

Greywater Re-Use

What is Greywater Reuse?

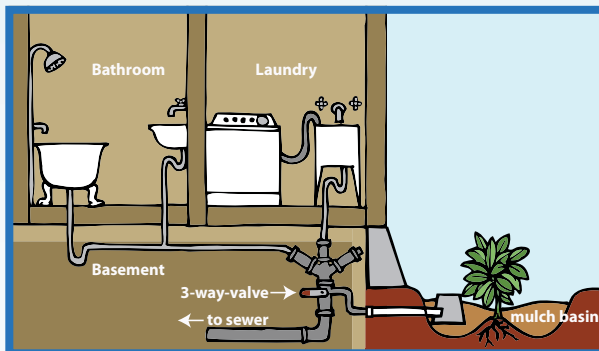
Greywater Reuse is recycling wastewater from showers, bathtubs, bathroom sinks and washing machines and diverting it from the sewer to irrigate outdoor plants and landscape.

Benefits of Greywater Reuse

As household water becomes more expensive, homeowners may need to consider alternate sources of water, such as greywater and rainwater, to affordably irrigate the plants around their home. Because greywater is available all year, it is a great source of irrigation during the dry months when rainwater is not available.

Important Considerations

Learn the regulations, design, installation, and maintenance requirements for a greywater system before starting your project. You cannot store greywater; so, only divert the amount needed to water your garden. For info about greywater system design and installation, go to greywater.EcoAct.org.



Basic Rules

Greywater can be reused for irrigation when a few simple rules are followed. Greywater:

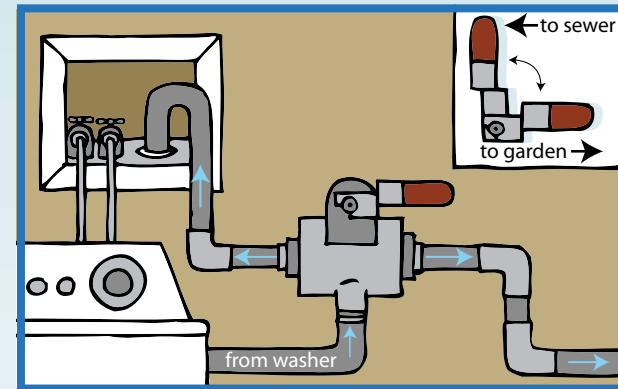
- Must be diverted through a labeled 3-way valve so that the user can divert water back to the sewer or septic system when necessary.
- Must be retained within the homeowner's property boundary.
- Outlets must be below ground, covered by at least 2 inches of mulch, rock or approved shield, and must be at least 100 feet from creeks, waterways and wells.
- Must not be in contact with edible parts of crops, such as root crops.
- Must not have been used to dye clothes or to wash diapers or feces soiled garments.
- Must not be used to dispose of hazardous materials.
- Should be used immediately, preferably within 24 hours.
- Must have a homeowner's maintenance manual.

Greywater Compatible Products

Some cleaning products which end up in greywater can be harmful to plants and soil. Therefore, products used in a greywater system should contain no sodium, boron, chlorine bleach, or other petroleum-based chemicals or surfactants. There are many eco-friendly "biodegradable" laundry detergents and clean greywater irrigation systems. See Ecology Center of Berkeley's Web site for guidance: <http://ecologycenter.org/factsheets/greywater-cleaning-products.html>.

Safety and Maintenance

Any greywater system, including a "laundry to landscape" system, must have its own Homeowner's Maintenance and Operations Manual, detailing the particular system's layout, working parts, and maintenance requirements. There are public health considerations when using recycled greywater, and the Homeowner's Maintenance and Operations Manual shows how to avoid problems.



Resources

Learn more about rainwater catchment systems and installation at: rainwater.WaterAwareness.org.

Learn more about greywater systems and installation at: greywater.EcoAct.org.

Disclaimer: This brochure is intended as a general reference tool and in no way supersedes statutory law or rules in your City or County.



A Homeowner's Guide to Conserving Water

Rainwater Catchment and Greywater Reuse for Outdoor Use



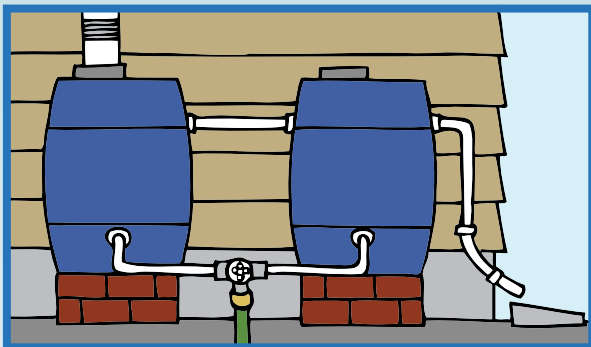
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Rainwater Catchment



What is Rainwater Catchment?

Rainwater Catchment saves normally wasted water and reuses it for irrigation or other non-potable (non-drinkable) uses.



Benefits of Rainwater Catchment

Rainwater collection is older than the Roman Empire, and is growing in popularity as people look for ways to use water resources more wisely. Monterey County would like to promote rainwater collection to help stretch our limited water supplies. When you install a rainwater catchment system at home, you are helping to maintain the beauty and health of your property, and of the Monterey Bay region. By collecting and using rainwater you are:

- Slowing downspout water run-off and reducing peak storm water flows;
- Reducing the volume of drinking water used for non-potable uses such as irrigation; and
- Saving money by reducing the amount of water you have to buy from the water company.

Rainwater Rooftop Catchment Estimation:
Avg. rooftop of 1500 Sq. Ft. x Avg rainfall in Monterey of 15 in/yr. = 14,027 gallons/yr.

Getting Started

Rainwater can be collected from most types of rooftops. Roofs painted with lead-based paint or paint containing fungicide would have to be re-coated with paint approved for the intended use. The first step is to clean your roof, disconnect your downspout, and connect it to a storage container. Your storage container needs an overflow pipe, which should be routed away from the house.

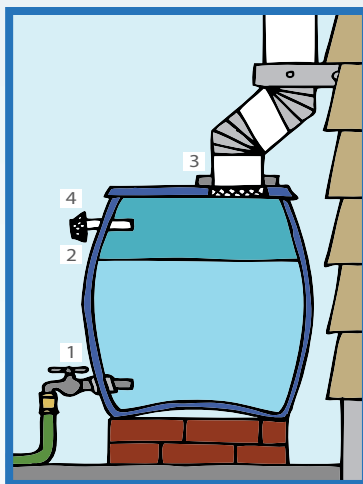
Rain Barrels

Rain barrels are just that, a barrel to catch the rainwater coming off your roof. They are inexpensive, easy to install and maintain, and good for small scale residential sites. They typically hold from 50 to 300 gallons, and are mostly used for watering plants.

SYSTEM COMPONENTS

A rain barrel should have:

- A spigot and/or a hose bibb (1) so that you can access the water;
- An overflow pipe (2) routed away from the house;
- A sealed and screened lid (3) with an opening for your drainpipe; and
- Screens on all vents (4).



See rainwater.WaterAwareness.org for a list of local businesses that sell rain barrels.

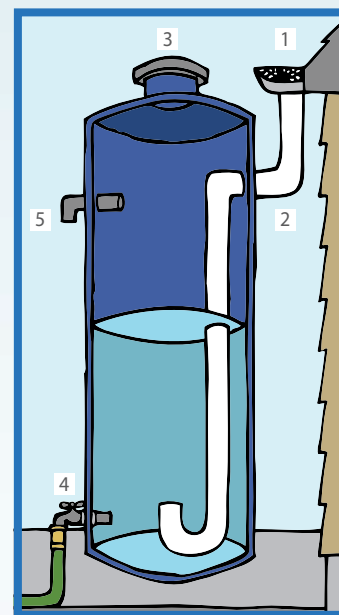
NOTE: No permit is required for a rain barrel. A rain barrel should never be connected to your home's plumbing.

Cisterns

Cisterns are larger than rain barrels, ranging from 300 gallons to thousands of gallons. A basic system used for irrigation typically includes:

- Fully screened gutters (1),
- Downspouts and piping (2), including a "first flush" diverter (not shown),
- A fully closed storage tank (3),
- A spigot and/or hose bibb (4), and
- An overflow pipe (5).

A cistern should never be connected to your home's plumbing.



NOTE: If your storage tank is less than 5,000 gallons and is above ground, no permits are required. If your system is larger than 5,000 gallons, includes new wiring for a pump, or will be installed underground or on a roof, you will need a building permit.

Safety and Maintenance

Be sure your rain barrel or cistern is sited on a stable, flat area near your downspout. Keep your system free of debris and maintain all screens to prevent mosquito breeding. Clean your rain barrel or cistern with a non-toxic cleaner such as vinegar. If you notice a bad smell, treat the water with chlorine bleach (Clorox) 1½ cups per 1000 gallons. Label all rainwater collection system pipes and fixtures:



NON-POTABLE WATER, DO NOT DRINK. Go to: rainwater.WaterAwareness.org for a printable label.

Sources of Non Potable Water

RAINWATER: Water that falls as rain, and then is collected as catchment water from your roof or other hard surfaces.

GREYWATER: Wastewater from bathroom sinks, showers, baths, or laundry.

BLACKWATER: Wastewater from your toilet, kitchen sink or dishwasher. Blackwater may not be reused without municipal treatment at the local sewage plant.

RECLAIMED WATER: Municipally treated sewage that meets California regulations for reuse as landscape irrigation.