



## Water Conservation

### Why Conserve?

Paying attention to the amount of water we use in our homes and landscapes is important for the health of our communities and our gardens. Utah is the second driest state in the nation. It is surprising to know that our per capita water consumption levels are at 290 gallons/day/person - the second highest in the nation, and far above the national average of 180 gallons/day/person. While it is important for us to use moderate amounts of water in our gardens, WCG also recognizes that vegetable plants need certain water levels in order to produce the desired harvest. It is our philosophy that it best serves our needs and the needs of our gardens to understand the requirements of our plants and water accordingly.

### How Much Is Enough?

Your crops will need varying levels of water at different times of the growing season. On average, gardens need 1-2 inches of water per week. This level varies depending on the weather and time of year. Water will be lost to evapotranspiration when the sun is out and the temperature is high. Because of this, we suggest watering in the early morning, so that the soil has a chance to absorb water before the sun comes out. Remember, the watering needs of your plants will change as the weather changes. Be prepared to adjust your watering schedule accordingly. **You will need to water more often when you first plant your seedlings and during the heat of the summer.** Reduce watering when it has been raining. Overwatering can be just as harmful to your plants and soil as underwatering.

Most vegetable plants grow stronger root systems when they are watered deeply over evenly-spaced intervals. Watering a little bit each day encourages shallow root growth and hardpan in the soil, especially in our dry climate. Allowing your soil to dry completely before watering again will reduce fungus and disease in your soil. A good test for soil moisture is to stick your finger a couple of inches below the surface. If it is moist, your plants will not need watering.

There are more sophisticated ways to test the moisture level of your soil. Some soil moisture meters are highly advanced, but tend to be high in cost. A soil probe will take a vertical sample of your soil, showing you how far down water is penetrating after watering. Measuring the amount of water you use per week is also wise. A container can easily be placed outside when watering. By measuring the amount of water in the container, you can determine if you need to increase or decrease the amount of water that you are providing your garden.

### Ways to Conserve: Mulching

One of the best ways to reduce water consumption is to reduce your need for water. Covering your plot with a straw or leaf mulch will help your plants grow by conserving moisture, keeping weeds down, and adding organic material to your soil. Smart gardeners don't go without mulch! Commonly used organic mulches include straw, leaves, grass clippings, hay, pine needles and even newspaper. Another way to keep your soil cool is to plant your crops close together. This creates a microclimate where plants protect the soil and each other from the sun. Studies have shown that healthy soil retains moisture longer than compacted, lifeless soil. The time you spend making sure that your soil is full of life-giving organic matter and plenty of nutrients will benefit your crops and most importantly, save water.

Mulch Material	Advantages	Disadvantages
Straw/Hay	Cheap, readily available, adds organic matter	May contain weed seed, insects, disease/mold
Leaves	Readily Available, free, rich in nutrients	Can mat down, be too acidic, may contain pesticide residue
Grass Clippings	Free, easy to apply, good source of nitrogen	Can mat down, may contain weed seeds, herbicide residue
Pine Needles	Good way to lower pH, easy to apply	May be too acid
Newspaper	Easy to obtain & apply, earthworms love it	Decomposes quickly, must be weighted down
Plastic	Total weed control, warms soil well, heavy plastic is durable and may be reused	Expensive, unattractive, may sterilize soil, must be weighted down

## **Drip Irrigation**

Three of the gardens operated by WCG have drip irrigation systems. By slowly applying water at the base of the plant (where it's needed the most), over a longer period of time, drip irrigation allows us to water deeply without wasting water. Water that is sprayed overhead with a hose or sprinkler will be lost to evaporation and might burn the leaves of your plants on sunny days. Drip irrigation also drastically reduces the amount of topsoil lost to erosion from overhead sprinkling systems or conventional irrigation. Fewer weeds crop up with drip irrigation because water is being applied to the plants you want to encourage, rather than the entire garden.

### **Resources:**

Jordan Valley Water Conservation District      (801) 565-8903, [www.jvwcd.org](http://www.jvwcd.org)

Sherm Fox; Trickle Irrigation Supply      (801) 272-2354

Colorado State Cooperative Extension      [www.colostate.edu/depts/coopext/](http://www.colostate.edu/depts/coopext/)

Western Regional Climate Center      [www.wrcc.dri.edu](http://www.wrcc.dri.edu)

[How to Grow More Vegetables](#) (than you ever thought possible) pp. 68-73, John Jeavons, Ten Speed Press, 1995