



“Your Watershed”
by the Russian River Watershed Association

July 2009

Rainwater Harvesting and Graywater Use

Over the last three years our region has received significantly lower than average rainfall during the winter and spring months. These dry conditions coupled with regulatory constraints on our water supply have led to an increased interest in additional ways that homeowners and businesses can reduce water use. An option that is becoming more popular is the development of on-site water supply sources. Rainwater harvesting and graywater systems are two types of on-site sources that can be used to supplement your water supply and reduce your needs for potable water for landscape irrigation and potentially other non-potable uses.

Rainwater harvesting is the collection and storage of rainwater from hard surfaces, such as rooftops, for later use. Rainwater harvesting varies from simple catchment devices, such as rain barrels, to more complex systems such as cisterns and storage tanks. Typically, rain barrels range from 50 to 100 gallons in size and the water collected is used to water plants and landscapes. Cisterns and storage tanks are larger than rain barrels, often storing several thousand gallons, and provide water for irrigation and other non-potable uses. Harvesting rainwater provides many benefits, including reducing the amount of storm water runoff, conserving water supply, and helping to reduce the amount of energy used and green house gas emissions produced to supply water.

When considering whether or not to install a rainwater harvesting system, it is important to take into account the size of your rooftop or catchment area, the amount of space available for rainwater storage, and how you plan to use the rainwater. For most types of catchment areas, for every inch of rain, an average of 600 gallons of rainwater can be collected per 1,000 square feet of catchment area. The amount of rainwater you collect and the length of time the rainwater is stored can add up quickly based on the amount of rainfall received and how the water is used. To prevent mosquito breeding and other stagnant water problems, rainwater harvesting systems should be inspected and cleaned routinely, and should include screens on all inlets and vents to keep out debris, an overflow pipe, a fully closed lid, and should be a dark enough color to block out sunlight to prevent algae growth. In addition, it is extremely important to check with your local City or County regarding any regulations or permits that apply to a rainwater harvesting system.

Graywater is untreated waste water from bathtubs, showers, bathroom sinks, and washing machines. Graywater does not include waste water from toilets, kitchen sinks, dishwashers or from loads of laundry that include diapers. The State of California has regulations that control how graywater systems must be designed, installed and operated, as well as restrictions on how



RUSSIAN RIVER WATERSHED ASSOCIATION

300 Seminary Ave, Ukiah, CA 95482 • (707) 833-2553 • www.rrwatershed.org

graywater can be used. Graywater can only be used for subsurface irrigation. In response to the dry year conditions, the State updated the residential graywater regulations this August to allow certain single-fixture systems (like a clothes washer) to be installed without a permit if the local enforcing agency has not adopted more stringent standards. If you plan to use a graywater system in your home or business, check with your local City or County building department regarding current regulations and permit requirements.

Using graywater helps conserve water supply and reduces the amount of waste water that is produced. When deciding to use graywater, it is important to consider how much graywater your home or business produces, the amount of irrigation your landscape needs, and the permeability of the soil in your landscape.

As rainwater harvesting and graywater systems grow in popularity, some water providers have begun to offer rebates and incentives for installing these systems. For more information on requirements, possible incentives, or other water conservation programs, contact your local water provider.

This article was authored by Jennifer Burke of the City of Santa Rosa on behalf of RRWA. RRWA (www.rrwatershed.org) is an association of local public agencies in the Russian River Watershed that have come together to coordinate regional programs for clean water, fisheries restoration, and watershed enhancement