



## Water Harvesting

**Water Harvesting** is capturing and storing rainfall to irrigate plants or to supply people and animals. It is one of the oldest known gardening methods, dating back to the beginnings of agriculture. Water harvesting methods are still used by the Tohono O'odham and Hopi tribes, who traditionally plant after the onset of summer and winter rains. Did you ever play in rainwater as a child, building earth dikes and letting them go? This is what water harvesting is all about.

Water harvesting will help you save money on monthly water bills and reduce your dependence on water supplied by your private water company. A well-designed system will also decrease your landscape maintenance needs.

All you need for a water harvesting system is rain and a place to put it. Your system can be simple, using contoured areas so that water flows directly to planted areas; or sophisticated, featuring storage systems that can contain captured water for later use.

A "catchment" is any large surface that can capture and/or carry water to where it can be used immediately or stored. Where are your catchment surfaces? Everybody has at least one catchment area on their property, such as a roof, patio or driveway. You can direct water runoff from these surfaces to plants, trees or lawns by using dikes, berms, or contouring. Rain gutters and pipes can move water to storage containers. You can use this stored water as an alternative watering source during sparse rain periods.

### Planning Your Water Harvesting System

A site plan, drawn to scale, will be helpful in planning your water harvesting system. The plan should identify the location of your house or other buildings, sidewalks, and other catchments that will carry water. Sketch in arrows to indicate water flow directions across each surface. Designate landscaped areas, types of vegetation and number of plants. This plan will help you decide where and how to direct rainwater, or where to store water should you decide storage is possible.

## Preparing the Site

You can do many things to capture rainfall at your site:

- Create depressions around trees and line them with rocks or mulch to retain moisture.
- If you are designing a new home site for water harvesting, arrange brick or flagstone paving to direct water to plants.
- Dig furrows and channels to direct water to a garden.
- Make sure your gutters and downspouts are free of trash, dirt and leaves.

## Should I Store Rainwater?

Water surplus available at the right time of year makes storage well worth the time and effort. A surplus becomes impractical when it must be stored for more than several months. Water stored for long periods of time will stagnate and become a health hazard. To determine whether storage can or should be part of your harvesting system, compare your total amount of water available (estimating rainfall) in a given month to that month's total landscape requirements. If you have a surplus that can be used in a reasonable amount of time, you should consider a storage system.

## Types of Water Storage

You can store water in a variety of ways: 55-gallon steel drums, oak barrels or underground storage tanks. For a simple storage system, place an oil drum or barrel on a raised platform under a rain gutter downspout. The barrel should have an external pipe with a shutoff valve to control the amount of water withdrawn. If you have designed your system properly, gravity will enable you to obtain water from the barrel to a drip irrigation system without a pump.

## System Maintenance

Regular maintenance is critical to any dependable water harvesting system. Make sure your gutters and downspouts are free of debris. Periodically clean and/or repair dikes, berms and channels to prevent excessive erosion.

## You Can Do It!

With a little planning, you can make your own urban water harvesting system for landscape use, and lower your water bill.