



Composting Toilets

This **Advanced Method and Material** was developed jointly by the City of Bellingham Building Department and Sustainable Connections to enhance water conservation efforts by providing a means for the installation of composting toilets.



BENEFITS

Composting toilets can help achieve zero water consumption. When used in combination with wastewater re-utilization in irrigation and other household water reduction techniques, costs can be cut by up to 60%. Additional benefits of composting toilets include:

- ❖ Lower electricity costs (to pump water and sewage)
- ❖ Elimination of infrastructure costs to provide fresh water or collect and treat sewage
- ❖ End state is a valuable fertilizer
- ❖ Contribute up to 3 LEED® points for your project

The average household spends as much as \$500 per year on its water and sewer bill. A four-person household using a traditional 3.5 gallon flush toilet will flush some 70 gallons per day down the toilet (that's an annual volume of over 25,000 gallons per year).

Compared to sewage systems, on-site composting and greywater treatment has less impact on the environment (large effluent releases into watercourses and oceans are avoided, disruption to soils systems through pipeline installation is eliminated and leakage of raw sewage into groundwater through pipe deterioration and breakage is eliminated). In addition, composting toilets help protect Lake Whatcom and ground water from being polluted by pathogens and nutrients while assisting in recycling the nutrients directly back to the plants they came from.

POLICY/CONDITIONS

Composting toilets may be installed when all of the following conditions are met:

- Composting toilets will be allowed to be installed in any habitable building unless prohibited by regulations not enforced by the City of Bellingham.
- Composting toilets must be tested and listed by a nationally recognized testing agency. Tests must conform to NSF/ANSI Standard 41.
- In restrooms accessible to employees or the public a permanent placard must be installed on the wall immediately behind composting toilets. The bottom edge of the placard must be between 35" and 48" above the floor. The placard will advise that a composting toilet is present and provide instructions for its use. Lettering on the placard will be no less than ¼" in height and easily read from an area in front of the toilet.
- When rest rooms are required to be accessible, composting toilets in those rest rooms must also meet all accessibility requirements such as a control locations, seat height, bowl geometry, etc.

SCOPE

All habitable buildings.

DEFINITIONS

Composting toilet: A human waste disposal system that utilizes a waterless or low-flush toilet in conjunction with a tank in which aerobic bacteria break down the waste.

PERMIT REQUIREMENTS

In general, the person installing the composting toilet obtains any required permits. For specific information applicants should contact the **COB Permit Center/Building Services Division** for more information: (360) 778-8300 or permits@cob.org.



Composting Toilets (cont'd)

- When composting toilets are installed in a residence, permanent use and maintenance instructions must be provided to subsequent owners or tenants. The property owner is responsible for providing training to tenants in the proper use and care of composting toilets.
- A statement notifying that the building contains composting toilets must be recorded on the permanent property record at Whatcom County.

RATIONALE

The construction industry, in concert with non-profit and governmental agencies, is looking for methods to reduce the impact of the built environment on public infrastructure. Composting toilets are one step toward that goal while providing a proven track record of safety and cleanliness.

REFERENCES / SOURCES

NSF/ANSI Standard 41
WAC 51-56-0600

FINANCIAL INCENTIVES

City of Bellingham

The City Council has adopted the Voluntary Metering Program (VMP) to help promote water conservation and offer city residents the opportunity to potentially save money on their utility bill. It is available through the Public Works Department to any single family residence inside the City limits. Currently, residential customers are billed a flat rate of \$28.23 a month for water service, regardless of the amount of water used.



ADDITIONAL RESOURCES

WaterSense

A comprehensive website on how simple and smart it can be to save water.
www.epa.gov/watersense/pp/het.htm



Build your own Rainbarrel

Collecting rainwater from your roof in rain barrels is a great way to conserve water, save money on your water bill, and reduce stormwater runoff.

www.cob.org/documents/pw/environment/water-conservation/how-to-build-a-rainbarrel.pdf



H2Ouse

A virtual encyclopedia of water conservation information for your home. Take the tour to investigate your water saving opportunities in each area of your home.

www.h2ouse.org

Washington Department of Health

A full report on specific composting toilet systems and allowable uses:

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

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