WATER CONSERVATION

What is Water Conservation?

Water conservation is the wise use of water resources for garden and lawn areas. Being aware of water use and making a few, minor changes to your everyday routine can be very beneficial for your plants, the environment, and your water bill!

Drip Irrigation:

Photo courtesy of: USDA NRCS

Photo courtesy of: USDA NRCS

What Can I Do?

- Plant native plant species. Native plants are adapted to the soil and weather conditions in this area, so they will need less maintenance.
- Mulch around your plants. Mulching helps aid in infiltration and holds moisture in the soil.
- Add organic matter to the soil, this will also help hold moisture.
- Install windbreaks and fences. This will help slow winds and reduce evapo-transpiration.
- Install rain barrels or collect rainwater in buckets to use for watering your plants.
- Water deeply in the early morning when necessary. This will reduce water lost to evaporation. One inch of water a week is sufficient for most plants.
- If you already use a sprinkler system, make sure it adds the correct amount of water. Also, direct sprinklers away from ponding areas where water is wasted.
- If you need to install new irrigation for your plants, see the reverse side of this sheet for environmentally friendly ways to do so.

Irrigation

There are a few different efficient irrigation methods to choose from. All of these methods conserve water by applying a small amount of water directly to the soil around the plants. This concentrates the water where it is needed and reduces water lost to evaporation.

Soaker Hose

Soaker hose systems consist of a soaker hose connected to a spigot and laid out around the plants to be watered. The hose can be moved as necessary to water other areas. A slotted pipe system is slightly more advanced and requires an installation process.

Installing a Slotted Pipe System

1. Design the system layout. If you are watering rows of plants, you may want one pipe next to every row or one pipe between every two rows.
2. Calculate and purchase the necessary lengths of pipe. Buy one piece of solid pipe to run the length of your garden, and pieces of perforated pipe to run the length of your rows.
3. Cut your solid pipe to the required lengths according to the distance between your lateral pipes.
4. Use t-connectors to attach the pieces of solid pipe.
5. Place a t-connector in the center of your solid pipe. This connector will be attached to the hose.
6. Cut perforated pipe to the length of the rows.
7. Attach perforated pipes to the t-connectors on the solid pipe. Perforations should be facing downward. Cap the end of the pipe.
8. Connect your garden hose to the hose connector on the solid pipe. Turn on the spigot until water slowly emerges from each of the laterals.

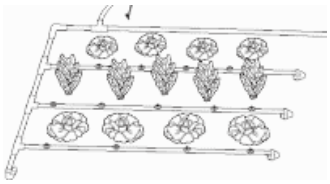

Photo courtesy of: www.dripirrigation.com

Drip or Trickle Irrigation

A drip or trickle irrigation system consists of the head, the tubing, and the emitters. The head connects to the water supply and consists of a pressure regulator, a filter, an anti-siphon valve, and an automatic timer. There are a few things to consider when dealing with the head of a drip or trickle irrigation system:

1. Normal city water pressure is about 55 psi, but most drip systems are designed to be used with only 25 psi. This is why a pressure regulator is important.
2. The emitters have very small openings that can be easily clogged with sediment from the water. A filter will help prevent this problem.
3. Some city ordinances may require you to install a back flow preventer. This is simply a valve to prevent the accidental backflow of water in the system getting to the water line. This is probably a wise choice for any system due to its low cost.
4. A timing device can be helpful in automatically turning the system on and off. The attachment could be battery operated or wired into the electrical system.

The plastic tubing transports water from the source to the plants, and can come in many sizes. Consider the following when choosing your tubing:

1. There is a maximum length of tubing that can be run in any one direction. For example, if using 1/2 inch tubing, 400 feet is generally the maximum. Check with the supplier for the exact limit.
2. Consider what you are watering. Large trees with deep root systems will require less frequent but longer waterings. In addition, well-mulched or shady vegetable gardens will probably require shorter watering times than those gardens in full sun conditions.

Emitters are the pieces that deliver the water slowly to the plants. They are either directly attached to the pipe or attached to a “spaghetti tube”, a very small, flexible tube that can be placed next to plants or in pots. The emitters may let water drip out slowly, or can also provide a spray pattern useful in watering groundcovers or lawns. Emitters can also release different amounts of water in various flow rates.

Before installing a watering system, be sure to check homeowner association covenants, as well as local and county ordinances. Do not work in a drainage, utility, or other easement without the proper permits.