

Encouraging Landscape Water-Conservation Behaviors #3: Developing Extension and Outreach Messages That Encourage Landscape Water Conservation Practice Adoption¹

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Introduction/ Overview

Quality educational initiatives that encourage best management practices (BMPs) for water conservation can play an important role in protecting water resources (Dietz, Clausen, Warner, & Filchak, 2002). According to the Environmental Protection Agency (EPA), the anticipated population increase in the U.S. will create a demand on existing water sources that surpasses available resources (United States Environmental Protection Agency, 2013b). Landscaping practices play an important role in water usage. The average American household consumes about 320 gallons of water per day and 30 percent is designated to outdoor use, totaling nearly 9 billion per day (EPA, 2013a; EPA, 2013b). A study conducted in the state of Florida, where mild winter temperatures create a year-round growing season, reported that 71% of all water consumption was directed toward the landscape in the average household (Baum, Dukes, & Miller, 2003).

The EPA estimates that, by 2030, Florida's demand for fresh water will be 28% more than it was in 2005 (EPA, 2013b). This increase will continue to deplete water sources; moreover, the general public has been relatively unaware

of the potential threat to water resources in the near future (Delorme et al., 2010). To combat the depletion of water, the Florida Cooperative Extension Service (FCES) must educate the public to make it aware of the science that supports BMPs for water landscape conservation (UF/IFAS, 2011). However, spreading this awareness is an ongoing challenge.

Extension exists to spread knowledge and skills that will support individuals in making informed decisions and solving problems (Seevers, Graham, & Conklin, 2007). One of the issues Extension educators face is how to communicate the correct information to clientele (Obahayujie & Hillison, 1988; Palmer, 2006). Extension educators are encouraged to be thoughtful and meaningful when creating messages for clientele. Extension educators can better reach the public through appropriate *message framing*. Message framing identifies the most effective message strategies to reach and attract potential clientele (Entman, 1993) and tailors the message to the target audience (Scheufele & Tewksbury, 2007).

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Frames simplify complex world issues by highlighting aspects most relevant to the audience, which allows citizens to “rapidly identify why an issue matters, who might be responsible, and what should be done” (Nisbet & Mooney, 2006, p. 56). Frames can be used as a powerful communication tool to encourage behavioral changes by eliciting a person’s reaction to a message (Critcher, 2007). Research suggests that people respond differently to messages depending on how they are framed. One use of framing is to form messages based on either potential gains (i.e., advantages or benefits) or in terms of potential losses (i.e., disadvantages to the individual) (Entman, 1993). Water conservation messages can be framed to encourage reducing the use of water during landscaping.

It is important for Extension educators to appropriately frame messages concerning water conservation practices. The *Encouraging Landscape Water Conservation Behaviors* series (see Appendix A for more details) was developed to support Extension professionals in promoting the adoption of water-saving practices and technologies to a target audience of Florida residents who irrigate their home landscapes. This EDIS publication is the third in this series, and its goal is to explain message framing and guide Extension educators in developing messages when communicating with clients about landscape water conservation.

Using Framing to Reach an Audience

Extension programming presents cutting-edge research from the university to help citizens make informed decisions (Goddard & Olsen, 2004; Molgaard, 1997; Rogers, 1988). UF/IFAS Extension is poised to choose the best possible frame to better inform target audiences about water conservation issues and practices related to landscapes (Monaghan, Ott, Wilber, Gouldthorpe, & Racevskis, 2013). However, communicating information in a way that resonates with targeted audiences can be challenging. By identifying what motivates individuals to change water-conservation behaviors (Jensen, 1989), based on their attitudes, demographics, lifestyles, and current behaviors, Extension educators can more effectively convey information about landscape water conservation and sustainability programming to target audiences.

Extension audiences can benefit from message frames because they allow for reflection on a given specific issue (Entman, 1993). For example, according to Entman (1993), because many people do not remain abreast of social and political issues, framing helps them understand the

relevance of how the issue might impact them personally. Framing also helps Extension educators to describe topics more favorably when seeking media coverage that can impact decision making (Gorham, Telg, & Irani, 2013).

What Is Gain and Loss Framing?

Framing indicates how the choice or outcome of an action is communicated in terms of its positive and negative consequences (Critcher, 2007). A message framed from a gain perspective is one that emphasizes what someone will gain if he or she behaves in a certain way. For example, a statement implying gain would be: “If you turn the water off while brushing your teeth, then your monthly water bill will decrease over time” (Detweiler, Bedell, Salovey, Pronin, & Rothman, 1999). In this example, framing emphasizes the financial incentives of using less water.

A loss frame is one that emphasizes what someone will lose if he or she does not engage in a behavior. For example, a statement implying loss would be: “If you do not turn your water off while brushing your teeth, your water bill will increase over time” (Detweiler et al., 1999). In this example, framing emphasizes the financial cost of not turning the faucet off while brushing one’s teeth.

The manner in which a message is framed does not alter its meaning; instead it alters the effect of the message on the population of interest (Critcher, 2007). For example, a gain-framed message concerning water depletion may say, *If we do X, individuals will continue to have enough water for daily life 25 years from now.* A loss-framed message may say, *If we do not do X, individuals will not have enough water for daily life 25 years from now.*

Gain-framed messages may be considered more effective in motivating prevention behaviors (such as using rain shutoff devices to save water during irrigation) because these behaviors are related to certain desirable outcomes (Detweiler et al., 1999). In contrast to gain frames, loss frames are considered more effective in encouraging detection behaviors (such as inspecting your irrigation system to make sure it works properly) since these behaviors have uncertain outcomes (Banks et al., 1995; Schneider et al., 2001). Both gain-framed and loss-framed messages are valuable tools in altering consumer behaviors. The choice between them depends on the desired type of practice change. The use of gain and loss frames can help Extension educators better understand if individuals will respond differently to a positive gain-framed message than a negative loss-framed message. For example, a positive gain-framed message may say “by *conserving* water through installing

low-flow irrigation heads, you will decrease the cost of your water bill in the future.” Conversely, a negative loss frame may say: “by *wasting* water through installing high-power irrigation heads, you will increase the cost of your water bill in the future.” Having an understanding of how to use gain and loss frames can help Extension educators to use messages strategically to promote the adoption of water conservation practices.

What Are Value Frames?

Extension educators who encourage landscape water conservation may develop many types of messages based on **financial**, **personal**, **social**, and **environmental** values (see Table 1 for examples). These values depend on an individual’s personal experience and cultural background. The following is a list of value frames that may be useful to encouraging landscape water conservation.

- **Financial value message frames** can provide individuals with the financial implications of their behavior. They may resonate with financially minded individuals who place a high value on their financial resources.
- **Personal value message frames** can provide individuals with salient information about how their behaviors can affect their personal life. They may resonate with individuals who value the way their behavior impacts their personal life and the world around them.
- **Social value message frames** can provide individuals with information about how their actions can impact society and are perceived by society. Social frames resonate with individuals who value how others perceive them and how they impact society.
- **Environmental value message frames** can provide individuals with information about how their behaviors can impact the sustainability and preservation of Earth’s natural resources. They may appeal to those who value

the environment and are conscious of how their behaviors impact the environment.

When crafting Extension communication materials, Extension educators may frame messages as gains or losses to appeal to specific values. It is important to base the choice of frames on a deep understanding of the Extension audience. Extension educators can develop materials that best meet the overall target audience’s needs or develop multiple materials for different segments of their clientele.

Conclusion

Extension educators’ role in encouraging water conservation behaviors will remain critical in the future. The responsibility of Extension educators is to translate research to clientele in meaningful ways that appeal to the target audience. Florida Extension educators should thoughtfully consider the use of gain and loss frames, as well as value frames, to communicate about water conservation practices. Incorporating frames appropriately can be accomplished by understanding the target audience, speaking to its values, and emphasizing desirable water conservation practices and anticipated results. Extension clientele will be better informed about the importance of landscape water conservation and more likely to adopt desirable behaviors as a result of receiving carefully crafted messages. Extension can train agents in strategic framing that will empower them to influence water conservation behaviors.

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Table 1. Gain and Loss Frames for Water Conservation Behaviors by Value Frame.

Value frame	Gain	Loss
Financial	By conserving water through good irrigation practices, you will decrease the cost of your water bill.	By wasting water through poor irrigation practices, you will increase the cost of your water bill.
Personal	By conserving water through good irrigation practices, you will waste less water throughout your lifetime.	By wasting water through poor irrigation practices, you will waste more water throughout your lifetime.
Social	By conserving water through good irrigation practices, you will be seen as a role model in the fight to ensure that water is available for future generations.	By wasting water through poor irrigation practices, you will not be seen as a role model in the fight to ensure that water is available for future generations.
Environmental	By conserving water through good irrigation practices, you are contributing to the preservation of one of Earth’s most precious natural resources.	By wasting water through poor irrigation practices, you are contributing to the destruction of one of Earth’s most precious natural resources.

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Appendix A: Encouraging Landscape Water Conservation Behaviors Series Overview

The *Encouraging Landscape Water Conservation Behaviors* series was developed to address promoting adopting 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 to understand this target audience and guide more effective programming.

#1: Tailoring Programs to Florida Residents Who Use Irrigation in the Home Landscape (WC199): 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): This publication describes how segmentation can be applied to increase the effectiveness of Extension programming and defines specific segments of this target audience.

#3: Developing Extension and Outreach Messages that Encourage Adoption of Landscape Water Conservation Practice (WC201): 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): 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): This publication segments Florida residents who irrigate by HOA status. Commonalities and differences among those who belong to a HOA and those who do not belong to a 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 Who Use Irrigation in the Home Landscape (WC204): 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): 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 and social beliefs.