October 2015

Residential Graywater Irrigation Systems

FAQ

City of Encinitas | Planning and Building Department | 505 South Vulcan Avenue, Encinitas, CA 92024 | (760) 633-2710 | www.encinitasca.gov

What is Graywater?

Graywater is untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes, including but not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs, but not including wastewater from toilets, kitchen sinks, dishwashers, or laundry water from soiled diapers, due to potential health issues.

Graywater is not the same as recycled water, which is highly treated wastewater from a treatment facility. Recycled water is used widely throughout Encinitas in landscaped areas of City parks and street parkways, and in many homeowners' association landscaped areas. Contact your HOA or water district about using recycled water in your HOA's common area.

A standard home generates about 160 gallons of graywater per day, or nearly

60,000

GALLONS PER YEAR.

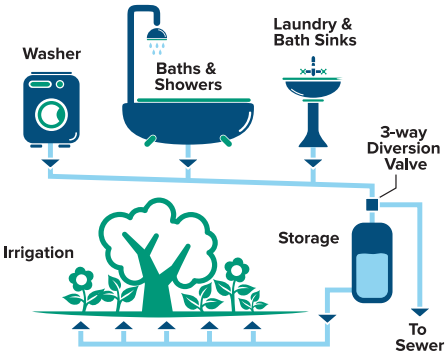
A family of four could reuse

22,000

GALLONS PER YEAR

alone by installing a washing machine graywater system.

What is a Graywater System?



Typical graywater systems are onsite wastewater systems that use untreated graywater for subsurface landscape irrigation through the use of mulch basins, disposal trenches or subsurface drip irrigation fields.

Using graywater is an excellent way to recycle and conserve water, and can help you reduce potable water consumption. Your indoor water can be reused as graywater, providing a constant source of recycled water for irrigating landscape including fruit trees, but excluding vegetable gardens.

Is Graywater Regulated?

The design, installation and maintenance of graywater systems is regulated to protect public and environmental health by ensuring that these systems can operate in all weather conditions with minimal maintenance; prevent the contamination of groundwater from improperly designed graywater systems; prevent the contamination of surface water from improperly designed and operated graywater systems; and prevent contact with effluent by humans and animals.

GRAYWATER BASICS

- Do not store graywater more than 24 hours. If you store graywater, the nutrients in it start to break down and create bad odors.
- Minimize contact with graywater, which may contain pathogens. All systems must be designed so that graywater soaks into the ground and is not accessible by people or animals.
- Be sure graywater infiltrates into the ground; do not allow it to pool or run off. Pooling graywater can provide opportunities for mosquitos to breed, as well as for human or animal contact.
- Simple systems are encouraged. A simple system lasts longer, is easier to maintain, uses less energy, and costs less. Systems with pumps and filters require more commitment and regular maintenance.
- Install a diverter valve at a convenient location for easy switching between the graywater system and the sewer system.
- Match the amount of graywater diverted to your plants with their irrigation needs.
- Use plant-friendly products in washing machines, sinks, shower, and tubs that provide graywater to the system. Many products contain boron or salts that are harmful to plants.

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All new homes must be pre-plumbed with graywater plumbing to all eligible discharge sources and with a stub out convenient to landscape irrigation — See Ordinance 2015-11

What Graywater Systems Can I Install Without a Permit?

The Encinitas City Council recently provided greater flexibility and opportunity for homeowners to install a graywater system without the need for a permit. Graywater systems that utilize only a single domestic clothes washing machine in a one- or two-family dwelling do not require a permit.

To qualify as a "no-permit" system, these systems:

- May *not* include a potable water connection or the use of a pump
- May not affect other plumbing, electrical, mechanical, or building components
- Must emphasize the use of Best Management Practices to prevent runoff
- Must have a daily capacity of 250 gallons or less
- Must comply with graywater system requirements as per Chapter 16 of the California Plumbing Code (CPC).

Please see the "Residential Graywater Irrigation Systems" document.

Why Do Some Graywater Systems Require a Permit for Installation?

Permitting is required for simple and complex systems that take discharge water from elements in the home other than a single clothes washing machine, and for systems that require plumbing, electrical, mechanical, or building modifications, or the use of a pump. Permitting and inspection of these larger systems ensure that graywater standards regarding manner of discharge, backflow prevention, groundwater, etc., as well as applicable construction standards, are met.

What Permits are Required? Fees? Timing?

CITY OF ENCINITAS

Per the CPC, a written construction permit must be obtained from the Enforcing Agency (in this case, the City of Encinitas Planning and Building Department), prior to the erection, construction, reconstruction, installation, relocation, or alteration of any graywater system that requires a permit. Submittal requirements and detailed fee information for residential graywater irrigation systems can be found in the document titled, "Residential Graywater Irrigation Systems". Typically, a permit could be issued 10 to 30 days following submittal depending on the need for corrections to the plans.

Fee Waiver: The City Council recently approved inclusion of graywater systems in the Energy Efficiency Permit Fee Waiver Program. Under this program, City review fees for typical systems are waived. Systems that require alteration of mechanical systems or require building modification would be subject to fees for those portions of the systems.

REGIONAL WATER BOARD

The California Regional Water Quality Control Board – San Diego Region (Regional Board) regulates discharges of waste to land, but the State Water Code provides that waivers for certain types of discharges may be allowed. SDRWQCB has issued a waiver (Waiver No. 1 of Order No. R9-2014-0041) that allows for graywater discharges once a Notice of Intent (NOI) is filed with the Regional Board. Information required in the NOI includes the location of the system, the owner of the property, the operator of the system, the waiver type proposed, description of the discharge and how it will be managed, and any additional information about the discharge and/or how the discharger will comply with the conditions of the waiver. No fees are required. For graywater systems requiring a permit, permit applicants must provide evidence of filing of an NOI with the Regional Board prior to issuance of the City permit.

WATER DISTRICTS

There are two water districts that serve the City of Encinitas, the San Dieguito Water District (SDWD) and the Olivenhain Municipal Water District (OMWD). Both water districts require backflow prevention for systems with cross connections to potable water systems, which typically occurs where a graywater system interacts with a home's irrigation system. Systems with such connection will require additional water district review and fees.

SDWD is a subsidiary district of the City of Encinitas and will review permit applications for graywater systems as a part of the City's internal review process.

For projects within the OMWD service area, applicants must separately submit plans to OMWD and provide evidence of OMWD approval of the graywater system prior to issuance of the City permit.

Please contact the water district serving the subject property for information regarding district requirements, fees and review time for graywater systems.

LEARN MORE

For more information on graywater systems and submittal requirements for the City of Encinitas, contact the Planning and Building Department at planning@encinitasca.gov or (760) 633-2710, or visit the City's Graywater Systems Webpage. Other helpful graywater/water conservation resources include:

California Urban Water Conservation Council
www.h2ouse.org

San Diego Sustainable Living Institute
www.sdsustainable.org

San Diego County Water Authority
www.watersmartsd.org