

The Milwaukee Water Works is recognized nationally as a leader in providing high-quality drinking water and for its comprehensive water quality monitoring program. The Milwaukee Water Works began operations on Sept. 14, 1874. We are proud to serve as the longest continuously operating water utility in the State of Wisconsin.

While contributing to a high quality of life, the water works also provides a reliable supply of pure water at a low price to support business, industry, and research.

The utility is owned by the City of Milwaukee and provides water to over 860,000 people in 16 communities in Milwaukee, Ozaukee, and Waukesha Counties: Milwaukee, Brown Deer, Butler, Greendale, Greenfield, Hales Corners, Shorewood, St. Francis, Wauwatosa, West Allis, and West Milwaukee. We also provide water to the Milwaukee County Grounds facilities and portions of Franklin, Menomonee Falls, Mequon, New Berlin, and Thiensville. The service area covers 196 square miles. Eleven of these are wholesale customers who receive Milwaukee water and operate their own water utilities. The others are retail customers who receive full water service, including customer billing and distribution system maintenance.

Governance

A division of the Department of Public Works, the utility is governed by the Mayor and Common Council. The utility is regulated by EPA and the Wisconsin Department of Natural Resources for facilities, operations, and water quality; and the Public Service Commission of Wisconsin for rates. The utility's budget is funded through revenue from water rates and proceeds of borrowing. In addition to water service, the utility provides a financial benefit to the City. In 2014, the utility made a \$12.4 million Payment In Lieu Of Taxes to reduce the city tax rate. The utility pays other city departments for services it uses and covers the cost of its own employee benefits.

Publicly Owned

Water rates, not taxes, pay the cost to purify and pump the water and keep infrastructure in reliable working condition. As a non-profit agency, we continuously reinvest revenue from rates in our utility. Since 1993, the Milwaukee Water Works has invested over \$459 million in its treatment plants, pumps, water mains, and booster stations to ensure a reliable supply of pure, fresh water.

The operating budget covers financial needs of the utility's work units. The Milwaukee Water Works is organized for maximum efficiency, and employs 308 professionals, down from a peak of 570 employees in 1966.

- At the two Water Purification Plants which provide round-the-clock service, Water Quality staff ensure the water meets quality regulations. The Supervisory Control and Data Acquisition System (SCADA) provides real-time data about the utility's operations and water quality monitoring.
- Water Distribution provides scheduled preventive maintenance and repair of 1,956 miles of underground piping, and responds to emergencies 24-hours-a-day.
- Water Engineering provides applied research and manages the Capital Improvements Program.
- Business includes customer service, accounting, billings and collections, and public outreach.
- Meter Services ensures meters operate properly and accurately represent water use.

Milwaukee Water Rates

Milwaukee's water rates are determined by the Public Service Commission of Wisconsin (PSC) and are intended to ensure the financial stability of the utility and fair value for customers. Water charges based on water use in

Ccf (one hundred cubic feet, or 748 gallons) include a service charge, fire protection charge for hydrant maintenance, and a use charge. Find additional information on our website: [Milwaukee.gov/waterCustomerService](http://milwaukee.gov/waterCustomerService) (<http://milwaukee.gov/water/customer/CurrentWaterRates.htm>)

Residential customers are billed quarterly; most commercial accounts are billed monthly. The Milwaukee Water Works uses a declining block rate in which cost per unit of volume decreases with usage. This rate structure is appropriate where there is an abundant, renewable supply of water, Lake Michigan, and all water is returned to the lake. The utility has more than adequate treatment and distribution capacity so there is no need to build or expand facilities to meet demand.

Milwaukee water is an excellent value. Including service charge, fire protection charge, and water use charge, two gallons cost one cent. Residential customers typically pay less than \$220 a year for water.

Water Purification

The Milwaukee Water Works treats Lake Michigan water with ozone as the primary disinfectant to destroy microorganisms that cause disease, reduce the formation of disinfection byproducts, and remove taste and odor. Particles are removed through coagulation, flocculation, settling, and biologically active filtration. Chlorine is a secondary disinfectant. Fluoride is added to reduce dental cavities. A phosphorous compound is added to control pipe corrosion to prevent lead and copper that may be present in pipes from leaching into the water. Chloramine disinfection maintains a residual in the distribution system. We continuously conduct water quality monitoring, or sampling, from the lake source water to the distribution system of nearly 2,000 miles of mains that carry an average of 103 million gallons of clean, fresh water every day.

The treated water enters homes and businesses through a service line pipe and a water meter. After you use water, it leaves your property through the sanitary sewer pipe and flows to the Milwaukee Metropolitan Sewerage District treatment facility where it is treated and returned to Lake Michigan.

Water Quality Monitoring Program

The Milwaukee Water Works analyzes Lake Michigan water and treated drinking water for regulated and non-regulated contaminants, including pharmaceuticals. These compounds are present in the lake water but none have been found in Milwaukee's treated drinking water. We continuously conduct water quality monitoring, or sampling, from the lake source water to the distribution system.

Our water quality monitoring and screening activities include organisms and contaminants that are not yet regulated but considered of emerging concern, or micro-pollutants. The utility tests source and treated drinking water for over 500 contaminants while the EPA requires tests for 91. The monitoring is conducted as a precaution to ensure safe water, to collect baseline data for study, and to meet future regulations. The expense of testing for unregulated compounds provides customers with added assurance and confidence in Milwaukee water quality and service.

A strategy to operate as efficiently as possible

Water use in Milwaukee has steadily declined during the past three decades, a result of more efficient water use, high-efficiency appliances and industrial machinery, and conservation and changes in the industrial landscape. Water sold decreased about 2% each year from 58 billion gallons in 1976 to 29.9 billion gallons in 2014. Milwaukee's water users have reduced water usage by 27% from 2000 through 2014. This is without promoting conservation (but with a Use Water Wisely program helping customers find and fix leaks, avoiding wasted water and controlling customer costs).

- The daily per-person, indoor and outdoor use in Milwaukee was 93 gallons in 2014 (calculated using water sold to residential customers only). The U.S. Geological Survey reports daily per-person use of 80-100 gallons.

- Wastewater and sewer charges are based on water usage, driving customers to use less water to hold down charges.

Average daily pumpage for 2014 was 103 million gallons. The utility could provide over 100 million additional gallons per day while maintaining capacity for emergency fire suppression. Less water sold translates into declining revenue as costs to treat and pump drinking water increase. As water use and revenues fall, the MWW focuses on reducing costs, making operational efficiencies, and using sustainable practices. The strategy results in savings in energy, chemicals, manpower, and other costs to maintain low and reasonable water rates.

Part of this strategy is the practice of supply-side conservation. The utility saved over one billion gallons of water from 2006 to 2014 through operational changes in treating and distributing water, flushing mains and hydrants. It would take decades of conservation by utility customers to equal this amount of water savings. We have several ongoing projects to assist in increasing efficiency of operations:

- Replacement of Automatic Meter Reading devices, meters, and batteries
- Streamlined system for payment of Municipal Services Bills
- Wireless work-orders for field operations and repairs using tablets

Infrastructure

The capital budget is based on long-term planning to replace or upgrade existing infrastructure, and to install new infrastructure as needed. The Capital Improvements Program prioritizes projects based on results of water-related research, new technology, and condition assessments of existing systems. The program includes treatment processes, buildings, laboratories, pumping and water storage, equipment, water mains, and hydrants. A multi-year project to provide backup electric power generation for five critical infrastructure sites is underway with design and installation of diesel generators to power treatment processes and pumps in the event of an electrical outage.

Meter Replacement Program

The Milwaukee Water Works is replacing 155,967 water meters in homes and small businesses in Milwaukee, and its retail customer communities of Greenfield, Hales Corners, St. Francis, and West Milwaukee. Customers with meters sized one-inch or smaller receive a new meter, automated meter reading device (AMR), and battery. The original meters were installed in 1996 and the batteries are reaching the end of their useful life. The replacement project will continue over several years to allow for normal meter service operations and maintenance.

Customer Service

The Milwaukee Water Works manages the billing for the Municipal Services Bill which, in addition to water, includes charges for five City of Milwaukee services and two Milwaukee Metropolitan Sewerage District (MMSD) charges. The utility forwards the payments to the City Treasurer for distribution to other city departments and the MMSD. This naturally generates inquiries from the public. In 2014, the Customer Service Center received 187,151 calls and served 28,153 customers at the Customer Service Counter at utility offices in the Zeidler Municipal Building.

Electronic Payment Collection

More and more customers are embracing electronic payment of their bills: MasterCard, Discovery Card, and eCheck through the utility's website and over the telephone using the interactive voice response system (IVR). These represent about 15% of funds collected. When electronic payment service began in 2006, only 4% of all bill payments were processed electronically using only Automatic Clearing House (ACH).

Water Service Critical to the economy

2014 was a year of growth for water-related business in Milwaukee. Coca-Cola, one of the Milwaukee Water Works' largest customers, invested \$30 million in its bottling and distribution center on Brown Deer Road. We

have the reliable, renewable water they need. MillerCoors is building a craft beer facility and expansion of bottling. In our regional food and beverage cluster, there are over 15,000 employees earning living wages at manufacturing and retail operations, with payroll over \$580 million.

Milwaukee's Global Water Center is growing. The City began building the Global Water Technology Business Park, formerly known as the Reed Street Yards. The Milwaukee Water Works provided engineering review and inspection of water mains and service lines to meet the growing demand for water from the new and existing water business and research developing in the park.

2014 Statistics

- Organization - April 18, 1871
- Service of Original Water Works began Sept. 14, 1874
- Public Utility Owned by the City of Milwaukee
- Population Served - 864,653
- Area Served - 196 Square Miles
- Miles of Water Mains - 1,963
- Main Breaks – 930
- Number of Fire Hydrants - 19,870
- Number of Valves - 49,838
- Metered Accounts - 162,405
- Service Connections – 168,731
- Total Annual Water Sales – 29.9 Billion Gallons
- Average Daily Pumpage - 103 Million Gallons
- Daily System Practical Capacity - 360 Million Gallons
- Number of Employees – 308
- Operating Revenues - \$83,917,000
- Operating Expenses - \$78,342,000
- Operating Income - \$5,757,000

Milwaukee Water Works Customer Service Center, Open Monday-Friday, 7:30 a.m. to 5 p.m.

Phone (414) 286-2830 TDD (414) 286-8801 Fax (414) 286-5452

24-Hour Water Control Center (414) 286-3710

Email for non-emergency contact: watwebcs@milwaukee.gov

Please visit our website, <http://www.milwaukee.gov/water>

The Milwaukee Water Works is a member of the [American Water Works Association](#), the [Association of Metropolitan Water Agencies](#), the [Water Research Foundation](#), the [Wisconsin Water Association](#), the [Wisconsin Rural Water Association](#), the [Milwaukee Water Council](#), and the [M7 \(FaB\) Food and Beverage Network](#).