

# Extension and the Environment: Understanding Florida Residents' Perceptions of Environmental Water-Related Topics<sup>1</sup>

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## Introduction

Water is one of Florida's most abundant and important natural resources. Not only does water impact some of Florida's major economic industries, such as tourism, agriculture, and retail, but it also impacts the environment (Odera, Lamm, Dukes, Irani & Carter, 2013). Florida is home to 1260 miles of coastline and Everglades National Park, which spans 1.5 million acres and is the largest subtropical wilderness in the United States (National Park Service, 2014).

As the demand for water continues to rise, conflict has arisen regarding the protection and regulation of water in Florida. Recent water quality regulations from the Environmental Protection Agency (EPA) have fueled an on-going debate between environmental and agricultural interest groups. Different interest groups need to understand the water concerns of Florida residents in order to avoid future water conflicts and should work together to find sustainable solutions (Odera et al., 2013).

Enhancing and protecting water quality, quantity, and supply is considered a high-priority initiative in the UF/IFAS Florida Cooperative Extension Service's 2013–2023 Florida Extension Roadmap (University of Florida Institute

of Food and Agricultural Sciences Extension, 2013). The role Extension faculty play in encouraging water conservation and educating clientele about water-related topics is vital to the success of this initiative and in ensuring water for Florida's future.

This EDIS publication explores Florida residents' perceptions of a variety of water topics related to environmental issues and their perceived level of importance of each. By understanding Florida residents' perceptions of water quality and quantity issues, Extension faculty can better educate this audience and communicate with them about water quantity and quality issues. Additionally, Extension faculty will be able to understand the level of importance the public associates with water issues.

## Background

In December 2013, the UF/IFAS Center for Public Issues Education in Agriculture and Natural Resources (PIE Center) conducted an online survey of Florida residents. The survey was distributed to Florida residents aged 18 and older, and 516 completed responses were collected (Odera & Lamm, 2014). Data were weighted to balance geographic location and to ensure that respondents were representative

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of the 2010 U. S. Census (Kalton & Flores-Cervantes, 2003; Odera & Lamm, 2014).

Included in the survey were questions about what Florida residents consider the most important clean water sources and the most important plentiful water sources, Florida residents' perceptions of water quality, and Florida residents' experiences with negative environmental impacts surrounding water. This is part of a larger study which focused on Florida residents' perceptions and attitudes toward water quality and quantity issues in Florida.

## Results

### Importance of Clean and Plentiful Water

Respondents were asked to indicate how important they considered the presence of various clean water sources to be and the importance of having plentiful water for various purposes. Respondents indicated their level of importance as “not at all important,” “slightly important,” “fairly important,” “highly important,” or “extremely important.”

When rating the importance of clean water sources, respondents placed the highest importance on clean drinking water, with 97% rating the issue as highly or extremely important (Figure 1). Respondents also placed high importance on clean lakes, rivers, and springs (89%); clean oceans (87%); and clean groundwater (87%).

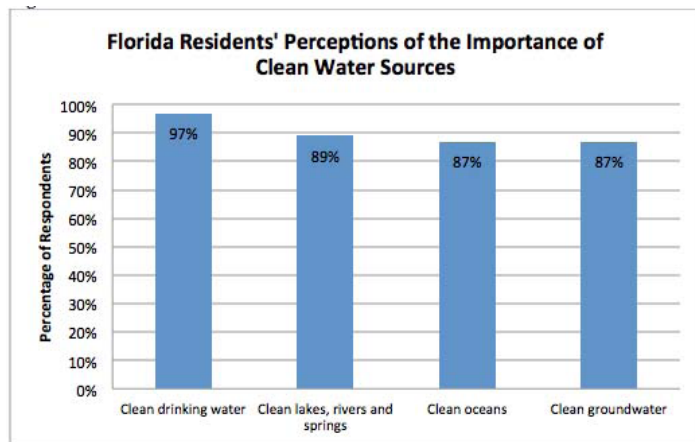


Figure 1.

When rating the importance of plentiful water for various sources, respondents placed the highest importance on plentiful water in aquifers, springs, rivers, and lakes, with 88% rating the issue as highly or extremely important (Figure 2). Respondents also placed high importance on plentiful water for cities (86%) and plentiful water for agriculture (85%). Respondents did not find all plentiful water resources important, with only 35% of respondents rating plentiful water for recreation as important and even

fewer (11%) rating plentiful water for golf courses as important.

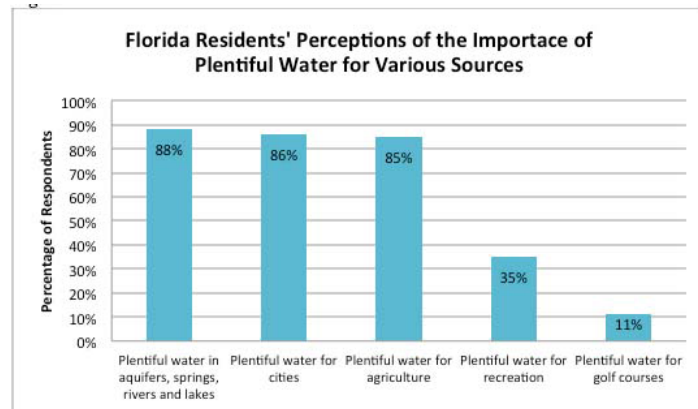


Figure 2.

### Experience with Water Resources

Respondents were asked about their personal experiences with water resources, including changes in water quality and if they had experienced any negative impacts due to poor water quality.

Respondents were asked whether they thought the quality of water resources was getting worse, better, or had remained the same over time (Figure 3). A majority of respondents felt the quality of rivers (46%), lakes (44%), oceans (43%), bays (40%), and groundwater (38%) was getting worse.

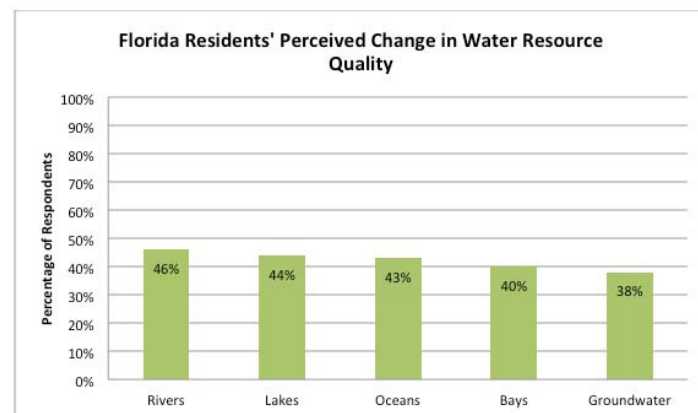


Figure 3.

Respondents were also asked to indicate whether they had experienced any negative impacts due to poor water quality, such as closed springs, rivers, or beaches or poor drinking water quality (Figure 4). Respondents were most impacted by poor quality of drinking water at home (20%) and closed beaches due to red tide or poor water quality (19%). Fewer respondents indicated experiences involving closed springs, rivers, or lakes due to algae blooms (12%) and closed springs, rivers, or lakes due to low water levels (8%).

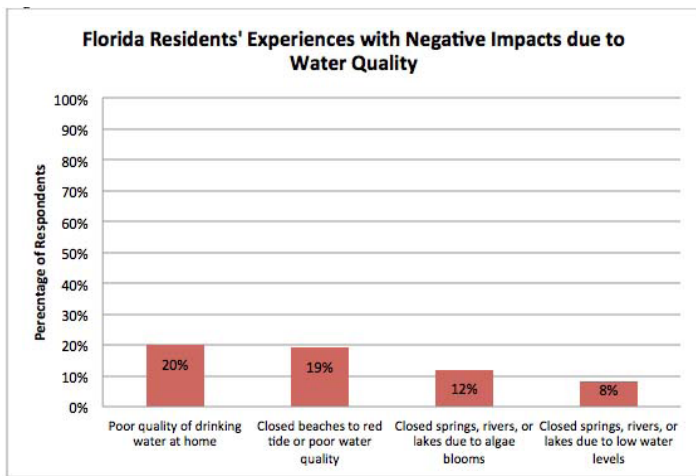


Figure 4.

## Interest in Environmental Water-Related Topics

Respondents were asked to indicate their level interest in water-related topics such as watershed restoration, fish and wildlife water needs, and forest management. Respondents could select as many topics as they had interest in from the list.

Respondents indicated moderate-to-low interest in water-related topics that pertained to the environment (Figure 5). Respondents indicated the most interest in learning about fish and wildlife water needs (32%), restoring fish and aquatic habitat (25%), shoreline clean-up (24%), forest management and water issues (15%), and watershed restoration (13%).

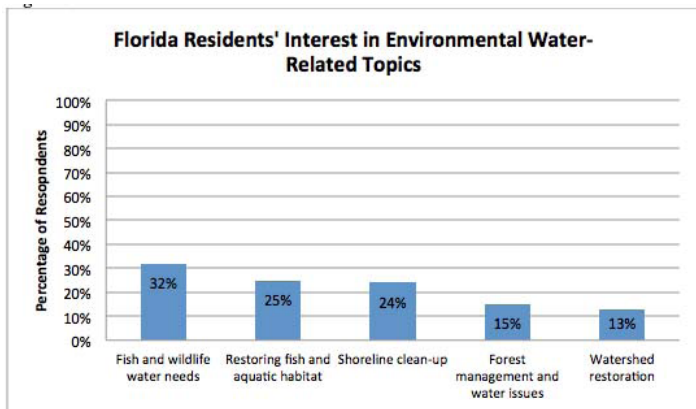


Figure 5.

## Recommendations

Extension faculty work in every county in Florida and represent the state’s land-grant universities, serving as opinion leaders within their communities. In some way or another, all Extension faculty are connected to the issue of water. Florida is home to more than 11,000 miles of rivers, streams, waterways, and over 1,800 miles of coastline

(Florida Department of Environmental Protection, 2011). As the demand for water continues to rise and recreational activities involving water grow in popularity, the role of Extension faculty in educating Florida residents on water-related topics will grow increasingly important. Extension faculty should increase programming focused on water issues in Florida, and place particular emphasis on water issues in the environment since this is what Floridians have shown the highest levels of interest in within this study.

Respondents indicated overall high levels of importance associated with clean water for various uses; clean drinking water (97%) was the use considered the most “highly or extremely important” by respondents. When discussing the importance of clean water with clientele, Extension faculty should emphasize that clean water is important for all uses in the future, not just for drinking. Florida residents should be informed of the importance of clean water not only for consumption, but also for recreation, agriculture, and the environment. Extension faculty should also incorporate the negative effects of not having enough clean water for these sources in the future and warn residents of possible consequence.

Extension faculty can also incorporate information about clean drinking water and plentiful water for aquifers, lakes, springs, and rivers into programming in all fields. Since Florida residents indicated these issues as being the most important, including this information in programming will not only attract new clientele but also continue to engage existing clients. When offering programming on outdoor water conservation, Extension faculty could also mention the role that aquifers, lakes, springs, and rivers play in clean drinking water. By educating clients about the role that aquifers, lakes, springs, and rivers play in water quality, clients will be better informed about the importance of clean water in the environment.

An overall small percentage of respondents indicated experiencing negative impacts due to water quality issues, such as closed beaches or poor drinking water at home. Even though it is a small percentage, this population should not be ignored because these experiences have made the issue personally relevant. Extension faculty should work with these clients to restore their confidence in Florida’s environment and use their experiences to encourage them to serve as opinion leaders, spreading the word about water issues and work that can be done to alleviate problems. Extension faculty can also use the experiences of these individuals as examples when educating clientele about the possible negative consequences of lower water quality so that all will understand the possibility and reality of negative impacts.

Additionally, respondents indicated mild levels of interest in water-related programming pertaining to the environment. Extension faculty should incorporate information about shoreline cleanup, fish and wildlife water needs, restoring fish and aquatic habitat, watershed restoration, and forest management and water issues into their programming. Extension faculty may be able to better reach clients by visiting state parks to educate visitors on ways they can contribute to conserving water for the environment. Programming could include specific information on ways to restore fish and aquatic habitat and ways they can contribute to the protection of natural resources. Extension faculty will be able to engage new clients and encourage clientele to conserve water when they incorporate information of interest to Florida residents.

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