UF WATER INSTITUTE 3 YEAR ACCOMPLISHMENT REPORT
June 2006-May 2009

1. INTRODUCTION

Florida's burgeoning human population and vulnerability to both climatological and anthropogenic changes in the water cycle make the State a unique living laboratory to develop new knowledge and test solutions to global water problems. In recognition of the importance of water issues, and the need to address them in a new interdisciplinary manner, the University of Florida (UF) established a campus-wide interdisciplinary Water Institute in May 2006.

1.1 Mission

The UF Water Institute brings together talent from throughout the University to address complex water issues through innovative interdisciplinary research, education, and public outreach programs.

1.2 Vision

Interdisciplinary UF Water Institute Teams, comprised of leading water researchers, educators and students, develop new scientific breakthroughs; creative engineering; policy and legal solutions; and pioneering educational programs that are renowned for addressing state, national, and global water problems.

1.3 Values

Partnerships**:** The Water Institute recognizes the importance of developing strong inclusive partnerships among Water Institute Affiliate Faculty, and with external stakeholders, to identify and prioritize critical water issues requiring interdisciplinary expertise.
Expertise**:** The Water Institute is committed to developing the basic knowledge, practical experience, and infrastructure required to respond to stakeholders' emerging water issues.
Excellence**:** The Water Institute is committed to provide excellent interdisciplinary water-related research, education and outreach programs that are recognized within the state of Florida, the nation and the world.
Respect**:** The Water Institute provides services that acknowledge and respect the expertise of all Water Institute Affiliate Faculty; it also recognizes the personal values, cultures, and socioeconomic context of its diverse external stakeholders.

1.4 Goals

The overarching goals of Water Institute research, education/outreach programs are to:

- Improve basic knowledge of the physical, chemical, and biological processes in aquatic systems (rivers, lakes, oceans, estuaries, wetlands, soil and ground waters).
- Enhance understanding of the interactions and interrelationships between human attitudes and activities, and aquatic systems.
- Develop and promote the adoption of improved methodologies for water management and policy (including quantity, quality and ecosystem services) based on a foundation of science, engineering, management and law.

2. INTERDISCIPLINARY EDUCATION/OUTREACH PROGRAMS

The following interdisciplinary education/outreach programs have been developed by the UF Water Institute. These programs provide interdisciplinary venues to develop and share new knowledge, and to develop and encourage the implementation of new technology and policy solutions for water issues. These programs also develop partnerships with external stakeholders that help to identify and prioritize critical water issues requiring interdisciplinary expertise; as well as to provide expertise and support for addressing these issues.

2.1 Biennial UF Water Institute Symposium: sponsored by Progress Energy.

The inaugural Water Institute Symposium held in Gainesville Feb 27-28, 2008 brought together 450 scientists, engineers, academics, policy makers, water managers, industry representatives, lawyers, students and members of the public to consider the relationships among challenges to water resources sustainability, explore solutions for pressing issues and provide broad based recommendations for research, education, technology and policies to ensure water resources sustainability for Florida and beyond.

Over 180 contributed oral and poster presentations were presented by faculty graduate students, consultants and state and federal agency scientists in Florida. A group of nationally and internationally recognized invited speakers from academia, federal agencies, and policy "think-tanks" participated in the opening plenary session of the symposium. The symposium concluded with a panel, comprised of the Executive Directors of each of the Water Management Districts and the Secretary of the Florida Department of Environmental Protection that focused on current Florida policies and programs and future research and education needs. A graduate student poster competition was held and 4 awards totaling $3000 were made to support graduate student travel to a national/international meeting to present their work. For Symposium agenda see http://www.waterinstitute.ufl.edu/symposium/agenda.html)

An on-line evaluation of the Symposium showed that :

- 99% of participants agreed (34%) or strongly agreed (64%) that the theme of the Symposium and the content of the sessions were timely, appropriate and informative.
- 88% of participants rated the symposium as very good (64%) or among the best (24%) they have attended
- 98% of participants plan to attend a UF Water Institute Symposium again
- 98% of participants would like to see the UF Water Institute host a Symposium similar to this either one once per year or once every two years.

The 2nd Water Institute Symposium will be held February 24-26, 2010 at the Hilton University of Florida Conference Center, Gainesville, Florida. The theme of the symposium will be Sustainable Water Resources: Complex Challenges, Integrated Solutions.

2.2 UF Water Institute Distinguished Scholar Seminar Series: Sponsored by the Smallwood Foundation

This annual seminar series, initiated in Fall 2007, 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 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 list of the 2007-08 and 2008-09 Seminar Series Scholars, see http://waterinstitute.ufl.edu/events/seminars.html. Recruitment is currently on-going for the 2009-10 speakers.

2.3 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 to identify and prioritize critical water issues requiring interdisciplinary expertise; as well as to provide expertise and support for addressing these issues.

July 16-20 2007: The Water Institute hosted a week-long Agricultural Knowledge Initiative Research Planning Workshop to kick off the USDA/ICAR Sustainable Water Resource Management: U.S. Collaborative Research and Education Project. The workshop included facilitated discussions and field trips and provided an opportunity for the detailed planning of the funded research projects which will be conducted in India. Six participants from three Indian Partner institutions, one participant from North Carolina A&T, and eleven participants from UF attended the workshop. Sponsored by USDA.

August 21, 2007: The Water Institute hosted a one-day Springs Nutrient Workshop with about 70 faculty members, state and local scientists, organizers, managers, regulators and policy experts. The workshop included synthesis presentations on the state of knowledge regarding sources, transformations, sinks and ecological impacts of nutrients in springs, as well as facilitated break out sessions to discuss information gaps and research needed to address these gaps. Sponsored by FDEP.

September 12 2007: The Water Institute hosted a one day Hydrologic Information Systems Workshop to assist the government of Australia in exploring how hydrologic databases and integrated modeling tools can be used to manage water movement and accounting on a large regional scale. Representatives from the three largest Florida Water Management Districts, USGS, the Australian Meterologic Bureau, the Australia Commonwealth Scientific and Industrial Research Organisation (CSIRO) Land and Water Division, University of Florida, and University of Texas Austin participated in the meeting. Sponsored by the UF Water Institute

November 15-16 2007: The Water Institute hosted a free half-day instructional seminar on the use of ArcHydro for water resource management applications. This seminar is open to UF faculty, students, consulting firms, and Water Management District employees. A one-day symposium to present the state of practice for the use of ArcHydro in Florida followed. The

purpose of these meetings was to share information about hydrologic data management and tool development for water research, education, decision-making, visualization and modeling efforts in Florida. Sponsored by the UF Water Institute.

November 29, 2007: The Water Institute hosted a one-day Open Modeling Interface (OpenMI) working group meeting between UF Faculty and OPEN-MI Developer and Principal Investigator Dr. Roger Moore from the Centre for Ecology and Hydrology, Wallingford, UK. The purpose of these meetings was to inform UF Faculty of the OpenMI standard for linking hydrologic and ecologic models, and encourage participation in this international effort. The Open-MI standard is a software component interface definition for the computational core (the engine) of the computational models in the water domain. Sponsored by the UF Water Institute.

November 30, 2007: The Water Institute hosted a one-day Water Conservation Research Planning Workshop to review the status of Florida water conservation research programs and develop a prioritized Water Conservation Research Agenda to support public water supply utilities and water managers in developing effective and efficient water conservation programs. The workshop was developed in collaboration with the Conserve Florida Group (a consortium of representatives from FDEP, all 5 Water Management Districts, Florida Water Utilities, and UF) and other interested UF Faculty. Sponsored by Conserve Florida Water.

September 4, 2008: Coordinated panel discussion on Water and Social Equity at the Harn Museum in conjunction with Harn "Water as Metaphor for Identity" exhibition and the UF Common Reading Program "When Rivers Run Dry" . Sponsored by the Water Institute

September 17-18, 2008: Coordinated and hosted 2 - day workshop of national experts on the Environmental Effects of Withdrawals from the St. Johns River.

June –September 2008: Coordinated state-wide peer review of the Florida Section of the American Water Works Association Florida 2030 Water Supply Infrastructure Vision Documents. Sponsored by the Century Commission in preparation for the Governor's Water Summit. See http://waterinstitute.ufl.edu/research/downloads/fl_2030_review_synthesis_final.pdf for a copy of the review.

August 2008 –April 2009: Coordinated national peer review of the Watershed Assessment Model. Sponsored by the Florida Department of Agriculture and Consumer Services, Florida Department of Environmental Regulation, South Florida Water Management District, St. Johns River Water Management District.

May 2009: Coordinated state-wide peer review of the St. Johns River Water Management District's Water Conservation Program. Sponsored by St. Johns River Water Management District.

2.4 Administration of the Hydrologic Sciences Academic Cluster

The UF academic cluster for graduate studies in Hydrologic Sciences (HSAC) was established in 1993 as a unique 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 48 faculty members and 24 graduate students from 10 departments and 3 colleges participate in the HSAC. Since 1993 120 M.S. and Ph. D. students have graduated from the program.

As recommended by the UF Faculty Water Institute Launch Team, the Water Institute provides administrative services to the HSAC including re-developing and maintaining the HSAC website and developing and maintaining an on-line database for the HSAC student, faculty and meeting records. In addition The UF Water Institute Director serves as a permanent voting member on the Hydrologic Sciences Academic Cluster Faculty Coordinating Committee.

2.5 Smallwood Student Intern Program

A 2008-09 gift from the Smallwood Foundation helped to support 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. Five interns are currently participating in this program. See http://www.waterinstitute.ufl.edu/people/interns.html for project details.

3.0 RESEARCH PROGRAMS DEVELOPED

The following interdisciplinary research programs have been developed by the UF Water Institute faculty and staff. These programs bring together interdisciplinary teams of faculty and students to provide the knowledge base for, and to develop new technology and policy solutions for state, national and global water issues.

3.1 Externally Funded Water Institute Projects

3.1.1 Water Institute Directed Projects ($4.42 Million)

- Cooperative Graduate Research Assistantships in Critical Water Resources Areas for South Florida, South Florida Water Management District/Florida Water Resources Research Center, $240K, Mar 2006- Mar 2009.
- Collaborative Research: Controls on Delivery and Fate of Water, Nitrogen and Calcium in a Spring-Fed Karst River, National Science Foundation, $325K, Mar 2009- Mar 2012
- Collaborative Research: High Resolution Sensor Networks for Quantifying and Predicting Surface-Groundwater Mixing and Nutrient Delivery in the Santa Fe River, Florida, National Science Foundation, $456K, June 2009-June 2012 (recommended for funding)
- Demonstration of Water Quality Best Management Practices for Beef Cattle Ranching in the Lake Okeechobee Basin , Florida Department of Environmental Protection, $1.568 Million, Sep 2002-dec 2009.

- Evaluation of Cow-Calf BMPs with regards to nutrient discharges in the Lake Okeechobee Basin, $140K, July 2008-June 2009.
- Evaluation of Hydrologic Data within the Upper Suwannee River and Santa Fe River Basins, St. Johns River Water Management District, $40K, March 2009-September 2009.
- India Agricultural Knowledge Initiative, U.S. Department of Agriculture, $90K, Aug 2006-Jul 2010.
- Peer Review of the Watershed Assessment Model, Florida Department of Agriculture and Consumer Services, $100K, July 2008-June 2009.
- Peer Review of Water Conservation Program Plan, St. Johns River Water Management District, $17K, March 2009-September 2009.
- Suwannee River Hydrologic Observatory, National Science Foundation, $360K, Dec 2006-Nov 2009.
- Technical Symposium on Water Withdrawals, St. Johns River Water Management District, $40K, April 2008-September 2008.
- Technical Symposium Workshop: 2nd Annual St. Johns River Water Supply Impact Study, St. Johns River Water Management District, $45K, April 2009-September 2009.
- Use of Seasonal Climate Forecasts to Reduce Risk in Regional Public Water Supply Management in the Tampa Metropolitan Region, Tampa Bay Water, $175K, Apr 2007 – Mar 2010.
- Use of Intra-seasonal and Seasonal Forecasts to Reduce Risk in Regional Public Water Supply Management, NOAA Sectoral Applications Research Program (SARP), $300K, October 2008-October 2010
- Water Institute Distinguished Scholar Seminar Series, Smallwood Foundation, $67K, April 2007-April 2010.
- Water Institute Water Systems Collaboratory, Florida Legislative Budget Request, $500K, July 2007-June 2008.

3.1.2 Water Institute Assisted Projects ($2.44 Million)

- Conserve Florida Clearinghouse. J. Heaney - P.I. (Environmental Engineering Sciences), Florida Department of Environmental Protection, $925K, Apr 2006- Apr 2009.
- Development of a Dynamic Decision Support System (D2S2) for Water Supply Planning. J. Jawitz - P.I. (Soil and Water Science), American Water Works Association Research Foundation/Palm Beach County Water Utilities Department, $110K, Jan 2007 to Jan 2010.
- Environmental Effects of Water Withdrawals from the St. Johns River: Expert Assistance, Ramesh Reddy – P.I. (Soil and Water Science), St. Johns River Water Management District, $60K, 2008.
- Jon Martin and Liz Screaton's new NSF project, 2009 (recommended for funding)
- Reducing nonpoint source loss of nitrate with in the Santa Fe Basin. M. Clark - P.I. (Soil and Water Science). Florida Department of Environmental Protection, $240K, Apr 2007-Oct 2009.
- Remote sensing meets ecological modeling meets Global Uncertainty Analysis meets socio-economic institutions, Jane Southworth –PI (Geography), $875K, May 2009-May 2012.

- Summary and Synthesis of the Available Literature on the Effects of Nutrients on Spring Organisms and Systems. M. Brown - P.I. (Environmental Engineering), Florida Department of Environmental Protection, $227K, Apr 2007 – Apr 2008.

3.1.3 Water Institute Faculty Projects ($72 million)

Faculty affiliated with the Water Institute have brought in $72 Million in externally funded projects over the last three years (i.e. since the inception of the Water Institute). These projects are compiled in a web-accessible database that can be searched by investigator, department, keyword, title, date and/or funding agency (see http://ees-his06.ad.ufl.edu/SearchFundedProjects/)

3.1.4 Water Institute Proposals Pending

- Collaborative Research: Spatio-temporal distribution of terrestrial water storage at watershed scales by merging models and observations, National Science Foundation, $265K, Level 2.
- Collaborative Research: Hydrodynamics and Sediment Transport in a Shallow Hypersaline Estuary, National Science Foundation, $366K, Level 4.
- Collaborative Research: Cyber-Enabled Integration and Conflict Resolution-Reconciling Science, Systems and Systainability (S3) in Regional Watersheds. National Science Foundation, $549K, Level 3.
- Collaborative Research: Transport of 14C-Labeled Solubilized Carbon Nanotubes in Natural Soils, National Science Foundation, $233K, Level 4.
- Circulation in Fringing Reef Lagoons drive by Wind-Waves. National Science Foundation, $552K, Level 2.
- Evaluation of Pre-Treatment Techniques and Operational Schemes for Controlling Arsenic Mobilization during Artificial Recharge (AR) and Aquifer Storage and Recovery (ASR)" , $150K, Level 4.
- Photocatalytic process with commercial potential for indoor air purification, $281K, Level 4.

3.1.5 Additional Water Institute Proposals Submitted

- A Critical Zone Observatory for Humid, Warm, Low-Relief Watersheds (Santa Fe River Basin, FL) , NSF, $4.25Million.
- Center for Climate Technology and Preparedness, 2008 Center of Excellence Proposal, being submitted jointly to the Florida Board of Governors through Florida State University, $15Million total, $7.5Million to UF, approximately $1Million to Water Institute.
- Climate Prediction Applications Postdoctoral Program, NOAA/Tampa Bay Water, $110K.
- Collaborative Program in Biological Control of Coral Bacterial Diseases , Smallwood Foundation, $46K.
- Collaborative Exchange between the Universities of Montpellier and Florida: Water Resources of Carbonate Aquifers, The French-American Fund for University Partnerships, $84K.

- Effect Of Bacterial Motility On E.Coli Surface Transport In Runoff Through Dense Vegetation, USDA National Research Initiative, $370K
- Impact of Dissolved Organic Matter on Colloid Transport in the Vadose Zone, USDA National Research Initiative, $400K
- Influence of Hydrologic Variability on Carbon Processing and Fluxes in an Organic Carbon and Carbonate Rich Watershed, Suwannee River Florida, NSF, $600K.
- Integrated Springshed Management: Improving Water Quality By Linking Land Use, Hydrologic And Socioeconomic Factors USDA/CSREES, $600K.
- Interdisciplinary Graduate Research Fellowships in Water Resources and Annual Lecture Series, Smallwood Foundation, $200K.
- Predicting Responses of Aquatic Plants and Apple Snails to Global Change and Altered Land Use, USEPA, $600K.
- Solutions for Water Resources Sustainability, 2008 Florida Legislative Budget Request $1.5 Million.
- Red Tide Research: Protecting Florida's Water Supplies, 2009 US Congressional Budget Earmark, $6Million.
- Science and Technology Center: Water Science for Sustainable Societies, National Science Foundation, $25Million.
- Socio-Economic And Hydrological Effects Of Stormwater Impoundments As Alternative Water Supply Sources In The Caloosahatchee River Watershed, Florida, USDA National Research Initiative, $400K
- Water Institute Core Labs and Post-Doctoral Researcher Program, 2008 US Congressional Budget Earmark, $5Million.
- Water Resources of Carbonate Aquifers: A collaborative exchange between the Universities of Montpellier (France) and UF, The French-American Fund for University Partnerships, $55K.

3.2 2007 Water Institute Program Initiation Fund Awards (Total Awards = $195K)

The following awards were made under the first Program Initiation Fund (PIF) Competition in March 2007:

- Protecting Florida's Water Quality: Identifying and Overcoming Barriers to Implementation of Low Impact Development (LID) Practices. Mark W. Clark - PI (Soil and Water Science), Tom R. Ankerson (Conservation Clinic, Levin College of Law), Pierce H. Jones (Agricultural and Biological Engineering), Barbra C. Larson (Environmental Horticulture).

- A Framework for Assessing The Hydrologic Footprint of Large-scale Biofuel Production . Matt Cohen - PI (School of Forest Resources and Conservation), Mark T. Brown (Center for Wetlands, Environmental Engineering Sciences), Angela Lindner (Environmental Engineering Sciences).

- Environmental Consequences of Nutrients and Organic Matter Injection into Carbonate Aquifers; Implications for Water Quality in Aquifer Storage and Recovery (ASR) Technology. Andrew R. Zimmerman - PI (Geological Sciences), Jean-Claude Bonzongo (Department of Environmental Engineering Sciences), Willie Harris (Soil and Water Science).

- Sediment Transport through Tidal Inlets During Extreme Forcing: Erosion or Accretion? Arnoldo Valle-Levinson - PI (Civil and Coastal Engineering), John M. Yeager (Geological Sciences), Tian-Jian Hsu (Civil and Coastal Engineering), Alexandru Sheremet (Civil and Coastal Engineering).
- Coupling of Advanced Oxidation and Adsorption Processes onto Silica-Titania Composites for Low Level Capture of Metals from Water Effluents. David W. Mazyck - PI (Environmental Engineering Sciences), Jean-Claude Bonzongo (Environmental Engineering Sciences), Lena Q. Ma (Soil and Water Science).
- Water, Gender and Equity in India. Whitney Sanford - PI (Religion), Anita Anantharam (Women's Studies), Vasudha Narayanan (Center for the Study of Hindu Traditions, Religion).

Deliverables from projects include 5 journal articles, 1 white paper, and 8 proposals (submitted through the Water Institute) for externally funded research projects. For a final report on these projects see http://www.waterinstitute.ufl.edu/research/downloads/PIF2007-Report-Dec2008.pdf

During academic year 2008-09, the Water Institute hosted a PIF "Munch Bunch" Presentation/Discussion Series to share the results of the 2007 PIF projects that have been completed. This provided an opportunity for the WI network to meet the 2007 PIF faculty, discuss the PIF activities, results and future potential, and to contribute to the UF Water Institute PIF strategic initiatives for 2008 and beyond.

3.3 2009 Water Institute Program Initiation Fund Awards

Goals: The specific goals of the 2009 Program Initiation Fund are to develop the theoretical underpinnings, preliminary data and methodological specificity needed to develop compelling, nationally-competitive interdisciplinary proposals for RFPs such as the recent NSF calls for interdisciplinary proposals related to Environment, Society and the Economy (ESE), Multi-Scale Modeling (MSM) or Emerging Topics in Biogeochemical Cycles (ETBC). Recent experience on NSF review panels indicates that successful proposals must present a compelling specific interdisciplinary challenge; propose a theoretical framework that underpins the approach to addressing the challenge, collect new (or synthesize existing) data in support of the integrated research; and analyze or model the data using well-specified state of the art approaches; and advance the science in at least two disciplines (i.e. be publishable in the leading journals of those disciplines) as well as advancing the integrated solution of the specified problem.

Review Process: Proposals were reviewed by an internal Water Institute faculty panel. There were many innovative ideas presented in the proposals that were synergistic with each other and ripe for integration and development into externally funded projects. The review panel recommended that the Water Institute award seed funding to several teams to develop full proposals for external funding, rather than fund a smaller number of full projects.

Strategy: The Water Institute plans to facilitate a process that cross-pollinates the promising ideas presented in the PIF proposals and creates interdisciplinary working groups to develop

successful proposals for external national-level funding. Three proposal groups consisting of 12 faculty members from 4 colleges were invited to participate in this process. Issues that these teams will focus on include surface water withdrawals in the Ocklawaha or St. Johns River Basin; development and implementation of springs management plans, and water allocation issues in the Apalachicola-Chattahoochee-Flint river basins.

The Water Institute proposes to help to develop the proposed interdisciplinary working groups based on the concept of "communities of practice". Dr. Etienne Wenger is an educational theorist and practitioner who developed this concept. According to his web-site "communities of practice are formed by people who engage in a process of collective learning in a shared domain of human endeavor.…In a nutshell: Communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly."

Dr. Wenger visited UF on May 4-5 to give a general seminar (2pm May 4th in 209 Emerson Hall) and facilitate a 1-day workshop on May 5th launching the 2009 PIF Interdisciplinary Working Groups. As a result of the workshop each proposal group agreed to

- Commit as a PIF research award recipient to engage actively in developing and participating in the PIF Community of Practice oriented toward developing integrated interdisciplinary research programs focused on interactions among social, political, hydrologic and ecologic water issues.
- Be flexible and contribute as appropriate to link their specific research expertise and experience with others in different disciplines and different proposal groups as appropriate.
- Commit to develop an integrated proposal for an interdisciplinary project to programs such as the NSF Environment, Society and the Economy (ESE), Emerging Topics in Biogeochemical Cycles (ETBC) of Multi-Scale Modeling (MSM) RFPs before December 2010.

4. OTHER LEADERSHIP/OUTREACH ACTIVITIES

- Conducted on-Campus Meetings with 30 diverse on-campus groups including faculty from CLAS, CALS, COE, COB, CDCP, Law, and Vet Medicine during June 2006-July 2007
- Conducted 66 meetings with External Stakeholders including state, national and international cooperators and funding agencies during June 2006-July 2007
- Taught CWR 6536, Stochastic Subsurface Hydrology, 11 students, Fall 2006
- Major Advisor for 2 Ph. D. students
- Member of Search Committee for Dean of the Graduate School, Fall 2006
- Member of Search Committee for Assistant Professor for Urban Water Resources, ABE Dept., Fall 2006-Spring 2007
- Invited Presentation to the National Research Council Water Science and Technology Board on the Water Implications of Biofuels, July 12, 2007.
- Invited Speaker at the National meeting of the Soil and Water Conservation Society, July 22, 2007.

- Invited seminar at the SouthWest Florida Water Management District, July 25, 2007.
- Invited speaker at the Jacksonville Rotary Club, September 10, 2007.
- Invited speaker for the University of Florida "Florida Tomorrow" Campaign Kick-Off, September 28, 2007.
- Invited Panelist on Water Management Implications of Climate Change for Florida Legislature Energy and Environment & Natural Resource Committees, November 6th, 2007.
- Member of Advisory Committee, Collaborative Large-Scale Engineering Analysis Network for Environmental Research, 2005-2007.
- Invited seminar Oak Hammock Institute for Learning in Retirement, April 1, 2008
- Invited Panelist, Army Corps of Engineers Waterways Experiment Station Environmental Lab Peer Review Panel, May 2008.
- Invited Speaker, Urban Land Institute, Jacksonville Florida, September 2008.
- Invited Delegate to the Century Commission Florida Water Congress, September 2008.
- Invited Speaker for the University of Florida Foundation Fall Board Meeting, October 2008.
- Invited seminar at the University of South Florida, October 2008.
- Invited Speaker for United Nations Association Gainesville Chapter United Nations Day, October 2008.
- Invited Speaker of Particle Energy Research Center Advisory Committee Meeting, November 2008.
- Invited Speaker at the Colorado School of Mines, Boulder CO, January 2009.
- Invited Speaker, University of Florida Section of Sigma Xi Annual Banquet, Gainesville Florida, April 2009
- Invited Speaker, Georgia Water Resources Conference, Athens Georgia, April 2009
- Invited Speaker, American Society of Irrigation Consultants, St. Augustine Florida, May 2009
- 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
- Member of Board of Directors, Consortium of Universities for the Advancement of Hydrologic Sciences, 2003-2008; Chair 2005-2006, Past-Chair 2007.
- Member of WATer and Environmental Research Systems Network (WATERS Network) Design Team, 2006-2008.
- Member of NSF Peer Review Panel for Cyber-enabled Discovery and Innovation Program, February 2009.
- Member of National Research Council's Committee on Independent Scientific Review of Everglades Restoration Progress (CISRERP), 2009-present