U.S. Consumer Water & Irrigation Usage

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Top 10 Key Insights

1. Lawn / yard **appearance** is the primary factor influencing homeowners’ irrigation practices.

2. Product **water efficiency** influences homeowners’ purchasing decisions.

3. Irrigation frequency is seasonal and primarily occurs during the summer, followed by spring, fall and winter.

4. **Cost is the primary purchasing barrier** for smart irrigation technology.

5. **Water-bill savings** is the main attribute that improves homeowners’ likelihood of conserving water and/or purchasing smart irrigation technologies.

6. Most participants adjust their irrigation system settings **only when there is an issue** and **adjust their system themselves**.

7. Automatic failure detection/alert/turn-off and mobile apps are the most important ‘high-tech’ irrigation features.

8. Conventional irrigation systems are perceived as being better priced than smart irrigation technologies. However, smart irrigation technologies are perceived as being more **reliable** and **easy to use** than conventional systems.

9. Eight-two percent of participants were interested in evapotranspiration-based or soil moisture sensing-based smart irrigation systems.

10. Most participants are **undecided** on whether they will purchase a smart irrigation system in the next 5 years. There is an **opportunity to educate** the homeowners so they actively seek out the smart irrigation systems when they update existing or install new irrigation systems.
Summary: The results of the U.S. consumer water and irrigation usage study provide insights into homeowners’ water use and conservation strategies. The information within this report serves to assist turf, landscape, and irrigation specialists as they strive to sustainably serve their customers. Results provide an overview of household water usage, current irrigation practices, smart irrigation perceptions, and consumers’ likelihood of purchasing smart irrigation technologies in the near future. Recommendations are provided based on the results.

Experimental Procedure and Respondent Demographics

Experimental Procedure
An online survey was administered to homeowners from California, Texas and Florida in May 2014. Only homeowners who had automated irrigation systems and traditional irrigation controllers were allowed to participate in the survey. In addition to the survey, participants were asked to complete choice questions where they selected which irrigation system option they would choose if given two different ‘smart’ irrigation controllers. The smart irrigation options included a) evapotranspiration (ET) based controllers that adjust irrigation timing/amount based on on-site or regional weather networks or b) soil moisture sensor (SMS) based controllers that adjust irrigation based on sensors within the soil on the property. The choices varied by cost, presence/amount of a rebate, amount saved on water bill, operation type, control and adjustment access, and automatic failure alerts (Table 1; Figure 1). Each participant completed six of the choice questions.

Table 1. Choice Attributes and Attribute Options

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>$475, $525, $575</td>
</tr>
<tr>
<td>Rebate</td>
<td>0%, 25%, 50%</td>
</tr>
<tr>
<td>Water Bill Savings</td>
<td>10%, 30%, 60%</td>
</tr>
<tr>
<td>Operation Type</td>
<td>On-site station (ET-based controller)</td>
</tr>
<tr>
<td></td>
<td>Local/regional network (ET-based controller)</td>
</tr>
<tr>
<td></td>
<td>Wired sensor (SMS-based controller)</td>
</tr>
<tr>
<td></td>
<td>Wireless sensor (SMS-based controller)</td>
</tr>
<tr>
<td>Access</td>
<td>Wall-mounted unit</td>
</tr>
<tr>
<td></td>
<td>Remotely – mobile app</td>
</tr>
<tr>
<td>Failure alert</td>
<td>Yes, no</td>
</tr>
</tbody>
</table>
Respondent Demographics
A total of 3,000 homeowners completed the survey/choice questions with 1000 participants per state. Sixty-three percent of participants were female, 78% were white/Caucasian, and 66% were less than 54 years old (Figure 2). Seventy-six percent of participants had two or less adults in their households and 61% did not have any children (<18 years old) in their households. Thirty-three percent of participants had obtained a 4-year college degree (Figure 3). Most (70%) participants’ 2013 household income was less than $100,000 (Figure 4). Fifty-eight percent of participants were employed (full-time, part-time, self-employed), 13% were unemployed, 6% were students, 19% were retired, and 4% were ‘none of the above’ (Figure 5). Eighty-two percent of participants live in urban or suburban areas.
Figure 2. Age of Respondents

<table>
<thead>
<tr>
<th>Age (in years)</th>
<th>% of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20</td>
<td>3%</td>
</tr>
<tr>
<td>20 to 24</td>
<td>7%</td>
</tr>
<tr>
<td>25 to 34</td>
<td>20%</td>
</tr>
<tr>
<td>35 to 44</td>
<td>16%</td>
</tr>
<tr>
<td>45 to 54</td>
<td>20%</td>
</tr>
<tr>
<td>55 to 64</td>
<td>22%</td>
</tr>
<tr>
<td>65 or over</td>
<td>12%</td>
</tr>
</tbody>
</table>

Figure 3. Highest Level of Education Completed

- Professional degree (JD, MD): 2%
- Doctoral degree: 1%
- Master's degree: 14%
- 4-year college degree: 33%
- 2-year college degree: 12%
- Some college: 25%
- High school/GED: 12%
- Some high school: 1%
Figure 4. 2013 Household Income

- More than $300,000: 2%
- $200,000 to $299,999: 2%
- $180,000 to $199,999: 2%
- $160,000 to $179,999: 4%
- $140,000 to $159,999: 4%
- $120,000 to $139,999: 6%
- $100,000 to $119,999: 9%
- $80,000 to $99,999: 12%
- $60,000 to $79,999: 16%
- $40,000 to $59,999: 18%
- $20,000 to $39,999: 19%
- Less than $19,999: 18%

Figure 5. Employment Status

- Employed full time: 40%
- Employed part time: 19%
- Self-employed: 9%
- Unemployed: 9%
- Student: 6%
- Retired: 13%
- None of the above: 4%
Chapter 1. Household Water Usage

BACKGROUND
Drought conditions and water pollution concerns have led to increased attention to water availability and quality. Many factors (climate, drought, etc.) influence homeowners’ level of awareness of water related issues. This chapter provides an overview of current homeowner use, attitudes, purchases, willingness-to-pay, and incentives related to water usage in their homes. Awareness of consumers’ personal water use and conservation practices is important in order to better understand needs and motivations behind their water consumption strategies. Actions can then be taken to further encourage sustainable water conservation behavior among homeowners.

RESULTS AND CONCLUSIONS

Attitudes toward Water Availability
Respondents were asked to indicate their level of agreement with different statements regarding their local water supply and usage. The statement ‘I am concerned about the appearance of my yard’ received the greatest amount of agreement followed by ‘I often see my neighbors over-irrigating’ (Figure 6). Participants disagreed with the remaining statements indicating they are aware of the need to conserve water, there are water restrictions in their area, and their conservation efforts impact the overall water supply. Overall, these results show homeowners in Florida, Texas and California are conscious of water issues in their areas.

Figure 6. Attitudes toward Water Supply
(0=strongly disagree; 5=strongly agree)

- My state has abundant water resources and there is no need to conserve water
- I often see my neighbors over-irrigating
- I am not aware of of water restrictions in my area
- I am concerned about the appearance of my yard
- I do not feel my conservation of water affects the overall supply
**Water Use**

Outdoor water features play a role in total household water use. The majority of respondents (48%) stated they had no additional outdoor water feature beyond irrigation (Figure 7). Twenty-five percent of participants had a swimming pool, 13% had a fountain, 12% had a hot tub, and 2% had other water features (including a bird bath, pond, waterfall, and/or spa). The high percentage of pool owners reflects the warm climates of the geographical areas sampled (Florida, Texas, and California).

![Figure 7. Outdoor Water Features](image)

Regarding overall household water use, most participants took showers instead of baths to reduce water waste (Figure 8). Participants also frequently watered the landscape during the coolest part of the day to reduce evaporation loss. Indoors they frequently rinsed dishes before putting them in the dishwasher and turned off the water while brushing their teeth. They also tended to plug the sink while washing dishes by hand. Rarely did they collect or recycle rainwater.
**Water Efficiency Purchases and Incentives**

Recently, water efficient household appliances have become more widely available. These appliances can decrease overall household water consumption and reduce the water bill. The majority (65%) of respondents indicated they consider the appliance’s (washing machine or dishwasher) efficiency when they are deciding which appliance to purchase (Figure 9). Twenty percent did not consider the water efficiency, 9% indicated the question was not applicable to their household, and 6% did not know.
Participants were asked to indicate if they had purchased water efficient toilets, water taps/shower heads, or rainwater tanks within the past 10 years. Seventy-seven percent of participants had not purchased a rainwater tank making rainwater tanks the least frequently purchased water conservation item (Figure 10). Purchasing of water flow-restrictor taps / low-water shower heads was equally split between purchased (42%) and not purchased (41%). The manageable size, ease of installation, and lower price related to taps/shower heads likely resulted in them being the most purchased water-conservation item on the list. The low-volume / dual flush toilet results were similar with 38% of respondents having purchased the toilets and 41% not. Interestingly, the toilets were the most common existing water conservation item at 19%, followed by the taps/shower head at 16%.

Very few participants had received any incentive (provided by the government or utility company) to purchase water efficient toilets, faucets/showers, and rainwater tanks (Figure 11). Approximately, 16-18% of participants received an incentive to purchase one of these items while 82-84% did not receive any incentive.
Many factors influence consumer receptiveness to changing their behavior and purchasing decisions. Respondents were asked the effectiveness of 10 different factors/incentives to reduce their household water consumption. The most effective factor was reducing the price of water-efficient equipment (Figure 12). Information on actions to save water and household water consumption is illustrated in Figures 10 and 11.
consumption were also very effective, followed by easier identification of water-efficient appliances, landscape ordinances limiting irrigation, higher water rates, and comparison information on water use between similar households. A real-time water use app, more information on environmental impacts, and landscape ordinances limiting turfgrass area were also considered effective means of reducing household water consumption.

**Figure 12. Factors / Incentives to Reduce Water Consumption**

(0=not effective; 10=very effective)

<table>
<thead>
<tr>
<th>Factor / Incentive</th>
<th>Effectiveness Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less expensive to invest in water-efficient equipment</td>
<td>10</td>
</tr>
<tr>
<td>More practical information on things you can do to save water at home</td>
<td>10</td>
</tr>
<tr>
<td>More information on the water consumption of my household</td>
<td>10</td>
</tr>
<tr>
<td>Easier identification of water-efficient appliances</td>
<td>9</td>
</tr>
<tr>
<td>Landscape ordinances limiting irrigation water use</td>
<td>9</td>
</tr>
<tr>
<td>Higher water rates</td>
<td>9</td>
</tr>
<tr>
<td>Finding that my household uses more water than similar households</td>
<td>9</td>
</tr>
<tr>
<td>Having real-time water use data available through mobile app</td>
<td>8</td>
</tr>
<tr>
<td>More information on the environmental impacts of water conservation</td>
<td>8</td>
</tr>
<tr>
<td>Landscape ordinances that limit turfgrass area</td>
<td>7</td>
</tr>
</tbody>
</table>

**Willingness-to-pay (WTP)**
Most (64%) respondents value water quality and are WTP more to improve it (Figure 13). Twenty-five percent of participants were not WTP more to improve their tap water quality, the remaining 11% did not know if they were WTP more or not. Twenty-six percent were WTP less than 5% more for improved tap water quality while 30% were WTP 5-15% more. Only 8% were WTP more than 16% more to improve their tap water quality. Results indicate that the cost of improved tap water quality should not exceed 15% more than homeowners’ existing water bill.
RECOMMENDATIONS TO THE INDUSTRY

Develop and promote irrigation and fertilization methods/products that enhance yard aesthetics while minimizing water waste. Educate homeowners on restrictions and concerns related to water availability and quality in their area. Offer guidelines to consumers about actions they can take to conserve water (i.e. irrigating at low temperatures, etc.) and reduce their water bill. Consider offering incentives for compliance with water-saving guidelines.

Clearly label and advertise water efficient washing machines/dishwashers, toilets, and taps/shower heads online and in-store. Promote the use of rainwater tanks. Provide in-store promotions comparing the efficiency and cost-savings provided by the different products.

Offer incentives for purchasing the more efficient products. Inform consumers about financial support options from the government for purchasing/installing water efficient products to keep initial investment costs low. Keep costs of improving water quality less than 15% more than the current water bill to encourage consumer buy-in.

Provide homeowners with information on water consumption, waste, and typical areas of improvement in households similar to their own. Develop a water tracking app to inform consumers about what activities/appliances use the most water within their households. Offer relevant suggestions on ways to decrease water usage. Consider community ordinances and incentives to decrease water usage and increase the implementation of water conservation strategies.

Figure 13. Maximum (%) Increase Above Current Water Bill Respondents Are WTP to Improve Their Tap Water Quality
Chapter 2. Irrigation Practices

BACKGROUND
Lawn and landscape irrigation practices greatly influence household water usage. Turfgrass and plants need frequent irrigation to maintain growth and aesthetic appearances. The appearance of the lawn/landscape is of primary importance to homeowners and provides the benefits of improving property value, community beautification, and neighborhood safety. Knowing homeowners’ current irrigation practices can aid in conserving water by identifying areas of improvement. This knowledge can also assist irrigation specialists as they serve their customers.

RESULTS AND CONCLUSIONS

Irrigation System
Most (69%) respondents indicated their irrigation water comes from municipal/city/county water sources (Figure 14). Fourteen percent stated their irrigation water was from well/surface water, followed by reclaimed water (9%). Six percent of respondents did not know where their irrigation water was from and only 2% used rain barrels.

Frequency of irrigation was seasonal. Lawns and landscapes were irrigated the most frequently during summer, followed by spring (Figure 15). This is not surprising since the temperatures and light are more intense during the summer months. Spring irrigation is likely due to needing to provide plants the water they require to break dormancy and establish themselves prior to the intense summer growing season. The lowest frequency occurred during the winter months, followed by fall. Intuitively this makes sense due to winter’s lower temperatures, less intense light, and plant species that go dormant during winter months.
Although landscape plants and turfgrass need irrigation, turfgrass typically consumes more irrigation water due to covering greater land area than landscape plants. To account for this impact on irrigation practices, participants were asked to indicate the area covered by turfgrass in their lots. Thirty-five percent of participants indicated that 26-50% of their lots consisted of turfgrass (Figure 16). Twenty-seven percent had 51-75% of their lots covered with turfgrass, followed by 0-25% coverage, and more than 75% coverage.

Forty-two percent of participants’ irrigation system consisted of 5-8 zones, followed by 0-4 zones (38%), ‘don’t know’ (11%), and 9 or more zones (9%). Sixty-six percent of participants’ irrigation systems were equipped with rain shut-off sensors, 22% were not, and 12% did not know.
Irrigation System Maintenance

Most participants (51%) had their irrigation system inspected (for uniform water application, obstruction/damaged sprinkler heads, leaks, etc.) when there was an issue (Figure 17). Eighteen percent had their irrigation systems routinely inspected (annually or biannually). Eight percent never had their system inspected and 4% indicated ‘other’ (including weekly, monthly, seasonally, quarterly, or when the HOA requires it). In the past year, 59% of respondents had their irrigation system’s automatic settings adjusted. Thirty-six percent did not and 5% did not know.

Many participants (43%) preferred to maintain their irrigation system themselves (Figure 18). Twenty-five percent had a landscaping professional maintain their system, 17% hired an irrigation specialist, 10% other (i.e. spouse, family member, friend, HOA, property manager), and 5% no one.
Irrigation System Knowledge
Most participants were knowledgeable about local irrigation regulations and their irrigation zone locations (Figure 19). They were marginally knowledgeable about the water needs of their lawns and landscapes. Participants were less knowledgeable about the types of plants, sprinkler head types, irrigation system efficiency, and soil type. They were the least knowledgeable about their system’s sprinkler application rate.

Figure 19. Knowledge of Irrigation System or Lawn  
(1=not knowledgeable; 7=very knowledgeable)
RECOMMENDATIONS TO THE INDUSTRY
Rain barrels are not often used by consumers but they offer many benefits (recycling water, water conservation, reduced irrigation bills, etc.) Educate consumers about rain barrels and other water conservation options. Inform them about the cost of installation, labor requirements, effect on water bill, benefits of use, and environmental impacts of each option.

Homeowner lawn/landscape irrigation systems vary by seasonality, size and complexity. Educate consumers about irrigation requirements for different plant species and how the requirements change by season. If located in an area of drought, promote xeriscaping and drought resistant plants that need minimal irrigation during dry spells.

Identify which irrigation systems work best for different lawn areas and dimensions. Promote the most efficient system by lawn area. Match homeowners with the proper irrigation system to decrease waste. Educate consumers about irrigation system zoning and how to improve system efficiency. Inform homeowners about rain-shut off sensors and encourage them to install the sensors. Promote the benefits (cost, environmental, etc.) of the sensors.

Many homeowners are do-it-yourselfers (DIYs). Develop tools to assist them in maintaining their irrigation system. For instance, develop an app, electronic calendar, text, or email system to remind them about irrigation system maintenance. Develop a cheat sheet for DIYs on what to look for, how to adjust, and how to test the system settings. Provide printed/laminated and electronic copies. Design irrigation systems that are easy to adjust and maintain. Make the parts available and easy to replace. Have staff available to answer questions and assist homeowners who want to take care of their own irrigation systems.

Educate consumers about the different types of irrigation systems and sprinkler heads. Inform them about the efficiency and maintenance of each. Align irrigation systems with the prevalent soil types in the area to improve water conservation. Inform consumers about the application rates of each system/sprinkler head type, which work best in their area/situation, and how to adjust the rates to get the most out of their system without wasting water.
Chapter 3. Smart Irrigation Technology

BACKGROUND
Technological advances have resulted in new products designed to aid consumers through improved convenience and sustainability. Smart irrigation technologies are one of these advances. In this chapter, smart irrigation technology includes consumer perceptions of evapotranspiration (ET) based and soil moisture sensor (SMS) based controllers. ET controllers adjust the irrigation timing and amount of water based on local/regional weather conditions from an on-site weather station or local weather network. Conversely, SMS controllers adjust the irrigation by obtaining soil moisture information from on-site soil sensors. Both technologies are a means of improving irrigation efficiency by irrigating only when needed. Since these technologies are fairly new, knowing consumer interest, acceptance and knowledge aids irrigation specialists and distributors as they pair consumers to the best irrigation systems for their situations.

RESULTS AND CONCLUSIONS

Important Features
Homeowners valued automatic failure detection/alert/shut-off options the most on irrigation systems, followed by mobile app control, wireless soil-moisture based irrigation, and weather-based automatic irrigation (Figure 20). They were less interested in irrigation systems that were integrated with other home automation technologies and touch screen displays for wall-mounted units. Overall, effective, easy and less cluttered (wireless) features were valued the most.
Smart Irrigation Technology Benefits

Regarding existing consumer knowledge about SMS and ET based controllers, most participants (79% for SMS, 84% for ET) indicated they were not knowledgeable about either type of system. Although participants were not knowledgeable, they had distinct perceptions of the benefits offered by each irrigation system (ET, SMS, conventional). Fifty-two percent of participants perceived conventional irrigation systems as having a better price than either the SMS or ET system (Figure 21). However, the SMS and ET systems were perceived as being easier to use and more reliable than conventional irrigation systems. When comparing the SMS to the ET irrigation system, most participants perceived them as being similar for price, ease of use, and reliability (Figure 22). Though, the SMS system was perceived as slightly superior to the ET system for all three benefits.
Smart Irrigation Technology Purchase Likelihood

Forty-nine percent of participants indicated that the SMS-based controller was the most reasonable investment for their irrigation needs (Figure 23). Twenty-five percent indicated that either a SMS-based or ET-based controller would suit their situation, while 14% indicated the ET-controller was best. Only 12% stated neither SMS- nor ET-based controllers were suitable.
Based on their choice in Figure 23, participants were asked their likelihood of purchasing the technology in the next 5 years. Overall, consumers were undecided about their purchase likelihood (Figure 24). Forty-one percent of participants were ‘likely’ (selected somewhat likely, likely, or very likely) to purchase the SMS-based controller, 30% were undecided, and 30% were ‘unlikely’ (selected somewhat unlikely, unlikely, or very unlikely). For the ET-based controller, 46% were ‘likely’, 27% were undecided, and 26% were ‘unlikely’. For the ET- or SMS-based controller, 46% were ‘likely’, 30% were undecided, and 24% were ‘unlikely’.

For the 12% of participants who selected the neither option (Figure 23), 66% stated their primary reason was they were satisfied with their current irrigation system and did not foresee needing a new one (Figure 25.) The initial cost was a barrier for 33%. Skepticism over water savings (26%), other (including drought conditions make irrigation irrelevant, water bans, small lawn
area, HOA controls, different needs for different plant species, renting, well water is free, and other more important expenses at the moment; 21%), and needing more information (19%) were also barriers to purchase. Very few participants indicated they perceived SMS- and ET-based controllers as ‘difficult to control’ or that they were uninterested in water conservation.

**RECOMMENDATIONS TO THE INDUSTRY**
Include automatic failure detection/alert/shut-off in all smart irrigation systems. Provide a mobile app to improve convenience. Both of these options are important because the homeowner can address situations when s/he is not home. They allow the irrigation system to be convenient, hands-off, and easy to use. Promote these features for both the SMS- and ET-based controller irrigation systems. Use educational advertising to inform consumers about these features.

Price is the primary benefit of conventional irrigation systems while ET/SMS-based systems are more beneficial in terms of use and reliability. Leverage these positive perceptions. Inform consumers about when their savings should equal their initial investment. Promote other benefits that are not well known to further differentiate the irrigation systems. Use an educational campaign to inform consumers about the availability of smart irrigation technology.
Most participants (82%) recognize smart irrigation as a positive product – stock, promote, install and inform consumers about these options. They agree that they are valuable but they are not aware of them as an option.

Regarding future purchasing intentions, many participants were undecided. There is a great opportunity to influence their choice by highlighting the benefits of smart irrigation technology. Promotions also serve to reinforce their positive perceptions. Advertise the benefits, provide industry professionals with the information they need to educate consumers, develop a user-friendly website with information about the systems, and inform people about the availability of these products.

Offer ET/SMS-based control augmentations for consumers who are satisfied with their existing irrigation systems. Offer cost-saving incentives for installation. Show consumers the long-term water savings and translate those savings into dollar amounts (i.e. reduced water bill). Provide educational materials to inform consumers about what ET/SMS-based systems offer.
Chapter 4. Smart Irrigation Technology Choice Questions

BACKGROUND
Participants were asked their preferences using a scale; however, that method does not show receptiveness to different levels of attributes. To assess the impact of different attribute levels, participants were given 6 choice questions where they selected which option (choice A, choice B, or neither) they would purchase. Each option had different attributes and attribute levels (options are presented in Table 1). This chapter explains the results that were obtained from the choice questions. Based on those results, willingness-to-pay estimates were generated. Results are beneficial to irrigation industry professionals as they determine which products to stock, how to promote those products, and consumer acceptance of the products.

RESULTS AND CONCLUSIONS

*Smart Irrigation System Attributes*
Price, rebate presence/amount, water savings, controller type, unit control, and automated alerts all influenced participants’ smart irrigation controller choices. Not surprisingly, as price increased, participants’ likelihood of purchase decreased for both SMS- and ET-based controllers (Figure 26). When compared to no rebate (0%), the presence of a rebate increased participants’ likelihood of purchase with a larger rebate having more of an impact. Compared to 10% water bill savings, water bill savings of 30% and 60% improved participants’ purchasing intentions. Overall, greater water bill savings (60%) had the most significant impact on participants’ purchase decision for both controller types. Participants were more likely to select a ‘wireless’ SMS-based controller than a ‘wired’ one. Type did not influence ET-based selection. Control did not influence consumer selection for either SMS- or ET-based controllers. Consumers were more likely to purchase SMS- and ET-based controllers if they had automatic alerts for when problems arose.
Note: Figure 26 values are relative. For example, the comparison attribute for ‘rebate’ is Rebate (0%) meaning that the Rebate (25%) and Rebate (50%) positively influence choice (due to their positive values) when compared to Rebate (0%). The comparison variable for ‘savings’ is Savings (10%), ‘type’ is wired for SMS-based controllers and on-site weather station for ET-based controllers, ‘control’ is wall-mounted unit, and ‘alert’ is no alert.

**Smart Irrigation System Willingness-to-pay (WTP)**

Homeowners were WTP the highest premiums for water bill savings of 60% (Figure 27). Specifically, they were WTP $4.98 for SMS-based controllers and $4.28 for ET-based controllers. They were WTP the next highest premium for a 50% rebate at $2.93 for SMS and $3.04 for ET. Thirty percent water bill savings was $2.33 for SMS and $2.02 for ET. The 25% rebate was next with $1.73 for SMS and $1.37 for ET. Participants were WTP $0.91 per $100 for SMS, $0.81 for an alert on SMS, and $0.67 for an alert on ET.
RECOMMENDATIONS TO THE INDUSTRY

Cost-savings had the most influence on consumers’ purchasing decisions. Specifically, water bill savings and rebates were selected and valued by homeowners the most. This is not surprising since both attributes reduce consumers’ initial investment costs and allow them to recoup their money faster. Industry professionals can offer financial incentives (rebates, etc.) to improve market penetration. Promotions emphasizing the water-bill savings need to be clearly presented to consumers. Leverage the water conservation benefit of these systems. Provide comparison advertisements with conventional and other irrigation systems.

Regarding product design, offer both control options (wall-mounted unit and remotely via a mobile app) since consumers had similar responses to them and preferences may vary based on the irrigation/landscape/home layout.

For the SMS-based control, emphasize the wireless type and the convenience of having a wireless irrigation system.

Install automatic alerts on both systems. Promote the alert to perspective clients. Emphasize why an automatic alert is a benefit (i.e. ease of use, peace of mind, reduced water waste, etc.)