

WATER SAVING STRATEGIES

Estimating Rainfall Runoff Using Rules of Thumb

Source: Rainwater Harvesting for Drylands, Vol. 1, Brad Lancaster, www.harvestingrainwater.com

You can collect 600 gallons of water per inch of rain falling on 1,000 square feet of catchment surface (roof).

Los Angeles Yearly Average : 15 inches of rain x 600 gallons = 9,000 gallons per 1000 square feet

Orange County Yearly Average: 13 inches of rain x 600 gallons = 7,800 gallons per 1000 square feet

Pasadena Yearly Average: 20 inches of rain x 600 gallons = 12,000 gallons per 1000 square feet

Riverside Yearly Average: 10.3 inches of rain x 600 gallons = 6,180 gallons per 1000 square feet

You can collect 27,000 gallons of water per inch of rain falling on 1 acre of catchment surface .

Los Angeles: 15 inches of rain x 1/10 acre x 27,000 gallons = 40,500 gallons per small city lot

Orange County: 13 inches of rain x 1/10 acre x 27,000 gallons = 35,100 gallons per small city lot

Pasadena: 20 inches of rain x 1/10 acre x 27,000 gallons = 54,000 gallons per small city lot

Riverside: 10.3 inches of rain x 1/10 acre x 27,000 gallons = 27,810 gallons per small city lot

Mulch: Mulch acts as a sponge, holding water and slowly releasing it to your plants. Mulch also decomposes slowly, releasing humic acid and breaking up clay soils. I use shredded Redwood bark ('Gorilla Hair'), shredded Cedar bark, or shredded arborist's mulch, which is basically shredded tree. An arborist I work with says Pine is too acidic and Palm is too slow to break down. Eucalyptus is fine for natives. Landscapes in fire zones should consider shredded Redwood bark, which is more fire-resistant. Mulch should not touch the stems or trunks of your plants; mulch should be kept at least 4 to 10 inches from your stem or trunk. Sow some California Poppy or other wildflower seeds on top of mulch.

Overflow: We often get our water all at once. Swales, rain gardens and infiltration pits should not be closer than 10 feet to a structure. There should always be a plan for overflow in a suitable direction.

Swales and Swale-and-Berm Features: Swales are level trenches on contour that keep water from running off in the landscape. Berms on the downslope side of swales help to further retain water.

Modified French Drain: In a modified French Drain, the pipe sits near the top of the gravel-filled trench instead of the bottom of the trench, allowing water to infiltrate before being carried off. There must be at least 2% fall in a system.

Rain garden: A sunken area that collects water. Plants in this area should be tolerant of both wet and dry soils.

Infiltration Pit: Infiltration pits should connect to an aquifer and be on well-draining soils. Do not use this strategy if your land failed a percolation test (perk test). Usually filled with ¾ inch gravel. Infiltration pits can contain a cistern with a bottom that drains, allowing water to leave the system slowly.

What's that plant?: *Carex praegracilis*, Clustered Field Sedge/Meadow Sedge makes a tough and beautiful meadow. String trim yearly in fall or mow. San Diego Bentgrass, *Agrostis pallens*, is also turf-forming.

Greywater: Greywater should not be held in a tank, and should infiltrate under 2" of mulch. Should only be used on plants with 1" caliper, i.e. fruit trees, not on root vegetables and not on most natives. There must be at least 2% fall in the system. Greywater users must use Oasis Biocompatible product, available online. "Biodegradable" products can add sodium to your soil. Find books, parts and a wealth of information on greywater by Art Ludwig online, oasisdesign.net

Cisterns: www.tankdepot.com is a good place for cisterns. Cisterns run about one dollar per gallon. First Flush Diverters come from the same place. Gutter diverter shown is from Gardener's Supply at gardeners.com.

Permeable Pavements: Permeable pavements should have an overflow strategy. They can silt up if not cleaned.

Irrigation: What's that Product?:
 Hunter MP Rotators
 Hunter PGP Rotors
 Netafim dripline for "drip on grid" in clay environments
 Mini-Sprayers to convert existing drip systems

Water features: Water features bring the sense of water back to the landscape, and can create habitat for birds, dragonflies and other wildlife.