



Water Conservation tips from the Garden at the High Plains Food Bank

815 S. Ross St, Amarillo, TX 79102 www.hpfb.org

A garden starts with the soil, and so does water conservation. The soil of the High Plains is primarily clay, which has a high water holding capacity but does not make that water readily available to the plants. Amending the soil with compost is the first step to raising the soils water holding capacity. Composts ability to retain moisture and make that water available will help make the most of the water that is put out on your garden. Tilling 2 inches of compost into the top six inches of your garden soil will significantly improve water holding capacity, and help maintain a healthy soil life.

An additional soil amendment that will help increase the soils water holding capacity is expanded shale. Expanded shale is a porous inorganic aggregate that can be tilled into the soil much like compost. It has been qualitatively proven to quickly improve the condition of heavy clay soil, and many gardeners who use it swear by it.

In addition to the soil, plant selection is a important consideration for water conservation. A popular term used for low water use plants is Xeriscaping. This generally refers to any plants that are tolerant of hot weather and need limited water to grow. There are nurseries, such as High Country Gardens¹, that specialize in plant varieties that meet this description. Another option would to use plants that are native to the High Plains. These plants are conditioned to the local temperatures, soil, and precipitation rate so need very little care. Resources such as Texas Parks and Wildlife² offer lists of plants that are native to this area and offer appealing landscaping attributes.

Irrigation

Irrigating your lawn and garden is great way to maintain a garden and yard through Amarillo's dry months. Choosing the right kind of irrigation for your situation can help keep a healthy garden and save water in the process.

The most traditional type of irrigation is spray heads that "throw" water on your garden. This style is prone to losing water due to the areas high winds, and through evaporation. Despite these traits, there are more efficient options when it comes to spray heads, such as pressure compensating heads. These spray heads can be adjusted throw less water over the same distance so that water will be applied to heavily in uneven intervals. This helps keep a uniform moisture over the garden and prevents times of extreme moisture and dryness. And because they can be adjusted to throw various distances they can easily be installed into an existing system for retrofitting.

A more efficient irrigation choice is drip irrigation. Drip irrigation delivers water in smaller amounts over a longer period of time which helps prevent water loss to wind and evaporation. It can often be incorporated into an existing garden bed without being unsightly or intrusive.

There are several varieties of drip, each with its own pros and cons. Two of the popular varieties are those that have integrated emitters, and those that have to have emitters installed manually. The variety with integrated emitters can be classified by their

emitter spacing; 12 inch, 18 inch, and 24 inch. Most brands are pressure compensating ensuring even water distribution to each emitter, and are designed to not clog. Their one inconvenience is that no other emitters can be added to the line, so you are stuck with spacing interval that was originally purchased with no ability to add on to it later. Drip line that has emitters that are manually installed has the ability to add additional emitters at will on the line, as long as there is significant water pressure. This can be beneficial because it can be changed as your garden changes. This variety of drip line unfortunately does not have pressure compensating emitters so uniform water distribution is not as easily achieved.

Rainwater Harvesting

Water is a valuable resource for the High Plains and it should be made the most of when it comes in the form of precipitation. Using rainwater to its fullest potential will help you keep a healthy lawn and garden and prevent the city from dealing with additional runoff.

The first step to using rainwater in your landscape is to watch how rain moves at your home during a storm. The natural flow of runoff can be tracked so that it can be channeled towards your plants that need large amounts of water and trees. A berm, which is a mound made of soil in your landscape will help direct water from your gutter downspouts and lawn into areas that need water the most. To help direct the water from the berm, gardens can be placed a lower elevations, or basins. Basins should be dug out around trees and garden beds to allow water to collect.

If you see water run off running down your street next to your curb, you are a candidate for cutting the curb and collecting runoff in your yard. This will help minimize the amount of water having to be collected by the city after large rain events and allow you to plant water loving plants in a water conscious yard. Before you knock out your curb a permit should be obtained by the City of Amarillo Traffic Engineering Department³. To remove the section of the curb a concrete saw can be rented from A-Team Rentals⁴, or someone can be hired from a local concrete contractor.

Rain Barrels

Collecting rainwater from your roof can be easy and inexpensive for the home gardener. A trip to the hardware store and a half hour is all it takes to convert a plastic 55-gallon drum into a rain collection device. The instructions for this device are included with this packet. To get pressure to sufficiently water your garden you may need to raise your barrel off of the ground. For every foot the water line is raised the pressure increases 0.43 PSI. Using cinderblocks or creating a platform for your rain barrel will give you additional pressure to water your plants.

¹High Country Garden, www.highcountrygardens.com

²Texas Parks and Wildlife Plant Guidance by Ecoregions, http://www.tpwd.state.tx.us/huntwild/wild/wildscapes/guidance/plants/ecoregions/ecoregion_9.phtml

³City of Amarillo Traffic and Engineering Department, <http://www.ci.amarillo.tx.us/departments/traffic.html>

⁴ A-Team Rentals, 1715 E. 10th, -