Rainwater Harvesting for Non-Potable Uses

A new tool for sustainable water resource management in Illinois

Senate Bill 38 Sponsor: Sen. Susan Garrett (D-Highwood)
House Bill 1585 Sponsor: Rep. Carol Sente (D-Lincolnshire)

What is rainwater harvesting?

Rain is the only water delivered to our homes free of charge. However, rather than tap this resource for non-potable uses such as flushing toilets, we channel it off into sewers.

Rainwater harvesting is an ancient practice to collect and use this costless, abundant resource, easing stresses on treated water supplies and reducing stormwater runoff.

What does SB 38/HB 1585 do?

Rainwater harvesting is difficult to employ in Illinois today because there are no minimum standards in the State Plumbing Code for the collection of rainwater for non-potable uses. SB 38/HB 1585 will require the Ill. Dept. of Public Health to establish minimum standards for rainwater harvesting systems by 2012.

SB 38/HB 1585 will:

- Enable and facilitate use of this simple, sustainable practice.
- Create jobs in plumbing and landscaping industries
- Catch Illinois up to other states that have greened their plumbing codes.
- Benefit Illinois companies including Aquascape (St. Charles), Wahaso (Hinsdale), and Prairie Rain Harvester (Farmer City).
- Comply with Illinois' conservation and efficiency obligations under the Great Lakes Compact.
- NOT affect traditional rain barrels**.**

A proven, versatile tool

From the parched South to the drenched Northwest, U.S. cities and states are turning to rainwater harvesting as a tool for stormwater management, pollution prevention, and supply augmentation.

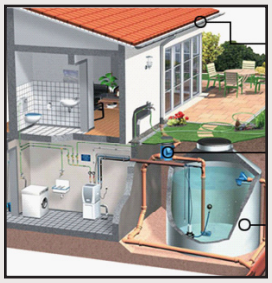
Portland, Ore. Portland's Rainwater Harvesting Code allows rainwater to be used for water closets, urinals, and irrigation.

Texas Since 2001, the State of Texas has exempted the purchase of rainwater harvesting systems from state sales taxes.

Lake County Forest Preserve, Ill. Because there are currently no established standards on rainwater harvesting for non-potables uses in the State Plumbing Code, the Forest Preserve's initial attempt to use that tool in its new Ryerson Woods visitor center was rejected by the local health board. The Forest Preserve was able to secure a variance from the Ill. Dept. of Public Health, but the process was time-consuming and costsly. Now installed, its system reduces wasted drinking water and stormwater runoff.

Rainwater harvesting systems are simple and straightforward:

- A roof catches the rainfall.
- A "first flush" system discards the first wave of water contaminated with roof debris.
- Gutters and downspouts guide the rainwater to the storage unit.
- Cisterns or rain barrels store the water, with pipes to guide away overflow.
- A pump directs water to its ultimate place of use, generally a toilet.



Source: Broken City Lab

Did you know?

Every year, a home with a 1,000 sq. ft. roof can collect over 50,000 gallons of free rain water that currently goes to waste.

The benefits of rainwater harvesting:

- Saves communities and individuals money by saving water.
- Reduces the need for costly water supply or sewer expansion.
- Eases demand on municipal water systems, and reduces strain on aging water infrastructure.
- Reduces stormwater, flooding and erosion.
- Protects fragile ecosystems from stormwater runoff pollution.

Did you know?

Toilets are responsible for more than 20% of household water consumption — treated, drinkable water that's simply being flushed away. Rainwater can be collected, filtered and pumped to toilets, creating a reusable resource.

For more information

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Green Jobs Potential for Rainwater Harvesting for Non-Potable Uses

Rainwater harvesting creates job opportunities

Rainwater harvesting has great potential as a water management tool, and to create green jobs. The market for rainwater harvesting professionals has been rapidly increasing. In 2009, membership in the American Rainwater Catchment Systems Association grew by over 30 percent.

- Existing design professionals, such as architects and engineers, could find a green niche.
- Illinois businesses can benefit from a new market opportunity. Examples of businesses that stand to benefit include:
    - Aquascape, Inc., of St. Charles, Ill.
    - Wahaso, Inc., of Hinsdale, Ill.
    - Rain Harvesting Pty Ltd., of Aurora, Ill.

Short-term potential for green job growth:

- The average cost of a basic residential rainwater harvesting system and installation is $5,000 to $12,000, and requires seven jobs: five installation, two supplier, and two manufacturing.
- Commercial systems cost $40,000 to $150,000, and require 16 jobs: ten installation, three supplier, and three manufacturing.
- A recent German study showed that, in 2005, when 35 percent of new buildings constructed in Germany were equipped with a rainwater collection system, 5,000 jobs were created.[1]

Long-term growth potential:

Rainwater harvesting systems have ancillary benefits:

- Increase in adjunct businesses like gutter installation and water filtration systems, LEED certification professionals, and landscape designers.
- Increased need for professionals to maintain and clean systems.
- Increased need for skilled labor as rainwater harvesting systems become more technologically advanced. For example, they can be integrated with computer software that can sense approaching storms or make automated switches from rainwater supply to municipal water supply for the home.
- Potential for industrial and manufacturing growth. Many of the specialized components are still made overseas, but, as demand increases, companies are moving production to the U.S. For example, BlueScope Water Tanks, an Australian company, recently began manufacturing some of its rainwater harvesting tanks in Texas.

[1] Chartered Institute of Environmental and Water Management, information on rainwater harvesting, at www.ciwem.org/resources/water/rainwater/index.asp

Aquascape employees installing a 1,000 gallon rainwater harvesting system at a home in Oswego, Ill. This water will be used for outdoor irrigation but its not currently tapped for non-potable uses such as flushing toilets.

This rainwater harvesting cistern was built in 1995, at the Lady Bird Johnson Wildflower Center in Austin, Texas.

Supporters

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Barrington Area Council of Governments
Center for Neighborhood Technology
Chicago Metropolitan Agency for Planning
City of Chicago, Depts. of Buildings and Environment
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