

Considerations for Installing a Composting Toilet System



State of Oregon
Department of
Environmental
Quality

Water Quality Onsite Program

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Composting toilet systems can be a great option for homeowners and business owners, who want to reduce waste, save water and ease the burden on their septic systems. The primary components of a composting toilet system are the toilet fixture and the compost processor.

Composting toilets have some benefits over conventional systems. They can reduce the amount of nitrogen, phosphorous, and potassium entering domestic wastewater by 90 percent, 50 percent, and 60 percent, respectively, reducing the leading causes of nutrient pollution in waterways and groundwater. Composting toilets reduce toilet water usage by 100 percent, and overall bathroom water usage by 25 percent.

The town of Falmouth, Massachusetts undertook an 'eco-toilet' incentive program and found the average cost of the retrofit per toilet was \$5,435 in 2014.

Frequently Asked Questions:

Are permits required?

A permit is required to install your composting toilet to ensure that systems are properly sited and constructed to protect human health and the environment.

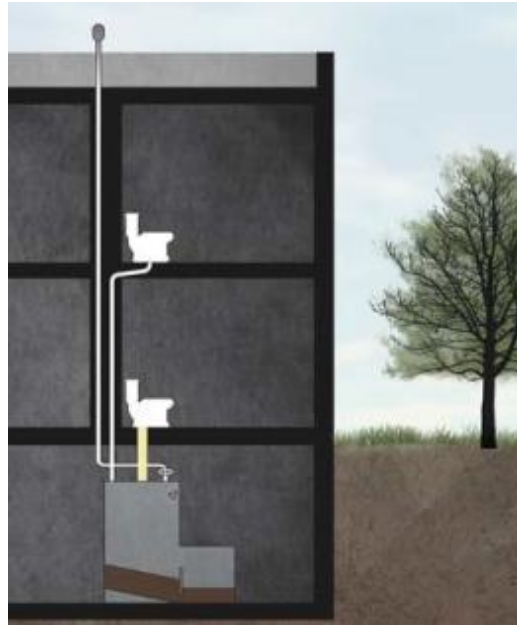
Residential composting toilets must meet NSF 41 standard, a standard for composting toilets created by NSF International. The independent organization certifies that consumer products meet standard requirements.

Whom do I call to get started?

In Oregon, [your local building department](#) issues plumbing, mechanical and electrical permits needed for composting toilets. The [Oregon Building Codes Division](#) issues permits directly in some cities and counties.

What permit do I need?

A **plumbing permit** is required to install a composting toilet system in a home. Venting fans would need an electrical permit and any modifications to the home may require other permits. Permits are generally valid for 180 days (about six months) and may be renewed, if needed.



*Ventilation, toilet fixture and compost processor.
Photo credit: Courtesy of the International
Living Future Institute*

If you have questions about permits for larger or more complex systems, contact the plumbing inspector for your jurisdiction (state, county or city).

What are the permitting fees?

Contact your local building department to obtain specific fee information for permitting a composting toilet. Depending on the system, there may be other building permits required (mechanical, electrical, etc).

How often do I clean composting toilets?

Like a flush toilet, the toilet bowl can be cleaned as often as the user prefers. Cleaning frequency of the composting processor depends on many factors. Smaller, self-contained systems (within the bathroom) require more frequent maintenance.

Systems with a processor vault below or outside of the restroom may be automated or require occasional mixing. Often there is a fan inside the unit to vent odors outside. There are different excess liquid management strategies depending on manufacturer; such as evaporation, or pumping excess liquid to irrigate the top of the solids pile.

What do I do with the finished material?

Oregon Administrative Rule 918-770-0080 specify that the material removed from a composting toilet be buried under 12 inches of soil.

What if I move?

There may be situations where contents that have not yet been composted need to be removed, like when a home is being sold and it's a condition of the sale. A DEQ-licensed sewage disposal service may remove the contents and take them to an approved facility that accepts septage, per septic system rules.

What if my building is within a sewer district?

Your building will still need a sewer connection.

What if I don't have a septic system yet?

Composting toilets don't eliminate all water generated in a home and therefore you will need to be hooked up to an approved wastewater treatment system. Flush toilets generate black water and by using a composting toilet, you will eliminate this type of water from your septic system. This is called a split system with human waste and graywater being separated. You still need to connect plumbing fixtures to an approved septic system. Because you are eliminating black water and using less water, the drainfield portion of a septic system may be approved for a smaller capacity, as much as two-thirds the size.

What if I already have a septic system?

You still need to maintain your septic system by pumping the septic tank when needed; we have a [fact sheet](#) for that, too. You may notice with a composting toilet that a septic system may not need to be pumped as often, provided there is no garbage disposal and sinks are not used as a garbage can.

What permits do I need for a graywater reuse and disposal system?

Composting toilets can be used in combination with a graywater reuse system during dry months and a septic system during wet months. A graywater reuse system is for beneficial reuse, such as watering plants during the summer. Both systems require a DEQ permit. The graywater reuse system would be offline in wet weather months or when there are discharges that could be a public nuisance, such as dirty diaper laundry discharges.

For more information

More information about composting toilets may be found at [Recode's website](#).

<http://www.recodenow.org/composting-toilets-in-oregon/>

For questions about using a composting toilet in conjunction with a proposed or existing septic system, contact your local [onsite program office](#).

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.

Acknowledgments

This fact sheet was developed in collaboration with Molly Winter at [Recode](#) and [Oregon Building Codes Division](#) staff.