

# Encouraging Landscape Water-Conservation Behaviors #5: Segmenting the Audience Based on HOA Status<sup>1</sup>

Laura A. Warner, Alexa J. Lamm, Emmett Martin, Joy N. Rumble, Esen Momol<sup>2</sup>

## Introduction

Floridians use large amounts of water for outdoor purposes such as irrigating the home landscape (Haley, Dukes, & Miller, 2007). Some Floridians have become more environmentally mindful, engaging in behaviors such as planting drought tolerant plants that require less water (Hansen & Lewis, 2015). However, it is important for Extension professionals to explore new ways to educate residents and target the home landscape in order to improve water conservation behaviors (Levy & Sidel, 2011; Warner, Martin, Lamm, Rumble, & Cantrell, 2015; Warner, Rumble, Martin, Lamm, & Cantrell, 2015).

This document can be used to inform Extension professionals on how to incorporate audience segmentation into programming; it provides data that shows how HOA membership potentially affects the barriers that households face when adopting conservation measures. The results of this audience segmentation revealed that there are similarities and differences among Floridians who use irrigation in their home landscape based on HOA status. Extension professionals should use this information to enhance programming by strategically planning programs based on the similarities between clients.

## Audience Segmentation

Audience segmentation is a principle of social marketing that divides a target audience into subgroups based on characteristics that affect their ability or willingness to adopt a certain behavior (Newton, Newton, Turk, & Ewing, 2013). The purpose of audience segmentation is to create programs and interventions tailored to the needs of the subgroup while directing what limited Extension resources are available to the subgroup, or subgroups, that can have the most influence on a problem (Maibach, Leiserowitz, Roser-Renouf, & Mertz, 2011). Practitioners use a wide variety of characteristics to segment an audience, such as age, race and ethnicity, gender, level of education, knowledge, attitudes, and behavioral traits (Mathijssen, Janssen, Bon-Martens, & Goor, 2012). Extension professionals may use audience segmentation to develop impactful programming targeted to specific groups who share important similarities (Monaghan, Warner, Telg, & Irani, 2014). The following reports an exploration of Homeowners' Association (HOA) membership as a way to strategically plan programs based on the unique needs of each group.

1. This document is AEC584, one of a series of the Department of Agricultural Education and Communication, UF/IFAS Extension. Original publication date April 2016. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
2. Laura A. Warner, assistant professor, Department of Agriculture Education and Communication; Alexa Lamm, assistant professor, Department of Agriculture Education and Communication; Emmett Martin, research assistant, Center for Public Issues Education; Joy Rumble, assistant professor, Department of Agriculture Education and Communication; Esen Momol, director, Florida-Friendly Landscaping Program; UF/IFAS Extension, Gainesville, FL, 32611.

## Homeowners Associations

HOAs were developed to maintain and regulate the standard aesthetics of properties in neighborhoods and subdivisions (Dunbar & Dudley, 2007). HOAs may create and enforce rules that prescribe a specific appearance of landscapes within the community. One study, using a small sample size, revealed that HOA dwellers were more likely to hire landscape services for lawn maintenance and pest control (Monaghan, Ott, Wilber, Gouldthorpe, Racevskis, 2013). Monaghan et al. (2013) also found that among survey participants, residents of HOAs were more likely to have an in-ground irrigation system and less likely to follow water conservation best management practices. However, homeowners, regardless of HOA status, frequently seek information about landscape and yard care from a landscape company (Israel & Knox, 2001).

## Exploring Characteristics of Floridians Who Use Irrigation in Their Landscape by HOA Status

An online survey was conducted to better understand water usage and engagement in conservation efforts throughout Florida and to examine ways in which audience segmentation can be applied to Extension programming. This study explored factors that influenced landscape irrigation water use in a sample of 1,063 Floridians who use irrigation in the home landscape and have decision-making power over their irrigation practices and technologies. This audience is considered a very important target audience for water conservation programming; however, there has been minimal research on this group, and one of the research goals was to better define these individuals. The sample was divided by HOA status and characteristics were examined to identify differences that could inform the application of audience segmentation to Extension programming. While the results are only applicable to respondents in the sample, findings revealed actions that can be taken to enhance relevancy of Extension programs.

Among the sample of Floridians who use irrigation in their home landscape, 49% ( $n = 524$ ) reported that their property belonged to an HOA, while 51% ( $n = 539$ ) did not belong to an HOA. Floridians who reside in an HOA were compared to those who do not belong to an HOA based on the following criteria: hiring of landscape services, attitudes towards good irrigation practices, perceived behavioral control over good irrigation practices, interaction with Extension, and selected demographics.

## Hiring Landscape Services

Approximately 73% of all respondents in this study hired a professional for some landscape services. A higher number of HOA residents reported that they use a landscape company for some services, findings similar to that of Monaghan et al. (2013). When HOA status was compared, significantly more (77%;  $p < .001$ ) residents who belong to an HOA hired a company for at least some landscape services, compared to 67% of those who did not belong to an HOA (Table 1).

Respondents reported the specific type of professional landscape services they hired, and categories included: lawn maintenance, pest management, tree pruning, irrigation, and landscape design. There was a significant relationship between HOA status and hiring of lawn maintenance ( $p < .001$ ) and pest management ( $p < .001$ ) services. Among HOA residents, more than half (59%) hire a company for lawn maintenance while less than half of non-HOA residents (42%) do so. More residents living in HOAs (53%) reported that they hire a pest management company than non-HOA residents (39%). There was no significant difference in hiring practices for tree pruning, irrigation, or landscape design services. Significantly more non-HOA dwellers (33%;  $p < .001$ ) than HOA dwellers (21%) reported that they did not hire a company for any landscape services.

## Attitude toward Good Irrigation Practice

Positive attitudes may influence an individual's likelihood of adopting good irrigation practices (Ajzen, 1991). Therefore, Extension professionals may find an understanding of their audience's attitudes useful. Floridians who use irrigation in their home landscape were asked to respond to the statement "**Implementing good irrigation practices is...**" An attitude index was calculated by averaging six attitude item responses that could range from 1 (negative attitude) to 5 (positive attitude). Attitudes towards good irrigation practices were positive and there was no significant difference in responses based on whether residents resided in an HOA ( $M = 4.72$ ) or not ( $M = 4.72$ ). Therefore, HOA status does not influence attitudes towards landscape water conservation.

## Perceived Behavioral Control toward Good Irrigation Practices

Extension professionals may find perceived behavioral control useful for understanding self-efficacy among their clientele. Higher levels of perceived behavioral control surrounding a specific behavior, or increased perception of one's ability to perform a task, can lead to the adoption of

new practices (Ajzen, 1991). Floridians who use irrigation in their home landscape reported their perceived behavioral control toward good irrigation practices by responding to the statement **“Implementing good irrigation practices is...”** Responses were collected using a five-point semantic differential scale.

Response items included the following spectrums

- Possible for me/Not possible for me;
- Easy for me/Not easy for me;
- In my control/Not in my control;
- Up to me/Not up to me;
- Practical for me/Not practical for me.

A perceived behavioral control index was calculated by averaging the six item responses that ranged from 1 (low perceived behavioral control) to 5 (high perceived behavioral control). The results revealed that Floridians who reside in HOAs have significantly lower ( $p = .027$ ) perceived behavioral control than those who do not (Table 2). Therefore, HOA residents feel less confident in their ability to adopt good irrigation practices.

## Interaction with Cooperative Extension

Approximately 76% of residents who belong to an HOA reported having never interacted with Extension compared to 70% of non-HOA dwellers, although this difference was not statistically significant. Approximately 21% of residents who did not belong to an HOA reported that they interacted with Extension less than once per month compared to 17% of those who belonged to an HOA. Approximately 6% of residents who do not belong to an HOA reported that they interacted with Extension between one and three times a month, compared to 3% of HOA residents. Therefore, Extension may be reaching HOA and non-HOA dwellers equally.

## Living within City Limits

Among Floridians who use irrigation in the home landscape, those who live in an HOA were significantly less likely ( $p < .01$ ; 64%) to live within city or town limits compared to residents who do not belong to an HOA (73%). This finding is in contrast to the assumption that most HOAs are in urban areas, revealing that many HOAs are located outside of city limits.

## Florida Residency

The average respondent who belonged to an HOA was 60 years old and had lived in Florida for 54 years, while those

who did not belong to an HOA averaged 55 years of age and had lived in the state for 27 years. This suggested that those moving to Florida from other states are choosing not to live in HOAs.

## How to Use This Information

The results suggest that Extension professionals could do the following:

### Conduct Needs Assessments

Extension professionals should conduct needs assessments to better understand what barriers residents face when attempting to practice good irrigation practices. The results revealed that residents who belonged to an HOA reported a lower perceived ability to adopt good irrigation practices. Extension professionals should consider this finding and develop strategies that make it easier for HOA residents to adopt water conservation practices in the home landscape. Extension professionals should create landscaping programs in collaboration with HOAs, residents, and landscape service companies. For example, Extension professionals could inform and educate residents of HOAs about the Florida-Friendly Landscaping™ Program and work with HOAs to make it easier for residents to implement changes in the home landscape while meeting HOA requirements.

While outside the scope of this study, others have reported that some HOAs are more focused on aesthetics than environmental conservation (Hansen & Lewis, 2015). Extension professionals who identify this value among HOAs they work with should emphasize how drought tolerant plants and low-water landscapes can be aesthetically pleasing.

### Work With HOAs

Extension professionals should collaborate with local HOAs to make Extension programs more relevant and more accessible to HOA residents and encourage more participation in Extension programs. Many residents who belonged to an HOA had never interacted with their local Cooperative Extension office. Extension professionals could use this finding as a starting point for residents to take advantage of programming offered in their county, district, or region. Extension professionals should work directly with HOA boards in order to help overcome the unique barriers that HOA members face. Extension could also use this finding as a way to reach this target audience. For example, Extension professionals could have classes and training sessions in a common area that is convenient for residents of HOAs.

## Target Professional Landscape Companies

Extension professionals can reach HOA members through professional landscape companies. More HOA residents hire professionals for several landscape services, and therefore receive landscape management information from these companies. Extension professionals should ensure that professional companies who serve HOAs are educated about the most current technologies and practices available to support water conservation in the home landscape.

## Target Urban Areas

Extension professionals should conduct more Extension programming in urban areas. A large number of Floridians who use irrigation in their home landscape reported that they lived within city or town limits. While even more non-HOA dwellers live within city or town limits, this finding indicates that most residents that use irrigation are within city limits. Helping these residents better understand and implement water conservation practices could reduce strain on city water supply, if this is their water source.

## Conclusion

Audience segmentation provides Extension professionals with the opportunity to group individuals by their specific needs and motivate their behavior change through more targeted programming. Defining targeted audiences for Extension programming is a first step to influencing behavior change among clientele (Monaghan et al., 2013), and this document highlighted the possibility of defining HOA residents as an important subgroup. Floridians who use landscape irrigation and live in HOAs have lower perceived control over adopting good irrigation practices. They are more likely to hire someone else for landscape services than to do it themselves. Extension professionals can build on the existing positive attitudes that HOA members have towards irrigation water conservation and work with HOA boards and within HOA restrictions to help residents overcome the unique barriers they face. Extension professionals could use the audience segmentation technique as a way to develop more impactful programming.

## Acknowledgements

The authors would like to acknowledge the University of Florida's Center for Landscape Conservation and Ecology (CLCE; <http://gardeningolutions.ifas.ufl.edu/clce>) for supporting this publication. The authors thank Liz Felter and Paul Monaghan for their helpful input on an earlier draft of this document.

## References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:10.1016/0749-5978(91)90020-T
- Carswell, A. (2012). Homeowners' association. *Homeowners' association..* (Vols. 1-2). (pp. 291–293). Thousand Oaks, CA: SAGE Publications Inc. doi: <http://dx.doi.org/10.4135/9781452218380.n97>
- Dunbar, P. M., & Dudley, C. F. (2007). *The law of Florida homeowners associations: Single family subdivisions, townhouse & cluster developments, master community associations* (7th ed.). Sarasota, FL: Pineapple Press.
- Haley, M., Dukes, M., & Miller, G. (2007). Residential irrigation water use in Central Florida. *Journal of Irrigation and Drainage Engineering*, 133(5), 427–434. doi:10.1061/(ASCE)0733-9437(2007)133:5(427)
- Hansen, G., & Lewis, C. (2015). *Ten strategies for working with your home owner association to convert to a Florida-friendly yard*. EP513. University of Florida Institute of Food and Agricultural Sciences. Retrieved from <http://edis.ifas.ufl.edu/ep513>
- Israel, G., & Knox, G. (2001). *Reaching diverse homeowner audiences with environmental landscape programs: Comparing lawn service users and nonusers*. WC044. University of Florida Institute of Food and Agricultural Sciences. Retrieved from <http://edis.ifas.ufl.edu/wc044>
- Levy, B. S., & Sidel, V. W. (2011). Water rights and water fights: Preventing and resolving conflicts before they boil over. *American Journal of Public Health*, 101(5), 778–780. doi:10.2105/AJPH.2010.194670
- Maibach, E., Leiserowitz, A., Roser-Renouf, C., & Mertz, C. K. (2011). Identifying like-minded audiences for global warming public engagement campaigns: An audience segmentation analysis and Tool Development. *PLoS ONE*, 6, 1–9. doi: 10.1371=journal.pone.0017571
- Mathijssen, J., Janssen, M., van Bon-Martens, M., & van de Goor, I. (2012). Adolescents and alcohol: An explorative audience segmentation analysis. *BMC Public Health*, 12(1), 742–751. doi:10.1186/1471-2458-12-742

Monaghan, P., Ott, E., Wilber, W., Gouldthorpe, J., & Racevskis, L. (2013). Defining audience segments for extension programming using reported water conservation practices. *Journal of Extension*, 51(6). Retrieved from <http://www.joe.org/joe/2013december/a8.php>

Monaghan, P., Warner, L., Telg, R., & Irani, T. (2014). *Improving extension program development using audience segmentation*. WC188. Gainesville: University of Florida Institute of Food and Agricultural Sciences. Retrieved from <http://edis.ifas.ufl.edu/wc188>

Newton, J., J. Newton, F., Turk, T., & T. Ewing, M. (2013). Ethical evaluation of audience segmentation in social marketing. *European Journal of Marketing*, 47(9), 1421–1438. doi:10.1108/EJM-09-2011-0515uf libr

Scott, J., & Marshall, G. (2009). Semantic differential. In *A Dictionary of Sociology*. Oxford University Press. from <http://www.oxfordreference.com/view/10.1093/acref/9780199533008.001.0001/acref-9780199533008-e-2061>.

Warner, L. A., Martin, E., Lamm, A., Rumble, J., & Cantrell, R. (2015). *Encouraging landscape water conservation behaviors #1: Tailoring programs to Florida residents who use irrigation in the home landscape*. Gainesville: University of Florida Institute of Food and Agricultural Sciences (AEC537). Retrieved from <http://edis.ifas.ufl.edu/wc199>

Warner, L. A., Rumble, J. N., Martin, E., Lamm, A. J., & Cantrell, R. A. (2015). The effect of strategic message selection on residents' intent to conserve water in the landscape. *Journal of Agricultural Education*, 56(4), 59–74.

## Appendix: Encouraging Landscape Water Conservation Behaviors Series Overview

The *Encouraging Landscape Water Conservation Behaviors* series was developed to address ways to promote specific behaviors—the adoption of water-saving practices and technologies—to a specific target audience, Florida residents who use irrigation in their home landscapes. These EDIS publications provide information to help Florida Extension professionals understand this target audience and create more effective programming.

### **#1: Tailoring Programs to Florida Residents Who Use Irrigation in the Home Landscape (WC199)**

Summary: This publication describes commonalities among this target audience and describes Florida residents who use irrigation in the home landscape. By understanding characteristics of this audience, Extension professionals can develop more effective and targeted programming for this audience.

### **#2: Applying Audience Segmentation to Water Conservation Activities in the Landscape—Defining Segments of the Florida Homeowner Audience and Implications for Extension Programming (WC200)**

Summary: This publication describes how segmentation can be applied to increase the effectiveness of Extension programming and defines specific segments of this audience.

### **#3: Developing Extension and Outreach Messages (WC201)**

Summary: This publication defines message framing, gain- and loss-framed messages, and value frames. Extension educators are encouraged to incorporate framed messages into their programming.

### **#4: Florida Homeowners' Reactions to Messages that Encourage Landscape Water Conservation Practice Adoption (WC202)**

Summary: This publication examines attitudes and perceived behavioral control over good irrigation practices among Florida residents who use irrigation in the home landscape. The impact of different messages that Extension educators may use to encourage water conservation is presented.

### **#5: Segmenting the Audience Based on HOA Status (WC203)**

Summary: This publication segments Florida residents who irrigate by HOA status. Commonalities and differences among those who belong to an HOA and those who do not belong to an HOA are explored. Extension educators can use this information to understand how HOA status impacts water conservation practices.

**#6: Information-Seeking Preferences of Florida Residents Use Irrigation in the Home Landscape (WC204)**

Summary: This publication examines information-seeking preferences of Florida residents who use irrigation in the home landscape. Extension educators can use this publication to understand how residents seek information and the type of water conservation information that residents would like to learn about.

**#7: Personal and Social Norms of Florida Residents Who Use Irrigation in the Home Landscape (WC205)**

Summary: This publication examines personal and social norms of Florida residents who use irrigation in the home landscape and describes how these characteristics can impact water conservation practices. Extension educators are encouraged to tailor programs that will encourage good irrigation practices and water conservation activities based on personal/social beliefs.

Table 1. Landscape services hiring practices among Floridians who use irrigation in the home landscape.

Landscape Service	Belong to HOA	Do not belong to HOA
Lawn maintenance	59%	58%
Pest management	53%	39%
Tree pruning	36%	34%
Irrigation	22%	20%
Landscape design	17%	18%

Table 2. Perceived behavioral control toward good irrigation practices among Floridians who use irrigation in the home landscape.

HOA status	<i>n</i>	<i>PBC</i>
Belongs to HOA	524	4.32
Do not belong to HOA	539	4.43