

## Irrigation Basics - Controllers

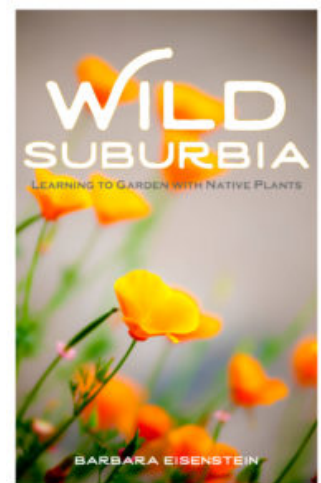
June is irrigation month at Wild Suburbia. Here in Southern California, cool, wet weather is ending and it is likely we will not have any measurable rain for the next six months. This is the time of year that I check the tubes and emitters of the drip systems for leaks. I set off each station of my in-ground sprinkler system to confirm that the rotors and spray heads are delivering water to the garden and not the street. I also start to worry about how my garden will survive for two months without me since – as those who follow *Weeding Wild Suburbia* will remember – I spend summers in the Pacific Northwest.

### Wild Suburbia on its own

Although I hire someone to do basic garden maintenance, irrigation has always been a concern. Some areas of my garden have native plants that require little, if any, summer water. However, I also have nonnative trees and shrubs, and a vegetable garden that cannot survive without supplemental irrigation. Furthermore, the amount of water that they need varies with the weather. It is very important to avoid drought stress during the summer for the deodar, avocados and Chinese fringe trees.

### Irrigation choices

There are many ways to garden with regard to water usage. One might choose to create a garden that requires no supplemental irrigation. At the other extreme, one may install a permanent, in-ground system. As you can imagine, the no-supplemental-irrigation option is simple and it conserves water, however, it is limiting in what you can grow, and the garden can look fairly dry during summer and fall. In-ground systems, if well-designed, are durable and easy to use. However, they are permanent and difficult to modify as the garden changes and develops.



Other options include the low-volume and inline drip systems. These are flexible and water-conserving, but they are more delicate and you must check them often for broken emitters and faulty tubing. And of course, the simplest method is to hand-water by setting up a sprinkler where water is needed. This can be the most efficient method for the astute and dedicated gardener since it means that the gardener is observing his/her plants frequently and watering based on their condition. On the other hand, it takes time and may not work well for those with busy lives.

(Consult [Wild Suburbia - Learning to Garden with Native Plants](#), pp. 54-59 for more information on irrigation pros and cons.)

## Basic components

In today's post, I review the different parts of irrigation systems, and give some details on a smart controller that we recently acquired. I will follow up in a future blog post with information on the other parts of irrigation systems. Click [here](#) for earlier blog posts on low-volume, drip and other irrigation considerations. Tips on when and how to water can also be found in the [how-to section](#) of this website.

Irrigation systems are comprised of the following four basic parts:

1. Controllers or timers
2. Valves
3. Pipes or hoses
4. Emitters

## Controllers

Controllers or timers are essentially the brains of the system. They determine when and for how long you water. A controller can be a gardener who notices the early signs of drought-stress and then turns on the valves, or it can be a timer attached to an outside spigot that opens a valve for a set period of time on given days.

Today, there are controllers that have more brains than most of us, hence the name "smart controller." You can program these incredible devices to water according to your instructions. Furthermore, some of these devices are so brilliant that they decide when to water based on information that you provide. In order to determine the "best" watering schedule, the controller will need to know things like soil type, exposure, plant type, location, and type of sprinkler head or drip emitter. Some controllers have a rain delay feature based either on a rain sensor or online weather information. Pretty amazing!

I tend to be a simple-minded gardener who usually takes the low-tech approach. However, the

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allure of being able to set off my sprinklers and drip system while I am 1,200 miles away was just too difficult to resist. Recently I succumbed to temptation and got a fancy-schmancy, too-smart-for-its-own-good controller. Let me explain how this came to be.

### Skydrop

A few weeks ago, two young men rang the doorbell while I was mulling over the summer irrigation debacle. I rarely respond positively to salespeople who just appear at my front door but their timing was superb. They were offering to install one or two smart controllers with very smart - actually brilliant - software to go with them. The controller and software are called [Skydrop](#). With no hitches Randy and Avi demonstrated the software and told me they would have someone install the controller that very same afternoon. Furthermore, the cost would be covered by [The Metropolitan Water District of Southern California's SoCal WaterSmart Rebate Program](#). How could I resist? I couldn't, and I am delighted.



Within minutes they installed the controllers and showed me how to program them. The software is truly excellent. It is WiFi-connected and I can set it off from anywhere! I can check the weather from Washington State and increase or decrease frequency based on whether we are expecting cool, misty weather or ten days of triple digits.

### The setup

Two controllers were installed. One replaced the old Rainbird controller (see picture above). This controller can open six valves in the front yard: parkway, lawn, veggie garden, shrubs, Chinese fringe tree, and foundation shrubs. So far it is set to water the lawn (rotors), vegetable garden (low-volume drip), yesterday-today-and-tomorrow shrubs (spray), and Chinese fringe tree and Ray Hartman Ceanothus (netafim inline drip). Of the two remaining zones, the front parkway is not irrigated, and the tubes and emitters have not yet been installed to water the foundation shrubs.

The second controller is wired to four valves in the backyard that will water the trees: 1. citrus, 2. Chinese fringe, 3. avocado 1 and 4. avocado 2. These valves allow me to apply water through connected hoses that are then attached to netafim inline emitter tubes. The tubing is covered with a layer of mulch. They will run for several hours approximately once a month during the summer, thus providing a deep watering to sustain the trees.

How do you deal with irrigation? Do you travel? How do you water your garden while you are away?