Hunter®

Hydrawise™ Ready
IRRIGATION CONTROLLERS

Hydrawise Software/App Owner's Manual
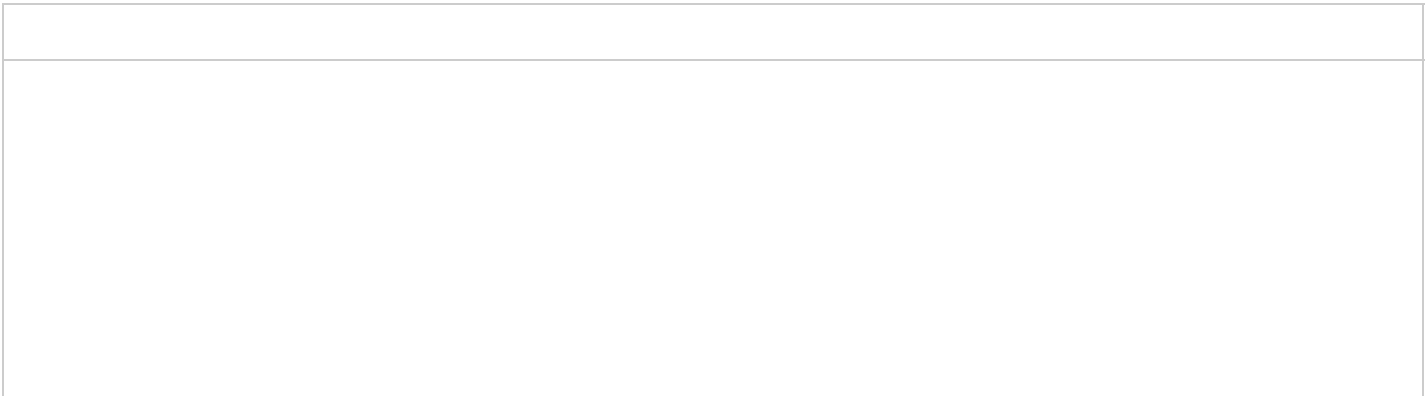
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Table of Contents

Advanced Mode Overview - Zones and Schedules

Hydrawise supports 3 types of watering - <u>Time Based</u> [1], <u>Smart (ET) Watering</u> [2], and <u>Virtual Solar Sync</u> [3]. Choosing which style of watering depends on a number of things, including your type of irrigation zone, if any watering restrictions exist in your area and personal preference (for example, for people who like to know that their irrigation will start on Mondays, Wednesdays and Fridays then Time Based Watering is ideal). Other topics covered in this article include:

<u>Add a Zone</u>

<u>Add Zone Images</u>

<u>Configure Master Valve</u>

<u>Configure Program Start Times and Water Days</u>

<u>Configure Preconfigured Water Schedule</u>

Adding a Zone

To add an irrigation zone, navigate to the **Zones & Schedules** page in your Hydrawise account and click on **Add a New Zone**. The Zone wizard will be displayed.

Fill in the Zone Details:

Zone Name: Name for each irrigation zone. Zone names are displayed on the Hydrawise controller and are used in your Hydrawise account to show run times and allow manual modification of watering schedules.

Zone Number: The zone number for each irrigation zone should match the number you have used when wiring the controller.

Zone Icon: Choose an icon which will be used to display the zone on the dashboard. If you have uploaded an image for this zone you can choose it to be displayed on the dashboard instead.

Watering Type: Select a watering mode for this zone. A zone can use Smart (ET) watering or Time Based watering, which are described below.

Depending on the type of watering you chose, fill in the details for Time Based, Smart (ET) Watering or Virtual Solar Sync.

Time Based Watering

Watering Type: Choose whether to set the information manually or choose from a list of preconfigured watering schedules.

Enter Time and Frequency: allows you to manually set the watering length and frequency.

Use a Preconfigured Watering Schedule: add a preconfigured watering schedule or use

one you've previously created. If your controllers are managed by a contractor, you may see preconfigured watering schedules that your contractor has created, which you can also use.

Enter Time and Frequency: If you choose to enter the time and frequency, the following fields are available:

Watering Length: The number of minutes this zone will run for each time.

Watering Frequency: Choose how often to water the zone.

Schedule Adjustment: Choose how to adjust the watering time based on your weather triggers.

Use a Preconfigured Watering Schedule: If you choose to use a preconfigured <u>Watering Schedule</u> you can either choose from a list of schedules you've previously created, or add a preconfigured watering schedule by entering the watering length and frequency and schedule modifications as per the fields above. If your controllers are managed by a contractor, you may see preconfigured watering schedules that your contractor has created, which you can also use.

Cycle and Soak: Cycle and Soak is the ability to break the watering time for a zone into periods of watering (cycle) and pause (soak) to allow the water to soak into the soil without runoff.

You can enable or disable Cycle and Soak. If you enable it, you need to specify the cycle and soak periods:

- Cycle Time: the maximum number of minutes the zone can run for
- Soak Time: the minimum time between zone watering to allow the water to soak into the soil

Tuning: Adjust the watering time for this zone from the calculated time. This allows you to fine tune your watering if your zone appears to be too dry or wet.

Smart (ET) Watering

Watering Type: Choose whether to set the information manually or choose from a list of preconfigured watering schedules.

Enter Time and Frequency: allows you to manually set the watering length and frequency.

Use a preconfigured Watering Schedule: add a <u>preconfigured watering schedule</u> or use one you've previously created. If your controllers are managed by a contractor, you may

see preconfigured watering schedules that your contractor has created, which you can also use.

Enter Time and Frequency: If you choose to enter the time and frequency, the following fields are available:

Watering Length: The number of minutes this zone will run for each time.

Peak Season Watering Frequency: How often the zone will normally run during your peak irrigation period. This frequency will be automatically adjusted throughout the year based on actual evaporation and rainfall.

Use a Preconfigured Watering Schedule: If you choose to use a preconfigured Watering Schedule you can either choose from a list of schedules you've previously created, or add a preconfigured watering schedule by entering the watering length and frequency and schedule modifications. If your controllers are managed by a contractor, you may see preconfigured watering schedules that your contractor has created, which you can also use.

Note that the Schedule Adjustment option in a preconfigured Watering Schedule is not used for Smart (ET) watering zones.

Cycle and Soak: Cycle and Soak is the ability to break the watering time into periods of watering (cycle) and pause (soak) to allow the water to soak into the soil without runoff. You can enable or disable Cycle and Soak. If you enable it, you need to specify the cycle and soak periods:

- Cycle Time- the maximum number of minutes the zone can run
- Soak Time- the minimum time between zone waterings to allow the water to soak into the soil

Tuning: Adjust the watering time for this zone from the calculated time. This allows you to fine tune your watering if your zone appears to be too dry or wet.

Adding Zone Images

You can upload multiple pictures of each of your irrigation zones to the Hydrawise system. To upload an image click on the Image Add button ✍ next to the Zone Edit button.

You can upload multiple images per zone. The total number of images that can be uploaded is based on the images size and is different for each account's Plan Subscription.

After an image is uploaded you can select an image to be displayed on the Dashboard by editing the zone ✍ and selecting the image in the Zone Icon list
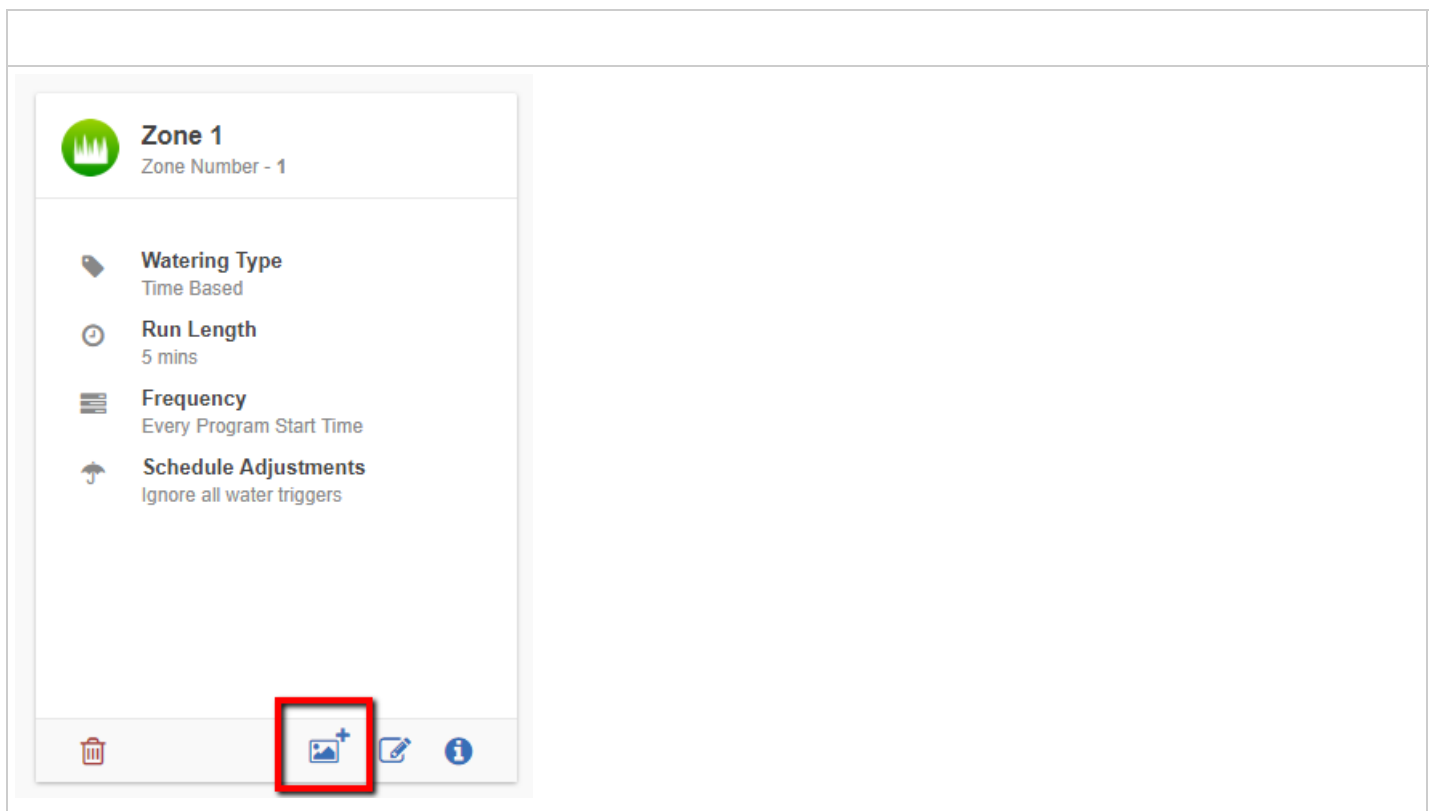
Configuring a Master Valve (Sensors and Valves Section)

A master valve is an automatic valve that is installed at the point where the irrigation system connects to the water supply. (Sometimes this circuit is called a "pump start circuit." Both types of circuits work similarly and can be used for a pump and/or a master valve.) The controller turns the master valve on and off.

Zone valves are the individual valves that operate a group of sprinklers or drip emitters. Typically one zone valve is turned on at a time, and controls the irrigation in a specific area of your garden. Whenever one of the irrigation zone valves is told to open by the controller, the controller also signals the master valve to open - the master valve acts like a back up valve, or a fail-safe valve. The purpose of the master valve is to shut off the water to the irrigation system when none of the zone valves are operating.

The image below shows a master valve operating connected to Zone 12 on a Hunter HC controller.

O	Water main
◆	Master valve (optional)
◆	Solenoid Valves
O	Water to zones
O	Common wires
@	24V AC plug pack
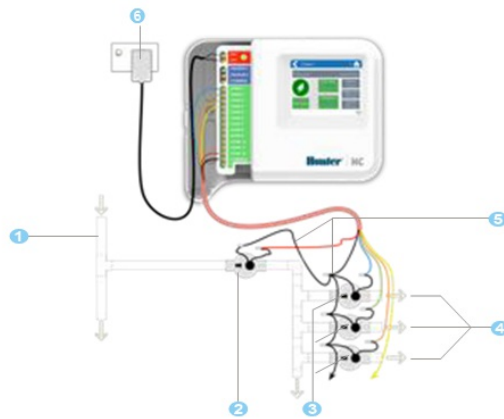
Different Hydrawise-Ready controller models have different options when selecting a master valve. With a Hunter HC controller, any one of your ordinary zones can be configured to act as a master valve, with all other Hydrawise-Ready controller models there is a dedicated master valve.

The master zone is configured on the Zones & Schedules page underneath your list of irrigation zones as highlighted in the image below.
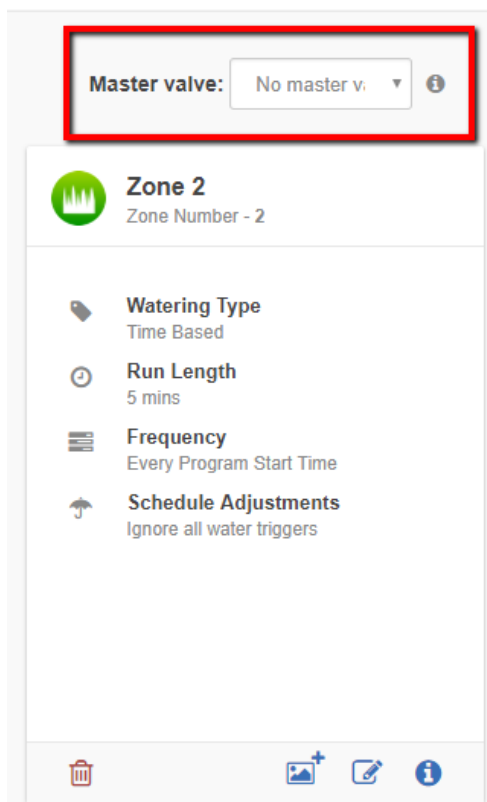
Configuring Master Valve - PRO-HC

With the Pro-HC, setting the master valve (MV) is similar. All you need to do is select whether you have a MV as shown below.

You no longer have to select which zone the MV is connected to, as the option will be different depending on the controller you select when setting up your controller for the first time.

Initially there is no master valve configured.

Configuring Master Valve - HPC-FP (Panel for PC-400 controller)

The default is for all stations to have the master valve/pump start circuit ON. The master valve/pump start can be set **ON** or **OFF** by station, regardless of which program the station is assigned.

Please follow the steps for initializing the P/MV for each zone.

1. Click the icon for the zone in "**zones and schedules**"
2. Click **Next** three times to enter the advanced section or programming.
3. You can now choose either of the following:
    1. Use **Global Master Valve Setting** (Turns the P/MV circuit ON)
    2. Use **Disable Master Valve** (Turns the P/MV circuit OFF)
4.

Configuring Program Start Times

Your controller's watering Program Start Times specify when your controller is permitted to do any watering. If multiple zones are using the same Program Start Time, then they will be started in sequence (only one zone can run at a time).

To add a program start time, navigate to the Zones & Schedules page in your Hydrawise

account and click on Add Watering Time.

Start Time: Enter the time for this Program Start Time.

Watering Type: Choose the watering type for this Program Start Time. For example, choose odd or even weeks.

Watering Days: Choose which days this Program Start Time applies to. For example, choose odd or even days, or select specific days of the week.

Then select the zones to which this Program Start Time applies. Either apply it to all zones or select from a list of zones or Preconfigured Watering Schedules.

Configuring Preconfigured Schedules

Preconfigured Watering Schedules allow you to group together zones with identical watering properties.

Each Preconfigured Watering Schedule determines how long a group of zones will run and how the schedule should be modified based on your local weather. Zones will water only at your defined Program Start Times.

To add a preconfigured watering schedule, navigate to the Zones & Schedules page in your Hydrawise account and click on Add Watering Schedule.

Schedule Name: Give the schedule a name.

Run Time: Choose how long each irrigation zone associated with this Preconfigured Watering Schedule will run.

Run Frequency: Choose how often each irrigation zone associated with this Preconfigured Watering Schedule will run.

Schedule Modification: Select how the watering schedule for this Preconfigured Watering Schedule is modified based on temperature and rainfall. Note: if you apply this watering schedule to a Smart (ET) Watering zone, the schedule modification is not used.

Viewing Preconfigured Watering Schedules

You can see all your preconfigured watering schedules on the Zones & Schedules page.

If your controllers are managed by a contractor, you may also see preconfigured watering schedules that your contractor has created. These will have a group symbol next to them as highlighted below. You can use these preconfigured watering schedules but you can't edit or delete them – only the contractor can do that.
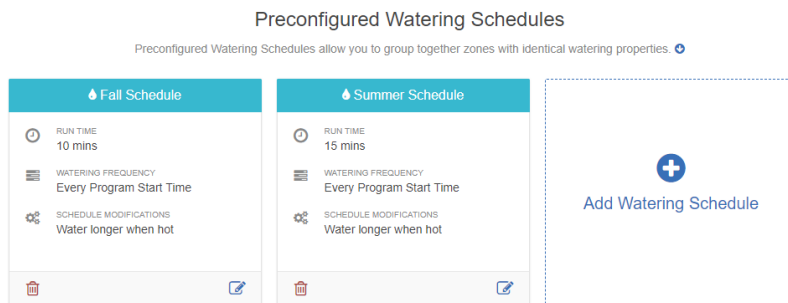
Zones - Using the Watering Type Time Based

Time-based watering will water on specific days (unless delayed by rainfall or forecast rainfall) and will vary the watering length based on your watering triggers. The controller will use the Watering Triggers you've set to automatically adjust its watering schedule. This Watering type would be most common as it allows the user to set the information manually or choose from a list of pre-configured watering schedules.

Please view the steps and screenshots to access this feature:

Click on **ZONES AND SCHEDULES** from the home dashboard, then select **ZONES.** Scroll

down to the first zone you choose to edit. Click on the ✏️ icon.

1. Choose **TIME BASED** as the watering type and click **NEXT.**
2. Choose the following options for the Time Based Schedule.
   - Watering type - time and frequency or <u>preconfigured schedule</u> [4].
   - Watering length - run time for zone in minutes (1 min to 1439 mins).
   - Watering frequency -
     - Every Program start time - This will allow the program to start at the designated time set in start times.
     - Interval days - See article <u>here</u> [5] for details
   - Predictive watering adjustments - Adjusted based on your water triggers
   - Monthly adjustments can be made using a chart as well.
   - Click **NEXT** when adjustments are complete.
3. Choose **ENABLE OR DISABLE** the <u>cycle soak feature</u> [6].
4. Finally, the Advance Section will allow you to select a **WATERING ADJUSTMENT** as a %.

STEP 1

STEP 2

Zone Details ▸	Time Based Schedule ▸	Cycle & Soak ▸	Advanced

Watering Type

○ Enter Time and Frequency below
○ Use a Preconfigured Watering Schedule

Watering Length
The number of minutes this zone will run for each time

10	minutes

Watering Frequency
Choose how often this zone should run
◉ Every Program Start Time   ○ Interval Based Watering

Predictive Watering™
Adjust watering based on the following triggers

⏻ Don't water when: ✎ Adjust watering:
☑ Forecast below 60°F   ☑ 80%+ chance of rain   ☑ Water 30% less when below 73°F
☑ Wind above 9mph   ☑ 0.5in+ rainfall last day   ☑ Water longer when hot
☑ 3in+ rainfall last 7 days   ☐ Water more often when hot

In addition to daily predictive watering adjustments you can specify monthly adjustments using the chart below

⑤ May   [========●========]   80%   x
            0 %   200 %

Cancel		‹ Prev	Next ›	✔ OK

STEP 3

Zone Details ▸	Virtual Solar Sync ▸	Cycle & Soak ▸	Advanced

Cycle & Soak
Cycle and soak reduces runoff from each zone by pausing an irrigation cycle ⓘ

◉ Do not enable cycle and soak
○ Enable cycle and soak

Cancel		‹ Prev	Next ›	✔ OK

STEP 4

Zone Details ▸	Virtual Solar Sync ▸	Cycle & Soak ▸	**Advanced**

Water Adjustment
Fine tune your watering if your zone appears to be too dry or wet

[——————●——————]   Water for
Water less   Normal   Water more   normal
                                      watering
                                      length

Cancel		‹ Prev	Next ›	✔ OK

Zones - Using the Watering Type

Virtual Solar Sync

This operates the same way as the Hunter Solar Sync by adjusting the run time per zone. It uses daily ET from your selected weather stations instead of on-site ET so it does not require on-site Solar Sync sensor installation. If no weather station ET is available, then it will fall back to using forecast ET and historical ET. The virtual Solar Sync makes its adjustments based on the rolling average of the last three days of data.

Hunter's Solar Sync Region and Water Adjustment settings	
Region	Determined automatically based on your controller's location from the weather station selected.
Water Adjustment	Use the Advanced Tab when editing a zone to adjust the zone's watering. See step 4 below:
Run Times	Set station run times (1 min to 1439 min) for peak summer watering. For assistance on establishing correct run times for your system, see run time calculator [7].

Please view the steps and screenshots to access this feature:

Click on **ZONES AND SCHEDULES** from the home dashboard, then select **ZONES.** Scroll down to the first zone you choose to edit. Click on the ✎ icon.

1. Choose **VIRTUAL SOLAR SYNC** as the watering type and click **NEXT.**
2. Choose the watering length, watering frequency, and weather adjustments, and click **NEXT.**
3. Choose **ENABLE OR DISABLE** the cycle soak feature.
4. Finally, the Advance Section will allow you to select a **WATERING ADJUSTMENT** as a %.

STEP 1

Zone Details ▸ Virtual Solar Sync ▸ Cycle & Soak ▸ Advanced

Zone Name
Assign a name for this irrigation zone

Front Grass

Zone Number
Choose the zone number that this zone is wired to on your Hunter controller

Zone 1 ▾

Zone Icon
Choose the icon you want to see on the dashboard for this zone

Watering Type
○ Time Based Schedule   ○ Smart (ET) Schedule   ● Virtual Solar Sync™
Automatically adjust program run length based on daily evapotranspiration (ET)

Cancel   ‹ Prev   Next ›   ✔ OK

STEP 2

Zone Details ▸ **Virtual Solar Sync** ▸ Cycle & Soak ▸ Advanced

Watering Type
● Enter Time and Frequency below
○ Use a Preconfigured Watering Schedule

Watering Length
The number of minutes this zone will run for each time

30   minutes

Watering Frequency
Choose how often this zone should run
● Every Program Start Time   ○ Interval Based Watering

Predictive Watering™
Adjust watering based on the following triggers ℹ
⏻ Don't water when:
☑ Forecast below 60°F   ☑ Wind above 9mph
☑ 80%+ chance of rain   ☑ 0.1in+ rainfall last day
☑ 3in+ rainfall last 7 days

Cancel   ‹ Prev   Next ›   ✔ OK

STEP 3

Zone Details ▸ Virtual Solar Sync ▸ **Cycle & Soak** ▸ Advanced

Cycle & Soak
Cycle and soak reduces runoff from each zone by pausing an irrigation cycle ℹ
● Do not enable cycle and soak
○ Enable cycle and soak

Cancel   ‹ Prev   Next ›   ✔ OK

STEP 4

After Virtual Solar Sync has been installed and programmed, it is recommended to allow the system to run for a few days at the initial setting. Because of the variety in site conditions, the initial setting may require adjustment in order to achieve the desired performance.

Virtual Solar Sync and Pre-Configured Watering Schedule Note:

In order to use Virtual Solar Sync with Pre-Configured Schedule, you must first have a Pre-Configured Schedule assigned in the account. The drop down here will not display any schedule without completing the necessary steps found in the article here [8]or simply click **CREATE NEW** as shown in the section below.

Pre-configured Watering Schedule Drop Down

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 [9]

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 [4].
    - 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 [10]
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**.

Program Start Times

The **PROGRAM START TIMES** are the specified times when your controller is permitted to water. Watering will not occur with no start times even if run time is added to all the zones. Please view the steps and screenshots to access this feature:

Edit Program Start Time or Water Days

1. Click on **ZONES** at the bottom of the app or **ZONES AND SCHEDULES** on a web browser from the home dashboard. Select **PROGRAMS START TIMES.**

2. Click on the (➕) icon for a **NEW** start or select the (✏️) box for a current start that may just require a change.

3. Enter your **START TIME**. This is the time your program cycle will begin.

4. Select your **WATERING TYPE**. The most commonly used type is "Normal Watering Time."

5. Select your **WATERING DAYS.** You have the option to select specific days, odd days, or even days. Learn more [11] or Select **NEXT**.

6. Choose **ALL ZONE** or **SELECT SPECIFIC ZONES** then click **OK.**

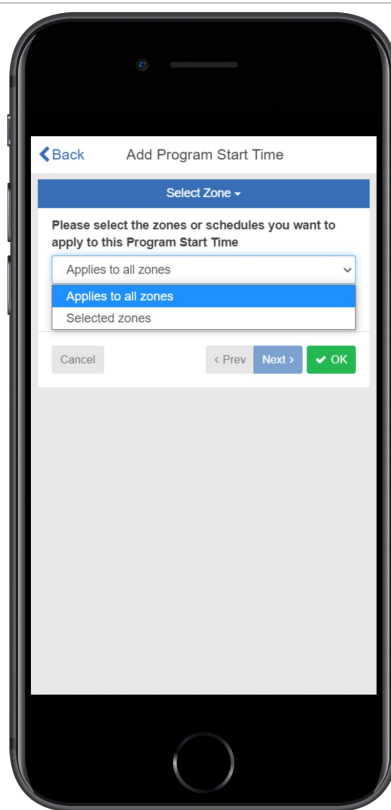| STEP 1	STEP 2
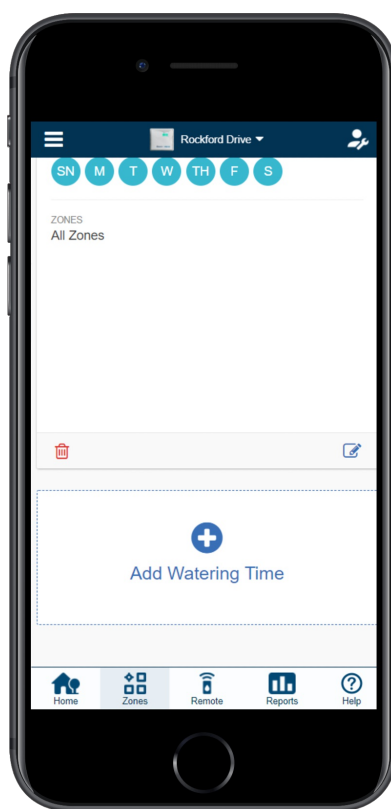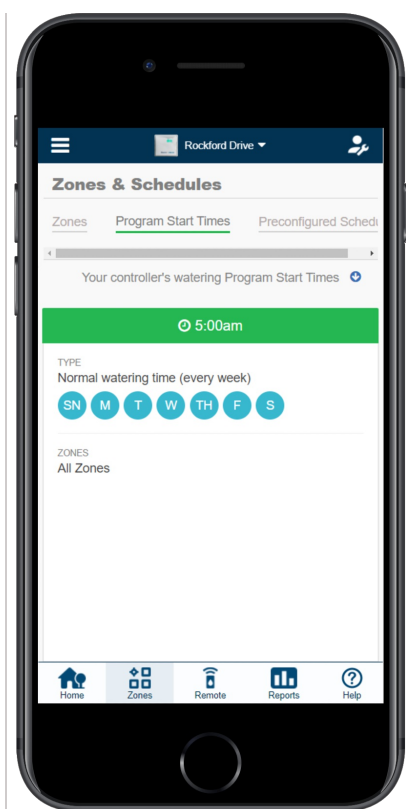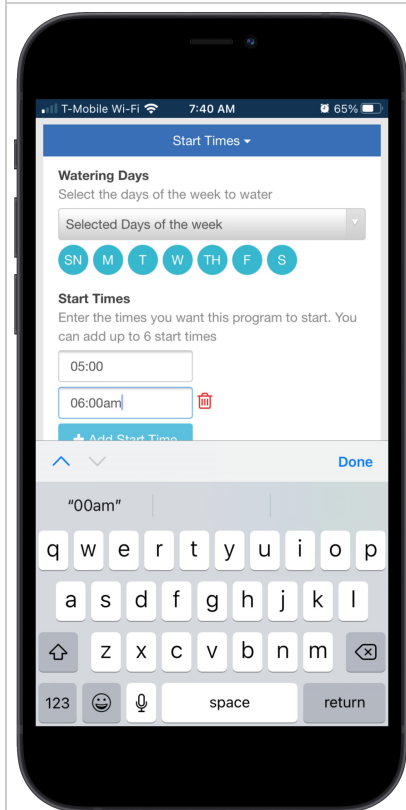
STEP 3-5	STEP 6

Watering Type Options:

Normal watering time	This watering time is used first when determining when the controller is permitted to

(every week)	run.
Watering even weeks only	This watering time is only used on even weeks. We use the ISO 8601 definition of even and odd weeks, where each week starts on a Monday. You can check if a particular date is on an even or odd week using an <u>online tool</u> [12]. When watering on even weeks, you can choose to water on specific days of that week or only odd or even days of the week.
Watering odd weeks only	This watering time is only used on odd weeks. We use the ISO 8601 definition of even and odd weeks, where each week starts on a Monday. You can check if a particular date is on an even or odd week using an <u>online tool</u> [12]. When watering on odd weeks, you can choose to water on specific days of that week or only odd or even days of the week.
Low priority water	Low-priority watering times are used when there are no Normal, Odd Week, or Even Week watering schedules available and a zone needs to run. A low-priority watering time can be useful where you want the controller to insert extra watering cycles between your normal watering cycles on hot days. This watering type works in combination with <u>How to Set Up "Water More Often When Hot."</u> [13]

Watering Day Options:

Select days of the week	You can specify the days on which you want this program start time to be effective. **Note:** Blue means selected, so by default all days are selected. You can deselect a day by clicking on it and it will turn white.
Even days	Will only allow this program start time to start on even days of the month
Odd days	Will only allow this program start time to start on odd days of the month

Applies to all zones	This automatically applies the specified program start time to all zones. If you remove or add irrigation zones, they will automatically be applied to this program start time
Selected zones	This will only allow the selected zones to use this program start time. If you add more irrigation zones, you may be required to add them to this program start time if you want them to use this program start time.

NOTE: If multiple zones use the same Program Start Time, they will be started in sequence.

Remember that there are many variables that can affect your Program Start Times. To understand how each one works, spend some time looking at the different options and

settings to see how they affect your watering schedule. If you would like to know more about how **Watering Triggers** can affect your program start times, refer to these links:

[Water More Often When Hot](#) [13]

[Setting Watering Triggers](#) [14]

[Smart Watering Adjustment](#) [15]

[Configuring Watering Schedules](#) [16]

Preconfigured Schedules

Preconfigured Watering Schedules allow you to group together zones with identical watering properties. Each Preconfigured Watering Schedule determines how long a group of zones will run and how the schedule should be modified based on your local weather. Zones will water only at your defined **PROGRAM START TIMES**.

NOTE: This feature is only an option when using the Advanced Programming mode. **Learn more** [17]

Example Schedules

Preconfigured Watering Schedules

Preconfigured Watering Schedules allow you to group together zones with identical watering properties. ⊙

💧 Lawn	💧 Lawn 1	💧 Time Based
RUN TIME 20 mins	RUN TIME 10 mins	RUN TIME 15 mins
WATERING FREQUENCY Twice a day	WATERING FREQUENCY Twice a day	WATERING FREQUENCY Three times a day
SCHEDULE MODIFICATIONS Water more often when hot	SCHEDULE MODIFICATIONS Water more often when hot	SCHEDULE MODIFICATIONS Water more often when hot

💧 Water Longer	💧 Water More	
RUN TIME 180 mins	RUN TIME 180 mins	⊕ Add Watering Schedule
WATERING FREQUENCY Every valid Program Start Time	WATERING FREQUENCY Four times a day	
SCHEDULE MODIFICATIONS Water longer when hot	SCHEDULE MODIFICATIONS Water more often when hot	

Setting a preconfigured watering schedule

Please view the steps and screenshots to access this feature:

1. Click on **ZONES** at the bottom of the app.
2. Click on **PRECONFIGURED WATERING SCHEDULE**.
3. Add a **SCHEDULE NAME** and choose a **WATERING TYPE.** The example below will be the most common which is Time Based.
4. Finally, add **WATER LENGTH, WATERING FREQUENCY**, and **PREDICTIVE WATERING ADJUSTMENTS.**
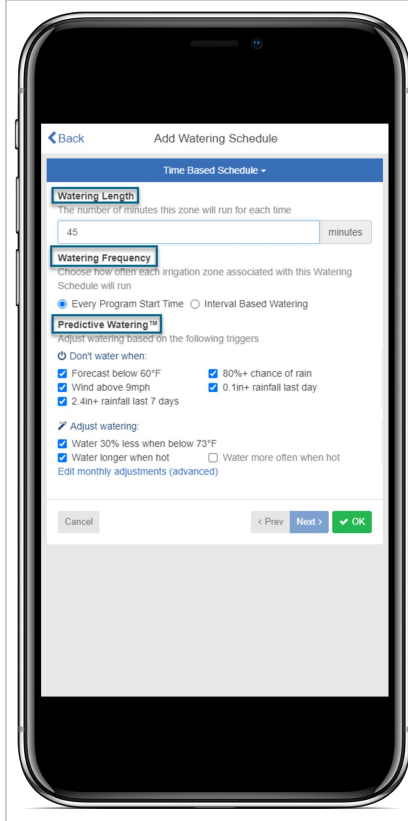5. Click **OK.**

STEP 1

STEP 2

Add Watering Schedule

General ▾

Schedule Name
Assign a name for this new watering schedule

ROTORS

Watering Type
◉ Time Based Schedule ○ Smart (ET) Schedule
○ Virtual Solar Sync

Water at a specified frequency (eg. every 1 week) and adjust schedule based on temperature and rainfall

Cancel   ‹ Prev Next › ✔ OK

STEP 3

‹ Back   Add Watering Schedule

Time Based Schedule ▾

Watering Length
The number of minutes this zone will run for each time

45   minutes

Watering Frequency
Choose how often each irrigation zone associated with this Watering Schedule will run

◉ Every Program Start Time ○ Interval Based Watering

Predictive Watering™
Adjust watering based on the following triggers

⏻ Don't water when:

☑ Forecast below 60°F   ☑ 80%+ chance of rain
☑ Wind above 9mph   ☑ 0.1in+ rainfall last day
☑ 2.4in+ rainfall last 7 days

✎ Adjust watering:
☑ Water 30% less when below 73°F
☑ Water longer when hot   ☐ Water more often when hot
Edit monthly adjustments (advanced)

Cancel   ‹ Prev Next › ✔ OK

Watering Schedules can be used for zones that are running either Time-Based Predictive Watering or Smart Watering. However, when using Smart Watering zones, the Schedule

Adjustment option in a Preconfigured Watering Schedule is not used. <u>Learn more</u> [18]

Fields in Preconfigured Schedule

Schedule Name	This is the name of the Watering Schedule.
Run Time	This is the watering time for this landscape type under normal conditions (if it is too hot or cold, this value will be automatically adjusted globally).
Watering Frequency	How often this schedule needs to run.
Schedule Modifications	When the day's forecast or current temperature is above your threshold, you can choose how often extra watering occurs. Don't water When and Adjust watering: - Forcast below 60F - Wind above 9mph 3in+rainfall last 7 days 80%+chance of rain 0.1in+ rainfall last day - Water 30% less when below 73F - Water 30% less when below 73F - Water longer when hot - Water more often when hot If you are using a watering frequency of Every Valid Program Start Time, watering will occur at each Program Start Time regardless of schedule modifications set above.

Assigning to Start Time

It is best practice to assign the preconfigured schedule to a start time without adding the zones that are tied to a preconfigured schedule as well. You will see in the example below that you can assign multiple schedules to a start time.

IMPORTANT: If one of your pre-configured schedules with zones are assigned to your **START TIME**, this will not automatically apply that schedule to those zones.

You will see in the example below, the back grass is part of the **Spray Zone** schedule.   The Rotor Zone Schedule added will **NOT** apply to the **Back Grass** zone that was added to the start time.

Example: Assigned Schedules

NOTE: Watering Schedules are not just time based; they work for smart watering zones, too. You create the schedules in advance for use across multiple zones.

How to Change the Run Times in Advanced Mode

If you choose to edit the **RUN TIME** for each station (zone) in **ADVANCED MODE**, please review the steps and screenshots below to access this feature. For information on changing your run times in **STANDARD MODE**, please visit the support article <u>here.</u> [19]

The following fields are also available when accessing this feature:

Time and Length	
Watering Length:	The number of minutes this zone will run for each time.
Watering Frequency:	Choose how often to water the zone. The most common is Every Program Start Time.
Schedule Adjustment:	Choose how to adjust the watering time based on your weather triggers.

Edit Run Times

1. Sign-in to your <u>Hydrawise account</u> [20]using your email.
2. Click on **ZONES** at the bottom of the app or **ZONES AND SCHEDULES** on a web browser from the home dashboard.
3. Scroll to the **ZONE** that requires the change and select the (⬚) icon.
4. Select **NEXT** at the bottom of zone details.
5. Enter the watering **RUN TIME** in minutes for the zone in the open text box under **WATERING LENGTH**. Select **DONE**, then **OK** to save.

STEP 1-2	STEP 3
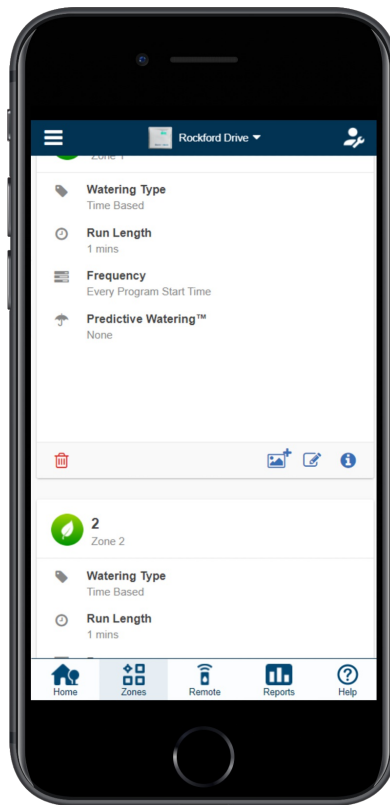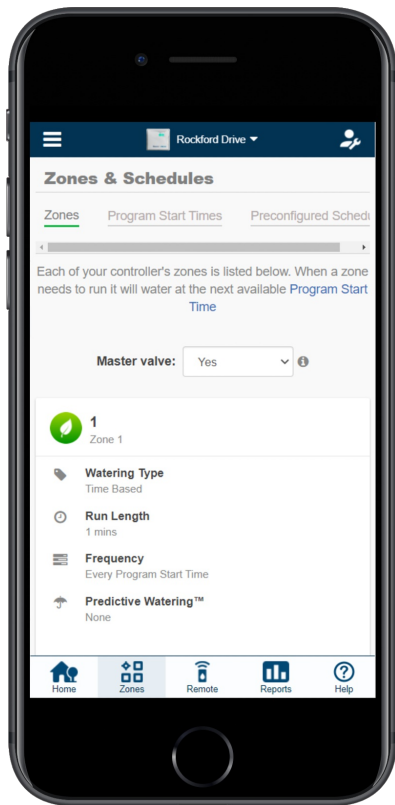
STEP 3
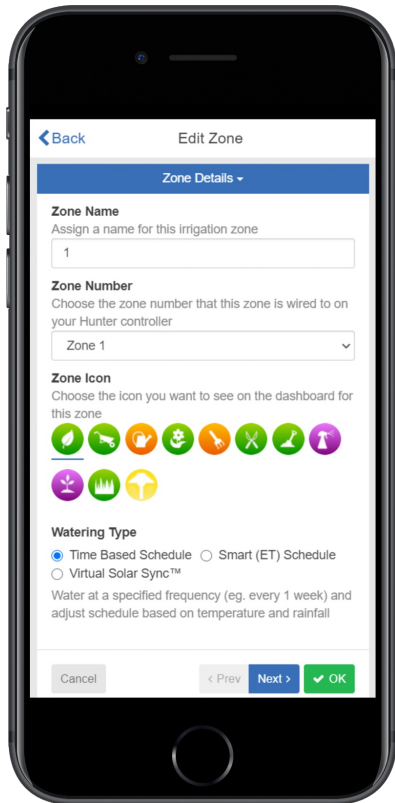
STEP 4-5
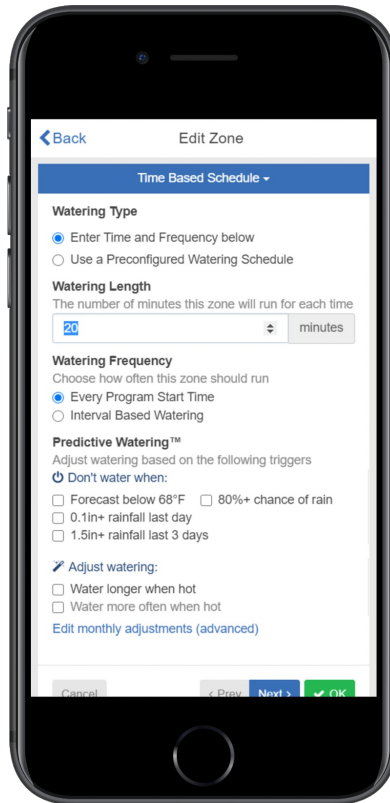
Changing to Standard Mode

The steps and screenshots below describe how to change the programming mode on your controller:

1. Select **CONTROLLER SETTINGS** from the Home dashboard on the left-hand side.
2. Once the configuration screen has loaded, click the ✏️ icon to edit the mode.
3. After you enter the desired mode for your controller, click **OK**.

For more information on comparing the two different programming modes, click <u>here</u> [21].

IMPORTANT: The controller model HC does not have the **STANDARD MODE** feature so this dropdown will not appear in the software.

Step 1

IRRIGATION CONTRACTOR
WE WATER

Deakin University
SAN DIEGO - LAC - OLD PROJECT

🏠 Home
🔳 Zones & Schedules
◉ Watering Triggers
📶 Sensors
🖳 Controller Settings ⬅
📊 Reports

Step 2
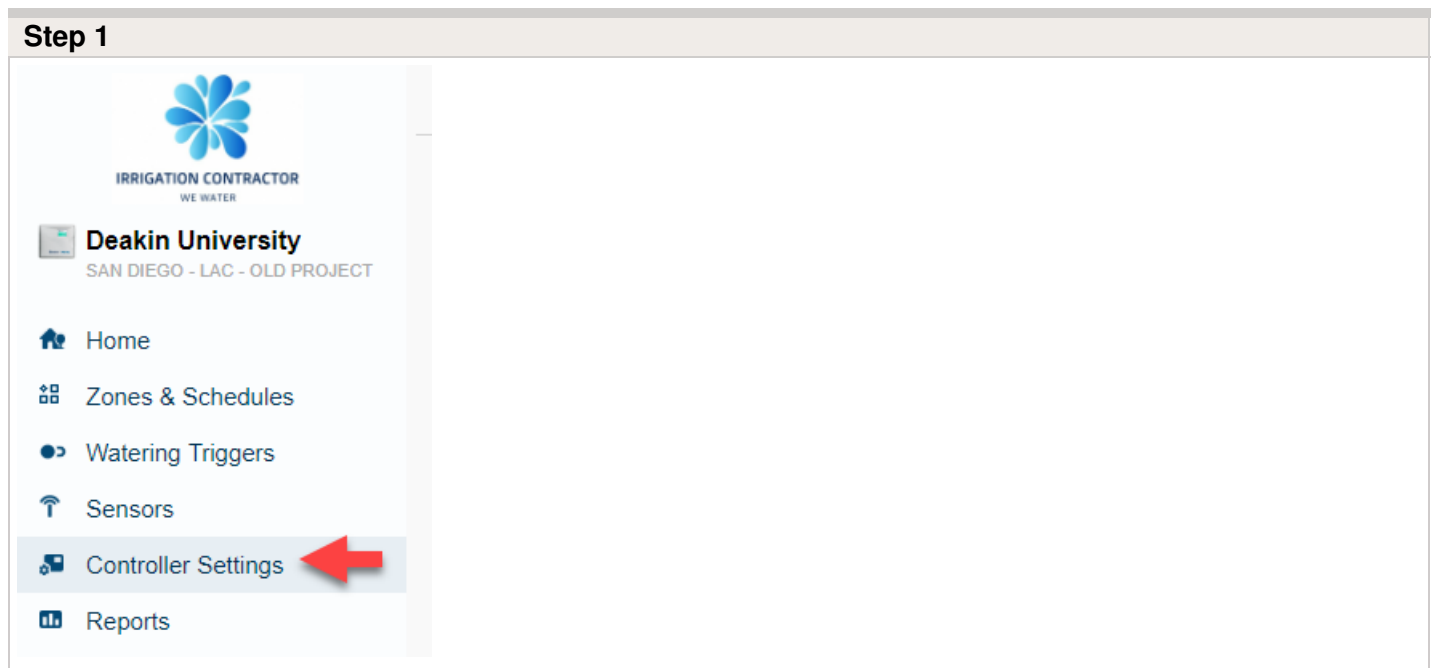
CONTROLLER

🎨 NAME
Deakin University

▌▌ SERIAL NUMBER
virt1112 Remove Serial

⚑ STATUS
Linked

🚀 MODEL
Pro HC 12 Station Controller

🕐 INSTALL DATE
Wed, 27 Feb 19 17:35:25 +0000 Start Wizard

⑂ SOFTWARE

📦 PROGRAMMING MODE
Advanced mode ⬅

Step 3

Edit Controller Settings   ×

Name

Deakin University

Model

Pro HC 12 Station Controller Change

Programming mode

Advanced mode ▼ ⬅

Create irrigation schedules with Hydrawise programming utilising
Program Start Times and Zone based programs

⬅ Cancel ✔OK

Advanced versus Standard Mode

Your Hydrawise system can be configured in two programming modes: Advanced and
Standard. The four charts below describe the features and benefits of each of the modes.
For more information on switching modes, <u>click here</u> [22].

Important: In **Advanced Mode**, every program and individual zone counts as its program. It is easy to exceed the 6-program limit. When this happens, the programs can get too large and exceed the controller's memory. This extra programming could result in an error message **Configuration To Large**.

Standard Mode	
Features	**Yes/No**
Industry **Standard** Programming	Yes
Stations can have different run lengths	Yes
Multiple start times from the same program	Yes
Odd / Even / Interval Watering	Yes
Name Programs or Start Times	Yes
Preconfigured Schedules	No
Time - Based Watering	Yes
Virtual Solar Sync Watering	Yes
ET (Smart) Watering	No
Water More often when hot	No

Controller Model	# Programs	# Start times per program	Total Start times per controller	Number of concurrent stations	MV allocation by the station
X2 with WAND	3	6	18	1 + MV	No
Pro-HC (PHC)	6	6	36	1 + MV	No
Pro-C Hydrawise (HPC)	6	6	36	1 + MV	Yes
HCC Controller (HCC)	6	6	36	2 + MV	Yes

Use **ADVANCED MODE** to create irrigation schedules with zone-based programming, which enables complex watering programs and small station count controllers. **NOTE:** The X2 controller model is not compatible with advanced mode.

IMPORTANT: The controller model X2 with WAND does not have the **ADVANCED MODE** feature so this dropdown will not appear in the software.

Advanced Mode	
Features	**Yes/No**
Industry **Standard** Programming	No
Stations can have different run lengths	No
Multiple start times from the same program	No
Odd / Even / Interval Watering	Yes
Name Programs or Start Times	No
Preconfigured Schedules	Yes
Time - Based Watering	Yes
Virtual Solar Sync Watering	Yes
ET (Smart) Watering	Yes
Water More often when hot	Yes

Controller Model	# Programs	# Start times per program	Total Start times per controller	Number of concurrent stations	MV allocation by the station
HC Controller (serial number C0) - Old model	N /A	N /A	N /A	1 + MV	No
HC Controller (serial number 05) - New model	6	6	36	1 + MV	No
Pro-HC (PHC)	6	6	36	1 + MV	No
Pro-C Hydrawise (HPC)	6	6	36	1 + MV	Yes
HCC Controller (HCC)	6	6	36	2 + MV	Yes

Water Days - Interval Watering

This feature is convenient if you want to have a more consistent watering schedule without having to worry about the day of the week or the date. The interval you select is the amount of days between watering including the water day (e.i. 2 day interval will water every other day).

This article will walk you through the process for setting interval days for **Online Advanced and Standard** mode.

Offline mode (Standard Only) instructions can be viewed in the article <u>here</u> [23].

Online Mode (Advanced)

The steps and screenshots below show how to set a interval for advanced mode online:

Click **"Zones & Schedules"** from the home Dashboard. Select the zone **"Edit"** icon.

Select **"Next"** to view the watering type screen.

Check the box for **"Interval Base Watering."**

Use the **"Up/Down"** arrows to select your interval number for days.

Select **"Ok."**

Next click **"Zones & Schedules"** from the home Dashboard. Select the **"Program Start Times"** mode.

Select the start time **"Edit"** icon.

Makes sure all the days of the week are selected. Deselecting any days may result in losing another watering cycle if the interval falls on that day.

Click **"OK."** Interval is now set for the zones assigned to this start time.

Step 6-7

Online Mode (Standard)

The steps and screenshots below show how to set a interval for standard mode online:

Click **"Zones & Schedules"** from the home Dashboard. Select the programs **"Edit"** icon.

Step 1

Home Program

PROGRAM TYPE
Time Based

WATERING DAYS
Selected Days of the week

(SN) (M) (T) (W) (TH) (F) (S)

START TIMES Tuesday
5:00am

ZONES
Front Grass   10 minutes
Street Drip   10 minutes
Front Drip   10 minutes
Show more...

PREDICTIVE WATERING™
Forecast below 60°F
Water 30% less when below 73°F
Water longer when hot
80%+ chance of rain
Wind above 9mph
0.1in+ rainfall last day
3in+ rainfall last 7 days

Select **"Next"** to view the start times screen.

Steps 2

| Program Name ▶ | Start Times ▶ | Run Times ▶ | Schedule Adjustments |

Program Name
Enter program name

Home Program

Program Type
⦿ Time Based Schedule   ◯ Virtual Solar Sync

Water at a specified frequency (eg. every 1 week) and adjust schedule based on temperature and rainfall

Cancel   Next ›   ✔ OK

Select the drop-down for **"Interval Base Watering."**

Use the **"Up/Down"** arrows to select your interval number for days.

Select when the day when the watering will **"Start."**

Select **"Ok."**

Step 3-6

Cycle/Soak Operation

The **Cycle and Soak** feature allows users to split each station's run time into more usable, shorter-duration watering. This feature applies particularly to slopes and tight soil (such as clay) because Cycle and Soak will help prevent excessive runoff. You should enter the Cycle time as a fraction of the station's watering time and the Soak time as the minimum soak required before watering the next portion. The total number of cycles is determined by dividing the total programmed station run time by the Cycle time.

IMPORTANT: If a flow sensor is installed with <u>Alert - Auto suspend for high flow</u> [24] configured, the system will shut down after the **FIRST CYCLE** if using this feature.

- **Cycle Time (3-minute minimum)** is the minimum number of minutes the zone can run at a time. The minimum time is to conform with the EPA requirements. <u>Learn More</u> [25]
- **Soak Time (3-60 minute range)** is the minimum time between zone watering to allow water to soak into the soil.

Example: Station 1 requires 20 minutes of water, but after only 5 minutes, runoff occurs. However, after 10 minutes, all the water was absorbed. The solution would be to program

20 minutes for the Station Run Time, 5 minutes for the Cycle time, and 10 minutes for the Soak. Station 1 will water for 5 minutes, and then the rest of the stations in the program will water. After all the other stations have watered, the controller will check to see if Station 1 has soaked for at least 10 minutes. If it had, then Station 1 will water for another 5 minutes. This process would repeat itself until Station 1 was watered four times for 5 minutes each, a total of 20 minutes.

To **test** Cycle and Soak, you must have an automatic cycle scheduled since running a zone manually from the app does not allow Cycle and Soak to take effect.

If your controller goes **offline**, your default watering schedule will still run, but Cycle and Soak will not work. Each zone will water its full length while offline.

Configuring Several Watering Lengths One Zone

You will now learn how to achieve different watering times using one zone (or many zones, if you understand the concept of stacking start times).

Stacking start times means creating Program Start Times one after the other based on the duration of the watering length set for each zone.

For example, if you wanted Zone 1 to run for 10 minutes in the morning and 30 minutes in the evening, you would have to set up Zone 1 with a watering length of 10 minutes. Then you would use Program Start Times to achieve the watering times you want.

NOTE: You must use "Every Valid Program Start Time" to achieve this goal, as the Program Start Time dictates when the zone is allowed to water.

A typical zone would be set this the example below:

Example 1

Front Lawn
Zone Number - 1

Watering Type
Time Based

Frequency
Every valid Program Start Time

Schedule Adjustments
Water longer when hot

Run Length
10 mins

To water for 10 minutes in the morning, you would create one start time at 7 a.m., for example, that allows Zone 1 to run for 10 minutes.

Example 2

⏰ 07:00

TYPE
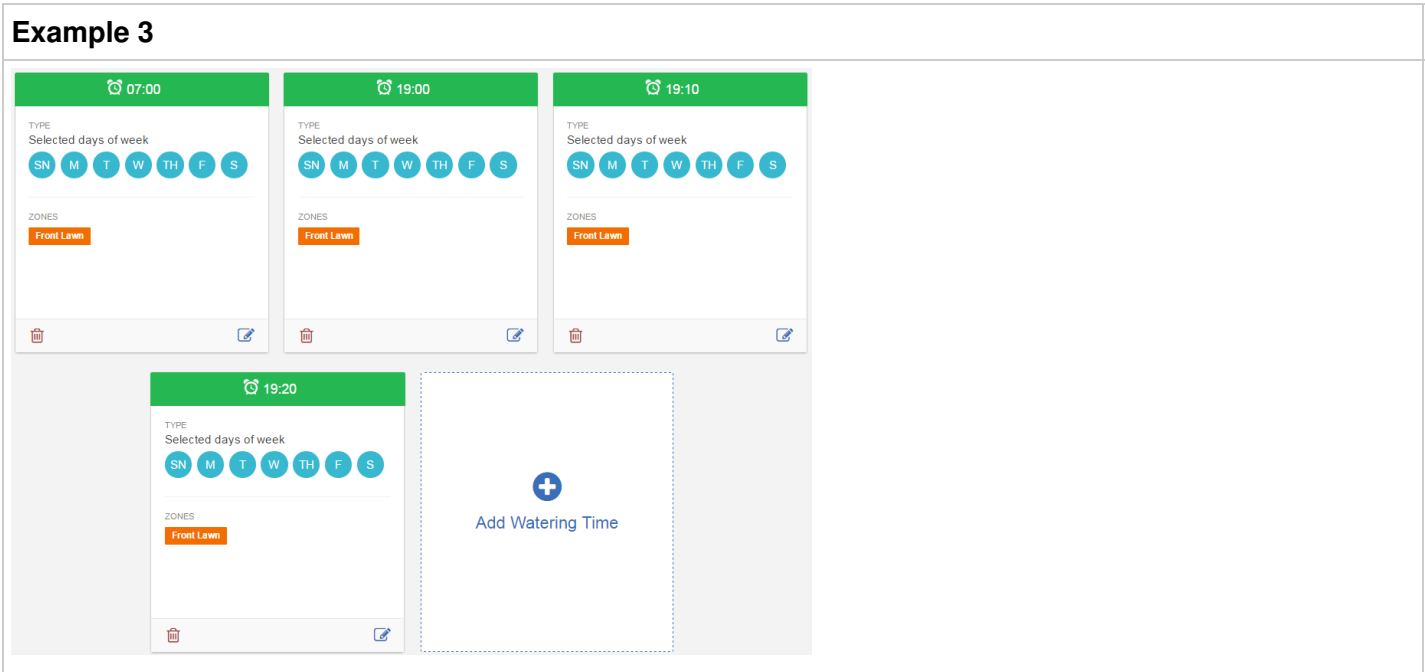Selected days of week

SN M T W TH F S

ZONES
Front Lawn

For Zone 1 to run for 30 minutes in the evening, you will need to stack start times. For

example, you will need to create program start times for Zone 1 at 7 p.m., 7:10 p.m., and 7:20 p.m., so the zone runs for a total of 30 minutes.

Example 3

By having the program start times dictate when zone one is allowed to water, we have achieved 10 minutes of watering in the morning and 30 minutes of watering in the evening without modifying the irrigation zone's configuration. See below for what the schedule will look like.
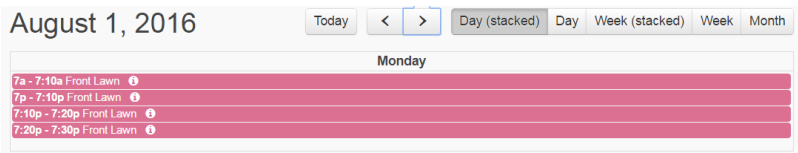
You can see there are 10 minutes of watering at starting at 7 a.m. Then, starting at 7 p.m., there is a total of 30 minutes of watering as a result of stacking your Program Start Times.

IMPORTANT: This method only applies with **Predictive Watering™** and will not work with Smart Watering. The water trigger "Water More Often When Hot [13]" will not also work if you want to use this method, as it uses "Every Valid Program Start Time."

Working with Images in App

Assign images to individual zones within your landscape to make it easier to identify each zone. If the images are taken with your smartphone, be sure to capture them in the correct orientation (landscape mode), as seen in the illustration below:

The total number of images that can be uploaded is based on image size and is different for each account plan subscription. Your current plan is visible on the **Controller Settings** menu. You can upgrade to the next plan if you are currently over your limit. Learn More [26]

Plan	Total Data
Home	25MB
Enthusiast	100MB

Steps

1. Sign in to the Hydrawise App [20].
2. Select **Zones** at the bottom next to the help icon.
3. Scroll down to the zone where you would like to **Assign** an image. Click the icon.
4. You can **Upload** multiple images per zone or take photos using the smartphone camera.
5. Once you upload an image, you can select it to be displayed on the **Home** Dashboard from the **Zone icon** list using the icon. After selecting the icon, click **Ok**. The updated image icon will be displayed on the **Home** screen.
6. To **Remove** an image, click on the image in the **Zones** settings. Use the trash icon to delete the existing image and add a new one using the cloud download icon.

IMPORTANT: Photos taken with higher-resolution cameras (modern-day smart devices) can increase your current data usage.

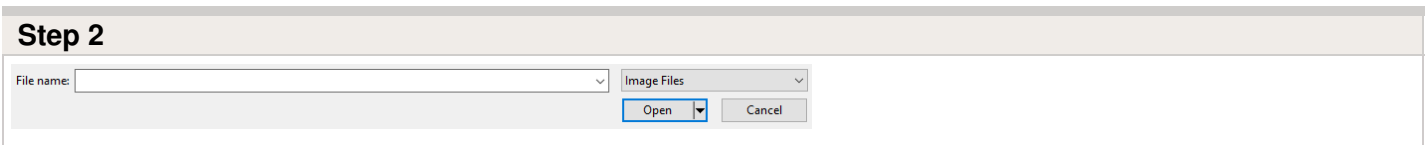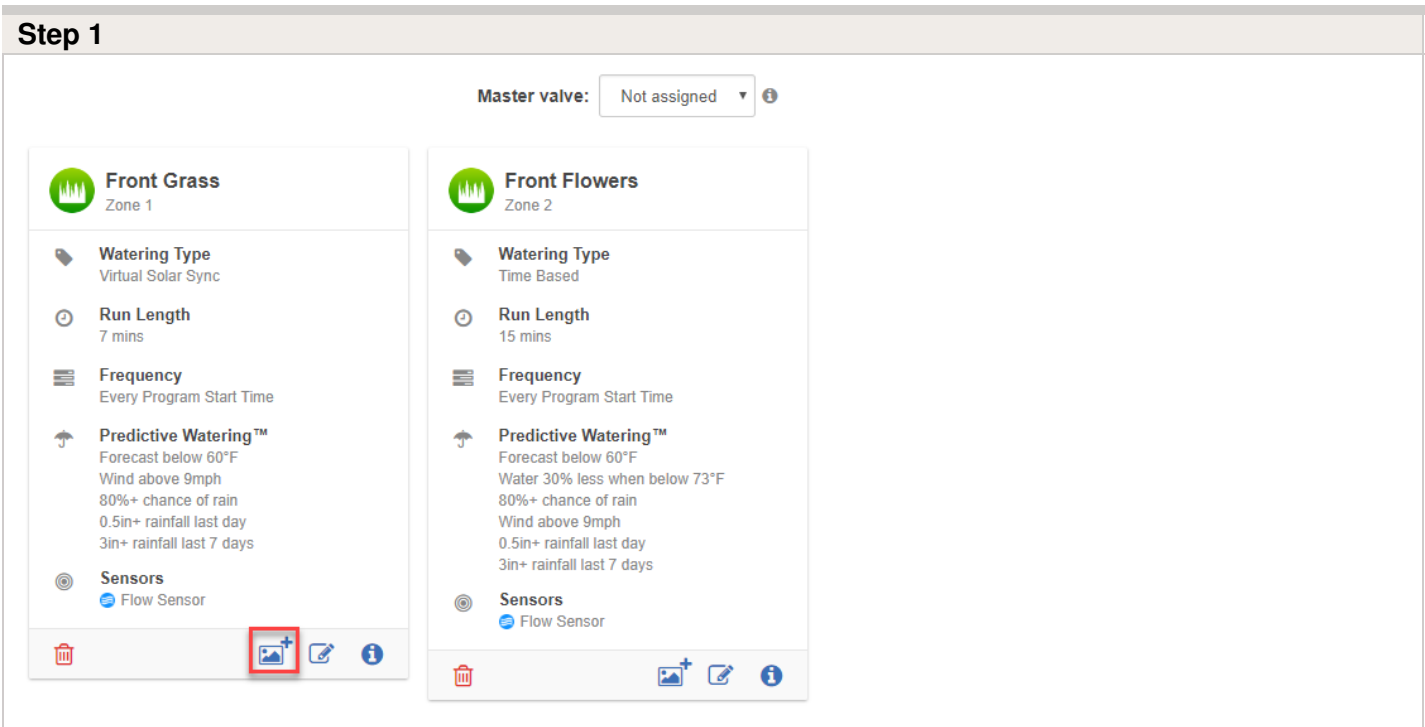# Assigning/Removing Images on PC

Please view the steps and screenshots to access this feature:

Assigning New Image

Click on "**Zones and Schedules"** from the home dashboard, then select **"Zones."** Scroll down to the first zone you choose to edit.

1. Click on the "**picture plus icon."**
2. Choose "**file name"** to upload as your zone image.
3. Image will now be added to your zone.

For information on image storage for your account, please us this <u>article</u> [27].

Step 1

Master valve: Not assigned ▼ ⓘ

Front Grass
Zone 1

🏷 **Watering Type**
Virtual Solar Sync

🕐 **Run Length**
7 mins

▤ **Frequency**
Every Program Start Time

☂ **Predictive Watering™**
Forecast below 60°F
Wind above 9mph
80%+ chance of rain
0.5in+ rainfall last day
3in+ rainfall last 7 days

◎ **Sensors**
Flow Sensor

Front Flowers
Zone 2

🏷 **Watering Type**
Time Based

🕐 **Run Length**
15 mins

▤ **Frequency**
Every Program Start Time

☂ **Predictive Watering™**
Forecast below 60°F
Water 30% less when below 73°F
80%+ chance of rain
Wind above 9mph
0.5in+ rainfall last day
3in+ rainfall last 7 days

◎ **Sensors**
Flow Sensor

Step 2

File name: _____ | Image Files ▼

Open ▼ | Cancel

Removing Image

Click on "**Zones and Schedules"** from the home dashboard. Scroll down to the first zone you choose to edit.

1. Click on the "**assigned image."**
2. Choose "**delete icon"** on the upper right hand side of the screen.
3. Image will now be removed from your zone.

Step 1

Step 2

Smart Watering - Quick Reference

How Does it Work?	Description
When does it water?	Waters when estimated moisture level reaches 0% in zones and schedules.
Choosing Run Times	See run time calculator here [7] or consult with local contractor/distributor.
How is ET calculated?	The calculation is done through the run times and the last 10 years of ET history based on the hottest time of the year for that location.
Forecasting High Temperature	Forecast three days in advance.

Programming: Zones and Schedules	Description
Enter Watering Length	Enter the number of minutes you want the zone to run (hottest time of the year)
Enter Peak Watering Frequency	Enter the time between watering in the peak of your irrigation (hottest time of the year) Example: 1 day interval means the system will water every day in the

	summer schedule.
Next Available Start Time Box	Checking this box will reset the smart water balance to 0. If this box is not checked when changing from time based to smart watering then the bar will automatically be at 100%.
Cycle/Soak	This helps reduce runoff by running small increments with same total run time. This is used instead of soil type and slope. *Example:* Station 1 requires 20 minutes of watering, but after 5 minutes, runoff occurs. However, after 10 minutes all the water is absorbed. The solution would be to program 20 minutes for the station run time, 5 minutes for the Cycle time, and 10 minutes for the Soak time.
Advanced	Fine tuning: 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.

Example: If we have every 2 days set as the frequency, this is not the minimum frequency as it is merely a reference point based on the driest time of the year. If we experience a drier time, we may need to water each day. Likewise, if we have a wetter time the frequency will increase, allowing for more time between watering.

| Water Triggers	Description
Use forecast temperature to predict Smart Watering	This trigger allows frequency adjustment based on the current season.
Use forecast rainfall to delay Smart Watering	This feature assists in delaying irrigation when rain is predicted.

Smart Watering - Adjustment and

Changes

Smart Watering is an automated watering schedule that uses information about environmental conditions to ensure your plants get the optimum 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.

NOTE: This calculation occurs in the background and may not always be reflected when checking reports or viewing your **Dashboard**. However, the feature does work and is reliable even if you can't visibly see these calculations.

In this example, there are two Smart Watering zones highlighted in red:
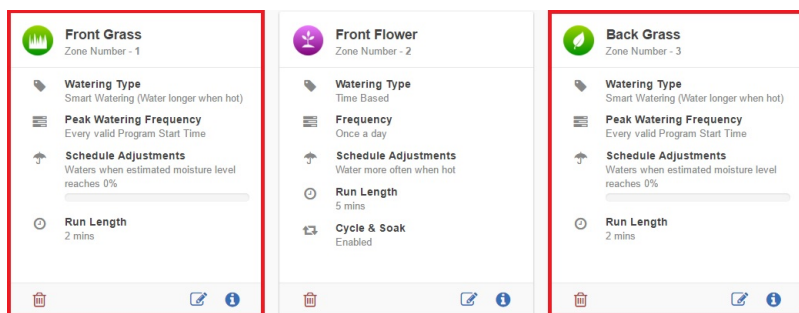
The **Watering Triggers** use Smart Watering Adjustments and have been left as default, with both switched on:

NOTE: If you turn off **USE FORECAST TEMPERATURE TO PREDICT SMART WATERING**, your Smart Watering zones will not water. This will occur since all calculations have been switched off, and Smart Watering is calculated using weather data to predict estimated soil moisture balance. You can use this feature when you don't want any watering to occur without suspending your Smart Watering zones.

The second option, **USE FORECAST RAINFALL TO PREDICT SMART WATERING,** assists with delaying irrigation when rain is predicted. Refer to the example below to see how this is affected when it is turned off.
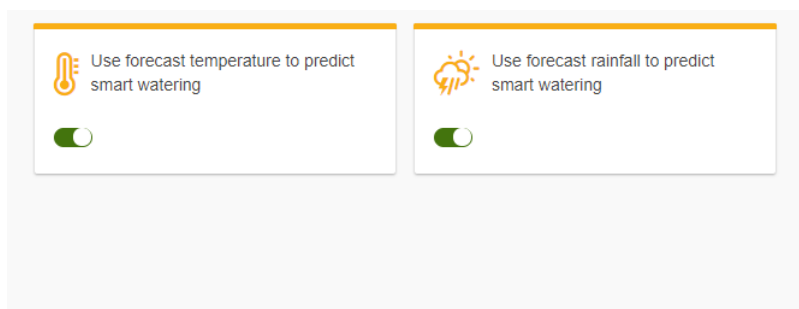
Your watering schedule will look like these settings combined with the weather forecast from your selected weather station.
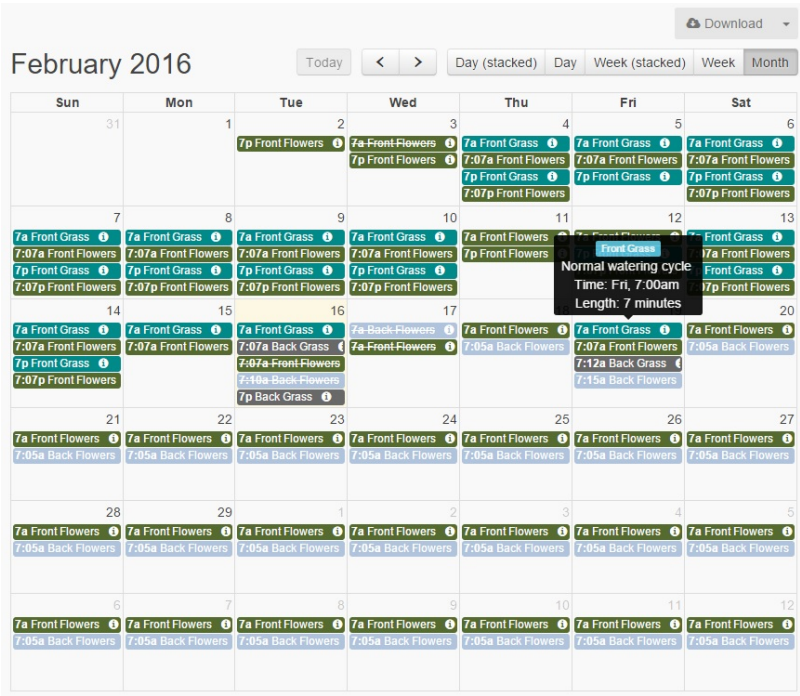
Now, if we are to change the watering trigger on the second option to off as shown below:
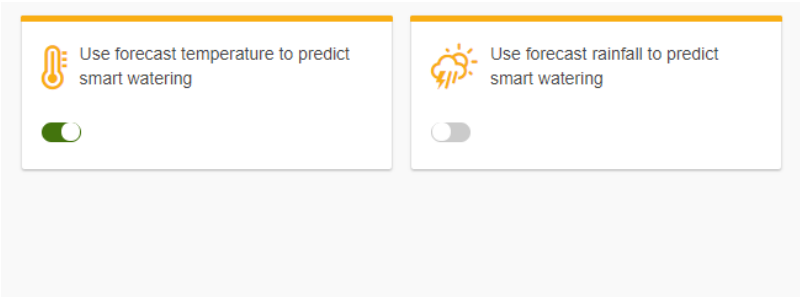
When checking your watering schedule, you will notice that it has been changed to water a day earlier on both zones. This is because the trigger "Use forecast rainfall to delay Smart Watering" is on (this is based on the calculations from the weather station; there is rain predicted on 18th). It has not been scheduled to water on that day, and watering has been pushed to the 19th. However, since we turned off this feature, watering will occur regardless of rain is predicted.
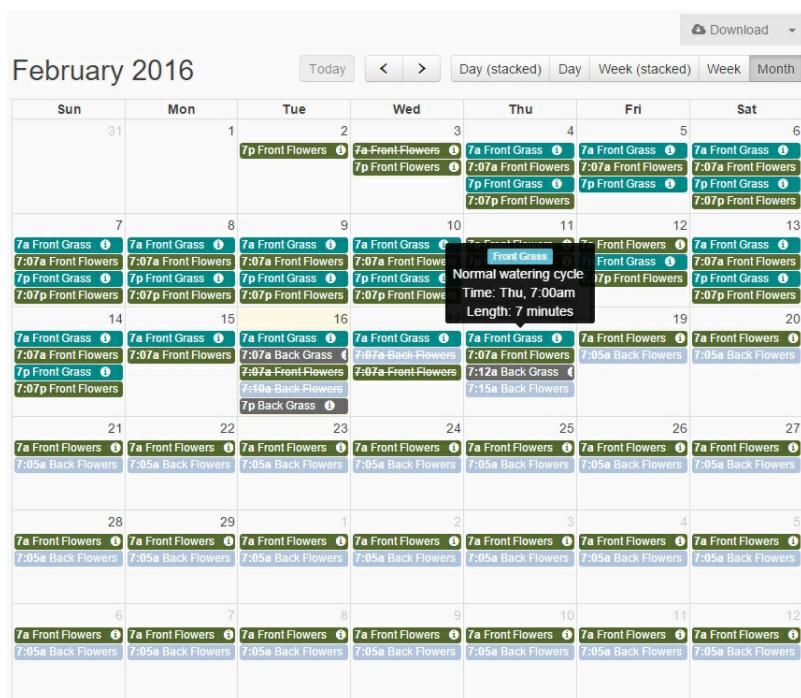
Smart Watering schedules are based on estimated soil moisture balance and how you specify the watering length and peak watering frequency. Thus, the higher your estimated soil moisture balance, the less likely a smart watering zone will be scheduled to water. More importantly, please remember that Smart Watering only forecasts three days in advance. If there is no watering scheduled during the next three days, you will see **Not Scheduled** next to **Next Run** when you highlight over your Smart Watering zone on your dashboard.

If you choose to change the watering adjustment, you can always go to the tuning tab on any zone for Smart Watering **Predictive Watering**™ to modify the peak watering day as shown below: For example, if you have a peak watering day set to 2 and the slider is changed to -50%, this will add a day to the peak watering day making it 3.

Please refer to this <u>link</u> [9] to gain further understanding of smart watering if needed.

Smart Watering and time-based **Predictive Watering**™ achieve similar water savings due to "predictive weather" watering triggers, time-based watering is easier to understand and adjust.

When will my zone next run using smart ET watering?

With Smart Watering, your zone will run when your estimated soil moisture reaches zero.

To check your estimated soil moisture, go to the **Zones and Schedules** page. Next, view the **Schedule Adjustments** field for the zone you want to check. This will display the estimated moisture level. When the soil moisture reaches 0%, the zone will water.

You can also check your estimated soil moisture balance in the **Reporting** section of the app.