

## **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 Department 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:**

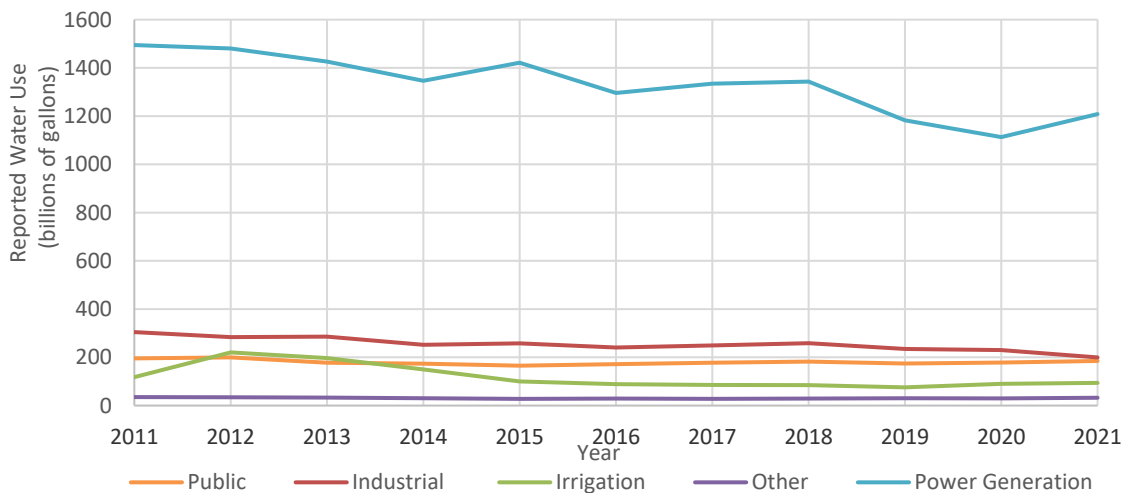
The Wisconsin Legislature ratified the Great Lakes—St. Lawrence River Basin Water Resources Compact (Compact) in 2007 Wisconsin Act 227. Act 227 contains additional water conservation and efficiency requirements that go beyond the minimum required by the Compact. These requirements are codified in §281.346 (8), Wis. Stats., and ch. NR 852, Wisconsin Administrative Code.

The Water Use Section of the Wisconsin Department of Natural Resource's Bureau of Drinking Water and Groundwater developed 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. Voluntary water conservation and efficiency measures are encouraged for existing water users throughout the state.

This 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. Rules implementing the program, primarily [ch. NR 852 Wis. Adm. Code](#), establish the necessary components for a water conservation plan and identify 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, ch. PSC 185 Wis. Adm. Code 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 report annually the program costs, the estimated water savings and estimated non-water 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; and are typically required immediately for any Great Lakes Basin public water systems serving populations of 10,000 or more seeking a new or increased withdrawal, and for applicants for diversions of Great Lakes water.

Water Use in Wisconsin (2011 - 2021)



Wisconsin DNR reported water withdrawal data, 2011 - 2021.

#### 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 \(glsregionalbody.org\)](#).

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 <math>\geq 2</math> 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 295 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 <a href="#">Wisconsin Water Stewards Program</a>, for agricultural irrigation with partners including the University of Wisconsin, environmental non-profit organizations and the Wisconsin Potato and Vegetable Growers.</p> <p>City of Waukesha – A summary of the City of Waukesha's <a href="#">water conservation and efficiency 2021 activities</a> is available on the WDNR's webpage. These activities included replacing 297 toilets working with two apartment complexes.</p> <p>City of Racine – A <a href="#">summary of the City of Racine's water conservation and efficiency 2021 activities</a> is available on the WDNR's webpage. These activities included implementation of three geo-thermal projects to replace water intensive activities.</p>
<p>Improve monitoring and standardize data reporting among State and Provincial water conservation and efficiency programs.</p>	<p>Wisconsin DNR developed a database for water use data and an online reporting system, with ongoing system refinement. Online water use reporting is available for all registered water users and reporting forms are mailed to those who choose not to report online. Online system automated quality checks continue to improve reporting quality. In 2021 69% of water use reports were submitted online.</p> <p>Wisconsin DNR has created tools to provide water use information at a site specific, aggregate and spatial levels to the public. Water use data can be searched through an online tool. <a href="https://dnr.wi.gov/wateruse/pub_v3_ext/source/">https://dnr.wi.gov/wateruse/pub_v3_ext/source/</a>. Water use data is also available spatially through a web viewer. <a href="https://dnrmaps.wi.gov/H5/?viewer=Water%20Use%20Viewer">https://dnrmaps.wi.gov/H5/?viewer=Water Use Viewer</a></p> <p>Wisconsin DNR has annual water use reports for 2011 – 2017, including a special analysis of Lake Michigan surface water use in</p>

	<p>2016 and a <a href="#">StoryMap</a> of Wisconsin water use with 2018 water use data.</p> <p>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"> <li>○ Co-funded a project with the Public Service Commission titled “Water Efficiency Potential Study for Wisconsin”, which was completed in 2011</li> <li>○ Funded a project titled “Ecological Limits of Hydrologic Alteration” focused on understanding stress to fish populations due to reduced streamflows.</li> <li>○ Funded a project to develop a hydrogeologic data viewer.</li> <li>○ Funded a “proof-of-concept” hydrological model to optimize stream flow, withdrawals and crop rotations in a small watershed in central Wisconsin</li> <li>○ 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.</li> <li>○ Funded a project to conduct a comprehensive survey of Springs in Wisconsin and continues to monitor 10% of the 400 springs inventoried annually</li> <li>○ 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.</li> <li>○ 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 <a href="#">Central Sands Lake Study</a> are available at the DNR website.</li> <li>○ Evaluated remote sensing evapotranspiration models for use and Wisconsin and evaluated differences in evapotranspiration rates relative to agricultural practices.</li> <li>○ Installation and operation of eddy covariance towers to directly measure evapotranspiration.</li> <li>○ Support research related to agricultural consumptive use</li> <li>○ <a href="#">Cumulative deviation from moving mean precipitation as a proxy for groundwater level variation in Wisconsin</a></li> <li>○ <a href="#">Observation of irrigation-induced climate change in the Midwest United States</a></li> <li>○ Supports ongoing streamflow monitoring in partnership with the University of Wisconsin Stevens Point.</li> <li>○ Supports Wisconsin’s groundwater level monitoring network operated in collaboration with the USGS and Wisconsin Geological and Natural History Survey.</li> <li>○ Conduct ongoing survey of Wisconsin springs and select stream flow measures to support Wisconsin’s water resources inventory.</li> </ul>

<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. DNR's Wisconsin Water Use reports examine water use trends by location, water use sector, and source and includes a <a href="#">StoryMap</a> on Wisconsin's water use. Information monitoring water quality data is included in StoryMap titled "<a href="#">Working together to collect Wisconsin's Water Quantity Data.</a>"</p>
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**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.