

DOUG
CRAWFORD-BROWN

Crawford-Brown, long-time environmental, Institute leader, leaves UNC

"THE CAROLINA COMMUNITY DEEPLY APPRECIATES DOUG CRAWFORD-BROWN'S LEADERSHIP DURING THE LAST 11 YEARS IN THE CEP, AND NOW THE INSTITUTE. HIS VISION FOR ENVIRONMENTAL PROGRAMS AT CAROLINA AND HIS GLOBAL LEADERSHIP IN HELPING TO REDUCE THE EMISSION OF GASSES THAT CONTRIBUTE TO GLOBAL WARMING WILL BE SORELY MISSED AT UNC AND BEYOND. WE WISH HIM THE BEST IN HIS NEW ENDEAVORS."

Bernadette Gray-Little, PhD
Executive Vice Chancellor and Provost

Doug Crawford-Brown, who has served as director of the UNC Institute for the Environment (formerly the Carolina Environmental Program) for the past six years, has resigned as both the director of the Institute and as a faculty member at UNC, effective March 10, 2008.

Crawford-Brown has been at UNC for 25 years. As the Carolina Environmental Program's associate director for education for five years prior to assuming the directorship, he was integral in establishing the B.S. in Environmental Science and B.A. in Environmental Studies degrees. He also assisted founding CEP Director Bill Glaze in planning and establishing the CEP; he later led the planning that resulted in its expansion to the present Institute. Crawford-Brown will stay closely affiliated with UNC and the Institute for the Environment by continuing to direct the IE's Summer Program in International Energy Policy and Environmental Assessment at the University of Cambridge in Cambridge, England.

Crawford-Brown has long been concerned with climate change and its impact. He plans to devote his energy to tackling the global problems of climate change and sustainability. Toward that end, he is forming, along with colleagues in the United Kingdom, a venture that will bring together investors, innovators, adopters and providers of green technologies. He is also taking a position as a senior sustainability advisor to the firm of Pell Frischmann, one of the UK's leading firms of consulting engineers, to help bring green building practices to communities and businesses worldwide.

Dr. Robert K. Peet has been appointed to serve as interim director of the Institute until June 2008. Peet has served as the chair for the Curriculum in Ecology for five years and as a professor of Biology at UNC for over 30 years; his impressive career includes service as editor-in-chief of Ecology. As interim director, he will lead the Institute as it continues its expansion, and as a search begins for the next permanent director. ■

"DOUG CRAWFORD-BROWN IS A VISIONARY LEADER AND ENVIRONMENTAL PIONEER WHO WILL BE SORELY MISSED. UNC-CHAPEL HILL, OUR SURROUNDING COMMUNITIES AND THE STATE OF NORTH CAROLINA OWE HIM AN ENORMOUS DEBT OF GRATITUDE. DOUG'S FINGERPRINTS ARE ALL OVER THE UNC AND CHAPEL HILL CARBON REDUCTION PLANS, THE ENVIRONMENTAL DESIGN OF CAROLINA NORTH, THE TOWN'S POLICIES ON ENERGY EFFICIENCY AND ENVIRONMENTALLY SENSITIVE DEVELOPMENT, AND THE STATE'S MITIGATION PLANS FOR CLIMATE CHANGE.

"DOUG'S ENERGY AND PASSION FOR FINDING SOLUTIONS TO THE GLOBAL CLIMATE CRISIS LED HIM TO HELP SHAPE THE ENORMOUSLY SUCCESSFUL CAROLINA ENVIRONMENTAL PROGRAM. THE MAGIC IN THIS PROGRAM, WHICH HAS GROWN INTO THE INSTITUTE FOR THE ENVIRONMENT, IS IN ITS TRIPARTITE STRUCTURE, EMPHASIZING NOT ONLY RESEARCH, BUT ALSO UNDERGRADUATE ACADEMICS AND COMMUNITY OUTREACH. WITH WORLDWIDE FIELD SITES AND DEGREE PROGRAMS DESIGNED TO MEET THE ENVIRONMENTAL CHALLENGES FACING HUMAN AND NON-HUMAN SPECIES, DOUG LEAVES THE UNC INSTITUTE FOR THE ENVIRONMENT POISED TO BECOME A NATIONAL LEADER IN ENVIRONMENTAL EDUCATION. WE ARE DEEPLY GRATEFUL FOR HIS SERVICE."

Tim Toben
Chair, Institute Board of Visitors

Institute surpasses campaign goal, thanks to major gifts



BILL JOHNSON
CHAIRMAN,
CEO AND PRESIDENT
PROGRESS ENERGY

Several generous gifts and grants helped the UNC Institute for the Environment surpass its \$8,000,000 Carolina First fundraising goal by more than \$500,000. The Carolina First campaign began June 1, 1999, and ended on Dec. 31, 2007.

Recent grants from organizations such as the Z. Smith Reynolds Foundation, Progress Energy, Wallace Genetic Foundation and the Golden Leaf Foundation, and gifts from individual donors helped put the Institute past its goal.

The Z. Smith Reynolds Foundation recently provided \$40,000 in funding to the Environmental Resource Program (ERP) to fund staff salaries and provide the opportunity for follow-up with teachers who attended the climate change workshop the foundation funded (and ERP hosted) in 2007. The workshop was so well received that one teacher stated that it was the best workshop she attended in 25 years of teaching, said Dana Haine, a science educator with ERP. The grant will allow ERP to continue to help teachers engage their students on the topic of climate change, and even get their students involved in civics. For instance, two teachers from Bertie, N.C. committed to work with their students to help start a recycling program in their county.

Progress Energy recently renewed their generous funding for the Center for Sustainable Energy, Environment and Economic Development (C-SEED) by donating \$150,000 to the Institute. The grant ensures the continuation of exciting research focused on energy, economic development and environmental sustainability. Graduate fellows named for Progress Energy have been recruited, and are currently working on fascinating projects on campus. Two Progress Energy Faculty Fellows for 2008 have also been named, and their research will be funded through the grant.

Additionally, Progress Energy's grant has allowed for a speaker series that will bring seven or eight of the most current and dynamic speakers to campus

to inspire and educate students about energy issues. Renowned scientist and consultant Amory Lovins began the 2008 slate of events as February's guest speaker.

Wallace Genetic Foundation has continued their generous funding of the Institute's Virtual North Carolina Project. Wallace Genetic's grant of almost \$100,000 will help make Chapel Hill, UNC and the state a greener place to live.

Greening the environment, economics and development in the state was also the goal of a grant from the Golden Leaf Foundation, which recently provided \$200,000 for a project focusing on Camden County, N.C. (see page 3).

"We have been gratified by the leadership support that these visionary contributors have provided, and by the generosity of all those who have helped the Institute for the Environment reach our ambitious campaign goal," said Senior Associate Director Tony Reevy. "These vital resources, and the vote of confidence behind these grants and gifts, fuel our faculty and staff's passion as we continue to advance environmental research, education and public service for the benefit of Carolina and beyond." ❁

"THESE VITAL RESOURCES, AND THE VOTE OF CONFIDENCE BEHIND THESE GRANTS AND GIFTS, FUEL OUR FACULTY AND STAFF'S PASSION AS WE CONTINUE TO ADVANCE ENVIRONMENTAL RESEARCH, EDUCATION AND PUBLIC SERVICE FOR THE BENEFIT OF CAROLINA AND BEYOND."

Tony Reevy
Senior Associate Director, Institute for the Environment

Turning data into visual representations

NEW UNC ENVIRONMENTAL VISUALIZATION LABORATORY HELPS SCIENTISTS MAKE SENSE OF COMPLEX ENVIRONMENTAL DATA

Data collected by environmental scientists is often extremely complex, multi-dimensional and daunting to analyze. Often, the best way to make sense out of it is to put it in a visual format, to create maps and graphs. Thanks to UNC's new Environmental Visualization Laboratory, these scientists now have at their fingertips the most advanced computer visualization and modeling technology, so they can better analyze and use this information.

The Environmental Visualization Lab (EVL), located within the UNC Institute for the Environment's Bank of America Building offices on Franklin Street in Chapel Hill, features a cluster of powerful, state-of-the-art computers. Each



JOSE RIAL

machine is equipped with specialized software and two large screens to turn huge amounts of numerical data collected from satellites, monitoring instruments, laboratory studies and human observation into two- and three-dimensional maps and graphs that enable scientists

to visualize environmental changes over time.

According to UNC Professor of Geological Sciences Jose Rial, who developed and directs the EVL, "The tools we now have available through this lab will allow us to map our data in a number of multidimensional representations so we can figure out what mechanisms are at work, and hopefully predict what is going to happen."

In addition to the visualization computers, the laboratory also features a 77-inch interactive electronic board that allows groups of scientists to project images from the computer or Internet onto

a huge touch-sensitive screen for discussion and to handwrite electronic notes that can then be saved on a computer. "This board is a perfect tool for discussion, brainstorming and cross-fertilization of ideas," Rial said. "We can bring together climate scientists, environmental scientists and geoscientists, put our work up on the board, brainstorm and exchange ideas. That's one important way science is done, and this lab will contribute very much to that."

The EVL will also serve as a valuable educational resource on interdisciplinary environmental topics such as the socioeconomic impacts of climate change, modeling of coastal floodplains associated with severe weather, and future transportation and population scenarios.

Rial explained that UNC has needed this lab for several years, but a recent, generous gift from Fred Stanback finally made it possible to launch the facility. "This new facility is a huge advance for the Institute for the Environment, and Mr. Stanback's gift has made it possible." ❁

UNC INSTITUTE for the ENVIRONMENT

Board of Visitors

TIMOTHY P. TOBEN, *Chair*
OLIVIA HOLDING, *Vice Chair*
FRED ANDERSON
PHILIP BLUMENTHAL
KIRK J. BRADLEY
EDITH CECIL
BETSY CHAFFIN
WILLIAM CLARKE
DENNIS CRUMPLER
CHRIS DAGGETT
THOMAS F. DARDEN
KEN EUDY

LORENE S. GEVALT
CHARLES T. HAGAN III
MARY LAMBERTON HILL
REGGIE HOLLEY
WILLIAM D. JOHNSON
LATOYA KING
HENRY LANCASTER
R. MICHAEL LEONARD
STEVE LEVITAS
MICHAEL MAHAFFY
THE HONORABLE DANNY MCCOMAS
J. REID MURCHISON III

JIM PARROTT
THE HONORABLE BEVERLY PERDUE
L. RICHARDSON PREYER, JR.
VIRGINIA MCGEE RICHARDS
CATHY S. ROCHE
CHRIS SAWYER
THOMAS F. VALONE
JOHN A. J. WARD
THOMAS L. WHITE, JR.
ROBERT K. PEET,
INSTITUTE INTERIM DIRECTOR, EX-OFFICIO

UNC Environment Newsletter Staff

TONY REEVY
SENIOR ASSOCIATE DIRECTOR
DANIELLE DEL SOL
INFORMATION & COMMUNICATIONS
SPECIALIST
LAURA ERTEL
EDITOR
UNC-CHAPEL HILL DESIGN SERVICES
DESIGN

Photo Credits

BILL JOHNSON'S PHOTO COURTESY
PROGRESS ENERGY (PAGE 2)
PHOTO COURTESY NITIN SEKAR
(PAGE 3)
PHOTO BY MATT GOULD
(PAGE 3, BOTTOM)
PHOTOS COURTESY ERP (PAGE 4)
MODEL COURTESY ALISON EYTH
(PAGE 4, BOTTOM)
PHOTO COURTESY LIZ VEAZEY (PAGE 5)
PHOTO BY WILL OWENS (PAGE 6, TOP)

STUDENT WINS PRESTIGIOUS UDALL AWARD

Nitin Sekar, a senior Environmental Science and Biology double major at UNC who will graduate this May, was honored for a second year as a Udall Scholar, a prestigious national award that recognizes his commitment to a career related to the environment. The Morris K. Udall Foundation was established by Congress in 1992 to honor Udall's 30 years of service in the House of Representatives, educate a new generation of Americans, and preserve and protect our natural heritage through studies in the environment and Native American health and tribal policy. The Udall Foundation is also committed to promoting the principles and practices of environmental conflict resolution.

Sekar has made the most of his UNC experience, gaining field experience all over the world.

In Siberia, he studied soil ecology, and in South Africa, he spent a semester with the Duke University-based Organization for Tropical Studies, then a month studying baboons in the field. "That was a really valuable learning experience. It helped me learn to what extent I like doing conservation biology field work, and to what extent I need to keep my feet in the more policy-related realm."

The Udall awards enabled Sekar to spend a summer in India studying the use of wildlife corridors by wild and domestic animals. "The Udall Scholars conventions," Sekar said, "also connected me with people around the country who are concerned with all sorts of environmental and conservation issues, things like global warming and energy dependency. It was a great networking opportunity for me to meet other people with similar long-term goals."

Over the past two years, Sekar has worked with other UNC students, faculty and organizations on and beyond campus, including students at Duke and Bennett College, to co-found the North Carolina Millennium Village Project, the first student-led partnership in the country to team with a village in Kenya to achieve the United Nation's Millennium Development Goals to eradicate extreme poverty. The group is helping this community raise funds to secure the resources needed to improve education, fight HIV and malaria and address other issues related to poverty, as well as to build relationships that help the community achieve its goals.

"I want to be a scientist involved in the international conservation and sustainable development movement," said Sekar. "To get there, I want to get a Ph.D. in evolutionary biology and ecology. I'd like to be able to solve problems using research skills in the field, but also to be able to participate in policy decisions and help create a stronger international network for preserving biodiversity while promoting sustainable development."

"Nitin Sekar is the most brilliant and well-rounded student I have come across in my 16 years of teaching," said Greg Gangi, associate director for education for the Institute for the Environment, who has taught and been a valued academic advisor to Nitin for four years. "He is strongly committed to the generation of knowledge; he is also driven by idealism and the highest ethical standards. He is a born leader with a personality best described as personable, empathetic, good-humored and humble." 🌱



NITIN SEKAR

Study assesses feasibility of "green" industrial park for Eastern NC

The UNC Institute for the Environment has received funding from the Golden Leaf Foundation to assess the feasibility of developing a "green" industrial park in Camden County, North Carolina that would serve as a state and national example of how such parks can be built sustainably.

A "green" park would include buildings that embody sustainable principles of design, reducing material and energy use in a way that would prove financially attractive to companies; and infrastructure design and support services such as water capture and re-use and recycling programs to reduce the environmental impact of the site as a whole.

If deemed feasible, development of a new industrial park could attract industries and jobs to the northeast corner of North Carolina. It could also become an example of best practices in the design, development and operation of industrial parks and supporting services that embody the principles of sustainability. And, it could stimulate the development of additional economic activities such as mixed-use residential and commercial development and ecotourism.

Four UNC teams — led by faculty from the Institute for the Environment, the Kenan-Flagler Business School and the School of Government — are working on the Camden County Green Industrial Park Feasibility Study, which will be completed by mid-2008. In March, a community workshop in Camden County brought together local stakeholders to determine their values, goals and concerns, as well as resources that could be brought to the table for such a park.

The project will culminate with a final report that will assess the environmental, technological, economic, regulatory and social feasibility of a green park, as well as a vision for how the features of such a park might be phased in over time to ensure that structures and services are in place as new economic opportunities arise. The project team will present the results to Camden County elected officials, stakeholders who participated in the community workshop and the community at large, and will provide materials to help proponents advocate with state-level decision-makers.

David Salvesen, deputy director of the Institute's Center for Sustainable Community Design and principal investigator for the project, said, "This project is an exciting way to bring together a vast array of talents from across the campus, and combine them with the interests of other researchers, developers and decision-makers in North Carolina, as the state looks to take a national lead in sustainable community design." 🌱

David Salvesen, Principal Investigator of the Camden County project, talks with residents at a March meeting at the Great Dismal Swamp State Park.



Outreach activities focus on lead poisoning prevention, links between water quality and health



Holly Denham, Project Wet/Stream Watch Coordinator with DENR's Division of Water Resources, participates in July 2007's "Environment and Health" workshop.

The Environmental Resource Program (ERP), the outreach and public service unit of UNC's Institute for the Environment, has received a contract from the N.C. Department of Environment and Natural Resources (DENR) to staff and coordinate the North Carolina Childhood Lead Poisoning Prevention Program (CLPPP). Environmental Health Educator Amy MacDonald works with DENR staff and environmental health specialists and local health departments throughout the state to provide outreach and education on lead poisoning and prevention to parents, childcare centers and schools. Lead exposure, which is particularly prevalent in children exposed to lead-based paint, can cause impaired growth and learning disabilities.

In addition to answering calls to the Childhood Lead Poisoning Prevention Hotline (1-888-774-0071), MacDonald and ERP Environmental Health Educator Neasha Graves conduct workshops and distribute information at health events, field media requests and develop educational materials on topics such as pregnancy and lead poisoning for use by health departments. With lead in toys being a relevant issue during the 2007 holiday season, MacDonald conducted outreach to 70 environmental health specialists from across the Piedmont region and was interviewed on UNC-TV. MacDonald recently completed risk assessor and lead inspector training, enabling her to go into the homes of poisoned children to determine the source of lead poisoning, bolstering the state's ability to keep children safe and healthy.

In July, ERP staff representing UNC's Superfund Basic Research Program partnered with DENR's Office of Environmental Education (OEE) and the Albemarle-Pamlico National Estuary Program to co-sponsor a week-long professional development institute for North Carolina teachers on water quality and health. Twenty-four middle and high school science and social studies teachers from central and eastern North Carolina attended the institute at the Trinity Center in Salter Path.

Participants in "Environment and Health: Making Connections through Water Quality Investigations" gained in-depth knowledge and awareness of the environmental science, health and civic aspects of



Dana Haine, Science Educator with ERP, leads educators in a climate change workshop.

water quality issues in North Carolina, and the skills to help students explore these issues and begin to look for solutions.

Workshops, hands-on activities and guest speakers covered topics such as water quality and investigations of the relationships between chemicals, water quality, the environment and human health. Teachers also visited a land-application wastewater treatment plant and local environmental education centers, including the N.C. Aquarium at Pine Knoll Shores, Sturgeon City, and the Rachel Carson Estuarine Research Reserve.

Participants rated the institute highly. "The teachers were enthusiastic about the real-life examples and supporting classroom materials that they received to help make learning about water quality relevant for their students," said ERP Science Educator Dana Haine.

Sarah Yelton, the OEE's Pre-K-12 Environmental Education Program Manager, coordinated the institute. "We were thrilled with the outcome of our partnership with the UNC Superfund Basic Research Program. The additional focus on environmental health gave us a unique opportunity to look at an environmental issue like water quality more holistically. The teachers were able to see the cycle of human actions affecting the quality of the environment, and then in turn affecting the quality of their own health."

ERP staff also conducted workshops at the N.C. Science Teachers Association on the impacts of climate change on ecosystems and human health, and on strategies for teaching the link between climate change, air quality and health outcomes. ✪

INSTITUTE GARNERS FIVE-YEAR, MULTIMILLION-DOLLAR EPA AWARD



ALISON EYTH

The United States Environmental Protection Agency (EPA) recently awarded a contract that could bring as much as \$22 million to researchers at the UNC Institute for the Environment and other partnering institutions over the next five years.

The work done under the "Emission, Air Quality and Meteorological Modeling Support" contract will help the EPA determine the levels at which they should set federal air quality and emissions standards. A team of scientists working in the Institute's Center for Environmental Modeling for Policy Development (CEMPD) will complete a range of projects that include designing computer software and performing extensive data analysis. CEMPD's Alison Eyth is the project's principal investigator.

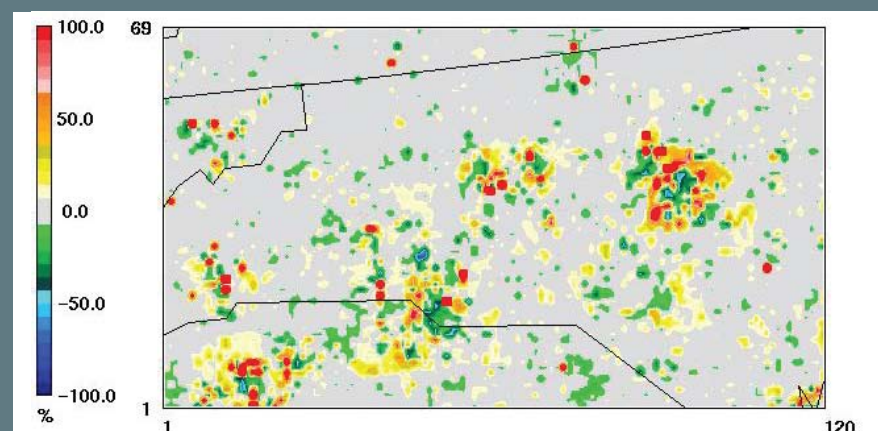
By February, the EPA had already assigned four projects, with an initial commitment of \$1.4 million.

The goal of UNC-Chapel Hill's work with the EPA is to ameliorate the effects of dangerous emissions, so as to protect and improve human and ecosystem health.

"The many outcomes of this applied research program will help decision-makers develop plans and policies to improve air quality in North Carolina

Annual % NOx Difference

NEI02, 2030-2000 4l, surrogates | Onroad mobile sources



January 1.0 0:00:00 | Min = -85.5 at (47,28), Max = 1946.8 at (52,20)

A model from one of Eyth's recent projects.

and nationwide," said Adel Hanna, director of CEMPD. "Over the years, CEMPD scientists have led and shared the development of a scientifically sound suite of environmental models and tools that have been used by the community in North Carolina and to address the complex problems of air pollution at large."

UNC-Chapel Hill will collaborate with seven subcontractors to accomplish this critical work. About 40 percent of the work will be completed by organizations outside the University. ✪

NOAA'S SOUTHEAST REGIONAL CLIMATE CENTER MOVES TO UNC

Want to know the highest temperature ever on a particular date? The wettest month? The driest year? How about the latest data on the current drought? For the official data, chances are you'll need to contact one of the National Oceanic and Atmospheric Administration's (NOAA) six regional climate centers, which produce and provide climate data, information and knowledge for citizens, government agencies and weather-sensitive businesses at the local, state, regional and national levels.

And since this summer, if you're asking about the southeastern United States, you'll be contacting UNC-Chapel Hill.



PETER ROBINSON

The Southeast Regional Climate Center (SERCC) provides climate data and information for the use of citizens and institutions in the southeastern United States. This past summer, SERCC moved from Columbia, South Carolina, where it had resided since its inception in 1989, into space within the UNC Institute for the Environment's new offices in the Bank of America building on Franklin Street in downtown Chapel Hill.

"Until now, the SERCC had been the only one of NOAA's six regional climate centers not directly associated with a university," explained UNC Geography Professor Peter Robinson, SERCC's director, who had commuted to South Carolina for several years. "And since the role of regional climate centers is associated with monitoring the climate, with research in climate impacts, and with education and outreach about climate and climate impacts — it's a role that fits perfectly within a university."

SERCC (www.sercc.com) has a full-time service climatologist who monitors the climate for the entire region. The center's database includes readings from the last hour, all the way back to 1948, a few to 1900, and even several into the 19th century. Each state in the region also has its own climatologist, who works closely with SERCC. North Carolina's is located at NC State University, which is also home to the supercomputers used to analyze and store the center's data. Staff at UNC and NCSU work closely together, sharing information and resources.

Having the center at UNC will also enhance collaboration and research opportunities at the Institute for the Environment. For instance, Robinson plans to undertake a niche area of applied climatology: the links between climate and health. Having SERCC on campus will facilitate collaboration with the Institute's Center for Environmental Modeling for Policy Development, and will provide opportunities for UNC graduate students and undergraduates to participate in climate-related research.

"The SERCC will serve both as a climate data hub to address a range of important questions that arise from a diverse user community in the Southeast, including water suppliers, power companies, environmental agencies and NGOs, as well as a focal point to facilitate faculty and student research in climate issues," said Larry Band, chair of the Department of Geography. "Having the SERCC at UNC provides us with important research infrastructure to pursue pressing interdisciplinary climate and climate-related questions, including past, present and future drought, weather hazards and environmental quality."

"We are very pleased to have UNC-Chapel Hill join with NOAA in providing national climate services," said Marjorie McGuirk, national partnership liaison for NOAA's National Climatic Data Center in Asheville. "Unfortunately, North Carolina suffers disproportionately the extremes of weather. But the good news is that North Carolina provides the National Climatic Data Center with a marvelous proving ground for the analysis of climate variability and change." 🌱

WHERE are they NOW?



LIZ VEAZEY
2004 UNC GRADUATE
MAJOR IN ENVIRONMENTAL SCIENCE
MINOR IN BIOLOGY

THEN

While at the University of North Carolina, Liz led one of the first successful campus renewable energy campaigns in the southeast and won the Morris K. Udall scholarship, a national environmental leadership scholarship, twice. She organized the first Southeast Student Renewable Energy Conference to engage other southern schools in energy and climate work.

After graduating in 2004, Veazey continued her involvement in the student movement around energy and global warming. While working for the UNC Sustainability Coalition and doing scientific modeling for UNC Distinguished Professor of Marine Science Chris Martens, she helped co-found and lead the Energy Action Coalition (EAC; www.energyaction.net), which has grown into a partnership of more than 40 organizations from across the U.S. and Canada that work with young people to support and strengthen the clean energy movement. Through her work with EAC, Veazey secured funding to start a regional organization focusing on these issues.

NOW

Veazey is regional campus coordinator for the Southern Energy Network (SEN; www.climateaction.net), which works with students on more than 60 campuses in the Carolinas, Florida, Georgia and Tennessee to empower communities, develop leaders and promote a clean, just, safe and sustainable energy future. SEN also helps students lobby for better state and national energy policies and network so they can share resources and experiences with various initiatives, from starting recycling programs to getting school leaders to commit to making the campus climate-neutral.

This fall, SEN was one of the partners of the EAC that sponsored PowerShift, a national youth climate conference, that drew more than 6,000 students from all over the country to the University of Maryland. The day after the conference, the students converged on Capitol Hill to conduct the largest lobby day on global warming to date. 🌱

"I HAD ALWAYS BEEN INTERESTED IN THE ENVIRONMENT AND THE OUTDOORS, BUT THE ENVIRONMENT AND SOCIETY CLASS I TOOK FRESHMAN YEAR REALLY INSPIRED ME TO GET MORE INVOLVED IN ENVIRONMENTAL WORK. IT GOT ME THINKING: 'WE NEED TO STAND UP AND MAKE THE WORLD A BETTER PLACE.'"

Liz Veazey
Regional Campus Coordinator
Southern Energy Network

UNC COASTAL STUDIES INSTITUTE TO HOST ALBEMARLE ECOLOGICAL FIELD SITE IN MANTEO

In January 2008, the Albemarle Ecological Field Site (AEFS), part of the UNC Institute for the Environment's Environmental Field Site Network, got a new home. The field site will now be hosted by the University of North Carolina Coastal Studies Institute (CSI) in their facilities at the historic Bell House in Manteo. CSI is providing both office and classroom space for AEFS students, faculty and staff.

The Albemarle Ecological Field Site, which has been in existence since 2001, is one of five Institute field sites located around North Carolina and the world that focus on themes specific to the hosting community or region and provide semester-long opportunities for UNC students to explore real-world issues through a combination of course work, field trips, group research projects and internships with local organizations. The AEFS program gives visiting Carolina students access to wildlife and natural habitats only found on the coast, and encourages them to use the resources for research, education, and outreach and public service.

The Coastal Studies Institute is a collaborative, multi-campus research and education institute, making the partnership with AEFS a natural fit: allowing for enhanced collaboration between

the two groups, including increased educational opportunities for AEFS students as well as access to CSI resources, staff and faculty.

The AEFS partnership fits well within CSI's mission to "undertake research, offer educational opportunities, provide community outreach programs, and enhance communication among those concerned with the unique history, culture and environment of the maritime counties of North Carolina." CSI fulfills this mission through applied research and educational programming in each of its four program areas: estuarine ecology and human health, estuarine and coastal processes, coastal sustainability and maritime heritage. In 2006, CSI engaged over 1,500 people in education programs, workshops and lectures.

The Coastal Studies Institute is currently in the design phase of construction of a 90,000-square-foot, \$32.5 million research and education facility located on 34 acres on Roanoke Island, with a planned opening in 2010. This new facility will provide an ideal work space for the varied research opportunities presented by its coastal location. The AEFS faculty, staff and students will have access to part of the campus, including classroom space, offices and dorm facilities.

"The move of AEFS activity into Manteo's CSI facilities will manifest more directly what has already been the case for months," said Robert Perry, director of the AEFS. "The staff of CSI has proven helpful in dozens of ways for quite a while—serving on the AEFS Community Advisory Board, offering advice and guidance to faculty and students on their Capstone projects, and providing field trip experiences.

"The collaborative spirit and goodwill already established will only deepen. In the end, UNC students will benefit significantly from the proximity of expertise that is rare in our area," he said.

CSI is also enthusiastic about the new partnership. "We are excited to continue to strengthen our relationship with AEFS and are looking forward to new collaborative opportunities," stated CSI Director Nancy White.

The Albemarle Ecological Field Site is part of the Institute for the Environment's Environmental Field Site Network, which is administered in partnership with the College of Arts and Sciences Study Abroad Office. The network includes sites in Europe, Thailand, Highlands, Manteo and Morehead City, North Carolina, and a Chapel Hill location planned to open later this year. ♣

New Energy and Environment Group Formed

Energy and Environment is a new campus-wide partnership built around the UNC Institute for the Environment's Center for Sustainable Energy, Environment and Economic Development (C-SEED) and the UNC Institute for Advanced Materials, Nanoscience and Technology (IAM). It seeks to produce interdisciplinary research, education and outreach in all aspects of energy use, environmental quality and economic development. One of its initiatives is to bring exciting learning opportunities to graduate students at Carolina.

The Energy and Environment (EE) group is comprised of key faculty

"A KEY NEED FOR ENERGY AND ENVIRONMENT TO SUCCEED AS A CAMPUS-WIDE PARTNERSHIP WILL BE TO ESTABLISH EFFECTIVE AND CLOSE COLLABORATION BETWEEN THE DISPARATE PARTNERS, OVERCOMING THE BARRIERS INHERENT IN THE PARTICIPANTS' WIDELY DIFFERING AREAS OF INTEREST, FOCUS AND EXPERTISE."

Robert Pinschmidt
Deputy Director, IAM

from the IAM and the Institute, Carolina Energy Fellows and Progress Energy Graduate Fellows and their advisors, and Progress Energy Faculty Fellows. The group meets monthly during the academic year for discussions, presentations of student projects, and to hear guest speakers.

Amory Lovins, experimental physicist, consultant, and cofounder, chairman and chief scientist of the Rocky Mountain Institute was the Energy and



Pete Andrews, one of the founders of the Energy and Environment group, recently led a discussion for students and faculty with Amory Lovins of the Rocky Mountain Institute.

Environment group's February speaker.

Progress Energy supports the Progress Energy Fellows and the monthly EE meetings through a grant to the Institute. Progress Fellows are graduate students who are funded to conduct research relating to energy, environment and economic development. The Institute funds the Carolina Energy Fellows Program; similar to those funded by Progress Energy, the Carolina Energy Fellows are graduate students charged to develop innovative approaches in the areas of alternative energy, energy efficiency and carbon reduction.

"A key need for Energy and Environment to succeed as a campus-wide partnership will be to establish effective and close collaboration between the disparate partners, overcoming the barriers inherent in the participants' widely differing areas of interest, focus and expertise," said Robert Pinschmidt, deputy director of IAM, who co-directs the group with C-SEED Director David McNelis. "The meetings are just one aspect of this task, but one which we hope will be an exciting and stimulating step in the education and development of all of the participants for achieving their common goals. It certainly has been for me."



ROBERT PINSCHMIDT

The group was founded in 2006 by professors Richard (Pete) Andrews, Doug Crawford-Brown, Joe DeSimone, Tom Meyer, and Tony Waldrop, Vice Chancellor for Research and Economic Development. Plans are underway to broaden the group and devise strategies to expand and enhance the study of energy and the environment at Carolina.

PEOPLE NEWS AT THE INSTITUTE

McNelis named C-SEED director

Dr. David McNelis has been named director of the UNC Institute for the Environment's Center for Sustainable Energy, Environment and Economic Development (C-SEED).

McNelis, an Environmental Sciences and Engineering research professor at UNC and an adjunct professor in nuclear engineering at North Carolina State University, has been with the Institute for the Environment since the inception of the Carolina Environmental Program over ten years ago.

McNelis will work with other faculty, such as Richard Andrews, as well as graduate fellows to promote energy and environment research on campus through C-SEED. Involving interdisciplinary groups in the research enterprise is vital to the center's mission and growth, McNelis said.

"This is an exciting time to be involved in a topic that is at the forefront of everyone's minds," McNelis said. "I look forward to the collaborations with other centers at Carolina, such as the Institute for Advanced Materials, Nanoscience and Technology and the Kenan-Flagler Business School Center for Sustainable Enterprise."



DAVID MCNELIS

McKee named head of Marine Sciences Department

Brent McKee has been named the new chair of the UNC Department of Marine Sciences and Mary and Watts Hill, Jr. Distinguished Professor.

As chair, McKee plans to continue the momentum the department has built over the past few years, as the faculty has grown, to help raise the visibility of the department and to bolster graduate student recruitment. McKee takes the helm during a time of change, as the department has temporarily moved its offices while its old home is rebuilt. In about four years, McKee will guide the department's move back into its permanent home in the new Venable Hall.

"With all of these changes, it will be a good time for us to reevaluate the identity of the department and outline our vision for the future," he said.

McKee, a native North Carolinian who earned his undergraduate degree at UNC-Chapel Hill, spent the last 20 years at Tulane University. He returned to Carolina in 2007.

McKee will juggle his administrative duties with research and teaching. His research focuses on river-ocean interactions and the role they play in climate and environmental change. This summer, he begins a project on the Amazon River to gain insight into the materials released into the lower 600 kilometers of the river, which have never been studied, that eventually flow into the ocean. He is also teaching several courses in *Global Environmental Change*, a new cluster for UNC undergraduates.

McKee is particularly honored to have been named a Hill Professor, a distinction that links the Department of Marine Sciences, the Institute of Marine Sciences (IMS) and the Institute for the Environment. "Watts Hill, Jr. was a great lover and promoter of the coastal environment of North Carolina," McKee said. "As a native North Carolinian who shares that love, it is very special to me to hold a professorship that symbolizes environmental work along the coast of this state. I have already started working on projects in the coastal marshes and river zones, including one on the Roanoke River with a colleague at the IMS."



BRENT MCKEE

New deputy director for Center for Sustainable Community Design

In December, Dr. David Salvesen was named deputy director for the Institute for the Environment's Center for Sustainable Community Design (CSCD), which develops strategies to improve environmental quality through better planning of regions, cities, neighborhoods, buildings and utility and transportation systems.

An expert in land use and its impact on the environment and people, Salvesen earned his Ph.D. in the City and Regional Planning Department at UNC, and has also worked in the UNC Center for Urban and Regional Studies. As the CSCD's second-in-command, he will work closely with Director Phil Berke to pursue and secure new research grants and will manage projects underway at CSCD.

Salvesen will also pursue his own research, which focuses on disaster preparedness, land use planning related to location of schools, and understanding the connections between physical activity and the built environment. In addition, he will continue to teach a graduate course on land use principles and policies at Duke University's Nicholas School for the Environment and Earth Sciences and will co-teach a UNC course on dispute resolution in the Department of City and Regional Planning.

"Dave will be heading up the outreach and engagement activities of the CSCD," Berke stated. "He is incredibly talented in working with a broad range of community-based stakeholders in education, consensus building, and seeking solutions that respond to local values. He brings considerable expertise in working on whole community solutions in the areas of land use and environmental planning, hazard mitigation and community development. We are extremely fortunate to have Dave on board at the CSCD."



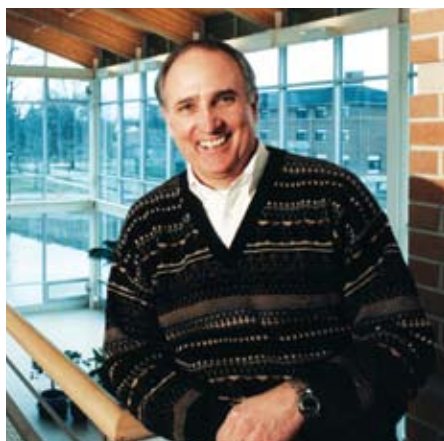
DAVID SALVESEN

DANIELLE DEL SOL has joined the Institute as an information and communications specialist. A 2005 graduate of Hendrix College, Danielle came to UNC from *The Daily Record* in Little Rock, Arkansas, where she was a business writer. As the Institute's first full-time, permanent communications staff, Danielle works with the director and the senior associate director to oversee a comprehensive public affairs program for the Institute, and assists with promotion of UNC's environmental programs campus-wide. Her responsibilities include the Institute's promotional publications (including this newsletter) and website, media relations and events planning. She also helps the Institute's North Carolina field sites with public affairs tasks, and works to enhance communication between the various environmental units at UNC-Chapel Hill.

LINDSAY LEONARD, a 2007 UNC graduate in Environmental Studies, joined the Institute in August as an office assistant working with Greg Gangi on student services and business affairs for Environmental Science, Health Science and Studies majors.

AMY MACDONALD joined the Institute's Environmental Resource Program in September as an environmental health educator working on childhood lead poisoning prevention and climate change. Before joining ERP, MacDonald was doing state climate policy work for Environmental Defense and the Southern Alliance for Clean Energy. She is one of 1,000 people in the country trained as climate messengers to present Al Gore's slide show from "An Inconvenient Truth." She holds a master's degree in Environmental Policy and Behavior from the University of Michigan and a B.S. in Political Science and Environmental Studies from Central Michigan University. Her main focus is on environmental health impacts on under-served communities.

UPCOMING
INSTITUTE EVENTS



DAVID ORR

2008 UNC Earth Day Speech
David Orr from Oberlin College

Tuesday, April 22, 2008, 7:30 p.m.
Carroll Hall Auditorium

UNC Institute for the
Environment Commencement
*Tom Darden from
Cherokee Investment Partners*

Sunday, May 11, 2008, 1 p.m.
Fourth floor
FedEx Global Education Building

Sustainable and Safe
Drinking Water in Developing
and Developed Countries:
Where Science Meets Policy

November 5-6, 2008
Friday Center

THREE JOIN INSTITUTE BOARD

THE UNC INSTITUTE FOR THE ENVIRONMENT IS PLEASED TO WELCOME THREE NEW MEMBERS TO ITS BOARD OF VISITORS. WE APPRECIATE THEIR WILLINGNESS TO VOLUNTEER THEIR TIME TO SERVE THE INSTITUTE.

Betsy Chaffin, a 1966 UNC graduate, is an artist who works in a variety of forms, from two-dimensional drawings, paintings, collages and photographs to three-dimensional sculpture. She is drawn to nature and to man's place and relationship in it. She lives and works on Spring Island, South Carolina, an island that she and her husband bought in 1990 and have developed as an environmentally sustainable community, including a land management trust to maintain the integrity of its open space. The trust employs several full-time scientists who manage the island and educate visitors and residents on the unique ecology and preservation of the island. The Chaffins' approach has been duplicated by developers in other states.

Chris Daggett, a 1972 graduate of UNC, has extensive public and private sector experience in brownfields remediation and redevelopment. He has served as deputy chief of staff to the Governor of New Jersey, as a regional administrator of the United States Environmental Protection Agency, and as commissioner of the New Jersey Department of Environmental Protection. In addition, for six

years he was a managing director of William E. Simon & Sons, a private investment firm. Currently, he is a principal with JM Sorge, Inc., a full-service environmental consulting and management firm. He also operates a brownfields development company, acquiring, remediating and redeveloping environmentally impaired real estate.

Michael Mahaffy is managing director of RHR Capital LLC, a private equity and real estate investment firm. He and his wife Tia and two daughters live in Greenwich, Connecticut. A 1982 Carolina graduate, Mr. Mahaffy also serves on the UNC Board of Visitors. His firm has developed a commercial wind farm in Wyoming and has investments in other environmentally focused activities.

INSTITUTE for the ENVIRONMENT
The University of North Carolina at Chapel Hill
Campus Box 1105
Chapel Hill, NC 27599-1105

ADDRESS SERVICE REQUESTED

Non Profit
Organization
US POSTAGE PAID
Chapel Hill, NC
Permit Number 177



UNC
INSTITUTE FOR
THE ENVIRONMENT



This newsletter was printed with vegetable-based inks on 100% recycled, 100% post-consumer waste, which was processed chlorine-free and manufactured with with Green-e® certified biogas energy and wind power. No state funds were used to print this document.

© 2008 Institute for the Environment, UNC-Chapel Hill