

Southwest Florida Water Management District

Outdoor Water Use
Focus Group Research
August- September 2007

Final Report

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Executive Summary

Based on this scope of work and collaborative meetings with the District, the following research objectives were outlined and used to develop the focus group protocol:

- 1) Understand homeowners' feelings about their lawns, landscaping, and gardening work.
- 2) Determine how involved homeowners are in making decisions about irrigating their lawn.
- 3) Investigate what motivates people to change their irrigation system.
- 4) Determine the extent that people are already changing their irrigation system in response to changes in weather patterns, seasonality, or the dormant growth periods.
- 5) Suggest perceived barriers to behavior change and possible strategies for motivating behavior change.

Five focus groups were conducted in three different study areas from August 16- September 8, 2007. Thirty-eight people attended the groups which were conducted in proximal locations to the target neighborhoods – The Villages, Port Charlotte, and Lakeland. Screening criteria for excluding participants included:

- Homeowners (not condos or apartments)
- Having a yard that they must maintain (not living in a maintenance-free community)
- Having an in-ground irrigation system

Findings by Objective

- 1) A majority of the participants expressed a desire for a green lawn. However, some participants mentioned that an ideal yard would have less grass and more trees, be environmentally friendly, be less costly, and be low maintenance. Most participants indicated that yard does say something significant about the residents.
- 2) The amount of rain and when the rainy season started was a motivator for changing irrigation practices among participants. Most participants have a rain sensor, but indicated that it doesn't work and, as a result, rely on visual cues to determine irrigation behaviors.
- 3) The majority of respondents had already adjusted their irrigation systems for the rainy season, and some indicated that they had changed in line with new restrictions from irrigating twice to one time per week. Some didn't think it's possible to over water in Florida, because the sandy soil drains so quickly.
- 4) In response to watering the yard every other week during December, January and February, many respondents indicated that they would believe the message and that they knew the grass was dormant during that time period. In response to watering during the rainy months of July, August, and September, a majority of the participants were either watering once a week, not at all, or less than once based on rain patterns and visual cues.

5) During the rainy months, barriers are minimal. While aware of that grass has a dormancy period, most participants did not change behaviors. Barriers include the lack of visual cues signaling the dormancy period and the difficulty of programming the irrigation system to water every other week.

Recommendations

1) We strongly suggest that the results of this research be used to develop a survey to collect representative data. The findings reported herein are informative and can be used with confidence, but should not be used to generalize to a broader population.

2) Engaged and interested homeowners, like most of the focus group participants, should be recruited to attend workshops on how to become “water stewards” in their community. We found that people rely on neighbors for information and are willing to teach their neighbors. The District’s existing NEST program may provide the framework to engage neighborhoods in water conservation, perhaps using a friendly competition to motivate participation.

3) In areas where water is very expensive, e.g. Port Charlotte, the message should focus on how water conservation saves money since cost trumps all other issues. This would be most effective where outdoor water is metered separately and where people aren’t primarily using surficial wells for irrigation. In areas where water is less expensive, the message should include multiple motivators.

4) University extension services, particularly the Master Gardener program, are trusted sources of information for motivated homeowners. The District should give (or continue to give) extension services a prominent role in outreach via funding, access to resources, etc. and engage them in delivering irrigation messages.

5) In high per capita water use areas, the District may consider sending someone out to maintain and fix rain sensors. This would be particularly useful in retirement communities where elderly people are less likely to climb heights to check the rain sensors, and where they are more likely to be home during regular business hours.

6) In high per capita water use areas, the District should work with utilities to provide separate metering systems for outdoor water use. This would allow homeowners and the utility to identify the source of high water use and allow homeowners to compare indoor and outdoor water use. It would also provide the District with valuable data.

7) The District should encourage local governments, developers, and homeowners associations to adopt water conservation regulations that encourage the use of drought-tolerant grasses, reduction of turf areas, xeriscaping, and Florida-friendly landscaping.

8) A consistent opinion expressed by participants is that you can’t over water, in part, because the sandy soil provides good drainage. The District should investigate if this belief is widely held and design a strategy to weaken this barrier.

9) Social diffusion may work better in affluent, socially active, retirement communities like The Villages. In neighborhoods that thrive on community involvement, neighbor vigilance, and regulatory coherence, the concept of social diffusion is likely to work more effectively. People are more engaged in each others business and committed to the “good of all.”

10) The District may consider providing alternative sources of outdoor irrigation water by holding rain barrel workshops or designing a better homeowner water holding device. Rain barrels greatly reduce homeowner’s reliance on potable water for irrigating plant beds, but are not the best means for watering large areas of lawn.

11) The District may want to alert people to the fact that their neighbors are being fined (if in fact they are). The focus group discussion around this topic indicated that people doubted the enforceability of watering regulations, and this may be a pervasive sentiment.

12) In the winter (and throughout the year), the District may use the message of “less water means less maintenance” to encourage people to reduce the amount of watering. Most of the participants are definitely interested in reducing their yard maintenance.

13) The “landscape competitors,” those motivated by outdoing their neighbors, should be encouraged to have the nicest lawn, while using the least water. A competition and notoriety event would demonstrate that alternative irrigation methods, proper plant selection, and understanding lawn health are more important than dumping more water and fertilizer on the lawn.

14) The following factors were identified by participants as having an influence on irrigation practices: water costs, low maintenance, water conservation, environmental protection, plant needs, and regulatory requirements. Most participants identified more than one factor. Survey research should be used to examine which factors are the strongest motivators for certain segments of the target audience. With this data, segment-specific strategies could be implemented.

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Introduction

Southwest Florida Water Management District describes the scope of the research as follows:

“The District plans to conduct a community-based social marketing pilot program that will ask residents to ‘water only every other week’ during months of December, January, and February; and ‘take control of their irrigation systems’ during the months of July, August, and September when rainfall can allow residents to turn their systems off for extended periods of time. Information gained from this qualitative research will be used to identify issues that might keep residents from adopting these desired behaviors (barriers) and to identify strategies to best communicate the conservation messages.”

Based on this scope of work and collaborative meetings with the District, the following research objectives were outlined and used to develop the focus group protocol:

- 1) Understand homeowners’ feelings about their lawns, landscaping, and gardening work.
- 2) Determine how involved homeowners are in making decisions about irrigating their lawn.
- 3) Investigate what motivates people to change their irrigation system.
- 4) Determine the extent that people are already changing their irrigation system in response to changes in weather patterns, seasonality, or the dormant growth periods.
- 5) Suggest perceived barriers to behavior change and possible strategies for motivating behavior change.

This final report provides an overview of the focus group methodology, specific findings, discussion about the results and recommendations for strategies that may reduce outdoor water use.

Methodology

Krueger and Casey (2000) define a focus group as "a carefully planned series of discussions designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment" (p. 5). Focus group methodology is flexible, not standardized. Focus groups provide in-depth information about an area of interest, encouraging a group of people to interact in a way that includes the natural features of conversation and a discussion that is focused. Although focus groups provide useful information regarding participant opinions, they don't shed light on the extent of those opinions, nor do they allow the generalization to a larger population. As such, we caution the reader to not generalize from our findings to the population at large.

Research Protocol and Questionnaire

Based on the research objectives, a series of guiding questions were developed through collaboration and trial. The purpose of the guiding questions was to help the moderator collect consistent information throughout the groups and to ensure that focus group discussion was

linked back to the research design and objectives. Two versions of questions were developed. The first version included detailed questions and sub-questions to guide the discussion through exploratory questioning. The second version utilized more general questions, relying on the moderator to probe for more detailed information. The research team did not find any notable differences between the information collected via the two versions.

Five focus groups were conducted in total;

- Study area #1 – Two groups were conducted at the Bacall Recreation Centre in The Villages on August 16, 2007. There were eleven people in the first group and ten people in the second.
- Study area #2 – Two groups were conducted at the Best Western Waterfront in Punta Gorda on August 18. There were ten people in the first group and four people in the second.
- Study area #3 – One group was conducted at the Imperial Swan Hotel in Lakeland on September 8, 2007 with three people in it.

The UCF Institute for Social and Behavioral Sciences (ISBS) planned to conduct nine focus groups, three in each of three different neighborhood communities in southwest Florida. We initially proposed nine groups to enable various approaches to divide and segment the target audience. For example, if we wanted to target men and women separately, we would put them in separate focus groups, or if we decided to target people on city water vs. well water separately, we would have that option. Considering we did not segment the audience, we believe that two groups in each neighborhood would sufficiently cover the diversity of opinions about outdoor water use. However, recruiting problems combined with a reduced timeframe resulted in lower participation than anticipated.

Thirty-eight people attended the groups which were conducted in proximal locations to the target neighborhoods. The rooms were set-up with tables pushed together in the center for the group to sit around, a registration table near the entrance, a table for food, and a table for observers and note takers. The rooms had water, snacks, and were close to restrooms.

Recruiting

ISBS personnel used telephone recruiting methods to recruit focus group participants. ISBS attempted to over-recruit slightly (12 recruited for each focus group) in an attempt to ensure that at least 8 participants would show up. A \$50.00 monetary incentive and three different time slots were offered to encourage participation. Willing participants were given directions to the focus group locations over the telephone and a follow-up telephone call the day before their appointed time reminded them of their commitment. Screening criteria for excluding participants included:

- Homeowners (not condos or apartments)
- Having a lawn that they must maintain (not living in a maintenance-free community)
- Having an in-ground irrigation system

The District provided addresses for targeted communities and ISBS personnel used the addresses to search the internet for phone numbers. This process reduced the number of households in the sampling by 39% on average, because phone numbers were not available for all addresses. For Study Area 3, ISBS purchased an additional 2000 telephone numbers from people living in Lakeland and also recruited from the address list provided by the District. From the purchased list, ISBS recruited participants from those people who indicated that they own a home, are responsible for their own maintenance, and have a in-ground irrigation system.

Recruiting was conducted by ISBS lab personnel, supervised by Amy Donley and Dr. Jana Jasinski. Recruiters spent more time attempting to contact willing participants than they did actually registering people for focus groups. This can be seen by examining the disposition of call attempts provided in table 1 below.

Table 1
Disposition of Telephone Call Attempts

Response	The Villages	Port Charlotte	Lakeland
Number of addresses provided by District	670	854	387
Number of phone #'s	561	577	121
Number of additional phone #'s			3000
Disconnected numbers	167	74	507
Business number	0	5	21
Fax machine	9	19	49
Total dial attempts	1030	1420	4387
Total redial attempts	126	184	1266
Agree to participate	21	10	20
Refusal	287	190	944
No answer	471	701	1840
Busy signal	19	54	89
Call back/hang ups	47	183	377
Not in target area	4	0	15
Not in target audience	3	0	506
Spanish speaking	2	0	19
Conversions from redial	0	0	0
Number of recruiting hours	49	48	105

Focus Group Moderating and Note Taking

Brent Marshall, Associate Professor of Sociology and Amy Donley, ISBS Project Manager moderated the focus groups. Leesa Souto of Stormwater Management Academy was present at all focus groups to cover any questions on the research and take notes. At least one, often two note takers were present at all groups and all groups were audio taped, ensuring that nothing

would be missed in the notes. To comply with UCF's Institutional Review Board requirements for human subjects research, the privacy of participants is protected by referring to people in the notes by number or pseudonym or both.

Focus Group Participants

The thirty-eight (38) homeowners that participated in the study can be characterized as living in the study area, owning a house with a yard that they are responsible for maintaining, and having an in-ground irrigation system. All of the study participants were white, eighty-two percent of participants were married (n = 31), and half of them were female (n = 19). The mean age of participants in The Villages, Port Charlotte, and Lakeland focus groups was 65 years, 69 years, and 67 years respectively. Roughly 57% of participants lived in communities that restricted landscaping practices in some way (n = 22) and nearly all of these are people lived in The Villages (n = 21). Regarding methods used for watering their yard (participants could select more than one option), 84% of participants indicated they used an outdoor irrigation system, 45% indicated they watered by hand with a hose, 24% used drip irrigation, 5% said they never watered their yard, and 7% indicated they only watered the flower beds not the grass. In The Villages, nobody said that they never water their yard, while a large majority of people in Port Charlotte (10 of the 14 participants) indicated they never water their yard. Fifty-three percent (n = 20) of participants indicated they do their own landscaping, 37% (n = 14) hired a landscaping company to do the lawn maintenance, and 10% (n = 4) did some combination of the two. Previous research (Green Consumer Survey, UCF 2005, Nonpoint Source Pollution Survey, FDEP 2001) indicate that study populations in both surveys were split about 50/50 whether they hired a lawn service or did their own lawn maintenance. On average, participants had lived in their current home for 5.7 years, with highest percentage of participants reporting three years. This number does not reflect the number of years they have lived in Florida, just the number of years lived in current home.

Detailed Findings

The report findings are based on the entirety of the focus group discussion and not just based on the quotations included in the report. The discussion that follows is inclusive of all the research and the selective quotes are not exhaustive, but are meant to be illustrative examples. Selected responses from participants are presented in italics with the group number listed after the line.

V1 – The Villages 10:00 am group

V2 – The Villages 1:00 pm group

P1 – Port Charlotte 10:00 am group

P2 – Port Charlotte 2:00 pm group

L1 – Lakeland 10:00 am group

The findings will be organized under the headings of the research objectives and then organized by subheading.

Objective 1) Understand homeowners' feelings about their lawns, landscaping, and gardening work.

People were asked to describe the ideal lawn, what they like and dislike about their lawn, and what they consider to be nice lawns in their neighborhood. Green was the primary response, although variation and trees were also important. Some people were interested in environmental and maintenance issues.

Some comments revolved around greenness, grasses, lawns and the desire for a "park like" setting.

I will say this: one of the reasons I decided to move to The Villages is the fact that it has a very park-like atmosphere. It's very nice. If you drive down the streets you see the lawns nicely taken care of. They're green and nicely taken care of. If you go outside of The Villages, you know, where people don't water their grass and that, it's dumpy looking. And in order to maintain a park-like environment that I like living in I think that you need to maintain. And I think that it's imperative that my neighbors do the same thing so that we can all enjoy the beauty of a park-like atmosphere. And I would not like it if they said okay we're going to double, triple, or quadruple the price of water so you don't water and all these lawns start going brown and dry and weedy and so on. I would find that very upsetting. VI

I'd rather have grass in Florida (rather than xeriscape). VI

It is green P1

You have to have green P1

Beautiful thick grass P1

Others preferred less lawn and more trees and variety.

I would have more trees. P2

Less lawn, no grass, more trees. P2

Something that accents the lawn, I would like low-maintenance trees and such so you don't spend a lot on water.

Variety. I like trees, bushes and lawn. Personally I don't like the trimmed row of hedges, that formal garden look. I like a landscape that has some wildness to it. LI

Flowers. LI

We have oak trees and I like the oak trees. LI

A few considered the environment and cost when discussing ideal landscaping.

Florida-friendly. I got the sign from the University...we did it not only because the price of water, but because our water resources are precious. L1

Charlotte County forced us to use so much lawn (in new construction) and made us put in an irrigation system. We didn't want it...you have to be green. P1

Trees, a lot of shade. It brings the cost of A/C down.

I would like to have zero-scaping (meaning xeriscaping), but it's not beautiful. P1

Some just wanted low-maintenance yards.

I have to have someone else do my yard because I cannot work in the yard anymore. P2

We have everything we want, we have a big yard, but it's a lot of maintenance. P2

I would like low maintenance trees and such so you don't spend a lot on water. P1

FYN is easy to maintain. L1

Low maintenance and flowers. L1

Along this line of inquiry, we also asked people what they thought a lawn said about the home owner and how neighbors influenced each others lawn care practices. Many indicated that they looked to their neighbors for advice, some were envious of their neighbors yards who were watering too much, and others resentful that their neighbors were wasting water.

I have a neighbor that didn't water and the neighborhood started pressuring him and he started watering. V2

In normal times, if somebody has a beautiful green lawn it's because they are using too much water. P2

On my street, almost everyone has irrigation and people try to compete. Their lawn looks better than mine. They all have nice lawns and keep them up well. P2

It's an extension of ourselves. We see a big difference in renters' yards and homeowners' yards. L1

I think (if someone doesn't take care of their yard) it means they don't care and other homeowners think that also. L1

It tells who you are – some people have an immaculate yard, but are never out of the house – usually people with kids or families, and they want everything to look immaculate just for the

look. Certainly if you let your yard fall apart and drive your pickup truck on it, that's one extreme. I tend to be more the middle of the road, for example, I haven't used fertilizer on the yard for over ten years and it still looks good, its just chemical that goes on the lawn for no reason. They make the yard a bigger priority then it is...L1

Objective 2) Determine how homeowners are currently irrigating their lawn and how they decide their irrigation schedule.

We started by asking people about their watering schedule and how frequently they irrigate. The initial response from most participants was to answer in line with the local regulatory requirements. However, subsequent discussion revealed that participants considered the weather when deciding to turn their irrigation system on or off. Clearly the amount of rain and when the rainy season started was a motivator for changing irrigation practices among these participants.

Once a week, if it's not raining. V1

Once a week, but I have my irrigation system off right now. V1

With the rain, we don't water at all. V1

Extra watering helps with the flowers. I've started watering flowers by hand, but the lawn is done once a week. V1

We've had some drought years where we were supposed to water once a week, but I water by hand any plants that I want to live. I don't care about the ground, but I do care about my plants. I make sure that I water them. During the rainy time, the water system has been off completely. When the weather is mild and it stays green, we don't normally have the water system on. V1

We are only allowed to water our lawn for a total of 30 minutes so in the winter, I water my grass twice a week for 15 minutes each. V1

Once a week for thirty minutes. V2

I turn it on weekly and use eye judgment. V2

I have my irrigation system on all the time, and it is set for once a week. V2

Never. P1

Dry season – once a week. P1

We are only allowed to water once a week. P1

We have a well, we are only legally allowed to water once per week. P2

*I water once per week, in the morning and the evening. P2
I don't water lawn, I water flower beds. P2*

I watered only once this week. L1

Back when we had grass, we were watering twice a week. Now the restriction is once a week, but we have neighbors that water twice a week. L1

We asked whether they had an irrigation system with a rain sensor and whether they thought the rain sensor worked or not.

Does your irrigation system have a rain sensor?

Yes.

Does it work properly?

No. They don't work at all. It'll be pouring down rain and the sprinklers will still be going full blast. V1

I don't think mine is working either. It comes on in the middle of the night. V1

I don't know how it works. V2

It is attached to the gutter and when it gets x amount of water it shuts off when you have a lot of rain. I'm not sure if it's working properly. V2

You never know if it's working properly. Yesterday we had a big rain and my neighbor's system was still running. No one here is going to climb up on a ladder and see if it's working. V2

The sensor is only for a certain period of time. V2

There is no indicator light. V2

Mine works. (2 different people in V2)

I've never tested it and never noticed. V2

I think you can trust that it works. V2

<Rain sensor is located> as high as it will go. P1

I know it is working if in the box, the red light is on. P1

There is a code that requires rain sensors. You need a permit and have to do it, you don't get away with much. P1

I see people who are watering in the rain...but their rain sensor is not working. P2

We have a rain sensor and no, it doesn't work. L1

We probed for motivators for irrigating or not irrigating the lawn as well as indications that the lawn has been watered enough. Responses loosely revolve around issues of monetary cost, water conservation, regulatory requirements, appearance and aesthetics, and availability of fresh irrigation ground water.

Cost

It's too expensive to repair a brown lawn. V2

We knew water was expensive, so we had a well dug, but can't guarantee that we have good water. We spent lots of money on well and such, started to use the water, and all the plants died. We took a sample to the health department and they told us that the only thing that could live in the water was saltwater fish. We went to SWFWMD and got great help from them. We had a second well dug, but we still don't have good water. Two wells we have to abandon both. P1

We did not want an irrigation set up to city water because it's too expensive. P1

Won't water because the bill was over \$140. P1

I don't water because of cost. P1

Conservation

By over watering, you're wasting water. V1

I would be concerned about water usage and we have to watch our water usage and sometimes lawns have to suffer. V2

It's not the end of the world if your grass is brown, this winter I was feeling guilty because our grass looked so good and we must be watering too much. V2

If I had grass that I didn't have to water lot, I would do that (expense) because it's more of an answer. P1

Issue is also availability. We don't conserve and more people coming in, then the more salt water comes in, issue is potability. P1

I remember a time when they didn't want us to take showers (in order to conserve water), but still they continue building like crazy. P1

We might run out of water soon with all the development...grass takes a lot of water and the water table keeps dropping. As long as the county requires grass and irrigation, we'll never come up with a solution about the water. P1

I try to conserve water inside, don't flush every time, take less showers, etc, and we went down 2000 gallons. P1

If we did have an irrigation system, we would water based on restrictions, because we believe in conserving and following the rules. P1

I catch the water from the sink or the shower - while I wait for it to get hot so I can water the plants. P1

Appearance and perceived plant needs

I'm not expert, I go on the basis of experience. V1

I do what I do based on what I see in my lawn. V1

I don't change how much I water unless there is a drought. V2

If I saw a stressed spot, I would leave the water on that spot for a longer period of time. I will go and hand water it. V2

I don't water (at all) because it goes dormant and then it rains. P1

One (neighbor) has this beautiful grass. You know they are watering too much. P2

Yard maintenance or preference

When we have our lawn sprayed, I do water my lawn extra. V1

I just follow what the water maintenance says. V2

It rains everyday, why do you need to water your lawn. All beautiful weeds are green, let Mother Nature take care of it, don't worry about it. P1

I think people aesthetically want their house to look nice with, you know, palm trees, something that's low-maintenance, you know, lighter on your wallet than having to put out money on a ton of water, and you still get the beautiful lawn that you want or landscaping that you want. P1

It ain't gonna do me no good if my grass is greener than my neighbors. P2

Objective 3) Investigate what motivates people to change their irrigation system, schedule or methods.

The majority of respondents had already adjusted their irrigation systems for the rainy season, and some articulated that they had changed along with new restrictions from irrigating twice to one time per week. In order to understand other reasons why people might change their irrigation methods or systems, we asked them to describe what they would look for to indicate that the lawn was over watered or what would happen if the lawn was over watered.

When it's soggy between the houses, you walk through and its up to your ankles, that's a good sign that you are over watering. V1

You can invite all kinds of fungus and mold and nematodes, so it CAN kill your yard to over water. V1

When we first moved here, I put out the cans to see how much water was bring put out, that's how you see if you're over watering. V1

It will start rotting. V2

Weeds. V2

Overall yellowing of the grass. V2

When the leaves start to close on the bushes. V2

You get a fungus. P1

Turns yellow and starts to die. P1

Landscaper told us when you see little round plants, you'll know you are watering too much. P1

It would go down the hill, I don't know why. P2

I don't know what would happen, we never tried it. P2

Sprout white things, look like mushrooms. P2

If soils are too moist, the grass can become drought intolerant. L1

It's possible to over water, yes it can cause problems. L1

Root rot and fungus. I don't know if chinch bugs like water or not. L1

Some didn't think it's possible to over water in Florida, because the sandy soil drains so quickly.

I don't think you can over water. V1

Depends on location. My lawn in the backyard soaks up water so fast. V1

Sandy soil in Florida - you can't over water because the soil soaks it up. V1

Last night we had a pool of water. Within 2 hours it soaked up. V1

It does get soggy in some places, it has to do with the type of soil. V1

Nothing happens when you overwater. V1

It depends on the type of grass you have. V1

I think here the way the landscaping is we don't have a problem with too much watering. V2

Can't water St. Augustine grass too much. P1

Trouble is where we live we have sand, when it rains the water goes right down. In other areas, it is black top soil and water stays. In sandy areas you have to water at least twice a week to keep a good lawn. P2

We also asked people how they know when their lawn needs to be watered and what indicators they look for when deciding to water the lawn.

I look at the grass and see if it's yellow, check the sprinklers to see if they're watering right (covering the area of grass.) V2

If you walk on it (the lawn) and the leaves don't come back up. V2

If its crunchy when you walk on it. V2

It turns yellow. P1

The guy who does the insect spraying tells me. P2

My lawn would turn brown. P2

Objective 4) Determine the extent that people are already changing their irrigation system in response to changes in weather patterns, seasonality, or the dormant growth periods. We started by asking people what they thought of two different activities.

What do you think about watering your lawn every other week during the months of December, January, and February when the lawn goes dormant? Do you think it's a good idea or what

questions would you have? Many respondents indicated that they would believe the message and specifically that they knew the grass was dormant during that time period, they just didn't realize that those months were the "dormant growth period" so to speak.

I've heard that you don't have to water as much, but I've never heard a time span. I've heard that it goes dormant. V1

I heard it doesn't grow as fast. V1

Different types of grass go dormant. V1

I wouldn't want to miss the Thursday that I was allowed to water. V1

How can you set the sprinkler to every other week? Manually? The system says that it has a 7 day cycle. You would have to do it manually. To reduce the amount of water is simple. V1

I've lived here seventeen years and in the winter it does go dormant and needs very little water. I just manually turn on my watering system. V1

There is still growth in the grass. V1

I find that the only thing that grows during the dormant time is weeds. V1

The term dormant means to me that we don't water the lawn at all. We still have to have someone come mow our lawn. V1

It depends on the type of grass. V2

I would rely on the expertise of the lawn maintenance guy. V2

If it's dormant, it shouldn't need to be watered. P1

Yes, if it's dormant, more water would be damaging. P1

Yes, we knew that from living here so long. P2

Every year it works that way, but now we are way below normal (rainfall). P2

Perceived barriers to this implementing this specific activity.

Depends on what season it is. Two months ago it would have been bad because it was so dry, but now with the rain it would be o.k. V1

You can't afford to lose your lawn. V1

Depends on how much rain we're having. V1

I would use my own judgment and evaluate the effect of what the expert said. V1

It would depend on who was saying it, if it were the county extension or some reputable person, than yes. V2

I don't think it goes dormant because it keeps growing. V2

There are some people that read that the grass is going to go dormant and they start watering less and force it into dormancy. I wouldn't believe no matter who said it. V2

If someone said it, I might believe it, but I would take action based on what I see in my own yard. V2

I would want to know the scientific reason why that needed to be done. V2

I'm on vacation. P1

If we are away, we don't make arrangement for people to water when away. P1

Water once more, roots stay down, water less and roots stay closer to the surface. P1

The other action we asked them to discuss was whether they would consider turning off their irrigation systems during the rainy months of July, August, and September.

Yes, this is the rainy season. P2

Yes, if we have a normal rainy season, you never have to water the grass. P2

After the rain starts, the grass turns green again. P2

It was obvious from responses to questions about irrigation frequency that many participants were already practicing this behavior. They had already turned off their system at the time the focus groups were taking place (August and September.) In nearly all groups, a majority of the participants indicated that they had turned off their irrigation systems recently.

Three or four weeks ago, we turned it off because of rain. V1

Two weeks ago we turned it off. V1

Mine has been off for about four weeks. V2

With the rain, we don't water at all, we just monitor it. V2

Shut it off in the rainy season. P1

No irrigation – Mother Nature. P1

Our irrigation system is automatic, but it doesn't work properly, so we just turn it off. P2

Only in the flower bed areas – which has a micro irrigation system, and I can selectively choose what to water, the lawn hasn't been watered in a couple of weeks. L1

We haven't watered since we had a good rain. L1

We turned ours off and are on a soaker hose. L1

We watch the weather and when it rains, we don't need to water except when the rain doesn't get to certain plants.

Perceived barriers to this behavior.

Just because it's the rainy season, doesn't mean you get rain. P1

I have plants that I still have to water when it rains. P1

My system has a rain sensor. P1

We investigated who the participants consider to be credible sources of information for irrigation and lawn care practices and where they received information in the past. Repeatedly, participants talk about their friends and neighbors as influencing their behavior or as sources of information. They also refer to “Master Gardeners”, the “Extension Office”, their landscape company, and hardware stores as sources of information. They believe people with credentials and those without some “vested interest.” The District, the Department of Agriculture, and the Utility were suggested, and there was clearly a need for the messenger to be scientific, have local knowledge, and be non-biased.

Master Gardeners. V1

The University. V1

Horticulturists. V1

Anyone with good credentials. V1

Someone familiar with our environment and local area. V1

Need someone local that knows the area. V1

We have an agriculturist whose articles get in those glossy magazines. V1

The Department of Agriculture. V1

I didn't get information (on my irrigation system), but asked the neighbors and they showed me how to do it. V2

I called the utility company (at the Villages) and they came out and showed me how to use it (irrigation system). V2

I asked them (the utility) to come back and help and they did. V2

It depends on who was saying it (a message on irrigation), if it were the county extension or some reputable person than yes, I would believe it.

I would rely on the expertise of the lawn maintenance people. V2

University of Florida Agriculture Extension V2 (many in all groups)

Home Depot. V2

From neighbors. V2

I pay for my information, I hire people. V2

My neighbor – they've been here for a long time. P1

If you have a question, call SWFWMD – they are full of information; would have done more like drip irrigation if we had more information (when we first moved in)...P1

I have a friend who is a Master Gardener. P1

Garden Club. P1

Native Plant Society. P1

I would believe the neighbors. L1

USDA or Ag extension – they have the background. L1

IFAS has been very helpful. L1

I have a couple of friends who are higher up with a large national landscape company, so they are good sources of information on what to plant where. L1

The guy writes in the paper every Friday and tells you what you should be doing at different times of the year. L1

Here is an interesting dialogue between three people who were asked who an irrigation message would have to come from to be believable.

Southwest Florida Water Management District. V2

No, I would want to hear it from someone without a vested interest. V2

The only thing that works for me is when they come around and say you're getting a fine – the guy that's going to hand me a citation. V2

Objective 5) Suggest perceived barriers to behavior change and possible strategies for motivating behavior change.

One possible physical barrier to people changing their irrigation schedule is complexity or difficulty adjusting the sprinkler system timer. However, in this study responses indicate that participants were generally confident with their ability to alter the irrigation system timer, however, many of the respondents were from residents of The Villages, where irrigation system maintenance is accommodated through various methods.

The discussion will be focused on The Villages, where all of the participants said they were somewhat to very knowledgeable about their irrigation system and many had used the directions to remind them about utilization. The Villages is an exceptional case, however, because the utility has done an extraordinarily thorough job of facilitating proper irrigation by sending people out repeatedly to provide hands-on assistance, regularly mailing inserts to remind people about irrigation practices, providing reminder prompts for the irrigation boxes, and coordinating the days and times people are permitted to water. It is unlikely that the public in general is as knowledgeable and accommodated with directions as residents living in The Villages.

I don't have a problem with it. V1

Our timers are all set up and it's pretty easy to change them. V1

It's not difficult. V1

The person came and showed me what to do and I forgot. V1

We have printed instructions on the box. V1

I'm not geared to that kind of thing and I'm by myself so I have to try to learn about it. V1

I forgot how they told us to use it, but each time I have to figure it out. V1

When we make an adjustment, we refer back to it (DVD). V1

I refer to it to set the days of the week. V1

One you've done it a couple of times, it's like driving a car. V1

We read what's on the box every time we use it. V1

My husband takes care of it. V1

You can't comprehend everything, you definitely need a refresher course. V2

I use the Hunter DVD to remember how to use the system. V2

I need pictures and diagrams. V2

I watched the neighbors. V2

I didn't get any information, but I asked the neighbors and they showed me how to use it. V2

I played around with it. V2

I had to get the DVD out to find how to change it to one day a week. V2

I have to review it every so often. V2

Another issue and potential barrier with irrigation systems is whether they are capable of being programmed for intermittent periods of time. For example, how many irrigation systems can be programmed to water every OTHER week and how many people are programming their systems in general? In our focus groups, most participants did not think this was possible.

It (sprinkler system) can be programmed to turn on and off, but how would it know the weather patterns? V1

The (sprinkler) system has a seven day cycle so if you were going to do it every other week you would have to do it manually. The system is not going to be able to do it. Oh, one more thing you'd have to remember! V1

I change the duration. V1

It's not a smart system. V1

I've got to figure out the equipment to be able to turn it off. V1

No, it's just goes on and off. V2

It's not like Tivo or anything like that where you program it to, I guess, to water eight days down the road or something like that. V2

I had multiple programs and didn't notice it. V2

We don't program ours at all. P2

We have ours timed. But you never know what the weather is going to be. You can program it one way and the weather is another way. P2

Another barrier to change is just the act of changing. Setting something once and forgetting about it is much easier than altering the schedule, or changing the method. In social marketing, we consider this the “market competition” or the other behaviors people would prefer to do instead of the one we are proposing. In the realm of irrigation practices, proceeding with “status quo” is by far the easiest behavior to implement. Participants speak to the need for “curb appeal” and “neighborly aesthetics” which we will include in this section as well as the desire to “just leave things the way they are.”

People will continue to do what has worked for them in the past, unless something drastic causes them to change. One area for continued exploration is to quantify just how many people share the same opinion as these people who never change their irrigation schedule throughout the year. Another area of investigation is to quantify how many people are out of town vacationing, or living somewhere else during these two seasons. A more subtle and challenging measure to consider is how many people would be unwilling to change anything about their yard maintenance simply because it works for them, or because they fear their homes marketability may be impacted.

No I never change it. V1

I would do things just the way they are. V1

Most of the snowbirds left during our dry season and so their sprinkler systems are going full blast and after they left we've had the rains come but they're still running because there's nobody to adjust them. V1

I would just leave it the way it is. I'm happy. V2

Mine stays the way it is all the time, year round. V2

My neighbor is selling his house and has good grass, so perfect. Every evening the sprinkler goes off every night, every night while he is up in Canada. P2

If we notice the neighbor is watering too much, we would go and tell them. But if they are not there, and the system is set, there's really nothing you can do. P2

My neighbors water the same all year round. L1

Regulations and watering restrictions can confound typical irrigation practices. In the discussion, it is apparent that participants trust the water restrictions as credible and scientifically based and rely on them to tell them when to water. However, rules are also only as good as their

enforcement and a number of participants expressed frustration that others do not heed the restrictions. However, most of the participants tended to water according to (or less than) the restrictions.

They (the water restrictions) must be based on some kind of study to determine why to water once a week, so I believe them. P2

The rules are made to conserve water. P2

I don't know how good they are at enforcing the rules. V1

They won't say anything if you have a fertilizer sign out. V1

We've had a warning. V1

They are strict about it here. V1

I'd like to see enforcement of the restrictions. V2

If they enforce it (meaning the water restrictions). P1

People would have to call the police. There are no water watchers. P1

People also think that reclaimed water is a source of unlimited irrigation water and they want to be asked to change practices based on some true need, not just speculation.

Well if they were saying that, you know, we're really low on water, which I can't imagine because we use the reclaimed water, then I would have to consider that I need to do something to help. But if they're just doing it as a test or experiment and my lawn suffers, I'll go back to watering like I used to.

Building codes and homeowner association requirements hinder water conservation efforts by requiring that new homes install large amounts of grass and existing homes to maintain their yards with a certain percentage of lawn.

Is there anything stating we have to have grass? V1

If you live in a Villa, you don't have to have grass. V1

I wouldn't mind getting rid of the grass. V1

We're building a house and we have to sod everything. Had to put in irrigation/sprinkler system because we don't want the lawn to die. We had to sod, wanted to put straw down and hydro-seed, but were forced to do this. We didn't want to water, we wanted to conserve. P1

Charlotte County forces us to use so much green, we wanted to put in stone and such. They made us put in irrigation system. P1

Wait until you get your bill. Our (first one) was \$900. P1

I don't think you should be forced to put in lawn. P1

For years I've been complaining about the construction, but it just doesn't stop. P1

We have neighbors that water twice a week (at least). We talked to the neighbor several times and my husband sent them what was in the paper, but it doesn't matter to them. They (city) took their name down and they said they would go talk to them, and if they keep doing it they will be fined. I thought that was o.k., because we are friends. L1

Along these same lines, people tend to point fingers at others before changing behavior, as in “Why should I do x, y, z when the establishment isn't.” This is not only in the discussion about what local and regional efforts are doing to protect water resources in the long run, but also that commercial enterprises and common areas appear to be wasting water.

I play on the golf course and I know that they use those sprinklers like you would not believe because I've gone out there when it's been so wet that the ball doesn't go any place. V1

I would ask about the common areas that are being watered every night. Why are we being asked to cut back on water usage and they aren't? V2

(I) saw water going to waste from a hydrant and called the water company and said why don't you have someone catching all that water? She told me “We don't have the manpower to do that.” I resent my water bill when I see all this hydrant water being wasted. P1

Does our government have any long range plans (for solving the water shortage)? P1

What is Port Charlotte going to be faced with in the next ten years about water, septic systems, etc...P1

Do commercial companies get fined? They water all the time. P1

Why are they letting builders put homes up – lots of water being used. P1

You call the water people and they say ‘Oh you've got to do it once a week. You've got to conserve’ and all that and you call the service that does our fertilizing and they say ‘oh well, if you don't water twice a week your lawn's going to die.’ So what do I do, you know? Sometimes you get into conflicting information. V1

We asked people what information about lawn and landscape maintenance they would be interested in learning more about.

I don't know why we haven't done xeriscaping, we should be doing that. V1

What the benefits of drip irrigation would be. Does it use less water? What are the expenses? V1

I'd like to know what that does to the whole ecosystem if you're putting a lot of fertilizer on it and it seeps down into the water system. V1

How is fertilizing with the watering system different than regular fertilizing four times a year? V1

We were new to Florida and the southern lifestyle. How often to water palm trees and water turns the ends yellow? ...it would have been nice to have (that information) when we moved in. V1

Different types of irrigation systems. V1

I'd like to see a different type of irrigation offered than what we have now, because these sprinklers get broken. I like the idea of drip irrigation. V2

Native plants. V2

I want to know what the county's long term plan is for building, water, etc...P1

Where is all the run-off from septic going? P1

What types of grasses, plants, and vegetation is good for my yard? P1

Participants also indicated how they would prefer to receive information. This section is divided into two parts – how people have received information in the past, and methods they described for how they would like to receive information in the future. It's interesting to see the difference in responses.

Internet. V1

Paper flyer. V1

If my water bill came with a little note that said water every other week then I would believe it (when asked if they would believe that watering needs change in dormant season). V1

I like articles in the newspaper by experts. V1

Seminars, hands on information. V1

I like to read, and have someone to tell me, also. V1

I don't think there is a single source better than others, they all have a benefit in attracting certain following. V1

I like to read articles in the newspaper, because I read it everyday. But if I have a certain problem, I am going to Google it. I can go and download adobe pamphlets... V1

If there was a program on the TV that had someone show works with Florida landscapes, I would watch it. V1

...you need someplace to go for specific information. V2

I'd go to Home Depot to find out about drip irrigation. V2

Environmental Expo. V2

They could make a movie. V2

All of the University information is available on line. V2

The water bill has ways to conserve (water), but how many people read them? P1

I don't get a water bill on paper, I get it electronically. P1

Government access channel, you could run short segments on things like this, water conservation, irrigation, etc...P1

Workshops at senior center and show the serious situation we are in (cost and availability) and get the information out and get people aware of the situation. P1

Radio too! I like things that I can listen to in the car more. P1

Attending workshops is great. And children should be involved too, to make it easier for families to attend. P1

In the past, where have you received your information on lawn care, irrigation and landscaping?

UF Website. V2

Neighbors or the Home Depot guy. V2

My lawn guy. V2

Google. V2

Ideas, methods, or messages that you think will encourage people to conserve or use less water?

Literature to educate people, like about the different types of grasses they have. P1

Need to educate the county (government personnel) P1

Our thought process is all wrong here. We are being told that we have to have so much grass, when we should be told we are only allowed to have a little grass. P1

Until the county is on board, then nothing will change. They could require that if people want the homestead (exemption) they have to attend a lawn and landscape maintenance class every year. P1

When (new residents) move into the county, they need to be told this type of information. P1

Reduce bills if they attend a class or workshop on conservation. P1

Workshops bring out discussion and word of mouth. P1

Change perceptions about what is good looking and what is not. A Florida yard is one that does not need to be lush and green. P1

(Commenting on previous suggestion) Real estate agents who sell the house and say the lawn's ugly unless it is NOT a perfectly manicured lawn! P1

Public school system. P1

I agree, in the school system to instill in children and tell them what the future holds for them. P1

Children are outspoken – they come home and tell parents what to do. P1

Availability of potable water, and lack of it. P1

Have things installed to conserve water – like that the water only stays on when you hold it. P1

Well, those automatic flush toilets are crap – it flushes three times before you leave the stall. P1

We need more reservoirs to capture and hold fresh water. P1

If big suppliers have access to most of us and had native plants, not necessarily just the exotic stuff, that would grow all winter season, then we could use them, but no one has them. P1

We went to one of those places and they had plants labeled that were Florida-friendly. P1

Tell people to cut the grass higher, and than they don't have to water as much. P2

Develop some type of grass that doesn't use as much water. I think UF is working on something like that. P2

Get people to be more conscientious. Even though they are hitting us with regulations, it goes in one ear and out the other for most people. P2

If you want information to get out, it needs to be done by the state or county, but we have no money. P2

Further penalties. In fact that's why I took my timer off the irrigation system. I read in the paper that people are getting fined because their timers were on and they were watering on the wrong day. It was the potential for it costing money that caused me to change. L1

Apparently high water bills don't make a different. L1

Probably threats of fines won't do it, but actually enforcing it and fining people would, but they don't have enough (enforcement) people for that. L1

Information on the utility bill – that's where people see the cost of water and it would impact them to see it...L1

Our sewer bill is twice as much as our water bill, and I wish they would differentiate (indoor and outdoor water use.) L1

When we installed rain barrels, our water bill dropped from \$200 to \$42. L1

I think a separate meter would be helpful. Yes, me too. L1

Discussion

UCF ISBS was engaged to assist the District with social marketing research, loosely designed around the concept of asking people to consider the weather when deciding to irrigate their yard or not. The focus group discussion and analysis reveal that the people who attended these focus groups were already doing that. Additionally, by far a majority were “taking control of their irrigation system” during the summer months by turning them off entirely. We suggest that if these groups are representative of the public at large, people are already doing this action. The District should conduct a survey to evaluate how many people are already doing this before proceeding with a full-scale pilot study around this behavior.

However, our findings suggest that encouraging the winter behavior of “watering every other week” is a little more difficult to understand. It is probably the case that the people in these groups continue to water once a week throughout the winter, and it would be challenging to get them to alter that schedule for a number of reasons. For one, many participants didn't think that

their irrigation systems could be programmed to skip a week, and they would have to remember to turn it on and off. Another was that people were out of town at that time. One of the biggest barriers to this behavior is that it is just counter-intuitive for people to see the lawn turn brown, and use that as an indication not to water, although one respondent did just that.

What we do during the winter time is we let the grass tell us what to do. If it's mild and it's still green then we'll do our regular watering. But once it turns brown we don't water it because usually that means there's a cold breeze and there's no growing going on, so until it starts showing green chutes again we don't water. VI

Quantitative research may also clarify how many people interpret the lawn turning brown in the winter as an indication that the lawn needs to be watered, vs. an indication that it's dormant and doesn't need to be watered. Replacing the lawn is perceived to be much more costly than risking either a fine for watering off schedule or the cost of water.

Clearly, regulation is a major influence, and people interpret the regulations as a scientifically-based effort to conserve water. In the focus groups, all participants were respectful of the regulations, which is not surprising for a couple of reasons. It is common for people to say what is socially desirable in settings where people don't know (or trust) each other. Many people initially answered the question about irrigation frequency with the socially desirable answer – their regulated irrigation schedule. This doesn't mean that they are lying; it means that they are saying the right answer and aren't thinking through their answer very thoroughly. It's just the first response that comes to mind. With further probing, it became evident that other factors, besides regulations, were influencing irrigation practices. Consider the different groups, The Villages has their irrigation schedule implemented for them by the utility who assigns their day and time and sends someone out to program it into their system. Port Charlotte had a large number of people who weren't irrigating at all because of the cost of city water and because they have a saline surficial aquifer. The Lakeland group had two people who were environmentally minded. So, these types of individuals are not concerned with regulations, or changing regulations, (except in Port Charlotte, where people think the regulations are too loose). They are concerned with the health of their yards and, as long as the regulations don't impact yard health, they are fine with the regulations. They are also irrigating less frequently than the regulations, because they are changing their irrigation schedules throughout the year. The segment of the population that is resentful of the lawn regulations doesn't appear to be present in the study groups.

On the contrary, the people in these study groups appear to be very actively involved in gardening and “cultivating” their homes landscape. They watch their yard to determine how much water it needs and some described visual indicators that alert them to watering needs, like yellowing or folding leaves or “crunchy grass”. Homeowners who are actively “cultivating” a yard watch the plants and the weather, and adjust watering patterns accordingly. It seems that the participants are particularly gardening oriented, but we are unable to make this conclusion without collecting data from the general public.

Homeowners who are not actively “cultivating” their landscape (or are physically absent or unable to) are more likely to be doing the least possible to keep their yard looking as good or

better than the neighbors. Further investigation to differentiate this audience into landscape cultivators (those who are pro-actively tending to their landscapes) vs. landscape sustainers (those who just do status quo) vs. landscape competitors (those who MUST have the greenest lawn on the block) may shed some light on who needs to be truly targeted with marketing strategies.

Due to self-selection bias, we suspect that most of our participants are landscape cultivators. This assumption is supported by the fact that most of the participants were actively involved in gardening, knowledgeable about operating their irrigation systems, and aware of the agriculture extension office. Furthermore, some of the participants were familiar with Florida-friendly landscaping, and many said they were interested in more information about alternative irrigation practices. The fact that they showed up to talk about irrigation practices may be an indication that they care about their yards. The ones who didn't show up may be the ones that are not interested in the topic (not even for \$50), and likely the ones that don't think about their irrigation systems very often. The ones who didn't show up are potentially the ones using the most outdoor water and the ones that need to be targeted with an intervention. Or perhaps they are the most difficult ones to reach and should be targeted last. In either case, a clear understanding is needed of exactly who comprises the different categories of lawn-care takers and what motivates them to make irrigation decisions.

To overcome the challenges associated with self-selection bias, the moderators asked participants to think of what their neighbors would say, do, and think and to work as a committee to try to change their neighbors' behaviors. We asked them to describe what their neighbors yards look like and how their neighbors were irrigating. Through this exploratory line of questioning, we attempted to extend the realm of responses to those beyond the people sitting at the table and to diversify the response set. More information on the focus groups participants are found in the following Target Audience section.

The methods used to link problem behaviors with high water consumption may be limiting. For example, the focus group discussion reveals that people who built new homes, or installed new yards had to pay exorbitant water bills. This came about in conversations about needing to install lawn and irrigation systems, where the response was "Oh yeah, wait until you get your first (water) bill. Ours was \$900!" It is possible that these areas have higher water consumption because they have a large number of yards that were either just installed at new construction (The Villages was built since the year 2005) or that were killed by either salt-water intrusion or re-construction after major hurricane damage (Port Charlotte). The salt-water aquifer will also confound the comparison of neighborhood outdoor water use. Neighborhoods where homeowners can't tap into the surficial aquifer for irrigation will be forced to use city utility water and will therefore appear to be using more water than a neighborhood where they can draw from a shallow aquifer for irrigation. There are many other complexities to comparing neighborhoods based on water consumption, but these concepts were revealed during this study. The District should quantify how many people have a shallow well for irrigation vs use city water.

Target Audience

The study participants are actively thinking about their irrigation practices. They are watching the weather and seasonal fluctuations of rainfall. They may be more motivated and engaged than the general public and therefore it is difficult to conclude that the proposed behaviors are inappropriate because people are already considering the weather when deciding to irrigate the lawn. The District needs to do quantitative research to better understand the numbers of people who think the same way as our study population as compared to those who never consider the weather, the seasons, or anything else when deciding when to irrigate. There is certainly a segment of the population that for many reasons, does not pay attention at all to their yard. When designing an intervention, it is important to know how many of these types of people are in the target areas.

For example, it is important to consider the target audience in terms of where they are in the decision making process. We suspect that many of the focus group participants are more motivated than the general public to implement the recommended behaviors. The participants are indicative of people who are in the contemplation and preparation stages of behavior change. They are either considering the behavior and weighing options;

- I would like more information on drip irrigation -

attempting to change behavior and seeking support;

- (you should) conduct workshops for discussion like this - word of mouth -

or in some cases actively doing the behaviors suggested like those who are already considering the weather in the summer and turning off their irrigation systems. Although this information provides valuable input on the attitudes and questions of this target audience, it is unclear just how many people in the population are in this level of behavior contemplation.

Other Pertinent Themes

1) Irrigation is linked to other yard maintenance practices and there is clearly a link between fertilization, irrigation, and lawnmower height. People asked about liquid fertilizer, and indicated that they watered more frequently after fertilizer is applied.

2) People discussed, described (in some cases erroneously), argued, and compared different types for grasses - explaining which ones go dormant, are “crab grass”, are drought tolerant, and haven’t worked well. There is a desire for more information on drought tolerant grasses and alternatives to St. Augustine grass.

3) Participants wanted more information on alternative plant media and irrigation, such as native plants, drip irrigation, Florida-friendly landscaping, and alternative sources of irrigation water (rain barrels, cisterns, and reservoirs were brought up.)

4) People are frustrated with the need to conserve water when it appears that government officials and land use planners are doing nothing to solve the big picture problem of relentless growth. Our Port Charlotte focus group participants were adamant about the need to educate the county and the state about how the existing regulations counter act their attempts to conserve water. Examples included uncontrolled growth and the building code requirements for lawn coverage and irrigation systems. There is a segment of the population that will not do what they are told until the “messenger” - be it government, academia, or nonprofit - demonstrates a commitment to act.

Recommendations

1) We strongly suggest that you take the results of this research and develop a survey to collect representative data from people living in the District. With focus group research, we understand how some homeowners may act, think, or feel, but the results tell us nothing about how many homeowners act, think or feel that way. The findings reported herein can be used with confidence, but should always be considered limited in scope, because they are the responses of individuals and not necessarily groups or communities or any representative body. Focus group input is provided by individuals and can only be attributed to the beliefs of one person or an isolated group. From this research, we are unable to draw conclusions about people in the District more generally.

2) Engaged and interested homeowners, like most of our focus group participants, should be recruited to attend workshops on how to become “water stewards” in their community. We found that people rely on their neighbors for information and that they are willing to approach and teach their neighbors. Also, high water consumers may be more receptive to messages from neighbors rather than from a government entity. That said, the water stewards would need to be accredited in some way, or their neighbors may just consider them an environmental activist or a busy-body and dismiss their input. We heard that respondents turn to neighbors for advice, but also that their neighbors often didn’t listen to them. The District’s existing NEST program may already provide the framework to engage neighborhoods in water conservation, perhaps using a friendly competition to motivate participation.

3) In areas where water is very expensive, e.g. Port Charlotte, the message should focus on how water conservation saves money since costs trump all other issues. Even in The Villages, one respondent suggested that a bill insert comparison statement may encourage people to reduce outdoor water use. Of course, this would be most effective where outdoor water was metered separately and where people aren’t primarily using surficial wells for irrigation. Some people may not know where their irrigation water comes from, which should also be investigated systematically. In areas where water is less expensive, the message should include multiple motivators.

4) University extension services and particularly the Master Gardener program seem to be trusted sources of information for motivated homeowners. The District should give or continue to give extension services a prominent role in outreach via funding, access to resources, etc. and engage them in delivering irrigation messages.

5) In high per capita water use areas, the District may consider sending someone out to maintain and fix rain sensors. This would be particularly useful in retirement communities where elderly people are less likely to climb heights to check the rain sensors, and where they are more likely to be home during regular business hours.

6) In high per capita water use areas, the District should work with utilities to provide separate metering systems for outdoor water use. This would allow homeowners and the utility to identify the source of over water use and allow homeowners to see how much money (and water) they are spending on their lawn compared to in-house uses. It would also provide the District with a wealth of data on outdoor vs. indoor water use and evaluable measures for behavior change.

7) The District should encourage local governments, developers, and homeowners associations to adopt water conservation regulations that encourage the use of drought tolerant grasses, reduced turf areas, xeriscaping, and Florida-friendly landscaping. The City of Mt. Dora has recently passed an ordinance that requires all planned urban developments to install Florida-friendly landscapes with controlled irrigation systems.

8) One consistent opinion expressed in the focus groups is that you can't over water, in part, because the sandy soil provides good drainage. The District should investigate if this belief is widely held and design a strategy to weaken this barrier. People living in poorly drained areas may believe a message about over watering, but not those living on sand hills or with sandy soils. Another message would be more appropriate for those living where even large amounts of rain disappear into the ground.

9) Social diffusion may work better in affluent, socially active, retirement communities like The Villages. In neighborhoods that thrive on community involvement, neighbor vigilance, and regulatory coherence, the concept of social diffusion is likely to work more effectively. People are more engaged in each others business and committed to the "good of all."

10) The District may consider providing alternative sources of outdoor irrigation water by holding rain barrel workshops or designing a better homeowner water holding device. Brevard County is implementing an initiative to give homeowners "1000 rain barrels by 2010" in an attempt to quantify the water saved by homeowners using alternative sources for irrigation. Research shows that at least one gallon of water is generated by a square foot of roof area for each inch of rainfall. Rain barrels greatly reduce homeowner's reliance on potable water for irrigation, but are not the best means for watering the lawn.

11) The District may want to alert people to the fact that their neighbors are being fined, if in fact they are being fined. The focus group discussion around this topic indicated that people doubted the enforceability of watering regulations, and this is likely to be a pervasive sentiment.

12) In the winter (and throughout the year), the District may use the message of “less water means less maintenance” to encourage people to stop or reduce the amount of watering. The focus group audience was definitely interested in reducing their yard maintenance. Again, this interest may reflect self-selection bias and thus requires further study.

13) The “landscape competitors” who are most interested in outdoing their neighbors may be encouraged to go to the next level of competition by having the nicest lawn on the block, while using the least water. The focus groups revealed an assumption that neighbors with nicest lawns are not abiding by the regulations. A friendly “Water Star Yard Tour,” or similar competition and a notoriety event, may demonstrate that alternative irrigation methods, proper plant selection, and understanding lawn health are more important than just dumping tons of water and fertilizer on the lawn. The District may consider holding a “Secret Garden Tour” type event where competitors are judged based on their yards aesthetics as well as environmental protection qualities. The competition could initiate with a workshop that explains alternative irrigation practices, native plants, Florida-friendly landscaping or xeriscaping, and how homeowners in their neighborhoods have implemented these practices. Thereafter, a tour of the competing yards could be facilitated with maps and instructions.

14) The following factors were identified by participants as having an influence on irrigation practices: water costs, low maintenance, water conservation, environmental protection, plant needs, and regulatory requirements. Most participants identified more than one factor. Survey research should be used to examine which factors are the strongest motivators for certain segments of the target audience. With this data, segment-specific strategies could be implemented.

References

Krueger, R. A. and M. A. Casey. 2000. *Focus Groups: A Practical Guide for Applied Research* (3rd edition). Thousand Oaks, CA: Sage.

Attachment A

Focus Group Questionnaires

Outdoor Water Use Focus Group Guiding Questions A

I. LANDSCAPE IRRIGATION IN GENERAL

How frequently do you water the lawn in general?

Do you change the frequency of watering throughout the year? If, yes, how so?

Do you consider the weather patterns when deciding when to water the lawn?

How many people have turned off their irrigation system right now? (count hands)

When did you turn it off?

How would you know if you were over-watering the lawn? What happens if your lawn gets too much water?

Who do you trust to provide lawn irrigation advice?

Who do you consider to be an expert?

Do you think that watering restrictions and/or utility watering schedules are the "official guidelines" of how much water your yard needs?

How do you know when your yard needs water? What do you look for in your lawn and plants as an indicator that the yard needs to be watered?

II. IRRIGATION SYSTEMS

Let's talk a little bit about different types of irrigation systems – and we are referring to those formal, installed in the ground systems that are run by a timer.

How many people have a formal, installed in the ground irrigation system?

How many people have a sprinkler that they set out manually?

How many people water by hand?

The next few questions are for those people with formal, installed irrigation systems, so those who don't have one, please bear with us for just a moment, there are only a few questions on this topic.

Do you (personally) know how to operate your irrigation system? If not, who does?

How difficult is it?

Did you receive any instructional information on how to operate the irrigation system?

Was it helpful to you?

How often have you used the irrigation instructional information?

Does your irrigation system have a rain sensor on it?

Does it seem to work properly?

Can your irrigation system be programmed for different weather patterns?

III. TESTING BEHAVIORS – WATERING EVERY OTHER WEEK

If you heard that your lawn only needed to be watered every other week during the months of December, January and February because your lawn was dormant, would you believe it?

What questions would you have?

Do you know what dormant means?

What would it take to get you to change your watering schedule to every other week during the dry months of December, January and February?

Cost of water?

What about increased fines and regulations?

Water conservation or environmental reasons?

What about if an expert told you that watering the yard less frequently was actually better for it?

What if your neighbor changed their watering routine to water less frequently and you really liked your neighbors yard? Would you change to watering every other week also?

Have you ever known anyone who didn't water every week? What did their yard look like?

What is the source of your irrigation water?

Would it make a difference if the source was drinking water vs. well water vs. reclaimed water?

IV. WATERING ONLY WHEN NEEDED

What do you believe would happen to your lawn if you altered your irrigation schedule according to the weather during the months of July, August and September because your lawn is receiving the water it needs from rainfall. Would you believe it?

What questions would you have?

What do you think would happen if you stopped watering altogether during the rainy season (July, August and September)? Would it make more work for you? Would your yard suffer?

V. SOURCES OF INFORMATION

What information about watering your yard and other landscaping practices would you like to know more about?

How would you like the information to be provided? For example, what format - as a DVD, booklet, workshop, website, personal consultation, or some other method)

In the past, where have you received information on lawn care, irrigation, landscaping, or other landscape maintenance topics?

Name specific sources

VI. WRAP-UP QUESTIONS

Do you have any last thoughts about lawns, irrigation practices, or ideas for how we can encourage people to change their irrigation practices based on weather patterns?

Outdoor Water Use Focus Group Guiding Questions B

I. YARDS

Describe the ideal yard, what does it look like?

What do you like about your yard?

What do you dislike about it?

What does a lawn say about its owners?

II. WATERING

Did you water your yard this week?

How often do you usually water your yard?

What factors determine how much you water?

- Weather
- Season
- Restrictions
- Cost
- Environmental

What do you think would happen if you over-water your yard?

How do you know when your yard needs water?

What do you look for in your lawn and plants as an indicator that the yard needs to be watered?

III. IRRIGATION SYSTEMS

Do you have an irrigation system?

If yes, what do you like/dislike?

Rain sensor

City vs. Well

Do the same watering restrictions apply to well water as they do for city water?

If you don't have an irrigation system, how do you water your yard?

Landscaping vs. lawn

Hand water, sprinkler

Did you receive information about how to operate your irrigation system?

Re-programming.

What happened when you attempted to change the irrigation system?

For those of you who change your watering patterns throughout the year, when do you change it and why?

How many people have their irrigation system turned it off right now?

Why?

What prompted you to do that?

Don't you have a rain sensor?

IV. TESTING STRATEGIES

Did you know that during the months of December, January and February because your lawn was dormant, you could water every other week?

Credible source?

Who do listen to about landscaping advice?

Neighbors?

Home Improvement Centers?

Others?

What factors would get you to water every other week during this period?

Cost?

Fines and regulations?

Environmental reasons?

Better for the lawn?

Did you know that during a normal rainfall year, you do not need to water your lawn during the months of July, August and September?

Credible source?

Who do listen to about landscaping advice?

Neighbors?

Home Improvement Centers?

Others?

What factors would get you to not water during this period?

Cost?

Fines and regulations?

Environmental reasons?

Better for the lawn?

V. SOURCES OF INFORMATION

What information about watering your yard and other landscaping practices would you like to know more about?

How would you like the information to be provided? For example, what format - as a DVD, booklet, workshop, website, personal consultation, or some other method)

In the past, where have you received information on lawn care, irrigation, landscaping, or other landscape maintenance topics?

Name specific sources

VI. WRAP-UP QUESTIONS

Do you have any last thoughts about lawns, irrigation practices, or ideas for how we can encourage people to change their irrigation practices based on weather patterns?

Attachment B

Focus Group Notes

Landscaping and Lawn Maintenance Focus Group Questions & Responses

The Villages Focus Group #1
August 16, 2007 10:00 AM

I. LANDSCAPE IRRIGATION IN GENERAL

1) How frequently do you water the lawn?

Most said once a week, if it's not raining

That's all we are allowed.

7 – Since it's been raining I've turned the sprinkler system off

9 – Mine is not off

6- Mine is off

8- Mine is off

2) Do you change the frequency of watering throughout the year? If, yes, how so?

Yes

1- We've had some drought years where we were only supposed to water once a week, but I water by hand any plants that I want to live. I don't care about the ground, but I do care about my plants. I make sure that I water them. During the rainy time the water system has been off completely. When the weather is mild and it stays green, we don't normally have the water system on

11 – We are only allowed to water our lawn for a total of 30 minutes so in the winter I water my grass twice a week for 15 min each.

5 – I've got to figure out the equipment to be able to turn it off

3 – Extra watering helps with the flowers. I've started watering the flowers by hand, but the lawn is done once a week

7- When we have our lawn sprayed I do water my lawn extra.

3) Do you consider the weather patterns when deciding when to water the lawn?

Yes, we look at weather patterns to determine watering the lawn.

4) How would you know if you were over-watering the lawn? What happens if your lawn gets too much water?

7 – When it’s soggy between the houses you walk through and it’s up to your ankles that’s a good sign that you’ve over watered. I set the cycle down when the grass seems to be too wet.

8 – When I first moved here I put out the cans to see how much water was being put out, that’s how you see if you’re over watering

5:35 “She was asking how do we know if we over water our lawns. You don’t really know because we don’t really have grass, we have crab grass. Worst stuff I’ve ever seen in my life. And we’re dealing with sand. I don’t think you can actually over water anything because the sand absorbs and you’re not getting anywhere. So I don’t think you can over water here in Florida.”

11 – I turn mine off when my neighbor waters my side

3- When my grass gets soggy I turn it off. When my neighbor waters their lawn I don’t turn my water on

2, 4, 9 – don’t think you can over water

8 – By over watering you’re wasting water, not based on the effect on the lawn

9- Depend on location. My lawn in the backyard soaks up water so fast.

2 – Sandy soil in Florida you can’t over water because the soil soaks it up

4- Last night we had a pool of water. Within 2 hours it soaked up/

7 – It does get soggy in some places. It has to do with the type of soil.

8- It depends on the type of grass you have.

2 – it’s all crab grass here in Florida

2, 4, 10 – nothing happens when you over water

1 – I do know that if you do over water you can invite all types of fungus mold and nematodes, so it CAN kill your lawn. The toadstools are a sign that you are over watering.

3 – You can get mushrooms even when you don’t over water. I’ve seen mushrooms on the side of the golf course and they don’t water that area.

10:16 – “Well I play on the golf course and I know that they use those sprinklers like you would not believe because I’ve gone out there when it’s been so wet that the ball doesn’t go any place.”

II. IRRIGATION SYSTEMS

5) Do you (personally) know how to operate your irrigation system? If not, who does?

Yes. We all have timers set up. We all know how to work it.

5 and 9 – I'm learning

7 – there are different types of irrigation systems throughout the villages. North of 466 are on a different meter system.

Some people are north and some are south of 466

11- I don't have a problem with it

3, 2- Don't have a problem working it

6) How difficult is it?

Not difficult

7) Did you receive any instructional information on how to operate the irrigation system? Was it helpful to you?

Some yes, some no

1 and 2 – someone came and showed us

Total of 5 got a DVD

9 – The person came and showed me what to do and then I forgot

4- We only got printed instructions on the box

7 – The question I would have that was not on the instructions is how to operate the sprinkler head and keep it from watering out into the street.

9 – I'm not geared to that kind of thing and I'm by myself so I have to try to learn about it. I have a key in my box.

3 – I forgot how they told us to use it, but each time I have to figure it out

8) How often have you used the irrigation instructional information?

10 - When you make an adjustment we refer back to it

5 – I refer back to it to set the days of the week

3 – We read what’s on the box every time we use it

7- Once you’ve done it a couple of times, it’s like driving a car

1- My husband takes care of it

9) Do you change your irrigation system schedule throughout the year? What happened when you attempted to change the irrigation system? Did it work well?

10) Does your irrigation system have a rain sensor on it? Does it seem to work properly?

16:00 – Does your irrigation system have a rain sensor? “Yes” Does it work properly? “No” “They don’t work at all.” “It’ll be pouring down rain and the sprinklers will still be going full blast.”

5 – I don’t think mine is working either. It comes on in the middle of the night.

Nobody’s works well

11) Can your irrigation system be programmed for different weather patterns?

Yes

8 – On and off, how would it know?

3- We manually turn it on.

7- I change the duration

1- Not a smart system.

III. TESTING BEHAVIORS – WATERING EVERY OTHER WEEK

12) If you heard that your lawn only needed to be watered every other week during the months of December, January and February because your lawn was dormant, would you believe it?

Yes

10 – Yes, every 10 to 14 days.

7 – I’ve heard that you don’t have to water as much, but I’ve never heard a time span. I’ve heard that it goes dormant.

6- I heard it doesn't grow as fast

19:09 – “If my water bill came with a little note that said water every other week then I would believe it”

11 – Different types of grass go dormant

9- I wouldn't change it to a week and a half. I wouldn't want to miss the Thursday that I was told to water it.

20:42 – “The [sprinkler] system has a seven day cycle so if you were going to do it every other week you would have to do it manually. The system is not going to be able to do it.”
“Oh, one more thing you'd have to remember!”

21:10 – “What we do during the winter time is we let the grass tell us what to do. If it's mild and it's still green then we'll do our regular watering. But once it turns brown we don't water it because usually that means there's a cold breeze and there's no growing going on, so until it starts showing green chutes again we don't water.”

10 – I've lived here 17 years and in the winter time it does go dormant and needs very little water. I just manually turn on my watering system.

5 – St. Augustine grows much slower

1- Flowers I water by hand.

7- There still is growth in the grass.

23:41 – “I find the only thing that grows is weeds. In the dormant time that's what you have to mow.”

13) What questions would you have? Do you know what dormant means?

8- The term dormant means to me that we don't water the lawn at all. We still have to have someone come mow our lawn.

We all think there is a dormant.

14) Who would the message have to come from to be believable, in other words who do you trust to provide lawn irrigation advice?

15) Do you think that watering restrictions and/or utility watering schedules are the "official guidelines" of how much water your yard needs? If yes, why? If not, why not?

10 – I do what I do based on what I see in my lawn

2- Sometimes I do water more

7- If we've had it sprayed I will throw in an additional cycle. Generally the guidelines are pretty up to date.

Generally followed

16) What do you think would happen if you watered every other week? Would it make more work for you? Would your yard suffer?

10 – Depends on what season it is. Two months ago it would have been bad because it was so dry, but now with the rain it would be ok.

9 – You can't afford to lose your lawn.

7- Depends on how much rain we are having.

5 – We had some people in our neighborhood that had their whole front lawn replaced because of bugs.

2- Soy grass is the best.

7- I've had St. Augustine grass for 14 years

2- We're from the north we know crab grass

17) Would you change your irrigation schedule to every other week? Why or why not?

No

2- I would do things just the way they are

18) What would it take to get you to change your watering schedule to water every other week? If the cost of water doubled, would you change? Why or why not?

Yes, that might affect it

28:17 – “I don't know why they haven't don xeriscaping. I mean really we should be doing that”

7 – I'd rather have grass in Florida

5- They do encourage you to not water a lot. Water is a separate bill. Irrigation water cost more. They encourage you to not use more.

11- They penalize you if you water too much.

Majority agree that if wage doubled they would change the schedule.

30:18 – “I will say this: one of the reasons I decided to move to The Villages is the fact that it has a very park-like atmosphere. It’s very nice. If you drive down the streets you see the lawns nicely taken care of. They’re green and nicely taken care of. If you go outside of The Villages, you know, where people don’t water their grass and that, it’s dumpy looking. And in order to maintain a park-like environment that I like living in I think that you need to maintain. And I think that it’s imperative that my neighbors do the same thing so that we can all enjoy the beauty of a park-like atmosphere. And I would not like it if they said okay we’re going to double, triple, or quadruple the price of water so you don’t water and all these lawns start going brown and dry and weedy and so on. I would find that very upsetting.”

6- Is there anything stating we have to have grass?

9- If you live in a villa you don’t have to have grass.

3- I wouldn’t mind getting rid of grass.

19) What about increased fines and regulations?

Absolutely

6 – I don’t know how good they are at enforcing the rules

10- Definitely would effect.

11- They are strict about...

6- We’ve had a warning.

8- They won’t say anything if you have a fertilizer sign.

20) What about if an expert told you that watering the yard less frequently was actually better for it? Would you do it?

Yes

7 – I would still use my own visual judgment and evaluate the effect of what the expert said.

21) What if your neighbor changed their watering routine to water less frequently and you really liked your neighbor’s yard? Would you change to watering every other week also?

2 – No, I don’t do what my neighbor does

8 – If it looked that much better I would ask what he was doing and maybe try it

6- It also has to deal with the fertilizer.

22) Would it take someone coming to your home and changing your irrigation timer?

23) Have you ever known anyone who didn't water every week? What did their yard look like?

IV. WATERING ONLY WHEN NEEDED (.50 HOURS)

O.K. great! Let's try another idea. Do you know when Florida's rainy season is? Right now! Generally, during the months of July, August and September we receive almost daily rainfall.

24) What if you were asked to alter your irrigation schedule according to the weather during the months of July, August and September because your lawn is receiving the water it needs from rainfall. Would you believe it?

25) What questions would you have?

26) What do you think would happen if you stopped watering altogether during the rainy season (July, August and September)? Would it make more work for you? Would your yard suffer?

27) What would it take to get you to consider the amount of rain before irrigating?

IV. SOURCES OF INFORMATION

28) What information about watering your yard and other landscaping practices would you like to know more about?

6 – What the benefits of drip irrigation would be, does it use less water, what are the expenses?

41:56 – “I'd like to know what that does to the whole ecosystem if you're putting a lot of fertilizer on it and it seeps down into the water system.”

5 – How is fertilizing with the watering system different than regular fertilizing 4 times a year?

6 – We were new to Florida and southern lifestyle, how often to water palm trees and what turns the ends yellow. The only way we've gotten that info is through garden meetings or newspaper, it would have been nice to learn it when we moved in.

1 - fertilizer

4 - Benefits of drip irrigation, how it works

5 - Different types of irrigation systems

10- I have somebody coming every two months. Mine looks better than my neighbor

7- I want to know the value of drip as opposed to regular irrigation? Do you use more water?

29) How would you like the information to be provided? For example, what format - as a DVD, booklet, workshop, website, personal consultation, or some other method)

7 - Internet

6 – Paper flyer

1 – Seminars, hands on information

9 – In the paper. I like the articles written by experts. Flyers and pamphlets

8 – I like her idea of the newspaper, but I like it when they have a guide handed out at a seminar

7 – Flyers in the water bill

3 – Internet (extension service website) or utility bill

2 – Department of agriculture could send pamphlets

4- Pamphlets in the water bill

5 – like to read something and have someone tell me too

6 – I like the paper, and it is nice to get emails

7 – I don't think there is any single source better than others, they all have a benefit in attracting certain following

8 – I like to read the articles in the newspaper b/c I READ IT everyday. But if I have a certain problem I am going to Google it. I can go and download adobe pamphlets.

9 – I like the newspaper articles and I like the flyers and seminars

10 – I like the pamphlets in the water bills

11 – Pamphlet in the water bill and newspaper

1 – If there was a program on TV that had someone who works with Florida landscape I would watch that.

30) In the past, where have you received information on lawn care, irrigation, landscaping, or other landscape maintenance topics? Do you remember receiving information from any specific sources? Which ones?

2 – Department of agriculture, called and asked

1 – Internet

31) Last question before we wrap it up – Do you know the source of your irrigation water – where it comes from? (Is it the same as your drinking water?)

South of 466 has reclaimed water which is everyone but number 4

11- I hate when we just got two inches of rain and I see people watering their lawns.

Unknown- I don't think we should be watering in the middle of the day though.

5 – You really shouldn't be watering the lawn in the middle of the day

10 – I have a sticker that tells me when to water

1 – On our street the guys get together and adjust the sprinklers

59:00 – “Most of the snowbirds left during our dry season and so their sprinkler systems are going full blast and after they left we've had the rains come but they're still running because there's nobody to adjust them.”

61:25 – “You call the water people and they say ‘Oh you've got to do it once a week. You've got to conserve’ and all that and you call the service that does our fertilizing and they say ‘oh well, if you don't water twice a week your lawn's going to die.’ So what do I do, you know? Sometimes you get into conflicting information.”

Good time for seminars?

In the morning or early afternoons... evening is generally bad. Weekends are bad.

What do you consider an expert?

Master gardeners

The university

Horticulturists

Anyone with good credentials

Someone who is familiar with our environment and local area

6- Anyone with credentials

8- We have an agriculturist that's articles get in those glossy magazines

7- Need someone local that knows the area

Heard about Florida Yards and Neighborhoods?

1 – In the paper a long time ago, but hard to remember what it is

3 – Awards to certain businesses for having water – friendly practices

V. WRAP-UP QUESTIONS

32) Do you have any last thoughts about lawns, irrigation practices, or ideas for how we can encourage people to change their irrigation practices based on weather patterns?

7 – Everyone is interested in doing the right thing, but we need something that incorporates into the lifestyle that we enjoy here in the villages. Providing this information to people will educate the people.

Landscaping and Lawn Maintenance Focus Group Questions and Responses

The Villages Focus Group #2
August 16, 2007 2:00 PM

I. LANDSCAPE IRRIGATION IN GENERAL

1) How frequently do you water the lawn?

1 – Once a week

2 – With the rain we don't water at all, we just monitor it.

3 – Three or four weeks ago we turned it off b/c of rain, before that only watering once a week

5 – Two weeks ago we turned it off; we have an automatic sensor, before that watered once a week

7 – I have my irrigation system on all the time, and it is set for once a week

8 – I turn it on weekly and use eye judgment

8- Once a week, 30 minutes. It has been off for about 4 weeks.

9 – Once a week for 30 minutes

2) Do you change the frequency of watering throughout the year? If, yes, how so?

7 – Mine stays the way it is all the time, year round.

3) Do you consider the weather patterns when deciding when to water the lawn?

7- It will start rotting

1- Weeds

4) How would you know if you were over-watering the lawn? What happens if your lawn gets too much water?

8 – Overall yellowing in the grass.

5 – When the leaves start to close on the bushes.

3 – I would rely on my lawn maintenance guy and what he says.

II. IRRIGATION SYSTEMS

5) Do you (personally) know how to operate your irrigation system? If not, who does?

5 – I use the Hunter DVD to remember how to use the system.

9:13 – “I do [know how to operate my watering system] but it’s tricky to set the sprinkler heads. When we moved in to the house they gave us a video tape. You don’t do it often enough to remember how to set the travel and all that. So I’m constantly whipping that tape out and replaying it to instruct myself on how to operate the Hunter type of systems.”

5,6,7,8,9- Don’t find it difficult.

6) How difficult is it?

7) Did you receive any instructional information on how to operate the irrigation system? Was it helpful to you?

Most Got the DVD except 9 and 7

9 – Didn’t get any information, I asked my neighbors and they showed me how to use it

7 - If you remembered what they taught you then good, but if not u figured it out.

1 – Watched neighbors

6- I played around with it.

5 – I found it helpful

3 – It was helpful

6 – I need pictures and diagrams

7 – I never got a DVD, they came within a week or two, you had to call and make arrangements

1 – The DVD filled in all the gaps

3 - I asked them to come back and help and they did at no charge

5 – I would ask them to come back and help

10- You can’t comprehend everything; you definitely need a refresher course.

8) How often have you used the irrigation instructional information?

1 – Once a year? I had to get the DVD out to find how to change it to one day a week.

3 – I have to review it every so often.

5 – I have the types marked on my sprinkler heads to help. I go to my video when I have problems.

7 – I have a drip system on my trees (palm trees). You can adjust it to let out just enough water.

9) Do you change your irrigation system schedule throughout the year? What happened when you attempted to change the irrigation system? Did it work well?

7 – No never change it

8 – Yes, I change it.

9 – Yes

6 – They monitor how long you've been running it and they will come over and turn it off.

14:51 – “One of yours only has to run it because it's gonna over spray into the other part. I turned mine off, I think, the second day I moved in. I turned all my sides off because the other guy was spraying onto my lawn. So there's no sense I both of us [doing it] because it got soggy. So I just turn all of mine off on the sides and I don't use the sides. And I just run the front, which is the bigger part of the lawn, like you said 45 minutes and in the back 15 minutes.”

5- I don't change how much I water unless it's a drought.

How long do you water?

3 – I'm not sure if they have a time frame, I only water it one day a week but right now I'm not watering it right now. I just follow what the water maintenance says.

5 – we have two types of heads, one is 15 min the other is 30

8 – three at 45, one at 10, and ..

9 – 30 minutes total based on the recommendation

10) Does your irrigation system have a rain sensor on it? Does it seem to work properly?

Everyone has one

6 – I don't know how it works

3 – It is attached at the gutter when it gets X amount of water it shuts it off when you have had a lot of rain. I'm not sure if it's working properly.

6 – You never know if it's working properly. Yesterday we had a big rain and my neighbor's system was still running. No one here is going to climb up on a ladder and see if it's working.

8 – The sensor is only for a certain period of time

1 – There's no indicator light

3 – Ours has a plastic sensor wired into the box and that's how it's supposed to work

9 – Mine works

8 – Mine works

5 – I've never tested it and never noticed

4 – Think you just trust it and assume it works

11) Can your irrigation system be programmed for different weather patterns?

7 – No it just goes on and off.

8 - Yes

22:38 – “It's not like Tivo or anything like that where you program it to, I guess, to water eight days down the road or something like that.”

5 – At one point mine was watering every day because I had multiple programs and didn't notice it.

9 – People don't know that you can program it.

23:37 – “Our neighbor got hers messed up somehow and she tried reading the directions and all that but the lawn treatment guy was out there and he says “I can do it” and he went out there and had it fixed in two minutes.”

How do you know when to water your yard? How do you know what to set it to?

7- When u moved in you had set times in your mailbox telling you what time and day to run it.

6- You get a sticker telling you

24:47 – “When they changed it [the watering schedule] to one day a week they put it in the paper.”

In April would you water more if you could? How do you tell if it needs more water?

In April, yeah.

6- I would water more

7- If it has brown tips

5- When the lawn dries

When grass starts to dry out and close up it gets stressed and that makes it susceptible to grubs

It gets a haze right before it turns brown and if you water then you can usually save it.

If you're under the one day a week restriction and it starts to look bad do you water more?

28:30 – “I hand water all my shrubs because basically speaking the sprinkler system is not supposed to be for shrubs.”

28:45 – “If I saw a stressed spot and the restriction was once a week then I would increase the time that I was watering in that section. I wouldn't do it more frequently but I would put more water because something is causing that one area to get stress.”

III. TESTING BEHAVIORS – WATERING EVERY OTHER WEEK

12) If you heard that your lawn only needed to be watered every other week during the months of December, January and February because your lawn was dormant, would you believe it?

7 – I think it depends on the type of grass

31:02 “You said if we heard that would we believe it. Well it would depend on who was saying it; if it was the county extension service or a reputable person, yes.”

31:24 – “Our lawn gets cut every month by the lawn guy. He doesn’t cut it because it’s not growing because he gets paid whether he cuts it or not. If there’s a need for him to cut, he cuts. So I don’t think it goes dormant in this particular place because we don’t get that much cold weather.”

1 – I don’t think it goes dormant because it keeps growing.

8 – There are some people that read that the grass is going to go dormant so they start watering less and force it into dormancy. I wouldn’t believe it no matter who said it.

3 – I would want to read more about it, but I would rely on the expertise of the lawn maintenance.

5 – If someone said it I might believe it but I would take action based on what I see in my own yard.

13) What questions would you have? Do you know what dormant means?

10 – How long do you need to be watering, the duration.

6 – I think that here the way the landscaping is we don’t have a problem with too much watering

5 – I just had a whole spot of my lawn replaced because I didn’t know water was missing a place in my lawn. I think too little watering is more dangerous than too much.

36:55 – “My concern is I think there’s a problem with over watering as far as water usage. I think we have to be careful about our water usage and waste of it and sometimes lawns might have to suffer when we’re in a drought and in general use too. Runoff is great for the lawn, but we certainly don’t want to have waste runoff.”

37:34 – “I would ask about the common areas that are being watered every night. Why we’re being asked to conserve and water every two weeks and you drive down Buena Vista and

see them on every night. So why are we being asked [to conserve water] and they are not complying?"

4 - We definitely don't want waste run off.

2 - I would ask why.

41:50 - "Well if they were saying that, you know, we're really low on water, which I can't imagine because we use the reclaimed water, then I would have to consider that I need to do something to help. But if they're just doing it as a test or experiment and my lawn suffers, I'll go back to watering like I used to."

3 - I would want to know the scientific reason why that needed to be done.

14) Who would the message have to come from to be believable, in other words who do you trust to provide lawn irrigation advice?

The water company.

4 - SWFWMD

43:05 - "So you would want to hear it from them [SWFWMD]?" "No, I would want to hear it from someone without vested interest, with a neutral interest in just my lawn."

43:22 - "Well when they come around saying if we catch you watering you're gonna get a fine then you shut it off. That's the only thing that's gonna work for me."

8 - University of Florida

Agriculture extension

15) Do you think that watering restrictions and/or utility watering schedules are the "official guidelines" of how much water your yard needs? If yes, why? If not, why not?

16) What do you think would happen if you watered every other week? Would it make more work for you? Would your yard suffer?

1 – I think it is fine.

5 – Once a week is adequate if you watch it.

No one thinks it would be detrimental.

4 - If I saw a stressed spot I would leave the water on that spot for a longer period of time.

8- When I see a stressed spot I will go hand water it.

17) Would you change your irrigation schedule to every other week? Why or why not?

18) What would it take to get you to change your watering schedule to water every other week? If the cost of water doubled, would you change? Why or why not?

7 – Citations

4 – Its not the end of the world if your grass is brown, this winter I was feeling guilty because our grass looked so good and we must be watering too much.

6 – Its too expensive to repair a brown lawn

19) What about increased fines and regulations?

Yes that would work

20) What about if an expert told you that watering the yard less frequently was actually better for it? Would you do it?

8 – I don't think so

21) What if your neighbor changed their watering routine to water less frequently and you really liked your neighbor's yard? Would you change to watering every other week also?

7 – I would just leave it, I'm happy. I don't pay attention to my neighbors.

3 – I'd ask them about it and check it out, and then I might change to conserve water.

6 – I'd go along with that.

22) Would it take someone coming to your home and changing your irrigation timer?

23) Have you ever known anyone who didn't water every week? What did their yard look like?

8 – I have a neighbor that didn't water and the neighborhood started pressuring him and he started watering

IV. WATERING ONLY WHEN NEEDED (.50 HOURS)

24) What if you were asked to alter your irrigation schedule according to the weather during the months of July, August and September because your lawn is receiving the water it needs from rainfall. Would you believe it?

25) What questions would you have?

26) What do you think would happen if you stopped watering altogether during the rainy season (July, August and September)? Would it make more work for you? Would your yard suffer?

27) What would it take to get you to consider the amount of rain before irrigating?

IV. SOURCES OF INFORMATION

28) What information about watering your yard and other landscaping practices would you like to know more about?

5 – I would like to know more about drip irrigation because I've got a couple of trees and some bushes that are in awkward spots to get to with the regular irrigation system.

1 – I'd like to see a different type of irrigation offered than what we have now because these sprinklers get broken. I like the idea of drip irrigation.

8 – I'd like to see a better design of the sprinkler system

4 – Native plants

1:01:17 – “I’d like to see; I think it’s kind of a fancy name, it’s an ET, evapotranspiration rate. When I lived in California we had them and everyday the newspaper would put what the ET rate was that day and then you would apply that 80% or 60% depending on what kind plant you had. So you knew how to regulate your water system based on how much water was evaporating out of the soil or the leaves and then I would know how to program my controller. And if they had that technology here that would be really great to know.”

29) How would you like the information to be provided? For example, what format - as a DVD, booklet, workshop, website, personal consultation, or some other method)

7 – In our newspapers

3 – Clinics sponsored by lawn care specialists

5 – Newspapers are great for certain things, but you don’t always read that so you need some place to go for specific information.

8 – All of the university information is available online.

5 – I’d go to Home Depot to find out about drip irrigation.

4 – Environmental expo

10- If it’s in the mail, yeah.

8- They could make a movie.

What about getting mail?

Not if they are trying to sell you something

30) In the past, where have you received information on lawn care, irrigation, landscaping, or other landscape maintenance topics? Do you remember receiving information from any specific sources? Which ones?

8 – UF website

10 – Neighbors and home depot

1 - My lawn guy

2 – Online search engines

3 – Lawn care person, article in magazines and the paper

- 5 – County extension, Home Depot
- 6 – From neighbors
- 7 – I pay for my information, I hire people.
- 9 – Lawn care guy and Google.

31) Last question before we wrap it up – Do you know the source of your irrigation water – where it comes from? (Is it the same as your drinking water?)

How far would you go for a seminar?

- More convenient if it's in the villages
- 7- somewhere by golfcart
- 6- oxford or wildwood
- 5 – I'd go no more than 10 miles

What are you looking for to determine when you need to water?

- 3 – I look at the grass and see if it's yellow, check the sprinklers to see if they're watering right
- 8 – if you walk on it and the leaves don't come back up
- 1 – if it's crunchy when you walk on it

V. WRAP-UP QUESTIONS

32) Do you have any last thoughts about lawns, irrigation practices, or ideas for how we can encourage people to change their irrigation practices based on weather patterns?

- 4 – it's costing them a lot of money
- 5 – All of the sprinklers go off in the middle of the night so I don't know if anyone is over watering or under watering.
- 2 – They could do a comparison of those who are following the rules and what they pay; a bill comparison.

3 – I'd like to see enforcement of the restrictions

5 - You shouldn't water at night because the water is just sitting there, you should water in the morning

6 – The only way you can get to people is through their pocketbook

4 – Environmental messages wouldn't work

Landscaping and Lawn Maintenance Focus Group Notes

Port Charlotte Focus Group #1

August 18, 2007 10:00 AM

What do you like about your lawn?

1-it is green

4-most come from up north; always green in Michigan; built house, key west landscape, Charlotte county forces u to use so much green, wanted to put in stone and such; Charlotte county made us put in irrigation system; looking for green beds

8-wasn't aware of Port Charlotte rule

4- new construction

3-easment then you have to have green

Brent – not HMA rule but a county rule?

4-yes, county rule

9-ugly year

4-in a year they will come and inspect it

What do you dislike?

In your neighborhood, what does a good lawn look like?

OR Think about a nice lawn in your neighborhood, what are the features that make it good?

10-something that accents the lawn; would like to have 0-scaping, but not beautiful; would like low maintenance trees and such so you don't spend a lot on water

4:58 – “I think people aesthetically want their house to look nice with, you know, palm trees, something that's low-maintenance, you know, lighter on your wallet than having to put out money on a ton of water, and you still get the beautiful lawn that you want or landscaping that you want.”

5-from Wisconsin, have beautiful thick grass; grass here is crab grass

1-have St. Augustine grass; have a well and sprinkler system

8-our experience – had designer to give us landscaping plan; we knew city water expensive, so we had a well done; can't guarantee that we would have good water – had water; spent lots of money on well and such; started to water; used sprinkler system and all plants died; took sample to health dept and they told us that the only thing that could live in the water was salt water fish; went to SWFWMD and got great help for them; we had second well dug, we still don't have good water; 2 wells and we have to abandon both

7-first well they did not seal it; came back third time; we have sample of water to be analyzed to see if we can use it

8-all our plants died; we did not want irrigation set up to city water b/c too expensive

Brent – cost of water major factor

9-won't water b/c bill was over \$140

8-oh yes

Brent – attractive

9-having well then you don't spend as much

7-still can only water once a week

1-well okay on certain plants/grass; but nice flowers, I have to use other water (not well water)

4-could you taste salt in water? (to Michelle)

8-oh yes

4-we had well put in and had to go down 300 feet

Brent – how many people have well?

About 3

What does a nice lawn say about its owners? What about lawns that are not well kept?

What are the benefits of keeping a lawn nice?

What makes it difficult to keep your lawn nice? What are the major problems you face?

What else must you do or give up to keep your lawn nice?

Water conservation....

What makes it difficult to pay attention to the weather and only water if there hasn't been adequate rainfall?

All-Yes, we watch weather

6-yes, we have to watch them

5-have plants that I still have to water when rains

13:20 – “We pay attention to when it rains and then we know we don't even have to hand water.”

1-yes, when we have dry days

14:05 – “Just because you're in the rainy season doesn't mean you're going to get rain.”

4-irrigation system has sensor

8-yes, ours did too, but didn't not use it

Brent – rain sensors?

4-we do

2-that is code to have a sensor in them; need permit you have to do it by code; don't get away with much

1-secret – look for native plants that don't require much water

What makes it difficult to skip-a-week of your normally schedule irrigation?

1-on vacation

8-if we are away; don't make arrangements for people to water when away

7-we put ours on a timer so we can put plants underneath it

17:34 – “Actually I do have a neighbor that is out of town and she calls me and she says ‘what does my lawn look like? Is it getting yellow? Is it this or that?’ And I tell her ‘no, you know, you don't need your sprinkler system on because we've had rain, like last year’. But since we're on water restriction she only waters once a week, like everyone else.”

Let's imagine you are on a committee to promote water conservation. How would you convince your neighbors to: Water weekly instead of more often?

1-we are only allowed to water once a week

9-it rains every day, why do you need to water your lawn; all beautiful weeds are green; let Mother Nature take care of it, don't worry about it;

1-grass gets brown whether you water

6-attacking problem not solution; out in Albuquerque, grass was dirt lawn; we might run out of water soon with all development etc., implementing grass that takes not a lot of water; water table keeps dropping; never come up with solution about the water

Brent – so on committee, what message would you give?

6-message – through university or research; develop better grass; help people put grass in; if I had grass that I did not have to water a lot – I would do that expense; more of an answer (grass takes less water)

8-seen them in Arcadia

4-friend who is master gardener, says they sell it at lawn shows

Brent – concerned about increase prices

All – yes

21:56 – “The other issue is availability. You only have so much fresh water for potable consumption.”

6-had a time when they didn't want to take showers; but still building like crazy

22:37 – “A few months ago I decided I'm going to try to save water inside; take less showers, don't flush the toilet as often, don't wash clothes as often. We went down 2000 gallons. It can be done.”

What would you tell them were the benefits?

How would you help them overcome the difficulties you mentioned before (e.g. any examples)?

LANDSCAPE IRRIGATION IN GENERAL

How frequently do you water the lawn in general?

5-never

4-dry season, once a week

Most – never

Do you change the frequency of watering throughout the year? If, yes, how so?

24:01 – “I shut it off during the rainy season. If it starts turning brown then I'll turn it back on.”

1-yes shut it off

Do you consider the weather patterns when deciding when to water the lawn?

3 & 4-yes

1 & 2-nod yes

How many people have turned off their irrigation system right now? (count hands)

About 4

1-my husband takes care of

9-no irrigation; Mother Nature

When did you turn it off?

How would you know if you were over-watering the lawn? What happens if your lawn gets too much water?

25:23 – “If you water too much you’ll develop a fungus in your yard.”

9-turn yellow, start to die?

1-can’t water St. Augustine grass too much

4-when out of house; landscaper told us use little round plants and you’ll know you’re watering too much

Brent – follow regulations?

2-more about cost

8-if had irrigation system, it would be based on restrictions; believe in conserving and following rules

Who do you trust to provide lawn irrigation advice?

Who do you consider to be an expert?

Do you think that watering restrictions and/or utility watering schedules are the "official guidelines" of how much water your yard needs?

How do you know when your yard needs water? What do you look for in your lawn and plants as an indicator that the yard needs to be watered?

3-turns yellow

9/10-don’t water b/c of cost

27:48 – “You do more damage to it when you water by hand. If you’re not watering your lawn [regularly] and then you go out there and water you’ll do more [damage] because it goes dormant and when the rain comes it comes back green.

IRRIGATION SYSTEMS

Let's talk a little but about different types of irrigation systems – and we are referring to those formal, installed in the ground systems that are run by a timer.

How many people have a formal, installed in the ground irrigation system?

9/10-no

5/6-no

Everyone else – yes

How many people have a sprinkler that they set out manually?

9-no b/c of cost

10-no, may water by hand certain plants

5-no, don't own one

How many people water by hand?

1-yes, many plants that I water

9-no, not lawn

5-no, not lawn; plants yes

8-did at one time (water with sprinkler) but not any more b/c of cost

29:55 – “One thing we did was we enlarged the planting areas and put mulch down so we have less grass and more planting areas. And we put in plants that were susceptible to this area, the native plants.”

Brent – anyone else with new home

30:42 – “We're building a house and we had to sod everything. Everything had to be sodded and we did not want to sod it. And they said ‘nope, you've gotta sod it.’ So we put out a tremendous amount of money to sod. And we had to put a sprinkler system in because when you're spending... how many square foot of sod did we have... So you put 30,000 square feet of sod in you'd better water it. So then I had to put the money out for a sprinkler system. So you're damned if you do, damned if you don't. We tried to go back and say, ‘you know, we haven't had

a lot of water or a lot of rain in the area and we do not want to sod right now. Can you give us an extension?" And they said 'no.' {We said] 'we'll put pine straw down.' 'Nope.' And our lawn was not big enough to seed, so we couldn't do that, so we had to pay a lot of money for sod and then we had to pay a lot of money for an irrigation system, which I didn't want to put in. So I'm forced to do what they want, but yet conserve water."

4-wait to you get water bill; ours was \$900

9-don't think you should be forced to put in lawn

The next few questions are for those people with form, installed irrigation systems, so those who don't have one, please bear with us for just a moment, there are only a few questions on this topic.

Do you (personally) know how to operate your irrigation system? If not, who does?

1-my husband does this

7/8-we both do it

8-easy to read and do

How difficult is it?

8-yes, easy to operate

3 & 4-yes, easy

Did you receive any instructional information on how to operate the irrigation system?

2-booklet on the cover; yes from company

8-yes, our landscaping guy gave us a plan so we know where things are

4-yes

9-on new home we don't know where it is

2-do you plan on watering?

9-no, not if raining

Was it helpful to you?

How often have you used the irrigation instructional information?

Does your irrigation system have a rain sensor on it?

All – yes

2-high as it can go

4-know it is working if in box the red light is on; it is a sender/not hard wired (antenna)

Does it seem to work properly?

Can your irrigation system be programmed for different weather patterns?

All-yes

10-plan on once I get it

4-it is automatic; it will work depending on season

8-depends on pressure of well sets for certain minutes

III. TESTING BEHAVIORS – WATERING EVERY OTHER WEEK

If you heard that your lawn only needed to be watered every other week during the months of December, January and February because your lawn was dormant, would you believe it?

8-yes

2-if dormant, it shouldn't need to be watered

6-yes, if dormant, more water would be damages

Brent – believe neighbor?

2-no

8-if have question, call SWFWMD – they are full of information; would have done more if we had more information put a drip system

Brent – did you know that the grass goes dormant?

4-certain types of grass

9-yes, certain types of grass

Brent – certain types of grass, etc

All-yes

What questions would you have?

Do you know what dormant means?

Brent – how often do you water in winter?

All – once a week

9-yes, I will once a week when get new home

What would it take to get you to change your watering schedule to every other week during the dry months of December, January and February?

6-availability; won't be able to water

5-more important to have water to drink than to have nice lawn

9-that is our style of life down here; like in AZ

4-in Phoenix there is a lot of green

Cost of water?

What about increased fines and regulations?

8-not personally, but heard in news paper, etc; write up ticket

41:48 – “The commercial companies never get fined though because I see the banks and you know they're watering all the time.”

9-yes they water all the time

42:06 – “They should be held accountable like us.”

7-give commercial people separate meters; I have to pay for all; would like separate meter for water lawn

8-prefer a separate meter

Brent-prefer a separate meter?

1, 8, 10- yes

42:32 – “When you’re watering your lawn that is not going through the sewage system. It’s only through your home that it’s going through the sewage. So we think we should not have to pay the extra sewage fee.”

Brent-regulations a deterrent?

8-yes

2-if they enforce it

7-yes, if they would enforce it

2-people would have to call police, they don’t have water watchers

Water conservation or environmental reasons?

9-more we use, the less we will have; building keeps going; Port Charlotte

8-went down to beach; and saw water going to waste from a hydrant; called water company and said why don’t you have someone catching all that water, she told me we don’t have the manpower to do that

2-takes three days to flush out hydrant; water going everywhere

4-have people out there with 5 gal buckets

8-I resent my water bill when I see all this hydrant water being wasted

10-salt water intrusion in the aquifers

1-why letting builders put homes up – lots of water being used

What if your neighbor changed their watering routine to water less frequently and you really liked your neighbors’ yard? Would you change to watering every other week also?

3-yes

9-yes, I think so

6-my neighbor has plush lawn, has a well, mine turns brown

5-some of theirs (neighbor) creeping into our

1-our neighbor watering every day, but we put a stop to that

2-no, I don’t think so, it is unrealistic to have water less and have a nice lawn

1-only water to 8 o’clock, we got a correction

4-don’t need to water but more than once a week

Have you ever known anyone who didn't water every week? What did their yard look like?

What is the source of your irrigation water?

1-well water

Would it make a difference if the source was drinking water vs. well water vs. reclaimed water?

8-have sink/shower water if we could use that to water lawn I would like to do that; catch water from shower in bucket when I wait for it to get hot so I can water plants

Brent – what if reclaimed cheaper?

9-no

8-no, still water when I am supposed to

3-no, you only need to water so much

1-what about rain barrels?

8-if we could bury a cistern if we could catch that water to use with our sprinkler system

WATERING ONLY WHEN NEEDED

Brent-when restriction is lifted, would you switch to watering more than once a week?

All-would not

5-b/c of the cost

4-why when it works when your lawn stays green once a week

8-in our area (b/c of salt) does not hold the moisture; would it better to water less than it would; soil would be a factor

6-water once more, roots stay down; water less, roots stay closer to surface

Brent – tend to water less than restriction

About 8

Brent – reason?

2-cost

8-yes, it is

Brent – water more?

All-no

Brent – ideas bout how to get people to conserve/use less water

4-reoccurring theme about cost

9-literature to educate people; like about the different types of grasses; don't have

6-educate county

2-our thought process wrong down here, told we have to have so much grass, should be told we are only allowed to have so little grass

9-they need to be knowledgeable in their offices; have websites with good clear information

5-newspaper

6/7-workshops

8-news, workshops, this is great, if we have more things like this; water bill has way to conserve, but how many people read them

9-tv, gov't access channel, run short segments on things like this – water conservation, etc

Brent – restrictions to utility bill

9-don't get bill on paper; electronically

1, 2, 3, - if read it then useful

Brent – cost issues, effective way to get people

10-workshops effective

9-public school system-children consume and tell inform to parents

10-water management districts

9-yes, but they don't feed it out to general public; people don't have time to find it

1-yes, people don't care or don't have time

9-workshops brings out discussions word of mouth

2-yes, word of mouth, tell people about this

4-change perception about what is good looking and what's not (lawns)

9-real estate agents who sell the house and say lawns ugly unless it is not a manicured lawn

Brent – shift idea about attractive lawn

All – yes

2-needs to start with county

6-workshop at senior center; show serious situation we are in (cost, etc) and get the information out and get people aware of situation; most people don't have a clue; for years I have been complaining about all the construction and it just does not stop

10-educate the masses

1-when move into county, need to be told this type of information

9-what is the county's long term plan for building, water etc

2-until county is on board, then nothing will change; if want to homestead, they attend a lawn scape maintenance class

10-reduce bills if attend class every year

Brent – feel county should do something/get educated

All – yes

2- county needs to educated

9-state needs to be educated; why should county with much water then; FL yard is one that does not need to be lush and green

4-need more reservoirs to capture water; need to see FL yard as not lush and green

2-other place don't have water at all

What do you believe would happen to your lawn if you altered your irrigation schedule according to the weather during the months of July, August and September because your lawn is receiving the water it needs from rainfall. Would you believe it?

What questions would you have?

What do you think would happen if you stopped watering altogether during the rainy season (July, August and September)? Would it make more work for you? Would your yard suffer?

SOURCES OF INFORMATION

What information about watering your yard and other landscaping practices would you like to know more about?

9-types of grasses you should buy; native plants and vegetation

10-type of plants – fast/slow growers

9-how often should you mow grass; chemicals to use in grass; type of grass to use?

7-if big suppliers have access to most of us and had native plants (not necessarily the exotic stuff) that would grow through winter seasons, then we could use them, but no one has them

8-we used to go to native plants shows

1-there is a native plant nursery in Sarasota

6-home depot/lowes – label the native plants

3-we went somewhere and plants were labeled FL friendly (home depot)

How would you like the information to be provided? For example, what format - as a DVD, booklet, workshop, website, personal consultation, or some other method)

1-extension service; in paper

9-magazines the come through; something that catcher attention

1-information in home depot/lowes; extension service has wealth of infor

5-radio too

DVD?

Most – yes

9-things that are being shown to me in car/listening too/or magazines I like more

Workshops?

All – yes

8-yes attending workshops, I will keep this information with me

9-children should be involved too; make easier for people to have families

Personal consultation?

9-I work all day, so depends on demographics; older people might have time the time

6-yes, if you are going to do something major to your yard

4-the master gardener is someone to talk to

9-do landscapers push native plants?

1-landscapers over plant

9-landscapers need to be educated

Brent – to Michelle & Kevin (9/10) - do you get comments from neighbors about your lawn?

10-no, just real estate agents

In the past, where have you received information on lawn care, irrigation, landscaping, or other landscape maintenance topics?

10-emailed by extension

9-attended those and get plants

4-yes, we have been there, look for information there; neighbor is master gardener

5-neighbors has been here long

Brent – neighbors

About 5

9-radio is great, most of where I get information

Brent – workshops? (Most do not get info from here, but good for future info)

9-from extensions

1-garden clubs

9-societies; attend about specific plants

8- exchange office (gov't office) – we never get information, why couldn't they send it out like something in the mail

9-cold calling like you did with us

Name specific sources

WRAP-UP QUESTIONS

Do you have any last thoughts about lawns, irrigation practices, or ideas for how we can encourage people to change their irrigation practices based on weather patterns?

7-does our gov't have any long range plans?

4-for anything?

[Brent – hard question to answer...]

8-school systems need some improvement; has to be somebody up there

1-politicians do what is most beneficial to them

9-gov't take the money; what is Port Charlotte going to be faced with in the next 10 years about water, septic systems, etc

Brent – how many people concerned about the long term affects?

All - yes

9-where all the run off from septic going?

Brent – what kind of message would be effective?

10-availability of portable water, and the lack of it

2-nod in agreement

9-quantity and quality of water; cost; education of masses

8-agree with Michelle; be in school system too to instill in children to tell them what future holds for them

9-when I went to daughter's preschool they don't make kids shut water off in sink; they need to tell them to do that.

6-very effective in school system; if teach there, then they will tell parents; they (kids) are they ones who are going to suffer

8-children outspoken – so they can come home and tell parents what to do

2-have things installed to conserve water (water only stays on when you hold it on)

9-automatic flush toilets are crap – flush 3 times before leave stall

Landscaping and Lawn Maintenance Focus Group Notes

Port Charlotte Focus Group #2

August 18, 2007 2:00 PM

I. YARDS

Describe the ideal yard, what does it look like?

2-full of weeds right now

3-lots of rain

1-first of all, I would have more trees, I would like cement curbing around things, I have to have someone do my yard because I cannot work in the yard – attacked by bugs; a fountain

2-have everything we want; we just did landscaping; a lot of maintenance, we have a big yard;

4-no grass, trees, less lawn

1-grass is green; St. Augustine grass; have azaleas; no insects – my lawn is in perfect condition; have service that spray for ants, etc

Brent – have a lot of lawn, but also tropical fruits? (to Doug)

1-yes

What do you like about your yard?

What do you dislike about it?

What does a lawn say about its owners?

1-on my street almost every person has irrigation; people trying to compete – lawn look better than mine; they all have nice lawns-keep them up well

Brent – competitions among homeowners for lawns?

1-yes, don't cut my grass – have someone do it; I garden though

4- in “normal” times (i.e. rain free times); somebody has beautiful green lawn b/c they are using too much water

1-no, we have a well; we are only legally allowed to water once per week

Brent – do people take water from the canal?

2-no

1-yes some; Charlotte has water police, they will fine you

4-i did not know that

3-we are on city water and it is so expensive

Brent –what does lawn say about you?

1-bill high, we had to turn off water

2-we try

4-live in same area (1&2), I don't water, we need to conserve waster; we know you need to conserve water; a lawn, it is what god gave me, so I don't water lawn; I water flower beds

2-so you think people who water too much then that is why they have nice green lawn; if don't water than not nice lawn; beautiful lawns and stinky lawns

Brent –

All- yes definitely

1-they catch some of them

2-they catch them once in awhile

1-water one day per week – water in the morning and in the evening

4-oh, you can do that?

1-set sprinkler so it goes off twice per day on Saturday; too much water bad too

II. WATERING

Did you water your yard this week?

1-yes this morning
2, 3, 4-no

How often do you usually water your yard?

What factors determine how much you water? [Weather, Season, Restrictions, Cost, Environmental]

1-yes, if no rain; weather big factor

All-weather big factor

1-over than ¼ inch then go off; if less than come on (sprinkler system)

2-ours [irrigation system] is automatic, but it does not work properly, so we just turn it off

4-don't water, so I turned it off

1-if certain grass, then could be destroyed by wet worms (floratam [type of grass]) not bahia [grass]; I think chic bugs

1-I had a patch that dried up, it was clean of insects; no chic bugs there, don't know why it died; no plugs to buy because too dry; had root, working and growing again

2-floratam is good looking grass; I have re-sodded so many times

3-have green weeds

4-green weeds

2-looks green as grass [the weeds]

1-my floratam is 18 years old and just as good

Brent – concerned about water use

4 & 3- yes

1- we have buckets that we use to catch rain water to water my wife's violets; my friend has 40 gal of barrels to catch rain water – and he uses it to water flowers

2-know someone who has tank that catches the rain

1- it is easy to install; and cheap

Brent – if they changed regulation...?

1-no, it will not change [emphasizes this]; Charlotte county 13 inches below

4-I read somewhere that FL will eventually be a desert

1-FL has more lakes/springs than any other state

2- have friend that their lake is down 16 inches

What do you think would happen if you over-water your yard?

2-it would go down the hill; I don't know

4-i don't know

2-don't know, we have never tried

1-sprout of white, looks like mushrooms; that is from over-watering

2-ain't going to do me no good if grass is greener than my neighbors

How do you know when your yard needs water?

1-the guy that does the insect thing for my lawn tells me; no insects in my lawn

[Brent – trust their advice?]

1-yes, good guy

4-yes, I have lawn service, someone cuts grass

2-I do the lawn, I enjoy doing it

3- my lawn would turn brown

2-one rain, and they weeds come down

III. IRRIGATION SYSTEMS

Do you have an irrigation system?

1,2,3-have one

4-have one, but it is turned off

If yes, what do you like/dislike?

- 1-just press the buttons, easy to use
- 2-the convenience; don't have to drag hoses around
- 4-when I did have mine, it was easy

Brent – is it programmable?

- 4-yes
- 2-yes
- 1-yes

- 2-see people who are watering when raining
- 4-want to go knock on their door
- 1-but their rain sensor is no working; I do my own maintenance

Rain sensor

City vs. Well

- 2,3,4-city

- 1-well

- 2-we can dig well, but salt water gets into the well

- 1-in your are (2&3) dig too deep and it is all copper

Brent – do you know people who changed to well when price of water increase?

- 4-not in our area

- 3-no

- 1-in some areas; north of Atlanta Blvd, draw water from well water; no access to city water

- 2-Port Charlotte has areas with fresh water canals

- 1-have well water in certain areas, but have it purified [names areas]

- 2-everyone has own idea about wells, etc; friend had well installed, lawn brown next day because of the salt in the water

Brent – do you hand water

- 4-yes for the flowers

3-yes

2-yes, or they will die without the water

Do the same watering restrictions apply to well water as they do for city water?

If you don't have an irrigation system, how do you water your yard?

**Landscaping vs. lawn
Hand water, sprinkler**

Re-programming. – irrigation system

1-no, same time

4-no

2-we did use ours, but we program it by hand, b/c it doesn't work – after a couple of bills, we changed our mind

Did you receive information about how to operate your irrigation system?

1-yes

2-yes

4-instruction manual; make it do whatever you want it to do

1-yes, instruction manual; counts days/times/dates; set water to come on when

2-have our little ones timed; never know what the weather is going to be; program it one way and the weather is another day

4-drive on one street –lots of rain; next street, no rain

1-that's Florida for you

What happened when you attempted to change the irrigation system?

For those of you who change your watering patterns throughout the year, when do you change it and why?

How many people have their irrigation system turned it off right now?

Why?

What prompted you to do that?

Don't you have a rain sensor?

IV. TESTING STRATEGIES

Did you know that during the months of December, January and February because your lawn was dormant, you could water every other week?

4-yes

3-yes; knew from living here so long

4-word of mouth

2-every year it works that way; dry/wet months; but we are way below normal

[Brent - Do you water less during those months?]

3-oh yes

1-at cultural center, they use to have classes to learn how to play golf, garden, fishing, etc. (senior citizens); that is where I used to learn to play golf and garden

Brent – do you feel neighbors know not to water?

1-yes, why water when you don't have to; or cut grass when you don't have to

4-my fellow comes and trims bushes when no grass, etc

1-cultural centers is where I learned; I did all my landscaping all by myself

4-i am interested in when and if I can get trees growing – lost my fruit trees

Brent – other good sources of information

1, 3, 4-extension office

1-extension service could out every so often; from UF

4-went to service on ants; granddaughter doing fellowships

1-master gardener comes from UF

Brent – do you feel neighbors have information?

3-depends, if they lived here long

2-some, it depends

4-if they live here longer, they become more interested

2-get sick of what you have

Brent – important factors to tell people not water during winter months

1-grass won't grow; it doesn't grow like it would

2-rain

4-tell them you are wasting water and the price of water

2-different grasses that live longer

1-not necessarily, for that you have to nurse it like a baby; one little spot (dead), you have to see what it is; if see grass being dug up – it is bugs

2-neighbor selling house, has good grass, so perfect, every evening the sprinkler goes off every night, he is up in Canada,

Brent – environmental reasons

1-economy; not good for grass; conservation

4-wasting water

Credible source?

Who do listen to about landscaping advice?

Neighbors?

Home Improvement Centers?

Others?

What factors would get you to water every other week during this period?

Cost?

Fines and regulations?

Environmental reasons?

Better for the lawn?

Did you know that during a normal rainfall year, you do not need to water your lawn during the months of July, August and September?

4-yes, that is a rainy season

1-yes, if we have normal season, you never have to water grass

2-after rain, your grass is green

Brent – notice neighbor watering too much

3, 4 – go and tell them

4-but if not here, then nothing you can do

2-if set, then you cannot do anything

1-yes, people are away, and if set, then cannot do

2-see sprinklers going off and we are conscientious about that b/c

4-one has with this beautiful grass – you know they are watering too much

2-you can tell; but don't want to start a fight with neighbor about that

Brent – other messages?

3, 4-no

4-if don't pay attention to word of mouth, then no, nothing; maybe a fine

Brent – restrictions – what goes into them?

1-conservation; to conserve water

2-they have to

4-we will run out of it

3-must have had some kind of study to determine why once a week

[Brent – based on research?]

2,3,4-yes, must have

1-FL has no mountains, and no snow melt; rain goes into the sea

2-hills start on other side of Tampa

4-Ocala is our mountains, I say

Brent –what other information about our yard

2-would you have to use more fertilizer if over-water/to keep grass

1-during summers use liquid fertilizer otherwise, it will burn the grass; liquid fertilizer is safe for when you water

4-how do you apply it?

1-use house, sprayer, etc; when glass clear, they fertilizer is finished

4-I use Miracle Grow

2-use fertilizer then I'll have to cut it

Brent – any other information about irrigation, etc?

4-what kind of plants to use (use less water)

2-cut grass, and leave high enough, then don't have to water as much

1-develop some type of grass that uses less water; developed by UF; never heard about it

2-my son put his in (beautiful lawn); did not water for 1 1/2 weeks, still okay, then he got a brown spot; that is a area where person won't let someone get a better lawn (high \$\$\$)

4-person from extension writes for the paper

1-retired scientist writes and brings plants; all irrigation done with no engines (air pressure); it is down in Ft. Myers

4-yes, they are experimenting to go out into the world

1-teach at 3rd world countries to farm to deal with what they have

2-trouble-were we live we have sand; when rain, they the water goes right down; in other areas it is black top soil and water stays; in sandy areas you have to water at least twice a week to keep a good lawn

Brent – what about radio?

3-no, not so much

4-I have PBS on all the time, but doesn't have much information

Brent – workshops?

1-yes

4-yes, extension used to have; I would like to have more

Brent – info from Lowes/Home Depot

1-yes, they have workshops, but different topics (like painting)

3-they have books their too; library also good source

2-library is best source

Brent – other things you want to add

4-get people to be more conscientious; even though they are hitting us with regulations; it goes in one ear and out the other for some people

1-if you want information out, it needs to be done by state or county, but we have know money; go to the vo-tech school – get information free of cost

2-county same thing – they'll give you any answer you want

I. YARDS

Describe the ideal yard, what does it look like?

3 – Florida-friendly – got the sign from the University – took up most of the grass and when it gets cooler – will take up the rest, the rest is mulch, palm trees and plants – we did it not only because the price of water but because our water resources are precious. We are the only ones in our subdivision of 65 homes and we like to smile at the others who are watering and mowing. We have rain barrels too, took an Ext agency workshop and they gave us one and went back to buy three more.

2 – Variety – trees, bushes lawn. Personally don't like trimmed rows of hedges, that formal garden, I like a landscape that has some wildness to it.

1 – Live in a small park and its all done for us there. So....

Brent – what pops into your head for an ideal yard -

1 - Flowers

If water wasn't' an issue would FYN still be ideal –

3 - Probably because its easy to maintain.

What do you like about your yard?

3 – low maintenance, flowers, I like the look to it

2 – Trees, a lot of shade – brings AC costs down. Its got some rolling hill to it, its not just flat with a lawn, but it has some flat areas of the kids to play in.

B- Fairly big yard – 2 ~1/3 acre.

1 – We have alot of oak trees and I like the oak trees.

What do you dislike about it?

1 – not really

3 – can't think of anything, I know my husband hates the Bermuda grass "Ive fought Bermuda Grass my whole life!"

What does a lawn say about its owners?

2 – Its an extension of ourselves. We see a big difference in renters yards and homeowners yards.

B - If someone doesn't take care of their yard as much as they could, you think that's a poor reflection?

2 - I think it means they don't care and other homeowners think that

1 – It definitely does. It's an extension of the individual

3 – It tells you who you are – some people have an immaculate yard, but their never out of the house – usually people with no kids or families, and they want everything to look immaculate just for the look. Certainly if you let your yard fall apart and drive your pickup truck on it, that's one extreme, I tend to be more the middle of the road, for example I haven't used fertilizer on the yard for over ten years and it still looks good, its just chemical that go on the lawn for no reason. They make the yard a bigger priority then it should be.

II. WATERING

Did you water your yard this week?

3 – Only in the flower bed areas – which has a micro system, and I can selectively choose what to water, the lawn hasn't been watered in a couple of weeks.

2 – No, we haven't watered since we had a good rain.

1 – We have an individual I our park that has a stone yard and I don't care for that all. It doesn't look good. I watered once this week.

How often do you usually water your yard?

2 – Back when we had grass, we were watering twice a week. Now the restriction is once a week, but we have neighbors that water twice a week

1- Or more

2- Yes it's true. We talked to the neighbor several times and my husband sent them what was in the paper, but it doesn't matter to them. They (city) took their name down and they said they would go talk to them, and if they keep doing it they will be fined. I thought that was o.k., because we are friends.

3 – Its an ad hoc basis – before we even had restrictions, I'd find sprinklers running during rain storms. I rarely ever water the lawn – where the garage and house roofs come together it pours rain, so we installed a little pond there to collect water.

2 – We have sensors on the house, and everyone has one, but I don't think they work. The sensors are up high.

What factors determine how much you water?

Weather

Season

Restrictions

Cost

Environmental

2- Appearance – if it starts getting brown

3 – What kind of grass do you have?

2 – St. Augustine, there are a couple of varieties, but primarily S.A.

1 – Same as (2) if the lawn looks o.k. I don't bother to water.

B – Weather/ certain time soft the year?

2 – During dry season, I would water a little more, and more concerned in the front. It'll come back when the rain starts again. The front has large trees.

What do you think would happen if you over-water your yard?

2 – Yes, if soils are too moist the grass vcan become drought intolerant.

1 – Its possible to overwater – yes can cause problems.

B –what kinds of problems?

3 – He mentioned root rot and fungus. I don't if chinch bugs like water or not.

B – So the FYN yard has an irrigation system>

3 – Yes, but we turned them off along time ago. We use the rain barrels for irrigation.

How do you know when your yard needs water?

What do you look for in your lawn and plants as an indicator that the yard needs to be watered?

III. IRRIGATION SYSTEMS

What do you like about it?

3 - Easy to repair, convenient on a timer. Our neighbor showed my husband how to install and repair irrigation systems.

2 – You don't have to get the hose out.

B – What is micro irrigation

2 – I have a couple off branches that come off of flexible tubing, very low flow and can be directed specifically to areas – you have a lot of control over where the water goes and how much each area gets. Its easy to add a sprinkler head...

Do you have an irrigation system?

All – yes

3 – But we turned ours off – we’re on a soaker hose.

If yes, what do you like/dislike?

Rain sensor – Yes, don’t work

City vs. Well – All City

Do the same watering restrictions apply to well water as they do for city water?

If you don’t have an irrigation system, how do you water your yard?

Landscaping vs. lawn

Hand water, sprinkler

Did you receive information about how to operate your irrigation system?

1 – No, not a bit

2 – No

3 – No, we were missing that.

Where did you learn about irrigation?

2 – Home Depot

3 – Extension Agent at Bartow – they had it in the paper that there were workshops and I attended the FYN one and the Rain Barrel one.

B – Do you think the neighbors will do the same thing.

3 – We hoep, but its a lot of work, but when the neighbors grass dies and we try to convince them to try FYN, they go ahead and do lawn because its easier.

B – HOA?

3 – Yes, but they don’t enforce anything?

B- You didn’t have a problem when you switched to FYN?

3 – No

2 – No HOA

1 – No HOA, each one does their own yard, and I just hire someone else to do it.

For those of you who change your watering patterns throughout the year, when do you change it and why?

How many people have their irrigation system turned it off right now?

Why?

What prompted you to do that?

Don't you have a rain sensor?

IV. TESTING STRATEGIES

Did you know that during the months of December, January and February because your lawn was dormant, you could water every other week?

Yes, all agreed that lawn goes dormant during this period of time.

3 – At the FYN workshop, I learned that some plants like water and others don't, so I water more on that then on season.

B – Neighbors tend to water more or less during this season

1 – No change, neighbors water the same year round

2 – No change

3 – Neighbors turn sprinklers on and don't change them, their at work, busy and don't even pay attention to when they come on.

Credible source?

1 – I would believe neighbors

2 – USDA or AG Extension – have the background

3 – IFAS has been very helpful

Who do listen to about landscaping advice?

Neighbors?

Home Improvement Centers?

Others?

2 – I have a couple of friends who are higher up with a large national landscape companies, so they are a good source of information on what to plant where.

3 – The guy in the paper writes every Friday and tells what you should be doing at different times of the year.

1 – No one source really.

What factors would get you to water every other week during this period?

Cost?
Fines and regulations?
Environmental reasons?
Better for the lawn?

B – It sounds like some of your neighbors don’t change their patters of watering throughout the year. What would be a way to get them to change?

2 – Further penalties – in fact that’s why I took my timer off the irrigation system, and I read in the paper that people are getting fined because their timers were off and they were watering on the wrong day. It was the potential for it costing money that cause me to change.

3 – Apparently high water bills don’t; make a difference.

2 – If fuel costs won’t stop people from driving, I doubt water costs will stop them from watering.

3 – probably the threats of fines won’t do it, but actually enforcing it and fining people would, but they don’t have enough people for that.

B - Running out of water make a difference?

2- probably not –
All agree

Did you know that during a normal rainfall year, you do not need to water your lawn during the months of July, August and September?

3- I hadn’t heard that. Its supposed to be our wet season, but it makes sense. It depends on the month. If you watered properly before that the roots would be better able to handle it.

Credible source or message that you think would convince people that’s the case?

2 - Something from the utility that tells hints for saving water.
Notices from credible sources like UF Ag Ext,
I don’t think word of mouth will do it. It wouldn’t hurt, but not sure how effective that would be.

B – Does the newspaper column talk about he wet season at all?

All – no I haven’t seen any.

Who do listen to about landscaping advice?

Neighbors?
Home Improvement Centers?
Others?

1 – T.V.

2 – Internet, web sites

3 – UF Extension Workshops – That’s what they are trying to do is educate people. I grew up in NY, so its a lot different down here.

B – Do you know if anyone from your neighborhood attended the workshops?

3 – No, I didn’t see any?

B – Any ideas for reaching those tough neighbors?

3 – I have no idea.

What factors would get you to not water during this period?

Cost?

Fines and regulations?

Environmental reasons?

Better for the lawn?

B – Any questions?

1, 2 – No

3 – With what you are doing today, will you be able to suggest these things to SWFWMD or someone?

B- Especially the two behaviors – what type of message would be effective and the way to get the information out there.

2 – Information on the utility bill – that’s where people see the cost of water, and it could impact them to see it and to consider. But, I mentioned that the cost of gas really hasn’t slowed down the driving.

B – In Port Charlotte, they were really impacted by cost.

2 – I also installed low-flow toilets. As far as lawn irrigation is concerned – I’m really stingy, I’ve lived in countries where there was little drinking water and to think of this potable water being used for irrigation is an outrage.

B- Do you have a separate metering system for indoor and outdoor

3 – They won’t let us. Our sewer charge is twice as much as our water bill and I wish they would differentiate them. When we installed rain barrels, our water bill dropped from \$200 to \$42.

2 – I think a separate meter would be helpful

1 – Yes me too.