

WATER CONSERVATION & EFFICIENCY PLAN



The City of Evanston

Evanston draws water from Lake Michigan—supplying its residents and businesses, and wholesaling water to five nearby communities. In 2010, on average, the city pumped 97 gallons per person daily. Evanston was awarded a grant from the Chicago Metropolitan Agency for Planning in 2011 to create a water conservation and efficiency plan. The plan is an extension of Evanston's Climate Action Plan and serves to promote environmental sustainability, one of the guiding values in the city's strategic plan.

Water Conservation Planning

A water conservation plan is the foundation of a water conservation program. The plan includes a water system profile, a forecast of expected future water demands, the identification and evaluation of water conservation measures, and a plan for program implementation and evaluation. There are several water conservation planning guidance documents available, including:

- [U.S. EPA Water Conservation Planning Guidelines](#)
- [American Water Works Association \(AWWA\) M52 Manual](#)
- [Handbook of Water Use and Conservation](#)

Approach

The purpose of Evanston's Water Conservation and Efficiency Plan is to have measurable goals that will facilitate conservation and efficiency and to educate the public about the importance and value of water. The plan includes a detailed water consumption profile and analysis of non-revenue water, water loss, the city's water rate structure and water treatment process, and the state of major infrastructure, such as pipes, pumping systems, and water meters. An analysis of the water-energy nexus also highlights how water conservation can reduce energy use and greenhouse gas emissions. The planning process was led by the Evanston Office of Sustainability and Evanston Utilities Department. The city solicited input from the community through online surveys and a public meeting prior to completing the draft plan.

At a Glance

Population: 74,500

Residential water use:* 63.8%

Plastic bottles eliminated:** 99,000+

* Residential sector percentage of total water use
** 12 oz. plastic water bottles eliminated by Tap Water Station in 2014



Evanston Water Conservation and Efficiency Plan
bit.ly/1GWBy9f

Key Goals

- 1 Reduce water consumption by 6 percent by 2020.
- 2 Adopt cost-effective and community-appropriate conservation and efficiency measures.
- 3 Continuously inform residents and businesses about the value of tap water and the connection between water use, household behaviors, and water-related business decisions.
- 4 Adopt municipal ordinances that support the plan.

Key Findings

Since the plan's release, eight plan implementation areas have been acted on.

Recommendation 1

Increase water-related information dissemination

The final plan was officially rolled out in September 2012, at Evanston's annual Green Living Festival, an event widely promoted by the city and attended by many residents and local businesses. Water was the focus of the festival, with activity stations to educate the public about the Evanston Water Treatment Plant and water conservation. The Illinois section of the American Water Works Association (ISAWWA) water trailer was also on display to promote tap water, and the city distributed 400 reusable water bottles.

Recommendation 2

Update water billing practices

Bills were changed from reporting water use in cubic feet to gallons to provide customers with a more understandable measurement.

Evanston has installed a new Automated Meter Information (AMI) system. Through AMI, customers are accessing real-time water use and historical usage trends—over 300 signed up in the first month. To reduce wasted water in homes and businesses, the new system will automatically generate leak investigation requests based on aberrations in meter readings.

Recommendation 3

Incorporate sustainable water policies into city departments and functions

Evanston is working to reduce both real and apparent water losses. The utilities department purchased new leak detection equipment and has completed a survey of the distribution system. The entire 157 mile system will be surveyed each year to minimize water loss due to aging water mains.

Recommendation 4

Promote communication and outreach on water conservation behaviors

The city's website contains many water conservation resources, including links to EPA Water Sense, a video on checking for toilet leaks, and simple home water conservation tips.

Recommendation 5

Promote tap water and reduce bottled water use

The Evanston Utilities Department built its own mobile water station, inspired by the ISAWWA trailer, to bring free tap water to community events. The mobile water station visits events sponsored by the City of Evanston, Northwestern University, and community organizations. In 2014, it provided 9,300 gallons of tap water to event visitors, eliminating the use of over 99,000 plastic 12-ounce water bottles. Bottled water sales are prohib-

ited at city-sponsored events when the mobile water station is available, and Evanston encourages private groups that use the station at their events to take the same action.

Recommendation 6

Reduce indoor water use from toilets

At the Green Living Festival, the Evanston Utilities Department organizes an activity station to educate residents about reducing toilet water use, which is the number one use of indoor residential water. The city distributed toilet leak testing kits in both 2013 and 2014 and heavily promoted WaterSense-branded bathroom fixtures.

Recommendation 7

Reduce outdoor water use

Evanston promotes the use of rain barrels, native landscaping, and rain gardens to minimize the need to use potable water for outdoor uses. The Evanston Ecology Center hosts a semi-annual Using a Rain Barrel course for residents and sells rain barrels at a reduced rate. The Evanston website provides information on rain barrel installation and maintenance.

Recommendation 8, 9

Reduce water consumption in non-residential sectors

Evanston focused first on implementing water conservation and efficiency policies at city facilities and informing residents, as these two initiatives would reach the largest number of people in a relatively short period of time. Next, the city will work with the largest non-residential water customers to identify opportunities to reduce water consumption.

Resources

[Evanston Water Conservation and Efficiency Plan 2012](#)

