

## **UF WATER INSTITUTE ANNUAL ACCOMPLISHMENT REPORT: May 2010**

The UF Water Institute coordinates interdisciplinary research, education and outreach programs designed to develop and share new knowledge, and to develop and encourage the implementation of new technology and policy solutions, for water issues. These programs develop partnerships between and among Water Institute faculty, students and external stakeholders; identify and prioritize critical water issues requiring interdisciplinary expertise; and provide expertise and support for addressing these issues. A summary of programs conducted during 2009-2010 is included below.

### **1. Biennial UF Water Institute Symposium: sponsored by Progress Energy.**

The second biennial Water Institute Symposium was held in Gainesville Feb 24-25, 2010. The symposium brought together over 450 scientists, engineers, academics, policy makers, water managers, industry representatives, lawyers, students and members of the public to examine challenges and solutions to water resources sustainability from multiple perspectives.

Over 200 oral, poster and panel presentations were presented by faculty, graduate students, consultants and state and federal agency scientists. A group of nationally and internationally recognized invited speakers from academia, non-governmental organizations, and industry participated in the opening plenary session of the symposium. The symposium included a report from Senator Lee Constantine chair of the Senate Select Committee on Inland Waters and concluded with a diverse panel of academic, industry, agency and non-governmental representatives who discussed recent progress, new challenges, and future trends regarding water resource sustainability. A graduate student poster competition was held and 3 awards totaling \$3000 were made to support graduate student travel to a national/international meeting to present their work. For a complete summary of the Symposium including the program, presentations, and participant lists see <http://waterinstitute.ufl.edu/postsymposium2010index.asp>

### **2. UF Water Institute Distinguished Scholar Seminar Series: Sponsored by the Smallwood Foundation**

This annual seminar series invites high profile scholars to UF on a monthly basis to conduct a general Water Institute seminar that will be of interest to a broad audience; meet with the Water Institute Faculty Advisory Committee to discuss strategic planning and partnering opportunities; and meet with interested Water Institute faculty and graduate students to discuss specific research/education issues. Each scholar is also asked to serve on the External Council of Advisors for the Water Institute for a 12 month period following his/her visit. For a listing of the 2007-08, 2008-09, and 2009-10 seminar series distinguished scholars, who represent leading experts in the fields of engineering, biophysical sciences, social sciences and law see <http://waterinstitute.ufl.edu/events/seminars.html>.

### **3. Interdisciplinary Workshops and Expert Panels**

Periodic interdisciplinary workshops and expert panels are hosted to develop partnerships between and among UF Water Institute Faculty, external academics and external stakeholders. The purpose of these panels and workshops is to identify and prioritize critical water issues requiring interdisciplinary expertise, as well as to provide expertise and support for addressing these issues. To date 19 workshops and expert panels have been conducted ( for a complete list see [http://waterinstitute.ufl.edu/events/workshops\\_panels.html](http://waterinstitute.ufl.edu/events/workshops_panels.html)). During 2009-10 the following externally funded peer review panels were coordinated to provide advice to Florida Agencies:

- Regional peer review of the groundwater modeling effort in support of the 2010 Northeast Florida Water Supply Planning Effort. (Sponsored by St. Johns and Suwannee River Water Management Districts, \$100,000, June 2009-March 2010)
- State-wide peer review of the St. Johns River Water Management District's Water Conservation Program. (Sponsored by St. Johns River Water Management District, \$20,000, March 2009-May 2009).
- National peer review of the Watershed Assessment Model. (Sponsored by the Florida Department of Agriculture and Consumer Services and the Florida Department of Environmental Regulation, \$100,000, August 2008-August 2009)

#### **4. Administration of the Hydrologic Sciences Academic Cluster**

The UF academic cluster for graduate studies in Hydrologic Sciences (HSAC) is an interdisciplinary program designed to broaden the skills of science and engineering students who are interested in all aspects of water; i.e., occurrence and quantity, distribution, circulation, quality, and management/policy. Currently 49 faculty members and 30 graduate students from 9 departments and 3 colleges participate in the HSAC. Since 1994 125 M.S. and Ph. D. students have graduated from the program.

The Water Institute provides administrative services to the HSAC including developing and maintaining an on-line database for the HSAC student, faculty and meeting records, and developing and maintaining the [HSAC website](#). In addition The UF Water Institute Director serves as a permanent voting member on the Hydrologic Sciences Academic Cluster Faculty Coordinating Committee.

#### **5. Smallwood Student Intern Program**

A gift from the Smallwood Foundation supports undergraduate and graduate student interns to work on interdisciplinary Water Institute projects. As team members, these students conduct an individual project that contributes to the overall effort, while learning about the process of interdisciplinary scientific research, collaboration and scholarship. To date five interns have participated in this program. See <http://www.waterinstitute.ufl.edu/people/interns.html> for project details.

#### **6. Water Institute Program Initiation Fund Awards (awards to date \$414,000)**

The goal of the Water Institute Program Initiation Fund (PIF) is to encourage interdisciplinary working groups consisting of UF faculty, graduate students, and key external experts to scope problems, engage stakeholders, write proposals, develop knowledge and propose solutions for complex water issues that have state, national and global importance. In 2007, six PIF projects involving 16 faculty members from 4 colleges were selected for seed funding. In 2009, three projects involving 14 faculty members from 3 colleges were selected. To date deliverables from these projects include a seminar series, 5 journal articles, 3 white papers and 11 proposals totaling approximately \$6.5 Million for externally funded research projects. For a complete description of all PIF projects see <http://waterinstitute.ufl.edu/research/researchProjects.asp?WIClassLevel=4>

#### **7. Externally Funded Research Projects**

UF Water Institute Affiliate faculty and graduate students are involved in externally funded research projects in wide-ranging aspects of water-related sciences, engineering, design, policy and law. The goals of individual research projects include such diverse interests as advancing the understanding of fundamental physical, chemical and biological processes in various aquatic systems, understanding how people organize themselves to use and manage water, and developing solutions to practical problems through engineering, design and legal applications of new scientific understanding. There are four categories of externally funded Water Institute projects, depending on the level of involvement of Water Institute staff in the project development (for more details see [WI Project Classification Policy](#)). To

explore all externally funded Water Institute projects by research thrust area, ecosystem of study, or classification level see <http://waterinstitute.ufl.edu/research/index.html>. A brief summary of current projects by classification is included below:

- **Water Institute Directed Research Projects:** For Water Institute directed projects, the Water Institute Director/Staff provide overall proposal coordination and/or project management. *18 projects totaling approximately \$4.0 Million have been funded under this category.* For details regarding these projects including title, goals and objectives, participating faculty and funding agency see <http://waterinstitute.ufl.edu/research/researchProjects.asp?WIClassLevel=3>
- **Water Institute Assisted Research Projects:** For Water Institute assisted projects, a Water Institute faculty member provides overall proposal leadership, but the Water Institute provides support services such as initial organization of the project team, liaison with a sponsoring agency, matching funds, technical support, data management, and/or project management. *11 projects totaling approximately \$4.9 Million have been funded under this category.* For details regarding these projects including title, goals and objectives, participating faculty and funding agency see <http://waterinstitute.ufl.edu/research/researchProjects.asp?WIClassLevel=2>
- **Water Institute Faculty Research Projects:** In addition to the research projects described above, in 2009-10 faculty affiliated with the Water Institute managed over \$108 Million in active externally funded projects. These projects are catalogued in an on-line database that can be by investigator, department, keyword, title, and date and/or funding agency (see <http://waterinstitute.ufl.edu/research/WIClassLevel1.asp> )

## 8. Personal Teaching/Leadership/Service Activities

- Major Advisor for 2 current Ph. D. students and 1 Post-Doctoral Associate who will begin July 12, 2010.
- Taught CWR 6536, Stochastic Subsurface Hydrology Fall 2006. Will offer course again Fall 2010.
- Co-author on 6 refereed journal articles in 2009-10.
- Member of Board of Directors, Consortium of Universities for the Advancement of Hydrologic Sciences, 2003-2008; Chair 2005-2006, Past-Chair 2007.
- Member of National Research Council's Committee on Independent Scientific Review of Everglades Restoration Progress (CISRERP), 2009-present
- Member Scientific and Engineering Advisory Panel for the State of Georgia's Comprehensive State-wide Water Management Plan 2009- present.
- Invited Speaker, Southwest Florida Water Management District Industrial and Public Water Supply Advisory Committees, Tampa Florida, July 2009
- Invited Speaker, Florida Fruit and Vegetable Association, Naples Florida, July 2009
- Invited Speaker, 5 IFAS Regional Advisory Council Meetings, Fall 2009.
- Invited Speaker, Congressional Water Caucus Panel on Water Allocation Issues in the Appalachicola-Chatahoochee-Flint River Basin, May 2010
- Invited Participant, NSF sponsored Biofuel Technologies and their Implications for Water and Land Use, Atibaia Brazil, August 2009.