Water Efficient Landscaping

In the Lake Tahoe Basin

USDA, Natural Resources Conservation Service

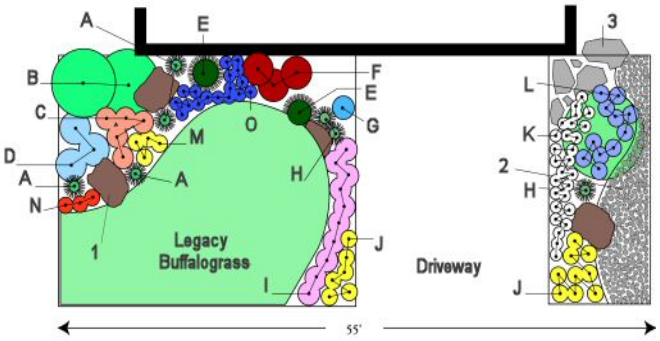
Getting Started. Planning for water efficiency is an extremely important component of landscape planning in the arid west. A well planned and water efficient landscape not only helps the environment, it also helps you avoid unnecessary headaches and heartaches over foiled plantings and disappointing designs.

A typical household uses approximately 260 gallons of water per day. In the summer months water use can increase by 250%, the majority of which goes for outdoor watering. An attractive, sustainable landscape that minimizes water use and uses sound horticultural principles, is one possible solution to this problem.

Many terms have been used to describe water efficient landscaping. Some of these include "water-wise," "water smart," "natural landscaping" and "Xeriscaping." Xeriscape is coined from the Greek work Xeros, which means dry. Unlike the dry unattractive landscape some people may picture when they hear the term, xeriscaped landscapes can be both beautiful and water efficient. All of these terms share the same underlying principles and provide excellent alternatives to "traditional" landscapes, make wise use of our water supply, and help keep your water bills reasonable.

Whether planning a new landscape or renovating an old one, following these principles will help you save water and achieve your gardening goals:

Plan and design comprehensively. Developing a landscape plan is the first and most important step in creating a water efficient landscape. Your plan should consider your regional climate as well as the micro-climates within your yard: some areas will be sunny and hot while others are shaded, higher soils may drain faster than low spots. Observe how many hours of sunlight each area of your plan receives



and make notes. Consider existing vegetation and work to preserve trees and shrubs. Think about how you use your yard. Do you entertain guests, need a place for children to play, want to block an ugly view? Once you have determined your needs, mapped out micro-climate zones and considered the placement of structures and existing vegetation you are ready to think about your new plants. Group your plants by water needs. If you can't bear to part with a water loving plant consider creating a small oasis of plants with similar needs.

Create practical turf areas. Lush green lawns can be beautiful, but they are one of the largest consumers of water in a landscape. Reducing turf areas or locating them in areas where they will receive runoff (such as near a gutter downspout) and have proper drainage can significantly reduce water use. If you are planting a new lawn, consider a drought tolerant variety. If you would like to keep a portion of your existing lawn consider keep partially shaded lawn areas or overseeding with a drought tolerant seed mix. Seed mixes containing clover have the added benefits of being pet tolerant and self fertilizing.

Care for your soil. Most Tahoe Basin soils have limited nutrient availability and limited nutrient holding capacity. This means that unless your plants are natives or adapted to these conditions, the soil should be amended with compost. This not only increases the nutrients available to your plants but also increases the ability of your soil to store water. In addition, soils around residential areas are often compacted by foot and vehicle traffic. A compacted soil may not be able to support the community of soil building microorganisms that are needed to convert soil minerals and compost materials into plant food. Loosen your soils to a depth of 12 to 18 inches and amend with compost at a ratio of 1/3 compost to 2/3 soil.

Established turf areas will most likely need to be treated with a core aerator to reduce compaction and build up of thatch materials. Build up of thatch is caused by overgrowth of surface root materials and creates a situation similar to a root-bound potted plant. Core aeration gives your lawn room to breathe, helps reduce compaction, and allows for more efficient irrigation.

Use water efficient plants. Plants native to your local area are often well adapted to arid conditions and are good garden candidates. Once established, native plants need very little water beyond normal snowmelt and rainfall. Also, because they are adapted to local conditions, native plants do not require fertilizers and are more resistant to pests and disease. For an excellent list of native and adapted species, see chapter 7 of the Home Landscaping Guide for Lake Tahoe and Vicinity. Gardening books, on line resources, your local conservation district and local nursery's are other good sources for plant suggestions.

Generally, spring and fall are the best times to plant but check the tags on each plant. When you purchase plants in the spring, be sure to ask if the plants have been "hardened off" and acclimated to Tahoe temperatures. Many species (even natives) are grown down at lower elevations and may be shocked by our cold spring nights. For more information see the *Planting Plans for the Lake Tahoe Basin* tip sheet.

Water efficiently with properly designed irrigation systems. The irrigation system should be well planned and managed. Drip or trickle systems apply the water where it does the most good; directly to the soil. This reduces evaporation and saves you time spent watering by hand. Not all plants need the same amount of water. Group plants with like water needs together. Also, irrigation needs change with the season and the weather. Water needs vary with plant variety, soil conditions temperature and rainfall. Adding rain and moisture sensors to your irrigation controller can eliminate unnecessary watering. Need also changes as plants mature. Remember to regularly maintain your irrigation system. Replacing fixed spray pattern nozzles with rotary spray nozzles can improve irrigation efficiency by up to 30%. For more information see the *Demystifying micro- and sprinkler irrigation tip sheet and the Water Efficient Landscaping: HOW TO* Series.

Use organic mulches to reduce evaporation. Mulching may be one of the most important and yet most often overlooked practice. Mulches minimize evaporation, reduce weed growth, slow erosion, and help prevent soil temperature fluctuations. When applied at a depth of 3-6 inches, mulches can be one key to a successful water efficient landscape. Here are a few guidelines:

- Avoid using rock mulches in sunny areas as they radiate large amounts of heat and can scorch plants.
- Piling mulch around a plants stem can cause disease and should be avoided.
- Mulch deeper than 6 inches can keep water from getting to your plants.
- Replenish organic mulch as they decompose into the soil.

Practice appropriate maintenance. The quality and water efficiency of your landscape will be best maintained through proper pruning, weeding, and attention to the irrigation system.

Water and fertilize your plants only as needed. Too much water promotes weak growth, increases pruning and mowing requirements and can lead to disease. Monitor your turf areas to determine watering frequency. Apply water when your lawn just begins to wilt. Sign of wilt include graying, footprints remaining in grass and grass blades laying over. From this point you have 24 to 48 hours to apply water before any damage occurs. Allowing your turf to wilt signals the plant to send its roots deeper to look for more water. This strengthens the root system and makes your turf better able to cope with hot dry periods. If you have an automatic irrigation system, adjust your watering interval to match your plants needs with each season.

A healthy soil will provide all the nutrients your plants need. Feed your soil with compost and avoid harsh pesticides and fertilizers which can harm the soil community. Much of the nitrogen needed by a lawn can be provided through mulching of grass clippings. Mulching clippings does not lead to surface build up if the clippings are one inch long or less. Simply leave clippings on the soil surface and they will break down within two weeks. For more information see the *Yard Fertility Management* tip sheet.

For further information contact:

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