

The Watering Hile

Watering Adjustments as Plants Grow

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As your landscape plants grow, water needs will change. The larger the plant, the larger it's root system, meaning more water should be applied. If you've ever heard Terry Mikel, Extension Horticulturist, explain his "Pizza Principle", you'll understand. Simply stated, the "Pizza Principle" says – always purchase the largest pizza for the best buy. The rationale is that a 2" increase in diameter (going from a 10" to a 12" pizza) translates to a 43% increase in area. Wow, that's a lot! Similar increases in water needs can occur as your plants grow.

That's why about once a year, it is recommended to reevaluate your landscape to determine if water placement should be changed and if more water should be applied. You can increase your water applied by:

- 1) adding more emitters
- 2) increasing emitter flow rate size, i.e. from a 1-gallon per hour to a 2-gallon per hour
- 3) increasing run times, or
- 4) any combination of the first three.

Use **Table A** to determine if you need to apply more water to your plants. **Table B** provides you with a suggested quantity and size of drip emitters to use for different sized plants.

Table A. Gallons of Water Required to Wet Root Zone

	Plant Canopy Diameter in Feet												
	1'	2'	3'	4'	5'	6'	8'	10'	12'	14'	16'	18'	20'
Trees	1.5	5	11	16	22	26	38	59	85	115	150	190	235
Shrubs	1	4	8	12	17	20							
Groundcovers	.5	2	3.5	5	7	9							

Table B. Suggested Drip Emitter Quantities

	CANOPY DIAMETER	NUMBER OF EMITTERS	EMITTER FLOW RATE
Trees	7-10 feet	3-5	2-4 gallons per hour
	11-14 feet	4-6	2-4 gallons per hour
	15-20 feet	6-12	2-4 gallons per hour
	21+ feet	12+	4 gallons per hour
Large Shrubs	4-6 feet	2-3	2 gallons per hour
Small Shrubs/ Groundcovers	1-3 feet	1	1 gallon per hour

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Here's an example of how to use the tables. Let's look at a four-foot diameter shrub. Table A shows that 12 gallons of water would be needed at each irrigation to wet the root system. Now if we look at Table B, we can see that a four-foot shrub has a recommendation to use two or three 2-gallon per hour emitters. Let's say we use two 2-gallon per hour emitters. That means we will get 4 gallons per hour, and if we run our system for 3 hours, we will get the 12 gallons needed. Keep in mind that your landscape plants can share water, so if you have high plant density in your landscape, you should be able to apply less water per plant.

One final thing to keep in mind... when your plants have larger root systems, it basically provides a larger water storage tank for the plant. This means that larger plants may need more water at each watering, but can be watered less frequently. As you make adjustments to increase water, also go to your controller to reduce watering frequency. In fact, if your trees are desert adapted, they may be able to survive on natural rainfall if precipitation rates are adequate.