

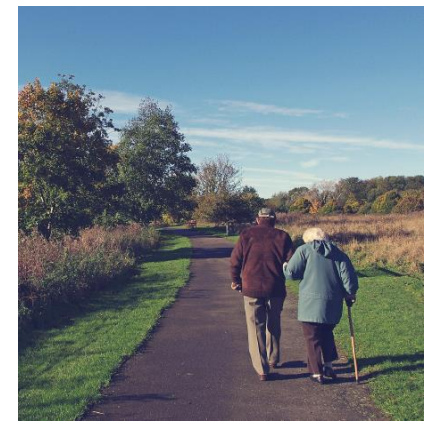
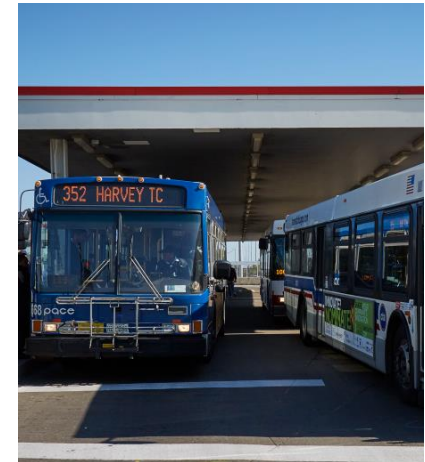


Chicago Metropolitan
Agency for Planning



NWPA Water Supply Sustainability Plan Updates

NWPA Executive Committee Meeting
September 28, 2023



Agenda

1. Revisit the Water Supply Sustainability Plan (WSSP) development process
2. Revisit the WSSP vision and goals
3. Overview of priority water conservation strategies
4. Overview of strategy assessment process

NWPA Water Supply Sustainability Plan: Development process

NWPA Water Supply Sustainability Plan

Purpose: Provide a shared vision and broad water conservation recommendations to promote the long-term sustainability of the water resources used in the NWPA region.

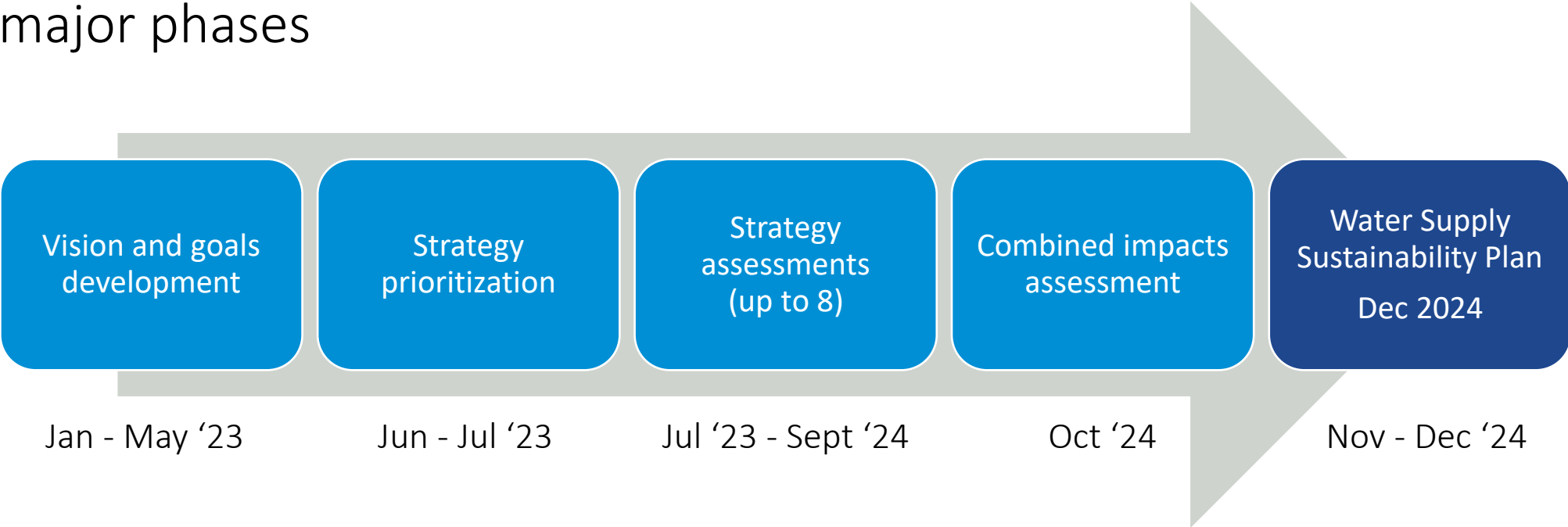
- **Partners:** NWPA (Technical Advisory Committee and Executive Committee), Illinois-Indiana Sea Grant Program
- **Funding:** Illinois Department of Natural Resources, Office of Water Resources



NWPA Water Supply Sustainability Plan Process

Multi-year planning process (January 2023 – December 2024)

Four major phases



Plan objectives

- Water supply sustainability goals
- Menu of water conservation strategies and best practices
- Greater awareness of priority strategies and resources
- Plan “template” to guide local water conservation planning



NWPA Water Supply Sustainability Plan

What it is

- Voluntary
- Broad potential water savings estimates for the NWPA region, not focused on any one municipality
- Raises awareness of the need for water conservation

What it is not

- Does not establish any new or broader regulatory authority
- Does not address unique conditions and issues facing individual municipalities

WSSP vision and water supply sustainability goals

NWPA Water Supply Sustainability Plan Vision

"The NWPA water supply sustainability plan will serve as a roadmap for members seeking to take voluntary steps toward feasible and effective long-term use of water supply resources."

NWPA Mission Statement:

The NWPA, formed by intergovernmental agreement, seeks to collaboratively plan for and steward our shared river and groundwater resources to ensure a sustainable water supply for the people, economy, environment, and future generations.

NWPA Vision Statement:

The NWPA area will have dependable supplies of water for generations to come.

*Source: Northwest Water Planning Alliance
2020-2024 Strategic Plan*

Lake Michigan goal

Previous:

NWPA communities needing an alternative water source will have access to a sufficient, affordable, and safe water supply within the legal limits of Illinois' Lake Michigan allocation.

Revised:

NWPA communities will help ensure that those needing an alternative water source can seek access to a sufficient and safe water supply within the legal limits of Illinois' Lake Michigan allocation.

Fox River goal

Previous:

The Fox River will provide NWPA communities with an affordable, safe, and reliable water supply while sustaining aquatic ecosystems.

Revised:

The Fox River will continue to sustain aquatic ecosystems and serve as an affordable, safe, and reliable water supply for NWPA communities currently using it or seeking it as an alternative source with a dedicated backup supply.

Sandstone aquifer goal

Previous:

Water withdrawals from the sandstone will be managed at a rate that extends the life of the deep aquifers and gives NWPA communities experiencing adverse dewatering impacts adequate time to switch water sources.

Revised:

Water withdrawals from the sandstone will be managed at a rate that extends and sustains the life of the deep aquifers and gives NWPA communities experiencing adverse dewatering impacts adequate time to explore other options.

Shallow aquifer goal

Previous:

Shallow aquifers will provide NWPA communities and households with an affordable, safe, and sufficient water supply while supporting healthy aquatic ecosystems.

Revised:

NWPA communities and households will withdraw from shallow aquifers at rates that help the source remain safe, affordable, and sufficient water supply while supporting healthy aquatic ecosystems.

Revised water supply sustainability goals

Lake Michigan: NWPA communities will help ensure that those needing an alternative water source can seek access to a sufficient and safe water supply within the legal limits of Illinois' Lake Michigan allocation.

Fox River: The Fox River will continue to sustain aquatic ecosystems and serve as an affordable, safe, and reliable water supply for NWPA communities currently using it or seeking it as an alternative source with a dedicated backup supply.

Sandstone aquifer: Water withdrawals from the sandstone will be managed at a rate that extends and sustains the life of the deep aquifers and gives NWPA communities experiencing adverse dewatering impacts adequate time to explore other options.

Shallow aquifer: NWPA communities and households will withdraw from shallow aquifers at rates that help the source remain safe, affordable, and sufficient water supply while supporting healthy aquatic ecosystems.

Priority water conservation strategies

Priority water conservation strategies

Focus on actions communities and public water utilities can take



Residential retrofits



New development standards



Landscape water efficiency



Water loss control



Commercial, industrial, & institutional (CII) conservation programs



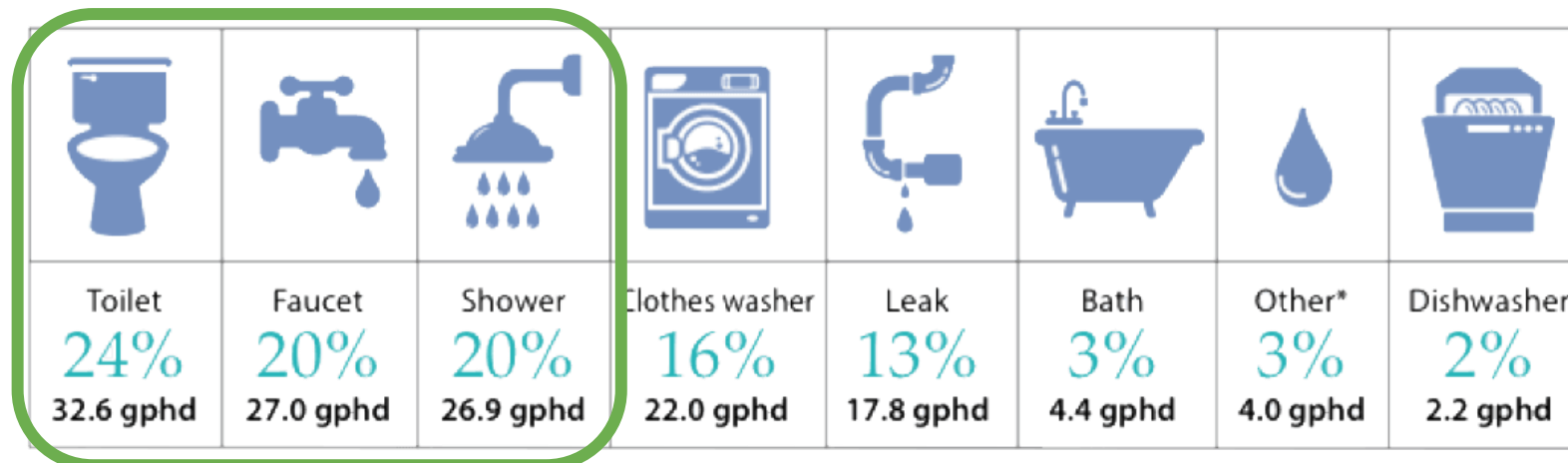
Costing and pricing



Information and education

Residential retrofits

The replacement of older fixtures with newer, water-saving ones to increase water-use efficiency.



* The "Other" category includes evaporative cooling, humidification, water softening, and other uncategorized indoor uses.

New development standards

Encourage developers to design with water efficiency in mind

Allow communities to grow while limiting water resource impact



WaterSense® labeled homes are designed to use less water!

look for
WaterSense
Meets EPA Criteria

FREE OF LEAKS
Homes are inspected to be free of visible leaks, reducing water waste and preventing costly damage.

PEACE OF MIND
Trained professionals conduct independent verifications, so you can be sure homes deliver savings.

SAVINGS THAT PERFORM
WaterSense labeled plumbing products ensure efficiency and performance.

www.epa.gov/watersense/homes

The infographic shows a cross-section of a house with a yellow exterior and grey roof. Inside, there is a bathroom with a shower, toilet, and sink; a kitchen with a stove, refrigerator, and sink; and a laundry room with a washer and dryer. A red line traces the water supply lines throughout the house, highlighting the plumbing system. The house is set on a green lawn with some plants and a small tree.

A WaterSense Labeled Home can Save Water and Energy:

50K

gallons of water a year or more for a family of four



enough water to wash 2,000 loads of laundry

\$600

in water and energy bills

Landscape water efficiency

Encourage communities to adopt measures limiting discretionary water use and promoting landscape water efficiency

NORTHWEST WATER PLANNING ALLIANCE

NWPA Regional Water Conservation Lawn Watering Ordinance

Outdoor limitation on the use of water

A. Purpose: Based on research from the Illinois State Water Survey, the Chicago Metropolitan Agency for Planning, local counties and other organizations, [Name of local government] recognizes that potable water is a finite natural resource; that communities within the Northwest Water Planning Alliance rely on shared groundwater and river water sources; and, that water conservation is a necessary component of a sustainable water supply.

B. Definitions: The following words and phrases when used in this section shall, for the purposes of this section, have the following meanings:

CITY or VILLAGE: [name of local government]

D RIP IRRIGATION SYSTEM: An IRRIGATION SYSTEM that saves water by allowing water to drip slowly to the roots of plants, either onto the soil surface or directly onto the root zone. Such systems include but are not limited to soaker hoses.

HANDHELD WATERING DEVICE: A means of watering that requires the watering device to be held in order to operate, including watering cans, buckets, and hoses equipped with automatic shutoff valves. This also includes the handheld use of a hose, provided it is continuously attended.

HARVESTED RAINWATER: Water that is accumulated and stored during times of precipitation, such as entering the storm sewer system.

IRRIGATION SYSTEM: A system that provides water to a landscape from a source of potable water supply.

LANDSCAPE: The area of a property that is landscaped or planted.

LAWN: The area of a property that is landscaped or planted with grass.

LAWN SPRINKLER: A device used for the watering of lawns.

LAWN WATERING: The watering of lawns.

NORTHWEST WATER PLANNING ALLIANCE: A coalition of local governments, including Cook County, DuPage County, Kane County, Lake County, Madison County, and McHenry County, and cooperative organizations.

Is your lawn a water guzzler?

Water loss control

Represents the efforts of water utilities to provide accountability in their operation by reliably auditing their water supplies and implementing controls to minimize system losses.



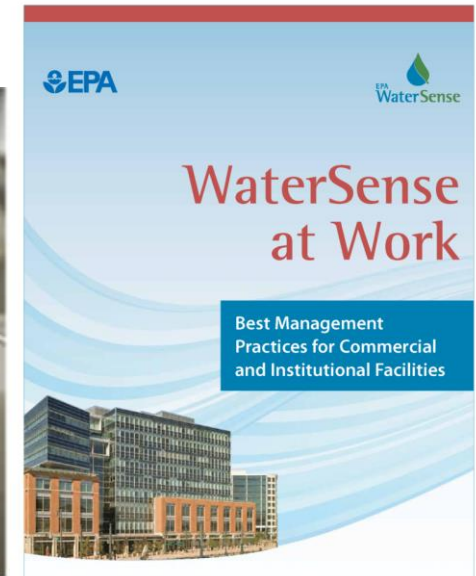
Non-revenue water benchmark of 10%
(Vickers, 2001, from CUWCC)

Commercial, Industrial, and Institutional (CII) conservation

Can include audits resulting in inefficient equipment retrofits and setting retrofit and new development standards



Pre-rinse spray valve

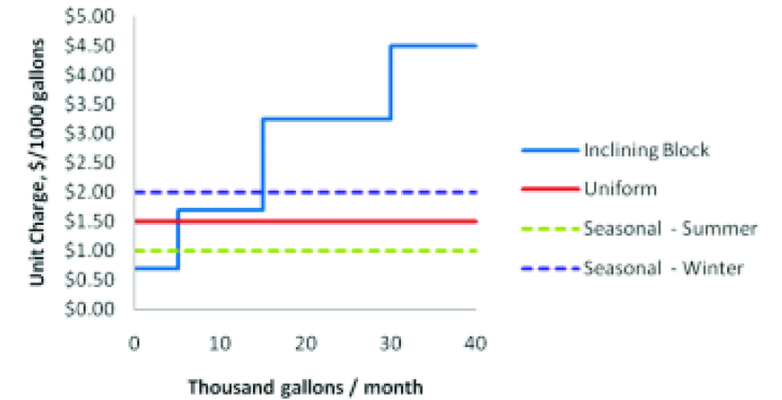


Reduce water use to an amount equal to 10% of baseline use within 10 years, up to a total of 40% water savings in the CII sector (CUWCC; Gleick et al., 2003)

Costing and pricing

Conveys water value through prices to water customers

Conservation Volumetric Water Rate Structures



A 10% increase in price reduces the quantity demanded by 1.5%.
(Dziegielewski and Chowdhury 2008)



Information and education

Aimed at raising awareness of the value of water and fostering a culture of conservation

Out of sight shouldn't mean out of mind.



As much as **50 percent** of the water we use outdoors is **wasted** from **inefficient** watering methods and systems. **Curb your water waste!**

look for **WaterSense** Made with EPA Certified

Groundwater is not an endless supply. Help use our resource efficiently.

Did you know... it can take centuries for rain to replenish a groundwater aquifer so that we may use it again? That's why we must conserve our current groundwater supply.

You can help by... using a WaterSense-labeled showerhead or toilet.

Thank you for doing your part to help ensure that our communities and neighboring communities have a clean and reliable water source now and for future generations!

For more information, visit www.epa.gov/WaterSense

Chicago Metropolitan Agency for Planning
Year 2018
WATER 2050
100% Recycled

GRADES K-5

An information and education program increases the uptake of other water conservation measures and can change water-use behaviors

Strategy assessment process overview

Strategy assessment process



Upcoming EC meetings

November 30, 2023

WSSP: Residential retrofits strategy
assessment

January 25, 2024

WSSP: Landscape water efficiency strategy
assessment

Thank you!

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