

Water Conservation Using Greywater

Fact Sheet
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Washington State Department of
Health
Wastewater Management Section

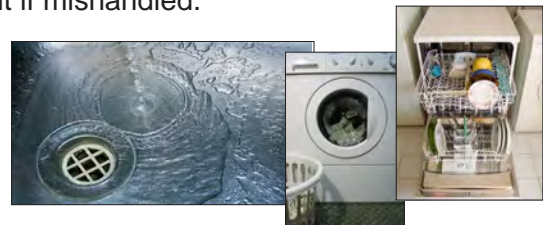
Why conserve water? Conserving our water resources is important in times of normal rainfall, but even more so during periods of extended drought. Our ground water and surface water supplies can be emptied faster than they can be refilled with rain and snowmelt. By using water wisely now, you help to ensure that there will be enough water for everyone in the future.

If handled carefully, greywater can be used in place of fresh water in subsurface irrigation systems. However, using less water in the first place is cheaper, easier, and safer than installing a greywater system for irrigating your landscape, and it's something everyone can do!

What is greywater?

Greywater is wastewater from bathtubs, showers, bathroom sinks, washing machines, dishwashers and kitchen sinks - any source in your home other than toilets.

It is important to understand that greywater can contain harmful bacteria, viruses, and chemicals that pose a risk to public health and the environment if mishandled.



What's harmful about greywater? Greywater contains bacteria and other substances that can be public health risks if not properly handled. Some characteristics from different sources are:*

Clothes Washer:	Bacteria, bleach, foam, high pH, hot water, nitrates, oil and grease, salts, soaps, suspended solids.
Bathroom:	Bacteria, hair, hot water, odor, oil and grease, soaps, suspended solids.
Kitchen:	Bacteria, food particles, hot water, odor, oil and grease, soaps, high pH and sodium (from dishwasher), suspended solids.

*Adapted from *Small Flows* quarterly newsletter, Winter 2001

Did you know.....?

- Greywater makes up the largest portion of wastewater from your home...up to 40 gallons per person each day.
- Greywater systems are usually cheaper and easier to install during construction of a new home. Re-plumbing an existing building can be expensive and may be impractical.
- Subsurface irrigation with greywater offers a way to conserve water. However, greywater may not meet all of your landscape irrigation needs all year round.
- Greywater systems must irrigate below the ground surface by using a drainfield or a



suitable drip irrigation system to reduce health risks.

- Some chemicals in greywater can be harmful to plants. For example, liquid detergents generally have less sodium than powdered detergents and are recommended when irrigating with greywater.

For more information about suitable plants for greywater, please see the Recommended Standards and Guidance document *Water Conserving On-site Wastewater Treatment Systems*, found at www.doh.wa.gov/ehp/ts/WWW/Water_Conservation_8-29-07.pdf.

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How can I conserve water using greywater?

- Greywater collected from sinks, tubs, showers, and clothes washing can be used in place of fresh water to irrigate trees, shrubs, and flowers.
- Sub-surface irrigation can place this water source where your landscape plants need it... at the root zone.

What are the benefits of using greywater?

- Use less fresh water.
- Save money.

Disadvantages & cautions:

- Handle greywater carefully because it can contain bacteria and viruses.
- Don't use greywater to irrigate food root crops such as carrots or potatoes, etc. Fruit trees are OK if irrigated below the surface at the roots.
- Don't water lawns with greywater using a sprinkler.
- Don't use greywater to wash patios, walkways, or driveways.
- Greywater may not meet all of your landscape irrigation needs all year round. Some times of the year, your plants may need more water than can be supplied by your greywater irrigation. Other times of the year, your home may generate more greywater than your plants can use.
- Grease and oils can cause problems with distribution piping, so be careful to manage what goes down the drain!
- Greywater irrigation must not be used above ground.
- If separating greywater from black water is a problem, consider using a Subsurface Drip System (a type of septic treatment system).

What else can I do to conserve water?

- Install low-flow water fixtures and water efficient appliances.
- Repair leaky plumbing fixtures.
- Take shorter showers.
- Choose landscaping that does not require large amounts of water.
- Water landscapes before 10 AM or after 7 PM.

For your safety and the safety of others

DO NOT drink greywater or apply it on anything that may be eaten, including root crops like potatoes or carrots.

DO NOT water lawns with greywater using a sprinkler, or use greywater to wash patios, walkways or driveways.

Where can I find more information?

Water conservation information is available at the Washington State Department of Health, Office of Drinking Water "Drought" website at: www.doh.wa.gov/ehp/dw/drought/droughthome.htm

How do I safely install and use a greywater irrigation system?



New Rules are on the way—until then use our Recommended Standards and Guidance document, *Water Conserving On-site Wastewater Treatment Systems*, found at:

www.doh.wa.gov/ehp/ts/WW/Water_Conservation_8-29-07.pdf

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