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2012 SCWRC Brings Together Over 300 Participants

Plenary Speakers Include SC Commerce Secretary, Agency Leaders from DHEC, DNR

The 2012 S.C. Water Resources Conference was held October 10 - 11 at the Columbia Metropolitan Convention Center and featured over 100 oral and poster presenters, 15 exhibitors and nine plenary speakers, six of whom made up a legislative panel. Clemson University's *Center for Watershed Excellence* coordinates the conference in conjunction with a statewide planning committee. The purpose is to provide an integrated forum for discussing water policies, research projects and water management to prepare for and meet the growing challenge of providing water resources to sustain and grow South Carolina's economy, while preserving its natural resources.

The first day opening plenary speaker was SC Commerce Secretary Robert Hitt III, who discussed the vital role water plays in economic development. Lunch speaker, SC DHEC Director Catherine Templeton, presented her agency's goal to assess water and provide science-based information to stakeholders to help them determine how to manage the state's resources. On day two, Sen. Paul Campbell moderated a legislative panel whose members included Sen. Phil Leventis, Sen. Vincent Sheheen, Rep. Don Bowen, Rep. Nelson Hardwick and Rep. David Hiott. The panel addressed issues including surface water permits, wetland preservation, saltwater intrusion and marketplace water pricing. SC DNR Director Colonel Alvin Taylor spoke during lunch on coastal communities where saltwater intrusion is contaminating wells, including his own.

2012 Major contributors included the Clemson University Restoration Institute, Duke Energy, Santee Cooper, the Charleston Water System, the S.C. Energy Office and YSI Inc. Supporting contributors included Clemson University's Strom Thurmond Institute, Coastal Carolina University Waccamaw Watershed Academy, the College of Charleston Environmental Studies Graduate Program, the S.C. Department of Health and Environmental Control Bureau of Water, the S.C. Sea Grant Consortium, SCANA and the U.S. Geological Survey.

Exhibitors included conference contributors as well AMEC Environment and Infrastructure, Inc., Cardno ENTRIX, Carolina Clear, Fuss & O'Neill, Normandeau and Water Missions International (hosted by Charleston Water System).

Produced in conjunction with *Clemson University Radio Productions* and the *Jim Self Center on the Future*, SC ETV's November 15 *The Big Picture* program featured interviews with plenary speakers. *Clemson University Radio Productions* provided live streaming video coverage and recorded interviews and other event footage. Radio interviews with conference participants will be featured on SC ETV's *Your Day* radio program over the coming months. Conference plenary session presentations, video interviews and the proceedings for 2012 and the two previous events are available at *www.scwaterconference.org*.

**2012
S.C. Water Resources Conference**

Exploring Opportunities for Collaborative Water Research, Policy and Management

CLEMSON UNIVERSITY

RESTORATION INSTITUTE

Duke Energy®

SC santee cooper®

Charleston Water System

Greenville Water

YSI
a xylem brand

SC ENERGY OFFICE
B&CB
SC BUDGET AND CONTROL BOARD

www.clemson.edu/appliedecology

Educational Events

Aiken Green Infrastructure Workshop & Educational Field Day

The Institute's *Center for Watershed Excellence* partnered with the City of Aiken to offer a **Design & Implementation Technical Workshop and Educational Field Day** in Aiken for the Sand River Headwaters Green Infrastructure Project. The event was sponsored by the USDA-NIFA Southern Region 406 Water Quality Project. The workshop on the first day addressed site design techniques and implementation practices in support of green infrastructure for the City of Aiken. The content of the technical workshop was tailored for professional engineers, landscape architects, stormwater managers and agency personnel and offered professional development hours. On the second day, the public and news media were invited to attend faculty presentations and an open forum to learn more about the project components and technology. On both days, attendees toured the reconstructed parkways to view the innovative best management practices and research instrumentation. Presentations and photos from the event are available at *www.clemson.edu/watershedcenter/aiken_green*.

On-Site Waste Water Treatment System Training Workshop

The *Center for Watershed Excellence* partnered with experts from Clemson University and the Universities of Georgia, Tennessee and Kentucky to offer a septic system training workshop for county agents and local authorities in July at the Clemson University Restoration Institute in North Charleston. The goal of the workshop was to reduce the incidence of septic failure by increasing homeowner knowledge on how to properly use and maintain an onsite wastewater treatment system. Topics included: fundamentals of collection, treatment and dispersal, basic components, site suitability, technology, maintenance and troubleshooting, Georgia and South Carolina regulatory issues, and small community-scale systems.

Intelligent River®
from observational to operational ™

Intelligent River® NSF MRI Project News

The Intelligent River® NSF MRI Project Team hosted a two day **Deployment Planning Workshop and Peer Review Session** at the Clemson University Madren Conference Center June 12-13. Over 40 participants representing nearly a dozen state and federal agencies and institutions attended and provided input on: database development, regulatory requirements for data collection, evaluating the best strategy for deployment, the use of data and quality control and assurance, recommendations on how and where to place sensors, and pilot use of data by agencies through the research period. PowerPoint presentations developed in the breakout group discussions are available at *www.clemson.edu/appliedecology/savannah*.

The Project Team announced in August they would partner with **Coastal Carolina University (CCU)** to deploy and monitor the sensors. Under Paul Gayes, director of the Burroughs and Chapin Center for Marine and Wetland Studies, the center will provide watercraft and technical staff to deploy the equipment, replace field equipment as necessary and assist in routine maintenance. The CCU team has expertise in making scientific measurements in challenging locations along the South Carolina coast.

In late summer, **Marvin Pontiff**, a former assistant deputy commissioner for SCDHEC OCRM, joined the Institute of Applied Ecology to serve as the Logistics Manager for the Intelligent River® team. Pontiff's background also includes serving as a US Coast Guard officer and captain of the port in Charleston. He will oversee daily operations to deploy and maintain the sensors. His experience working with federal and state maritime regulatory agencies, coastal natural resource organizations, environmental groups and the local port officials in both Charleston and Savannah will allow the team to efficiently organize the necessary coordination with these entities as equipment is deployed.

www.clemson.edu/appliedecology

Faculty Search for the Thomas F. Hash '69 Endowed Chair in Sustainable Development

Applications and nominations are sought for the Thomas F. Hash '69 Chair in Sustainable Development. The individual who holds this endowed position will lead the *Center of Economic Excellence in Sustainable Development*, part of the South Carolina SmartState Program. The Chair will hold a joint appointment in the Computer Science Division of the School of Computing and the Holcombe Department of Electrical and Computer Engineering. The Chair is also expected to maintain affiliation and close collaboration with researchers across campus, including the Institute of Applied Ecology.

The mission of the Sustainable Development Center is to advance sustainable development through technological innovation. This includes developing new technologies from optically-based chemical sensors to wireless networking platforms, as well as the development of new environmental and ecological models designed to support real-time monitoring and management of natural and built environments. The Endowed Chair will serve as the cornerstone for advancement of the research, education,

and outreach objectives of the Center. At the same time, the Endowed Chair will play a key leadership role in identifying commercialization opportunities for Center-derived research that builds on integrating sustainable development and information technology. Please visit ***www.clemson.edu/public/ecology/chairs.html*** for more information.

Applicants must have an earned doctorate in computer science, computer engineering, electrical engineering, or a closely related field and should submit a current curriculum vita and a minimum of five references with full contact information. Electronic submissions (PDF files) to hashsearch@clemson.edu are preferred, but applications and nominations can also be mailed to Hash Search, 105 Riggs Hall, Clemson University, Clemson, SC 29634, USA. Application material must be received by January 1, 2013 to receive full consideration, though the search will remain open until the position is filled.

Clemson University is an Affirmative Action/Equal Opportunity employer and does not discriminate against any individual or group of individuals on the basis of age, color, disability, gender, national origin, race, religion, sexual religion, sexual orientation, veteran status, or genetic information. Clemson University is building a culturally diverse faculty committed to working in a multicultural environment and encourages applications from minorities and women. Clemson University is interested in candidates who can contribute to the cultural diversity and excellence of the academic community through their research, teaching, and/or service.

Carolina Clear Documenting Watershed Moments

In the fall of 2013, Carolina Clear will again partner with Clemson University's Department of Sociology and Anthropology to conduct telephone surveys of South Carolina residents to uncover watershed knowledge, attitudes, and behaviors as they relate to watershed and stormwater management. This survey will collect data from 2400 residents in six target regions across the state that partner with Carolina Clear to educate and involve their citizens in stormwater management and water resource protection programs. The data will be used to evaluate progress since 2009 when 1600 state residents were surveyed, as well

as drive regional education program development. The 2009 data and reports are available on the Carolina Clear website so that partnerships and agencies across the state can work towards watershed outreach programs that result in meaningful and sustainable behavior changes and water quality protection.

To find out more about Carolina Clear, please go to ***www.clemson.edu/carolinaclear*** or contact Katie Giacalone at kgiacal@clemson.edu.

Participants at the Intelligent River® Deployment Planning Workshop identify recommended equipment deployment locations.

Dr. Devendra Amatya with the USDA Forest Service presents his poster to conference attendees during the 2012 SCWRC.

Aiken Green Infrastructure project faculty member Dr. Daniel Hitchcock explains how monitoring equipment functions in the parkways.

Linking land use, water, energy and climate change

The **Institute of Applied Ecology (IAE)** is applications-driven, bringing together an entrepreneurial and interdisciplinary faculty with an applied focus to develop, pilot and package innovative solutions for sustainable natural resources. Major programs of IAE include the EPA-designated *Center for Watershed Excellence* (www.clemson.edu/watershedcenter) and the *Intelligent River® Research Enterprise* (www.intelligentriver.org).

IAE supports Clemson University's the Sustainable Environment Focus Area by expanding opportunities for faculty and students to participate in statewide watershed management programs. IAE focuses on the application of novel and emerging technologies, innovative management strategies, and multi-scale outreach programs to solve major natural resources problems.

The IAE offices on campus were relocated in August of 2011 to Kappa Street (off Silas Pearman Blvd), in the Strom Thurmond Institute building. In July of 2012, IAE opened a second office location and laboratory at Edisto Research & Education Center in Blackville to assist faculty in developing the "Intelligent Farm" and its associated technologies.

A parkway in Aiken reconstructed with a bioswale and wireless monitoring equipment.

INSTITUTE of APPLIED ECOLOGY
CLEMSON UNIVERSITY

SCDHEC Director Catherine Templeton speaking at the 2012 SC Water Resources Conference.

Save the Date

April 10-11, 2013
Georgia Water Resources Conference

Georgia Center, Athens
www.gawrc.org

2012 SCWRC Student Poster Competition Winners

1st Place
Pamela Corwin, The Citadel Graduate College

2nd Place
Ryne Phillips, Clemson University

3rd Place
Kyle Curtis, Coastal Carolina University

4th Place (tie)
Chelsey Richardson, Coastal Carolina University
Ian Taylor, Clemson University

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