North Texas Municipal Water District wins ‘Blue Legacy’ award

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Award based on adoption of Texas A&M AgriLife Extension Water My Yard program

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Residential landscape irrigation typically accounts for about half of municipal water usage, and studies have shown that homeowners often overwater their landscapes by as much as 50 percent, according to Texas A&M AgriLife Extension Service irrigation specialists. (Texas A&M AgriLife Extension Service photo by Robert Burns)

DALLAS – The North Texas Municipal Water District has won the Water Conservation Advisory Council’s “Blue Legacy” award for the Water My Yard program.

According to the advisory council’s announcement of this year’s winners: “The Council celebrates innovators who champion preserving the state’s most precious resource, water, by presenting the Blue Legacy award. This award program recognizes outstanding water conservation efforts and successes of Texans.”

The Water My Yard program was created by Dr. Guy Fipps, Texas A&M AgriLife Extension Service irrigation engineer, College Station; David Flahive, AgriLife Extension programmer and system analyst, College Station, and Charles Swanson, AgriLife Extension irrigation specialist, College Station.

The program incorporates automated weather stations situated in certain metropolitan areas in Texas that feed data to the Water My Yard Website, http://WaterMyYard.org, Fipps said. The software uses evapotranspiration rates — called ET – to calculate weekly irrigation recommendations specific to areas within a city or residential community. Homeowners and businesses subscribing to the free service receive weekly recommendations on how much to water their yard or landscape based on rainfall amounts, ET and other factors, such as the design of their irrigation system.

The North Texas Municipal Water District encompasses 1,600 square miles and provides water services to 1.6 million residents of North Texas through 13 member cities, according Fipps.

Most water the district relies on comes from Lake Lavon, east of Dallas, Fipps said. But the persistent drought of the last few years, along with increased demands, have dropped lake water levels. The result has been mandatory water restrictions, which were particularly severe for landscape irrigation.

“Watering restrictions have varied over the last few years, ranging from two days a week irrigation to one day every two weeks,” Fipps said.

At the advice of Fipps and Swanson, the water district purchased and installed seven automated ET weather stations.

“The locations for the stations were chosen based on elevation, microclimates, available district properties and variations in rainfall patterns,” Fipps said.

Weather station data is collected daily as a part of the TexasET Network, and used to calculate daily potential evapotranspiration for the various cities in the district, including Allen, Farmersville, Forney, Frisco, Garland, McKinney, Mesquite, Princeton, Plano, Richardson, Rockwall, Royse City and Wylie.

“Many municipalities and water utilities have struggled to develop effective programs to address the excessive use of water in landscape irrigation,” Fipps said. “Most automatic irrigation systems are improperly programmed and over-irrigate, wasting 20 to 50 percent of the water applied.”

Though university research has consistently shown using ET-based irrigation schedules can save significant amounts of water, the system has not had wide adoption by homeowners, he said.

“ET-based programs only inform homeowners how much water in inches is needed,” Fipps said. “The problem is that each irrigation system has a different water application rate. Most homeowners do not know their rate or how to determine run times based on how much water is required or how to make adjustments to run times for soils and root-zone depth.”

The Water My Yard program was designed to make using ET data easy through an interactive website app, he said.

First, homeowners use an interactive map to select their location within the water district. Alternately, they may enter their address or allow the website to locate them from their IP address.

“The location of the residence is required in order to determine the nearest ET weather station,” Fipps said.

Next, homeowners select their type of irrigation system. The online program has pictures of the various types of home irrigation systems, including rotor, spray, drip and multi-stream. After selecting the type of system, the homeowner enters the spacing of the rotors, spray heads or sprinklers. The software then calculates the irrigation system run time to meet the water requirements of the type of turf grass or landscape, and emails those requirements to the homeowner every week.

“It’s actually much simpler for the homeowner to set up on the app than it is to explain,” Fipps said.

The Water My Yard program is available to other cities and communities as well. For information, contact Fipps at 979-845-7454 979-845-7454, g-fipps@tamu.edu, or Swanson at 979-845-7454 979-845-7454, clswanson@ag.tamu.edu.

Since 1994, Fipps has promoted the use of scientific weather station data for the more efficient use of water in urban landscapes and agricultural crops. The TexasET Network, the associated website, http://TexasET.tamu.edu, posts daily weather and has additional tools to determine watering requirements for landscapes and crops.

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