February 4, 2026 • 11 a.m.–12:30 p.m.

Hybrid Meeting • MS Teams or Public Works Headquarters Building Confluence Room

Water Advisory Group

Lori Faha, Environmental Resources Manager • Dan Denning, Water Conservation Program Manager • Elisabeth O'Keefe, Stormwater Program Manager • Joe McClay, Building Official • Jerry Waugh, Building Safety Division • Aubrie Koenig, Facilitator

Purpose & Agenda

Discuss graywater opportunities, considerations, and potential scope of a City evaluation to address Council's graywater goal.

1. Welcome & Introductions
2. Graywater
   - Overview
   - Conservation Potential
   - Considerations
3. Discussion & Feedback
4. Summary & Closing
5. I Love Bend Water Cameos

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January Meeting Reflections

Conservation Updates:

- Provided general updates – installing five weather stations to improve data
- Described process to analyze and evaluate conservation measures
- Shared successes, lessons learned from ROW codes/standards update (contractor coordination, process improvements)
- Previewed next steps to update model, refine, adopt, and implement new data-informed measures

Campaign Feedback:

- Audiences: businesses and industrial customers, future water nerds
- Messaging: reliable, resilient (dual system)
- Partners: schools, parks, county restaurants, concerts
- Contests: great taste/quality
- Simple, repeatable statements: I heart Bend water, 100 years of Bend water
- Schwag: stickers, water bottles

Stay tuned at the end of the meeting…

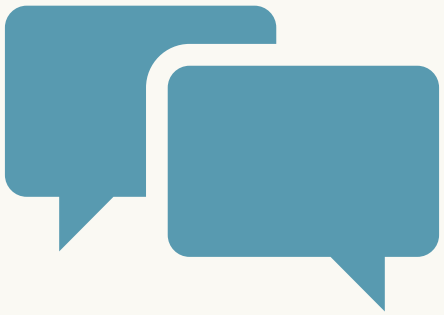
Quick video clips – fill in one of these blanks:

- *"I love Bend Water because…"*
- *"I love Bend Water so I…."*

Graywater Discussion

Jerry Waugh and Joe McClay, City of Bend, Building Safety Division

WAG Question Preview



- *What do you see as the value of graywater compared to other conservation efforts?*
- *What is your experience with graywater in other communities?*
- *What have you seen as key challenges, lessons learned, best practices?*

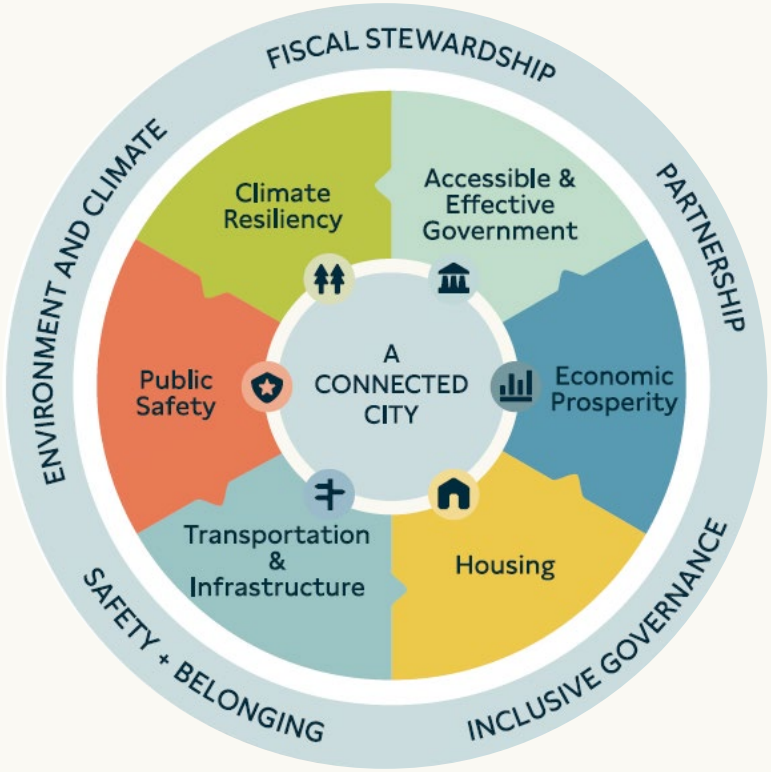
City Council Goal

CLIMATE RESILIENCY

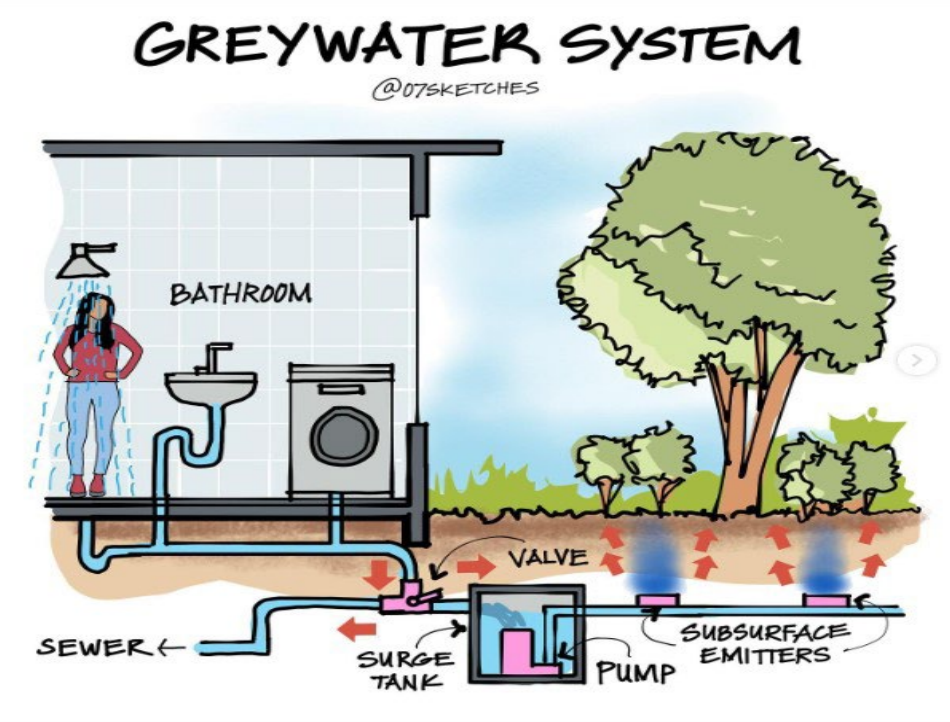
Promote a sustainable and resilient community by advancing climate action- recognizing affordability and availability of clean energy, protecting natural resources, and building wildfire resiliency.

Protect our watershed through water conservation and stewardship, reducing per capita water use by the end of the biennium

- Update the city's water rate structure to further incentivize water conservation
- Analyze and expand existing conservation measures to achieve per capita water use of 165 gallons per day by the end of the biennium and **explore use of graywater**
- Collaborate with Tribal partners on water resources in the Deschutes Basin
- Continue participation with the Deschutes Basin Water Collaborative and complete the Water Management Plan



What is Graywater?



Graywater includes wastewater discharged from showers and bathtubs, bathroom sinks, and laundry machines.

Graywater DOES NOT include toilet discharge, garbage wastes (kitchen sinks with garbage disposal units) or wastewater contaminated by soiled diapers.

If appropriately collected and handled, graywater can be safely reused for flushing toilets and urinals as well as irrigating certain trees and plants. Reuse of graywater reduces the demand on other sources of water, such as potable water, surface water and groundwater.

Oregon Recognizes Three Types of Graywater

Type 1: Untreated graywater or graywater that 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 that 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 that is treated to Type 2 graywater 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.

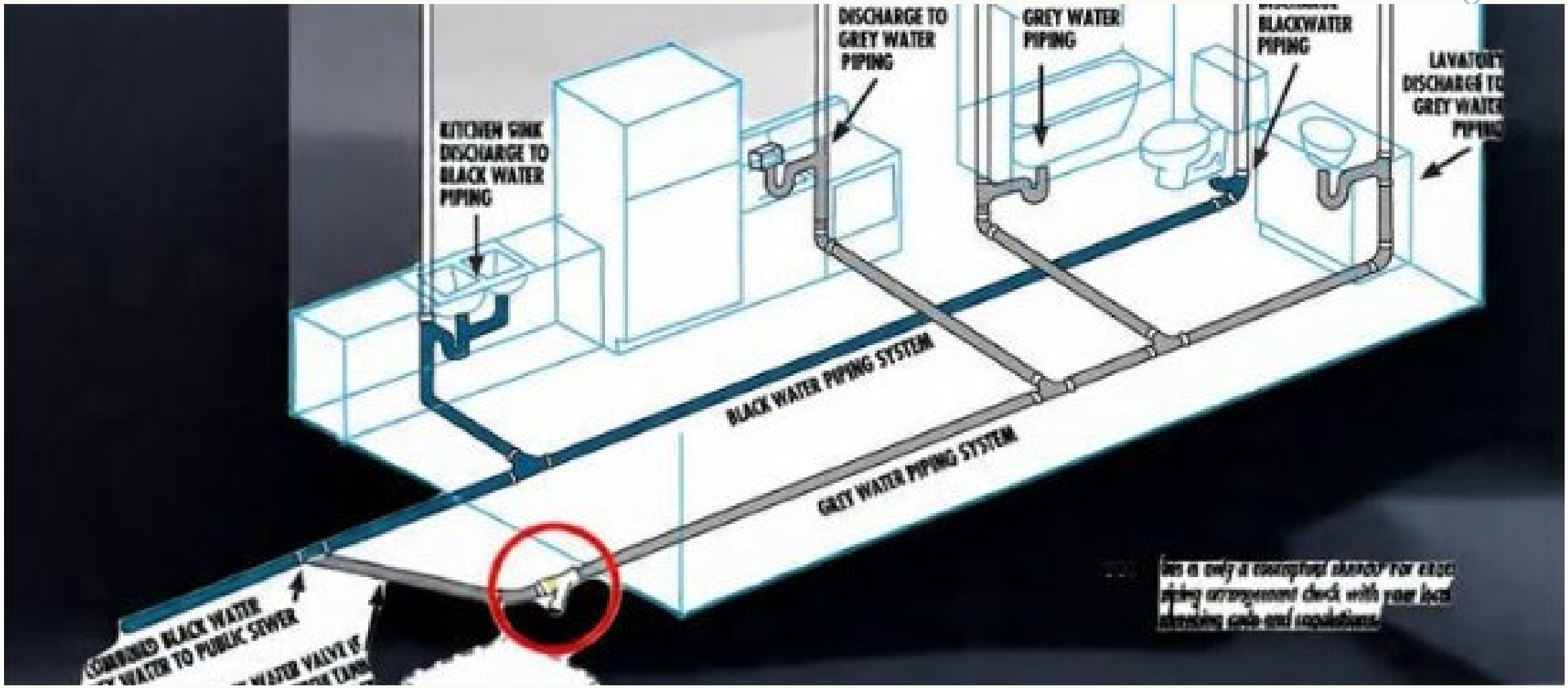
Graywater Regulations and other information

DEQ regulates graywater reuse and disposal systems under Oregon Administrative Rules Chapter 340, Division 53, which establishes a policy that encourages graywater reuse while protecting public health safety and welfare, public water supplies and waters of the state. These rules are based on recommendations from DEQ's Graywater Advisory Committee.

The rules define three types of graywater (Type 1, Type 2 and Type 3), based on level of treatment, and identify specific beneficial purposes, such as landscape irrigation, for each type of graywater. The rules also establish treatment and monitoring requirements, setbacks, access and exposure controls, and site management practices necessary to protect public health and the environment.

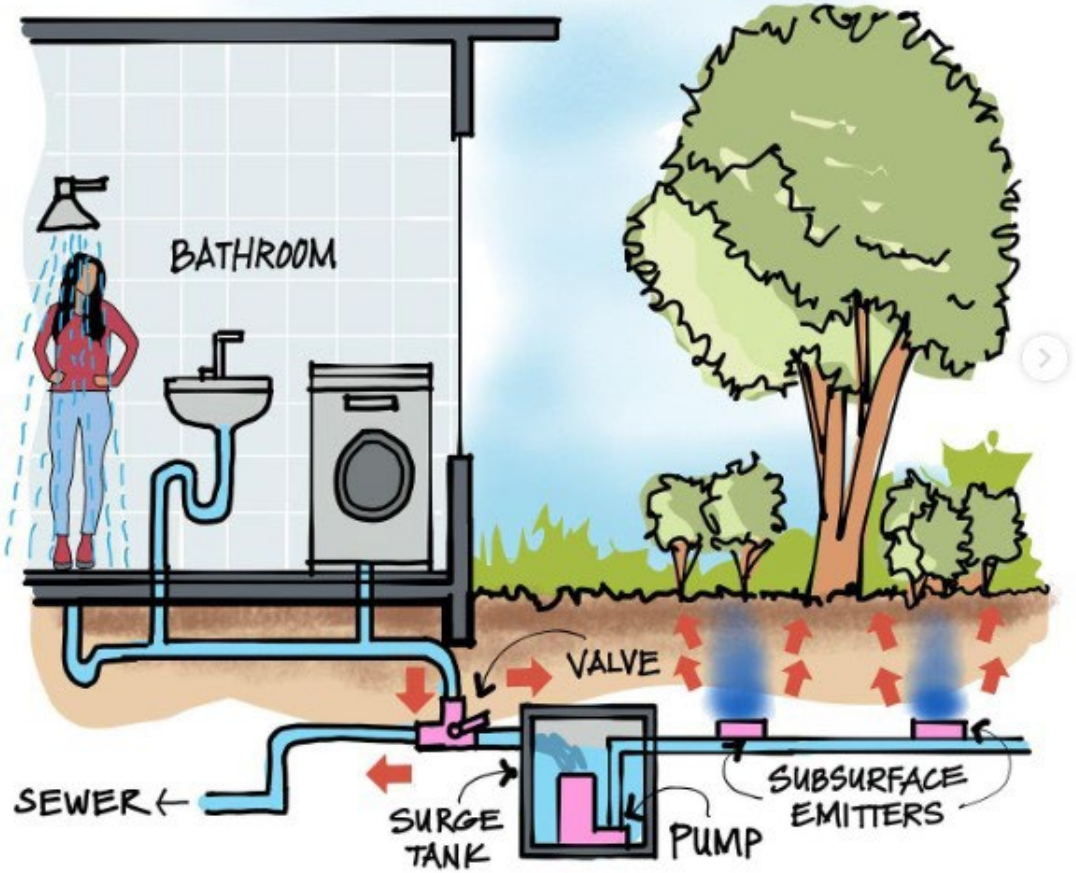
OAR 340-053-0050 to 340-053-00100 prescribes requirements for permitting graywater reuse and disposal systems.

Typical Graywater Type 1 System

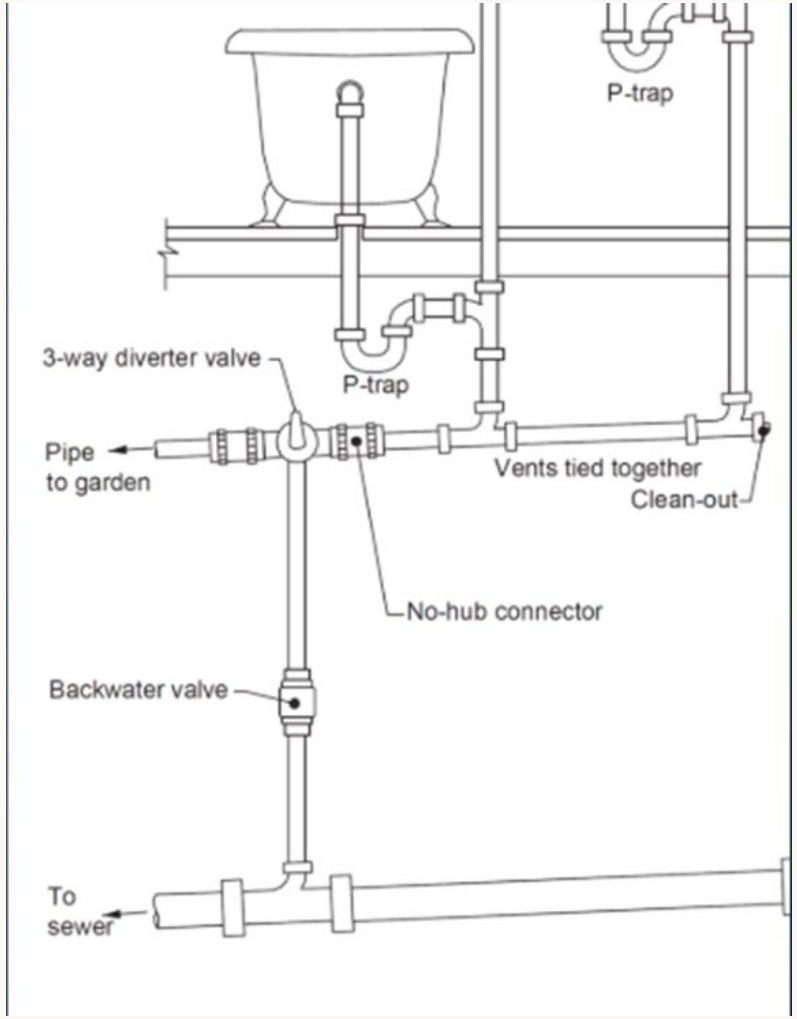


GREYWATER SYSTEM

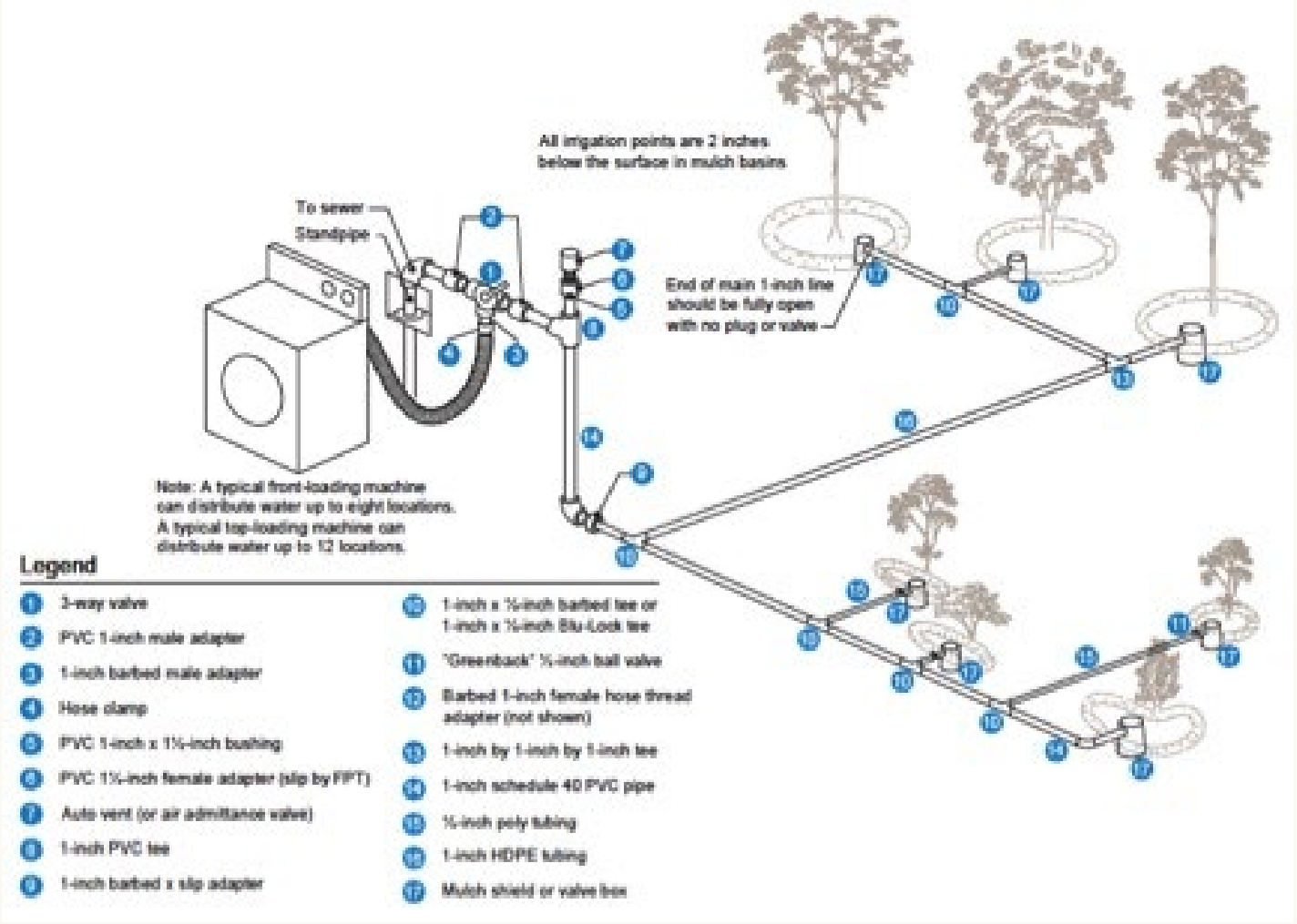
@07SKETCHES



Single Bathroom Graywater System

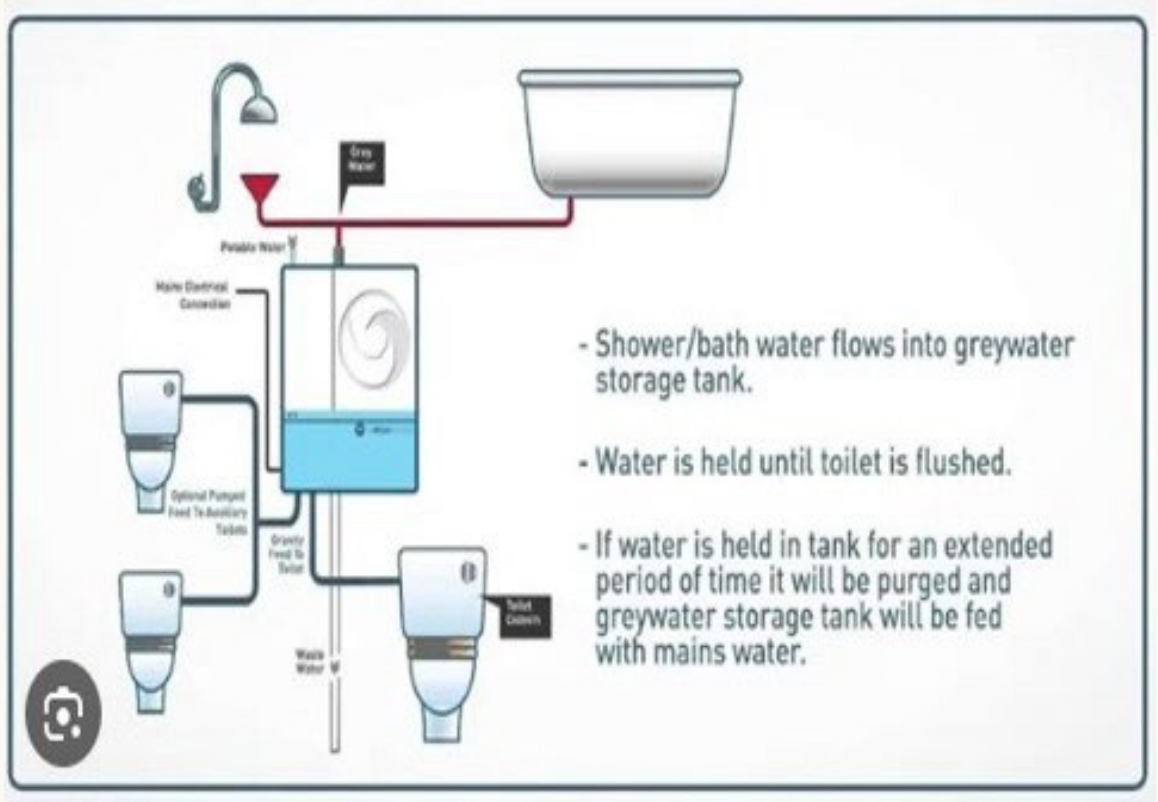


Standalone Washing Machine Graywater System



Statewide Alternate Method (SAM)

State of Oregon Building Codes Division has a **(SAM) Statewide Alternate Method** dated October 2017 No.08-02 and 08-04, it covers Gray Water Reuse Systems for Commercial and Residential Installations



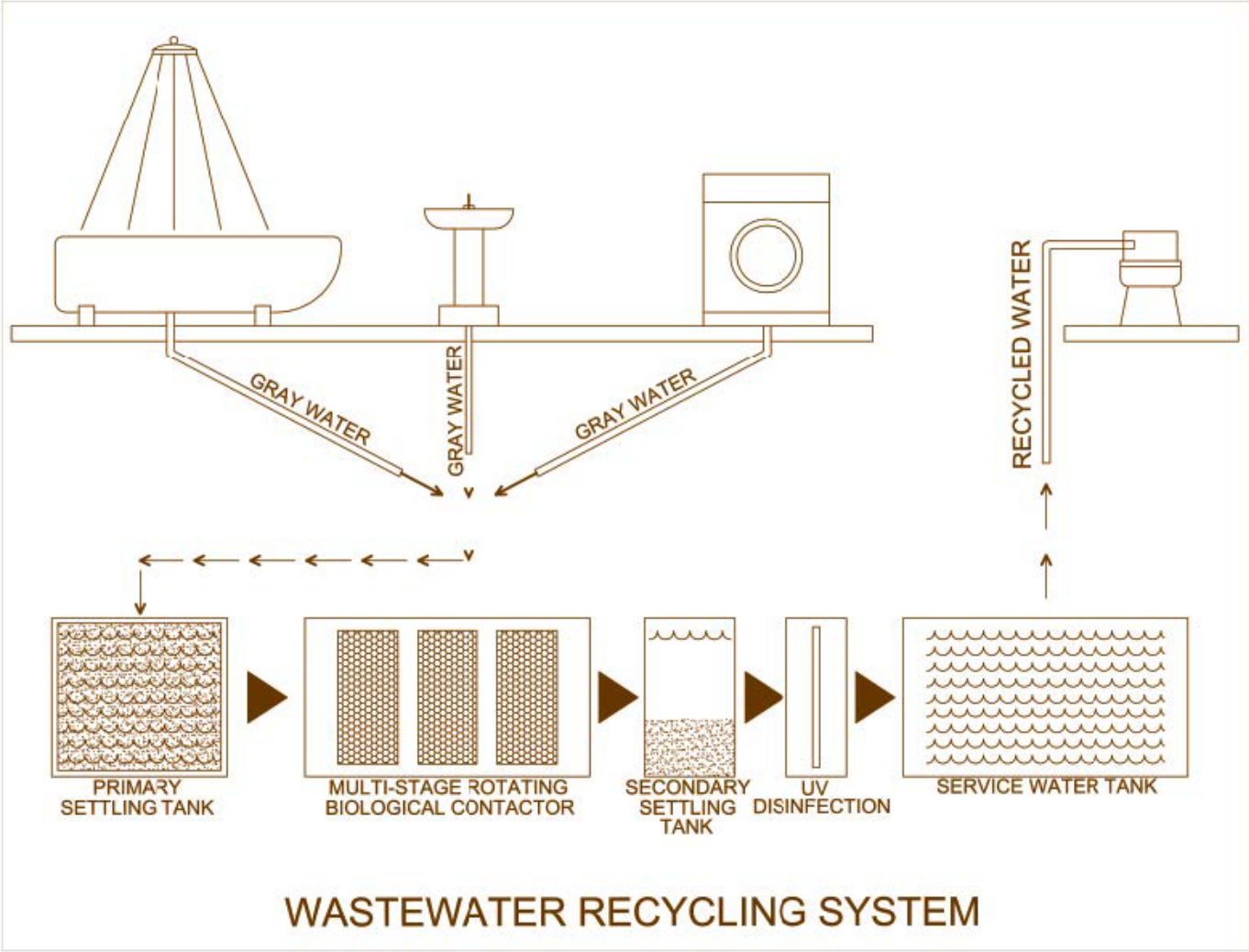
Things to Consider

The average person in the United States uses approximately 50 gallons of potable water a day for indoor use. Installing low-volume plumbing fixtures and a water conservation system can reduce potable water consumption by almost one-third.

AVERAGE DOMESTIC	WATER USE
Shower and bath	35%
Toilet Flushing	30%
Laundry	20%
Kitchen and drinking	10%
General cleaning	5%

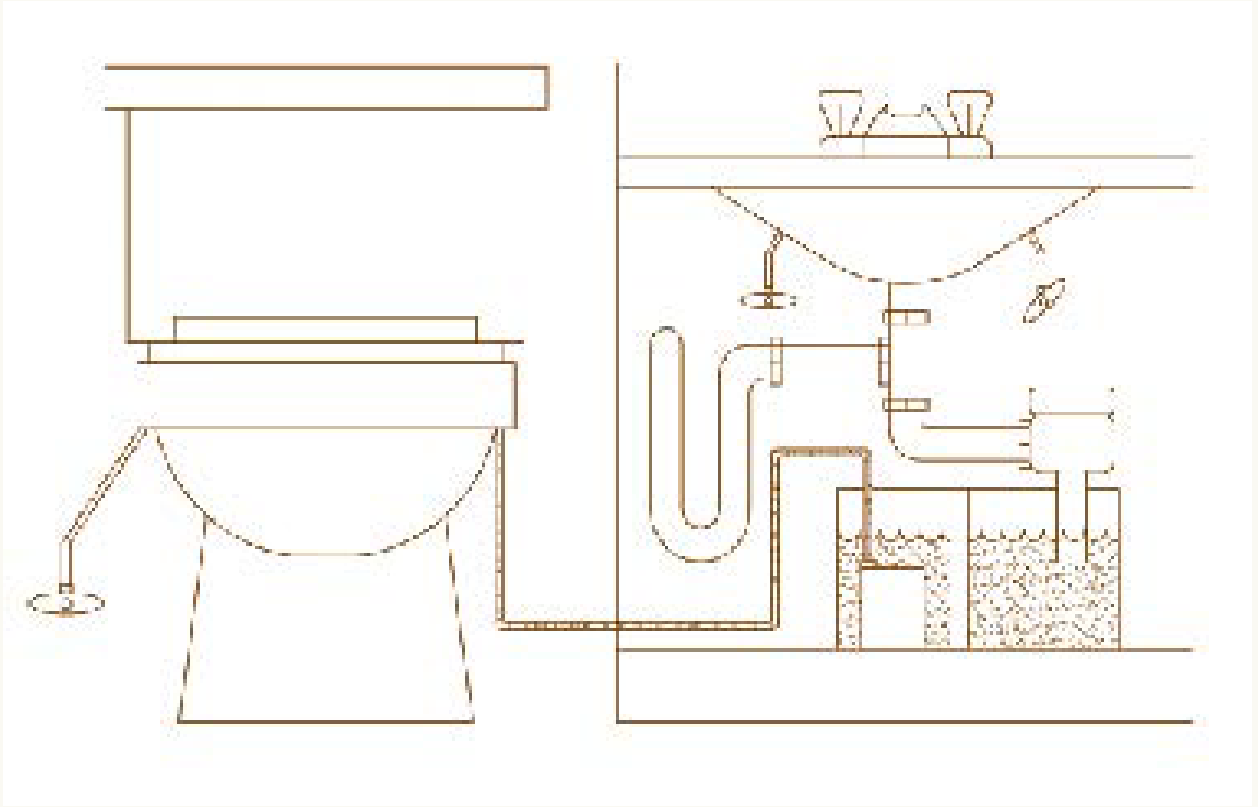
Graywater Recycling System

This figure shows a basic graywater reuse system. This example shows how wastewater from the shower, bathtub, washing machine, and bathroom sink is collected and drained into a holding tank, where it is filtered and disinfected. The treated water is then pumped to supply the toilets with water for flushing.



Sizing Your System

Graywater systems range in size from small ones that supply water to a single toilet within a home, to large ones that supply water to all the toilets in a commercial building. The figure shows a typical residential wastewater reuse system. It is designed to use wastewater from the bathroom sink to supply flush water for a single toilet. Many of these single toilet systems are available as pre-designed units or kits that a homeowner can install after getting a permit.



Additional Resources:

- Graywater reuse and disposal systems
- Rules on Graywater Reuse and Disposal Systems
- Statewide Alternate Method (SAM)
- BCD.Oregon.gov

Graywater Examples in Bend

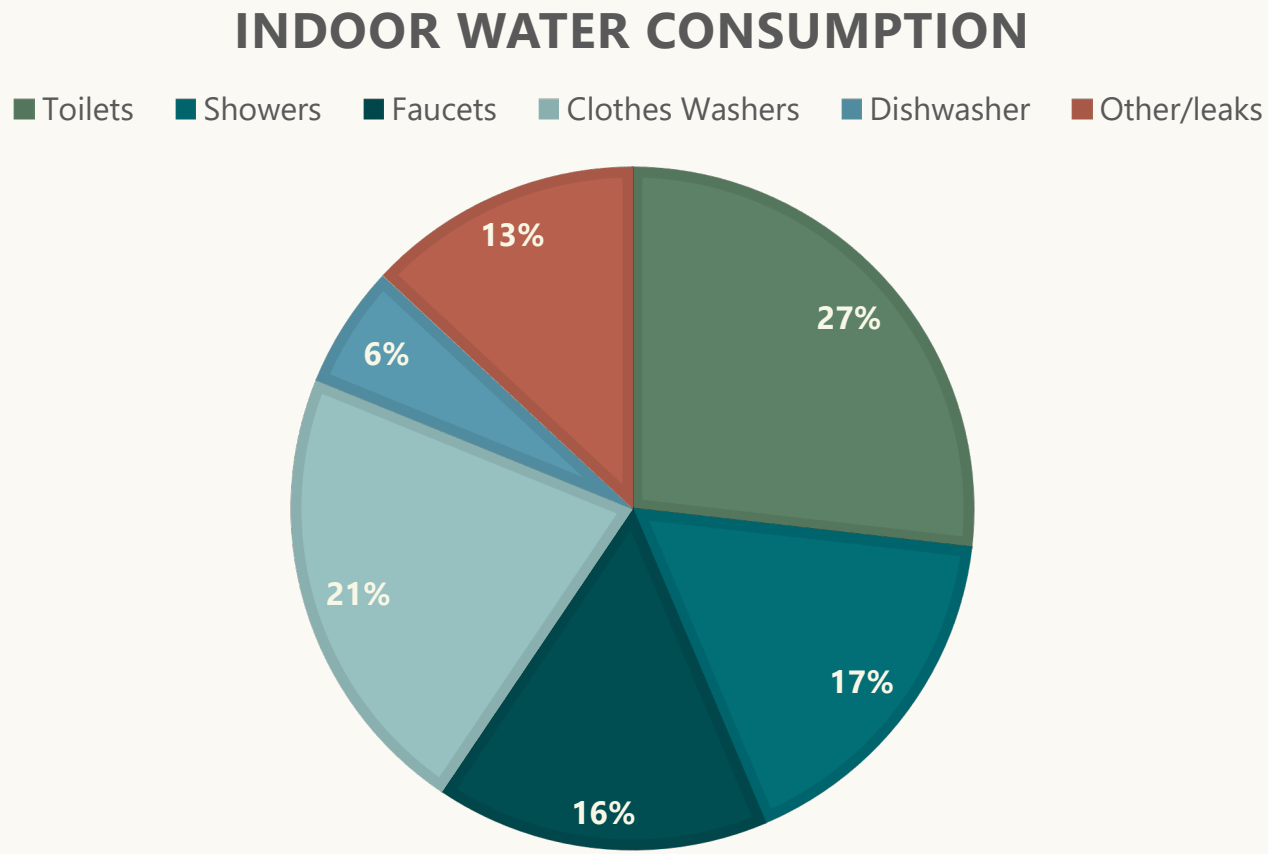
Desert Rain

- Primary tank for trapping solids and oils
- Subsurface constructed wetland for secondary treatment of suspended solids and organic material
- Storage for treated graywater
- Irrigation system for treated graywater reuse

Water conservation potential

Avg indoor consumption for SFR account 99.4 gpd

Avg indoor consumption for MFR account 175,711 gpd



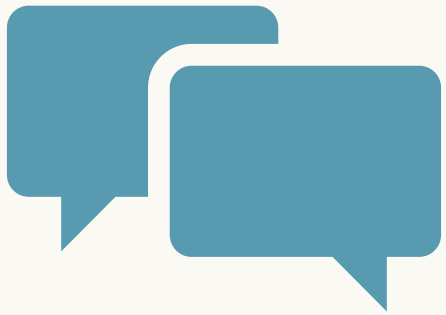
- 73 gpd of potential graywater available
- 120 days of potential use (April-Oct)
- 8,760 gallons available per season
- Avg. SFR consumption outdoors 65,400 season
- 128,270 gpd of potential graywater available
- 365 days of potential use (indoor and outdoor)

Graywater considerations

- **Customer types**
  - SFR individual systems (i.e. washer conversion), MFR and Commercial potential for larger demand offsets through shared collection, treatment and reuse possibilities
- **Seasonality**
  - Demand offsets to irrigation needs are realized during irrigation season
  - Maintenance of system — 50% of SFR homes currently have a sprinkler system operating below standard efficiency levels
  - Limitations to distribution method to landscape
- **Relationship to Stormwater Facilities**
  - Pro: Ideally managed together — when done correctly stormwater infiltration can help manage accumulated salts from cleaners and long-term build up in soils
  - Con: Insufficient space for infiltration or geology not conducive (ex: steep slopes, low infiltrating soils)
  - Con: Could reduce capacity in infiltration facilities
  - ***Graywater must infiltrate (no overflow)

Discussion & Feedback

WAG Focus Questions



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WAG Video Cameos

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- *"I love Bend Water so I…."*

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Look ahead

March 4, 2026: Stormwater and Water Conservation Annual Reporting Highlights and Standards Updates
11 a.m.-12:30 p.m. Hybrid Meeting (Headquarters Building or MS Teams)

April 1, 2026: Drainage and Density Implementation
11 a.m.-12:30 p.m. Hybrid Meeting (Headquarters Building or MS Teams)

Thank you!

Language Assistance Services & Accommodation Information for People with Disabilities

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