



# Water Institute

2012-2017 Strategic Plan





**UNIVERSITY of  
FLORIDA**

# Water Institute

## 2012– 2017 Strategic Plan

### 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. Since its inception, the UF Water Institute has emerged on campus, and in the state, as a leader in coordinating interdisciplinary research, education and outreach programs.

Over the last five years, there has been growing scientific, public and political awareness of water issues emphasizing the need for locally relevant and nationally pertinent research, education and outreach. Understanding complex water issues in a new holistic manner and exploring integrated solutions to managing these issues requires a sustained high level effort. It calls for bold action to facilitate means to obtain, integrate and share new data; to design innovative, comprehensive large-scale experiments; and to develop new simulation tools to allow scientists, managers, citizens, and policy makers to explore alternative scenarios of the impacts of climate change, population growth, land use change, and water management and policy alternatives. This strategic plan outlines the Water Institute mission, vision, goals, objectives and activities designed to meet these challenges and opportunities for the next five years.

### 2. Mission

The UF Water Institute brings together talent from throughout the University, and builds internal and external partnerships, to address relevant and urgent research challenges; implement innovative interdisciplinary training programs for promising students; and provide state-of-the-art expert assistance and educational programs for external stakeholders.

### 3. 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.

### 4. 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.

## 5. Goals

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

- Improve basic knowledge of the physical, chemical, and biological processes in aquatic systems (rivers, lakes, 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 resource management, policy and public awareness (including quantity, quality and ecosystem services) based on a foundation of science, engineering, management and law.

## 6. Thrust Areas

Research, Education and Outreach thrust areas are thematic cross-cutting initiatives around which the Water Institute Affiliate Faculty joins forces to achieve Water Institute goals. Thrust Areas provide broad outlines of emphasis areas rather than narrow definitions of the Institute, and represent areas in which interdisciplinary collaborations are likely to produce significant progress. The four overarching thrust areas and their goals are:



**Water, Land Use and Ecosystems** - Develop the basic understanding needed to develop and deliver programs and policies intended to reduce human impact on water quality and ecosystem function.



**Water and Climate** - Develop and improve predictive tools that will allow simultaneously management of water resources for multiple uses under the certainties of climate variability and the uncertainties of climate change.



**Water and Society** – Improve understanding of factors affecting real or perceived conflicts, and decision making processes regarding complex water issues, and develop innovative educational, conflict resolution, economic, or policy strategies to achieve long term water resource sustainability goals.



**Water Resources Sustainability** – Develop the understanding, technologies and management strategies that support sustainable management of water resources that allow current water use and water quality needs to be economically met without restricting future water availability and quality.

## 7. Strengths, Weaknesses, Opportunities, Threats (2012)

<b>Strengths</b>	<b>FAC Ranking<sup>1</sup></b>
Excellent Water Institute Staff	2.73
Solid externally funded grants program from state and national sources that engage a strong core of faculty from a variety of departments/Colleges/Centers	2.70
Well-attended, well-recognized biennial Symposium	2.64
Strong interdisciplinary Distinguished Scholar Seminar Series that brings in internationally known experts in water-related fields	2.55
Excellent relationships and recognition from Progress Energy, Swisher Foundation, Sherwood Stokes Foundation, Smallwood Foundation that have resulted in additional gifts for Water Institute Programs	2.55
Good recognition with Deans, Vice Presidents and President at UF	2.50
Excellent interdisciplinary graduate education opportunities through Water Institute Graduate Fellows Program and Hydrologic Sciences Academic Cluster	2.40
Increasing recognition as focal point for water expertise within the state and region (Water Management Districts, FDEP, FDACS, Senate Select Committee on Florida's Inland Waters, EPA)	2.30
Good progress facilitating discussions/partnerships/projects between regulatory agencies, industry, and UF faculty	2.30
Diverse, well-respected Faculty Advisory Committee	2.27
Comprehensive website with searchable faculty expertise, awards, and publication database	2.09
Strong reputation for timely, unbiased service to state and regional agencies for funded peer review/stakeholder review activities	2.00

<sup>1</sup> Average ranking assigned by Faculty Advisory Committee (3 high, 1 low)

<b>Weaknesses</b>	<b>FAC Ranking<sup>1</sup></b>
No large (multimillion) interdisciplinary grants received to date	2.30
No formal External Advisory Board established	2.30
Uneven participation by UF faculty (particularly in social science disciplines)	2.22
Perceptions/realities of overlap with existing UF centers/institutes remain	2.13
No new large endowments received since the Progress Endowment	2.10
Recurring legislative support from the state not established	1.88
No federal earmarks received	1.57
Uneven awareness of Water Institute activities and added value/benefit to UF	*

<sup>1</sup> Average ranking assigned by Faculty Advisory Committee (3 high, 1 low)

\* Added by FAC but not ranked

<b>Opportunities</b>	<b>FAC Ranking<sup>1</sup></b>
Continue to submit large interdisciplinary proposals to federal funding agencies (NSF, USDA, EPA, DOE) that build on previous efforts and partner with other UF Centers (WRRC,CFW, FCI, EPI), outside agencies and external academics where appropriate.	2.90
Establish foundation/private donor support to supplement and ultimately replace UF Deans' support for Water Institute Graduate Fellows Program.	2.50
Partner with departments to establish state and/or endowment support for hiring of interdisciplinary water faculty.	2.40
Partner with IFAS Extension and the Center for Public Issues Education to build strong stakeholder engagement/education programs within the newly created EPA Center for Excellence in Watershed Management.	2.10
Partner with Center for Latin American Studies, Center for African Studies, IFAS International Programs Office to develop Foundation- supported water research, education and outreach programs in developing countries.	2.00
Establish Foundation/Industry support for Undergraduate Water Scholar/Internship Programs.	1.70

<sup>1</sup> Average ranking assigned by Faculty Advisory Committee (3 high, 1 low)

<b>Threats</b>	<b>FAC Ranking<sup>1</sup></b>
State and Federal budget cuts for environmental programs in general, water programs in particular, reduce external funding opportunities	2.50
Broad faculty engagement declines due to increased pressures on their time and resources as well as reduced resources within the Water Institute	2.40
Potential for declining administrative support from UF	2.38
Increased real/perceived competition with Departments and Centers on campus due to new UF budget model and institutional framework (RCM)	2.00
Covering Water Institute staff salaries as direct costs on specific grants reduces their availability to provide program and proposal development support to broad Water Institute Affiliate Faculty	1.70
Maintaining Water Institute programs takes priority over efforts to document and publicize Water Institute successes	1.60

<sup>1</sup> Average ranking assigned by Faculty Advisory Committee (3 high, 1 low)

## 8. Strategic Priorities for 2012-2017

<b>Future Priorities</b>	<b>FAC Ranking<sup>1</sup></b>	<b>Chairs/ Directors Ranking<sup>2</sup></b>	<b>Final Ranking<sup>3</sup></b>
Build upon past successes ( symposium, seminar series, moderate-sized interdisciplinary research grants, funded service projects for state agencies, maintenance/enhancement of web-accessible faculty, awards and publication databases)	2.63	2.63	3
Continue to form and nurture interdisciplinary teams with diverse faculty leadership and representation to go after large (multimillion) externally funded programs, partnering with other Centers and Institutes (e.g. EPI, FCI, LATAM, PIE, Center for Wetlands, WRRC) where appropriate.	2.63	3	3
Build externally funded stakeholder engagement/education programs in partnership with IFAS Extension	1.91	1.88	3
Build and strengthen the Water Institute Graduate Fellows Program by obtaining continuing commitment from UF Deans and supplemental/replacement funding from private donors	2.27	2.5	3
Partner with departments to establish state and/or endowment support for hiring of interdisciplinary water faculty	2.18	2.25	2
Develop a charter for and form an External Advisory Board	3	2.13	2
Develop a strategy for Water Institute promotion, marketing and public relations	2.09	2.57	2
Partner with industry (i.e. utilities, consulting firms) state and local governmental agencies and private donors to establish an externally funded Undergraduate Water Scholar/Internship Program	1.73	1.75	1

<sup>1</sup> Average ranking assigned by Faculty Advisory Committee (3high importance, 1 low importance)

<sup>2</sup> Average ranking assigned by Chairs and Directors (3high importance, 1 low importance)

<sup>3</sup> Final ranking after consultation with VP for Research and SVP for Agriculture and Natural Resources and review of budget constraints.

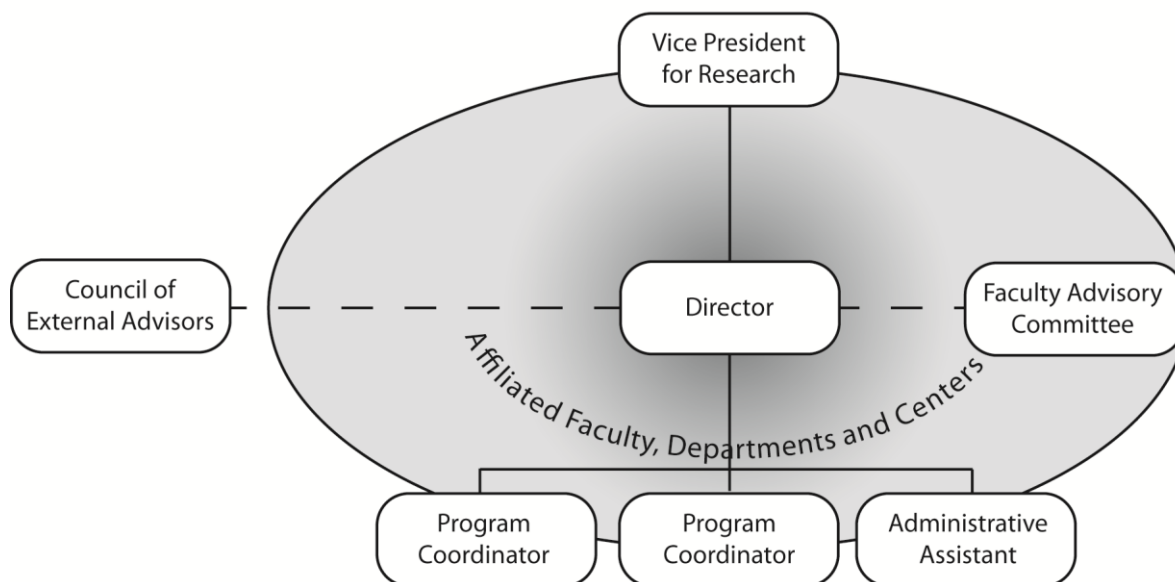
## 9. Performance Measures for 2012-2017

- Biennial Symposium continues to be well-attended and well-sponsored and generates net positive revenue for the Water Institute.
- Distinguished Scholar Seminar Series continues to bring in internationally known experts in water-related fields and is well attended by UF Faculty, students and the interested public.
- Up-to-date website showcases Water Institute faculty programs and publications and attracts steady or increasing visits from external stakeholders, students and UF faculty.
- \$5 Million in new Water Institute research, education and outreach funding is obtained.
- At least one large multi-million interdisciplinary grant is obtained from national/international funding agency (NSF, EPA, USDA, DOE, USAID, NIH).
- Active participation in the development and implementation of UF/IFAS Extension Water Education Initiative
- Outside funding for the Water Institute Graduate Fellows (WIGF) Program is obtained and the program continues to attract excellent students.
- WIGF fellows submit successful interdisciplinary proposals during their tenure at UF, publish important peer reviewed articles and are placed in competitive positions upon graduation.
- State and/or donor funding is obtained for new UF water faculty members.

## 10. Organization

The Water Institute is led by a full-time director, who reports to the Vice President for Research (Figure 1). Two program coordinators assist the director in the development, execution and evaluation of Water Institute programs. An administrative assistant serves as office accountant, office manager, and website/database developer.

Figure 1: Organizational Chart for University of Florida Water Institute



Individual faculty affiliation with the Water Institute is through voluntary registration in an on-line faculty expertise database. All registered faculty are considered Water Institute Affiliate Faculty members and eligible to vote on Water Institute governance issues. All Affiliate Faculty members retain their positions in their tenure department homes where all administrative and performance review functions are carried out. Currently there are over 200 University of Florida faculty members from more than 65 departments and centers affiliated with the Water Institute.

An internal Faculty Advisory Committee (FAC) for the Water Institute consists of 15 members of the Water Institute Affiliate Faculty. Ten members of the FAC are elected by members of the Water Institute Affiliate Faculty on staggered 3 year terms. Five members are appointed by the Water Institute director to ensure balance among disciplines

During 2007-2012 an ad-hoc External Council of Advisors consisted of speakers who participated in the Water Institute Distinguished Scholar Seminar Series. These individuals are representatives of leading academic institutions in a wide range of water-related fields, many of whom are National Academy members and two of whom are Stockholm Water Prize winners. A priority for the 2012-2017 period will be to establish a more formal External Advisory Process.

## **11. Business Plan**

The Water Institute is poised to address relevant and urgent research challenges, implement an innovative program of interdisciplinary training for promising young researchers, and build its growing partnerships both on campus and with external stakeholders. High priority will be placed on ensuring a sustainable Water Institute through externally funded research, education, knowledge transfer projects; obtaining private donations to build both intellectual capacity and facilities; and producing broad state, national and international impacts.

The following summarizes the business plan for funding Water Institute programs:

- Base funds from UF for Water Institute director and staff salaries
- Existing endowment funds for operating expenses
- Extramural Funding for interdisciplinary grants and service projects
- Indirect cost returns for re-investment in internal Program Initiation Fund Awards
- Pursue new gifts and endowments for:
  - Endowed chairs and named professorships
  - Named Water Institute Graduate Fellowship Program
  - Named undergraduate internships
  - Named buildings, labs, computational centers
- Pursue State Legislative Budget Requests and Congressional Budget Requests to build Water Institute faculty, staff, facilities