



**Madison
Water Utility**



2017-2018 ANNUAL REPORT

TABLE OF CONTENTS

INTRODUCTION	1
PROJECTS.....	3
FINANCES	9
WATER QUALITY	13
WATER SUPPLY & OPERATIONS.....	19
EDUCATION & OUTREACH	23
ADDITIONAL RESOURCES	31

Cover photo: Students from Thoreau Elementary School sign a water main at the 100th Mile Celebration on September 14, 2017.

Date issued: **DATE FINAL REPORT IS APPROVED BY BOARD**

This reporting period includes audited 2017 financial statements, 2017 Water Quality monitoring, and 2017-2018 projects, events, and operations.

DRAFT

INTRODUCTION

Purpose

Section 13.01(3) of the Madison General Ordinances establishes the duty of the Madison Water Utility Board to “issue an annual report that shall be made available to the Common Council.”

Mission Statement

We are entrusted by the people of Madison to supply high quality water for consumption and fire protection at a reasonable cost, while conserving and protecting our ground water resources for present and future generations.

History of the Madison Water Utility

Founded as a public utility in 1882, Madison Water Utility (MWU) is proud to bring safe, high-quality water to more than 250,000 people across Madison, Shorewood Hills, Blooming Grove, Maple Bluff, parts of Fitchburg, the Town of Madison, and the Town of Burke. MWU has always been a groundwater system in spite of being surrounded by lakes. A deep, high-quality aquifer beneath Madison is the source of our water supply.

MWU has 23 active deep wells, 33 reservoirs, and 895 miles of water main. It is a public water system owned and operated by the City of Madison and governed by the Water Utility Board under General Manager leadership. Like other water utilities in the state, the Public Service Commission of Wisconsin regulates the utility in matters of rates, rules and levels of service. Its operations and infrastructure projects are funded by water rates, not property taxes.

Water Utility Board Governance

The [Water Utility Board](#) is described by state statute and city ordinance. The board is charged with authority for managing and operating MWU under the general direction of the Common Council. It is made up of seven voting members appointed by the Mayor and confirmed by the Common council. The Director of Public Health (or his/her designee) is an ex officio member.

The Water Utility Board has adopted policies that define the benefits MWU provides to the residents of Madison, establish financial and ethical boundaries, and describe how the board carries out its own tasks. Board meetings are open to the public and generally held on the fourth Tuesday of every month.

Madison Water Utility Board Members

OFFICERS

- *President:* Lauren Cnare
Communications Director, The Society of St. Vincent de Paul
- *Vice President:* Eugene McLinn
National Sediment Market Leader, Burns & McDonnell
- *Secretary:* Patrick Delmore, Ph.D.
Instructor, Edgewood College School of Education

ALDER BOARD MEMBERS

- Marsha Rummel, District 6
- Michael Tierney, District 16

CITIZEN MEMBERS

- Michael Dailey
Retired Deputy City Engineer, City of Madison
- Debra Simon
Retired Budget and Audit Manager, City of Madison

PUBLIC HEALTH APPOINTMENT (EX OFFICIO MEMBER)

- Doug Voegeli
Director of Environmental Health, Public Health of Madison and Dane County

PAST BOARD MEMBERS WHO SERVED DURING THIS REPORTING PERIOD (2017-2018)

Madeline Gotkowitz, Bruce Mayer, David Ahrens, and Arvina Martin.

Madison Water Utility Senior Leadership Team

- Tom Heikkinen, General Manager
- Al Larson, Principal Engineer
- Joe DeMorett, Water Supply Manager
- Joseph Grande, Water Quality Manager
- Dan Rodefled, Operations Manager
- Jeffrey Stanek, Chief Financial Officer
- Amy Barrilleaux, Public Information Officer

PROJECTS

Current and Upcoming Projects

Madison's water infrastructure plays a crucial role in our city's public health, safety and economic well-being. Though most of it is out of sight—and often out of mind—a failure to invest in our water infrastructure could lead to disruptions in service, inadequate fire protection, and significant and costly damage to roads, homes, and businesses.

MWU invites residents to become active in the development of our projects through participation in our [Citizen Advisory Process](#) (CAP). Through this participatory process, MWU receives valuable input and feedback which helps produce high quality projects that meet and exceed public expectations.

Water Main Projects

It is estimated that about 300 miles of the city's 900 miles of [water mains](#) are deteriorating and in need of replacement. At an approximate cost of \$1.5 million per mile, replacing water mains is a significant and growing expense. However, a failure to take care of this infrastructure would lead to increased main breaks, disruptions in service, and significant and costly roadway and property damage. MWU has been ramping up main replacements for the last decade, focusing on the pipes with the highest failure rates—generally those that were installed during the post-WWII boom era.

Most of MWU's water main replacements are completed in conjunction with larger street reconstruction projects. In accordance with industry best practices, the old pipe is replaced with modern cement-lined ductile iron pipe, wrapped with plastic sheeting to protect against corrosion. Today's pipe installations are expected to last 100+ years. In some cases, it is possible to reduce digging and save money by creating a new pipe within the old one using the latest lining technology. MWU was the first water utility in Wisconsin to use this technology.

Projects in 2017 included over 8 miles of water main replacement and over two miles of pipe lining work. Madison Water Utility also celebrated a major milestone—100 miles of main replaced or relined since the utility began its Water Main Replacement Program in 2005. The 100th mile of main was installed during a street replacement project on Yuma Drive, and a small celebration with neighbors, nearby Thoreau elementary students, and MWU employees was

held on September 14, 2017. Attendees were invited to sign a 504 lb section of ductile iron pipe and watch as it was lowered into place six feet below street level.



100TH MILE CELEBRATION ON YUMA DRIVE, SEPTEMBER 2017

2018 water main projects included over 6 miles of water main replacement, including a 2-mile \$3.6 million replacement project on Monroe street.

Lakeview Reservoir Reconstruction

[Lake View Reservoir](#) provides water storage and fire protection to a large portion of the Lake View Hill Neighborhood. The old reservoir was undersized and had reached the end of its useful life. MWU used this site to improve water storage for the city's north side by constructing a new two-zone reservoir with a capacity of 1.3 million gallons in its place. This is the first dual-zone water tower ever built in Wisconsin.

Construction began in the summer of 2015 and included reconstruction of the water tower and three projects to upgrade the water mains nearby. The water tower reconstruction cost \$5.2 million, and the cost for upgrades to nearby water mains and the booster pump station is \$2 million.

The tower earned a 2018 Engineering Excellence Best of State Award from the American Council of Engineering Companies (ACEC) of Wisconsin and earned a national Honor Award from ACEC in Washington D.C.



LAKEVIEW WATER RESERVOIR BEFORE AND AFTER

Paterson Street Operations Center Reconstruction

MWU currently operates out of two facilities: the Heim Building at 119 East Olin Avenue and the [Operations Center](#) at 110 S. Paterson St. The Operations Center dispatches service vehicles, houses heavy equipment and spare parts, and provides workshop areas for maintenance of vehicles and equipment. The old facility was undersized and did not meet work needs with regard to functionality, employee health and safety, and work flow. Construction on a new operations center began in 2015 and was completed in 2017 with upgrades to the vehicle storage building across the street. The cost for this project was \$15.2 million.

The new Operations Center earned two 2018 Engineering Excellence awards from ACEC Wisconsin, including a Best of State award for innovative storm water design. The new facility was also honored with a Project of Distinction Award by the Association of Builders & Contractors and a national ACEC Recognition Award.



NEW OPERATIONS CENTER AT 110 S PATERSON STREET

Well 31

A [new well](#) and reservoir was necessary to improve firefighting capacity and system reliability to the southeast part of the city. A site on Tradewinds Parkway was selected, and the well was drilled in 2013. Construction of a \$1.6 million ground storage reservoir with a capacity of 1.5 million gallons began in 2015 and was completed in 2016. Construction of the well and iron and manganese filter building (which cost \$5.9 million) began in the spring of 2017 and was completed in 2018.



WELL 31 ON TRADEWINDS PARKWAY

Well 31 is MWU's first new well in 12 years, the longest the utility has ever gone without building a new well.

Blackhawk Water Tower

A [new 1 million gallon water tower](#) near the intersection of Pioneer and Old Sauk Road will improve emergency water supply, fire protection, and system reliability on Madison's far west side. It is a composite-style water tower with a poured concrete base topped with a steel tank. Construction began in 2017 and the tower went into service on December 4, 2018. The project will be completed in 2019 with ancillary work within the structure and landscaping, paving, and final grading on the site.



A CRANE LIFTS A SECTION OF THE STEEL ROOF INTO PLACE AT THE TOP OF BLACKHAWK WATER TOWER.

The land for this site is in the Town of Middleton and was annexed to the City of Madison as part of this project. Current planning agreements between the Town of Middleton, City of Verona, and City of Madison place Madison's future westernmost border along Pioneer Road.

Water Conservation House

The [Water Conservation House](#) will be a demonstration home that features innovative water and energy efficient building systems in a modest, 2-3 bedroom single-family home. It will be built on property MWU currently owns, used for conservation outreach and education, and ultimately sold. Current plans will cut per-person municipal water use by half and include:

- A 500-gallon rainwater harvesting system
- Energy efficient water heating, including a wastewater heat recovery system
- Native plants, turf, rain gardens and permeable pavement designed to keep nearly all rainwater on site.
- High-efficiency appliances and plumbing fixtures

FINANCES

Billing and Rates

Current rates

MWU's charges represent about one third of the total average [Madison Municipal Services bill](#). In addition to water, Madison's Municipal Services Bill includes items levied by other city agencies including sewer, stormwater, landfill and urban forestry charges.

The average Madison residential customer pays \$26.52 per month in water charges. Since 2015, a conservation rate has been in effect for residential (single family homes and duplex) customers. MWU is the largest utility in Wisconsin to offer a conservation rate for its residential customers.

RESIDENTIAL RATES

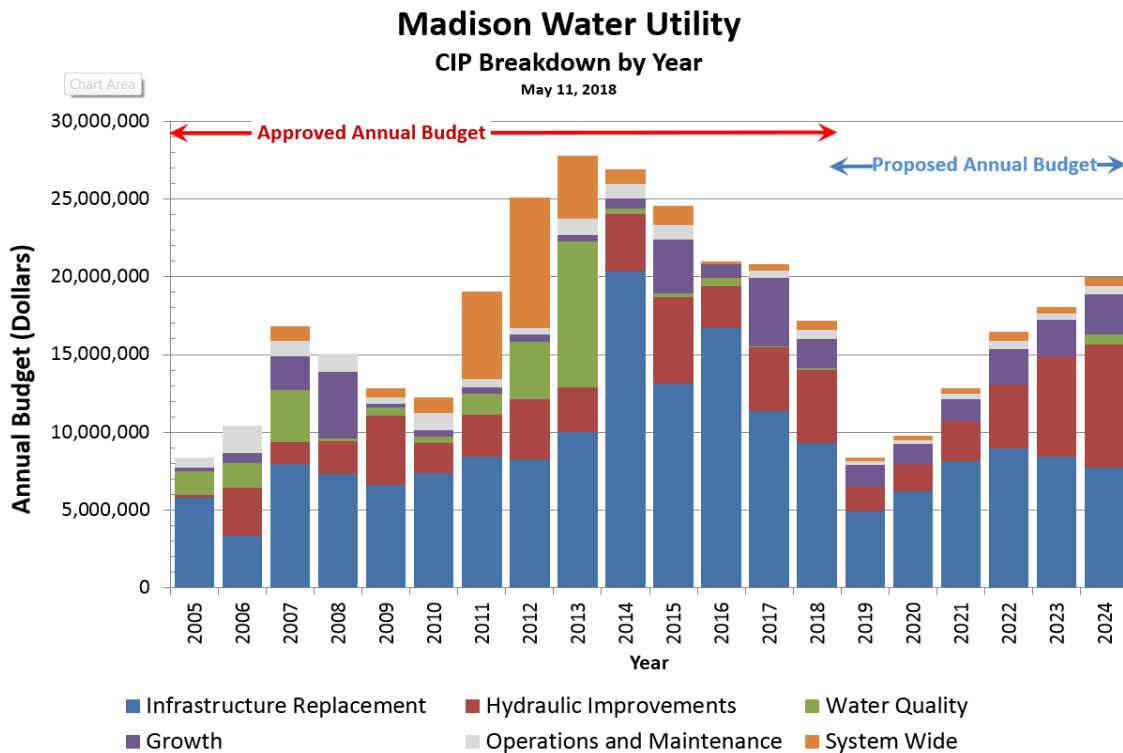
Usage per billing month	Cost per 1,000 gallons
First 3,000 gallons	\$3.41
Next 3,000 gallons	\$4.55
Next 3,000 gallons	\$5.46
Next 5,000 gallons	\$7.85
Over 14,000 gallons	\$9.40

The base charge for most residential customers is \$11.74.

The current rates went into effect on November 2, 2018. MWU currently anticipates continuing revenue increase needs from 2020 through 2024 to fund infrastructure replacement and keep up with inflation.

Capital Improvement Program and Budget

MWU has been committed to renewing and rebuilding aging infrastructure, improving water quality, and providing reliable service both now and in the future. Reflecting that effort, funding of our Capital Improvement Program (CIP) increased over the last decade to over \$20 million per year. Proposed annual budgets for 2019 and 2020 significantly reduce spending in order to keep the utility's debt load and rate increases in check.



2017 Financial Highlights

- Total operating revenues decreased \$633,000 or 1.8% from 2016 to 2017, while pumpage decreased 4.4% for that same period. Although pumping decreased 4.4%, the utility added 475 new customers in 2017, the highest number of new customers added since 2007 (536).
- Income before capital contributions and transfers decreased \$4 million or 49% from the prior year. The decrease was due to \$2 million in tank painting expenses, increased interest expense of \$700,000 on outstanding debt, and increased depreciation expense of \$600,000.
- As of December 31, 2017, MWU had a negative unrestricted operating cash balance of \$6.1 million. The City of Madison manages operating cash through a centralized treasury function for all city-wide funds including MWU. Deficiencies in operating cash are presented as a due to/due from the city. This balance represents the necessary cash funding to adequately fund restricted cash accounts maintained as a requirement of the utility's bond covenants. The utility will borrow for capital and operating needs in December 2018.
- On August 15, 2017, the City of Madison acquired the assets and customers of Waunona Sanitary District #2. Waunona Sanitary District #2 had been a wholesale customer. The acquisition included 4.5 miles of main, 392 service laterals, 27 hydrants and 465 meters.

Long-Term Debt

The vast majority of MWU's facility and infrastructure projects are funded through the sale of revenue bonds. The utility's last borrowing was late in 2018 to cover operating and capital budgets for 2018 and 2019.

Date	Purpose	Final Maturity	Interest Rates	Original Amount	12/31/17 Amount Outstanding
REVENUE BONDS					
12/09/09	Refunding debt and system improvements	1/01/30	2-5%	\$48,540,000	\$37,550,000
11/10/10	System improvements	1/01/31	0.90-5.25%	\$13,250,000	\$9,895,000
12/22/11	System improvements	1/01/32	2- 4%	\$19,370,000	\$15,565,000
12/19/12	System improvements	1/01/33	2- 4%	\$21,095,000	\$17,640,000
12/18/13	System improvements	1/01/34	3-5%	\$24,335,000	\$21,645,000
12/17/15	System improvements	1/01/36	2.85-5%	\$41,610,000	\$40,125,000
12/28/16	Refunding debt and system improvements	1/01/37	1.24-3.82%	\$38,420,000	\$36,255,000
Totals				\$206,620,000	\$178,675,000
ADVANCE FROM MUNICIPALITY					
10/19/10	Payoff unfunded pension liability	10/01/24	3.41%	\$1,404,052	\$915,926
01/01/08	Advance from City, Burke Utility District #1	n/a	0.83%	\$393,762	\$447,308
LOAN FROM MUNICIPALITY					
08/04/05	Advance from City of Madison ¹	n/a	See note below.	\$4,573,000	\$1,530,000

¹ In 2005, the Common Council approved a loan from the City of Madison to MWU to be used as financing with interest charged monthly at 0.25% higher than the monthly rate earned through the city's investment pool. MWU is making payments of \$765,000 a year plus interest.

WATER QUALITY

The [Annual Water Quality Report](#) was issued in May 2018; the data in the report was from 2017. Madison drinking water meets all primary (health-based) drinking water standards. MWU routinely collects more samples and runs more tests than are required by the EPA and DNR. Online, customers can find out [which wells serve their address](#) and receive detailed water quality information for those well(s).

Disinfection

[Chlorine](#) is used in very small amounts (generally 0.3 milligrams per liter) to destroy harmful water-borne viruses, bacteria and microbes. The chlorine disinfects the water and a residual amount continues to offer protection from bacteria and viruses after water leaves our well facilities and travels through miles of pipeline to people's homes. The rarity of samples that show the presence of coliform bacteria is an indication of the adequacy of MWU's disinfection.

Fluoride

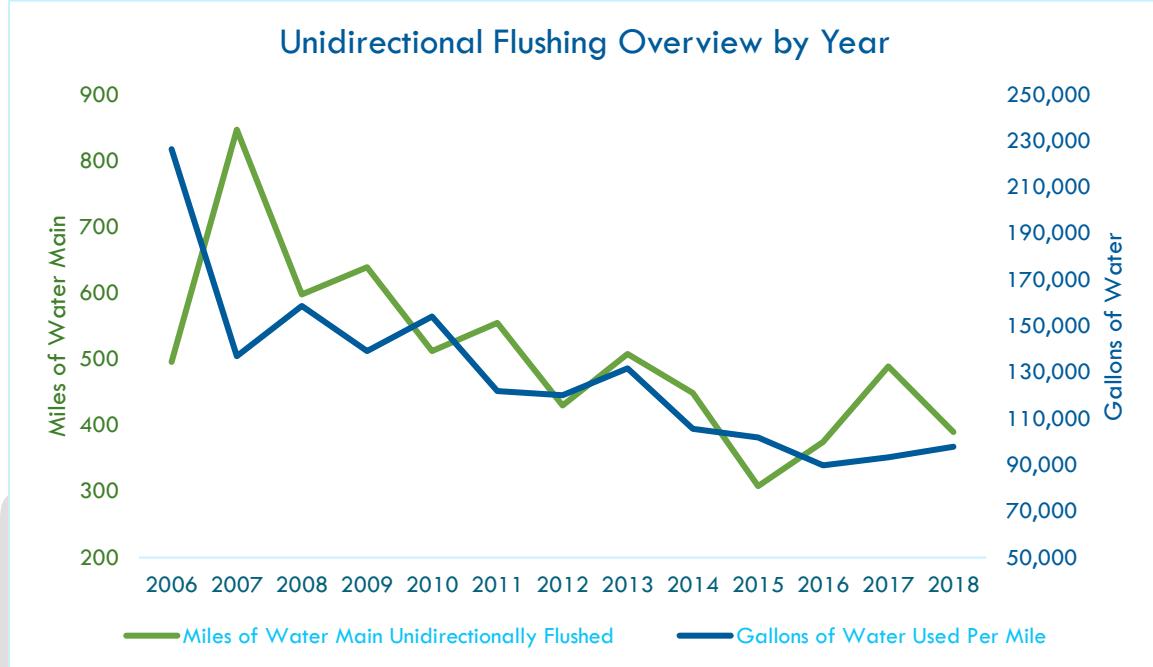
MWU began adding fluoride to Madison's water in 1948 at the direction of the Common Council. The move was part of a city policy to reduce the risk of dental cavities, particularly for children with little access to routine dental care. Madison Water Utility currently follows the [recommendation of Public Health Madison Dane County](#) (PHMDC) with regard to fluoride levels added to drinking water.

Water Main Flushing

To improve water quality and minimize discoloration, water mains are [comprehensively flushed](#) by a technique known as unidirectional flushing. The procedure is performed in warm-weather months and involves systematically opening hydrants and valves to force the water through at high velocity. This cleans the pipes by removing accumulated mineral sediment. In 2018, 390 miles of water main were flushed unidirectionally.

As the graph below illustrates, MWU has improved the water efficiency of its flushing program over the years. From 2007-2012, MWU's collaborative research partnership with UW-Madison's Department of Civil and Environmental Engineering was focused on optimizing flushing

operations. Based on this research, MWU has developed data-based annual flushing plans that have resulted in significant cost and water savings.



Each year, MWU also does some conventional water main flushing. Conventional flushing also removes accumulated sediment from pipes, but it involves the flushing of multiple hydrants at a time and does not include the valving off of individual sections of main, thereby diminishing the “scouring” efficiency. Conventional flushing is used in areas of the city where fewer minerals build up in the mains. In 2018, approximately 406 miles of water main were flushed using conventional methods.

Flushing operations and disturbances like fire suppression, flow tests, and main breaks can cause temporary low pressure and discolored water. If discoloration occurs, customers should open the cold tap nearest the water meter—usually a basement sink—to full flow until the water runs clear. In some situations, this may take 5 to 10 minutes. If discoloration continues, customers should contact Water Quality at (608) 266-4654.

Source Water Protection

Protecting our groundwater resources requires the combined efforts of many entities including MWU, regulatory agencies, and individual customers and businesses. Potential sources of groundwater contamination include:

- Hazardous chemical spills and leaks.
- Improper use and disposal of chemicals, including fertilizers and pesticides.
- Unused or improperly abandoned private wells.

MWU's [Wellhead Protection Program](#) identifies land areas that contribute groundwater to our drinking water wells as well as potential contamination sources. City of Madison ordinances allow the restriction of future land uses within these zones in order to reduce the risk of water supply contamination.



A SIGN ON UNIVERSITY AVE. SIGNALS THE WELLHEAD PROTECTION AREA FOR WELL 14.

Road salt and Well 14 study

Madison relies on road salt to maintain safe conditions on our roads, sidewalks, parking lots and driveways during our Wisconsin winters. But oversalting leads to irreversible environmental damage, especially for our waterways. Road salt is contaminating local water bodies and the aquifer, our drinking water source. Salt infiltration has been observed in at least six of Madison's 22 drinking water wells.

Well 14 on University Ave. has shown the most dramatic rise in chloride levels. MWU launched [a series of studies](#) of how salt is contaminating groundwater that supplies Well 14, evaluate potential impacts of well reconstruction such as bore hole casing extension on overall water quality, and investigate ways to reduce chloride levels.

Treatment to remove salt, like reverse osmosis or ion exchange, is costly to install and even more expensive to operate. However, it is possible to dramatically lower road salt use while maintaining winter safety. The City of Madison Streets Division has been pre-treating some roads with a brine solution before winter storms hit, which can reduce salt use by up to 70 percent. The City of Madison has also implemented a voluntary [Winter Salt Certification Program](#) open to all in Dane County. This program encourages winter maintenance professionals to use the least amount of de-icing material necessary in order to keep parking lots, roads, sidewalks and driveways safe while protecting our water resources.

More information about the road salt issue and how to make a difference is available [on MWU's website](#) and at WiSaltWise.com.

Well 27 Radium Study

Madison Water Utility has been conducting a study of [Well 27](#) on North Randall Ave. after test results in 2015 showed higher-than-expected radium levels. Radium has always occurred naturally in rock that makes up Madison's aquifer, and levels at Well 27 have never violated federal health standards. However, MWU takes these results very seriously and will continue to closely monitor the well.

MWU staff has partnered with experts from the Wisconsin Geological and Natural History Survey to analyze the original rock cuttings pulled from Well 27 when it was drilled in 1989. The analysis shows that there are two formations that could be contributing radium to the water, one at the bottom of the well's bore hole and one near the top. Phase two of the study will be to test the water at various depths within the Well 27 bore hole and determine whether sealing off certain rock formations will have an impact on radium levels. Due to budget constraints, this phase of the study has been postponed.

Well 8 Groundwater Study

Located in Olbrich Park on Madison's east side, [Well 8](#) is a seasonal well that provides additional supply and fire flow protection during the high-demand summer months. Well 8 became the focus of neighborhood concern after a chemical called PCE (tetrachloroethylene) was found in groundwater nearby. The contamination plume originated from the Madison Kipp Corporation property nearby. Though PCE has never been detected at the well, MWU has hired independent consultants to review all available information, analyze groundwater movement, and locate appropriate sites for additional monitoring wells that would identify groundwater contaminants before they reach the well. A monitoring well installation was originally scheduled to move forward in 2018 but has been postponed due to budget constraints.

Per- and Poly-fluoroalkyl Substances / PFAS

In 2015, MWU tested for a group of chemicals known as [PFAS](#) (or Per- and Poly-fluoroalkyls). These chemicals are widely used in food packaging, flame-retardants, cookware, fabrics, upholstery, and firefighting foams. The utility looked for six different types of PFAS in every Madison well, but none were found.

In 2017, Madison Water Utility tested five wells again using methods that were more sensitive. The wells were located near landfills or the airport, places where PFAS can be found. PFAS were detected at very low levels in two of the wells tested. Well 15 showed trace amounts of five PFAS, with a combined concentration of 0.032 µg/L (parts per billion). Well 16 showed trace amounts of one type of PFAS, and levels were much lower. The EPA has established a Health

Advisory Level for two of these types of chemicals, which is a combined 0.070 µg/L for PFOA and PFOS. The Health Advisory Level does not currently include any other types of PFAS.

In 2018, MWU expanded testing to include more types of PFAS at these two wells, and initiated a computer modeling and mapping study for Well 15. Based on the study, Madison Water Utility concluded that Truax Air Field is the likely source of low levels of PFAS detected at Well 15.

In 2019, PFAS testing will be further expanded to include all wells, using labs that are able to detect as many as 30 different types of PFAS compounds at very low levels.

Cross Connection Control Program

A cross connection is an actual or potential connection between the public water supply system and a source of contamination or pollution. The most common cross connection is a garden hose, which is easily connected to the water supply system and is often used for the application of potentially dangerous substances like chemicals and fertilizer. Under certain conditions, backsiphonage or backpressure could be created in a water line, which may pull, siphon or force contaminant-laced water back into the building's piping system or our drinking water supply. For this reason, a hose connection vacuum breaker should be installed on each faucet or hose bibb that is connected to the drinking water supply.

MWU'S [Cross Connection Control Program](#) is designed to safeguard public health and ensure that contaminated water cannot backflow into our clean drinking water supply. This program includes the following components:

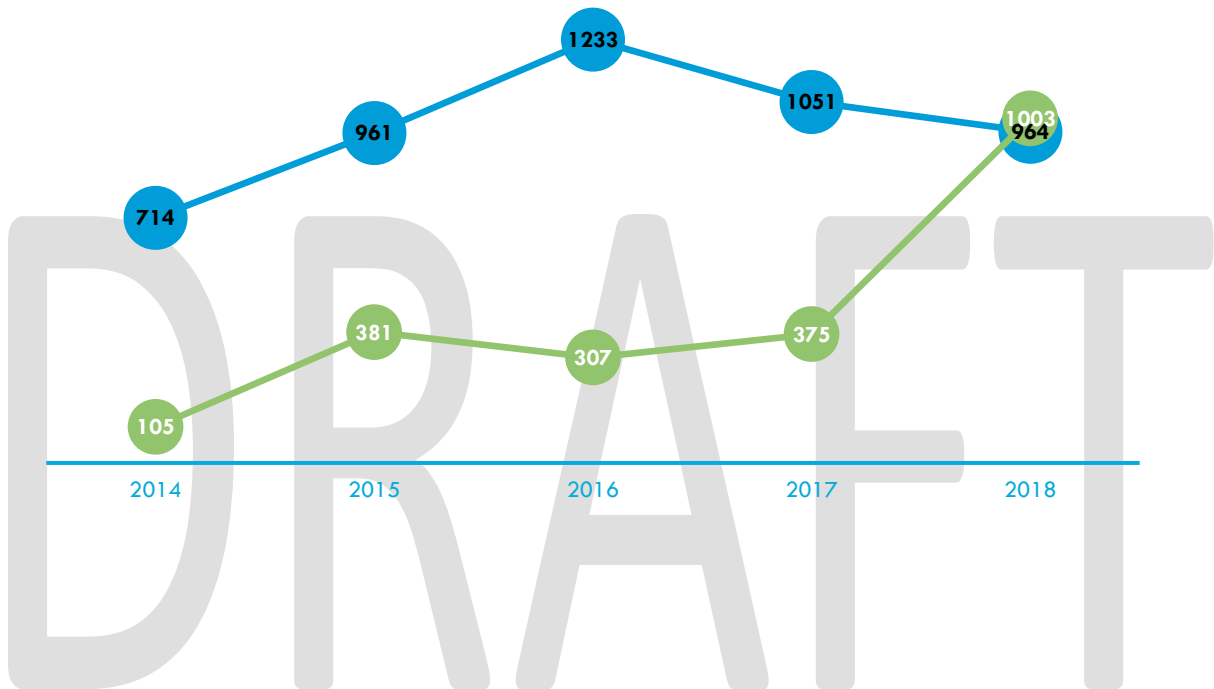
- **Cross Connection Control Inspections** – Commercial, industrial, and residential plumbing systems are inspected to determine if any cross connections exist. Inspections occur on varying frequencies based on the hazard level of a given facility. Higher-risk facilities receive a comprehensive inspection every two or three years.
- **Installation of Protective Devices** – Backflow prevention devices or assemblies are installed by the owner where unprotected cross connections are found to exist.
- **Annual Testing of Testable Backflow Devices** – Customers must have all testable backflow prevention assemblies tested once a year by a certified tester.
- **Public Education Materials** – We provide our customers with brochures, bill inserts, and access to additional public education and awareness on our website.

Madison Water Utility has been performing comprehensive cross connection control inspections for commercial and industrial facilities since 1994. The program was recently expanded to include single and multi-family residential surveys coordinated with our water meter

replacement program, which has significantly increased the total number of inspections performed each year.

Number of Cross Connection Control Surveys/ Inspections Completed

Commercial & Industrial Surveys Residential Surveys

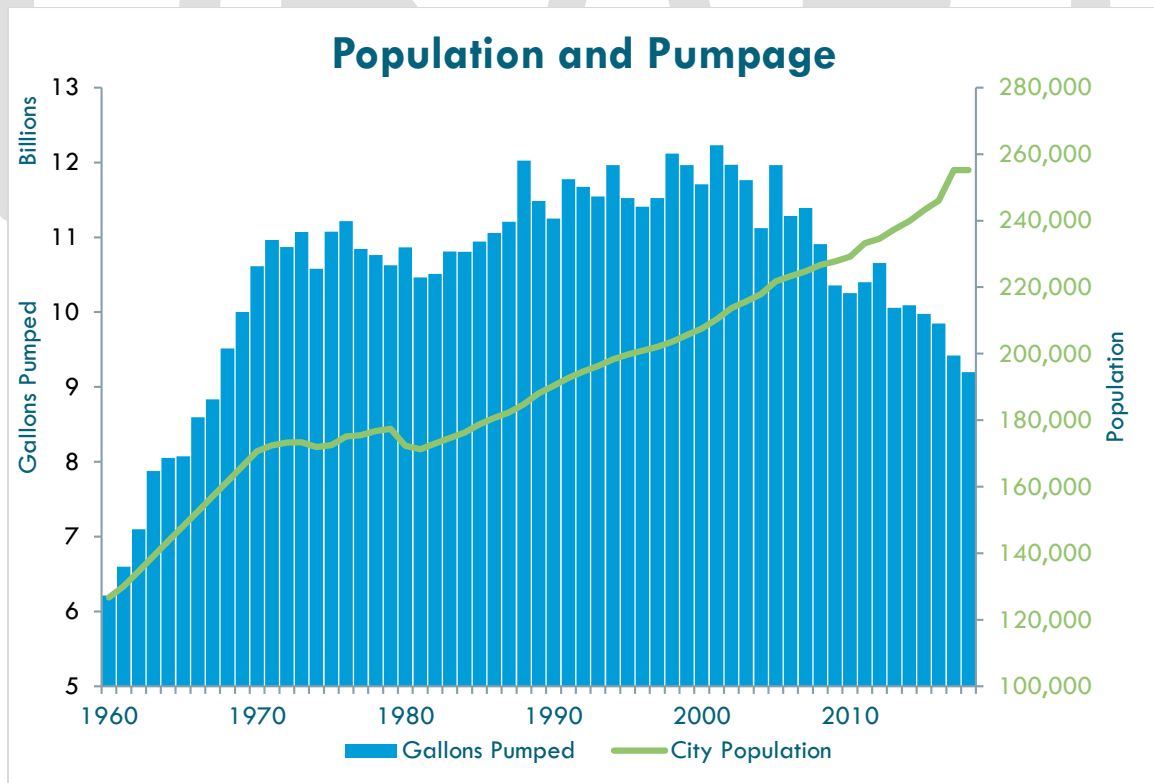


WATER SUPPLY & OPERATIONS

Pumpage

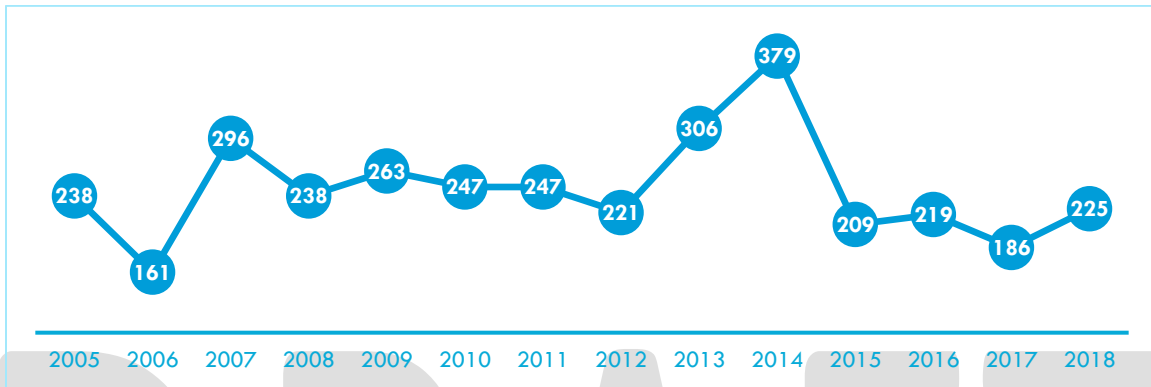
MWU pumped 9.2 billion gallons of water to homes and businesses across the city in 2018, about 200 million gallons less than the year before – and more than a billion gallons less than the utility pumped in 2012. Summer rainfall in 2017 and 2018 occurred at frequent intervals, reducing water use for irrigation citywide.

Per-capita water use for customers living in single-family homes has dropped to the lowest level in the last 20 years. Residential customers used 53 gallons per-person per day in 2018. Back in 1988, that number was 80 gallons per person. Housing, demographic, and industrial trends have also impacted Madison's water use. Nine out of ten new households added since 2007 in Madison have been renters, and Madison has been a majority-renter community since 2011. Industrial use in Madison is down 73 percent from seven years ago. Madison's last remaining dairy operation closed its doors in 2009, and Oscar Mayer recently left Madison. When Oscar Mayer plant was at full production, it was MWU's biggest industrial customer using 400 million gallons of water a year.



Water Main Breaks

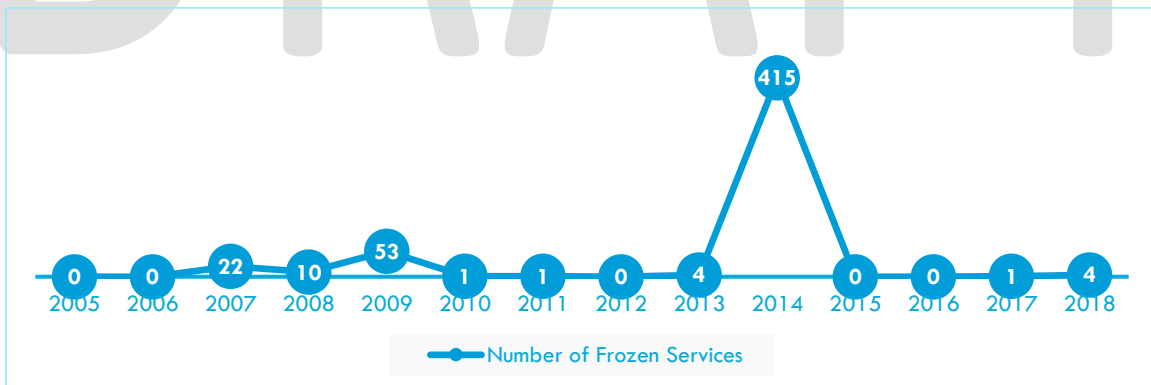
There were 225 main breaks in 2018. Main breaks are caused by a combination of winter weather and an aging piping system. In 2013 and 2014, extreme cold caused record numbers of water main breaks.



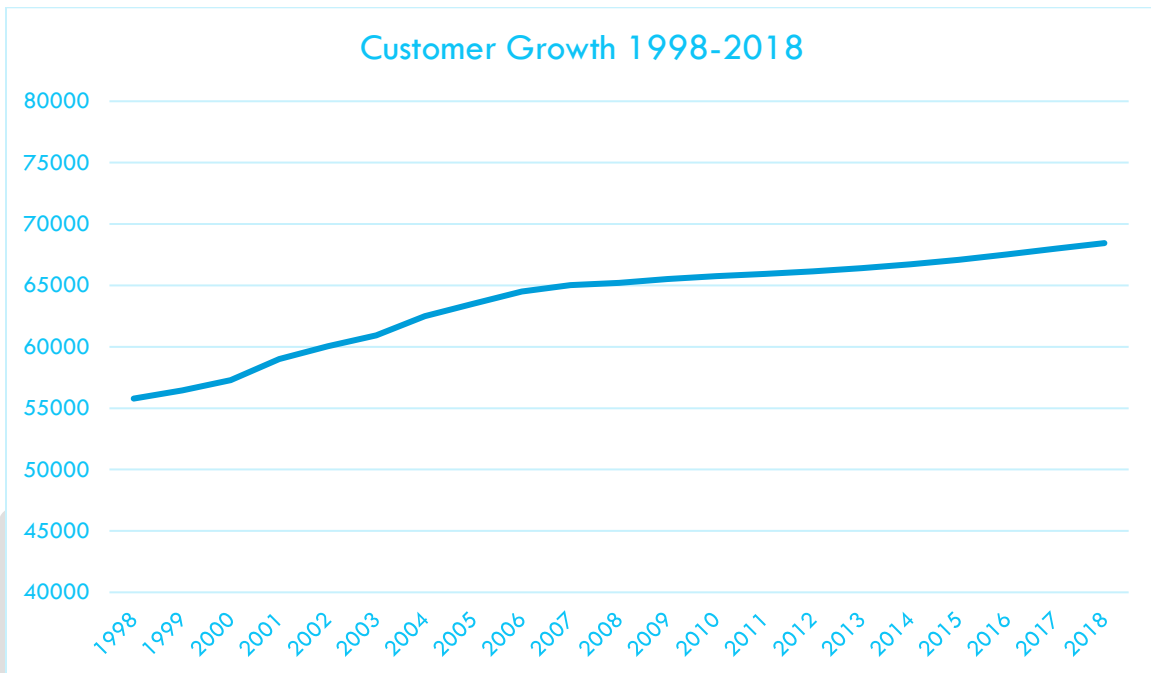
Over the past ten years, MWU has experienced an average of 250 main breaks per year. MWU is undertaking the aggressive goal of replacing or relining more than half our water mains as part of our [infrastructure renewal program](#). As pipe is replaced, the risk of main breaks is reduced.

Frozen Service Laterals

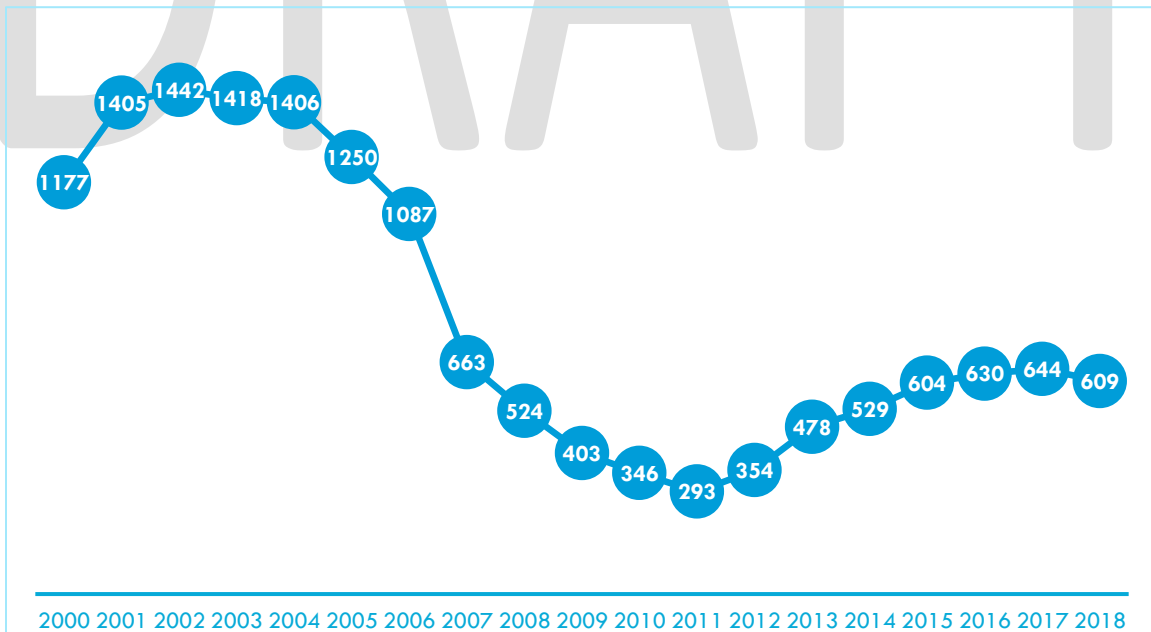
Four frozen service laterals (the pipe running from a water main to a home) were thawed by MWU in 2018. In early 2014, prolonged, extreme cold caused the frost line to plunge over six feet deep in parts of the city, causing hundreds of water outages as service laterals froze.



Customer Growth



In 2018, the utility received 609 new applications for service, compared with 644 received in 2017. This was the first time since 2011 that the number of applications declined from the previous year.



Graduate Research Project: Energy and Cost Saving Strategies

Since 2002, Madison Water Utility has partnered with UW-Madison's Department of Civil and Environmental Engineering on collaborative research projects. Over the years, nine graduate students have completed an MS Thesis that provides practical value to the utility. A tenth graduate student is building on prior research and identifying energy and cost saving strategies for system operations.

Drinking water utilities are significant consumers of energy and Madison Water Utility is no exception. In 2017, MWU used 20 GWh of electricity at a cost of \$2.2 million dollars, and electricity costs have generally averaged 15% of MWU's annual operations and maintenance expenses. Though water conservation reduces energy consumption, it does not reduce energy intensity. The current emphasis of the research program has been to assist MWU in reducing energy intensity as well as reducing energy costs.

EDUCATION & OUTREACH

MWU continues its focus on community outreach and education to raise awareness, broaden public understanding, and increase community engagement in source water protection and water conservation.

Key Outreach Initiatives

Got Water Initiative

Since 2015, Madison Water Utility has partnered with the Healthy Kids Collaborative of Dane County on the “Got Water” project in Madison schools. The program helps students make healthy beverage choices by giving them easy access to water. In 2018, five Madison elementary schools and one middle school were selected by the Collaborative to receive water bottle refilling stations for students and staff. The bottle filling stations were funded by Madison Water Utility and installed by the Madison Metropolitan School District. The Collaborative and its community partners also provided new water bottles to every child and staff member at each school. As part of the program, students also learn where Madison’s tap water comes from, why it’s important to stay hydrated, and participate in celebration activities that promote healthy habits.



LAPHAM STUDENTS USING BOTTLE FILLING STATION PROVIDED THROUGH THE “GOT WATER” PROJECT

Since the program started, it has provided water bottle filling stations to a total of 16 elementary schools—half of the elementaries in Madison—and three middle schools.

Water Wagon

MWU's [Water Wagon](#) continues to be a popular outreach tool. There were 35 Water Wagon events in 2018, and 48 events in 2017. Many of those events were at local schools. Other events included REAP's Summer Food Program Celebrations, Ride the Drive, Westfest, and Shake the Lake.



WATER WAGON AT SAFETY TOWN, SUMMER 2018

135th Anniversary Celebration

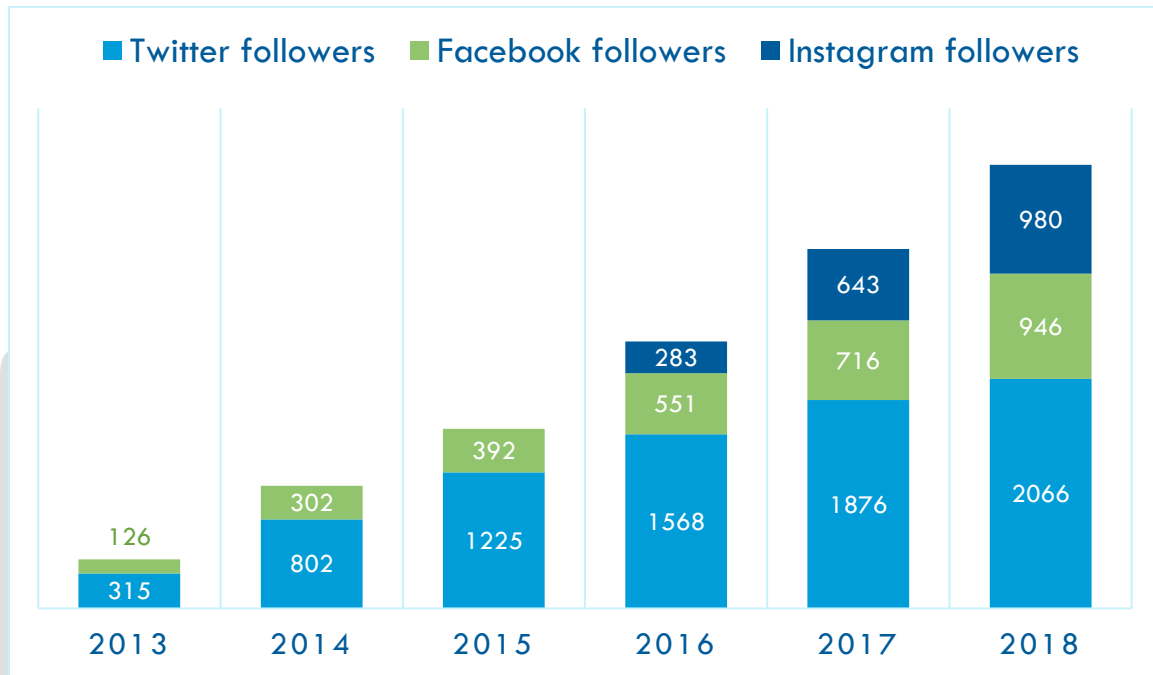
On June 3, 2017, Madison Water Utility hosted a 135th anniversary celebration at its newly-rebuilt Operations Center on Paterson St. The event included a showerhead giveaway, tours, display of historic photos and items, kid's activities, and water main tapping team demonstrations.



WATER MAIN TAPPING TEAM DEMONSTRATION AND FACILITY TOUR AT 135TH ANNIVERSARY CELEBRATION

Social Media and other Communication Tools

Madison Water Utility continues to see significant growth in social media followers since its first tweet in 2012. Instagram launched in 2016 and continues to be MWU's fastest growing social media platform.



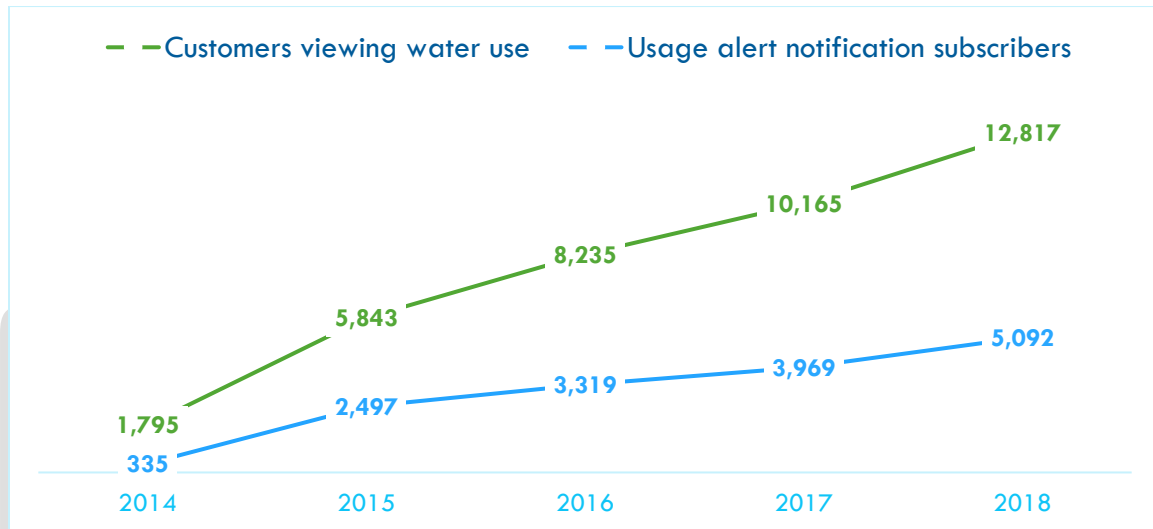
The utility's web article series, [Inside MWU](#), continues to be popular with over 10,000 views in 2018 and many articles picked up by external media. MWU also has a YouTube channel featuring 20 videos with over 37,000 views.

Conservation & Sustainability

It may seem counterintuitive for a utility that sells water to plan for conservation, but a sustainable rate of pumpage is necessary to ensure clean and abundant water supplies for future customers. Additional benefits of water conservation include improved water quality, a reduced burden on surface water quality as less wastewater is generated, and reduced greenhouse gas emissions as less energy is spent pumping water.

Online conservation tool

In 2014, Madison Water Utility unveiled Wisconsin's first [online conservation tool](#), which allows customers to view their monthly, daily, and even hourly water use online. It also allows customers to set up water use alerts—they choose the number of gallons they want to use on a daily, weekly, or monthly basis, and if they go over that number they receive an email alert.



Toilet Rebate Program

Toilets account for nearly 30 percent of residential indoor water consumption, and older toilets are a major source of wasted water due to leaks and inefficiency. In 2009, MWU established a [toilet rebate program](#) for residential customers. In 2010, the program was expanded to include apartment buildings, and in 2016 it was further expanded to include all other customers (businesses, nonprofits, etc.). This program offers bill credits of up to \$100 to customers who replace existing toilets with EPA WaterSense-rated models. Over 14,000 toilets have been

replaced through this program, resulting in estimated water savings of over half a billion gallons citywide since 2009.

Year	Toilet Rebates
2009	1724
2010	2504
2011	2466
2012	1536
2013	2298
2014	1399
2015	1292
2016	1485
2017	910
2018	983

Showerhead Giveaways

At the end of 2016, Madison Water Utility launched its first showerhead giveaway. Hundreds of high-efficiency, WaterSense showerheads were given to customers at the Warner Park Community Recreation Center and at MWU's Olin Ave offices. In 2017, MWU held a showerhead giveaway at the Meadowood Neighborhood Center and at its 135th Anniversary Celebration at the Paterson St. Operations Center. By switching to WaterSense showerheads, the average family could save 2,900 gallons of water every year, and save the energy it would have taken to heat all that water.

Project Home Partnership

In 2016, Project Home and Madison Water Utility launched the first water conservation program in Wisconsin aimed at helping low-to-moderate income homeowners reduce water waste, increase efficiency and save money on their water bills.

This program is focused on:

- Installing high-efficiency toilets (1.28 Gallons Per Flush or less)
- Fixing plumbing leaks (in the U.S., a trillion gallons of drinking water are lost every year because of plumbing leaks)
- Installing water saving devices (faucet aerators and low-flow shower heads can save thousands of gallons of water a year)

In 2016 and 2017, Project Home completed water conservation work at 98 Madison homes, serving 191 low-to-moderate income MUW customers. Half of them were senior citizens and one-fourth were people with disabilities. This work included the installation of 92 high-efficiency toilets and 9 plumbing leak repairs. Funding was renewed for the program in 2018. Madison Water Utility customers can contact [Project Home](#) to determine if they are eligible for this program.

ADDITIONAL RESOURCES

- [Annual Drinking Water Quality Report](#)
- [Inside MWU](#)
- [Project News](#)
- [2017 Annual Report to the Public Service Commission of Wisconsin](#) (pdf)
- [2018 Annual Report to the Public Service Commission of Wisconsin](#) (pdf)
- [2017 Madison Water Utility Financial Statements](#) (pdf)

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