ACTIVE RAINWATER COLLECTION

Container Types—be creative!

550 gallons

Corrugated Metal Pipe

2,500 gallons

65 gallons

165 gallon stock tank

HOW MUCH RAIN CAN YOU CATCH?

- **Measure area the collection surface covers**
- **Multiply the rainfall in inches**
- **Multiply by 0.6 = gallons collected**

EXAMPLE OF ANNUAL ROOF COLLECTION AMOUNT

- **Roof covers 20 ft X 50 ft = 1000 ft²**
- **Annual rainfall = 15 inches**
- **1000 ft² X 15" X 0.6 = 9,000 gallons!**

GO NATIVE WITH PLANTS!

Local native plants are important for a successful RainScape. Going native means more watchable wildlife and less care, fuss and watering for you. Contact local plant experts for plant choices.

Southwest Native Devil's Claw
(Proboscidea parviflora)

GO TAKE A HIKE!

Southwest Native Desert Willow
(Chilopsis linearis)

Stroll around your natural environment and observe the plants, and where they grow. Do the cheery yellow flowers grow in full sun or partial shade? Does the hummingbird-attracting tree grow near a dry stream bed?

Mimic a plant's natural habitat in your RainScape and practice tough love. Most landscapes are overwatered. After plants are established, only water plants when they need it, not when you want.

PRINCIPLES OF RAINSCAPES

(Xeriscape Principles + Water Budget)

- **Plan and Design...** for water conservation and beauty from the start.
- **Balance the Budget...** balance the landscape water demands with the water supply.
- **Select Low Water Use Plants...** and group plants of similar water needs together.
- **If Needed, Create Turf Areas...** of *manageable* sizes, and appropriate grasses.
- **Use Soil Amendments if Needed...** amend only for garden and turf—*NOT for desert adapted plants!*
- **Use Mulches...** such as wood chips or gravel, to reduce evaporation & to keep the soil cool.
- **Irrigate Efficiently...** with properly designed systems (including hose-end equipment) and by applying the right amount of water at the right time.
- **Maintain the RainScape Properly...** by mowing, weeding and pruning properly. *DO NOT use plastic as a weed barrier*. Use porous material or a 3" layer of gravel or organic mulch.

Learn more about RainScapes at:

The University of Arizona
Cooperative Extension
Water Wise Program

waterwise.arizona.edu

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cals.arizona.edu/pubs/garden/az1539.pdf

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ARIZONA COOPERATIVE EXTENSION
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RainScapes

The ultimate in water efficient landscaping!

RainScape Principles can be applied to a new or existing yard to create a beautiful and water efficient landscape.

AZ1539
February 2011

Water Wise
waterwise.arizona.edu

THE UNIVERSITY OF ARIZONA
College of Agriculture and Life Sciences

WHAT ARE RAINSCAPES?

RainScapes are landscapes that once established rely entirely on rainwater (and gray water if available) while preserving tap water for indoor and drinking water needs.

Why Rainscapes?

RainScapes help reduce dependence on declining water supplies while providing a landscape supplied by Mother Nature's bounty. Because landscape water use can account for up to 50% of a typical residential water bill, this is a great way to help your community, the environment—and your wallet!

Although RainScapes can be seasonal depending on the rain supply, think a lush RainScape isn't possible? Consider this: in a one inch rain, you can collect 600 gallons from a 1,000 square foot roof, while a 4,500 square foot lot will receive 2,800 gallons!

RainScapes follow Xeriscaping principles (see back panel) for a water efficient landscape, but add "Balance the Budget" to ensure all the water needs for the landscape are met by the rain that falls on the property.

BALANCE THE BUDGET

Demand and Supply

Water Demand—how much is needed?

Balance the landscape water demand by using a combination of

- *plant types*
- *plant quantities*

Landscape water demand depends on the type and number of landscape plants. The more water thrifty the plants, the less water needs to be collected. If more water is collected than your plants need, you can add more plants or have a lush planting to take advantage of the abundance of rain on your property.

Water Supply—how much is available?

Rain catchment options

- *contour the land to direct detained water to plants (called "passive systems")*
- *storage tanks (called "active systems")*

Just like a checking account with deposits and withdrawals, a storage tank works much the same way. Therefore, although you may get 9,000 gallons of rain from your 1,000 square foot roof in a year, it is not necessary to store a year's worth of water because you will be using it throughout the year.

PASSIVE RAINWATER COLLECTION

Berm

Use stormwater beneficially with 3 basic principles:

SLOW it down

- **Start by managing water at the top of the watershed (yard, neighborhood, area)**
- **Keep existing vegetation on the soil**
- **Make multiple water catchment areas**

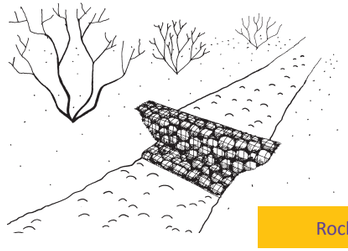
SPREAD it out

- **Spread water out**

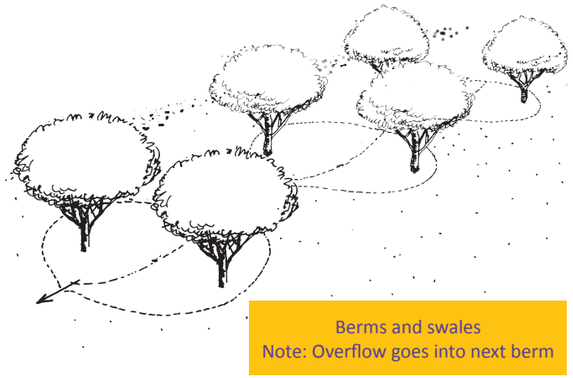
SOAK it in

- **Encourage water to infiltrate by increasing the porosity of the soil. Grow grasses in wet areas and put organic material (bark, compost, straw) or rock on top of the soil as a mulch.**

Start small and adjust as needed.



Rock Gabion

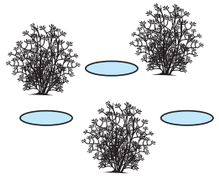


Berms and swales
Note: Overflow goes into next berm

PASSIVE RAINWATER STRUCTURES

Rock gabions: sturdy metal fencing wrapped around rocks and secured into drain ways.

Depression/Swales: shallow areas for water detention, approximately 2-6" deep in planting areas.



Berms: structures made out of soil, straw bales or other available materials designed to detain water. Soil berms should be about 6" high and 12-24" broad.

NOTE: ALL WATER HARVESTING PRACTICES MUST COMPLY WITH STATE WATER LAWS.

WHAT ABOUT MOSQUITOES?

Standing water is OK as long as it drains within 72 hours. Cover all collection containers to keep out mosquitoes and other animals. Products containing a bacteria called "BTi" that is toxic to mosquito larvae (safe for animals) are readily found in your favorite gardening departments and can be added to any standing water.