



**Top:** Lime Kiln Point State Park, on Washington's San Juan Island, is one of the many state parks around the country that successfully uses composting toilet systems.

**Right:** At the University of British Columbia's C.K. Choi Building, dry fixtures save more than 96,000 gallons of water each year.

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## GUEST COLUMN: **OUTDOOR RESTROOMS**

# Compost Happens

Alex Linkow

Just about everybody understands composting on a basic level. Most people have at least seen a backyard bin, and anyone who's ever set foot in the woods has witnessed composting in action. The composting process, during which organic matter is broken down, is nature's way of recycling. And in the process, waste volume is greatly reduced, and nutrients are returned to the soil.

What many people don't realize is that the same concept can be applied to human waste. In our hunter-gatherer days, humans avoided defecating in their drinking water like every other land mammal. Human waste was scattered, and it composted naturally. But when humans started living in large communities, things changed. Eventually, flush systems became the gold standard. Now, Americans alone are flushing an average of 4.8 billion gallons of water down the toilet every day and polluting

aquatic ecosystems in the process. But there is a simple solution.

Composting toilet systems are an environmentally sound, practical alternative to flush, vault and portable facilities. There's no water wasted for flushing, pollution caused by sewers and septic systems is reduced, and composting toilet systems allow you to put nutrients back where they belong, in the soil, not in the water.

### Myth vs. reality

Those that have heard of composting toilets are likely familiar with some of the myths about them. If you think these systems are only appropriate for remote locations, can't handle heavy use, or smell like an outhouse, you have been misinformed.

Composting toilet systems are certainly useful in remote locations. They have been used successfully for years, in back-country locations such as the huts of the Appalachian Mountain Club, the Alaskan wilderness and in the Grand Canyon. But they have also been used with success in highly populated cities such as New York City; Boston; Vancouver; Winnipeg; Grand Rapids, Mich.; and Ann Arbor, Mich. For example, a composting toilet recently was installed to serve visitors at Manhattan's "Ballfields" at Battery Park City. And in Vancouver, even

though sewer lines were readily accessible, the University of British Columbia installed no-flush composting toilet systems to save water, reduce waste, and provide learning opportunities for students and the wider community.

Facilities such as those in New York and Vancouver need to be able to handle steady use. So don't let anyone tell you that these systems are only appropriate for part-time vacation homes or low-traffic back-country outposts. In fact, some modern composters can handle upward of 150 uses per day or more than 50,000 uses per year. At Wawayanda State Park in New Jersey, the bathhouse, using composting toilet systems exclusively, can handle nearly 500,000 uses per year.

Of course no sensible park director wants a half-million visitors complaining about smelly restrooms, and one of the main reasons that people hesitate when considering composting toilets is the idea of odor. But the truth of the matter is that a properly designed composting toilet system incorporates a ventilation system that keeps odorous air circulating through the composter and out of the building, not through the restrooms. Fans are designed to run continuously, and as long as the fans are running, there is no odor in the restroom. That's the reality.

### Who should have a composting toilet system?

OK, you think, these things are more versatile than I thought, but how do I know if they are right for me?

Well, let's take a look at some of the reasons park and recreation facility personnel have chosen composting toilet systems over other human-waste disposal options. Maybe water conservation is a primary concern of yours. Whether you're an environmentalist or just a pragmatist, water conservation is likely on your radar, and flushless composting toilet systems use virtually no water. Composting toilets are also a good fit in areas with limited space, remote and environmentally sensitive locations, areas with poor soils that make septic systems difficult, and when regulations call for large septic mounds that you want to avoid creating.

Dr. Randall Van Dragt—biology professor and preserve director at the Bunker Interpretive Center within Calvin College's 100-acre Ecosystem Preserve in Grand Rapids, which has composting toilets in its classroom building—articulates another good reason to use composting toilet systems.

"We wanted to get people thinking more deliberately about how they interface with natural systems," he says. And of course, composted end products make great fertilizer and soil amendments, although regulations for end-product usage vary. The composting process can reduce solid waste more than 90 percent, and the small amount that remains can either be used on-site or hauled away. Liquid end product is stored and then used as fertilizer or transported off-site.

### Costs and savings

The cost of composting toilet systems varies from case to case. Depending on the situation, they can be less expensive than conventional systems. One major advantage of waterless composting

toilet systems is that plumbing costs are minimized because you never have to call the plumber to fix a clogged or leaky toilet. And, of course, there is no overflowing. You also save on water and sewer bills, and although the money saved may not be significant, the water savings certainly are. Even a low-flow flush toilet uses about 1.6 gallons of water per flush. Compare that to a flushless composting toilet system that uses only a miniscule amount to keep the compost pile moist, and you can see the difference.

Composting toilets are here to stay. Parks, golf courses, camps, ski areas, schools and others have made the decision to go with these systems for all the right reasons. Flush toilets, portable toilets, vaults, sewers and septic systems all create waste and add to water pollution, and in this age of water shortages and degraded water supplies, we cannot afford to turn a blind eye. Composting toilet systems prevent waste and water pollution and offer a simple, sustainable alternative. So don't compound the problem; be part of the solution.

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**Smaller composting units can be ideal for trailhead installations.**