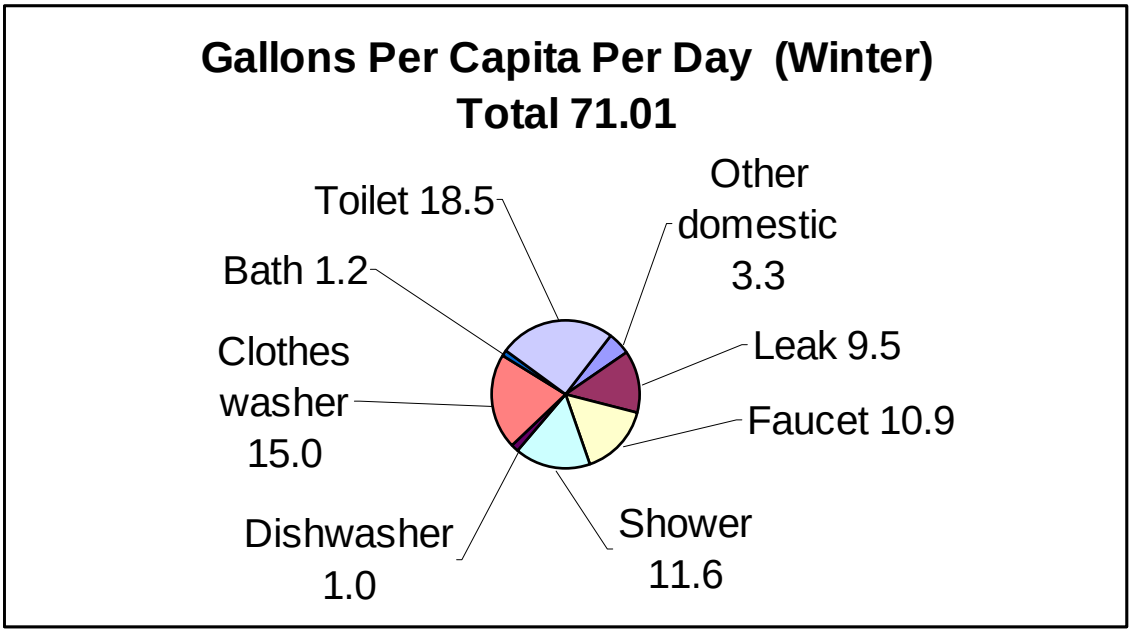
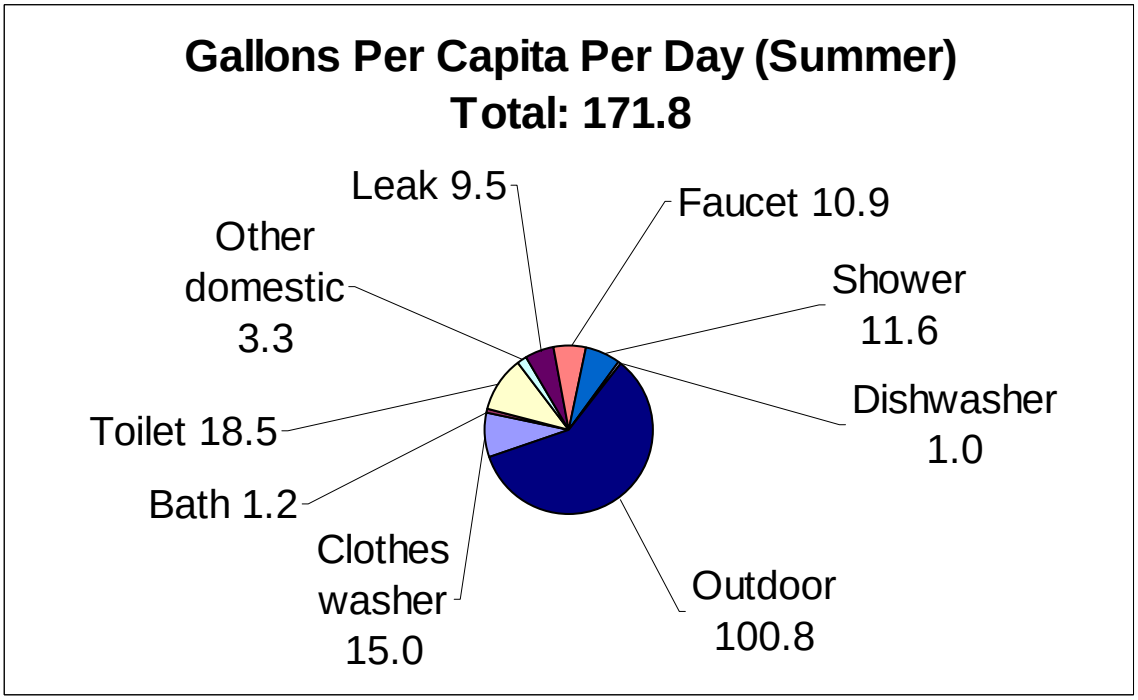
OUTDOOR CONSERVATION

The single largest use of water for most customers is irrigation of landscapes.





Many consumers see their bills increase significantly during the summer months. There are a number of things that consumers can do to reduce the amount of water used for irrigation in the summer.

LANDSCAPE PLANNING FOR CONSERVATION

Plan, Plan, Plan

The key to installing a water efficient landscape is advance planning. There are many choices available in landscapes that require less water than the traditional lawn.

Naturescaping stresses the use of native species when selecting plant materials and creating more naturalistic settings in our landscapes. Naturescaping is more complex than the arbitrary installation of commonly available plants in your yard. It requires fore thought about plant selection and placement. Naturescaping often yields the additional benefit of being friendly to native species of birds and other creatures, as well as requiring minimal or no supplemental irrigation, less maintenance, and, fewer or no applications of synthetic biocides, such as pesticides or herbicides. The website for Plant Native, http://www.plantnative.com/how_siteprep.htm, offers some excellent advice on getting started with Naturescaping. Clackamas County Soil and Water Conservation District periodically offers workshops on Naturescaping and the dates for these events are listed at http://www.cc-swcd.org/workshops.html. Check your local library, nursery or home improvement store for print material on the subject.

Xeriscaping™ is a method of planning for a landscape after taking into consideration all of the factors that effect a particular site, such as direction of exposure, slope, soil condition, prevailing winds, how much turf is required for functional reasons, and others. Once all of this information is considered, the correct low water use plant for each location can be selected, thus eliminating the necessity for most supplemental watering, once the landscape is established. More information on the seven principals of Xeriscaping™ can be obtained at http://www.ces.uga.edu/pubcd/B1073.htm or similar web sites or check your local library or book store for reference materials, such as the Xeriscape Handbook, by Gayle Weinstein.

Plant selection can yield water use reductions in the landscape. Perennials and shrubs are much more water efficient than annuals. Their root structures penetrate more deeply into the soil, breaking it up. This provides a route for water to enter the deeper soils, and allows the plants access to water stored at

Outdoor Quick Tips

Water yards in the early morning or evening to avoid water loss to evaporation.

Water in spaced intervals to allow the soil to absorb it and prevent runoff.

Sweep driveways and walks instead of hosing.

Mulch holds water for plants to use and shades soil to reduce losses to evaporation.

Aerating lawns speeds up percolation of water and reduces runoff.

Wash pets on the lawn, that way the water does double duty by watering the grass too.

Leave grass longer. Taller blades shade the soil, reducing evaporation and encourages deeper turf roots so grass will withstand the heat better.

greater depths. This water is not as subject to loss by evaporation as is water that resides in the upper layer of soils.

Plan functional turf areas. Lawns require much more water than other types of landscape materials. Limiting turf to only the areas where it will be used can generate a great deal of water savings. There are many varieties of ground covers available that can carpet an area with color without demanding the amount of water, fertilizer or maintenance that a conventional lawn would need.

SOIL PREPARATION

Much of our area has a high clay content in the soils, which means water is absorbed slowly and tends to run off when irrigation water is applied. These soil conditions make it harder for plants to become established and develop in the soil. This is especially true when it comes to grass and sod. These types of problems can be avoided by making sure that the soil in your landscape area has been generously amended with organic material that has been thoroughly incorporated into the soil. This may seem like an unnecessary expense initially, but it pays off in the long run by producing healthy plants and reducing watering requirements.

Soil amendments:

- ► Prevent clay soils from compacting, so water gets into the soil instead of running off the surface;
- ► Make your soil a better home for beneficial organisms like earth worms, that work to keep your soil healthy;
- ► Act like a sponge, absorbing and holding water until your plants need to use it; and,
- ► Reduce the amount of fertilizer required by plants.

Organic based mulch (not gravel or rocks) applied to the top of soil reduces water loss to evaporation by shading the soil surface and holding water that is then available to plants later. Leaf mulch is an excellent choice, as it is an actively decomposing mulch that adds nutrients to the soil as it decomposes.

IRRIGATION SYSTEMS

The simplest form of irrigation is using a sprinkler on a hose. Using this form of irrigation offers the possibility of conservation in that most homeowners simply turn on the sprinklers and come back later. Determining the application rate on your sprinkler will allow you to more accurately determine how long your sprinkler should run. Your lawn only requires about 1 inch of water a week, including rain, if the temperature is below 85 degrees. Hotter temperatures may increase your

lawns requirement to 1 ½ inch of water per week. You can figure out how long it will take your sprinkler to apply one inch of water by using the "Tuna Can Test":

1. Place 3 to 5 empty tuna or cat food cans at varied distances from the sprinkler.

2. Run your sprinkler for 15 minutes, stop the water and measure the water level in the tuna cans.

3. Note the water depth in the cans and calculate your watering time for one inch of application. For instance, if the cans contain one half inch after 15 minutes, your watering time to achieve one inch will be a half hour.

Most lawns will benefit from a cycle and soak application process, where the total amount of water is applied in several cycles with breaks in between of 15 to 20 minutes. This is especially important for soils with heavy clay or that have been compacted. Hose bib timers are available that can assist you with your watering schedule.

Many property owners make the decision to install an in-ground sprinkler system to save time and for convenience. The surprise is that many in-ground sprinkler systems are not designed for efficiency and end up costing the property owner more in water costs than they should. Design features of an efficient system include drip or micro-irrigation for flower beds, shrubs and trees, head to head coverage on turf areas, and the inclusion of a rain sensor over ride on the system controller. A brochure containing questions you can ask irrigation contractors about proposed systems or bids is available by contacting Kim Anderson at kimanderson@sunrisewater.com, or by calling her at the office at 503-761-0220.

Rain sensors, which are gauges that measure precipitation and are connected to an irrigation controller, are designed to sense measurable precipitation and override the controller programming. This will prevent the irrigation system from watering while rain is falling or if it has fallen recently. Rain sensors or gauges are commonly available at most home improvement stores and can be added to existing irrigation systems.

Customers now have the option of taking irrigation to the next level. Evapotranspiration or ET controllers receive weather data collected at a nearby weather station and calculate the exact amount of water to apply to the landscape using a formula that includes factors such as plant type, soil type, sun exposure, slope, and others. These controllers are completely automatic, as they respond to the actual weather that is impacting the landscape rather than relying on a water budget or timer that operates traditional controllers. You can click on http://www.irrigation.org/about_et_connection.htm or select http://www.irwd.com:8090/Conservation/Research.html to learn more about ET weather based irrigation management.

Sunrise Water Authority is committed to capturing savings from conservation wherever possible. Sunrise Water Authority is partnering with the North Clackamas Parks and Recreation District and the North Clackamas School District on a project to install the Maxicom™ centralized irrigation control system at their facilities. This system allows the agencies to specifically control the amount of water applied to any portion of a landscape from a remote location. The system is also equipped with alarms to notify the users of leaks, so that they can be repaired more quickly than has historically been the case. Most Maxicom™ systems will typically yield reductions in water use of 35-50%. The system allows the Districts to more effectively and efficiently utilize their staff in maintaining their facilities.