Clean, Abundant Water

Water is a defining feature of Madison. Five lakes—Mendota, Monona, Waubesa, Kegonsa, and Wingra—shape our city and offer ample opportunities for Madisonians to enjoy the outdoors. Across our many departments, the City of Madison works to be a good steward of water resources, to protect and improve water quality, support water conservation, and create welcoming public spaces along the waterfront.

The Green and Resilient section of the City's Comprehensive Plan details the strategies the City is pursuing to protect our water resources. Providing clean, safe drinking water is one of the City's most important jobs. The Madison Water Utility provides 24.5 million gallons of clean drinking water to our community every day. They use 22 wells, 30 reservoirs, and a network of 916 miles of pipes. The Madison Water Utility regularly tests our water for pollutants and removes contaminants.

Managing our water sustainably also means using less water wherever possible. It takes a lot of energy to move water from the wells to our faucets. Using less water conserves our water resources, saves energy, and reduces our carbon footprint. Through conservation programs like the High Efficiency Toilet Rebate and Home Water Conservation programs, Madison households are successfully reducing water waste. The average home used 75 gallons of water each day in 2002. That number fell to 50.8 gallons per day by 2019.

Managing rainfall is another key focus of the City. Rainwater that lands on our rooftops and pavement usually runs into a storm drain and then into a pond, stream, river, or lake. It picks up pollutants from streets and other surfaces along the way. Madison cleans stormwater by removing suspended solids and cleaning up leaf litter to avoid sending more nutrients, like phosphorus (which contributes to algae blooms) to our lakes.

We invest in programs like Yahara WINS to help reduce nutrient runoff into our lakes from upstream. The City's Stormwater Management team is also concerned about the amount of rainfall, which has been increasing due to climate change. Madison strives to be ahead of the curve in studying exactly what this will mean for our city and the changes required to prevent flooding and improve the resilience of our stormwater infrastructure.

The following goals and actions aim to create a water system that protects community health, improves water quality, and advances climate resilience. The goals and actions in Healthy Ecosystems (pg. 70) also help keep our water clean and abundant.

Yahara WINS

The Yahara Watershed Improvement Network (Yahara WINS) aims to reduce the amount of phosphorus in lakes throughout the Yahara watershed. Phosphorus is an important nutrient, but too much causes harmful algal blooms in our lakes. Led by the Madison Metropolitan Sewerage District, Yahara WINS works with many partners in the Yahara watershed to keep more phosphorus from entering our waterways. It also helps us meet the water quality standards established by the Wisconsin Department of Natural Resources (WDNR). Partners include cities, villages, towns, county agencies, wastewater treatment plants, agricultural producers, environmental groups, and others.

Wisconsin Salt Wise

We need to use salt during the winter to keep roads and other surfaces safe. However, its application comes with a heavy cost. The widespread use of salt has led to the steady salinization of our streams, rivers, and lakes in Madison and across the state. It only takes one teaspoon of salt to pollute five gallons of water to a level that is toxic for plants and animals that live in streams and lakes. It is very expensive to remove salt from water, meaning once it enters the water it is unlikely to leave.

The Madison Salt Certification Program encourages winter maintenance professionals to use the least amount of salt necessary to keep parking lots, roads, sidewalks and driveways safe. Since it began in 2017, the program has certified over 300 professionals in Dane County. See Wisconsin Salt Wise for more information.

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GOAL 14	**Ensure surface and drinking waters remain clean by reducing existing sources of contamination and preventing new ones from developing.**
METRICS	Concentration of Per-and Polyfluoroalkyl Substances (PFAS), chlorides, and phosphorus in local surface and drinking water
ACTION 14.1	Reduce and eliminate the spread of PFAS contamination into surface and groundwaters in collaboration with county, state, and federal partners, eventually removing surface waters from the WDNR's Impaired Waters List for PFAS and achieving levels of PFAS below state and federal drinking, ground, and surface water standards.
ACTION 14.2	Minimize the use of chlorides (salt) as part of winter street operations and water softeners to help reduce their movement into surface and groundwater, with the goal of eventually removing Lake Wingra from the WDNR's Impaired Waters List for chlorides, preventing additional listings on the 303D list, and achieving declining levels of chlorides in our drinking water.
ACTION 14.3	Reduce urban non-point source pollution discharges to surface water and meet the City's NR151 removal requirement, for example through continuous improvement of leaf collection and street sweeping, expanding green infrastructure, and implementing other practices that reduce phosphorus and total suspended solids in urban runoff.
ACTION 14.4	Support increased stormwater management on private properties, for example by expanding the pilot grant program to help property owners install rain gardens, rain barrels, cisterns, and permeable pavement.

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ACTION 14.5	Operate and maintain the City's wastewater collection system to provide adequate capacity to convey all peak flows, eliminate infiltration and inflow, and prevent sanitary sewer overflows to protect water quality, the environment, and public health.
ACTION 14.6	Continue to collaborate with Dane County and other partners to reduce regional agricultural runoff into the Yahara River watershed.
GOAL 15	**Expand water conservation efforts to reduce peak load and annual water use by 10% from 2020 levels by 2030.**
METRICS	Annual peak load and water use
ACTION 15.1	Increase water conservation by residential, commercial, and industrial users through, for example, expanded Water Utility appliance replacement programs, reduction of irrigation on residential and commercial properties, cisterns, utilization of rain and grey water in buildings, and expanding public education efforts.
ACTION 15.2	Conserve water by reducing supplemental water usage on turf and landscape areas within Olbrich Botanical Gardens, parks, and golf courses and focusing on selecting native and non-native species that can tolerate increasingly more extreme shifts in weather and climate.