

How much water does a redwood take?

By Ann Dozier, Master Gardener

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Q: Is the coastal redwood tree a good landscape choice locally? Does it take a lot of water? — Sheila Schraub, San Luis Obispo

A: The coastal redwood, *Sequoia sempervirens* is a well-known native of California. Many old redwoods tower in various settings around the county.

These fast-growing evergreens rise with straight, red-barked trunks into a lovely pyramidal shape. A freshmelling group of redwoods exemplifies the cool beauty of a forest setting.

However, if you want a redwood, you should recognize you are planting a fast-growing exemplar of the world's tallest tree, with a spread of 15 to 30 feet at the base. Look at available space and decide if you (or your heirs) realistically have room for a tree this size.

Redwoods, as natives of the Northern California coast, are happiest in the cool, foggy coastal belt. There, nearly daily fog in summer is moist enough to drip from needles and frequent winter rains provide sufficient water.

Coastal redwoods in our area need regular irrigation (whenever the top 3 inches of soil is dry) and they are therefore not an ideal choice for gardeners interested in water conservation.

One recommendation is to plant them next to a lawn, where they will benefit from the frequent watering schedule (and where they will likely soon overshadow and compete with grass.) Redwoods have many shallow roots —therefore, try to avoid soil compaction in the root zone, and mulch frequently to keep roots cool.

There are procedures for determining the water needs of plants in a landscape. We can estimate these conditions numerically, and what those calculations indicate is that your redwood trees will use about three-fourths of the water that a lawn planted on the same total area would use.

We do have good data on the water needs of a clipped grass lawn in these coastal areas, and the requirements are about 4.6 inches of water during July. So your trees would need about 3.5 inches of water. Think of it like a rain gauge but upside down. That's a tough concept to convert to how long to run your drip system. You can calculate the area for each tree, and we know that it takes a little over 27,000 gallons of water to cover an area 209 feet by 209 feet (an acre). If you convert that 3.5 inches of water, corrected for the efficiency of the irrigation system and for the spacing of your trees, that means each tree would use about 10 gallons of water per day. Yes, per day.

Redwoods are nearly pestfree, but hot dry climates do stress them. Stressed trees may become subject to bark beetles or other problems. Recently, failure to thrive has been seen on redwoods planted in the Central Valley and Southern California. Experts postulate that a combination of heat, air pollution and water salts are the cause. Competition from larger trees, nearby structures or persistent winds can also lead to thin and lanky specimens.