

FLORIDA EXTENSION INITIATIVE 2:

ENHANCING AND PROTECTING WATER QUALITY, QUANTITY, AND SUPPLY

PRIORITY 3 – PUBLIC AWARENESS OF WATER ISSUES

Situation

Florida is uniquely characterized by its numerous and treasured water resources. The geological and geographical features of Florida are such that water, in the form of surface water, salt water, or groundwater, is a prominent feature throughout the state. Consider the following facts from the Florida Department of Environmental Protection:

- Florida is surrounded by more than 1,260 miles of coastline (more than any state in the continental U.S.)
- There are 7,712 lakes, reservoirs, and ponds larger than 10 acres in Florida, the area of which is 1,529,280 acres
- There are more than 1,700 rivers and streams in Florida stretching 51,858 miles. The longest of which is the St. Johns River coursing through 273 miles.
- Florida's total surface water area is 11,761 square miles, making it the 3rd largest in the United States.
- Florida has approximately 700 freshwater springs, 33 of which are 1st magnitude springs having flow rates of 100 cubic feet/second or more.
- These springs are a glimpse into the massive groundwater resources of the Floridan aquifer system which underlies the entire state.

These unique water resources in turn influence the characteristics of Florida's many and varied ecosystems as well as population growth and development in this state. The stability of Florida's population, natural resources, agriculture, land use, industry, and thus economy, is intricately tied to the quantity and quality of our water.

The Florida Office of Economic and Demographic Research estimates that Florida's population will increase from 19.1 million residents today to approximately 21.0 million residents by 2020. The demand on Florida's water supply needed for this growth is increasing, and in some areas signs of impaired water quality and quantity are already evident. Intrusion of salt water into coastal freshwater aquifers, implementation of water use restrictions in many urban areas, and degradation of surface and ground waters (FDEP 2012 Integrated Water Quality Assessment Report) reflect these increasing demands.

As the State of Florida continues to balance the demands of population growth with protection of its natural resources, managing water remains a critical priority for policy and decision makers. Efforts by state and local agencies to address water quality concerns in the context of Federal, state, and local mandates have resulted in a suite of protective standards (i.e. Total Maximum Daily Loads, Basin Management Action Plans, Best Management Practices, Minimum Flows and Levels, Consumptive Use Permitting, Fertilizer Ordinances, etc.) Clarifying the often complex science behind these efforts, working with stakeholders so they become aware of, and adopt, science-based management practices, and increasing the overall knowledge of Floridians about water quality and quantity issues is paramount to our future.

Florida legislators, county commissioners, city council members, managers, and regulatory agencies must build their capacity to make science-based water resources management decisions. The public needs to build their capacity to provide meaningful input and engage in these decision making processes. The role of UF/IFAS Extension is to improve Floridian's knowledge of the value of water quality and quantity to Florida's ecology and economy, and encourage behavioral changes that ultimately protect Florida's water resources.

REFERENCES:

- *Preliminary Situation, Outcomes, Programs and Audiences: UF Water Summit December 12-13, 2012, Handout for Session 2 and 3.*
- *The Florida Office of Economic and Demographic Research:* <http://www.edr.state.fl.us/Content/population-demographics/data/CountyPopulation.pdf>
- *FDEP 2012 Integrated Water Quality Assessment Report:* http://www.dep.state.fl.us/water/docs/2012_integrated_report.pdf
- *UF/IFAS EDIS Pub: Florida's Water Resources:* <http://edis.ifas.ufl.edu/fe757>
- *FDEP Florida Water Facts:* <http://www.dep.state.fl.us/secretary/stats/geographical.htm>

PROGRAM OBJECTIVES

Increased “awareness” is usually considered the first step towards behavior change when referring to an educational program. Being that this priority is solely focused on awareness, these objectives are new territory for extension and should be considered as adaptive drafts that will improve over time.

SHORT TERM OBJECTIVES:

- Increased awareness of Florida’s public drinking water sources
- Increased awareness of common water resource issues or hot topics
- Increased knowledge of watersheds, including the ability to identify which watershed an individual lives in

MEDIUM TERM OBJECTIVES:

- Increased participation in UF/IFAS Extension water resource education programs
- Increased number of participants reporting they have discussed water resource issues with friends, family, co-workers, or community leaders
- Increased participation in civic participation such as: writing an elected official regarding water resource management, attending a city or county commission meeting where water resources were being discussed, participating in a volunteer “clean-up” of local water bodies, etc.
- Increased number of residents contacting UF/IFAS Extension for help with water related questions which may include but are not limited to: residential irrigation practices, stormwater runoff and percolation, waterfront vegetation, rain barrels and rain gardens, aquatic invasive species, etc.
- Increased participation by UF/IFAS Extension faculty and staff in the Water DROPs Program
 - # of faculty and staff presentations using DROPs materials
 - #of people reached using DROPs materials

LONG TERM OBJECTIVES:

- Improved perceived “value” of local water resources among residents
- Improved perceived “value” of wetlands, riparian zones, and ridge ecosystems

EDUCATIONAL METHODS

DEVELOP AND INVEST IN THREE SIGNATURE WATER PROGRAMS: Since water is a complex issue with a lack of basic understanding at both the lay audience and policy level, UF/IFAS Extension must invest in a water awareness campaign featuring clear and concise messaging. In addition, the lack of awareness surrounding Florida’s water issues may impact the inclination of individuals to seek out a “water program”, therefore water issues information must be disseminated throughout all program areas in extension. Three Priority Programs were identified to tackle the issue of a lack of water awareness statewide; they are presented below with the generalized target audience and proposed structure. Information used in these programs will be gleaned from existing programs and materials, and issues and objectives in the other Water Initiative Teams; collaboration is essential.

- **Water Schools:** *community leaders, decision-makers, elected officials*
 - Single and multi-day formats
 - Framed for political and administrative relevance
 - Focused on current/pressing topic(s)
- **Florida Waters Stewardship Program:** *concerned citizens, general population*
 - Combines elements of program formats and curriculum from Florida Natural Resources Leadership Institute and other “Master” UF/IFAS Programs
 - Six sessions over several weeks focusing on different water topics through canned programs, guest speakers and short field-tours
 - In-class and on-line discussions, take-home assignments and class stewardship project
- **Water DROPs (Delivery-Ready Outreach Plug-ins):** *captive audience at other program area events*
 - Complete with presentation, evaluation questions, background information, and script if needed
 - Clear, concise, consistent, and targeted information for a variety of target audiences

- Designed with program area's input and needs in mind, made unique to each program area

DEVELOP IN-SERVICE TRAINING FOR EACH SIGNATURE PROGRAM: UF/IFAS Extension faculty and staff may not possess a sufficient background in water resources to teach these programs at the level expected of extension. Training should focus on background knowledge related to known and potential water issues, how to plan and conduct one of the signature programs, and how to use the tools developed for each program. In-Service training will ensure that all faculty have received consistent information and aid UF/IFAS Extension in ensuring quality education programs.

RESULTS

EDUCATIONAL MATERIALS: Topically focused presentations, fact-sheets, modules, and other communication tools to be used by Extension Faculty. Additionally, In-Service Trainings and faculty guides will be provided to train Extension faculty and staff in hosting new water awareness programming.

MEASURABLE OUTCOMES: The following outcomes and indicators should be used with the understanding that as a new priority, water awareness issues will need adaptive measuring tools. The following are draft indicators and outcomes for Extension impact regarding water awareness.

- Increased civic engagement related to water resources
 - # of people reached through water education programs
 - # of people reporting they shared information from a water program with at least two people
 - # of people reporting increased desire for water resources information and classes
 - # of phone calls Extension Agents receive regarding water issues
- Improved capacity of informed residents
 - #of water education programs offered by county extension
 - # of people who can accurately identify where their drinking water comes from (local perspective)
 - #of people who can accurately identify what watershed they live in and where it ultimately drains (local perspective)

NEEDS

NEEDS ASSESSMENT:

For each proposed Signature Program, a needs assessment and related support are required. UF/IFAS Extension has been providing water resource education for many years and as such, a thorough assessment of existing programs, materials, and needs should be performed.

CURRICULUM DEVELOPMENT:

- Water resources/issues glossary
- Designed messaging
- System to house DROPs for easy access by faculty (website, server, etc)
- Translation services
- Marketing materials: Issue specific statewide marketing plans
 - May include: videos, fliers, posters, brochures, social media tools, commercials, etc.

AUDIENCE RESEARCH RESOURCES: The Water Awareness Priority Team identified audience research as a need because there is a general perception that we are 'preaching to the choir'. To have increased public water awareness, it is essential that new audiences are reached and impacted.

STANDARDIZED REPORTING AND METRICS: In order to show statewide impact regarding water awareness, all of UF/IFAS Extension must work towards water education and evaluate participants in a consistent fashion. To accomplish this, the Water Awareness Priority Team proposes requiring a percentage of every faculty's workload be devoted to water education. In addition, all educational water

programming should use the same evaluative tools. The results of this proposal will be a collaborative approach to water education to the likes of which UF/IFAS has never attempted before.

SUPER ISSUES

This Priority Team relates to all of UF/IFAS's Super Issues.