

Why plant a water-wise landscape?

A water-wise landscape saves money.

Selecting Texas native plants and practicing responsible watering techniques in your landscape are two smart ways to lower your water bill.

A water-wise landscape saves water resources.

According to the California Urban Water Conservation Council, on average, half the water used in a single family home in the United States goes to the landscape. You can be a good steward of the precious water resources of our aquifers and watersheds by planting water-wise landscaping of Texas native and adapted plants.

This booklet and its companion piece, *Installing a Rainwater Harvesting System*, outline simple steps to create a water-wise landscape.

Site Analysis and Design

The first step in designing your landscape is to decide what you want your garden or landscape to accomplish for you. Will it serve as a privacy screen? A sitting area? An area for children to explore? A wildlife sanctuary? A sensory garden? A medicinal garden? A source for cut flowers? A color complement to a structure? A combination of these purposes?

Once you decide on the purpose of your garden, analyze your site. Create a drawing of what you have on your site. Include property boundaries, utility easements, structures, walkways, large trees, and other features you want to incorporate into your plan.

Many people “get the yard that comes with the house,” and there may be non-native plants in your existing landscape.

Keeping in mind that established non-native plants provide shelter and food for wildlife and shade for you, make note of any existing landscape or structural features you want to remove. If possible, try to remove invasive, exotic plants that will reproduce quickly and overtake native plantings.

Observe your garden site during different times of the day and year. Notice how many hours of sun each area receives through the seasons, shade patterns from trees and existing structures, water runoff patterns, soil texture, and damp or dry areas.

Do some research.

Notice what pleases you about other gardens in your area. Visit some botanical gardens and native plant nurseries for ideas. Use the resources of your local library and websites to find examples of landscape designs you like.

Be realistic about any constraints to your plan.

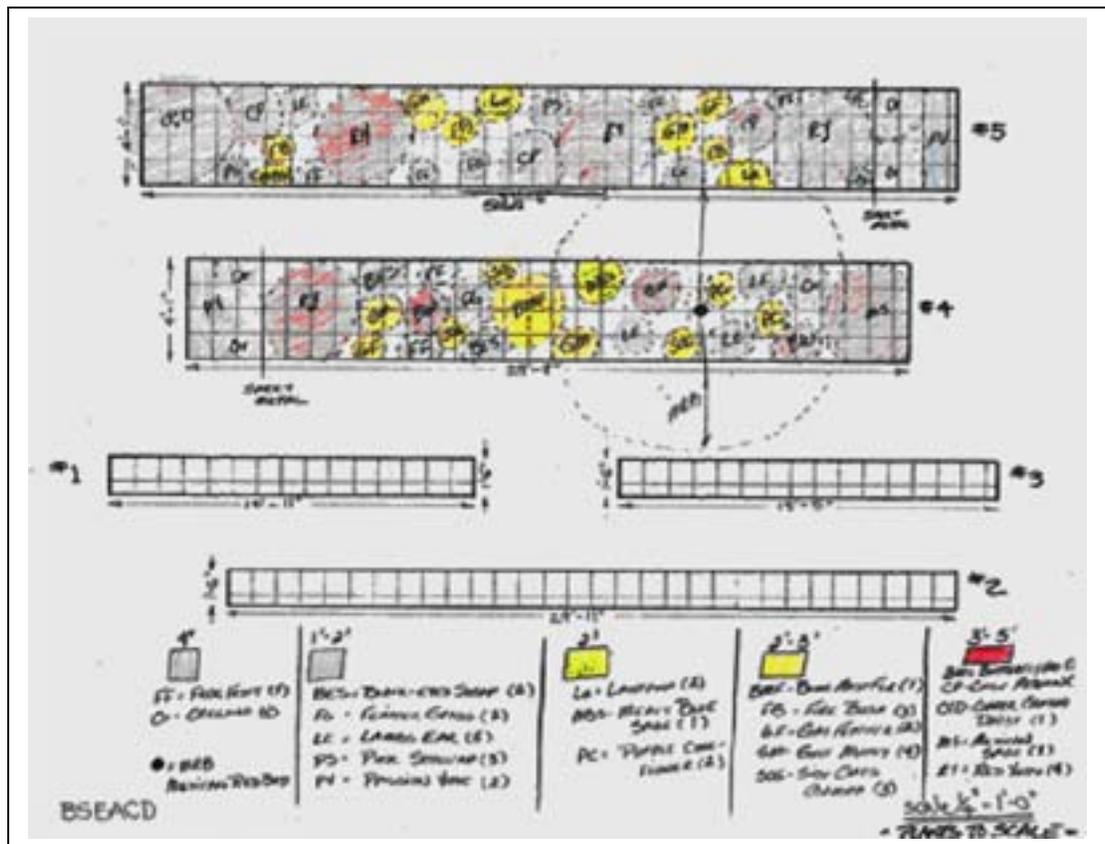
Consider how much money, time, and effort you are willing to invest in the initial development of your landscape. Estimate how much time you can spend maintaining your garden. If you have pets, decide whether they will have access to all or only limited areas. Verify that there is a water source nearby or make plans to bring water to the area. Consider safety, home security, and the possibility that your neighbors will react negatively to a drastic change.

Use your site analysis drawing and the purpose of your new landscape to sketch in the rough outlines of your new garden.

Include features such as pathways, screens, a pond, or areas for attracting wildlife or growing vegetables. This drawing will evolve as you make decisions about the details of your new landscape.



CAPTION:
 Master Naturalists, Kris Thorne, Mary Helen Quinn, and Shari Forbes sketch out their garden plans.



CAPTION:
 When designing a garden bed, it might be helpful to sketch out the plants in a grid.

Soil Analysis

The quality of your soil is extremely important. Before installing any plants, determine the texture of your soil. Take a handful of your soil and try to roll it up in a ball. If it falls apart, it is too sandy. If you can form it into a ball and flatten it into a string, then it has too much clay. For a small fee, you may have your soil tested for pH and mineral levels at a soil testing lab.

You may need to amend your soil by thoroughly mixing compost with your existing soil. Soil amendments may be purchased from local suppliers by the cubic yard.

Use this formula to calculate how much amended soil to buy:

Length (in feet) x Width (in feet) x Depth (in inches) / 324 = Cubic yards

For example, an area 29' long by 4' wide by 4" deep would require 1.43 cubic yards of soil. (29' x 4' x 4" / 324 = 1.43 cubic yards of soil)

Use a tiller or hand tools to mix in soil amendments. Allow your amended soil to settle for a few days before installing plants.

You might also want to top dress your planting area with decomposed granite, which will slowly release minerals to your new plantings.



CAPTION:
Dirt can be delivered for your landscape. Five cubic yards of Dillo Dirt from J.V. Environmental were ordered for the District's raised beds.



CAPTION:
Al Janelle, Master Naturalist, tills in added compost to the existing soil.

Choosing Plants for Your Garden

Select specific native water-wise plants that will contribute to the purpose you have determined for your landscape and that work within your particular constraints. Consider color, season of bloom, texture, form (height/spread), water needs, sun requirements, etc. Group plants in communities according to their water and sunlight needs.

Draw your selected plants on your plan, allowing for their mature size. For an informal, natural effect, place plants in a staggered arrangement; for a more formal design, concentrate on symmetry and color balance.

Make a list of the number and size of each plant, and use this list when you shop.



CAPTION:

Peggy Murphy, Al Janelle, and Joan Ivy choose plants for the shaded raised beds. These Master Naturalists found the Grow Green Guide from the City of Austin and Texas Cooperative Extension especially helpful in determining the mature size of the chosen plants.

Shopping for Plants

Using your list, visit or call some of our local native plant nurseries. Look for these characteristics in the native plants you select: full appearance; strong, undamaged, multiple stems; green leaves with no discoloration; leaves and stems free of insects and disease.

Resist the urge to purchase large specimens; smaller plants (1-gallon size or smaller) have smaller root systems and are more likely to adapt and thrive in their new soil environment.

Depending on the season, you may not be able to find all the plants on your list. You may decide to choose alternate species or wait until your selected species are available. Don't hesitate to take advantage of the generosity of your friends and neighbors; most gardeners love to share the extra plants and seeds that result from their successes.

Purchase your plants as close to your installation date as possible. Keep plants in a shady place and watered until they are placed in the ground to prevent their drying out.

Installation

Using the drawing of your garden plan, set each potted plant where it will be planted in the beds. Decide if you want to make any last-minute changes in your design, and rearrange your potted plants accordingly.

Remove each plant from its pot and gently loosen the roots. Break apart any root systems that have grown together in a circular fashion. Dig a hole as deep as the root mass, and place the plant in the hole. Fill the hole back in, taking care not to compact the soil around the plant or cover the previous soil level of the plant in its pot.

After all your plants are in the ground, add mulch to the beds. Be careful not to place mulch too close to the plant stems. A layer of mulch protects your new garden by covering and shading soil, minimizing water evaporation, inhibiting weed growth, and reducing soil erosion. Many kinds of organic material may be used as mulch (e.g., leaves, coarse or fine cedar, pine bark, cypress, or hardwood), and many are available commercially. Some gardeners even use hay. Ask for recommendations from your favorite local nursery or experienced gardener.

Water everything liberally, and take some time to admire your new landscape.



CAPTION:
Jeanette Allison, Texas Master Gardener, and her assistant install plants that were first carefully laid out in the raised beds.

Watering Techniques

Texas native plants are adapted for long, hot summers. When soil temperatures heat up, plant growth slows down. During the summer, you might notice slow growth and less color, but your plants will be able to survive and flourish again when cooler temperatures return.

During the first month, water your plants liberally. During this period (especially if it is late spring or early summer), they will need added water to establish strong root systems. After a month, water only when your plants show signs of stress: wilting leaves, drooping stems, etc.

You might want to install a soaker hose or drip irrigation system to administer small amounts of water over a longer period of time. Slow watering helps roots receive the correct amount of water and keeps soil temperature more consistent. Drip irrigation also prevents over-watering problems such as root suffocation and root rot.

One of the most beneficial things you can do for your plants is to install a rainwater harvesting system. According to the Texas A&M Water Resources Education website, "rainwater is good for plants because it is free of salts and other minerals that harm root growth. As rainwater percolates into the soil, it forces salts down and away from root zones, allowing roots to grow better and making plants more drought tolerant."

Rainwater harvesting systems can be as simple as a small rainbarrel under your downspout or as elaborate as a drip irrigation system fed by thousands of gallons of stored rainwater.



The District collects water off a 640 sq. ft section of roof. The water is gravity-fed into a 1550-gallon black polyethylene tank, which becomes nearly full after a 4 in. rain. We chose this lightweight, dark-colored tank in order to prevent the growth of algae. It measures approximately 7'-6" in diameter by just under 6'-0" high.

Caring for your New Landscape

Your new landscape will thrive with proper care.

Using a resource such as the *Grow Green Guide* from the City of Austin and Texas Cooperative Extension, make a list of the maintenance needs of each plant (e.g., cutting back stems, removing spent blooms) and arrange the list by month or season. Use this list for monthly maintenance of individual plants.

- Water your plants infrequently and deeply in the mornings to help establish deep root systems.
- If you fertilize, it is recommended that you use only organic fertilizers that release nutrients slowly.
- If pests appear in your garden, it is recommended that you use only organic pest control products.
- Once a month, in the hot summer months, spray all foliage with a mild seaweed solution in the early morning hours; this treatment helps your xeric plants tolerate heat and drought.
- Once each quarter, spray foliage and soil with actively aerated compost tea, which contains live bacterial and fungal microorganisms that promote the health of vegetation and soil. Rainwater is the best source of the recommended water in the half-and-half solution.
- In the spring, apply a 1/2"-thick layer of organic compost around the base of your plants and trees, avoiding contact with the stem or trunk. Compost, unlike mulch, will "dissolve" slowly into the soil and provide nutrients for your growing plants.



*CAPTION:
Master Naturalist Al Janelle
applies compost tea to the
District's beds.*

The District would like to thank the Capital Area Master Naturalists (<http://www.camn.org/>) for their many hours of volunteer time and their commitment to educating others about water-wise landscaping.

Please contact the District at any time for more information or a tour.



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