



MOTHER EARTH NEWS

Human Waste Management: How To Save On Water Bills With Composting Toilets

January/February 1979

<http://www.motherearthnews.com/nature-and-community/human-waste-management-zmaz79jfzsch.aspx>

By the MOTHER EARTH NEWS editors



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Human waste management is a complicated issue for urban and rural areas.

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The [Institute for Local Self-Reliance](#) (ILSR) from Washington, D.C. has been working to help urban and rural residents gain greater control over their lives through the use of low-technology and decentralist tools and concepts. At MOTHER EARTH NEWS we believe that more people (city dwellers and country folk alike) can take control of their home sewage treatment systems.

Sewage disposal is a problem shared by city dwellers and country folks alike. In rural areas, old, broken-down septic tanks (that smell every summer or, worse, contaminate the local drinking water) are the most common hassles. In the city, on the other hand, people are often hit with skyrocketing water bills ... which are "necessary" to support the construction of new sewage lines or multimillion dollar treatment plants. In both urban and rural environments, concerned groups are searching for alternatives to present human waste management issues.

City Solutions: How To Save On Water Bills

Until now, city residents haven't had much choice but to pay those budget-breaking water bills. People in Manassas, Va., for example, tried to protest the construction of a costly sewage treatment plant by not paying the \$500 increase in their annual water bills. In response, the city promptly shut off the taps of the protesters ... forcing them to set up portable toilets in their back yards and to shower in other people's homes.

But other metropolitan areas have come up with more creative ways to attack their human waste management problems. In Chicago, for instance, a group of city planners and college professors has proposed a wide range of small-scale, job-intensive alternatives to a massive waterworks project now under consideration by the city. The original proposal calls for the construction of a \$7.3 billion network of tunnels, underground reservoirs, and sewer-line improvements in 53 separate communities. The price tag for this program will be somewhere in the vicinity of \$1,400 per household ... or over \$100 million from every neighborhood in the region!

The small-scale alternatives, however, call for waste prevention rather than treatment. "Slow the water runoff down to increase percolation," says Northwestern University professor Stanley Hallett, "and start off by closing down and converting our unnecessary streets!" Hallett maintains that up to 20 percent of Chicago's streets can be replaced with water-absorbing gardens and parks, without causing traffic tie-ups. The professor's other ideas include composting vacant city lots, and redesigning rooftops so that each will hold — and slowly release — 2 inches of rainwater. Of course, it would also be very helpful if the Windy City could reduce the amount of sewage that enters the system in the first place ... composting toilets and gray-water filters are two methods that have been suggested as ways to help realize this goal.

Many of Chicago's proposed conservation projects can — advocates say — be incorporated into regular city maintenance work, such as street regrading, rooftop repairs, and existing water conservation programs. And, unlike the massive, expensive construction proposal — which would require sophisticated equipment and trained engineers — small-scale technologies could create new jobs at a very low overall cost.

In suburban Evanston, for example, estimates have shown that the performance anticipated from the huge system of tunnels and reservoirs could be matched by labor-intensive alternatives at half the price! This "pocketbook" approach has won a lot of attention, and both the General Accounting Office and Senator Charles Percy have called for a moratorium on further planning of the original proposal. Senator Percy has also called for a step-up on research and demonstration projects in alternative waste and storm-water treatment technologies.

Small Town Alternatives: Composting Toilets?

While Chicago is exploring the human waste management options open to large metropolitan areas, small towns are finding their own solutions. In West Plains, Mo., for instance, residents launched a grassroots water conservation campaign after the town's sewage lagoon leaked 50 million gallons of contaminants into the Ozark ground water. The leak made more than 800 people ill.

A citizens' organization called "Why Flush?" urges people to cut down on water use and offers fact sheets that compare readily available composting toilets to the traditional flushing design. A typical sewage plant in Missouri, to cite one of the campaign's examples, uses 20,000 gallons of water per person each year. That

same sewage plant costs individual families between \$4,000 and \$6,000 annually. Composting toilets, on the other hand, use no water and would only cost the average home about \$2,000 a year.

The "Why Flush?" campaign also distributes charts that show how much water is normally used in the course of a dozen everyday household activities. The charts also explain how this use could be cut down through simple conservation measures.

Small Town Solutions: Septic Tank Alternatives

In Eugene, Ore., a different type of campaign is underway, which is attempting to convince residents that alternative sewage plans can help preserve the rural character of their neighborhoods.

You see, like hundreds of communities across the country, the River Road/Santa Clara area north of Eugene is feeling the strain of urban sprawl. Although this region still has orchards, farms, and streets without sidewalks, its 27,000 residents make it the most densely populated unincorporated area in Oregon. And, some people claim that local septic tanks — which already number 8,500 — may be contaminating the ground water.

The city of Eugene, however, won't extend its sewer lines unless it can annex the area for tax purposes. The rural residents fear that — besides the expense and loss of independence that would go hand in hand with annexation — the installation of sewer lines would bring a glut of new development.

As a result, local officials are seriously considering a plan that calls for the increased use of composting toilets, stepped-up septic tank maintenance, the installation of recirculating sand filters, and graywater recycling. "People aren't too crazy about composting toilets," admits one of the alternative sewage plan advocates, "but they don't like the idea of annexation, either. This could go either way."

Readers who are interested in a state-of-the-art review of some of the above proposals — and other alternative sewage treatment systems — will find a good deal of information in a book called Low-Cost Technology Options for Sanitation, published by the [International Development Research Centre \(IDRC\)](#).