Zones - Using the Watering Type Smart (ET) Watering

Smart (ET) Watering is an automated schedule that uses information about environmental conditions to ensure your plants get the optimal amount of water. Evaporation will draw moisture from your garden, while rainfall and irrigation will add moisture. Understanding these conditions allows Hydrawise to decide when the time is right to water your garden. ET stands for evapotranspiration and is explained further below.

For each zone, you will have to assign the watering length and peak watering frequency:

- The watering length is how long watering needs to run to water your zone thoroughly.
- The peak watering frequency is how often you usually water this zone during your peak irrigation period.

The controller will vary your watering frequency based on actual evaporation and rainfall in your area on a day to day basis. In contrast to Time Based Watering and Virtual Solar Sync, Smart Watering will always water a zone for the same run length, and it will vary the frequency (days) of watering based on temperature and rainfall. Learn More [1]

Please view the steps to set up Smart (ET) Watering.

1. Click on **Zones & Schedules** from the home dashboard.
2. Select **Zones.** Scroll down to the first zone you choose to edit ().
    - Enter the zone name and number, and choose the icon.
3. Choose **Smart (ET) Watering** as the watering type and click **Next.**
4. Choose the following options for the Smart (ET) schedule.
    - Watering type - Time and frequency or preconfigured schedule [2].
    - Watering length - Run time for the zone in minutes.
    - Peak Season Watering frequency - Days between watering in the peak (hottest time) of the season.
    - Predictive watering adjustments - Uses ET data from weather stations.
5. Click **Next.**
6. Choose **Enable** or **Disable** for Cycle Soak. Click **Next.** Learn More [3]
7. In the **Advanced** section, you can fine-tune your watering if needed. This feature is designed to slow down or speed up the drying process. If the soil is too wet, then we allow it to dry for longer, too dry; smart watering will allow less drying time.
8. When setup is complete, click **ok**.

How it Works

Hydrawise looks at the data that you enter, the watering time and frequency. We reverse engineer the Penman-Monteith formula for ET using proprietary algorithms and ten years of history for that address.

If extra watering occurs, there is likely a lot of rainfall during the Peak Irrigation month; this is accounted for. However, there are days when there is no rainfall, and the ET becomes artificially high as there has been no rainfall. Hence, we need to irrigate more than you expect.

The Math

You get these from the **Reports > Weather > Monthly Evapotranspiration** on the web browser application.

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(Monthly ET - Monthly Rainfall) / number of days in the month = Daily ET.
Peak Month is Month—You can find this by going to a zone, editing it, then going to the Smart (ET) tab and clicking the "*Help me set up?*" link.

Example:
ET 162mm
Rainfall 225mm
(162-225)/31= -2.03mm
Daily ET is - 2.03mm, so with peak watering set to 1 day, this means we should require -2.03 x 1 = -2.03mm of ET to be used before we water. This is bad since the ET is negative.

The daily ET reports show the current average is 5.1mm.

This means the schedule will irrigate every day based on the current calculations since the ET will always be negative. We can recommend using the Time-Based Watering type coupled with the watering triggers, which provides a much better controller

over when you want the schedule to irrigate.