

Water Institute Status Report: November 15 2006

Logistics

- Acquired 1300 sq ft space in 570 Weil Hall requiring minor renovations
- Arranged for phone and IT services to be provided courtesy of the Civil and Coastal Engineering Dept.
- Arranged for fiscal services to be provided courtesy of the IFAS Dean for Research and Agricultural and Biological Engineering
- Purchased basic office equipment and furniture required for startup
- Hired two part-time Research Coordinators: Kathleen McKee (M.S. Soil and Water Science), Mark Newman (Ph. D. Civil Engineering)

Stakeholder Development

- Conducted on-Campus Meetings with 25 diverse Faculty groups from CLAS, CALS, COE, COB, CDCP, Law, Vet Medicine (see Appendix 1)
- Conducted approximately 45 meetings with External Stakeholders including state, national and international cooperators and funding agencies (see Appendix 2)

Strategic Planning

- On-Line Faculty Survey: Completed September 1 (see Appendix 3)
- 1-day Faculty Forum: Completed October 16th (see Appendix 3)
- Conduct Election of Internal Advisory Board November 2006
- Release Opportunity Fund Call Dec 8th, January 29th due date
- Plan External Stakeholder Summit for Early Spring 2007
- Plan Formation of External Advisory Board for Late Spring 2007
- Plan First Annual Water Summit (Tentative date Feb 2008)

Water Institute Projects Initiated:

- Conserve Florida Clearinghouse (\$150K for 1 year, planning grant)
 - Funded by DEP, and the WMDs
 - Joint effort by COE (Heaney) CALS (Haman) and COB (Berg)
 - Mission is to collect, analyze and make available research information and technical assistance to public water supply utilities and water managers for use in developing effective and efficient water conservation programs
 - Began Summer 2006
- Suwannee River Hydrologic Observatory
 - Funded by NSF (\$460K for 2 years, planning grant)
 - Joint effort between COE (Delfino, Slatton), CALS (Graham, Cohen), CLAS (Martin)
 - Member of group of 8 watersheds serving as test beds for a national network of observatories

- Will address the relative roles of climate change and human development on water dynamics, water quality, and ecology across US hydroecoclimate regions
- Began November 1, 2006

- US Department of Agriculture India Agricultural Knowledge Initiative
 - “Sustainable Water Resource Management: U.S - India Collaborative Research and Education”, \$90,000
 - “Information and Communication Technologies for Capacity Building in Water Management”, \$60,000
 - Began September 1, 2006

Water Institute Proposals submitted:

- National Science Foundation, “Influence of Hydrologic Variability on Carbon Processing and Fluxes in an Organic Carbon and Carbonate Rich Watershed, Suwannee River Florida”, \$2,407,910 : declined
- NSF, Partnerships for International Research and Education. “Sustainable Land and Water Management: Comparative Analysis of Benchmark Basins across Economic, Environmental, Hydrologic, and Social Gradients” Pre-proposal for internal competition, \$2,400,000:declined
- Legislative Budget Request, “Solutions for Water Resources Sustainability”, \$4,776,000
- Congressional Budget Earmark, “ Water Institute Core Labs and Post-Doctoral Researcher Program”, \$5,000,000
- NOAA, “Use of Seasonal Climate Forecasts to Reduce Risk in Regional Public Water Supply Management in the Tampa Metropolitan Region”, \$300,000

Water Institute Proposal Working Groups:

- NSF Critical Zone Observatory RFP (\$4,500,000 over 5 years) LOI due October 1 2006 , Proposal due December 15, 2006
- FDEP : Summary and Synthesis of the Available Literature on the Effects of Nutrients on Spring Organisms and Systems (\$200K for 12 months)
- AwwaRF- Palm Beach Utilities, “Refined Regional Data Decision Support System”, \$200,000

Research Project Management

- U.S. Environmental Protection Agency 319 Program, "Demonstration of Water Quality Best Management Practices for Beef Cattle Ranching in the Lake Okeechobee Basin", \$1,349,785.00, Sept 2002-June 2007, Principal Investigator for 7 faculty member team.

- South Florida Water Management District/Florida Water Resources Center, Cooperative Graduate Research Assistantship Program, \$70,000, April 2006-May 2007, Principal Investigator for 5 faculty member team.
- National Science Foundation, “Design and Demonstration of a Distributed Sensor Array for Predicting Water Flow and Nitrate Flux in the Santa Fe Basin, \$360,000, November 2006-October 2008, Principal Investigator for 6 faculty member team.

Research Project Participation

- U.S. Environmental Protection Agency 319 Program, "Evaluating the Effectiveness of BMPs for Reducing Nutrient inputs to Groundwater in the Suwannee River Basin", \$597,193, Jan 2000-July Jan 2007, Co-Principal Investigator in 5 faculty member team.
- National Science Foundation, “ Improved Estimation of Evapotranspiration and Recharge from a Dynamic SVAT through Assimilation of Microwave Brightness”, \$400,000, Jan 2004- Jan 2008, Co-Principal Investigator in 4 faculty member team.

Teaching

- Teach CWR 6536, Stochastic Subsurface Hydrology (3 credits), Fall 2006

Appendix 1: On-Campus Stakeholder Meetings and Presentations

- March 30 CLAS Ecology and Environment
- April 13 Florida Water Resources Research Center
- April 14 School of Natural Resource and Environment
- April 19 Interdisciplinary International Water Interest Group
- May 5 Hydrologic Sciences Academic Cluster
- May 8 IFAS Extension
- May 9 Center for Latin American Studies
- May 11 Public Utilities Research Center
- May 18 Soil and Water Science Department
- May 22 UF Geoplan Center
- May 23 UF Office of Sustainability
- May 26 Fisheries and Aquatic Sciences Department
- June 20 Program for Resource Efficient Communities
- August 17th, Aquatic Vet Medicine
- August 18th IFAS Extension Dean re Hastings Demonstration Facility
- September 1st IFAS Research Dean re SFWMD liaison
- September 15th, Soil and Water Sciences Department
- September 28th, School of Forest Resources and Conservation
- October 2nd IFAS Research and Extension Associate Deans
- October 5th Religion Group (Florida Organization on Religion Environmental Sciences and Technology)
- October 9th School of Natural Resources and Environment
- October 13th Fisheries and Aquatic Sciences Department
- October 23rd Particle Science Engineering Research Center
- November 1st, IFAS Tropical Research and Education Center, Homestead
- November 3rd, Environmental Engineering Sciences Dept.
- November 6th, CLAS Ecology and Environment Committee

Appendix 2: External Stakeholder Meetings and Presentations

- March 23, Frank Rijsberman, Director of International Water Management Institute (Sri Lanka)
- May 2 Florida Century Commission (in conjunction with SNRE)
- May 12 Stan Bronson, Director Florida Earth Foundation (WPB)
- May 12 South Florida Water Management District (WPB)
- May 22 Delegation from Punjab Agricultural University (India)
- May 24 Hilary Swain, Director Archbold Biological Station
- May 25 Florida Pesticide Review Council Meeting
- May 25 Dean of Science, Makerere University, Uganda
- May 30 NSF Geosciences Director, Washington DC
- June 1 US Geological Survey
- June 6 Progress Energy
- June 12 Suwannee River Water Management District
- June 15 Florida Association for Water Quality Control, Naples
- June 16 Tampa Bay Water
- June 20 Delegation from Ranga Agricultural Univ (Hyderabad, India)
- June 22 Conserv Florida Clearinghouse Steering Committee
- June 27 Delegation from the Florida Chapter AWWA
- June 29 Lake Okeechobee Interagency Meeting (SFWMD, DACS, DEP)
- July 25 Nancy Johnson International Center for Tropical Agriculture (CIAT – Columbia)
- July 26 Florida Department of Environmental Protection & Florida Department of Agriculture (Tallahassee)
- July 27th Florida Institute of Phosphate Research (Paul Clifford)
- July 28 Swisher Foundation (JAX)
- August 3-14 ICRISAT (Hyderabad India), Ranga Agricultural University (Hyderabad India), International Water Management Institute (Colombo, Sri Lanka)
- September 6-8 Annual Water Management District/DEP Conference, Tarpon Springs
- Sept 13th, USDA Washington DC
- September 21, St. Johns River Water Management District, Palatka
- September 25, NSF Washington DC
- October 2nd, Florida Natural Areas Inventory
- October 18th University of Florida Foundation Orlando Regional Planning Committee
- October 23rd, Tampa Bay Water
- October 31st, South East Climate Consortium/NOAA
- November 1st, South Florida Water Management District, West Palm Beach
- November 8th, UF Foundation and Holloway Farms, Leesberg
- November 9th, SJRWMD Hastings
- November 10th, Florida Federation of Garden Clubs, Jacksonville

- November 11th, UF Foundation Advisory Board
- November 13th, USGS Orlando
- November 14-17th CUASHI, NSF Austin TX
- November 20th, Marion County
- November 29-30th, NSF CUAHSI-CLEANER Planning meeting

UF WATER INSTITUTE FALL RETREAT 2006

October 16, 2006 9:00-4:00

Austin Carey Forest Lodge

AGENDA

- 9:00 Welcome: History and Context of WI** ([click for power point presentation](#))
- 9:10 Introductions** ([click for attendee list](#))
- 9:40 Objectives and Participant Expectations**
- 10:00 Faculty Survey results** ([click for power point presentation](#))
- 10:20 Break**
- 10:35 Scenarios Exercise: What will the Water Institute look like?** ([click for results](#))
- Research
 - Outreach
 - Collaboration
- 12:30 Lunch**
- 1:30 Thrust areas and criteria for Research and Outreach** (small groups)
- Establish criteria ([click for criteria considered](#))
 - Define thrust areas ([click for thrust areas defined](#))
 - Discuss in plenary
- 3:00 Break**
- 3:15 Next Steps:**
- In thematic groups, define what, when, who and how (click for [next steps](#))
- 3:50 Summary, Evaluation and Closure**

Water Institute Fall 2006 Retreat: Summary of Scenarios Exercise

1. Scenarios Exercise: What will the Successful Water Institute look like in 2011? (Common characteristics suggested by 4 break-out groups)

The Water Institute is recognized for...

- an engaged interdisciplinary faculty – disciplinary isolation (disciplinary silos) have been broken down
- an excellent reputation within UF as well as within the state, nation, and world
- strong partnerships with the Water Management Districts and local governments (long term funded research--demonstration sites have been established in all Water Management Districts)
- facilitating discussions between regulatory agencies, industry, and academia
- being an honest broker, the go-to place to have problems solved
- training excellent students
- impacting water policy at the state level
- strong externally funded grants program from state, national and international sources
- distributing indirect costs in an equitable manner that fosters interdisciplinary work and does not threaten department chairs or deans
- building/recruiting water faculty at UF in under-represented disciplines (especially social sciences, policy sciences, and the humanities)
- obtaining funding for 5 endowed professorships
- a strong visiting scholar program
- a strong annual symposium
- a robust, well-respected external advisory board
- supporting operating expenses with endowments
- research and outreach programs that are self-sustaining through state and federal earmarks
- being called on by the state and national press (e.g. NPR) for issues regarding water
- excellent Water Institute staff including grants facilitator, communication director, IT director, and accountant
- a strong publication record in top peer reviewed journals, as well as white papers and synthesis articles for agencies and op-ed pieces in newspapers
- supporting the development of technologies for state, national and international applications
- world renowned water faculty who receive prestigious awards, and are members of NAS, NAE, etc.

**2. Scenarios Exercise: What will Unsuccessful Water Institute look like in 2011?
(Common pitfalls to avoid from 3 break-out groups)**

The Water Institute failed because...

- there was not adequate incentive to encourage faculty participation and support
- no realistic metrics for success were established early on
- failed to get Deans' support of metrics for success
- there was limited administrative support
- there was no increase in external funding
- very few departments were engaged – failed to break down disciplinary isolation
- the internal advisory board was too biased or narrowly focused
- failed to engage social scientists
- not enough outreach
- external advisory board was neglected
- insufficient grants, papers, post docs, grad students, public awareness
- there was no Water Management District or Legislative support
- unable to strike an effective balance between basic and applied research
- unable to strike an effective balance between local, state, and international research
- takes advantage of ideas and plans of others and is viewed as a parasite
- becomes too narrowly focused (e.g. focuses only on hydrology)
- no early 'success stories'
- there is a lack of incentive for top performers to affiliate
- not able to address issues of overlap/conflict with existing UF centers/institutes

**Water Institute Fall 2006 Retreat:
Criteria proposed for consideration in determining Thrust Areas**

The thrust areas should be...

- interdisciplinary
- related to existing expertise at UF (or identifiable partners)
- related to outcomes that stakeholders are interested in
- related to research, education and outreach that stakeholders are willing to fund
- focused on areas with long term potential
- dynamic and complementary
- local, regional and international
- capable of encouraging student involvement
- able to contribute to fundamental understanding of important topics
- inclusive of Extension / Education
- related to issues in which UF is a leader
- compelling due to current situations and events
- based upon a portfolio of possible research efforts (comparison of projects that are sure to get funded with success and risky ventures)

**Water Institute Fall 2006 Retreat:
PROPOSED WATER INSTITUTE THRUST AREAS**

- **Water Resources Sustainability**
 - Development of Alternative Water Supplies (Desalination, ASR, Reservoirs)
 - Water Treatment, Water Remediation
 - Management of Groundwater recharge areas
 - Water Conservation, Reuse, Demand Management
- **Water and Ecosystems**
 - Linking Terrestrial and Coastal Systems (Estuaries and Coastal Zone)
 - Springsheds
 - Wetlands
 - Watersheds
 - MFLs, TMDLs, BMPs, Ecosystem restoration
- **Water and Climate**
 - Extreme Events (Floods, Flood Control, Droughts, Hurricanes)
 - Climate Variability (ENSO phase, MDO)
 - Climate Change (Global warming, sea level rise, rainfall redistribution)
- **Water and Society**
 - Water Policy and Law
 - Water Pricing
 - Social Impacts and Implications (religion, poverty, social equity)
 - Public Health

Water Institute Fall 2006 Retreat: Next Steps

- Hold elections for Internal Advisory Board
- Form faculty working groups for each thrust area
- Organize seminar series based on thrust areas: invite expert speakers to stimulate ideas and help gel faculty groups to prepare for proposal writing (webcast through polycom/webex)
- Investigate and circulate RFPs in thrust areas
- Design internal RFP to jumpstart faculty groups in thrust areas, including:
 - Funds for bringing in external speakers
 - Support for preliminary data collection and external proposal preparation
 - Matching funds for competitive proposals
 - Synthesis papers for refereed journals
 - White papers for setting research agendas with agencies
- Plan External Stakeholder Outreach and Form External Advisory Board
- Plan first Water Institute Symposium

Water Institute Fall 2006 Retreat: Retreat Attendees

Amy Shober	Soil and Water Sci
Arnoldo Valle Levinson	Coastal & Ocean Eng
Chuck Jacoby	Coastal Extension Specialist, Fisheries & Aqu Sci
Craig Stanley	Gulf Coast Res and Ed Ctr - Bradenton
Dorota Haman	Ag & Bio Eng
Greg Kiker	Ag & Bio Eng
Hannah Covert	Ctr for Latin American Studies
Iske Larkin	Aqu Animal Health Ed Coord., Vet Medicine
Jasmeet Judge	Ag & Bio Eng
Jean-Clade Bonzongo	Env Eng Sci
Jim Heaney	Env Eng Sci
Jim Jawitz	Soil and Water Sci
Joan Bradshaw	Nat Resource Extension, Citrus Cnty
John Jaeger	Geology
Kathleen McKee	Water Institute
Ken Campbell	Ag & Bio Eng
Kirk Hatfield	Civil Eng
Lou Motz	Civil Eng
Mark Brown	Ctr for Enviro Policy; Env Eng Sci
Mark Clark	Soil and Water Sci
Mark Newman	Water Institute
Matt Cohen	SNRE
Michael Dukes	Ag & Bio Eng
Mike Annable	Env Eng Sci
Nancy Peterson	SNRE
Rafael Muñoz-Carpena	Ag & Bio Eng
Richard Hamann	Env Law
Rick Stepp	Anthropology
Roy Yanong	Fisheries & Aqu Sci
Ruth Francis-Floyd	Aqu Animal Vet Medicine
Sandra Russo	Prog Devel, International Ctr
Sandy Berg	Economics
Sanjay Shukla	Ag & Bio Eng
Spyros Svoronos	Chemical Engineering
Tom Obreza	Soil and Water Sci
Tom T-J Hsu	Civil Eng
Wendy Graham	Water Institute

Water Institute Fall 2006 Retreat: Welcome Power Point (double-click on image to see presentation)

University of Florida Water Institute



Water Institute Fall 2006 Retreat: Summary of Survey Results (double-click on image to see presentation)

Summary of Results from the Water Institute Faculty Survey