Xeriscape Landscaping

The term “xeriscape” comes from the Greek word “xeros,” meaning dry, and “scape,” a kind of view or scene. Xeriscaping is a method of landscaping using drought tolerant plants along with planting and maintenance methods that result in a water efficient landscape. The Denver Water Department developed the term xeriscape and the “7 Principles of Xeriscape” in 1978, and these principles are being adopted and used by communities nationwide from Florida to California, Washington, and the Dakotas. Xeriscape design combines maintenance techniques for saving water with plants most adapted to the natural rainfall of the area.

The reason behind xeriscaping is water conservation. The motivation for conserving water can come from various reasons: increasing cost of water, wells going dry, excessive salts in groundwater or stewardship to leave quality water for future use. We can have high quality landscapes in Sedgwick County, Kansas with our average rainfall of over 32 inches of rainfall yearly. Our landscape will look much different than the desert areas receiving less than 10 inches of rainfall or east coast areas receiving over 50 inches annually. Communities nationally have realized that no matter how much rain they normally receive, they still have periods of drought and can save water for future uses by following xeriscape practices.

The 7 Xeriscape Principles

1. Plan and Design
2. Amend Soils
3. Efficient Irrigation
4. Appropriate Plant and Zone Selection
5. Use Mulches
6. Reduced Turf Areas
7. Maintenance

1. Plan and Design – Create a scale drawing of house, drive, walks, patio/deck, shade structures and desired use areas of the landscape. Include in the drawing where water naturally flows and where wet or dry areas may occur. That expansive new deck or patio can increase the outdoor living space on your property while reducing the area needing supplemental water.

2. Amend Soils – Amend soil with organic matter so that rainfall infiltrates versus running off. Work in two inches of compost into the upper six inches of soil. This principle is important to all plants. A nice one inch rain is not fully beneficial if only the first half inch soaks in and the rest runs off.

This principle applies to flower beds, vegetable gardens, shrub beds and even a new lawn. Whenever new beds are developed, work the compost into the entire bed. This takes a lot of compost, so do it in stages and plan on adding compost with each new planting. Do not add compost to just the planting hole. Instead, work it into an entire planting bed. Adding compost to just the planting hole results in more water soaking in but not being able to drain away, thus the flower, shrub or tree in that hole will drown when overwatered or after a heavy soaking rain.

Purchased compost and homemade compost all work the same. They all will increase infiltration and improve soil quality.

Learning to make your own compost and then working it into all new plantings will reduce water needs and improve the quality of plants.

3. Efficient Irrigation – Our Kansas farmers are really happy when they get that slow soaking rain, about 1 -1 ½ inches that comes slowly spread out over night or all day. And they appreciate that next soaking rain about one week later.

Our lawns, gardens and landscapes also benefit from a slow, deep, infrequent watering. Whether watering with a sprinkler on a hose or with a sprinkler system, plan on watering deeply and infrequently. Use efficient sprinkler heads that apply larger droplets to reduce loss to wind and evaporation. If water is running off prior to applying the full inch, then reset the system to cycle and soak. Allow it to soak in, then water more in the same day. Water in early morning prior to sunrise to reduce evaporation. Utilize rain sensors that will keep the sprinkler system from coming on after a rain. Conduct an irrigation audit to see that all sprinkler heads are functioning correctly.

Drip irrigation is more efficient than soaker hoses. Drip systems have inline emitters at even spacings and provide the same amount of water through each emitter in the system. Soaker hoses release the most water closest to the water source. Though soaker hoses are rather inexpensive, they are inefficient in water distribution.

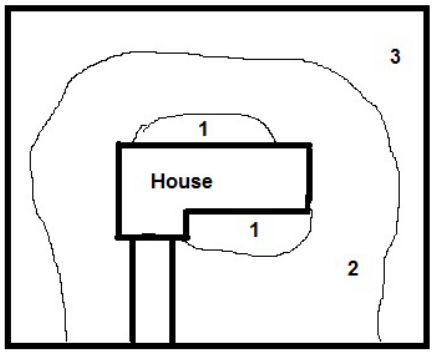
4. Appropriate Plant and Zone Selection – In your total landscape design, plan for zones according to water needs. Group plants with similar water requirements together.

Key

1 – highest water use areas

2 – moderate water use areas (three to four waterings per year)

3 – lowest water use areas



Place high impact, high color plants (and plants that need more water) next to the home entry or next to the deck/entertainment space. By grouping higher water use plants near rain gutters, rain barrels or cisterns can be utilized and save time and supplemental water.

Since fescue lawns can survive well with deep, infrequent watering, place the lawn in the moderately irrigated zone.

The low water use zone can be plants that survive on natural rainfall. Consider using WaterWise plants (those that survive on natural rainfall) as the core of the landscape. Check online for the publication "WaterWise Plants – Trees and Ornamentals for South Central Kansas".

The amount of space that you allow for each zone is dependent on your own personal and community situation as to the amount of quality water that is available and your personal preferences in plant materials.

Consider converting to a turfgrass species that needs less water.

Most Drought Tolerant - Buffalograss
- Bermudagrass
- Zoysia
- Tall Fescue
- Bluegrass

Least Drought Tolerant - Ryegrass

Other considerations - Warm season grasses – Buffalograss, Bermudagrass and Zoysiagrass grow only in full sun. Fescue grows in both sun and shade. Under drought conditions, fescue survives in shade better than in full sun. The lowest water use lawn situation is using warm season types in full sun and tall fescue in the shade areas.

5. Mulch – Mulches keep plant roots cool and reduce evaporation. Cover all areas of bare soil. Mulch between flowers, vegetables, shrubs and in tree rings. Use coarse mulches such as woodchips and bark in woody plant beds and pathways. Finer texture mulches such as shredded leaves, compost, leaf mold, grass clippings, wheat straw or pine needles, are used in annual and perennial beds. Apply to depth of 1-3 inches.

6. Reduced Turf Areas – Shrub beds, perennial beds and ornamental grasses all use less water than fescue lawns. Reducing the area dedicated to cool season grasses will reduce water use.

7. Maintenance – Xeriscape landscapes can be low maintenance, but that does not by any means mean no maintenance. The basic pruning, deadheading and weeding will be necessary as in all nice landscapes. By keeping the property well maintained, it will be a welcome landscape in a neighborhood.

There are many maintenance methods that reduce water use in plants:

* Core aerate lawns to increase infiltration. Do this in the fall or spring on fescue lawns and in late spring or early summer on Bermuda, zoysia or buffalograss lawns.
* Raise the mowing height on lawns –
    * fescue - 3 inches
    * bermudagrasss - 2 inches
    * buffalograss - 3 inches
* In natural areas lawns may be left unmowed during the heat of the summer and will be the most drought tolerant.
* reducing the number of fertilizer applications and using slow release fertilizers will make plants more drought tolerant.
* water all plants deeply and infrequently
* pruning - remove only dead branches during drought
* convert leaves and small prunings to compost and mulch to increase infiltration and reduce evaporation.
* Harvest rainwater with rain barrels and cisterns.
* Double digging, pit composting will increase infiltration.

Xeriscape Landscapes in Wichita –
You will find xeriscape design in home landscapes, commercial landscapes, city parks and public buildings in the Wichita area. These design principles have increasingly been implemented in recent years. One of Botanica's earliest gardens is the Xeriscape Demonstration Garden. This demonstrates the 7 Principles of Xeriscape. Botanica is a great steward of water and implements many of the xeriscape principles throughout the entire garden acreage. Botanica is located at 701 Amidon in Wichita.

The grounds of the Sedgwick County Extension Education Center were designed using Xeriscape principles in 1984. Most of the lawn areas are planted to buffalograss and are not watered. Drip irrigation is used to water the trees in the arboretum and flowers and vegetables in the demonstration gardens. The plantings demonstrate low water use plants, are always kept mulched and are watered on an as needed basis. Rain barrels were added in 2013 to utilize some of the rainwater for landscape purposes.

Consider implementing the 7 Principles of Xeriscape in your own home and business landscape.

Xeriscape Checklist put a check beside all that you practice

____ water deeply and infrequently
- ____ lawn
- ____ flowers
- ____ vegetables
- ____ trees and shrubs

____ use efficient rotor sprinkler heads
____ use drip irrigation in beds
____ have a rain sensor for sprinkler system
____ reduced lawn area
____ use a rain barrel(s)
____ collect water in cistern
____ use slow release fertilizers
____ no fertilizer used during drought conditions
____ raised mowing height
____ group plants according to water needs
____ increasing the number of plants adapted to natural rainfall
____ increasing number of ornamental grass plantings
____ core aerate lawn to increase infiltration
____Use organic mulches in
- ____ shrub beds
- ____ flower beds
- ____ vegetable gardens
- ____ under fruit trees
- ____ under young trees

____ make compost for soil improvement
____ work compost into planting beds prior to planting
____ practice double digging in annual beds (flowers and vegetables)

Select Plants adapted to natural rainfall
____ trees
____ shrubs
____ ornamental grasses
____ perennial flowers
____ annual flowers
____ lawn grasses

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