

Rules on Graywater Reuse and Disposal Systems



State of Oregon
Department of
Environmental
Quality

Background

On Aug. 25, 2011, the Oregon Environmental Quality Commission approved rules that created a statewide program for the permitting of graywater reuse and disposal systems. House Bill 2080, passed by the 2009 Oregon Legislature, required the development and adoption of these rules.

What is graywater and how can it be used?

Under Oregon law, graywater refers to shower and bath wastewater, bathroom sink wastewater, kitchen sink wastewater and laundry wastewater. Graywater does not include dishwasher wastewater, garbage disposal waters, toilet or wastewater contaminated by soiled diapers.

Organic matter, suspended solids or potentially pathogenic microorganisms can contaminate graywater. However, if used as described in the rules, graywater can be reused safely for a number of different purposes, such as irrigating certain trees and plants, and providing moisture for compost. Reuse of graywater reduces the demand on other sources of water, such as potable water, surface water and groundwater.

Oregon's rules recognize three different "types" of graywater, based on graywater quality. Higher-quality graywater can be used in more ways than lower-quality graywater.

- **Type 1 graywater** is graywater that is untreated or has passed through a physical process to remove solids, fats, oils and grease. Type 1 graywater is the lowest quality and may be used only for subsurface irrigation.
- **Type 2 graywater** is treated by a chemical or biological process to reduce total suspended solids and organic matter concentrations. Because this type of graywater is stabilized through treatment, it may be used for drip irrigation and in landscape ponds.
- **Type 3 graywater** is treated to Type 2 standards and disinfected to reduce bacteria and other potential pathogens. Because of its high level of treatment, Type 3 graywater is suitable for additional uses, such as sprinkler irrigation and dust control.

What is a graywater reuse and disposal system?

A graywater reuse and disposal system is any existing or proposed graywater collection and distribution system equipped with a diversion device, i.e., valve that can direct graywater between beneficial reuse and disposal. The graywater systems must be connected to a permitted sanitary system.

A property owner seeking to construct, install or operate a graywater reuse and disposal system must obtain a permit from the Oregon Department of Environmental Quality.



Graywater refers to wastewater collected from showers, baths, kitchen sinks, and laundries.

How can I obtain a permit?

Permit applications are available on DEQ's website:

<http://www.oregon.gov/deq/wq/programs/Pages/Water-Reuse-Graywater.aspx>

A person wanting to use graywater will choose between three different permits, depending on which permit best meets their particular needs:

- **Tier 1 general permit (2401).** A Tier 1 general permit is available for single-family residences and duplexes that generate less than 300 gallons per day of Type 1 graywater and use it solely for subsurface irrigation of landscape plants or compost. A person will fill out the permit application, pay permit application fee, the annual fee, and agree to follow the permit's conditions. DEQ will review the documentation and notify the applicant if coverage under the Tier 1 permit is granted. If the system owner submits an annual report to DEQ, the annual fee will be waived most years.

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- **Tier 2 general permit (2402).** This general permit is available for any structure that generates less than 1,200 gallons of Type 1 or Type 2 graywater per day. A person will fill out a new-permit application, pay the application fee, the annual fee, and submit required documentation to DEQ for review. DEQ will review the documentation and notify the applicant if coverage under the Tier 2 permit is granted.
- **Tier 3 individual permit.** DEQ will issue an individual permit for any system ineligible for coverage under a Tier 1 or Tier 2 general permit as well as to anyone not wanting coverage under a general permit. Applying for a Tier 3 permit requires a new-permit application, the submission of fees and documentation, and possibly a Land Use Compatibility statement. DEQ will review the material and develop a permit with site-specific conditions. Tier 3 permits are subject to a 30-day public comment period. The cost of an individual permit will vary based on the size and complexity of the graywater reuse and disposal system.

What can I do to prepare for a graywater reuse and disposal system permit?

The rules require all graywater reuse and disposal systems to be connected to a permitted sanitary sewer system. This can be either a municipal sewer system or a permitted onsite (septic) system. The rules also require the owner or operator of the system to maintain a written design of the system. Property owners can decide how they plan to use graywater and develop a system design plan, which must include the following information, at a minimum:

- Location of the system
- Intended use or uses of the graywater
- Design flow of the graywater reuse and disposal system
- Fixtures that are the source of graywater
- Design of the distribution and reuse system
- Description of any graywater treatment used
- Name and contact information for the system designer

Tier 2 and Tier 3 systems producing more than 300 gallons per day for irrigation must also include information on the irrigation system design.

Property owners can also prepare for future graywater use by installing plumbing that separates graywater flow and complies with local and state plumbing code.

For more information

DEQ posts updates on graywater permits and Oregon's graywater program development on its graywater website:

<http://www.oregon.gov/deq/wq/programs/Pages/Water-Reuse-Graywater.aspx>.



Graywater irrigation system.

For more information, please contact:

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Alternative formats

Documents can be provided upon request in an alternate format for individuals with disabilities or in a language other than English for people with limited English skills. To request a document in another format or language, call DEQ in Portland at 503-229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696; or email deqinfo@deq.state.or.us.