



## Your Irrigation System During Drought

*Contra Costa County has a Mediterranean climate characterized by long, hot, dry summers, and most landscape plants should be watered to survive under these conditions. We must learn how to use water more efficiently as demand rises and drought conditions continue.*

### IRRIGATION SYSTEM MANAGEMENT

➤ **CHECK THE IRRIGATION SYSTEM.** Check, adjust, and repair pipes, valves, and sprinkler heads to make sure there are no leaks and no water is being wasted. Correcting these problems can improve the uniformity of water application and reduce water waste by 10 percent or more. Move drip emitters away from the crowns, out to the dripline for trees and shrubs that have grown since the original irrigation was installed.

The Colorado State University Lawn & Gardening Drought Tip Sheet—*Irrigation Check Form*—at <http://extension.colostate.edu/drought-yard-garden-resources/> is a convenient checklist.

➤ **UPGRADE IRRIGATION EQUIPMENT.** Replace worn out irrigation system components and consider upgrading systems that are over 10 years old with new, higher efficiency components.

- Convert sprinklers to in-line drip irrigation.
- Replace conventional sprinkler nozzles with high-efficiency rotating or precision nozzles.
- Replace traditional irrigation timers with weather-based models (smart controllers).
- Install pressure regulators to improve system performance.

**Rebates** are available from the local water districts for upgrading irrigation equipment and installing Smart Controllers. For information, see the resources list at the end of this document.

➤ **GROUP PLANTS BY HYDROZONE.** Group plants with the same water needs onto the same valve or line. For the water use requirements of different plants, see the UC document *WUCOLS IV Water Use Classification of Landscape Species* at <http://ucanr.edu/sites/WUCOLS/>.

➤ **WATER IN THE EARLY MORNING.** Water in the early morning when there is no wind and little evaporation.

➤ **WATER ACCORDING TO PLANT NEEDS AND SOIL TYPE!** Check soil moisture (dig down or use a moisture meter) and water only when the soil is dry. Adjust irrigation frequency and run times to water plants as little as possible to keep them alive. Get used to plants that don't look perfect.

The following links provide sample sprinkler and drip run times. After factoring in your climate, soil, plant type and sprinkler output, these can be used as a starting point. Gradually reduce water use by 10 percent increments over the course of a few weeks, giving plants time to adjust:

- Contra Costa Water District *Water Information and Sample Irrigation Schedules* <http://www.contracosta.watersavingplants.com/Watering-Guide/Schedules.php>
- EBMUD *Watering Guide* and other resources <https://www.ebmud.com/water-and-drought/conservation-and-rebates/water-conservation-publications/>.

➤ **AVOID RUNOFF.** Know your soil type and water to match the infiltration rate with your soil to avoid runoff. Irrigate more frequently with shorter runtimes for sandy soil, so that water is not wasted below the rooting depth. Irrigate less frequently but with longer runtimes for loam and clay soils. On slopes and areas with compacted soils, avoid water runoff by using multiple (cycled) start times (also called pulse irrigation) to allow water to soak in slowly. Adjust spray heads so that no water runs off onto sidewalks or into the street.



## ALTERNATIVE WATER SOURCES

- **CAPTURE EXTRA WATER.** Use buckets to capture water in sinks and tubs while waiting for the water to get warm and then use it to irrigate plants.
- **COLLECT RAINWATER.** Consider installing a rainwater catchment system or a rain garden to capture and direct rainwater for deep soil infiltration during the rainy season. Note that collected roof water may have contaminants and should not be used for overhead watering of food crops.
- **CONSIDER A GRAYWATER SYSTEM.** Graywater is untreated wastewater from clothes washers,

showers, bathtubs, bathroom sinks and laundry tubs that is used for outdoor watering. In California, wastewater from toilets and kitchen sinks or dishwashers is not allowed. Graywater is an option for irrigating your ornamentals but it should not be used to water root vegetables or any vegetables whose plant parts come into contact with the soil due to the potential that human pathogens might be present. In addition, you must be careful to avoid using household products that add salt, boron or chlorine bleach to the soil. A permit may be required for certain graywater systems. Check with your local building department for graywater regulations.

## ADDITIONAL DROUGHT TIPS

- **REQUEST A WATER AUDIT.** EBMUD and CCWD will perform free on-site home water surveys. They test showerhead and toilet flow rates and help locate leaks. The landscaping, irrigation system, and watering schedules are assessed. Recommendations are provided to improve water use efficiency. Repairing leaking faucets, toilets, pipes and valves can free up additional water for landscape use.

- **DO NOT WASH YOUR CAR AT HOME.** Go to a commercial carwash where the water is recycled.
- **USE A BROOM.** Instead of the hose, use a broom to clean off pavement.
- **TEACH YOUR CHILDREN THAT THE HOSE IS NOT A TOY!**

## SOME ONLINE RESOURCES FOR FURTHER INFORMATION

### University of California

- Managing Water Sustainably: [http://cagardenweb.ucanr.edu/General/Managing\\_Water,\\_Sustainably/](http://cagardenweb.ucanr.edu/General/Managing_Water,_Sustainably/)
- Landscape Water Calculator: [http://ucanr.edu/sites/UrbanHort/Water\\_Use\\_of\\_Turfgrass\\_and\\_Landscape\\_Plant\\_Materials/Plant\\_Water\\_Needs/Easy\\_Calculators\\_for\\_Estimating\\_Landscape\\_Water\\_Needs/](http://ucanr.edu/sites/UrbanHort/Water_Use_of_Turfgrass_and_Landscape_Plant_Materials/Plant_Water_Needs/Easy_Calculators_for_Estimating_Landscape_Water_Needs/)

### East Bay Municipal Utility District

- Rebates & Discounts (lawn removal, greywater, mulch and others): <https://www.ebmud.com/water-and-drought/conservation-and-rebates/residential>
- Home Water Surveys (DIY or on-site): <https://www.ebmud.com/water-and-drought/conservation-and-rebates/residential/services-tools>

### Contra Costa Water District

- Rebates (lawn removal, smart controllers & others): <http://www.ccwater.com/157/Rebates>
- Info about Graywater and Rainwater Catchment: <http://www.ccwater.com/Search/Results?searchPhrase=graywater>
- Home Water Survey: <http://www.ccwater.com/233/Home-Water-Use-Survey>

### Dublin San Ramon Services District

- Rebates (DSRSD): <http://www.dsrds.com/outreach/drought-watch-water-conservation/rebates-freebies>
- Rebates (Zone 7): <http://www.zone7water.com/conservation-rebates/rebate-programs>

*Special thanks to the UC Master Gardener Program of Sonoma County for allowing us to use the materials their members prepared as the starting point for this document. Edited by the Water Conservation Committee of the UC Master Gardeners of Contra Costa County, 2014/15.*