

ENVIRONMENT

Green toilet wins city approval

Composting commode is first to gain official stamp.

By Asher Price
AMERICAN-STATESMAN STAFF
Thursday, June 18, 2009



Cody Duty

AMERICAN-STATESMAN

Who needs water when saw dust will do? Carpenter David Bailey is a proponent of the composting toilet, which relies on bacteria to transform human waste into soil.

It took more than four years of negotiations and construction, but this month an Austin Water Utility inspector gave final clearance to a glorified outhouse that is on the vanguard of down-and-dirty environmentalism.

Known as a composting toilet, the East Austin commode relies on the alchemy wrought by bacteria to transform human waste into a rich trove of soil. Specialists in so-called humanure have hailed the approval of the toilet as a watershed moment for common-sense environmentalism.

Users flush not with water but with a scoop of sawdust from a nearby bucket, saving the drinking-water-quality water used by conventional toilets, not to mention the energy and money required to pump and clean the wastewater.

"It's the ecologically sound thing to do," said David Bailey, 32, an itinerant carpenter and puppeteer who spearheaded the project. "Rather than using purified drinking water for a waste stream, we're using naturally occurring, ambient bacteria to create soil, one of Earth's least renewable resources. You have more water to drink and bathe in, and you end up with topsoil that's every gardener's dream."

The technology, simple as it is, is unlikely to become widespread. City code bars any property within 100 feet of a sewer line from having a composting toilet. There's also the "ick" factor. And despite issuing its first such permit, the city does not sound especially keen on composting commodes.

Austin Water Utility spokesman Kevin Buchman said the composting toilet is "not something we're endorsing or even recommend. It's an option for people building homes and trying to do what they believe to be environmentally sound."

The state delegates regulatory power for on-site sewage facilities, which include composting toilets, to local authorities, said Terry Clawson, a spokesman for the Texas Commission on Environmental Quality.

The permitted outhouse sits about 4 feet off the ground on a 9.8-acre former landfill in the Montopolis neighborhood that belongs to the Rhizome Collective, a group that puts in practice off-the-grid sustainability, or living in ways that require little in the way of nonrenewable sources of energy.

There is no water hookup to the screened-in, cottage-like outhouse, which cost about \$3,000 to build

and has a small porch in front and a stall with two commodes inside. Only one functions at a time, for about a year; once the vault beneath it, which is matted with straw, is full, the vault and commode will be sealed for a year. Then the contents are usable as compost, Bailey said.

While one commode is sealed, the other will be used.

Mismanaged sewage and bad sanitation have been blamed for outbreaks of a variety of diseases, among them cholera. But heat created by bacteria in the vault destroys pathogens and coliforms, Bailey says, making the soil "totally benign, environmentally speaking."

The airy outhouse sports views of a pasture of cacti and smells mostly of sawdust. A small fan, powered by a solar panel affixed to the outhouse, keeps fumes moving through a PVC exhaust chimney. A hand-sanitizer dispenser sits beside the screen door. In keeping with the sympathies and orientation of the Rhizome Collective, the toilet-side books include "Malcom X Speaks," the Marxist sociological text "Society of the Spectacle" and the prison novel "Iron City."

The permitting and final approval for the outhouse took four years, but "it's a testament to the openness of the city to allow us to build it," said Bailey, who says he has built more than a dozen composting toilets in Texas, the Northeast and overseas.

At least a handful of composting toilets exist in Austin covertly, but Bailey said the Rhizome Collective wanted to win city recognition for the project to persuade officials to broaden the ways residents can cut their water use. On average, toilets use as much as 3 gallons per flush, Buchman said.

As part of the permit application, members of the Rhizome Collective included material from two of the seminal toilet-construction texts, "Lifting the Lid" and the "Humanure Handbook."

"I know of no other cities that officially recognize humanure toilets," said Joseph Jenkins, author of the "Humanure Handbook." "It is little understood by regulatory personnel, and it falls into a gray area — somewhere between what people typically consider 'sanitation' or 'waste treatment' and 'composting.' "

Benefits include the production of a valuable fertilizer, savings in water use, and the prevention of treated effluent, possibly laden with chemicals, from being discharged into waterways, said Lauren Ross, a civil engineer who worked on the project.

"In our current culture, it's not a technology for most people," she said. "But there is a significant part of Austin's community ready to take some radical steps for environmental protection. Composting toilets are no crazier than a lifestyle based on living somewhere in suburbia and commuting 15 miles for a downtown job. That's also not for everyone, but it gets planned for and is accepted as a normal, ordinary way of life."

Flush toilets also contribute to the enormous amounts of energy required to pull water out of the Colorado River, treat it to a drinkable standard, flush it through the sewage system, and treat it again before it can be discharged back into the river. Austin Water Utility uses as much electricity as all other city departments combined, not including Austin Energy, said David Greene, energy and resources engineer with the water utility.

"It's a major energy issue," Greene said.

asherprice@statesman.com; 445-3643

A letter in response to this article

Monday, July 6, 2009

he 'ick' factor

Re: June 18 article "City OKs green toilet in watershed moment for environmentalists."

Thanks for the story on the sawdust or composting toilet. Congratulations to the creative and persistent folks at Rhizome Collective, who spent four years bringing this simple, water- and energy-efficient technology to the city's approval system.

Your writer and copy editors speak for many when they focus on the "ick" factor. All I can assure you (having been part of a community that safely and sensibly composted and used human waste for more than a decade and also having survived several hurricanes) is that the ick factor involved in reliance on the flush toilet when water becomes sufficiently scarce — as it is surely and inexorably becoming — is infinitely higher.

What we treat as a resource can save us. What we treat as poison will kill us.

Nancy Weaver