

## Rainwater Catchment



You can catch 600 gallons of water per inch of rain for every 100 square feet of roof. Water caught in this way does not require a permit from any agency.

## Grey Water Systems



Grey water systems are now legal in California. You can add a lot to your garden productivity using your bath and laundry water for irrigation. The plumbing is often quick and easy.

## Storing Water in the Landscape



Recontouring your land and excavating a bioswale that is filled with organic matter can create an area of high soil moisture ideal for an orchard or for farming. This is also called permaculture. A geologist should be consulted for any large scale project.

# Water Security: Storage & Conservation Strategies



Water is an infinite resource that regulates atmospheric temperatures, shapes the Earth's surface, passes through every living creature, transports nutrients, and creates spectacular visual displays.

## Water Budget for Security

To achieve water security, you need to think about available resources and your potential need, and then to calculate a water budget. Water planning needs to be done in advance, not when you are in crisis. People often over-estimate their water needs, which can lead to unnecessary expense of purchasing too much storage capacity. Water use varies tremendously with the season as does water supply, so it may take a while to gather the data needed. Water data may also be required for some permitting processes.

## Deep Irrigation



Top watering your plants can often be very inefficient, especially if the soil dries out and becomes hydrophobic. Instead you should deep water your plants for maximum delivery to the root zone. Insert PVC pipe into soil at zone of root depth with small perforations to let water out. Feed water at the top with drip system as shown at upper right.

## Water Meters



The first step to achieving water security is installing a water meter. You should have one for your house and another for your garden so that you know your domestic and irrigation water use. Make sure that you purchase a system with a **leak indicator** to prevent unneeded loss and water waste.

## Redundancy for Security



Whenever multiple tanks are installed for water storage, each tank should be equipped with its own shut off valve. This prevents catastrophic loss of water, if one valve in the system is left open.

## Float Valve to Avoid Waste

Every water tank should have a float valve to shut off the intake and prevent overflow. Water spilled below your tank can saturate soils and increase risk of slope failure. Leave as much water at its source as possible for Nature and your downstream neighbors.

