The MES Program is a partner in the newly formed Ashley Cooper Stormwater Education Consortium (ACSEC). The ACSEC is a regional collaboration of communities and education providers united in a mission to involve and educate the public about stormwater runoff - the leading cause of pollution in the nations waterways. The ACSEC was created to coordinate and implement a regional, watershed-scale education strategy to help small municipal separate stormwater sewer system (SMS4) communities address recent US Environmental Protection Agency (EPA) mandates. The ACSEC is modeled after the successful Coastal Waccamaw Stormwater Education Consortium (CWSEC) in the Myrtle Beach area, which was created in 2004. Clemson University’s Carolina Clear program was one of the founding members of the CWSEC and organized the ACSEC in the Charleston region, which is the third and largest stormwater education consortium in South Carolina. MES alumnus David Joyner was hired as a natural resources agent with Clemson Extension in 2007, with the primary responsibility of coordinating the ACSEC. Joyner noted that “Stormwater runoff pollution is a collective problem that we are all a part of and likewise education is fundamental. Communities and organizations working together in a coordinated fashion provide the best way of developing and delivering that education.”

So why is stormwater runoff such a big deal? Lesson #1: In most areas of the country, including all of South Carolina, stormwater sewers are separate from domestic sewer system - which means that the stormwater runoff is conveyed through pipes and ditches that drain to water bodies, not to a treatment plant. Domestic water, leaving your sinks or bathrooms, goes either to a treatment plant if you are on city water/sewer or to an on-site septic system. Stormwater runoff picks up pollutants - such as sediment, nutrients, heavy metals, oil and grease, bacteria and potential pathogens - and discharges them in water bodies, such as streams, ponds, lakes, and estuaries. Areas that are densely populated and have large amounts of impervious surfaces, such as roads, sidewalks, parking lots, and rooftops are particularly vulnerable. These impervious surfaces alter the hydrology, forcing a much larger percentage of the precipitation to flow off the land, rather than infiltrating into the ground. Researchers have found a relationship between impervious surface percentage and aquatic system health. When more than 10% of the land is impervious, water quality is negatively impacted, and becomes non-supporting when impervious cover (Continued on page 3)
Welcome home to both our returning and new graduate students! As you are aware, we are very fortunate to have landed in a new, expanded home. I do hope you use and enjoy the new space we now have. It is because of our graduate students, the true core of the program, that we are able to expand.

We accepted 22 new students in the Fall Semester, and an additional ten in the Spring from a wide variety of disciplines, including Political Sciences, Environmental Studies/Sciences, Geology and Biology to name a few. These accomplished students come from a variety of schools and backgrounds ranging from students returning from professional jobs to recent graduates. Their research interests include such topics as bear conservation, coastal management, water quality and conservation, land use law, and habitat restoration. They join 56 returning students who are well along the way to finishing their internships and theses in our program. I want to thank each of you for making our program the success it is.

We have just completed a recruitment campaign by sending out nearly 1000 posters to campuses in the east coast region that have top quality students who would qualify for entrance into the MES Program. Universities that have environmental programs in the areas of policy, finance, political science, geology, physics, chemistry, and biology programs have been targeted. Return correspondence has already started to come in and we hope that we can recruit high quality students from these universities. I would like to challenge each of you to contact your former schools and ask them to recommend our program to promising students. We need your help.

The MES Program completed a one day workshop for faculty and internship advisors. The objective of the workshop was to determine where advisors feel the program is succeeding and where it needs to improve. Over twenty faculty attended, many with extremely valuable suggestions. We have been using many of the suggestions to improve our program. Improved communication among faculty is one signal area that we are attempting to consolidate. An overwhelming number of people felt that our interdisciplinary approach to environmental studies is the strength of the program, a sentiment shared by our graduate students.

Many of our students have presented their research at professional conferences. These students include: Kate Skaggs, Guinn Garrett, Catherine Booker, Jeff Medves, Tyler Lawson, and Sarah Cech. Again, the Graduate School will be sponsoring the annual Graduate Research Poster Session to be held in January, 2009. I am sure many of our students will take full advantage of this opportunity to showcase their research.

The MES Program continues to receive internship support from many of the fine organizations in the Charleston area including the Department of Natural Resources, the Department of Health and Environmental Control, the Sea Grant Consortium, the Noisette Company, the Sustainability Institute and many others. Thanks to all of you for supporting our program!

Finally, as the newest Director of the Program I want to thank all of you for helping me fulfill this very important mission. It is the graduate students, the faculty, thesis directors and the internship programs that make us one of the best environmental studies programs on the east coast. I hope you will continue to support this program and make it grow into a flagship institution the future. Please do not hesitate to ask me should you need any assistance.

- A. Kem Fronabarger
reaches more than 25% (Schueler et al., 2002). Low impact development (LID) practices, which try to improve infiltration through the use of techniques such as pervious hardscapes, rainwater harvesting and bio-retention cells, are gaining momentum to counter the problem.

This Fall, the MES Program and Clemson Extension signed a Memorandum of Understanding to support an intern annually for the ACSEC. As an MES alumnus, Joyner is uniquely familiar with how the program works and looks forward to establishing a parallel between thesis/internship requirements and the research needs of the consortium. In a recent interview, Joyner outlines the three main goals he hopes to achieve through this newly created partnership between the MES Program and the Ashley Cooper Stormwater Education Consortium. First, the consortium plans to offer a paid internship every year it remains in existence, as long as a suitable candidate is available. This student will be employed by the Clemson Extension and will work for the consortium. Joyner explains that there is a wide variety of project possibilities, including water quality education, forming GIS-based regional characterizations of the area, such as locations of septic tanks, concentrations of impervious surfaces, or industrial areas. For the first year, the intern could also interpret a needs assessment, as data is much needed at the local level. The intern could ask questions such as: what are public perceptions concerning stormwater runoff? Do people realize that the water is not treated? In the second year, an intern may wish to devise a water monitoring system or consider the effectiveness of a “scoop the poop” campaign. Overall, the internship position would be utilized to discover current problems, find what is lacking, examine perspectives of the public and uncover possible solutions.

The second goal Joyner seeks to achieve with the new partnership is for the Clemson Extension and the MES Program to work together to highlight areas of needed research and to help establish projects for regionally applicable development. This area of the partnership may work well for students who plan to do thesis work, as the consortium still needs much research to be done in the area of science, such as the effectiveness of buffers and rain barrels, and in the area of policy, such as how communities perceive issues of stormwater runoff. The Consortium and Joyner hope that establishing these connections within the research community will help to disseminate information and extend education to the public.

The third goal Joyner and the consortium hope to accomplish with the MES Program is to use the urban campus as a living classroom by making it more stormwater runoff friendly. Joyner proposes to use the campus to showcase features that reduce stormwater runoff, such as building a rain garden or constructing a cistern to store rainwater. By implementing practices on campus, people can see for themselves the effectiveness of various methods, and awareness of stormwater runoff issues can be increased.

Both David Joyner and our program director, Dr. Fronabarger, are very excited about the newly formed partnership designed to find real solutions to the current local environmental issues of stormwater runoff, and Joyner looks forward to working with MES students ready to make a difference. The consortium is advertising for an internship position that will begin in early ’09.

Contact David Joyner at djoyner@clemson.edu, (843) 722-5940 ext. 125, or by visiting his office located at 259 Meeting Street, Charleston, SC 29401; http://www.clemson.edu/public/carolinaclear/
MESSA Events

Social Events

This fall MESSA kicked off the semester by holding a welcome back party with a very appropriate theme: Recycled costume party. Costumes included everything from a cardboard Optimus Prime to reused prom dresses to Mr. Peanut.

Since last year’s trip was so much fun, MESSA decided to once again have a camping trip out to the Francis Marion National Forest this past October. After some hiking and geocaching we hung out around the campfire, roasted some smores, and had ourselves a good old time.

In December MESSA will be holding its annual oyster roast out at Fort Johnson. In addition to all you can eat oysters we will also be holding the elections for 2009 MESSA officers!

Volunteering and Public Outreach

This semester MESSA had one of the most ambitious volunteer event schedules ever. In back to back to back weekends MESSA had students attend the SCDNR Beach Sweep at Waterfront Park, Adopt-a-Highway in West Ashley, and we set up an educational display at the first ever Charleston Green Fair in...
Marion Square. As usual, MESSA was heavily involved in the local race scene. We fielded a team of MESSA runners for the Keep Charleston Beautiful & Earthforce Green and Lean 5k and will also be helping out at the Kiawah Marathon in December. We were also participated in the SCDNR SCORE program and volunteered to play Clean City Clara for Keep Charleston Beautiful on a weekly basis.

Involvement in the Graduate Student Association

MESSA has continued to be heavily involved in the Graduate Student Association at CofC. This year MES'er Maegan Cooper was elected to the executive board and has served as secretary. In addition, first year student Lindsey Graham has been appointed to be the new MESSA representative to the GSA. Last year the GSA worked to get cheaper parking rates for TA’s, RA’s, and GA’s and this year they set their sights on working to improve the college’s health care plan for graduate students.

Upcoming Spring Events

Once school starts back in January MESSA will be holding its annual Holiday party and the newly elected officers will be taking over. The customary MESSA events like Earth Day, Spring Fling, and annual camping trip can all be expected. Most importantly, the 8th annual MESSA 8k for H20 will be held February 21 out at Folly Beach. This year’s race director, Sarah Mooney, is already spearheading an aggressive drive to organize advertising and sponsorship committees to make this years race even more popular and successful than last year’s!

MES OFFICE NEWS

As most of you know by now the MES Program Office has moved up to the 3rd floor of the Riley Institute. Mark now has a well deserved bigger office with a nice view of King Street, and Professor Mills has a bigger office as well. The best part of the move is the addition of a MESSA reading room. The reading room has computers, wireless internet, color printers, and offers a quiet place on campus to study. Access is available 24/7 by signing out a key from Mark and there are also lockers available for student use.

Because being green is what the MES Program is all about, the new office space is soon going to get a green makeover. First, little things like fixing the leaky faucet in the bathroom and installing a programmable thermostat will be done. The out of date toilet in the bathroom is going to get swapped out for a brand new Energy Star 2 stage model. Next, we are going to tackle some of our bigger problems like sealing up ancient leaky windows and replacing old broken blinds with more energy efficient ones. Finally, the current lighting system is also going to get completely replaced by newer energy efficient fluorescent lighting.
**New Faculty Spotlight - Dr. Annette Watson**

**Dr. Annette Watson** was born in New Jersey and attended the **College of the Atlantic** in Maine. She then went to pursue her Masters degree in Northern Studies from the **University of Alaska-Fairbanks**, and received her PhD in Geography from the **University of Minnesota**. During her time in Alaska, she worked with tribes, studying indigenous knowledge and how they incorporate their knowledge into decision making. She was able to fish and hunt with the local fishermen and hunters, learning their ways of survival. She is especially interested in how humans and the environment interact, particularly the philosophy of how this human-environment interaction should be versus actual practice. Now that she is in the Charleston area, she is hoping to do a comparison of the local fishermen and hunter knowledge to what she has learned from the indigenous people of Alaska. Knowledge of the environment helps to shape how different people view nature and act about it. Dr. Watson wants to “go beyond the stereotypes” of hunter/fisher/gatherers and learn about their knowledge and views on nature.

This Spring she is teaching **Political Ecology**, a course looking at the philosophy and practice of human-environment interactions. In the future she looks forward to teaching a **Politics of Science** course as well as a **Case Studies** course. Dr. Watson has said she is excited to be working with the faculty and students at College of Charleston and is looking forward to the local research opportunities.