Xeriscape Maintenance: Healthy Landscapes for Lasting Beauty

Xeriscapes can be quite water efficient and require less maintenance than traditional, water intensive landscapes. Low water use plants and new irrigation technologies provide the potential for substantial water savings outdoors. Because Xeriscapes require less pruning, less mowing and less fertilizing, they provide the added benefit of lower maintenance for those who choose this type of landscaping. But the full water saving potential that Xeriscapes provide can't be fully realized without some regular care, repair and observation.

Taking care of your yard can be fun, relaxing and very rewarding. Follow a maintenance routine that takes into account our desert climate conditions and the growth characteristics of native and desert adapted plants. The maintenance practices presented in this section can help keep your yard healthy, beautiful and water efficient.

Watering Schedules Tailored for Landscapes in the Sonoran Desert

Nearly all of the landscape plants available for use in the Sonoran Desert need regular irrigation to get them established and keep them healthy.

Red Bird of Paradise

This is due to high temperatures, low humidity, near year-round sunshine, very low rainfall (only seven to ten inches a year) and frequent windy conditions that speed water evaporation from the soil. Generally, new plants need to be watered more frequently than established plants. Those in sunny areas need more water than plants in shaded areas and plants that are exposed to the wind need more than those that are protected.

Although many plants need irrigation year-round, far less water is required during the cooler times of the year than during the summer months. Seasonal adjustment of irrigation schedules is one of the easiest and most effective ways to avoid wasting water. **Irrigation schedules should be adjusted at least four times a year. Change the frequency of irrigations to accommodate differences in seasonal water requirements.**

Two watering schedules are provided on pages 43 and 44: one for new plants and another for established plants. Please note that these are general guidelines. Inspect your plants

Opposite: This Xeriscape features a variety of groundcovers, cacti and succulents against a backdrop of efficiently watered turf.

Can You Feel Their Pain?

Here are some typical signs of plant stress.

Signs of underwatering:

- Soil in the lower portion of the root zone is dry.
- Older leaves turn yellow or brown and drop.
- Leaves are wilted or drooping.
- Leaves curl.
- Stems or branches die back.

Signs of overwatering:

- Soil is constantly damp.
- Leaves turn lighter green or yellow.
- Young shoots are wilted or drooping.
- Leaves are green yet brittle.
- Algae and/or mushrooms are on or around plants.
- Growth is excessive.

regularly for signs of overwatering or underwatering and adjust irrigation schedules to accommodate the conditions and plants in your yard.

A Watering Schedule for New Plants

The guidelines presented here are for native and desert adapted plants. High water use plants will require more frequent and/or longer irrigations. Follow these watering guidelines until your plants are established - approximately one year for shrubs and three years for trees. Watch your plants closely for signs of stress, especially during extremely hot temperatures.

- ***Weeks 1 and 2***

Water every 1-2 days in summer, every 3-4 days fall through spring.

- ***Weeks 3 and 4***

Water every 3-4 days in summer, every 6-7 days fall through spring.

- ***Weeks 5 and 6***

Water every 4-6 days in summer, every 7-10 days fall through spring.

- ***Weeks 7 and 8***

Water every 7 days in summer, every 10-14 days fall through spring.

- ***After week 8***

Gradually extend the time between irrigations until plants are established.

After the eighth week, check the position of each water distribution end point (drip emitter or micro tubing). Move the end points closer to the outer edge of the root ball. After the first summer, there is rarely a need to irrigate low water use trees and shrubs more than once a week.

The yellow color of the Palo Verde tree in bloom works beautifully against the red garden wall in this Xeriscape.

Even though these guidelines are appropriate for most landscapes, new plants in your yard may need water more or less frequently. As a rule of thumb, each irrigation should wet the root ball and one to two inches of surrounding soil.

A Schedule for Established Plants

The following watering schedule includes guidelines for many types of established landscape plants. Again, check periodically for plant stress and adjust your irrigation schedule as needed. It might be helpful to put a copy of this watering schedule in your controller box.

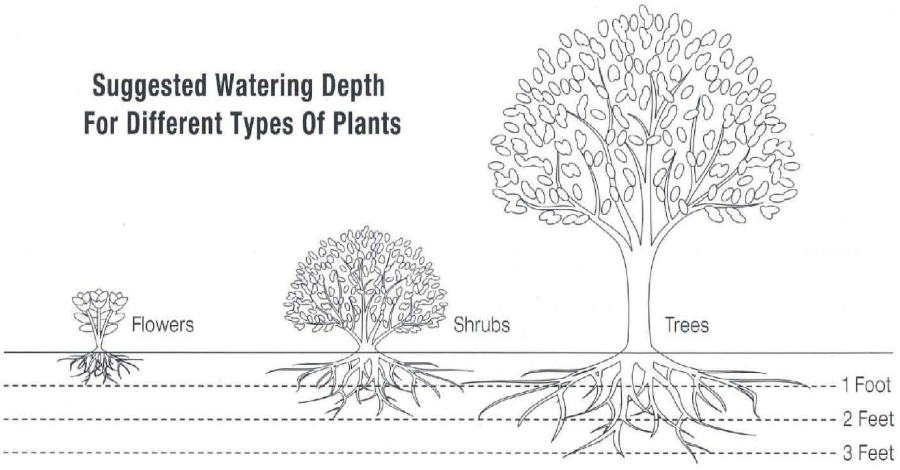
Cassia (far left), Trailing Dalea (to left of waterfall), Bougainvillea (to right of waterfall) and Lady Banks Rose (against wall) soften this private relaxation space.

General Guidelines for Landscape Watering

Here are some tips to help save water and maximize plant health:

1. Use two simple tools to help you water more efficiently. Put a rain gauge in your yard. If it rains 1/2 inch or more at one time, skip the next irrigation. Use a soil probe to determine whether or not irrigation water is reaching the entire root zone. The soil probe will move easily through moist soil and will stop or become very difficult to move when you reach dry soil. A long screwdriver or a piece of rebar with one end sharpened can be used instead.
2. Microclimates are landscape situations where the conditions are different from those in other parts of your yard. Different microclimates exist in nearly every yard and can be created by differing soil types, exposure to sun and wind, and reflective surfaces like walls and driveways. Water requirements of plants can be affected by microclimates. You may find that some trees and shrubs need more water than others. In these areas, it may be necessary to supplement regular irrigations with some hand watering. Soaker hoses or a garden hose and diffuser are especially good tools to use in these instances.

Suggested Watering Depth For Different Types Of Plants

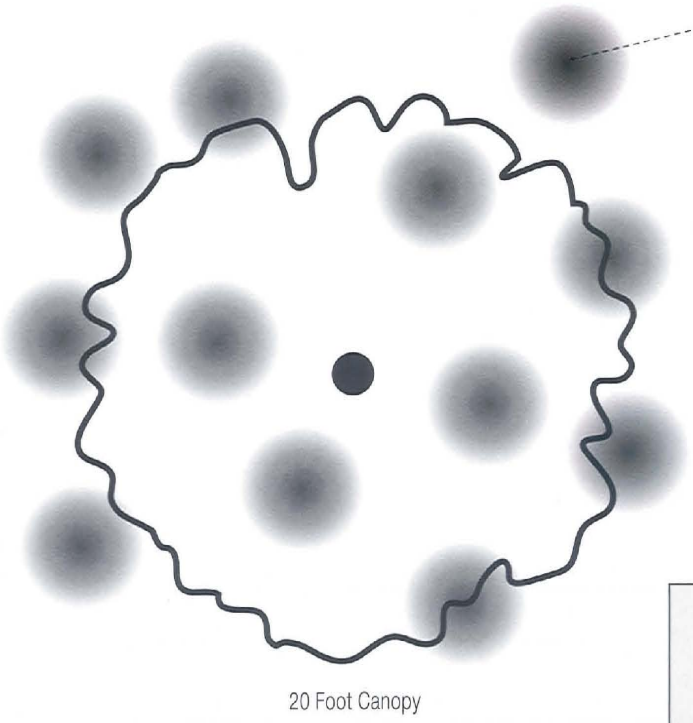


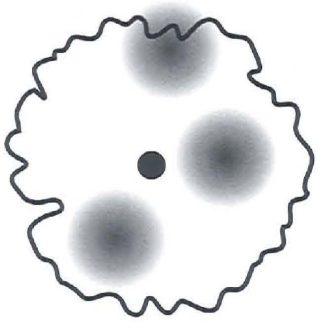
LANDSCAPE WATERING GUIDELINES

Plant Type		Spring (Mar. - May)	Summer (May - Oct.)	Fall (Oct. - Dec.)	Winter (Dec. - Mar.)	Watering Depth
Trees	Desert adapted	14-30 days	7-21 days	14-30 days	30-60 days	24-36 in.
	High water use	7-12 days	7-10 days	7-12 days	14-30 days	24-36 in.
Shrubs	Desert adapted	14-30 days	7-21 days	14-30 days	30-45 days	18-24 in.
	High water use	7-10 days	5-7 days	7-10 days	10-14 days	18-24 in.
Groundcovers and Vines	Desert adapted	14-30 days	7-21 days	14-30 days	21-45 days	8-12 in.
	High water use	7-10 days	2-5 days	7-10 days	10-14 days	8-12 in.
Cacti and Succulents		21-45 days	14-30 days	21-45 days	if needed	8-12 in.
Annuals		3-7 days	2-5 days	3-7 days	5-10 days	8-12 in.
Warm Season Grass		7-10 days	3-5 days	7-10 days	20-30 days	6-10 in.
Cool Season Grass		3-5 days	none	3-5 days	5-10 days	6-10 in.

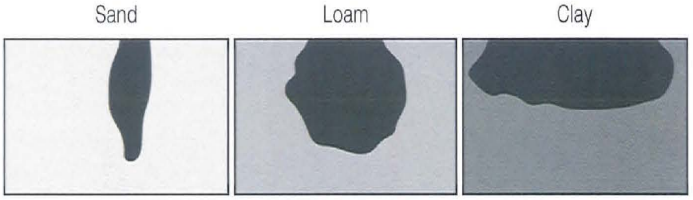
Guidelines for established plants (1 yr. for shrubs, 3 yrs. for trees). Additional water is needed for new plantings, sandy soils, and extremely hot, dry weather. Water to the depth indicated and 1.5 times the plant canopy width.

Wetting Pattern Examples





Comparative Wetting Patterns For Different Soil Types



3. Salts occur naturally in our local water supplies. Fertilizers also contain salts that accumulate in the soil around landscape plants. High salt levels can damage many kinds of plants. An extra-long irrigation will help reduce salt buildup around plants. (This practice is called leaching.) Leach salts from the soil every six to twelve months by irrigating twice as long as usual. If you live in an area with a high concentration of salts in the water, more frequent leaching may be necessary (perhaps two or three times during the summer and once during the cooler months). A good, long rain that comes at the right time may flush extra salts from the soil and eliminate the need for this activity.
4. To minimize evaporation, water turf very early in the day (ideally between 1:00 a.m. and 7:00 a.m. during the warmer months).
5. In general, it's time to water when the top one-half to one-third of the soil around a plant dries out. Water moves more quickly through sandy soils than it does through the clay loam soils that are most common in our area. If your plants are in sandy soil conditions, you may need to water them more often with shorter irrigation times.
6. Between six months and one year after planting, move drip emitters farther away from plants to encourage a well-developed root system.

Taking Care of Your Plants

Fertilizing: Think Thin

Most native and desert adapted plants need little or no fertilizing. If plants look healthy and are growing properly, it is probably best to leave them alone. Although uncommon for native plants, some desert adapted plants from other parts of the world can suffer if there is a lack of nitrogen or iron availability in the soil. Deficiencies in both of these soil nutrients can cause the same effect; a yellowing of the leaves, commonly called chlorosis. If the entire leaf turns yellow, the problem is probably due to a nitrogen deficiency. If the veins of the leaf stay green, but the rest of the leaf turns yellow, it is more likely due to an iron deficiency. **It is important to note that chlorosis also can be a result of overwatering.** Before adding fertilizer, check your plants and your irrigation schedule to rule out this possibility. Check with your County Cooperative Extension office or with staff at a local nursery for help with plant problems.

Nitrogen-based fertilizers and chelated iron are widely available. Because application rates and amounts vary among fertilizer types and brands, follow the instructions on the label. In general, it is best to fertilize before a plant's primary growing season (usually in the spring or summer).

Pruning: Love it and Leave it Alone

The watchword for pruning desert adapted trees and shrubs is **WAIT**. Normally, there is no need to prune for

This Texas Sage looks lovely in the landscape and thrives with a minimum of pruning.

Get in Tune to Prune

Here are some tips:

- Leaving growth on lower tree trunks for one to two years results in increased trunk size and strength.
- It is preferable to prune trees while they are still fairly young (but older than one year). This will minimize the exposed or "wounded" area and speed healing.
- Use appropriate tools that are properly sharpened. This will expedite the pruning process and will minimize damage to trees and shrubs. A pruning saw is best for limbs over one inch in diameter. Pruning loppers are good for mid-sized limbs, 1/2 to one inch in diameter, and pruning shears are best for thinner branches, 1/2 inch in diameter or smaller.
- Be alert and careful. Wear protective gear: a hat, glasses and gloves. Don't work when you are tired.
- **Do not work near power lines.** For large or difficult pruning jobs, consider hiring a certified arborist.
- Prune deciduous trees during their dormant period.
- Prune trees sparingly during the summer to avoid sunburn on trunks.
- If a large pruning job is necessary, complete it in stages, preferably over a period of a few months. Don't remove more than 1/3 of the plant's mass during any one season.
- To reduce the possibility of spreading disease, disinfect your tools after pruning each plant. Use alcohol or a 10% bleach solution in water.
- Use of pruning paint or sealant is not recommended.
- When in doubt, don't prune.

the first year or two.

Watch your plants during the establishment period and you will find that most desert adapted plants and trees have a beautiful natural form that requires little or no pruning. Too much pruning leads to unnaturally shaped plants, inhibits the plant's food-making capability, reduces flowering and heightens a plant's water demand due to increased growth from new shoots. It also sends too much waste material to local landfills.

There are some instances where pruning is appropriate:

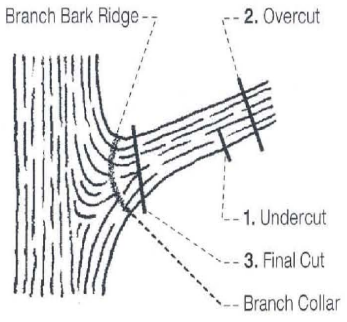
- To remove dead, diseased or weakened branches.
- To keep walkways, driveways and other high traffic areas in your yard passable and safe.
- To remove branches that rub against each other.
- To control or direct growth.

Before pruning, take a good look at the tree or shrub. Think about the reason for pruning and plan to remove only the limbs or branches necessary to accomplish your objective. After removing one limb, stand back and take a look before removing anything else. It's better to remove one limb at a time than to remove too many and be sorry later. It is important to remember that every time you prune, a wound is created that must heal. Proper pruning

will speed the healing process, minimize cracks along the trunk, reduce the potential for disease and insect infestation and reduce unwanted new sprouts.

It is best not to remove larger limbs (over two inches in diameter) in a single cut. Use three cuts instead. Follow these general instructions for making proper pruning cuts:

- Start by sawing into the bottom of the limb one to two feet out on the branch to be removed. Saw about half way through the limb. This will prevent the branch from breaking and ripping bark from the tree.
- Then saw from the top of the limb, an inch or two farther out from the first cut. Saw all the way through the branch. This will leave a stub. This cut removes the weight of the branch so your final cut can be made safely.
- Finish up by removing the stub. The last pruning cut should be made just outside a line that would connect the bark ridge (top of limb) and the branch collar (bottom of limb). If it's hard to see the branch collar, angle the last cut slightly away from the bark ridge. Cutting too close to the remaining limb removes the tissue that would allow the healing tissue to grow over the wound. Cutting too far away leaves a stump that will die and creates an entryway for pests and disease.



Three-Point Cut For Large Branches

This beautiful garden gate provides a dramatic entry to a colorful, water-efficient yard.

The University of Arizona Cooperative Extension offers several free publications that contain specific information on pruning.

Taking Care of Your Irrigation System

Since your irrigation system provides a life line to the plants in your landscape, remember to include it in your regular maintenance routine. Here's a handy schedule for drip irrigation system care:

Once a month:

Inspect your irrigation system to check for leaks, clogged emitters and other problems.

- Turn on the system at least thirty minutes before the inspection to allow enough time for emitter wetting patterns to show.

Beavertail Prickly-pear

- Walk through the yard, checking the pipe/poly tubing for leaks and checking each water distribution end point (emitters or micro tubing) to see if it is functioning properly.
- Replace or repair damaged or clogged emitters and micro tubing.
- Check the location of water distribution end points. Emitters and micro tubing can be moved as a result of yard maintenance activity (i.e., raking) and pet activity (i.e., digging). Return stray emitters and micro tubing to their proper positions.
- Check the schedule on your irrigation controller. Sometimes power failures and other factors will cause the controller to return to a default schedule. Reset the controller if necessary. If the weather has changed, reprogram the controller to accommodate changing plant water needs.

Once a year

(preferably during the spring):

Flush the irrigation lines.

- Start with the cap that is closest to the control valve and work your way toward the end of the system.
- Flush each line for about a minute, until the water runs clear. Remember to close each cap before moving on to the next. Do not allow contaminated water to flow back into the line.
- Check valve boxes to make sure they are clear of debris.

Clean and inspect the filters.

- Inspect filter screens for holes. Replace as needed.
- Clean the system by opening the end of the filter and turning on the system briefly.
- If there is calcium buildup on the screen, remove it and soak it in a solution of 50% water and 50% vinegar until the buildup is removed.

Replace the controller battery.

- A fresh battery will prevent the controller from reverting to the default program in the event of a power failure.

Revisiting Your Xeriscape: Additions, Conversions and Improvements

Many people think of their homes as a work in progress with something new or different planned for the future. That's the way it often is with the landscape as well. In addition to regular maintenance activities, you probably will want to begin planning for at least one of the items slated for a later phase in your new landscape. Even if you were able to install every component of the landscape plan, you may have decided to add or change something at a later time.

Take some time to walk through your yard. Look at your plants and irrigation system. Imagine what it might be like with an added gate, some paint on the far wall, seasonal wildflowers, an herb garden in the corner, a cactus collection or a small, private area to call your own...the possibilities are endless. Plan for change the same way as you would plan for a brand new landscape. Remember to make notes, draw a landscape plan or modify your existing plan, do a budget analysis for significant modifications and plan to phase in big changes to accommodate time constraints and financial considerations.

We are fortunate in this part of the country to have a year-round growing season and many months of great weather each year. Your Xeriscape can be not only beautiful and water efficient, it also can be an extension of your home and a place for you to relax, unwind and enjoy.

Opposite top and bottom: Although they are different in style, both of these homes are complimented by a colorful, low-maintenance Xeriscape.