

North Texas City Joins Rachio for Residential Irrigation Pilot Study

Plano is a suburb of Dallas with nearly 278,000 residents, spanning 72 square miles. Although the region is growing quickly, Plano is over 95% built out, with the bulk of growth occurring in the 80s and 90s. Thus, most residential landscapes are established. According to 2015 data, per capita water use increases over 350% from a winter non-watering day to a summer watering day. Residential water use comprises 60% of total customer water use, and residential irrigation is the leading cause of summer peak demand year after year.



The Problems

- Water use and waste increase substantially due to summer irrigation.
- "Set it and forget it" is a common mentality among residents, as they often do not want to adjust controller settings weekly or monthly.
- Most smart controllers require users to know how long to water and how often to set cycles. Unfortunately, most residents do not know how to do this appropriately.

The Questions

1. Is there a product that can help residents set appropriate run times and cycles based on their unique landscapes and irrigation systems?
2. Can the product make regular schedule adjustments based on weather conditions?
3. What are residents' thoughts about the product's effectiveness and usability, and do these thoughts promote increased engagement?
4. Can we reasonably associate any changes in participants' water use (using AMI data) with use of this product?

Why Rachio?

- Determines the amount of water needed per zone and calculates run times based on what users do know: soil type, vegetation type, sun exposure and slope.
- Can automatically adjust based on past, current and future weather conditions.
- Can be controlled remotely.



The Pilot Study

- The recruiting process yielded 60 residential participants that represent a "snapshot" of Plano's zip codes and demographics.
- Each participant received a 16-zone Rachio Smart Sprinkler Controller in July or August of 2016.
- All participants received verbal and written, region-specific programming instructions for reference. Participants were free to install Rachio on their own or by enlisting an installer of their choice.
- Several participants attended an optional, in-depth programming training session.

Participant Feedback

Participants completed a survey in November of 2016.
Of the participants, 81% provided feedback. Here are some results:

Controller Installation

- 76% installed Rachio themselves; 12% hired a TCEQ licensed irrigator.
- 80% checked their irrigation system for broken heads, misaligned spray patterns and other problems while installing Rachio.

Controller Interaction

- Before Rachio: 63% checked settings seasonally; 14% never checked settings.
- After Rachio: 68% check settings via their mobile app 1-2 times/week.
- That said, 78% report that they are "very comfortable" allowing Rachio to operate with little interaction.

Controller Impacts

- 95% report that their participation has "definitely" or "somewhat" helped them learn about efficient irrigation.
- 87% report that they are "very satisfied" or "satisfied" with their landscape's appearance and health.
- 82% report that they feel more informed about the City of Plano's environmental learning opportunities.
- Anecdotal: Participants are very engaged with Rachio, and they provided many comments – **overwhelmingly positive** – on their experience.

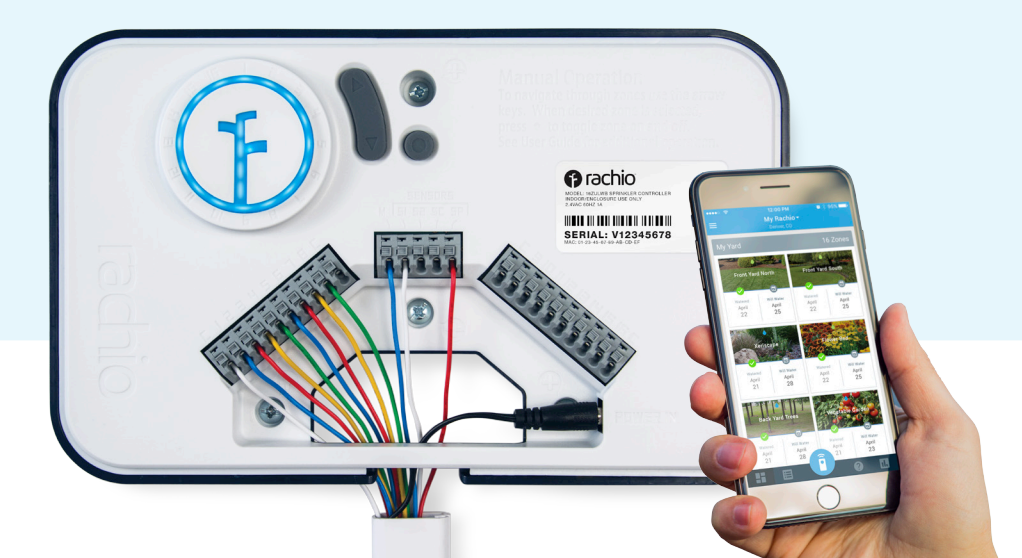
Participant Comments

"I love the **opportunity to review my watering sessions on my phone.**"

"I love **the ability to use Amazon Echo/Alexa by voice to turn on the sprinklers** when I see unwanted animals and people on my lawn and to manually set rain delays too!"

"I absolutely love this controller, and it was **surprisingly easy to install.**"

"I will **use native plants around my landscape to conserve additional water.**"



Next Steps

Analysis is underway to evaluate the participants' pre-Rachio and post-Rachio water use (using AMI data) to determine whether or not changes, if any, are statistically significant, all else equal.

For More Information

Please contact **Katie Masucci** at katiem@plano.gov or (972) 769-4216 for more information on pilot study development for municipal educators or utility representatives.
Please contact **Clay Kraus** at clay@rachio.com or (303) 549-0566 for more information on Rachio products and partnership opportunities.