



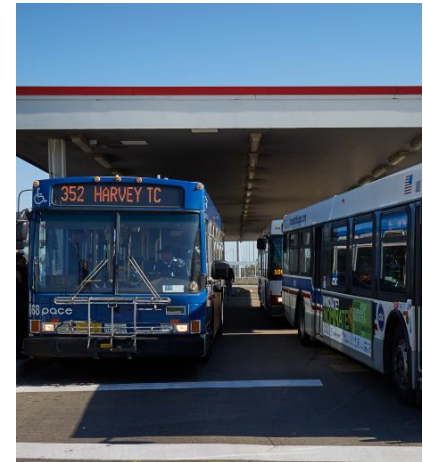
Chicago Metropolitan  
Agency for Planning



# NWPA Water Supply Sustainability Plan

January 24, 2023

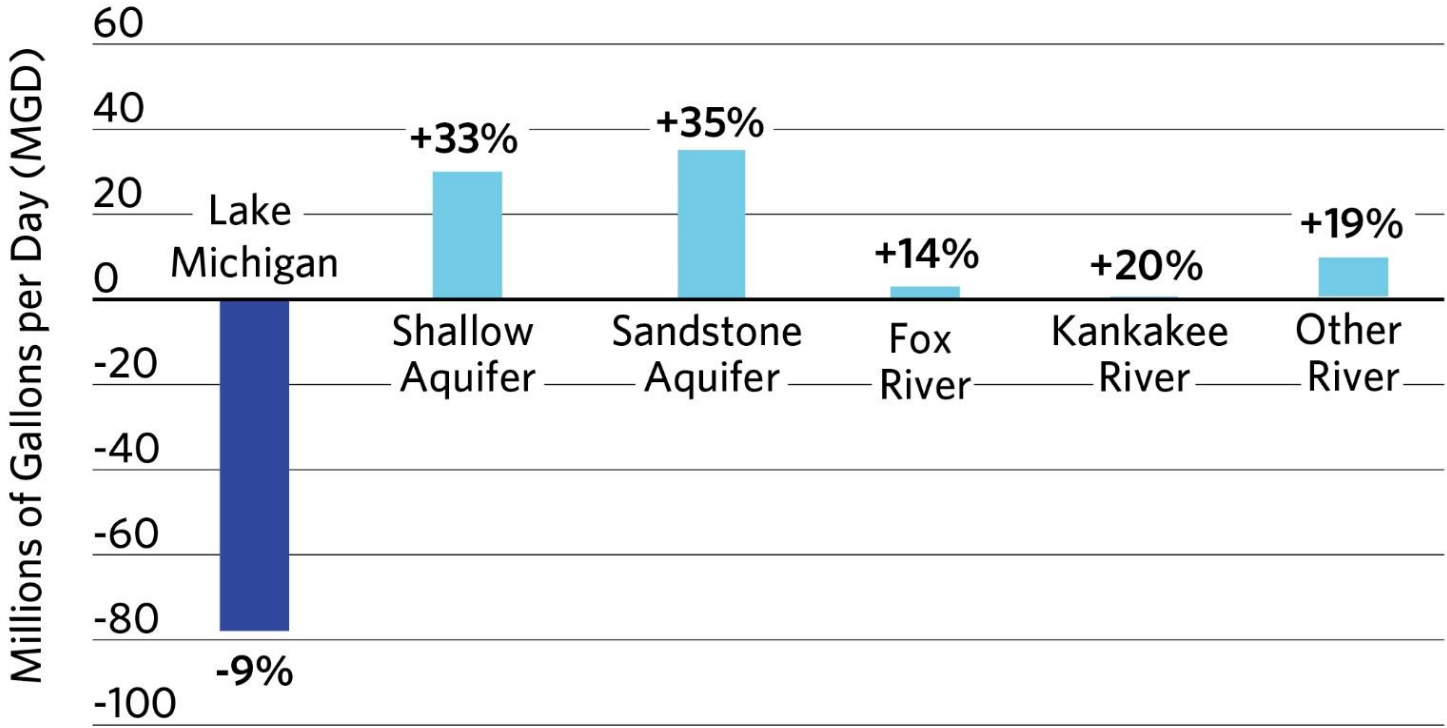
Technical Advisory Committee



# Forecasted demand exceeds groundwater supplies

Projected changes in water demand by water source, 2011-50

Source: CMAP ON TO 2050 Regional Water Demand Forecast.



# NWPA Water Supply Sustainability Plan

- Establish vision and expectations
- Outline potential water-saving strategies
- Estimate performance of strategies
- Work to build consensus around priority strategies and implementation resources
- Provide a template to guide local planning efforts

## ***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.

# NWPA Water Supply Sustainability Plan

Planning process would provide NWPA members with the answers to the following questions:

- What strategies are the most effective?
- How far will specific conservation strategies get us?
- How much less water do we need to use?

# 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 action and provides steps

## *What it is not*

- Does not establish any new or broader regulatory authority
- Does not address unique conditions and issues facing individual municipalities
- Some locations may need to conserve more water
- Local governments, particularly in risk areas, will still need to develop their own local plans

# NWPA Water Supply Sustainability Plan

**January – June 2023  
(FY23)**

Develop vision and goals

Draft existing conditions summary (NWPA Profile)

Select strategies for investigation

Design strategy investigation process

**June 2023 – Sept 2024  
(FY24 – FY25)**

Strategy investigation and assessment

Build awareness of strategies and implementation resources

**October – December 2024  
(FY 25)**

Combined impacts assessment

Develop NWPA Water Supply Sustainability

Encourage implementation through education & outreach

Encourage local water supply plans

# TAC Roles and Expectations

Participation in TAC meetings

Technical expertise and experience

Assist with TAC recruitment

# Upcoming TAC meetings

## **February 28**

WSSP: Vision and goals development

## **March 28**

*Canceled due to WaterCon*

## **April 25**

WSSP: NWPA Profile

## **May 23**

WSSP: Strategy selection

## **June 27**

WSSP: Strategy assessment (strategy #1)

## **July 25**

WSSP: Strategy assessment (strategy #2)  
Regional water demand forecast update (TBD)

## **August 22**

WSSP: Strategy assessment (strategy #3)

## **September 26**

WSSP: Strategy assessment (strategy #3,4)

## **October 24**

WSSP: Strategy assessment (strategy #3,4)

## **November 28**

WSSP: Strategy assessment (strategy #5)



# Water2050 demand management strategies

- 1) *Conservation Coordinator*
- 2) *Residential Customers Water Surveys*
- 3) *Residential Plumbing Retrofit*
- 4) *Residential High Efficiency Toilet Program*
- 5) *High Efficiency Clothes Washer Program*
- 6) *System Water Audits, Leak Detection, and Repair*
- 7) *Metering*
- 8) *Water Waste Prohibition*
- 9) *Large Landscape Conservation Programs and Incentives*
- 10) *Conservation Programs for CII Accounts*
- 11) *Wholesale Agency Assistance Programs*
- 12) *Public Information*
- 13) *School Education*

**Table 12: Potential water savings associated with conservation measures at two tiers of implementation**

Conservation Measures	Low Conservation (mgd)	High Conservation (mgd)
High Efficiency Toilets <sup>2</sup>	15.0	74.8
Water Waste Prohibition <sup>2</sup>	12.1	60.3
Metering <sup>1</sup>	30.3	31.5
Leaks and Audit Repair <sup>1</sup>	5.9	29.7
Residential Plumbing Retrofits <sup>2</sup>	5.2	26.0
Commercial/Industrial <sup>3</sup>	5.0	25.2
High-Efficiency Clothes Washers <sup>2</sup>	3.2	16.1
Large Landscape <sup>1</sup>	1.0	5.1
Residential Water Survey <sup>2</sup>	0.1	0.7
<b>All Measures - Total</b>	<b>77.8</b>	<b>269.4</b>

1. Low conservation applies to 10% of demand; high conservation applies to 50% of demand.

# Assess potential of strategies

## ***Could include the following:***

### Quantity

- Non-revenue water reduction
- Outdoor lawn watering
- Conservation water rates
- Plumbing retrofits and appliance upgrades

### Quality

- Sensible salting
- Contaminants of emerging concern

# strategy assessments

## Objective

Explore feasible and effective strategies NWPA members can take to establish a path toward long-term sustainable water resource use.

# strategy selection & investigation design

- Strategy selection for investigation - May 2023, up to 8 strategies
- Design the strategy investigation process
- Strategy investigation process memo - – June 2023
  - outlining process to determine 1) existing levels of implementation for each potential strategy and 2) potential water savings

# strategy investigation process

For each strategy

- Determine existing levels of implementation
- Potential water savings
  - Identify information needed to estimate water savings
  - Identify source of information
  - Information may be collected via survey, ordinance review, interviews, website review, and similar techniques.

# strategy assessment & investigation

- Strategy assessment and investigation sessions – June 2023
- Current implementation and feasibility
- Assess savings potential of individual strategies
- Education and selection facilitation support
- Strategy confirmation
- Strategy assessments – chapter in plan for each strategy (up to 8) – September 2024

# strategy assessment plan chapters

- Individual summaries of each strategy that
  - explain the strategy
  - current implementation levels (if applicable)
  - potential/feasibility for implementation
  - potential water savings if implemented
  - implementation resources
  - potential barriers to implementation, and
  - applicable case studies

# Combined Impacts assessment

## Objective

Estimate combined water savings from all the selected strategies, and, if available, compare with ISWS estimates of sustainable yield for the NWPA area.



# Plan deliverable

- Executive summary
- Plan vision and goals
- Summary of existing conditions
  - water sources, access to alternative water sources, number of communities, service populations, current and projected withdrawals, sustainable yield values
- Recommended strategies
  - Description, current and proposed implementation, potential savings, and resources and techniques for implementation
- Potential savings of the recommended package of strategies compared to ISWS sustainable yield values and performance metrics (if available)

# Questions?

**Kelsey Pudlock**  
[kpudlock@cmap.illinois.gov](mailto:kpudlock@cmap.illinois.gov)

**Margaret Schneemann**  
[mschneemann@cmap.illinois.gov](mailto:mschneemann@cmap.illinois.gov)

[@cmapillinois](https://twitter.com/cmapillinois) |    

