

# **Xeriscape Demonstration Garden**

## **Cathy Shirley, Master Gardener**

### **History of Xeriscape in the West**

The concept of xeriscape gardening began in Denver, Colorado, in the early 1980s. Located in the rain-shadow of the Rockies and experiencing rapid population growth, the Denver Water Commission was concerned about limitations on future water supplies and established a task force partnering with area landscape contractors and the Colorado Extension Service, to educate the public on water conservation in the landscape.

The task force coined the term *xeriscape*, a hybrid of the Greek word *xeros*, meaning dry, with the English word *landscape*, and developed the seven principles of xeriscaping: planning and design, soil improvement, limited turf, mulching, efficient irrigation, low-water use plants, and appropriate maintenance. A demonstration garden based on those principles was installed and dedicated in 1982. In the succeeding thirty-three years, xeriscape demonstration gardens have been planted in many arid states.

### **Creation of our Xeriscape Demonstration Garden**

In 2001 John Begeman, the Urban Horticulture Agent for Pima County, proposed a new Master Gardener demonstration garden based on xeriscape principles. The new xeriscape garden would replace a water-thirsty Bermuda lawn and encourage Tucson residents to conserve water through changes to their landscaping.

In the first year, Master Gardeners removed the lawn, created pathways, constructed berms, and installed a drip irrigation system. The irrigation system had four separately controlled lines: one for a mini-oasis zone nearest the building, and one each for small plants, shrubs, and trees.



Our Xeriscape Garden

A brick patio was laid between two mature Arizona ash trees (*Fraxinus velutina* "Rio Grande") that were retained for their cooling shade. In later years a water-harvesting cistern was added to capture rainfall from the building roof, and a low-lying drainage area was transformed into a wash with boulders and rock gabions to slow water movement for the benefit of nearby plants.

The first new plants in the ground were seven desert trees that anchored the garden beds and provided shade for future plantings of shrubs, perennials, and succulents. Plant selection criteria were limited to drought-tolerance and cold hardiness to 15° to 20°, given our proximity to the Rillito River. Many plants were native to the Sonoran Desert, but others originated from other arid zones, such as the Chihuahan Desert, the Mediterranean, and Africa.

As gardeners know, no garden is ever finished, but by 2006 the garden was mature enough to qualify for recognition. It won two awards from that year's Community Xeriscape Contest: First Place in the Public Education Category and the Judges Xeriscape Award for the Most Efficient Irrigation System.

### **Today in our Xeriscape Demonstration Garden**

There are now over 150 species of trees, shrubs, perennials, grasses, cacti, and succulents growing in the garden. Only one of the original desert trees has been replaced; the others are now mature specimens with bird nests.

Plantings have changed over the past decade as the result of a few severe frosts, the multi-year drought, and human error. A Master Gardener is not an infallible gardener. As Master Gardeners rotated in and out to other demonstration gardens, complete knowledge of the irrigation system was lost. New irrigation lines were laid that eventually led to confusion on what plant was on what line, and where exactly lines ran—we usually found them with a shovel and a resulting stream of escaping water.

This spring a new irrigation system was laid to support a xeriscape garden design separated into three water-use zones (or hydrozones): a mini-oasis with moderate water-use plants close to the building, a transition zone of lower water-use plants, and a natural zone for plants that could survive on rainfall once established. The major runs were kept to the perimeter of the garden beds, buried safely below rock edging.

If you visit the garden, Beds 5 and 6 are the mini-oasis, Beds 1 and 4 are the transition zone, and Beds 2, 3, and 7 are the natural zone. We have left minimal irrigation in the natural zone to ensure our mature trees can survive the drought. The garden plantings are in flux, as we find out which ones can survive on the level of water they are receiving. When plants look to be suffering they will be transplanted, if possible, to a more suitable zone. For plants that die out, we will replace them with a native plant adapted to the zone. When plantings settle out, we will be updating our plant list.

Our goals with this phase in the xeriscape garden's evolution are to maximize the efficient use of water in the garden and to reflect regionally appropriate horticulture both for the visual impact of the visitor and for the benefit of local wildlife.



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