MS NON-THESIS PROJECT

Final Report

A Public Opinion Poll of Polk County Elected Officials Regarding Water Issues in Florida

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4/1/2015

Water is an important issue economically, socially, and environmentally in Florida. Central Florida's water resources are a hot commodity in regards to development, conservation, utilities, and recreation. To measure Floridians' opinions and attitudes regarding water issues in Florida, the University of Florida/IFAS Center for Public Issues Education, or PIE Center, surveys the general public annually. This research aims to compare the opinions of Polk County Florida's elected officials to those collected by the PIE Center's research. Like much of Florida, Polk County's economy strongly depends on healthy ecosystems for agriculture production and tourism dollars. This research seeks to develop understanding regarding knowledge gaps, differences in opinions between elected officials and general residents, and recommend educational strategies to reach elected officials on water issues they are interested in learning about. In March 2015, an online survey was distributed to Polk County elected officials by electronic mail. The total email list for survey distribution totaled 87 individuals. Due to the relatively small number of individuals within the target population, the researcher used a census-survey approach regarding sample size and attempted to seek responses from each individual within the target population. Survey response was low, 18% (n=14) but non-response bias is thought to be low due to the low diversity within the sample population. Results from this survey indicate that overall, the elected officials' responses are similar to those of the general citizen in Florida regarding perceived changes in water quality and the importance they associate with various water uses. Areas in which the data suggests a departure in opinion from the general citizen include desire for more information, knowledge of water policies, and willingness to take advantage of water resource information.

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INTRODUCTION

Water is an important issue economically, socially, and environmentally in Florida. Central Florida's water resources are a hot commodity in regards to development, conservation, utilities, and recreation. To measure Floridians' opinions and attitudes regarding water issues in Florida, the University of Florida/IFAS Center for Public Issues Education, or PIE Center, surveys the general public annually. The results of the survey are shared in the spring and over time; the PIE Center's research will be used in analyzing trends regarding public opinion of water issues in Florida.

This research aims to compare the opinions of Polk County Florida's elected officials to those collected by the PIE Center's research. Like much of Florida, Polk County's economy strongly depends on healthy ecosystems for agriculture production and tourism dollars. This research seeks to develop understanding regarding knowledge gaps, differences in opinions between elected officials and general residents, and recommend educational strategies to reach elected officials on water issues they are interested in learning about.

METHODS

In March 2015, an online survey was distributed to Polk County elected officials by electronic mail. The survey was created and hosted on Qualtrics.com, a survey software

company website, which the researcher accessed through the University of Florida's contract for use.

The target audience for this research included any elected official serving in Polk County, Florida. Email account information, used for survey distribution, was obtained by contacting Polk County Board of County Commissioners' communications office. The list consisted of contact information for all of the known elected officials in each of Polk County's seventeen municipalities. In addition to County and City Commissioners, Mayors, and Councilmembers, the researcher attempted to include the elected officials who represent Polk County's special taxing districts. In total the email list for survey distribution totaled 87 individuals. Due to the relatively small number of individuals within the target population, the researcher used a census-survey approach regarding sample size and attempted to seek responses from each individual within the target population. This method is a non-probability sampling method in which every individual within the population has the same opportunity to participate.

The survey instrument was developed using established questions from the Public Issues Education Center's "Public Opinions of Water in Florida" survey which was administered in November 2014. The survey included several new questions developed by the researcher to help limit survey responses to the target audience. Additionally, there were a few questions developed to act as a program needs assessment. These

questions, developed by the researcher alone, were not reviewed for internal validity or reliability. These questions are not included in this report and are meant simply to provide feedback and direction for the UF/IFAS Extension Polk County Natural Resources Program.

The survey instrument was delivered in a Tailored Design Method which had five email contacts and endorsement from two influential community leaders. The researcher's direct contacts included a pre-survey introduction email, a survey link email, two subsequent emails thanking participants and encouraging further participation, and finally, a thank you email two hours prior to the survey's closure. A local city commissioner and an influential member of Polk County's City Clerk Association endorsed and forwarded the survey email to known elected officials. The survey was open for 20 days and resulted in fourteen viable responses.

RESEARCH ASSUMPTIONS AND LIMITATIONS

Twenty-one surveys, in total, were started but only nineteen surveys were completed. Of the surveys initiated, one opted out of the survey participation, one indicated they do not live in Polk County, and five indicated they were not currently an elected official in Polk County, FL; as a result, these participants were thanked for their participation and they exited the survey. Of the completed surveys, 14 survey responses were considered viable.

Disregarding seven email addresses for repeatedly bouncing, the survey instrument was sent to 80 individuals in the sample population. The 80 email addresses represent the 80 elected officials and representatives for elected officials that were available to the researcher through public search and through an information request to the Polk County Board of County Commissioners' communications office. The response rate for completed surveys was 24% with a viable response rate of 18% (n=14). The conclusions of the this research assume that the survey respondents do not hold significantly different views than the rest of the sample population in Polk County, Florida regarding the water issues discussed in the survey instrument. Furthermore, the researcher assumes that the elected officials who chose not to respond do not have strong opinions on water issues in Florida.

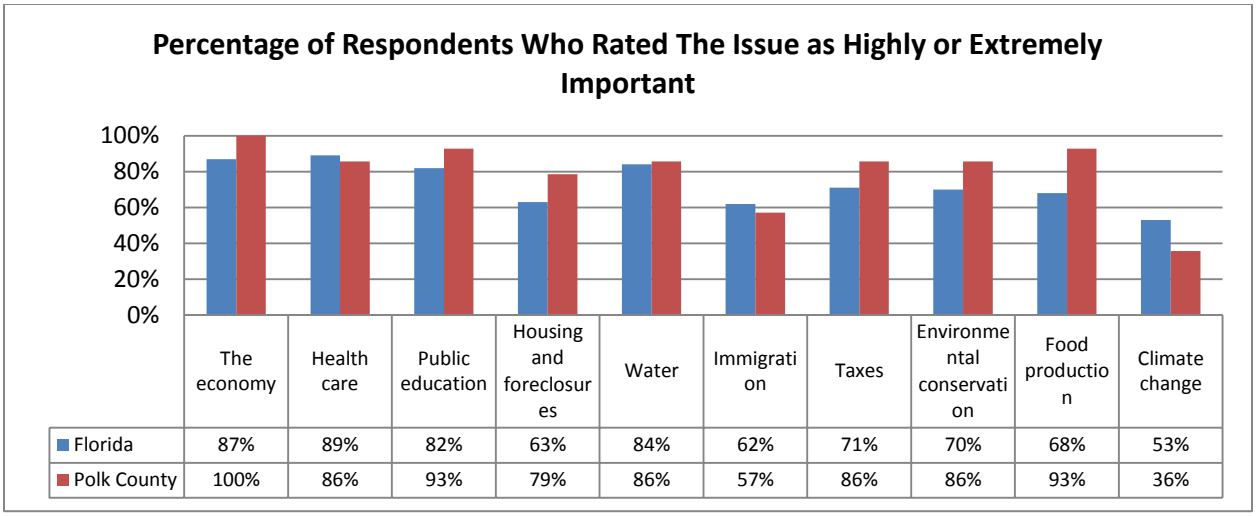
Non-response bias should be low for this research due to the similarities between the sample and the sample population (Ary, Jacobs and Sorenson 408-409). While age is not easily ascertained for the target population to a specific degree, through personal interaction with many in the target population, the researcher is confident that there is not enough variety in age within the sample population to result in non-response bias. Moreover, the researcher is assuming that the political ideologies and political affiliations of those surveyed are similar in distribution to the sample population. Since most municipalities do not list political affiliation or ideology on websites or other public areas, the researcher was unable to determine the political preferences of the

sample population. In the sample population, African-American elected officials represent approximately 16% of the total population but no one from this sub-category responded to the survey. One hundred percent of survey respondents (n=13) indicated that they were white while white elected officials only represent an estimated 85% of the population. In addition, women were represented in greater numbers than are found in the sample population; 38% (n=5) of survey respondents were female whereas approximately 20% of elected officials in Polk County are female. Non-response bias could be lowered in the future if the researcher determines why the response rate for African-American elected officials was so low.

RESULTS

IMPORTANCE OF WATER ISSUES

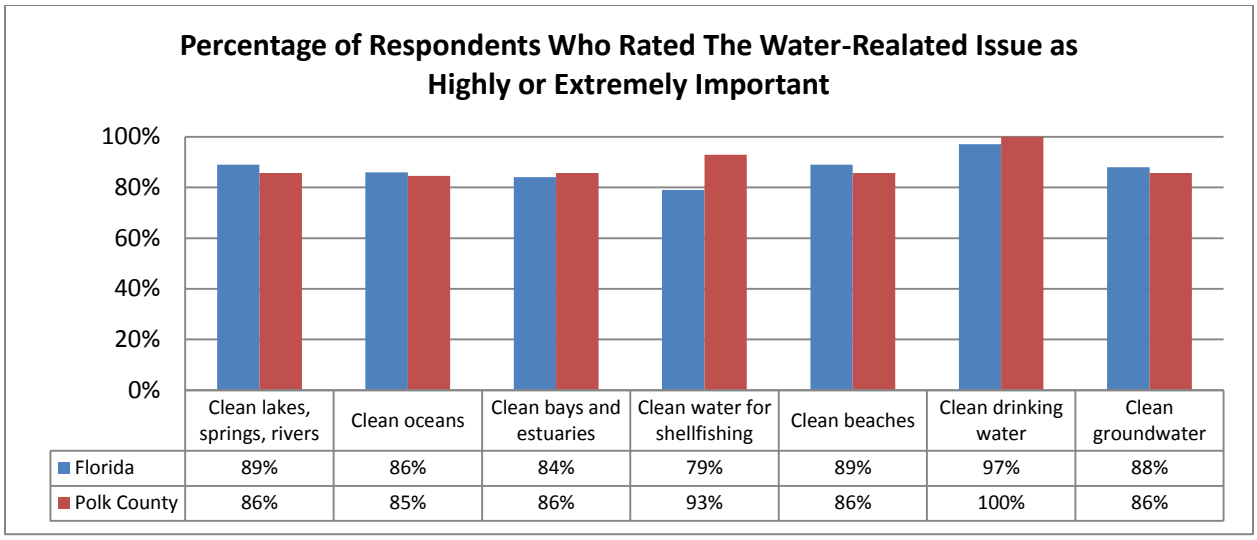
Survey respondents were asked were asked to rate several types of 'hot issues' in Florida in terms of importance. Participants were asked whether they considered issues to be: not at all important, slightly important, fairly important, highly important, extremely important, or unsure. **Error! Reference source not found.** shows the percentage of respondents who indicated they felt the issue was highly or extremely important. Polk County elected officials ranked the economy the highest, followed by public education and food production. In contrast, Florida residents ranked health care, the economy, and water the highest (Odera and Lamm 16).



	The economy	Health care	Public education	Housing and foreclosures	Water	Immigration	Taxes	Environmental conservation	Food production	Climate change
Florida	87%	89%	82%	63%	84%	62%	71%	70%	68%	53%
Polk County	100%	86%	93%	79%	86%	57%	86%	86%	93%	36%

FIGURE 1: IMPORTANCE LEVEL OF ISSUES IN FLORIDA

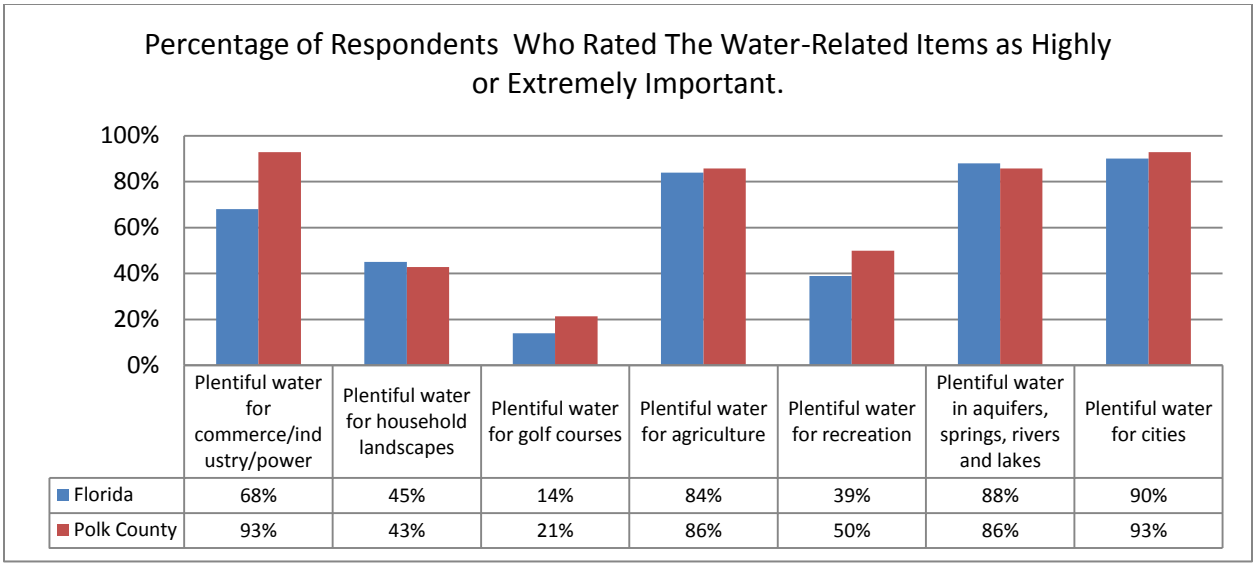
When asked specifically to rank the importance of water issues in Florida, most survey respondents indicated that they thought water related issues are highly or extremely important. Figure 2 shows the percentage of respondents who indicated they felt the issue was highly or extremely important. Polk County elected officials ranked clean drinking water as most important, followed by clean water for shellfishing. Similarly, Florida residents ranked drinking water the highest, followed by clean water for clean lakesm springs, rivers (Odera and Lamm 17).



	Clean lakes, springs, rivers	Clean oceans	Clean bays and estuaries	Clean water for shellfishing	Clean beaches	Clean drinking water	Clean groundwater
Florida	89%	86%	84%	79%	89%	97%	88%
Polk County	86%	85%	86%	93%	86%	100%	86%

FIGURE 2: IMPORTANCE LEVEL OF WATER ISSUES IN FLORIDA

Survey participants were also asked to rank the level of importance they associated with various uses for water resources. The majority of Polk County survey respondents ranked plentiful water for commerce/industry/power and plentiful water for cities as highly or extremely important. Conversely, the majority of Floridians surveyed ranked plentiful water for cities and plentiful water in aquifers, springs, rivers, and lakes as highly or extremely important (Odera and Lamm 17).



	Plentiful water for commerce/industry/power	Plentiful water for household landscapes	Plentiful water for golf courses	Plentiful water for agriculture	Plentiful water for recreation	Plentiful water in aquifers, springs, rivers and lakes	Plentiful water for cities
Florida	68%	45%	14%	84%	39%	88%	90%
Polk County	93%	43%	21%	86%	50%	86%	93%

FIGURE 3: IMPORTANCE OF WATER-RELATED ITEMS

As the last major topics regarding the level of importance associated with various topics, survey participants were asked to indicate the level of importance they associated with salt water intrusion and red tide. The majority of Polk County respondents (59%, n=14) and Florida respondents (72%) indicated that they agreed or strongly agreed that "saltwater intrusion in an important issue in Florida" (Odera and Lamm 19). Additionally, the majority of Polk County respondents (72%, n=14) and Florida respondents (68%) indicated that they agreed or strongly agreed that "red tide intrusion in an important issue in Florida" (Odera and Lamm 19).

CHANGES IN FLORIDA'S WATER QUALITY

The next section of the survey asked survey participants how they felt water quality in Florida was changing, if at all. Respondents were asked to indicate whether they felt water quality was better, worse, no change, or if they were unsure in the areas of lakes,

groundwater, rivers, bays, estuaries, springs, or coastal waters (oceans in the Polk County survey). Across the board, responses were similar. In Figure 4, the researcher summarized the responses across waterbody types to illustrate the average number of respondents who indicated they thought water quality is better, hasn't changed, is worse, or if they were unsure. For Polk County respondents, the water body which was chosen most frequently as "worse" was Florida lakes (43%, n=14) and most frequently chosen as "better" was Florida lakes (21%, n=14). While it sounds contradictory, it indicates that respondents have stronger feelings regarding Florida lakes, for better or worse, than other waterbodies.

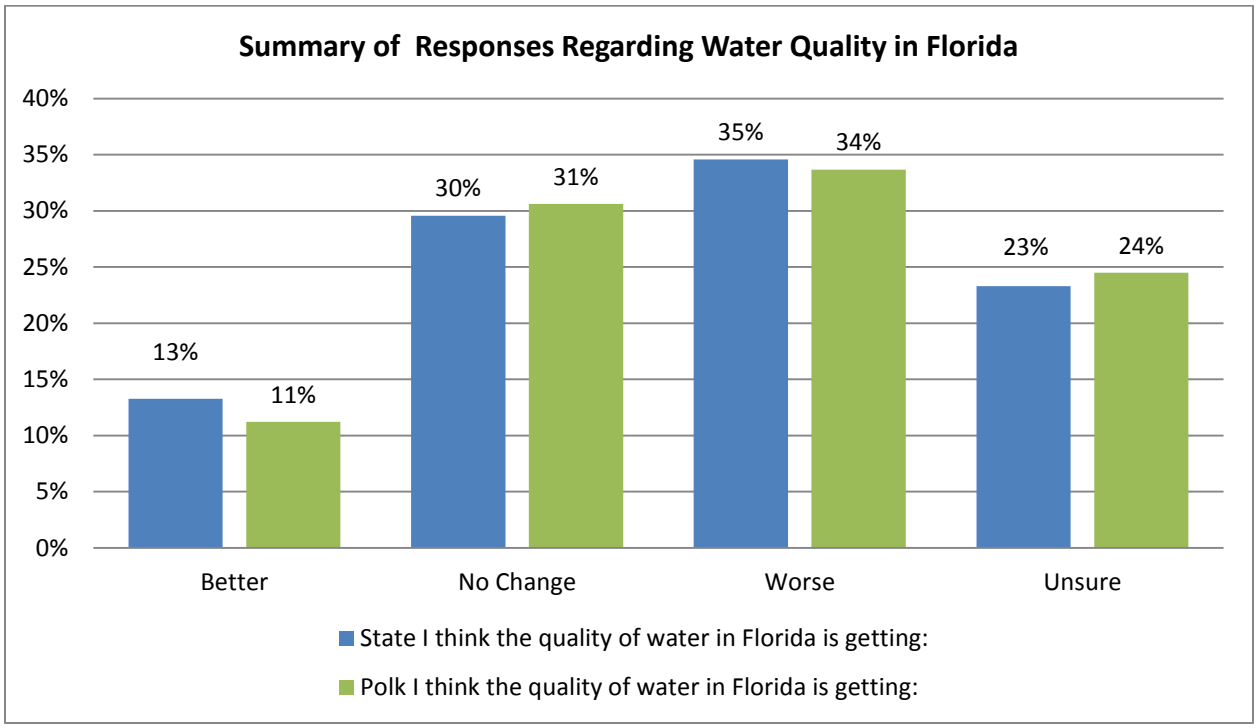
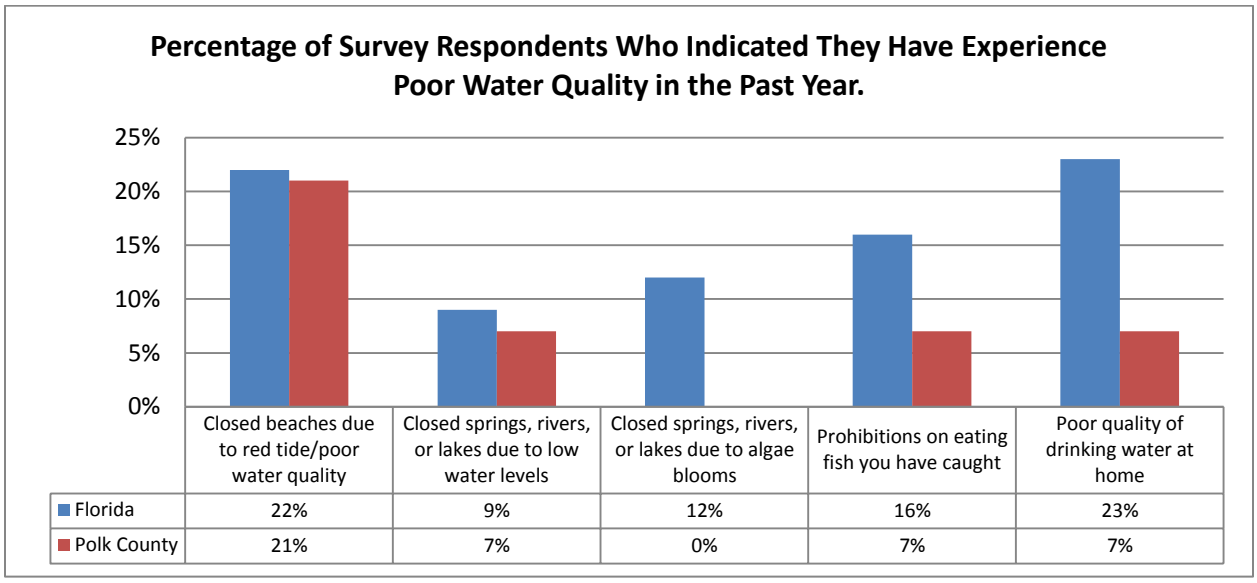


FIGURE 4: AVERAGE PERCENTAGE OF RESPONDENTS WHO INDICATED A GVEN CHANGE IN WATER QUALITY, IF ANY

Next, survey respondents were asked whether they had personally experienced poor water quality as it may affect a person's life. They were asked to indicate if they had experienced poor water quality consequences such as prohibitions on eating caught fish, closed beaches or rivers, or poor drinking water. Only 29% (n=14) of Polk County elected officials indicated that they have experienced at least one of the experiences listed in the past year. The most common experience indicated by Polk County respondents was "closed beaches due to red tide/poor water quality" (21%, n=14) as shown in Figure 5. The most common experience indicated by Floridian's surveyed was "poor drinking water quality at home" (23%) (Odera and Lamm 21).



	Closed beaches due to red tide/poor water quality	Closed springs, rivers, or lakes due to low water levels	Closed springs, rivers, or lakes due to algae blooms	Prohibitions on eating fish you have caught	Poor quality of drinking water at home
Florida	22%	9%	12%	16%	23%
Polk County	21%	7%	0%	7%	7%

FIGURE 5: EXPERIENCES WITH POOR WATER QUALITY

Likelihood of Participating in Water Conservation Activities or Behaviors

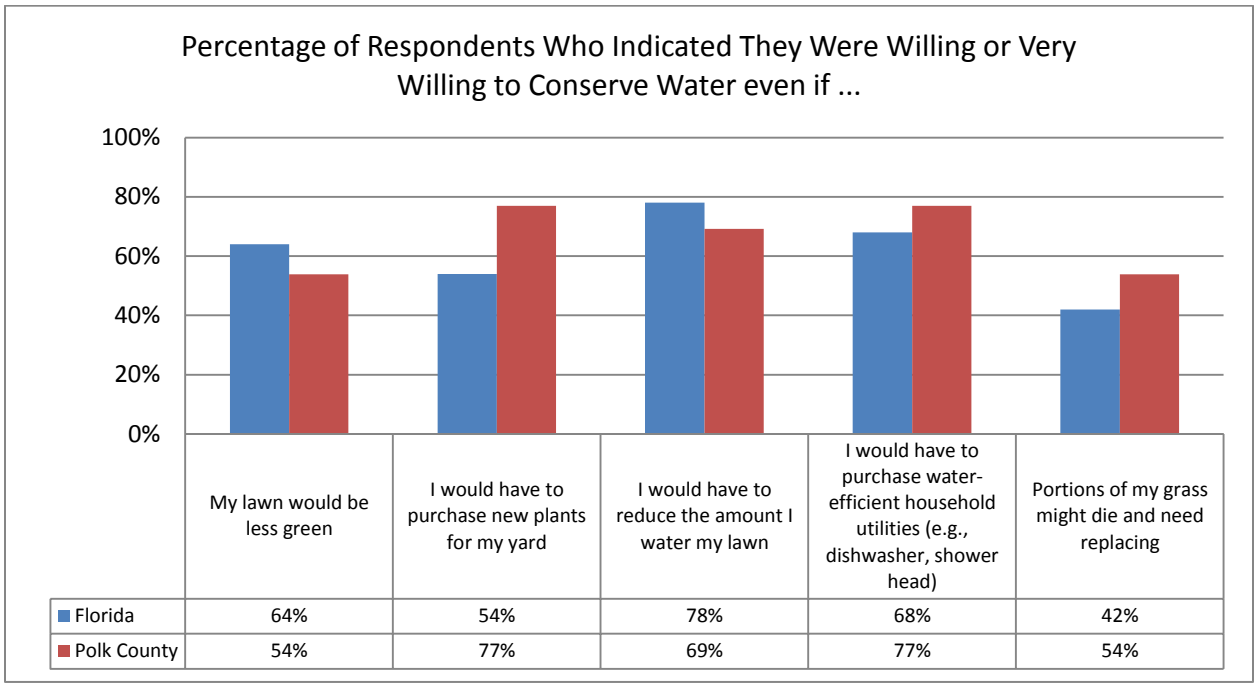
Following questions regarding issues with water quality and experiences with poor water quality, survey participants were asked to indicate the likelihood that they would

participate in various water conservation or environmental behaviors. The behavior most Floridian's surveyed indicated they were likely or very likely to participate in was only running the washing machine when it is full, 84% (Odera and Lamm 26). Conversely, 92% of Polk County respondents indicated that they were likely or very likely to responsibly dispose of hazardous materials and to support water restrictions issued by their local government. In Table 1, an asterisk (*) marks behaviors in which a difference of 20% or more is observed regarding the percentage of respondents who are likely or very likely to participate in the given behavior.

TABLE 1: PERCENTAGE OF RESPONDENTS WHO INDICATED THAT THEY WERE LIKELY OR VERY LIKELY TO PARTICIPATE IN CONSERVATION BEHAVIORS

Water Conservation or Environmental Behavior	State Poll	Polk County
Responsibly dispose of hazardous materials (e.g., motor oil)	84%	92%
Support water restrictions issued by my local government*	72%	92%
Only water your lawn in the morning or evening*	61%	90%
Sweep patios and sidewalks instead of hosing them down	73%	85%
Use biodegradable cleaning products*	65%	85%
Only run the washing machine when it is full	87%	83%
Reduce the number of times a week you water your lawn	60%	78%
Avoid purchasing plants that require a lot of watering	70%	77%
Reduce use of pesticides if your landscape quality would decrease*	52%	77%
Visit springs, lakes, state parks, etc., to learn about water issues*	49%	77%
Volunteer for a stream clean up or wetland restoration event*	31%	77%
Only run the dishwasher when it is full	76%	75%
Reduce use of fertilizer if your landscape quality would decrease	52%	69%
Reduce your use of natural resources	65%	67%
Vote for candidates who support water conservation	69%	62%
Vote to support water conservation programs*	77%	54%
Donate to an organization that protects water	36%	38%
Join a water conservation organization	25%	38%
Buy a specialty license plate that supports water protection efforts (e.g., Support Florida Springs, Indian River Lagoon)	26%	23%
Keep a timer in the bathroom to help you take a shorter shower	30%	23%

In addition to water conservation and environmental behaviors, survey participants were asked a series of questions to understand their willingness to take action to conserve water even with potential consequences. Figure 6 shows responses to the prompt, "I would be willing to take action to conserve water even if …" Polk County survey respondents indicated they were most willing to conserve water even if they had to purchase new plants for their yard (77%, n=13) or they would have to purchase water-efficient household utilities (77%, n=13). Floridian's surveyed indicated they were most willing to conserve even if they had to reduce the amount they watered their lawn (78%) (Odera and Lamm 31).



	My lawn would be less green	I would have to purchase new plants for my yard	I would have to reduce the amount I water my lawn	I would have to purchase water-efficient household utilities (e.g., dishwasher, shower head)	Portions of my grass might die and need replacing
Florida	64%	54%	78%	68%	42%
Polk County	54%	77%	69%	77%	54%

FIGURE 6: WILLINGNESS TO CONSERVE WATER WITH CONSEQUENCES

KNOWLEDGE AND ATTITUDES TOWARDS GOVERNMENT AND POLICIES RELATED TO WATER ISSUES

Participants were asked to reflect on their attitudes regarding governmental influence on conservation behaviors. Figure 7 and Figure 8 show the percentages of Polk County respondents and Floridian's surveyed who indicated they agree or strongly agree with the statements presented.

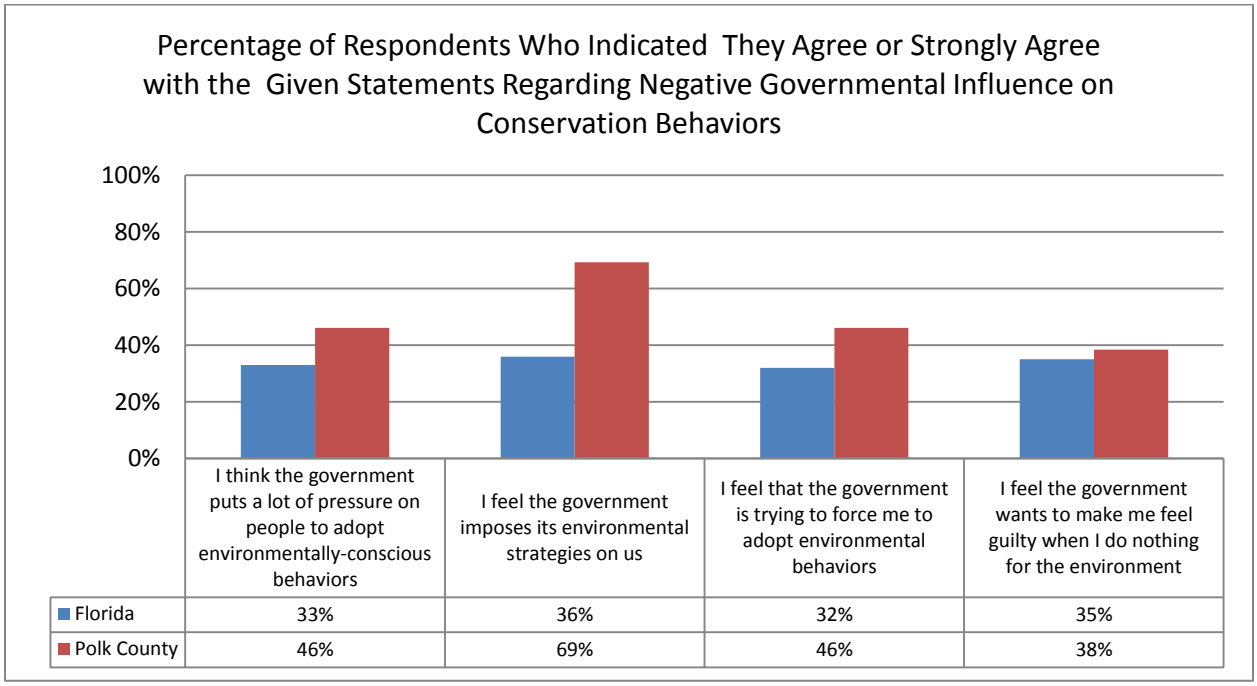


FIGURE 7: PERCEPTIONS OF NEGATIVE GOVERNMENTAL INFLUENCE ON CONSERVATION BEHAVIORS

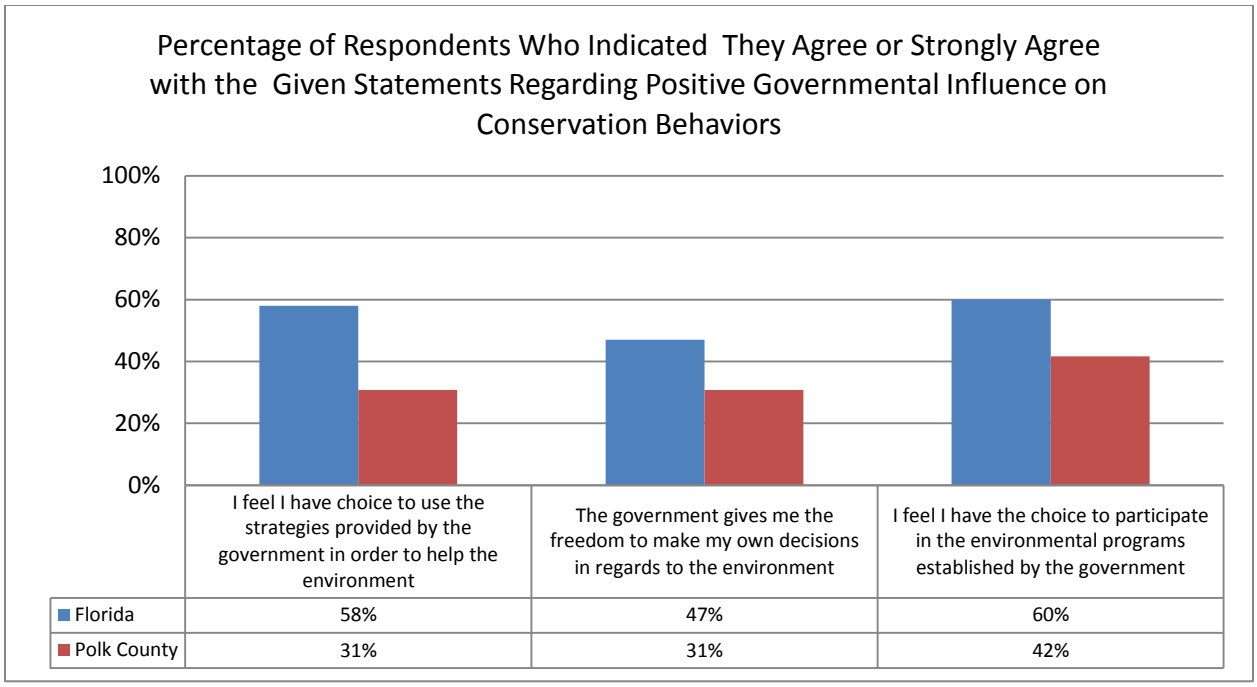
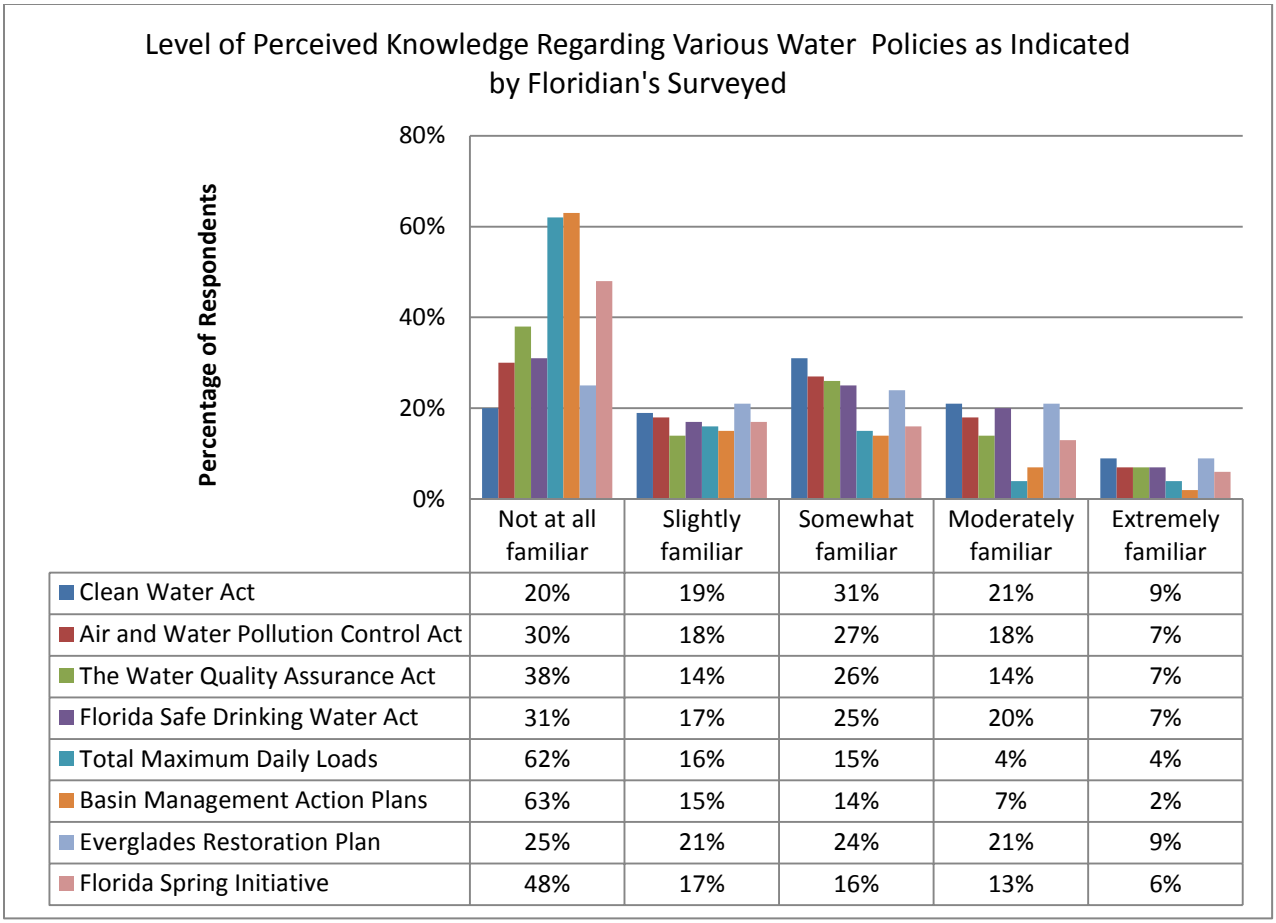


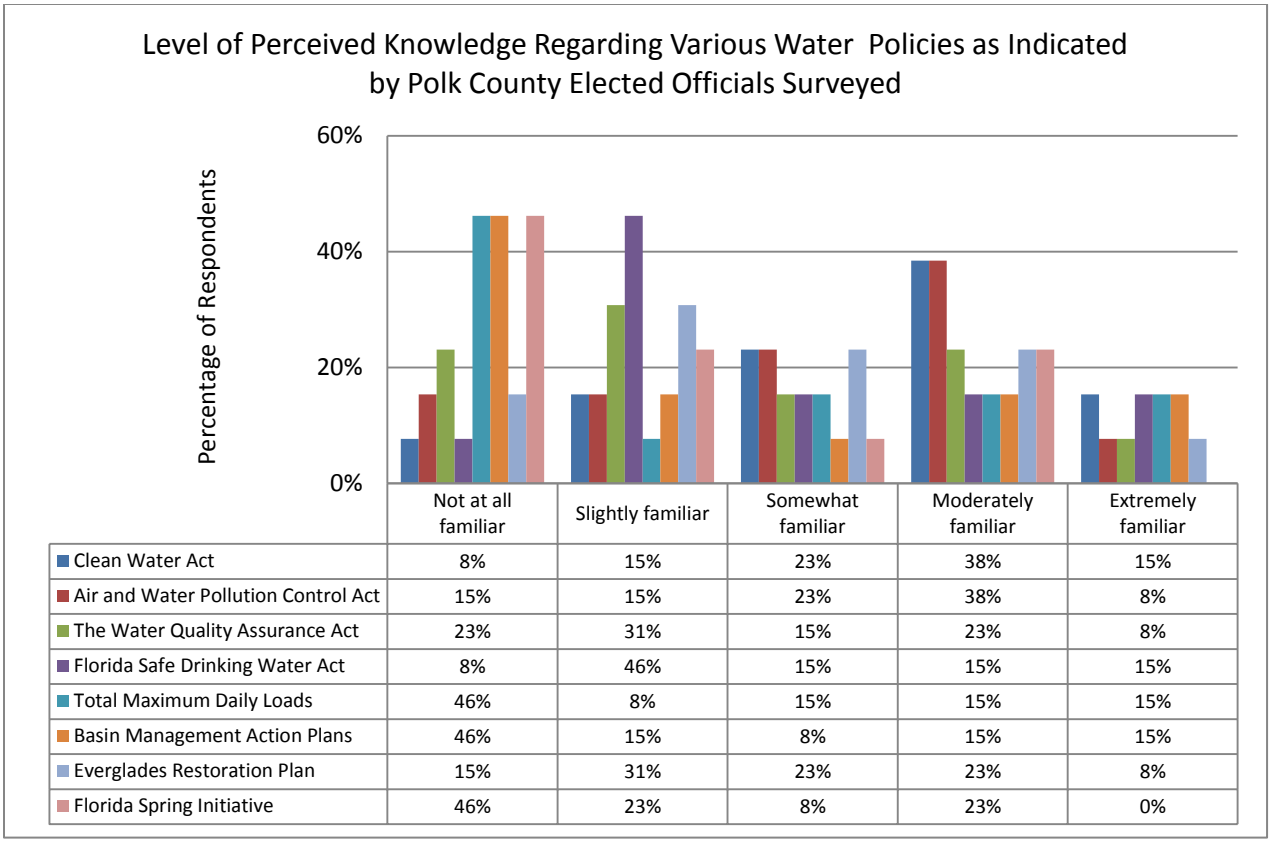
FIGURE 8: PERCEPTIONS OF POSITIVE GOVERNMENTAL INFLUENCE OF CONSERVATION BEHAVIORS

Next, survey participants were asked about their perceived level of knowledge regarding water policies such as the Total Maximum Daily Loads (TMDL's), Clean Water Act, and Florida Safe Drinking Water Act. Overall, Floridian's surveyed indicated a low level of knowledge regarding water policies (Odera and Lamm 35). Polk County survey respondents reported a higher level of knowledge regarding water policy than what is seen in Odera and Lamm's results, but the level of knowledge reported varied more among water policies.



	Not at all familiar	Slightly familiar	Somewhat familiar	Moderately familiar	Extremely familiar
Clean Water Act	20%	19%	31%	21%	9%
Air and Water Pollution Control Act	30%	18%	27%	18%	7%
The Water Quality Assurance Act	38%	14%	26%	14%	7%
Florida Safe Drinking Water Act	31%	17%	25%	20%	7%
Total Maximum Daily Loads	62%	16%	15%	4%	4%
Basin Management Action Plans	63%	15%	14%	7%	2%
Everglades Restoration Plan	25%	21%	24%	21%	9%
Florida Spring Initiative	48%	17%	16%	13%	6%

FIGURE 9: KNOWLEDGE OF WATER POLICY, FLORIDIAN'S SURVEYED



	Not at all familiar	Slightly familiar	Somewhat familiar	Moderately familiar	Extremely familiar
Clean Water Act	8%	15%	23%	38%	15%
Air and Water Pollution Control Act	15%	15%	23%	38%	8%
The Water Quality Assurance Act	23%	31%	15%	23%	8%
Florida Safe Drinking Water Act	8%	46%	15%	15%	15%
Total Maximum Daily Loads	46%	8%	15%	15%	15%
Basin Management Action Plans	46%	15%	8%	15%	15%
Everglades Restoration Plan	15%	31%	23%	23%	8%
Florida Spring Initiative	46%	23%	8%	23%	0%

FIGURE 10: KNOLWEDGE OF WATER POLICY, POLK COUNTY ELECTED OFFICIAL'S SURVEYED

EDUCATION AND ADDITIONAL INFORMATION ON WATER RESOURCES

The final section of the survey inquired about the respondent's participation in Extension events and their interest in receiving more information regarding water resources. Furthermore, the survey asked respondents how they would be most likely to take advantage of additional information.

The majority of Polk County respondents and Floridian's surveyed have not participated in an Extension education event (Odera and Lamm 36). Of Polk County respondents who indicated they have attended an Extension education event, the

majority of respondents indicated that they have attended (80%, n=5) either a Florida-Friendly Landscaping™ program or Polk County Water School.

Figure 11 shows the percentage of respondents interested in additional information related to water resources. Polk County respondents were most interested in community actions concerning water issues (82%, n=11) and watershed management (64%, n=11). Alternatively, Odera and Lamm's results indicated 31% of respondents were interested in fish and wildlife needs and 30% were interested in home and garden landscaping ideas for Florida yards.

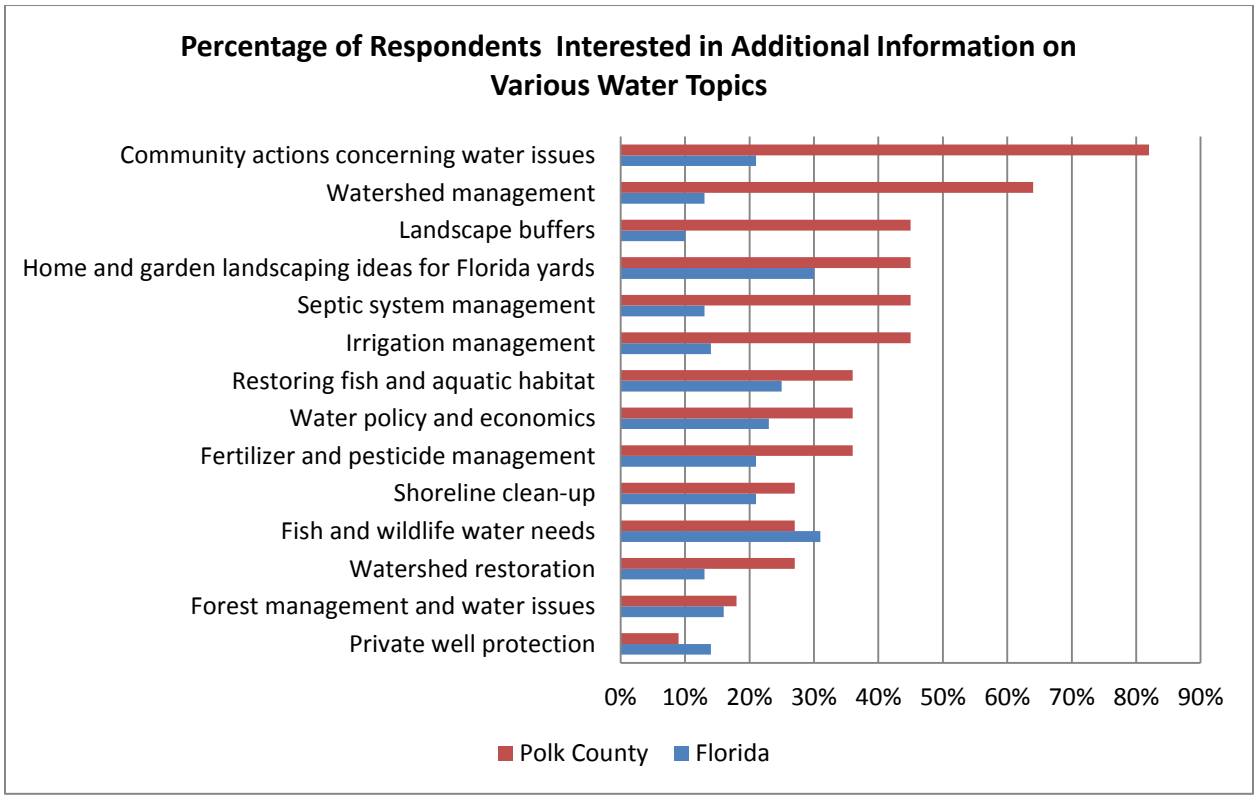


FIGURE 11: INTEREST IN ADDITIONAL INFORMATION ON WATER TOPICS

Knowing what topics respondents are interested in is only half of the battle. Next, the survey participants were asked in what type of learning opportunity would they most likely participate in. Figure 12 illustrates the preferences indicated by survey responses.

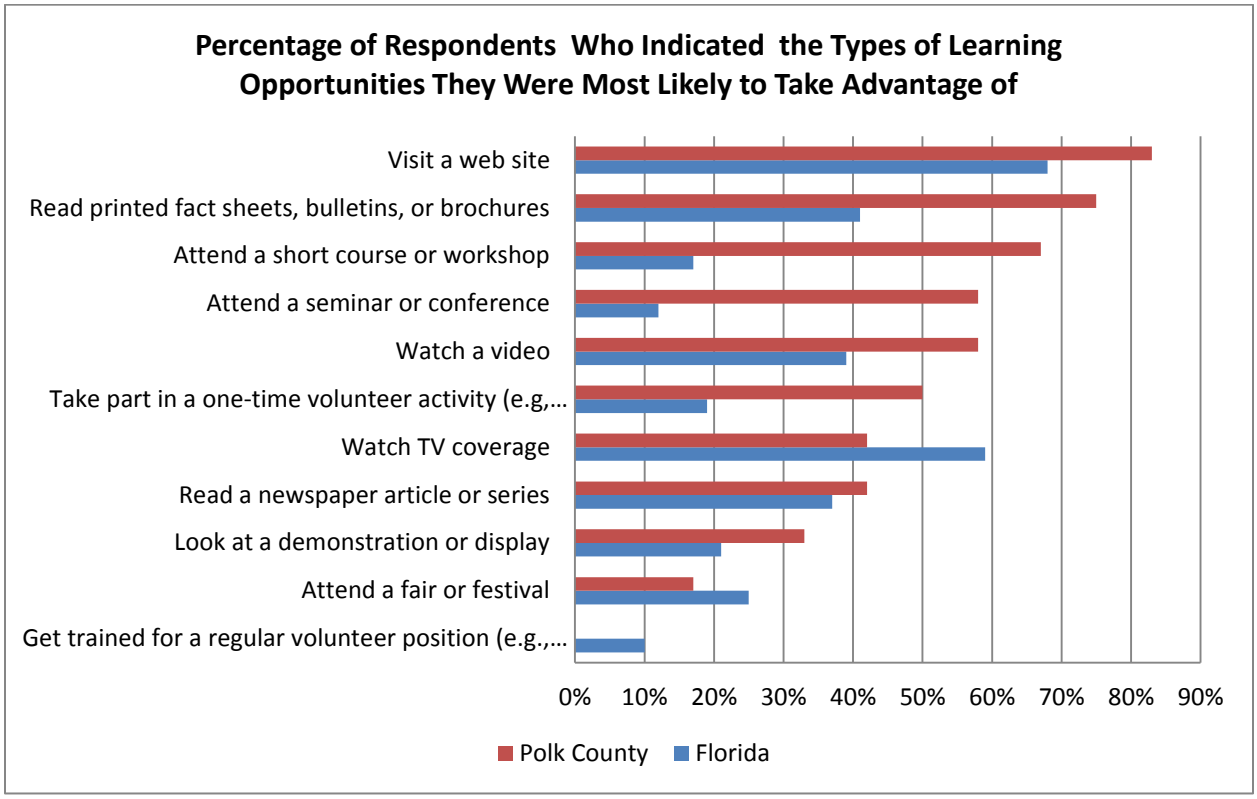


FIGURE 12: TYPES OF LEARNING OPPORTUNITY RESPONDENTS INDICATED THEY WOULD LIKELY TAKE ADVANTAGE OF

DISCUSSION

Results from this survey indicate that overall, the elected officials' responses are similar to those of the general citizen in Florida regarding perceived changes in water quality and the importance they associate with various water uses. Areas in which the data suggests a departure in opinion from the general citizen include desire for more

information, knowledge of water policies, and willingness to take advantage of water resource information.

In Figure 7 and Figure 8, results show a difference of opinion between the two survey samples regarding the positive or negative influence government may have on conservation behaviors. Considering that all participants in the Polk County survey are elected members of city and/or county government, this difference of opinion may be due to an insider's perspective versus that of an outsider. Alternatively, the Polk County participants were not equally weighted to reflect the State of Florida's residential political affiliations like Odera and Lamm's study and instead, were heavily skewed towards conservative (54%, n=13) Republicans (62%, n=13). This may be another reason for the difference in reported perceptions but would need further research to determine if political ideology or affiliation is statistically related to perceptions of government influence on conservation behaviors.

The similarities between both samples regarding perception of water quality changes, if any, the importance of water topics, and importance of water use for various uses suggest that elected officials at the local level have the same level of knowledge regarding actual water quality data and trends. At the local government level, most elected officials in Polk County maintain full-time employment outside of their civic responsibilities due to the low salary that accompanies the position; salary for a city

commissioner or like position is usually lower than $15,000 and often lower than $8,000 per year (The Ledger). These results, coupled with the lifestyle of Polk County's elected officials suggests that they respond to resource knowledge questions similarly to any general resident; however, the survey indicated that they are more likely to seek additional information and more willing to participate in conservation behaviors. Assuming all responses were given truthfully and not in campaign mode, it is reasonable to assume that something related to their position as an elected official alters their survey responses. The researcher suggests this may be because elected officials regularly deal with management and policy decisions which illustrate the need for community participation and expose them to the complexity of natural resources issues. Further research is needed to identify the reason behind the significant difference in responses.

CONCLUSIONS

This research, while not meant for generalizations to larger populations, can provide some insight for educators working with water resources and elected officials. Elected officials who responded to this survey demonstrated similarities to the general public regarding knowledge and perceived importance of water issues in Florida. On the other hand, when it came to a willingness to conserve water or willingness to seek additional information the elected officials who responded demonstrated a higher level of interest

in additional information and an increased willingness to participate in conservation behaviors than the general resident of Florida.

These findings need further in depth research to further understand why elected officials may be more interested in conservation behaviors and what barriers may exist to enacting those behaviors. Additionally, if they are so keen to learn more, why did so few indicate that they have participated in an Extension education event? More research should be conducted to investigate any barriers to participation which may exist so that more effective educational programming may be offered.

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