Harvesting the Sky

Ancient Idea for Modern Needs

In an average year, about 80,000 gallons of water fall from the sky onto the typical 1/4 acre lot in Tucson; 1/3 or more runs off, adding to street flooding and erosion. That's both water and money down the drain.

Rainwater harvesting captures rain and uses it close to where it falls, or stores it for future use. The cheapest place to collect rainwater is in your landscape—slowing the flow of runoff to allow it to soak into the ground where it can sustain plants. Using harvested rainwater reduces erosion and flooding, salt accumulation in the soil, utility bills, and dependence on groundwater.

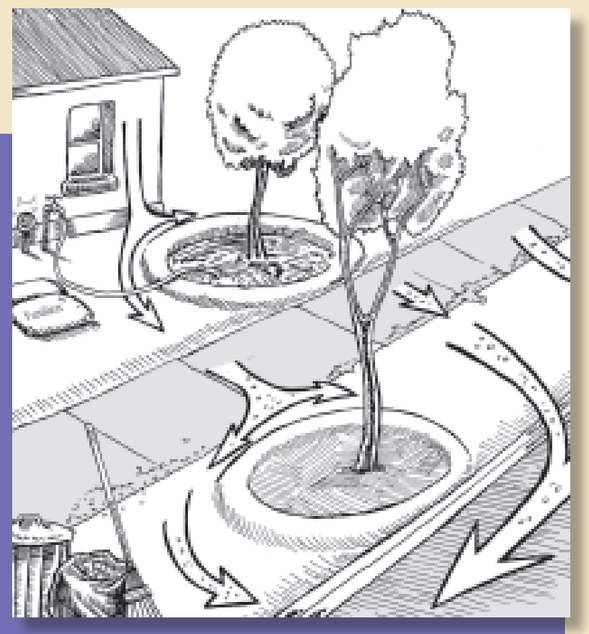
It's an ancient idea you can use today to make an important difference.

Put Your Catchments to Work

A catchment is any surface that can catch or channel rainwater. It can be a roof, driveway, or the landscape itself. The amount of water collected depends on the size of the area, surface type, and slope.

Next time it rains, watch which way the water flows across your property. Determine where a berm or channel would slow the flow and spread the water out, letting it percolate into the ground. Don't forget to allow for extra runoff during a major storm and a spillway for overflow.

Even the simplest methods of water harvesting, like installing plants under the drip line of a roof or using porous pavement materials, can produce immediate results.



billowing cloudbank denotes rain for Rio Grande pueblos

More Ways to Harvest Rain

- Install rain barrels beneath downspouts—be sure to include a lid and/or mosquito dunk.
- Lay perforated PVC pipes in gravel-filled trenches to direct water where it is needed.
- Install a cistern—and make sure it's large enough to hold the runoff from the heaviest storm you can expect

A 50' x 50' roof equals 2,500 sq. ft. Tucson's annual rainfall is approximately 12", and there are 7.48 gallons in a cubic foot of water, so you can expect 18,700 gallons of runoff per year (assuming 100% runoff). A monsoon storm that drops 2" of rain on your house could result in 3,000 gallons of water!

When Calculating Demand, It's the Plants!

Plant selection is a major factor in any successful water harvesting project. Keep in mind…

- Native and adapted plants can tolerate prolonged drought and know how to take advantage of water when it is available.
- Riparian trees like desert willow and mesquite do well in large, deep basins where they may stand in water for up to a day.
- Groundcovers act like living sponges, increasing the soil's ability to hold water.

- Grouping plants with similar water needs and spacing them so there is enough water to go around means happier, healthier plants.
- An area of 500 sq. ft. planted with low water use plants requires about 5,000 gallons of water—plant the same area with high water use plants and the demand doubles!
- Raised berms can double as pathways and provide additional planting areas for species needing less water.

Read all about it! Pima County Cooperative Extension's Harvesting Rainwater for Landscape Use is available online at http://cals.arizona.edu/pubs/water/az1344.pdf or visit www.harvestingrainwater.com.

Two water harvesting illustrations, Brad Lancaster; billowing cloudbank icon, Heard Museum