Xeriscaping

The term Xeriscape originated with the Denver, Colorado Water Department in 1981 in response to drought conditions occurring in Colorado. Xeriscaping principles were developed through experience in a number of different western states.

Xeriscape (pronounced zeer-i-scape) is water conservation through creative landscaping. The term Xeriscape means water conserving, drought tolerant landscaping. Xeriscaping can provide significant impact in conserving our limited water resources.

Xeriscaping takes a holistic approach to landscape water conservation. It stresses the use of native and drought tolerant plants and their use in appropriate situations. But more than that xeriscaping involves proper planning and design, installation and maintenance practices.

Water Conservation
Doing Our Share

There are seven basic principles of Xeriscaping. They include:

- Water-wise planning and design.
- Low water use/drought tolerant plants.
- Limited lawn areas.
- Efficient irrigation design and equipment.
- Water harvesting techniques.
- Surface mulches and soil amendments (where appropriate)
- Proper maintenance practices.

Water-wise Planning and Design --Many people create their own designs with excellent results. Landscape professionals can also serve as helpful resources. They can provide advise, critique, or can develop the plans. Planning is the most important step to a successful Xeriscape because it allows for the installation of the landscape in phases, which minimizes expenses.

The zoning of landscape plantings is one of the basic concepts of Xeriscape design. The oasis zone is the area in closest proximity to the house. Here, higher water use plants are located to help cool the home through shading and evapo-transpiration. This may be the location for a small lawn area, annual flowers, potted plants, cooling vines or a paved patio surrounded by shrubbery and ground cover plants. A little farther out from the house comes the transition zone, where drought tolerant trees, shrubs and ground covers are used in groupings to enhance the benefits of water harvesting techniques. The arid zone lies beyond the transition zone and is comprised of plants which need little or no supplemental irrigation. The emphasis here is on plants that can survive on rainfall alone. This is the place to leave any natural vegetation that may have been on the property.

Low Water Use/Drought Tolerant Plants -- There is no shortage of beautiful drought tolerant native plants in western states. But many introduced plants from arid or semi-arid regions of the world are also drought tolerant. Most importantly, select the right plant for the right place. Be mindful not only of water requirements but also of the factors of soil conditions, and exposure to light, wind, and temperature extremes (both hot and cold). Bear in mind that even native and drought tolerant plants must have regular irrigation until they are established.

Limit Lawn Areas only to areas where they provides functional benefits, such as a children's play area or pet run. Turf is best separated from landscape plantings so that it may be watered separately. Often turf can be replaced with other, less water demanding materials, such as low water demanding ground covers, surface mulches, or hard paving materials. Never locate turf areas on slopes where water is lost to run-off.

Match your irrigation method to the type of plant being irrigated, drip or low volume spray emitters for individual plants, and spray irrigation for lawns. Drip and low volume spray are the most efficient ways to irrigate because they put the water where it is needed and reduce run-off and evaporation. Use a timer or controller to schedule irrigation and adjust as seasons and weather changes. Combine plants with like water requirements on a separate irrigation zone with its own value that can be controlled by use of a timer or controller.

Water Harvesting Techniques are used to channel runoff water to planted areas or contain it for later use. A few simple methods that direct water where it is needed include sloping sidewalks and terraces, channeling or collecting roof water, creating shallow basins around landscape plantings, and the use of rock channels to direct rain water. By creating earth mounds or berms at the edge of the property water can be trapped on site. Locate plants where they can take advantage of the extra water.

Mulches are coverings placed on the soil under and around plants. Typical organic mulches include; compost, bark chips, ground wood, wood shavings, and animal manures. Inorganic mulches include; decomposed granite and other rock and gravel materials. Mulches help hold in soil moisture, keep soil temperatures cooler during the summer, reduce weed growth, and in the case of organic mulches; reduce soil compaction, improve water penetration, and add humus to the soil. Soil amendments are organic materials such as peat moss, animal manure and compost which are mixed into the soil. Their use is beneficial in conserving water, but should be limited to use in vegetable, flower and ground cover beds where the entire potential root zone can be modified. Never use soil amendments in planting holes for trees and shrubs!

Proper Maintenance Practices--Plants that are healthy and properly maintained use less water. Avoid over fertilizing and heavy pruning which can promote excessive growth and increase water needs. Mow lawns to the recommended height to promote deep rooting and drought resistance. Keep mower blades sharp; clean cuts lose less moisture than jagged tears. Control weeds that can compete with desirable plants for water and nutrients. When possible, water on an as-needed basis, taking into account the weather, the climate, and the plants individual water requirements.

Arizona Master Gardener Manual, Arizona Cooperative Extension, College of Agriculture, The University of Arizona