

Water My Yard Program

What is the ‘Water My Yard’ Program?

The *WaterMyYard* Program (<http://WaterMyYard.org>) is an innovative program and website that solves two of the biggest problems in getting homeowners to use science-based methods to determine when and how much water to apply to their lawns:

1. Most homeowners do not know what ET (evapotranspiration) is or how to use it to determine water requirements.
2. Most homeowners do not know the precipitation rate of their sprinklers or the water holding capacity and root zone depths of their yards, all of which are required to determine irrigation runtimes.

The *WaterMyYard* website employs simple, intuitive images and information prompts. With a few clicks, homeowners get recommendations on how long (in minutes) to run their irrigation systems. Users then can quickly set their email options to have these recommendations sent to them each week.

The *WaterMyYard* Program was first launched in May 2013 as a joint effort of the Irrigation Technology Program of the Texas A&M AgriLife Extension Service and the North Texas Water Municipal Water District.

What is ET?

Evapotranspiration (or ET) is the scientific term for the amount of water that plants and crops need to grow and remain healthy. The water requirements of plants depend upon both

- a) the type of plant, and
- b) the local weather, particularly temperature, relative humidity, wind speed and solar radiation.

Over the past 60 years, research and demonstration projects have shown that using ET-based irrigation schedules can save significant amounts of water. In urban settings, automatic irrigation systems typically are improperly set-up and “over-irrigate” (and waste) 20%-50% of the water applied.

How Is the ‘WaterMyYard’ User Interface Set-up?

The Website uses a visual data entry format. Watering recommendations are quickly produced in a three step process. Sample screens from each step are shown at the end of this document.

Step One. Select Location

A map is displayed, and the user simply clicks the map where his/her yard is located.

Step Two. Enter Sprinkler Precipitation Rate or Select Sprinkler Type

If the user does not know the precipitation rate, he/she simply clicks on the image of their system. Pop-up screens then allow the user to select the manufacture and sprinkler spacing.

Step Three. Watering Recommendation and Email Set up

The water recommendation is given in minutes (how long to run your system) for once a week or twice a week watering. Next, the user can enter his/her email address to receive automatically generated water recommendations every Monday.

How Are Water Recommendations Calculated?

WaterMyYard uses standard science-based methods to calculate irrigation runtimes using local evapotranspiration data. The process is as follows:

1. By selecting the user's location, ***WaterMyYard*** finds the closest ET weather station to obtain the past week's ETo (reference ET) and rainfall.
2. Next, appropriate coefficients and quality factors are used to calculate irrigation requirements which have been shown to work well for home yards from research and demonstration projects.
3. Irrigation requirements are reduced by the amount of effective rainfall (if any).
4. Soil types, and depths are used which correspond to those common in the local area in order to set the remaining parameters needed for calculations.
5. Sprinkler precipitation rates are determined in cooperation with the Texas Turfgrass Irrigation Association and from interviews with local irrigation dealers, and correspond to the types of systems prevalent in the area.

What Are the Requirements to Participate in the WaterMyYard Program?

To participate in the ***WaterMyYard*** program, you must have at least one agricultural (ET-type) weather station that meets the TexasET Network requirements. Next we will work with you to obtain the remaining information that is needed to set up your area on the ***WaterMyYard*** website. During this process, we create an interactive map of your service area, and a user/email database for email recommendations.

Costs

Neither the **WaterMyYard** Program nor the **TexasET Network** receives State funding; thus we rely on sponsors to help cover the costs of providing these services. There are two fees associated with this program: *Set-up Fee* and *Program Support Fee*:

1. Set-Up Fee: \$4000 base fee (one-time charge)

This fee covers the costs to set up the **WaterMyYard** website for a sponsored area. For multiple weather stations and/or remote rain gauges, a surcharge may be required. Please contact us for more information.

2. Program Support Fee (annual, including year 1):

- a. \$5,000 for the first weather station
- b. \$500 for each additional data logger (weather station or remote rain gauge)
- c. A 20% discount for 10 or more stations

This *Program Support Fee* is effective for the 2016 calendar year. The fee covers the costs of participating in the program any time during 2016. **WaterMyYard** participants are not required to pay a TexasET Network fee.

3. ET Weather Station Information and Costs: see Appendix A (below)

Contacts

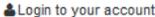
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Sample Water My Yard Screen Images

Step One: Enter Your Address (Location)





Keep your yard healthy and save water in two simple steps.



Save Water

Over 50% of landscape water is wasted due to overwatering, inefficient watering practices and broken or poorly maintained irrigation systems. Water My Yard will help you determine exactly how much to water, conserving water resources for the future and saving you money right now.



Keep Your Yard Healthy

A healthy yard needs less water than you may think. The Water My Yard program has been designed as a tool to assist you in determining an adequate amount of supplemental water that is needed to maintain a healthy lawn.



Automated Recommendations

It only takes a few short steps to begin receiving automated emails or text-messages to know how much water your landscape actually requires based on local weather conditions.

Let's get started

Step 1.) Check if your address is in the service area:

Enter a full address, city or zip code

[Check your address](#)

Step 2. Enter Sprinkler Precipitation Rate or Select Sprinkler Type

Step 2.) We need to determine the precipitation rate of your irrigation system 

You know your precipitation rate

You do NOT know your precipitation rate  

Please select the sprinkler that most resembles the sprinklers that your system uses. 

	<p>Multi-Stream</p> <p>Applies water in multiple moving streams across the lawn, typically in either a circle, half circle, or quarter circle pattern.</p> <p>You have this type of sprinkler</p>
	<p>Rotor</p> <p>Applies a single stream of water that rotates in a circular pattern over the lawn.</p> <p>You have this type of sprinkler</p>
	<p>Spray</p> <p>Applies a solid continuous fan of water across the lawn, typically in either a circle, half circle, or quarter circle pattern.</p> <p>You have this type of sprinkler</p>
	<p>Drip</p> <p>Applies water through dripping emitters in a buried hose in the lawn's root zone. Sub-surface drip of turf only.</p> <p>You have this type of sprinkler</p>

Step 3: Watering Recommendation and Email Set-up

Watering recommendation sponsored by: Texas A&M AgriLife Extension

Water conservation plan - 2 watering(s) every 7 days allowed, as needed.

Watering recommendation for the time period: 📅 Tuesday, September 8, 2015 to Monday, September 14, 2015

💧 0.19 inches of water needed
🕒 One watering(s) for 22 minutes

Important Notes:

1. Always consult your city or local water provider for watering restrictions which may be in place.
2. To receive a runtime email, or text-message, every Monday morning, click "Create an account" below and create your account.
3. Runtimes greater than 25 minutes may require multiple irrigations per day to avoid having runoff.
4. For assistance in programming your irrigation controller, please refer to your irrigation controller owners manual or contact a Licensed Irrigator.

🌞 Previous 7 Days Weather Summary [\[View\]](#)

[Receive automated watering recommendations 🗨️](#) [Start over 🔄](#)

APPENDIX A. Weather Station Information and Costs

To participate in the WaterMyYard program, you must also obtain one or more ET weather stations and cover the associated costs, as follows:

1. Purchase a weather station that meets WaterMyYard Program specifications,
2. Pay the monthly bill if a telephone or cell phone is used for data transfer,
3. Appoint a Station Manager to oversee the required maintenance of the station, and
4. Provide for sensor recalibration costs and maintenance to the station as needed.

Note: through our School of Irrigation, we offer a 1-day short course on *Operation and Management of Weather Stations for Irrigation* which station managers may find useful, and who may take the course free of charge.

Extension staff will:

1. Assist the sponsor with the purchase and siting of the weather station,
2. Provide advice on the most appropriate communication method(s) based on local situations,
3. Help set up internet transfer (if used),
4. Download station data on a daily basis, perform error and data quality checks, calculate ETo, and post on the TexasET Website,
5. Assist the station manager with troubleshooting problems if they occur and with sensor recalibration and installation directions, and
6. Other services on a cost-basis such as weather station installation, and the creation of customized webpages and information delivery.

Costs

1. **Weather Station:** ~\$5500.
See the price list of station components below.
2. **Weather Station Site Preparation:** *Varies.*
Costs vary from site to site and depend on the preferences of the sponsor. Stations may be purchased with a self-supporting tripod and simply placed in a grassy area, or on a pole set-up with a concrete base. A chain link fence may be needed if located in a public accessible area. Contact our staff for more information.
3. **Weather Station Installation and Set-up:** \$500 plus travel expenses. Other options are to include installation costs as part of the purchase agreement or do it yourself.
4. **Extra Set of Sensors:** ~\$1700.
We recommend that sponsors keep on hand an extra set of sensors so that there is no data interruption when sensors are recalibrated or must be replaced.
5. **Annual Sensor Recalibration Costs:** ~ \$400 per year
Sensors are recalibrated every one or two years, depending on the sensor. Thus, costs vary from year to year. This is a conservative cost for annual budget planning.

Equipment Specifications

TexasET Network requires scientific grade weather stations and sensors that may be purchased through Campbell Scientific, Inc. If other manufacturers are used, then the equipment must meet or exceed that of the equipment listed below. Data loggers must be programmable.

<u>Minimum Weather Station Specifications</u>	<u>Approximate Costs*</u>
1. CR800 Datalogger for Measurement and Control	\$1056
2. HMP60-L10 Vaisala Temperature and RH Sensor	\$ 322
3. 6 Plate Gill Radiation Shield	\$ 115
4. TE525-L25 6" Rain Gauge	\$ 361
5. LI200X-L15 LI-COR Pyranometer	\$ 392
6. LI2003S LI-Cor Leveling Base	\$ 77
7. CM225 Solar Sensor Mounting Stand	\$ 27
8. 03002-L15 RM Young Wind Set	\$ 649
9. CM220 Right Angle Mounting Kit	\$ 29
10. PS150 12V Power Supply w/Rechargeable Battery	\$ 264
11. SP10 10W Solar Panel w/Regulator	\$ 178
12. CM106 10-foot Galvanized Steel Instrument Tripod	\$ 500
13. CM204 4-foot cross-arm mount	\$ 85
14. ENC14/16 Weatherproof Enclosure	\$ 288
Total	\$4343

**costs as of December 2015 and do not include shipping, handling, tax or installation*

Communication Options

- Cell Phone

Raven XTV* (Verizon)	\$479
LS300G* (AT&T)	\$479
Raven Mounting Kit	\$ 24
Null Modem Cable	\$ 4
0dBd ½ Wave Whip Antenna	\$ 22
- Land line phone

COM220*	\$384
Surge protection	\$ 30
- Ethernet

NL201*	\$278
Field power cable	\$ 14
- Radio (various options)

**modems - one modem is required for each communication option*

