

Water Conservation and Efficiency Program Review

State of Wisconsin
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2. Status of Wisconsin's Water Conservation and Efficiency Goals and Objectives

Consistent with the Basin-wide Goals and Objectives:

Wisconsin adopted water conservation and efficiency goals and objectives that are consistent with the Basin-wide goals and objectives. The goals and objectives, which were most recently revised in 2011, can be found on the DNR website at:

<https://dnr.wisconsin.gov/sites/default/files/topic/WaterUse/StatewideWCEObjectives2011.pdf>

Wisconsin accepted public comments on the state's water conservation and efficiency goals and objectives in 2019 and determined that no revisions to the goals and objectives were necessary.

3. Water Conservation & Efficiency Program Overview:

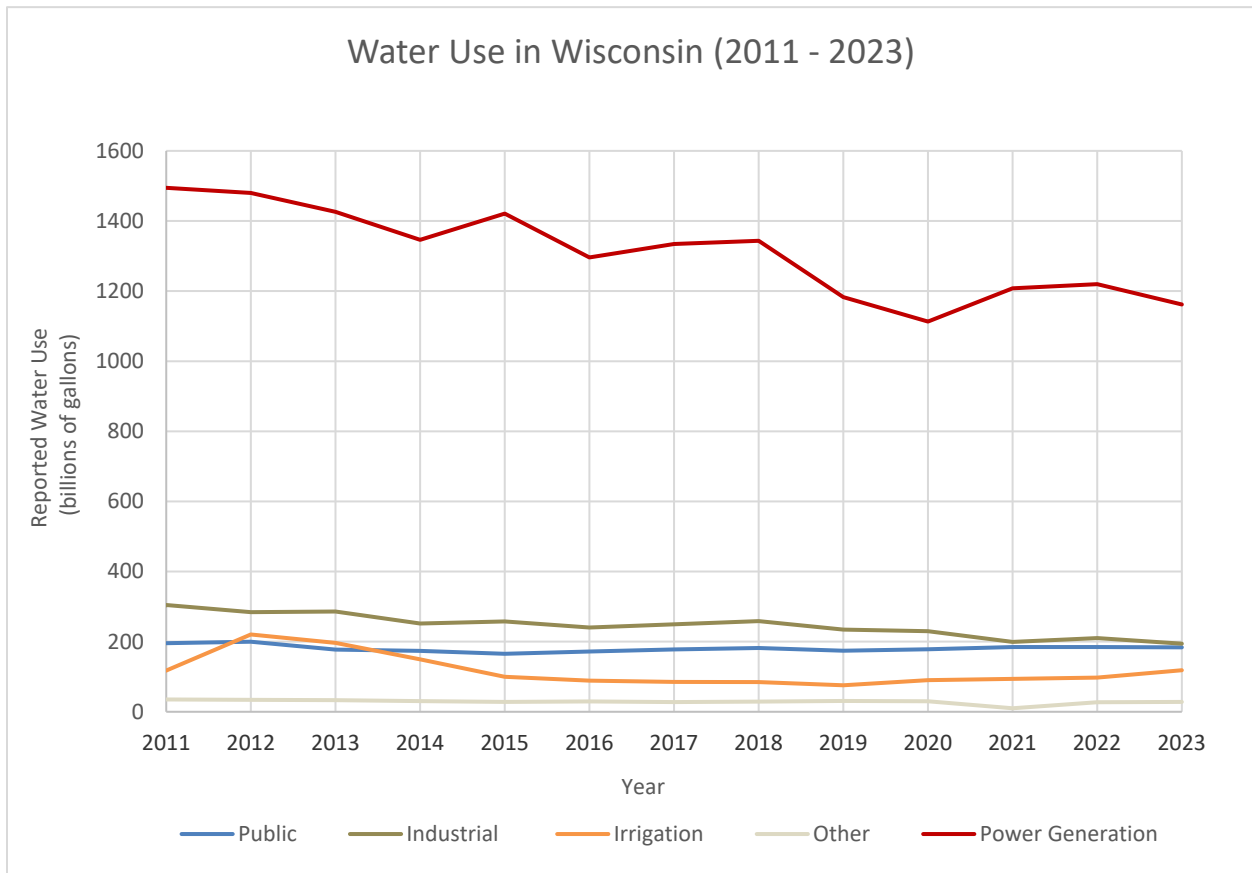
The Wisconsin Legislature ratified the Great Lakes—St. Lawrence River Basin Water Resources Compact (Compact) in 2007 Wisconsin Act 227, and Wisconsin Statute (§281.346 (8)) and Administrative Code (ch. NR 852) include water and conservation efficiency requirements that go beyond the minimal requirements of the Compact. The Wisconsin Department of Natural Resources (DNR) Water Use Section includes a statewide water conservation and efficiency program that is based on Wisconsin's adaptation of the Great Lakes Regional Conservation and Efficiency Objectives. The program requires mandatory water conservation and efficiency measures for new or increased withdrawals in the Great Lakes Basin, for any new or increased diversions from the Great Lakes Basin, and for any new or increased withdrawals—statewide—that will result in a water loss averaging more than 2 million gallons per day in any 30-day period. The program encourages voluntary water conservation and efficiency measures for existing water users throughout the state.

Wisconsin's conservation and efficiency program is implemented through administrative rules, water use permits, and guidance developed in cooperation with the Public Service Commission of Wisconsin (PSC) and the Wisconsin Department of Safety and Professional Services (WSPS). Wisconsin's administrative rule ch. NR 852 guides the program, and

establishes the necessary components for a water conservation plan and identifies water conservation and efficiency measures by water use sector. For withdrawals subject to mandatory water conservation and efficiency, requirements increase as the volume of withdrawal increases.

In addition, Wisconsin’s administrative rule ch. PSC 185 includes requirements for public water utilities to meter all water uses and sales, maintain meters, identify, and repair system leaks, control water usage from hydrants, maintain records of system pumpage and metered consumption and conduct an annual water audit. Voluntary water conservation programs approved by the Public Service Commission must annually report program costs, estimated water savings and other benefits of the program, such as energy savings.

Finally, water supply service area plans for public water supply systems must consider water conservation alternatives when identifying options for supplying water. These plans are required by 2026 for all public water systems in Wisconsin serving populations of 10,000 or more. Wisconsin also requires approved water supply service area plans in order to issue approvals for new or increased withdrawals for in the Great Lakes basin and for Great Lakes diversions for public water supply purposes.



Wisconsin water withdrawal data based on annual reports submitted by water users to DNR, 2011 - 2023.

4. Consistency with Regional Objectives:

As shown in the table below, the Wisconsin program is consistent with the regional objectives in the promotion of environmentally sound and economically feasible water conservation measures. More details for each objective are available at [Conservation and Efficiency Objectives \(glsregionalbody.org\)](http://ConservationandEfficiencyObjectives(glsregionalbody.org)).

OBJECTIVES	LEGISLATIVE OR PROGRAM DESCRIPTION
<p>Guide programs toward long-term sustainable water use.</p>	<p>Wisconsin adopted Water Conservation and Water Use Efficiency Rules (NR 852) in 2011. Mandatory water conservation plans and conservation and efficiency measures are required for new or increased Great Lakes Basin withdrawals, all diversions of Great Lakes water, and withdrawals with a water loss of ≥ 2 MGD. Wisconsin’s Water Supply Service Area Planning (§. 281.348, Wis. Stats.) statute requires communities to develop a water supply plan including considering water conservation and efficiency. Wisconsin DNR has initiated the administrative rule making process for Water Supply Service Area Plans and Diversions of Great Lakes water. Both of these rules will provide linkages to Wisconsin’s Water Conservation and Efficiency Administrative Rule NR 852.</p>
<p>Adopt and implement supply and demand management to promote efficient use and conservation of water resources.</p>	<p>Required water conservation plans are in place for 327 water use permittees. Wisconsin DNR and the Public Service Commission of Wisconsin coordinate on water conservation and efficiency programs for public water systems. Wisconsin DNR assisted in the development of a statewide set of conservation standards, called the Wisconsin Water Stewards Program, for agricultural irrigation with partners including the University of Wisconsin, environmental non-profit organizations and the Wisconsin Potato and Vegetable Growers. Communities with diversion approvals are required to report annually on their water conservation and efficiency activities. These reports are available on the Wisconsin DNR webpage.</p> <p>City of Waukesha – A summary of the City of Waukesha’s water conservation and efficiency 2023 activities. The City replaced 12,509 linear feet of main to address leaks.</p> <p>City of Racine – A summary of the City of Racine’s water conservation and efficiency 2023 activities. The City surveyed 25% of the system for leaks and addressed an estimated 335,000 gpd of leakage.</p> <p>Village of Somers – A summary of the Village of Somers’ water conservation and efficiency 2023 activities.</p> <p>City of New Berlin – A summary of the City of New Berlin’s water conservation and efficiency 2023 activities.</p>

<p>Improve monitoring and standardize data reporting among State and Provincial water conservation and efficiency programs.</p>	<p>Wisconsin DNR has a database for tracking water withdrawal data and an online reporting system. Registered water users are required to annually report water use. DNR encourages online water withdrawal reporting, however, reporting forms are mailed to those who choose not to report online. In 2023 69% of water use reports were submitted online. DNR staff input mailed copies of water withdrawal reports into the database. DNR’s process also includes automated quality checks to continue to improve data quality. Wisconsin DNR has created multiple tools to provide water use information to the public:</p> <ul style="list-style-type: none"> - an online tool to search for groundwater and surface water sources, - a spatial web viewer tool, and - annual reports. <p>In 2022, DNR created a StoryMap of Wisconsin withdrawals and examined water use trends over the past decade. Additionally, the PSC requires reporting on Water Conservation and Efficiency activities that are included in public water utility budgets.</p>
<p>Develop science, technology and research.</p>	<ul style="list-style-type: none"> ○ Co-funded a project with the Public Service Commission titled “Water Efficiency Potential Study for Wisconsin”, which was completed in 2011. ○ Funded a project titled “Ecological Limits of Hydrologic Alteration” focused on understanding stress to fish populations due to reduced streamflows. ○ Funded a project to develop a hydrogeologic data viewer. ○ Funded a “proof-of-concept” hydrological model to optimize stream flow, withdrawals and crop rotations in a small watershed in central Wisconsin. ○ Funded a project entitled “Impacts of potato and maize management and climate change on groundwater recharge across the Central Sands” to better understand impacts of groundwater dependent agro-ecosystems. ○ Funded a project to conduct a comprehensive survey of Springs in Wisconsin and continues to monitor 10% of the 400 springs inventoried annually. ○ Funded a project to compile groundwater and lake level data for Wisconsin and develop statistical models to understand linkages between groundwater, climate and water levels of seepage lakes. ○ Conducted a study authorized by the Wisconsin legislature to evaluate and model the potential impacts of groundwater withdrawals on three specific lakes in Central Sands region of Wisconsin. The results of the Central Sands Lake Study are available at the DNR website. ○ Evaluated remote sensing evapotranspiration models for use in Wisconsin and evaluated differences in evapotranspiration rates relative to agricultural practices.

	<ul style="list-style-type: none"> ○ Installation and operation of eddy covariance towers to directly measure evapotranspiration. ○ Support research related to agricultural consumptive use. ○ Cumulative deviation from moving mean precipitation as a proxy for groundwater level variation in Wisconsin. ○ Observation of irrigation-induced climate change in the Midwest United States. ○ Supports ongoing streamflow monitoring in partnership with the University of Wisconsin Stevens Point. ○ Supports Wisconsin’s groundwater level monitoring network operated in collaboration with the USGS and Wisconsin Geological and Natural History Survey. ○ Conducts ongoing survey of Wisconsin springs and select stream flow measures to support Wisconsin’s water resources inventory. ○ Developed new tools with the USGS for more efficient water quantity impact assessments to streams and wells ○ Improving quality assurance and quality control approaches to Wisconsin’s water withdrawal database with a USGS WUDR grant.
<p>Develop education programs and information sharing for all water users.</p>	<p>Information on water use and water conservation and efficiency are shared in at state conferences, through promotion of EPA WaterSense Fix-A-Leak Week, through the Wisconsin State Fair, and Farm Technology Days. Additionally, UW-Extension promotes efficient use of water through irrigation management seminars and is part of a collaborative state effort to development of conservation stewardship program for irrigated agriculture. UW-Madison developed an online continuing education course to train conservation professionals in agricultural water conservation. As mentioned above, DNR’s Wisconsin Water Use reports examine water use trends by location, water use sector, and source and includes a StoryMap on Wisconsin’s water use. Information monitoring water quality data is included in StoryMap titled “Working together to collect Wisconsin’s Water Quantity Data.” DNR added new webpages in 2023 to address drought. DNR conducted an analysis of 2023 water use trends due to the drought and presented those findings in 2024 to various state and regional groups.</p>

5. Wisconsin Water Conservation and Efficiency Program Implementation Timeline and Status:

The State of Wisconsin is implementing Wisconsin’s water conservation and efficiency program as described in section 3 and 4 with ongoing efforts to continue the implementation and improve the program.