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Rainwater Harvesting for Landscape Use

Harvesting rainwater in the desert may sound a bit ironic - but it's because we live in a desert that conserving our most precious natural resource – water – is imperative.

Rainwater harvesting is effective even in arid regions that receive a minimum of 12 inches of yearly rainfall. The average annual precipitation for Prescott is 19 inches, most of which is rainfall.

Why harvest rainfall?

- Save money by reducing your water bills.
- Reduce demand on the municipal water supply.
- Make efficient use of a valuable resource.
- Reduce flooding, erosion and contamination of surface water with sediments, fertilizers and pesticides in rainfall run-off.

Harvesting rainfall is not only good for our checking accounts and for our municipal water supply, it is also good for our plants. Rainwater is free of salts and other minerals that can harm root growth. As rainwater percolates through the soil, it pushes salts down and away from the root zones. This aids in better root growth and water uptake which, in turn, makes the plant more tolerant of drought.

So what is water harvesting? It is the capture, diversion and storage (optional) of rainwater for plant irrigation.

There are three components for water harvesting system:

Rainfall: rainfall runoff is the rainwater that flows off a surface, such as a roof. Runoff can be captured and diverted to plantings or it can be captured and stored for later use.

Plant Water Requirements: the type of plants in a landscape will determine how much water is needed to maintain plant health. Using native and desert-adapted plants will greatly reduce water usage. These plants are typically adapted to long periods of drought, making them suitable for landscapes that will rely primarily on rainwater harvesting.

Water Collection and Distribution System: in a simple system, rainwater is used immediately by diverting it to planting areas. More complex systems collect and store water for later use. A simple storage system may consist only of 55 gallon barrels placed under downspouts while complex systems may include underground storage tanks.

Most homeowners can easily construct a simple diversion system, especially if they are installing a new landscape.

Your roof is your catchment area. Your gutters and downspouts can direct water to plants. By planting in a slight depression you can create a holding area that will contain water, increase water penetration and reduce flooding. The soil that was dug out to create the depression should be used to build a berm (a bank of soil used to retain water) around the area.

Planted areas that will receive runoff may be located close enough to the home that water can flow directly from downspouts to the plants or, if further away, a channel may need to be dug which directs water from the downspouts to the plants.

A simple water harvesting system is that simple! Your roof, gutters, downspouts and possibly a diversion channel is all you need to get started.

For more detailed information you can stop by the nursery and pick up "Harvesting Rainwater for Landscape Use" by Patricia H. Waterfall, Extension Agent, University of Arizona Cooperative Extension/Low 4 Program. You can also visit <http://rainwaterharvesting.tamu.edu/index.html> for more information provided by Texas Cooperative Extension of Texas A&M University, Texas Water Resource Initiative, New Mexico State University, Arizona Department of Water Resources, and The University of Arizona. Information for this article was derived from both of these sources.