



How to Use Irrigation Schedule 1 for Low Water Use Plants

Supplemental Water Needs

Our landscape plants need water to enable their growth and cool their foliage. In nature, this water comes from rainfall; in gardens we commonly provide supplemental water with our irrigation systems. The amount of supplemental water we apply can vary throughout the year and is influenced by the **(1) types of plants, (2) seasonal climate, (3) microclimates and (4) soil types**. As might be expected, we apply the most water to our gardens from April through October when there is little rainfall and when the days are longest and temperatures highest. We also provide more water to plants growing in sunny areas and when they are flowering. Less supplemental water is needed in the winter months when temperatures are cooler, days are shorter and when we have seasonal rains.

Irrigation Schedule 1 has been developed for Low Water Use Plants that need limited amounts of supplemental water during the summer to grow well in the Inland Empire. These plants include many cacti and succulents, and various California native, Southwestern and Mediterranean plants. Plants included in Irrigation Schedule 1 are among our most drought adapted choices for our landscapes and gardens. The Irrigation Schedule and Graph shown below, has been designed to provide you with the **(5) baseline amount and frequency** of supplemental irrigation water on a monthly basis for established gardens with these plants. Winter rains can provide winter water from November through March, but we need to provide supplemental water during our long hot and dry cycle of the year.

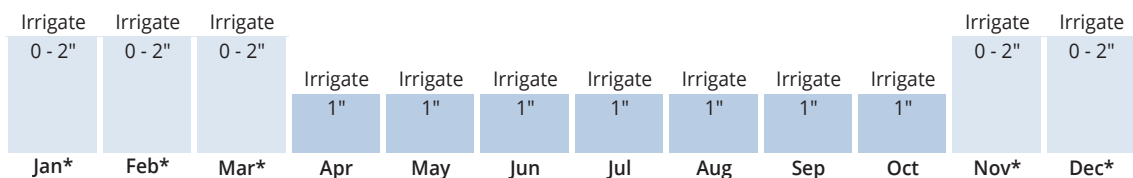
Low Water Use Plants

Irrigation Schedule 1

	Jan*	Feb*	Mar*	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov*	Dec*
Runs per Month	0 to 2x	0 to 2x	0 to 2x	1x	1x	1x	1x	1x	1x	1x	0 to 2x	0 to 2x
Inches per Run	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Inches per Month	0 to 2"	0 to 2"	0 to 2"	1"	1"	1"	1"	1"	1"	1"	0 to 2"	0 to 2"

Range of supplemental summer water: 7"

Range of supplemental winter water: 0"-10"



Look at **Irrigation Schedule 1** above. For plants assigned to Irrigation Schedule 1 we have provided you with a chart that shows how many times to water each month (**Runs per Month**) and how much water to apply during each application (**Inches per Run**), and the total amount of monthly supplemental water (**Inches per Month**) needed to sustain these plants. As you can see, monthly supplemental water needs for plants assigned to Irrigation Schedule 1 need only 1 inch of supplemental water from April through October. In contrast, these plants grow best with when we have good winter rains; if these rains do not occur we should irrigate up to 2 inches to make up for the lack of rainfall. This chart also indicates to apply 1 inch of water during each irrigation cycle.

Explaining Supplemental Water Needs

Water is essential to the growth and health of our landscape plants. Over 97% of water used by plants is needed to cool their leaves and stems; the remaining water is needed for growth of roots, stems and leaves. It is important to know that plants need water throughout the year and that the amount of water needed is dependent upon many factors described below.

(1) Types of Plants: Our garden plants come in many different sizes and shapes. Plants that have the most leaves often need the most water for cooling. This means our trees often need more water than smaller shrubs and ground covers. Succulents and cacti have an advantage by storing water in their stems for use when conditions are dry. Many California native and Mediterranean plants have adapted to summer conditions with leathery leaves, and also by becoming inactive when soil conditions are dry.

Due to the many types of plants we can grow in our gardens, we recommend selecting and combining plants with similar water needs together and applying appropriate amounts of water to each group. This technique leads to different garden moisture zones, or hydrozones, that can be watered on separate irrigation valves.

(2) Seasonal Climate: When we grow plants in dry climate regions such as the Inland Empire, winter rains do not provide all the water our plants need. In particular, we need to provide most supplemental water from April through October in order to sustain good plant growth and character. This is when we experience long days with high temperatures, intense sun exposure and dry soil conditions that lead to plants needing more water to cool their foliage. In contrast, late fall and winter months have cooler temperatures, lower sun angles and shorter days that often reduce the need for water. This is also when our rains most often occur.

(3) Microclimates: Seasonal climate conditions become modified around our homes and landscapes. Some planting areas are facing South and West, or are on slopes where reflected light and afternoon sun conditions create higher temperatures and increased need for more water. Plants growing on the North and East exposures, or under shade trees will have more moderate conditions and use less water. Plants need to be selected to fit these conditions and grouped into hydrozones with separate irrigation valves.

(4) Soil Types: Garden soils hold moisture for plants to use. Our objective is to add enough water to moisten the top 12-15 inches of our soil, and to replenish this moisture as it is used without causing extended moisture stress on our plants. Clayey soils can hold the most moisture and irrigation water is best slowly applied by low volume drip irrigation systems to avoid runoff. Sandy soils often hold the least moisture and drain the fastest. Loam soils often have the best combination of conditions for watering by spray or drip systems, and to achieve good moisture coverage and depth for roots. Low volume microspray and other low flow sprinkler nozzles as well as drip tubing can be installed, and controllers can be set to water with multiple start times to avoid runoff and to achieve uniform distribution of moisture.

(5) Baseline Amount and Frequency: An Irrigation Schedule and Graph has been prepared for four different groups of plants depending upon their supplemental water needs. Supplemental water is organized on a monthly basis as well as volume and number of irrigation applications. The objective is to water deeply and infrequently. Again, we want to add moisture to the top 12-15 inches of soil where possible and to encourage deep root depth within our plants. In practical terms, we try to provide at least 1 inch of water each time we irrigate, and we will water one, two, three or four times a month depending upon the water needs of our particular plants.

Each baseline schedule and graph is a recommended starting point for your garden water needs. However, it is always necessary to study your garden conditions and adjust this schedule to fit the seasonal and microclimate variations, including heat waves, droughts, and winter rains (that can provide all the winter moisture needed so your irrigation system can be shut off). This requires you to be vigilant and make garden observations and adjustments to this baseline schedule for it to work best for you.