of her list.

Visit the school, talking with her tour guide and sitting in on a Geographic Information Systems class. “I was impressed by the things the students were learning in the GIS class,” she says.
When she arrived in the fall, she immediately found an abundance of opportunities. She is already involved in NatureSAFE and in the Outdoor Adventures Club. After taking the Fundamentals class, she thinks she may pursue green building or green chemistry as special topics of interest. “It gave me a lot of ideas and options for what I might want to focus on in the future,” she says.

I’m applying the skills I’ve learned’
When senior Connor Coleman was looking for colleges four years ago, Catawba was his third choice — until he came to the campus. The Cleveland, Ohio, native was given a tour of the Center for the Environment building, which was under construction at the time. That glimpse into the future, plus hearing about the other opportunities the college and the Environmental Science Program offer, made all the difference.
“From the beginning, it was the right place for me,” Coleman says. “I knew I would get individual attention and have the opportunity to have a good relationship with the professors and do interesting things.”
Now, as graduation beckons, Coleman can look back on four years of growth in knowledge and leadership skills. He emerged as a leader his junior year, committing himself to recycling and composting projects on campus. He also blazed the trail for other students with his involvement in the N.C. College Conservation Network. Through his encourage-ment, more and more Catawba students have become involved, and last September Catawba hosted one of the network’s conferences with nearly 20 students from Catawba among the participants.
Coleman is active in the greening initiative on campus. His current focus involves green design and LEED certification for all future buildings on campus. The LEED (Leadership in Energy and Environmental Design) Green Building Rating System is a voluntary national standard for developing high-performance, sustainable buildings. He has also had the opportunity to intern with the LandTrust for Central North Carolina. “I’m able to apply a lot of the skills I have learned in the last 3 ½ years,” he says.
“The internship gives me an opportunity to meet a lot of people. With graduation coming in a few months, I can honestly say that I am not too worried about getting a job. One of the great things about our program is that it has a high placement rate.”
“Tara, I’m confident that I can graduate and have a job in the field doing something I want to do,” Coleman says. “I’ll be able to wake up every morning and be happy to go to work.”
A Champion of Clean Air, Catawba, Rowan County

Paul Fisher is a champion of the Clean Air Initiative. He’s a champion of the Center for the Environment and of Catawba College. In fact, Paul Fisher is a champion of Rowan County. He is not only willing to support causes that promote the common good; he also encourages others to join him. "Paul Fisher is an amazing man," says John Wear, director of the Center for the Environment. "Once he decides that a particular effort is going to better the education or the quality of medical care or community development or the quality of life in this county, he gets behind it 100 percent and uses his considerable influence to bring others into the fold.

"Paul’s granite integrity and his willingness to lead by example have a galvanizing effect on those around him," Wear says. "When he speaks, people listen."

A perfect example is the support the Clean Air Initiative has garnered as a result of Fisher’s actions. At a luncheon for bank representatives at the Center for the Environment, he pledged that F&M Bank, the financial institution he heads as chairman and chief executive officer, would contribute $10,000 to the air quality effort. Then he challenged the other officers in the room to follow suit. To date, 15 banks have committed more than $34,000 to the initiative.

Air pollution is a quality of life issue, Fisher says. "It deals with health and with economics. If we’re not doing well health-wise, we’re not going to do well economically. The county won’t attract favorable business. Good people are not going to come to the worst air quality in North Carolina."

He explains why he wanted the banks to support the Clean Air Initiative. "It was our time to do something," he says. "We were on the hot seat. We didn’t cause all of the air pollution, but I’m sure we contributed to it in small ways, and those small ways add up."

Fisher believes that Catawba may have been destined to assume a leadership role in the fight against air pollution. The Winston-Salem and Charlotte areas also suffer from poor air quality. "But there wasn’t a catalyst," he says. "We had two things: 1) We had some of the worst air in the country, and 2) we had one of the finest small environmental programs in the state."

The Center has assumed the role of catalyst in the effort to clean up the air in this region. The fact that Salisbury is not the largest city in the region or that the Center is not the largest environmental organization may even be an advantage, in Fisher’s opinion. "Another fellow 2000 years ago came from a small town, too," he says. "You don’t have to be big time for people to recognize the importance of what you’re doing. To be honest, it’s probably an advantage."

Community Supports Friends of Center Program

The response to the Catawba Center for the Environment’s new Friends of the Center program reveals a strong support base for the Center’s initiatives. The group grew to nearly 80 members in the first three months of its existence.

"It has been such an inspiration and motivation to see the response to the new Friends of the Center program," says Brandi Orbain, coordinator of fund raising and volunteers. "The community has embraced the work that we are doing and has begun to come together to ensure that our work continues."

The Friends is a network of individuals and businesses that have made a financial commitment to preserving the health of the environment, which in turn positively affects the health of the citizens and the health of the economy. Support ranges from $5,000 and above for a Partnership at the Gold level to $10 for a student membership.

The Center will launch an annual event for the Friends in the spring and will continue to offer lectures and workshops on sustainability issues. "We always strive to plan interesting and thought-provoking events that help to increase awareness of our natural resources and show us how we can become better stewards," Orbain says.

She notes that the Center continues to seek support from the community through the Friends Program. "We want to reach our goal of enrolling two members by May 31," she says.

Paul Fisher: ‘Growing is Coming to Rowan’

EDITOR’S NOTE: This is an excerpt from an interview with Paul Fisher. It appeared in the January 2, 2005, issue of the Salisbury Post.

Q: What could be done to make the community better?
A: The Chinese symbol for change has two meanings, as I understand it. One is danger, and one is opportunity. As I look into the future, I think I see both. I’m not sure people understand the growth that is about to come to Rowan County. I don’t think our governments are ready for it. I don’t think our schools are ready for it. I don’t think our infrastructure is ready for it. I am fearful that this wave of growth is going to come and catch Rowan County flat-footed.

Q: So what should we do?
A: I would set up a body that is made up of some city officials, county officials and others, and simply go where the battles are being fought. I would go to See FISHER, page 19

Thank You, 2004 Friends of the Center for the Environment

In 2004, the Center for the Environment embarked on its first-ever membership campaign. We are privileged to recognize the following founding members of the Friends of the Catawba Center College Center for the Environment.

The help and support of the community are essential to our ability to carry out our mission to foster environmental stewardship in our region, thereby addressing environmental problems facing the community and the region and helping to protect our physical and economic health. The Center continues to seek and encourage participation in the 2004 Friends of the Center Program for more information, contact the Center at 704.637.4727.

Gold $5,000 and above

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Bronze $1,000 - $2,499

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In Honor Of Center for Environmental Staff

Beth Farmer

Daniel Kirk

Alice and Fred Stanback, Jr.

In Memory Of Paul Green, Jr.

Donald Lomax

Elizabeth Stanback

Alliene O'Brien Sutton
Orbin, Smith Join Center for Environment Staff

Brandi Bettis Orbin, formerly assistant director of development stewardship at Georgia Institute of Technology, has joined the staff of the Catawba College Center for the Environment. She serves as coordinator of fund raising and volunteers.

A graduate of N.C. State University, Orbin has worked in marketing and community relations for DASH Systems Inc., Meredith College and the Special Olympics World Summer Games. She participated in Atlanta's Clean Air Campaign when she lived in Georgia.

She is married to Will Orbin, a social studies teacher and head football coach at East Rowan High School. They have one-year-old twins, Benjamin and Regan.

Kim Smith

Kimberly Smith, a graduate of the University of North Carolina at Chapel Hill, is the new executive administrative assistant.

A daughter of Jim and Patsy Betts of Salisbury, she recently returned to her hometown after working 10 years in Charlotte as a paralegal. She is married to Brent Smith, potter and co-owner of Green Goat Gallery in Spencer.

Climate Change Brings Rising Sea Levels

EDITORS NOTE: This is an abbreviated version of a story by Scott Jenkies that appeared Sept. 10, 2004, in the Salisbury Post.

The next time you crank the car to drive to the beach, you may be helping to move the coast closer for future generations, a Duke University scientist told a group at Catawba College on Sept. 9.

In fact, some of the coastal vacationers enjoy today may someday become submerged under a rising Atlantic Ocean, thanks to changes in the climate, Dr. William Schlesinger said.

"Essentially, we as North Carolinians will lose the Outer Banks" and some coastal plains, Schlesinger said.

And that may not be the worst of it...

Some global warming models show diseases such as malaria, now found only in tropical climates, finding the southeastern U.S. more hospitable. That projection warns that before the end of this century, rainfall totals now considered normal could become the norm.

Certain parts of the country could see some types of trees disappear. North Carolina could lose its pines, he said.

And some species, particularly those that live in cold climates such as polar bears and penguins, could die out.

Dean of Duke's Nicholas School of the Environment and a professor of biogeochemistry who has testified before Congress, appeared on CNN and contributed to National Geographic and others, Schlesinger spoke at the Center for the Environment.

The professor focused mainly on rising levels of carbon dioxide -- the product of spent fossil fuels such as oil -- and the potentially harmful effects on Earth's climate.

"The change is slow, but cumulative," he said.

Since the mid-1800s, when industry took hold and man began mining and burning fossil fuels in a big way, Schlesinger told a few dozen people, carbon dioxide levels and global temperatures have risen "hand in hand."

As a result, average temperatures have crept up a few degrees around the planet, an observation borne out, he said, by weather station data that show deviations from "normal" temperatures overwhelmingly on the high side in the past several decades, where before most deviations were below normal.

Wear's Columns Focus on Sustainability Issues

EDITORS NOTE: The following excerpts include the opening paragraphs of columns that Dr. John Wear, director of the Catawba Center for the Environment, has written for area newspapers. For the full texts, please visit centerfortheenvironment.org.

The Importance of Planning for our Future

Growth is headed our way.

Every time I pick up the newspaper or read a report about the region, I realize that Rowan County is headed for dramatic change, whether we want it or not. Voices and Choices' 2004 State of the Region report revealed that the population of this region is expected to increase by 1.8 million in the next 30 years. If that isn't enough to make us sit up and take notice, consider this:

Land in our region is being developed nearly four times faster than our population is growing. In fact, if we continue the current land-to-person ratio, we will develop 342,000 more acres by 2035.

To put that in perspective, our LandTrust for Central North Carolina, which is probably one of the more progressive land trusts in the state and covers a similar number of counties, has protected less than 9200 acres in the years I have been involved with the organization.

We need to step back and carefully consider what we want to do because we are going to grow -- and we're going to grow fast. The question is, "Do we want to plan for growth and guide it in a way that would benefit the community as a whole, or do we want to just let it happen and deal with the consequences later?"

Just as good businesses develop plans for their future, good governments should also have an overarching vision and a plan for how a county or a municipality wants to grow...

Air Quality in Rowan: What Are the Facts?

I think it's time to re-examine the facts about air quality in Rowan County and also to look at the progress we have made since the Clean Air Initiative began.

The Catawba College Center for the Environment and the Rowan Sustainable Community Development Commission began efforts about a year ago to educate the public about air pollution and work toward cleaning up our air.

What prompted these efforts? In 2003, the American Lung Association ranked Rowan as one of the worst counties in the nation for air quality. What is the reality here? Do we really have a problem or is this merely related to the presence of ozone monitors in Rowan? To find out, we began asking some questions...

Back to the Future: The Importance of Greenways

The past may hold the key to our future.

Let's look back to the earlier part of the 20th century, when people used horses and buggies to get from one place to another. If they met a neighbor on the path, they stopped and chatted for a bit. Life carried with it a kind of ease that is hard to find today.

We jump in our cars and dash to the grocery store one mile away. If we see a neighbor, the best we can do is wave or honk our horn. We're sealed in our metal sedans or SUVs, our minds racing as fast as our vehicles.

Now consider the greenway, that corridor of open space which connects people and places and offers a host of benefits to health, the environment and the economy. A well

See SUSTAINABILITY, page 14
developing high-performance, sustainable buildings.

"We want to raise the bar a little bit," Coleman says. "We are proposing to the administration that we do a similar thing, but we would like to see us meet the gold standard, which is the second highest rating."

Elisa Alfieri, a sophomore, focused her attention on how to effectively educate the faculty, staff and students about the importance of campus greening. Her group decided that education is more effective when it is fun. They are considering showing the movie, "The Day after Tomorrow," which deals with the problem of global warming, and holding a forum about the subject after the movie.

"The key is not just to have the seminar and not just to pass out information but to do something fun with it," Alfieri says. They also decided to focus their educational efforts on the freshmen. "We want to get them involved with campus greening from the very beginning," she says.

John Wear, the seminar facilitator, was impressed with the students' enthusiasm for researching the topics and for getting involved in projects that will help Catawba set the example for others. "We scheduled the seminar in response to the students' requests," he says. "They thanked me for the opportunity to be involved in it. I found that extraordinary."

Alumni who returned for Homecoming discussed ways to get more involved with Center activities. (From left) Bret Estep '95, Chris Schlageter '96, Kurt Cribb '00, Center Director John Wear, Dave Burman '04, Wendy Kuhne '94, Stephen Long '04, Krista Yarls '04, Ben Prater '02, Kevin Arnan '04 and freshman Tara Millington and senior Connor Coleman.

MESSINGER...

His advocacy for the environment and the Center for the Environment has manifested itself in a number of ways. He has agreed to be one of the charter members of the Center's Community Advisory Board. His company has contributed generously to the Clean Air Initiative, which the Center is spearheading. And he is working with Catawba student intern Dan Robertson this semester to help research ways his company can become more environmentally friendly.

"We can learn as a company [about sustainable practices] as well as the student's learning," Messinger says. "We can educate our whole work force."

Providing both financial support and leadership for the Center's program and activities is important to Messinger. "People have to be willing to stand up and convince others to look at this seriously," he says.

AWARDS...

"We are very pleased that others in the region recognize the work the Center is doing to educate the public about air pollution and to promote ways to clean up our air," said John Wear Jr., director of the Center for the Environment. "We have been gratified by the many supporters who understand the importance of our work and are working with us to address this critical problem."

The Clean Air Initiative is funded by these individuals, institutions and foundations: F&M Bank, Central Carolina Bank, Wachovia Bank, Rowan Bank, Bank of North Carolina, Power Curbers Inc., Fred and Alice Stanback, County of Rowan, City of Salisbury, Z. Smith Reynolds Foundation, Blanche & Julian Robertson Foundation and Catawba College.

SEMINAR... (continued from page 6)

VOLUNTEERS... (continued from page 5)
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AWARDS...

(continued from page 1)

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Students, alumni and friends gathered to work on the ecological preserve.

(continued from page 5)

"Helping at the work day was a very small way for us to say thank you for all that the folks from Catawba have done to help with the Environment," he says. "It was also a way for us to express our appreciation for all that the Center does to promote environmental education for the students in our part of the state."

Brandi Orbin, fund-raising and volunteer coordinator, expressed gratitude to the volunteers for their effort. "These volunteers got up early on a beautiful fall Saturday morning to help us get the preserve ready for the waterfowl and students who use it each fall," she said. "We greatly appreciate their time and hard work."
A Champion of Clean Air, Catawba, Rowan County

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"Paul's granite integrity and his willingness to lead by example have a galvanizing effect on those around him," Wear says. "When he speaks, people listen."

The best example is the support the Clean Air Initiative has garnered as a result of Fisher's actions. At a luncheon for bank representatives at the Center for the Environment, he pledged that F&M Bank, the financial institution he heads as chairman and chief executive officer, would contribute $10,000 to the air quality effort. Then he challenged the other officers in the room to follow suit. To date, five banks have committed more than $34,000 to the initiative.

Air pollution is a quality of life issue, Fisher says. "It deals with health and with economics. If we're not doing well health-wise, we're not going to do well economically. The county won't attract favorable business. Good people are not going to come to the worst air quality in North Carolina."

He explains why he wanted the banks to support the Clean Air Initiative. "It was our time to do something," he says. "We were on the hot seat. We didn't cause all of the air pollution, but I'm sure we contributed to it in small ways, and those small ways add up."

Fisher believes that Catawba may have been destined to assume a leadership role in the fight against air pollution. The Winston-Salem and Charlotte areas also suffer from poor air quality. "But there wasn't a catalyzt," he says. "We had two things: 1) We had some of the worst air in the county, and 2) we had one of the finest small environmental programs in the state."

The Center has assumed the role of catalyst in the effort to clean up the air in this area. The fact that Salisbury is not the largest city in the region or that the Center is not the largest environmental organization may even be an advantage, in Fisher's opinion. "Another fellow 2000 years ago came from a small town, too," he says. "You don't have to be big time for people to recognize the importance of what you're doing. To be honest, it's probably an advantage."

The response to the Catawba Center for the Environment's new Friends of the Center program reveals a strong support base for the Center's initiatives. The group grew to nearly 80 members in the first three months of its existence.

"It has been such an inspiration and motivation to see the response to the new Friends of the Center for the Environment program," says Brandi Orbin, coordinator of fund raising and volunteers. "The community has embraced the work that we are doing and has begun to come together to ensure that our work continues."

The Friends is a network of individuals and businesses that have made a financial commitment to preserving the health of the environment, which in turn positively affects the health of the citizens and the health of the economy. Support ranges from $5,000 and above for a Partnership at the Gold level to $10 for a student membership.

The Center will launch an annual event for the Friends in the spring and will continue to offer lectures and workshops on sustainability issues. "We always strive to plan interesting and thought-provoking events that help to increase awareness of our natural resources and show us how we can become better stewards," Orbin says.

She notes that the Center continues to seek support from the community through the Friends Program. "We want to reach our goal of enrolling 200 members by May 31," she says.

**Community Supports Friends of Center Program**

In 2004, the Center for the Environment embarked on its first-ever membership campaign. We are privileged to recognize the following founding members of the Friends of the Catawba Center College Center for the Environment.

The help and support of the community are essential to our ability to carry out our mission to foster environmental stewardship in our region, thereby addressing environmental problems facing the community and the region and helping to protect our physical and economic health. The Center continues to seek and encourage participation in the 2004 Friends of the Center Program. For more information, contact the Center at 704.637.4727.

**Gold $5,000 and above**

- **Benefactor** $500 - $999
  - Joanne Johnson
  - Miller Davis Studios, Inc.
  - Redmont Natural Gas

- **Rowan Regional Medical Center**
  - Pat $250 - $499
    - Alocia Primary Metals
    - Missie and Greg Alcom
    - Central Carolina Insurance Agency

- **Patron** $250 - $999
  - Diversified Graphics
  - Lillian Guscione
  - Betty and Bobby Lomax

- **Sustaining** $100 - $249
  - Mary-Ellen and Robert Reece Bailey
  - Lynn and Robert Bertram
  - Carolyn and Wilbert Blackman
  - Pat and Dick Check
  - Donna and Jeff Childress
  - Anne and Dave Clay
  - Nancy and Newton Fowler, Jr.

- **Honor** $50 - $99
  - Peter Hairston, Jr.
  - Dale and Dick Huffman

- **Benefactor** $500 - $999
  - Natural Resources Defense Council
  - Loise and Robert Puehrse

- **Patron** $250 - $499
  - Carla Reische and Jon Palmer
  - Lois and Robert Pruehsner

- **Sustaining** $100 - $249
  - Janice Query
  - Jane and John Riley
  - Jane and Mark Ritchie

- **Individual** $25 - $49
  - Martha and W.S. Adams
  - Nicholas Cordasci
  - Peggy Cap
  - E.R. Crawford, III, M.D.
  - Kurt Cribb
  - William Crowder
  - George Drum
  - Larry Farmer

- **Family** $50 - $99
  - Mary and Karl Arthur
  - Gail and Rick Barrier
  - Barbara and Clarence Beaver, Jr.
  - Nancy Erb
  - Rosemary and Bill Hall
  - Dianne and Ned Hudson
  - Pat and Dick McGuire

- **Student** $10
  - Jenny Boyd

- **In Honor Of**
  - Center for Environmental Staff
  - Beth Farmer
  - Daniel Kirk
  - Alice and Fred Stanback, Jr.

- **In Memory Of**
  - Paul Green, Jr.
  - Donald Lomax
  - Elizabeth Stanback
  - Alliene O'Brien Sutton

**Patron** $250 - $999

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Orbin, Smith Join Center for Environment Staff

Brandi Bettis Orbin, formerly assistant director of development stewardship at Georgia Institute of Technology, has joined the staff of the Catawba College Center for the Environment. She serves as coordinator of fund raising and volunteers. A graduate of N.C. State University, Orbin has worked in marketing and community relations for DASH Systems Inc., Meredith College and the Special Olympics World Summer Games. She participated in Atlanta’s Clean Air Campaign when she lived in Georgia.

She is married to Will Orbin, a social studies teacher and head football coach at East Rowan High School. They have one-year-old twins, Benjamin and Regan.

Kim Smith

Kimberly Smith, a graduate of the University of North Carolina at Chapel Hill, is the new executive administrative assistant.

A daughter of Jim and Patsy Betts of Salisbury, she recently returned to her hometown after working 10 years in Charlotte as a paralegal. She is married to Brent Smith, potter and co-owner of Green Goat Gallery in Spencer.

Climate Change Brings Rising Sea Levels

EDITOR’S NOTE: This is an abbreviated version of a story by Scott Jenkins that appeared Sept. 10, 2004, in the Salisbury Post.

The next time you crank the car to the beach, you may be helping to move the coast closer for future generations, a Duke University scientist told a group at Catawba College on Sept. 9.

In fact, some of the coastline vacationers enjoy today may someday become submersed under a rising Atlantic Ocean, thanks to changes in the climate, Dr. William Schlesinger said.

"Essentially, we as North Carolinians will lose the Outer Banks" and some coastal plains, Schlesinger said.

And that may not be the worst of it. Some global warming models show diseases like malaria, now found only in tropical climates, finding the Southeastern U.S. more hospitable to such diseases, a projection warns that before the end of this century, rainfall totals now considered normal could become the norm.

Certain parts of the country could see some types of trees disappear. North Carolina could lose its pines, he said.

And some species, particularly those that live in cold climates such as polar bears and penguins, could die out.

Dean of Duke's Nicholas School of the Environment and a professor of biogeochemistry who has testified before Congress, appeared on CNN and contributed to National Geographic and others, Schlesinger spoke at the Center for the Environment.

The professor focused mainly on rising levels of carbon dioxide -- the product of spent fossil fuels such as oil -- and the potentially harmful effects on Earth's climate.

"The change is slow, but cumulative," he said.

Since the mid-1800s, when industry took hold and man began mining and burning fossil fuels in a big way, Schlesinger told a few dozen people, carbon dioxide levels and global temperatures have risen "hand in hand."

As a result, average temperatures have crept up a few degrees around the planet, an observation borne out, he said, by weather station data that show deviations from "normal" temperatures overwhelmingly on the high side in the past several decades, where before most deviations were below normal.

Wear's Columns Focus on Sustainability Issues

EDITOR’S NOTE: The following excerpts include the opening paragraphs of columns that Dr. John Wear, director of the Catawba Center for the Environment, has written for area newspapers. For the full texts, please visit centerfortheenvironment.org.

The Importance of Planning for our Future

Growth is headed our way. Every time I pick up the newspaper or read a report about the region, I realize that Rowan County is headed for dramatic change, whether we want it or not. Voices and Choices' 2004 State of the Region report revealed that the population of this region is expected to increase by 1.8 million in the next 30 years. If that isn't enough to make us sit up and take notice, consider this: Land in our region is being developed nearly four times faster than our population is growing. In fact, if we continue the current land-to-person ratio, we will develop 342,000 more acres by 2035.

To put that in perspective, our LandTrust for Central North Carolina, which is probably one of the more progressive land trusts in the state and covers a similar number of counties, has protected less than 9200 acres in the 10 years I have been involved with the organization.

We need to step back and carefully consider what we want to do because we are going to grow -- and we're going to grow fast. The question is, "Do we want to plan for growth and guide it in a way that would benefit the community as a whole, or do we want to just let it happen and deal with the consequences later?" Just as good businesses develop plans for their future, good governments should also have an overarching vision and a plan for how a county or a municipality wants to grow...

Air Quality in Rowan: What Are the Facts?

I think it's time to re-examine the facts about air quality in Rowan County and also to look at the progress we have made since the Clean Air Initiative began.

The Catawba College Center for the Environment and the Rowan Sustainable Community Development Commission began efforts about a year ago to educate the public about air pollution and work toward cleaning up our air.

What prompted these efforts? In 2003, the American Lung Association ranked Rowan as one of the worst counties in the nation for air quality. What is the reality here? Do we really have a problem or is this merely related to the presence of ozone monitors in Rowan? To find out, we began asking some questions....

Back to the Future: The Importance of Greenways

The past may hold the key to our future.

Let's look back to the earlier part of the 20th century, when people used horses and buggies to get from one place to another. If they met a neighbor on the path, they stopped and chatted for a bit. Life carried with it a kind of ease that is hard to find today.

We jump in our cars and dash to the grocery store one mile away. If we see a neighbor, the best we can do is wave or honk our horn. We're sealed in our metal sedans or SUVs, our minds racing as fast as our vehicles.

Now consider the greenway, that corridor of open space which connects people and places and offers a host of benefits to health, the environment and the economy. A well
SUSTAINABILITY...

(continued from page 13)

planned greenway system can offer walkers and bicyclists opportunities to connect with one another as well as trails to get from one area to another....

Preserving Tree Canopy Good for Air
Does it really make sense? Here we are with air pollution on the rise, and we're removing the only filtering system we have.
That system is our tree cover. Trees serve as a natural air purification system because they absorb pollutants and draw some of the air. So maintaining a healthy tree canopy makes sense from an air quality perspective. But it also makes good financial sense.

The Charlotte/Mecklenburg area has discovered both the health and monetary benefits 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 calculates that the amount to $45.8 million in annual environmental benefits.

The benefits are distributed throughout the city. The 35 counties in the region total 390,000 acres of forest between 1990 and 2002. The state lost about 1.24 million acres, and 71 percent of that loss was caused by urbanization.

Saving Energy Saves Money, Reduces Pollution
If corporations and local governments made New Year's resolutions, saving energy and money would be a great place to start, and Craig Gammarino with the North Carolina State Energy Office would be a terrific guide.

Craig recently shared some of the State Energy Office's down-to-earth, practical ideas with the Catawba College Center for the Environment. The first step in any energy efficiency program is utilities accounting. This determines where and how efficiently energy is being used. Discovering billing data errors and switching electric rates can save a surprising amount of money. The state owns more than 12,000 buildings and pays a whopping $225 million each year in utility bills. Officials identified nearly $700,000 worth of savings just by switching rates. Craig says you can expect to save at least 1-2 percent through these accounting efforts....

Students Reveal Why They Chose Catawba

'I never knew you could learn so much'

Talk with freshman Tara Millington for five minutes, and she'll tell you that dragonsflies spend most of their lives underwater and the purity of a stream can be determined by monitoring the insects that live there.
'I never knew you could learn so much from the little things you find in a stream,' she says.

In one short semester, the Palatine Bridge, N.Y., native has become a champion of Catawba College's Environmental Science Program and the Center for the Environment where she works as a work-study student. She has worked on the ecological preserve and helped with the Clean Air Lecture Series by transcribing presentations for the Center's web site.
'The Center has already learned so much, just taking Fundamentals of Environmental Science and going out on the preserve,' she says.

A First Family Scholarship recipient, Millington chose Catawba for the one-on-one contact with the professors and the opportunities for hands-on learning. "I feel that not a really a lecturer," she says, "so it works with my learning preferences."

She has gotten involved with the environmental club, NatureSAFE, and with the N.C. College Conservation Network, which allows environmental science students from colleges and universities across the state to share ideas. "It was exciting to learn that other colleges are doing the same kind of things that we're doing," she says.

Natural products for cleaning and personal hygiene are of particular interest to her. She intends to learn more about tree oil products so she can share her knowledge with other students.

Lectures "just blow my mind"

Freshman Hayley Stafford of Fort Lauderdale, Fla., got involved immediately in all three programs for the Environment to Millington. She says she arrived in the fall. "The first weekend I went backpacking, and within the first two weeks I began attending speeches on campus," she says.

The speakers in the Center's Clean Air Lecture Series "just blow my mind," she says. "Even in our Fundamentals of Environmental Science class, we talk about so many things that I've never even thought of."

After attending several lectures at Catawba before she decided on Catawba. The college's strong Environmental Science Program was the main reason Catawba rose to the top of her list.
Seminar Uncovers ‘Tons & Tons of Ideas’

“Tons and tons of ideas.” That was the phrase one student used when he talked recently about the Campus Greening Seminar offered last semester at Catawba College. More than 20 students gathered to research and explore ideas for making the Catawba campus more environmentally friendly.

They heard speakers on campus recycling and composting, on green purchasing and simple living. They divided into groups to research topics like building green and saving energy. Their next step is to compile all their information and present it to the administration and selected faculty and staff in the hope that their recommendations will be adopted throughout the campus.

The students examined what other colleges and universities are doing, adapting the ideas to Catawba’s particular situation.

Part of the appeal of the recommendations is that the practices will save the college money as well as benefit the environment. Compact fluorescent light bulbs, for example, last years longer than traditional bulbs. They also use less energy so utility companies have to produce less and therefore emissions are reduced.

Conor Coleman notes that recycling has a financial benefit as well. “Rowan will pick up the recycling for free.”

Ed & Nancy Clement Support the Work of the Center

Ed and Nancy Clement have followed the progress of the Catawba Center for the Environment since its inception. “We have seen its effect not only on Salisbury but on the entire region,” Clement says. “The Center reminds us of the importance of sustainability and helps promote land conservation in the region.”

The 189-acre ecological preserve, which is adjacent to the Center for the Environment facility, is an asset for the college and the community, says Clement. “I love the fact that the Catawba preserve is right in the middle of Salisbury. It’s the only preserve that I know owned by a college or university that is protected in perpetuity with a conservation easement.”

As founding president of the LandTrust for Central North Carolina and the Historic Salisbury Foundation, Clement believes strongly in the conservation of land and the preservation of our heritage. Nancy Clement, also a president of the Historic Salisbury Foundation, has been an active fund-raiser for various groups in the community. Their advocacy of the Center and related community causes prompted them to become Friends of the Center for the Environment the moment the organization was established.

“Ed and Nancy are stellar examples of Salisbury. Rowan residents care deeply about their community and are willing to lend their financial support to organizations that they feel are advancing causes that will benefit the community today and in the future,” says John Wear, Center director. “We are grateful for their friendship and their advocacy.”

Gifts Totaling $105,450 Support Clean Air Initiative

The Clean Air Initiative has received gifts totaling $105,450. Businesses, banks, foundations, local governments, and concerned citizens have committed funds to the initiative.

The project, spearheaded by the Catawba College Center for the Environment, is educating people about air pollution and fostering strategies to mitigate that pollution. The catalyst for the project was the American Lung Association’s 2003 announcement that Rowan was the 16th worst county in the nation for air quality.

Subsequently, Rowan was placed on the Environmental Protection Agency’s non-attainment list, which means it does not meet federal air quality standards.

Five banks in Salisbury and Rowan County have contributed a total of $34,250. F&M Bank, Central Carolina Bank, Wachovia Bank, Rowan Bank and the Bank of North Carolina have all made commitments to the initiative.

The Z. Smith Reynolds Foundation gave $20,000 to the cause, and the Blanche & Julian Robertson Family Foundation committed $5,000. In addition, Power Curburs Inc. has led the business community in supporting the initiative, and environmental advocates Fred and Alice Stanback have made a substantial contribution.

The project has also received support from See GIFTS, page 18

City of Salisbury Takes Steps to Clean Up the Air

The city of Salisbury has put its commitment to clean air on the front burner.

Steps it took a year and a half ago are already producing results. The city switched from diesel, which contains about 3,000 parts per million of sulfur, to low-sulfur diesel fuel, which has about 500 parts per million, in its off-road equipment in December of 2002.

Now, however, the city is intent on making additional changes that will improve the quality of the air. For one thing, it is exploring grant possibilities to help defray the cost. ways, says David Treme, city manager. “Not only would it improve human health but it would also have the benefit of improving our environment.”

See STEPS, page 19

Local Station Offers Biodiesel

Steve Jarrett has taken a bold step forward on behalf of the environment.

His corporation, Superior Oil Co., became the fourth in the state -- and the only one west of the Triangle area -- to offer a blend of 20 percent biodiesel and 80 percent petroleum diesel (B20) to the public.

His Penn Mart station at the corner of Mooresville Road and South Main Street began selling B20 in mid-October, thanks to a $25,000 grant from the N.C. State Energy Office through the N.C. Solar Center. The grant allows Jarrett to sell biodiesel for the same price as regular diesel, which typically costs 20-30 cents less per gallon.

This renewable fuel, which can be used in any diesel vehicle without modification, is produced from organic feed sources like soybeans, cooking oil and animal fats. It produces lower emissions of particulate matter, carbon monoxide, toxic contaminants, sulfur dioxide and hydrocarbons than regular diesel. It does, however, increase nitrogen oxide emissions by about 2 percent.

See BIODIESEL, page 20
Environment. Truckers Benefit from New Equipment

EDITOR’S NOTE: This is an abbreviated version of a story by Mark Wineka, which appeared in the October 13, 2004, issue of the Salisbury Post.

Rowan County took an electrifying step into the future Oct. 12 at The Derrick Truck Stop off Interstate 85.

The Environmental Protection Agency’s top man, Mike Leavitt, presented the Centralina Council of Governments with a $100,000 check to help establish a truck stop electrification site at The Derrick.

An electrification site allows a driver to shut off his engine and plug into whatever he needs to stay comfortably inside his rig. The driver has everything at his fingertips: electrical outlets inside and outside the cab, satellite TV connections with on-demand movies, a built-in computer with wireless Internet, telephone jacks, ports for keyboards and mous-es, filtered central heating and air and a credit card reader to pay for it all.

But the biggest benefit to those assembled Tuesday afternoon in The Derrick parking lot was what truck electrification stops mean for the environment. The Rowan County site will reduce pollution in a county rated worst in the state for its air quality.

Nationwide, extended truck idling contributes 11 million tons of carbon dioxide, 180,000 tons of nitrogen oxides and 5,000 tons of particulate matter to the atmosphere. It’s an unhealthy, sometimes deadly mix.

Idling long-haul trucks consume more than a billion gallons of fuel a year, costing $2 billion.

Leavitt pulled a strand of hair from his head Tuesday to illustrate that particulate matter that imbeds itself into lungs and causes respiratory problems for millions is just one-thirtieth the size of that hair. Taking steps to reduce the amount of particulate matter leads to longer, healthier, more productive lives and a better community, Leavitt said.

Former Rowan County Commissioner Leda Belk, who chairs the COG Board of Delegates, and Rebecca Yarbar, regional initiatives program administrator for COG, played an instrumental role in identifying The Derrick as a site and winning the EPA grant.

MISSION...

(continued from page 4)

Dr. Robert Knott, Catawba College president, is pleased that the Center is able to use its expertise for the benefit of the community. “The Center clearly provides enrichment opportunities for our students, such as the ecological preserve and the sustainable facility that houses the Center, but it also connects what the college has to offer with what the community needs,” he says.

“The Clean Air Initiative is a good example,” Knott says. “We’re glad the Center can serve as a catalyst to help energize the community around environmental issues.”

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Center Partners with Simple Living TV Series

The Catawba College Center for the Environment has entered a partnership with the Simple Living TV Series that will bolster the work of both.

“Simple Living with Wanda Urbanaska,” which is produced by Urbanaska and Frank Levering for public television stations nationwide, is the first major television series on simplicity. The series focuses on environmental stewardship, thoughtful consumption, community involvement and financial responsibility. Urbanaska calls it “a paean to a more meaningful life with less debt, less clutter and less stress.”

Catawba and the Center for the Environment will be recognized in the credit roll of the second run of the series, which will begin airing in the fall of 2005. The college will serve as the financial agent for the second complement of programs.

A number of activities are planned in cooperation with Simple Living, including a presentation by Urbanaska at the Center for the Environment building in the spring.

“One of the reasons we decided to affiliate with Simple Living is the message it promotes,” says John Wear, director of the Center and a member of the Simple Living National Advisory Board. “It’s not only an environmental message but also a message about living in this world — about living in a way that uses fewer resources and about enjoying a lifestyle that gives us more time to be with our children and our families.”

“Wanda and her staff put all this into a format that is really fun to watch and appeals to people in many walks of life,” Wear says. “That’s the reason it’s available in 75 percent of homes across the United States.”

The students agree. Megan Fusom, a freshman from Mount Pleasant, S.C., recognized Urbanaska when she visited campus. “I watch her show,” Fusom says. “It’s a good idea. People need to be educated about the environment, and we as students need to learn about living simpler.”

Urbanaska calls the partnership “a really exciting opportunity for two organizations that are interested in making change, in bettering the quality of life and the quality of our environment.”

“It’s a natural fit,” she says, “because Catawba is an educational institution, and we at the Simple Living Television Series are also seeking to educate the public. Many of the issues we are tackling in Simple Living also segue beautifully with the work that Dr. Wear and others at the Center are doing to raise awareness about the environment.”

Volunteers Prepare Preserve for Fall Activities

About 30 volunteers gathered at the Catawba Center for the Environment Sept. 11, 2004, to prepare the college’s 189-acre ecological preserve for fall activities.

Two teams worked on cleaning and repairing wood duck boxes for the fall migration, and two more worked on trail maintenance and speed up in preparation for classes and student research projects.

Those who donated their time and effort included alumni from the Environmental Science Program, high school students, Catawba students and staff and friends of the Center.

Marry Eitle, bibliographic instruction and reference librarian at the Corrill-Linn-Black Library on the college campus, helped locate and assess the state of wood duck boxes. “We were able to wear waders and splash around in the waters of the lake,” she says. “It was so much fun.”

She volunteered because she feels that the ecological preserve is one of the primary assets of the campus. “I was interested in exploring the preserve with many people and giving back to the environment through a clean-up,” she says.

Andy Miller, district soil conservationist with the Davidson Soil and Water Conservation District and chair of the Area 8 Envirothon, says he and his wife volunteered because of the assistance he received from Center director John Wear and special projects coordinator Kurt Cribb during the Envirothon, which was held last March at the Center for the Environment facility and adjacent preserve.

See VOLUNTEERS, page 11
More Funds Needed for Composting Project

With luck and generosity, three earth tubs will be churning out compost for the campus landscape by the fall.

The Catawba Center for the Environment has purchased the $7,000 tubs with gifts from Fred Stanback and Bill Graham, Catawba trustees and members of the Center's Community Advisory Board. The Center has been able to acquire one of the tubs at a significantly reduced rate from a school in Durham which received it as a gift from DuPont. Now the Center must raise an additional $18,000 to cover the cost of installing the tubs.

Initially, student Connor Coleman researched the subject for the Center as a work-study student. The information he gathered prompted him to become a driving force behind the project. "We want to be role models," he says. "We want to set the example."

The dining service will put its food scraps into the three-cubic-yard tubs where the scraps will be turned with a bulking agent which absorbs moisture.

After baking for three days at 130-degree temperatures, the material will be transformed into compost, which will be used in campus landscaping.

Don Nilson, the director of Food Services, notes that the cafeteria produces about 500 pounds of scrap each week. The process reduces the material to 1/3 of its original weight.

He was involved in a massive recycling program at Ithaca College and knows from experience how important it can be to support this 110 percent," he says.

Kurt Cribb, the Center's special projects coordinator, says the compost will enhance the plantings on campus. The Center will build a natural and artificial structure to provide a place for the students to place the compost and let earthworms enrich it even more before it is placed on the planting beds.

"I foresee it adding beauty and nutrients to our current and future plantings," Cribb says. "It should make our plants grow healthier and their root systems grow stronger."

It will also save the college money because less material will have to be hauled away to the landfill. Henry Haywood, facilities director, estimates that the composting program will save Catawba more than $7,500 per year in disposal costs.

Center for Environment Takes Mission to Next Level

The Catawba College Center for the Environment is ratcheting up its efforts in the community. "We're taking our mission to the next level," says Dr. John Wear Jr., Center director.

The Center has taken a leadership role in the community and the region since its inception nearly 10 years ago. It was recognized for the construction of one of the first green buildings in the state. In addition, it has lent its expertise and assistance to everything from land conservation to watershed protection and greenway development.

Wear notes that the Center's goal has never been to focus on what is wrong but rather to serve as a catalyst for positive action and to partner with other groups to effect positive change. "A good example of that is the way we work with the Sustainable Community Development Commission on the Clean Air Initiative," he says. "That group is made up of people from many walks of life. They all add a valuable perspective to the discussions. Together, we are able to do so much more than if we acted separately."

The Clean Air Initiative is the Center's current focus. It involves an array of efforts -- from promoting walkable communities and preserving the tree canopy to assisting the Rowan-Salisbury school system as it retrofits school buses with diesel oxidation catalysts and supporting the city of Salisbury as it explores funding to convert its fleet to ultra-low sulfur biodiesel.

"This county and a number of others in the region have been faced with the air quality issue," Wear says, referring to the Environmental Protection Agency's placing Rowan and seven other counties in either there's a 100 percent contribution of buildings."

Particulate matter also plays a role in sudden cardiac death. "We know from this gigantic study that two days after air pollution exposure, there will be an increase in the number of cardiac deaths," Ballantine said. "They increase vascular inflammation markers and blood clotting proteins and tend to cause irregular heartbeats."

Air pollution exposure also increases the rate of lung cancer and stroke.

Ballantine noted that Medicare expenditures increase by about $180 extra dollars per patient for every ten parts per billion of particulate exposure. "In Charlotte that's $94 million every year extra in Medicare expenditures. In Rowan County, it's about $6 million."

Citizens can lessen air pollution through such things as purchasing fuel-efficient cars, creating land-use plans that allow people to walk more and drive less, and retrofitting school buses, Ballantine said.

An Ecological Connection Underfoot

EDITOR'S NOTE: This is an abbreviated version of a column by Chris Verner that appeared in the October 17, 2004, issue of the Salisbury Post.

Ordinarily, I don't consider carpet a particularly interesting subject. Carpet is a utilitarian home furnishing that comes in many different textures and designs, but serves only one basic purpose -- to cover floors and provide a little cushiony comfort underfoot.

So when I heard the remarkable story of Interface, Inc., an Atlanta-based company that has turned the making and selling of carpet into an environmental mission. Michel Belland, sales manager for Interface, related the company's story in October when he gave a presentation on sustainable business practices as part of the Catawba College Center for the Environment's Clean Air Lecture Series.

Like all good stories, this one begins with a compelling character -- Ray C. Anderson, a Georgia Tech-trained engineer who founded Interface in 1973 and over the next three decades transformed it into the world's largest producer of commercial floor coverings, a billion-dollar conglomerate with factories on four continents and sales in 110 countries.

To think of it at this point, it sounds like a typical business success story, and for its first two decades, Interface was a typical carpet maker. Its factories were voracious consumers of energy and raw materials, its waste products were sent to landfills, and its effects on the environment were immaterial.

But the story is about to change.

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Air Pollution Like Living with a Smoker

Breathing polluted air is like living with a cigarette smoker, said Dr. Clay Ballantine, a nationally recognized authority on air pollution and health.

Ballantine, an Asheville physician who testified two years ago before a Senate subcommittee on the subject, spoke Sept. 14, 2004, to an audience at the Catawba Center for the Environment's Clean Air Lecture Series.

"Lung-related deaths are increasing," he said. "To put this in perspective, we probably lose about 23,000 people a year to air pollution-related health effects," compared to 17,000 to drunk driving and 20,000 to murder.

He likened breathing polluted air to inhaling a fine mist of chlorine bleach. "It sets off an entire host of physiologic responses to this irritation."

The last 20 years has seen a 50 percent increase in childhood asthma, according to Ballantine. A clear relationship exists between ground-level ozone and the number of asthma attacks. "The more ozone, the more asthma," he said.

Even healthy people are affected by exposure to ozone. A study by Amt Associates indicates that between 1/3 and 1/2 of all asthma in North Carolina is due to air pollution. "This translates into a quarter of a million asthma attacks, 6,000 ER visits and almost 2,000 hospital admissions over the course of a year," Ballantine said.

Particulate matter, which comes primarily from tailpipes and smokestacks, is another culprit. "The particulates interact with your immune system and actually get directly into your blood stream," he said. "These things don't stop at the door."

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New Development Trends Return to Traditional Patterns

Urban designer David Walters told an audience at the Catawba Center for the Environment facility Nov. 29 that new development trends are really based on old development patterns.

By designing neighborhoods like those developed 100 years ago, where residents could walk on sidewalks from their homes to shops and neighborhood parks, communities can help clean up the air and create a sustainable future, Walters said.

He used Dartmouth, England – the town of 14,000 where he grew up – as an example. "It was built on the typical pattern of compact settlement and a lot of preserved landscape," he said. "The land is working farmland so it's an active piece of economic production and a part of the area's tourism. It represents a massive injection of money into the local economy."

The idea of thinking about the land as an economic resource, which has many layers of possibility and needs relatively sophisticated management, is at the heart of Walters' work and the work of other urban designers. "We try to mesh the public interest and private development sector," he said.

The Dilworth neighborhood in Charlotte, where Walters currently lives, is a good example of a sustainable neighborhood that includes a range of housing opportunities, shops and preserved open space. The streets are relatively narrow with sidewalks on both sides, and the neighborhood is safe for pedestrians, motorists and cyclists.

A connected network of streets is a fundamental requirement for a walkable neighborhood, Walters said. "People will walk if it's safe and attractive and there’s someplace to walk to."

The Dilworth community is how America was built until the 1940s, Walters said. "Once we emerged victorious from World War II, newness and innovation swept through our culture." Older buildings were either demolished or the facades were covered with aluminum.

"We built our subdivisions and our retail centers around one criterion only: the automobile," Walters said. Sidewalks were out, and cul-de-sacs were in. "There was no care or interest in the public realm. Our interest focused on ourselves, our own peace and our own automobiles."

Now communities realize that building houses in one place, companies in another and shops in still another means that we have to drive everywhere. This contributes to air pollution, obesity and a lack of a sense of community. The new patterns of development give people more choices, Walters said. They can walk or cycle or drive their cars, if they choose. Houses and businesses and parks are all part of the mix, just as they were 100 years ago.

"It's interesting," Walters said, "that this new development pattern is actually just America's old development pattern rediscovered."

Fred Stanback Involved from the Beginning

Fred Stanback’s involvement with the Catawba Center for the Environment precedes the establishment of the Center. In fact, it goes back to the 1980s when the current Catawba Ecological Preserve was just an idea in Professor Mike Baranski’s mind.

"Mike Baranski and Dan Kirk [retired chair of the Biology Department] and Bill Stanback [Center Advisory Board member] thought the land beside Catawba had special significance and should be protected," Fred Stanback says. "They got me involved."

The Conservation Trust of North Carolina subsequently declared a 45-acre tract jointly owned by Catawba and the Rowan-Salisbury Board of Education a Natural Heritage Area, and the college dug a lake -- named Baranski Lake -- on the 189-acre ecological preserve. It’s an unusual lake in that it’s not an impoundment of a flowing stream but relies on ground-water," says Stanback, a Catawba trustee and member of the Center’s Community Advisory Board.

"In his characteristic understated style, Stanback says Center Director John Wear wanted "a little building" to use for the Environmental Sciences and Studies Program and the Center for Environment, and the 'plans grew dramatically.' He refers, of course, to the 21,000-square-foot sustainable facility that houses the Center. His mother, Elizabeth Stanback, contributed $6 million to the construction of that building. She credited her son, Fred, and Wear as the inspiration for the gift. "I certainly endorse everything that they are doing," she said in 1998, the year after the initial gift."

It emerged as a three-dimensional incarnation of the Center’s sustainable curriculum. Everything about the facility -- from the site design to the environmentally friendly building materials, from energy and water conservation issues to recycling and waste management -- is grounded in principles of sustainability. It opened in January of 2001. A longtime benefactor of Catawba College and the environment in general, Stanback and his wife, Alice, have contributed generously to the Center and its initiatives. "Our Center would not be where it is today without the generosity of the Stanback family," says Wear.

"Catawba's Center for the Environment and Environmental Science Program have garnered national attention in education and environmental circles," he says. "We are frequently lauded for the uncommon experience we offer our students through a combination of the academic program and the Center's activities. The Stanbacks have provided significant funding to further our growth."

Stanback has encouraged administrators to include an environmental awareness course for all students at the college. "We're destroying our environment at a very rapid rate," he says, "so I think it's important to protect resources like the air, the water, the trees, and a teaching center like the one at Catawba can help train tomorrow's leaders about why this is important and how to do something about it."

"The future political and business and religious leaders can have a big effect on the environment," Stanback says. "We need information from the scientists, but the ones who affect public policy may have the bigger impact. That's why we need to involve as many students as possible in environmental awareness."
Message from the Director
Center Provides Value-added Education

A recent Associated Press story reminded me of how important the Catawba Center for the Environment is to the education of our students. A young man in a northwestern state reacted to development's encroachment on the habitat of an endangered species. The result was not the preservation of the habitat, but a backlash of anger against his tactics. This young man - like graduates from so many colleges and universities -- had the scientific knowledge necessary to analyze the situation and signal danger, but he obviously had not had a background in working with community members to bring about a satisfactory solution.

How different that is from the education that our students receive. We recognize that environmental science and studies is a complex field. It involves science, to be sure, but it also involves public policy and ethics. We know that successful outcomes can turn on an ability to work with community leaders and garner grassroots support.

That's why we are striving to provide so many real-world opportunities for our students through the Center. That's what sets us apart from the myriad environmental science programs throughout the country. We offer a value-added education that teaches students the complexities of effecting positive change that will create a sustainable future and enhance the quality of life for our citizens.

Consider the opportunities our students have as a result of their involvement in the community. The next phase of our Clean Air Initiative promises to offer students who plan to be educators internship opportunities to teach younger students and their parents about the causes of air pollution and ways of mitigating it.

Our students continue to work as interns at the LandTrust for Central North Carolina where they benefit from the Center's long-term partnership with that organization. They get firsthand experience in our joint project to conserve the Two Rivers Preserve and the South Yadkin Refug. They also work with Horizons Unlimited on the N.C. WILD education site at Duke Power's Buck Steam Station near Salisbury. The goal of that program is to provide wildlife habitat and to involve students and the community in learning about and protecting the environment.

The Center, which was officially founded in 1996, actually grew out of community projects like these. The beauty of this approach is that both our students and the community benefit.

We will focus much of our energy this year on environmental awareness on campus - reaching out to faculty, staff and students who are not in the Environmental Sciences Program. Thanks to a generous benefactor, we now have professional development stipends for faculty who wish to learn how to integrate environmental education into their classes.

In addition, we will create round-table discussions for faculty, staff and students on subjects like campus greening and environmental awareness. Catawba students will continue to work with the administration to facilitate campus greening and environmental projects, and they will take an active roll in educating students in other disciplines about the importance of being good environmental stewards.

Because of the generosity of donors to the Catawba Center for the Environment, we are able to offer this value-added education to our Catawba students. The benefit to them, to our community and to the communities they will inhabit after graduation cannot be measured.

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EPA Honors Food Lion Stores
The Environmental Protection Agency recognized Salisbury-based Food Lion in December 2004 for its energy efficiency.

More than 200 stores in eight states have earned the EPA's Energy Star designation. Each of these stores saves as much as 86,000 kilowatt hours per year. The energy savings at each store prevents nearly 190,000 pounds of carbon dioxide from spewing into the atmosphere every year. This is the equivalent of removing pollution from 19 cars or planting nearly 26 acres of trees.

"Food Lion is one of the most energy-conscious corporations in our region," says John Wear, director of the Center for the Environment. "It sets the standard for energy efficiency. We are very glad the EPA has recognized our hometown grocery chain for its outstanding efforts."
CONNECTION... (continued from page 17)

sumers of non-renewable raw materials, generated clouds of pollution and created mountains of waste. Because synthetic carpet fibers such as rayon or nylon are petroleum based, it consumed a lot of oil.

But 10 years ago, Anderson's life and business philosophy abruptly changed when he picked up a copy of Paul Hawken's "The Ecology of Commerce," the ground-breaking book in which the Smith & Hawken co-founder warned of the environmental and economic ruin ahead if multinational corporations didn't become more conservation-minded. Hawken called for the adoption of sustainable business practices that reduce waste, shift to renewable energy sources and use recycled materials.

Anderson has described what happened as "an epiphany - it hit me like a spear in the chest." Rather than seeing his company as a business-school model of free-market capitalism, he realized "I was part of the problem ... a plunderer of the Earth."

He embarked a program to make Interface the world's first large "fully sustainable" company - meaning it would use only renewable energy sources, such as solar power, and recycled material while developing carpets that didn't use petro-chemicals.

The company has reduced emissions of carbon dioxide - a gas implicated in global warming - by 46 percent through more efficient production processes and increased use of renewable fuel. One plant now gets most of its power from methane gas piped from a nearby landfill.

The company uses 78 percent less water at its modular carpet plants and 40 percent less in its broadloom plants. Not only that, Belland notes, but the water is "cleaner when it leaves the plant than when it came in."

For the full story, visit CenterForTheEnvironment.org and click on Clean Air Initiative.

BIODiesel... (continued from page 15)

Conversations with City of Salisbury staff and with Raymond Coltrain of Piedmont Research Station prompted him to investigate the possibility of selling biodiesel. The City of Salisbury's willingness to serve as the "anchor tenant" for the fuel station was instrumental in Jarrett's securing the grant, according to Anne Tazewell, alternative fuels program manager with the N.C. Solar Center. The city will use B20 in all its diesel vehicles.

Tazewell, who helped Jarrett with the grant, notes that providing assistance to the private sector is important.

MESSINGER, 'We Have To Protect the Environment'

CEO Dyke Messinger understands the value of the environment to Rowan County's economic health and quality of life.

The president of Power Curbers Inc., Messinger ranks quality of life as a top priority for the citizens of Rowan. "What has been given to us in our green spaces and our livability and our air and water is something we have to protect. Period," he says.

"We're only on this earth a short period of time so protecting it - preserving it for generations to come - has to be one of our major priorities."

Messinger notes that Americans have lived with excess for so long that they typically don't consider living in a sustainable way. "The building of the Center for the Environment is a perfect example of sustainability, he says. Its use of recycled and recyclable products and environmentally friendly practices makes it a model "green" building."

He sees a direct correlation between air quality in Rowan and economic development. "There are companies that will not be able to locate in areas that have federal ozone restrictions," he says. "After all, who wants to move their company or set up another manufacturing facility where they're going to have restrictions because of the poor air quality?"

Center for Environment Receives Awareness Award

The Catawba College Center for the Environment has received an award for its contribution and dedication to improve the state's air quality during the 2004 ozone season.

The North Carolina Air Awareness Program in Charlotte and Mecklenburg County presented the award on Oct. 22, citing the importance of the Center's Clean Air Lecture Series, which brings authorities to the Center to speak to the community on air pollution, its effects and ways to combat it. The Center is spearheading the Clean Air Initiative for Rowan and the Central Piedmont in response to the fact that Rowan does not meet federal air quality standards. The American Lung Association listed the Charlotte-Gastonia-