



# 2012-2013 ANNUAL REPORT

## MADISON WATER UTILITY

WINNER, "BEST TASTING WATER IN WISCONSIN" AT THE 2013 WWA STATE FAIR COMPETITION



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# 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

Madison’s community water service began in 1880 with a petition to the City of Madison Common Council asking that a waterworks system be constructed. Madison’s population was 10,324. The Common Council directed its waterworks committee to establish the Madison Waterworks on September 5, 1881. Financing was obtained and contracts let in spring of 1882, and pumping commenced on December 7, 1882.

Early management was vested in the Common Council through its committee, and on March 2, 1884, general management was transferred to the Board of Water Commissioners. This Board of Water Commissioners arrangement continues today. The Madison Waterworks achieved department status in the early 1960s and became the Madison Water Utility (MWU) under a General Manager leadership. In common with other Wisconsin water utilities, the Public Service Commission of Wisconsin regulates the utility in matters of rates, rules and levels of service.

MWU has always been a groundwater system in spite of being surrounded by lakes. A deep, high-quality aquifer beneath the city is the source of our water supply. MWU currently has 22 active deep wells with a pumping capacity of over 65 million gallons per day, and now provides water service to over 66,000 accounts.

## Water Utility Board Governance

The [Water Utility Board](#) is described by state statute and city ordinance. It is made up of seven voting members and the Director of Public Health (or his/her designee) as an ex officio member. The board is charged with authority for managing and operating MWU under the general direction of the Common Council. The Mayor appoints and the Common Council confirms board members for terms of five years for citizen members (with staggered appointment dates) and two years for alder members. The Director of Public Health's appointment is ongoing.

The purpose of the board, on behalf of the residents of Madison, is to ensure that MWU:

- provides consumers with an adequate quantity of high quality water for consumption and fire protection at a reasonable financial and environmental cost; and
- manages groundwater resources and the water delivery system to ensure present and future generations of city residents benefit from this excellent source of water.

The Water Utility Board has adopted a [Policy Book](#), which includes 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.

The board generally meets on the fourth Tuesday of every month. The City of Madison's [Legislative Information Center](#) includes a list of meeting dates and archived agendas, minutes, and links to audio recordings of meetings.

## Water Utility Board Members

### OFFICERS

- *President:* Madeline Gotkowitz  
Hydrogeologist, Wisconsin Geological and Natural History Survey
- *Vice President:* Bruce Mayer  
Accountant, Wegner LLP
- *Secretary:* Larry Nelson, P.E.  
Retired, City Engineer

### ALDER BOARD MEMBERS

- Lauren Cnare, District 3
- Anita Weier, District 18

### CITIZEN BOARD MEMBERS

- P. Michael DePue, P.E.  
Civil Engineer and Certified Floodplain Manager
- Patrick Delmore, Ph.D.  
Assistant Professor, Edgewood College School of Education

### PUBLIC HEALTH APPOINTMENT (EX OFFICIO MEMBER)

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

## 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
- Michael Krentz, Financial Manager
- Robin Piper, Customer Service Manager
- Amy Barrilleaux, Public Information Officer



# PROJECTS

## Major Projects

### Infrastructure Renewal



## REBUILDING AND RENEWING

Out of sight -- and often out of mind -- is a vast network of pipes, wells, and pump stations stretching from one end of the city to the other. Even though much of it is hidden beneath our streets and sidewalks, Madison's water infrastructure plays a crucial role in our city's public health, safety and economic well-being.

Nearly half of our water mains—some 400 miles of pipe—are deteriorating and in need of replacement. At a cost of about \$1 million per mile, replacing water mains is a significant and growing expense. However, a failure to take care of this infrastructure now would lead to potential exposure from lack of fire protection and increased main breaks, disruptions in service, and significant and costly roadway damage. It will take 40 years of focused, deliberate planning and action to replace those 400 miles of deteriorating pipeline.

During 2012, MWU replaced 4.7 miles of water main and built 3 miles of new main. In 2013, 5.1 miles of main were replaced and 3.5 miles of new main was added in newly developed areas. In accordance with industry best practices, 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.

New technologies, such as trenchless structural lining methods, allow cost savings. . MWU was the first water utility in Wisconsin to use this technology, which allows old pipe to be re-lined in place, avoiding excavation and pipe removal. In 2012, MWU rehabilitated approximately half a mile of 6-inch water main on Major Avenue using structural cured-in-place pipe (CIPP) lining technology. In 2013, this technology was also used to rehabilitate water mains on Lake Mendota Drive, West Badger Road, and West Mifflin Street.

## Project H<sub>2</sub>O



MWU has nearly completed [Project H<sub>2</sub>O](#), the upgrade to a wireless technology network that reads and transmits water consumption on a daily basis. By the end of 2013, more than 65,000 new metering systems had been installed in homes and businesses across Madison.

The benefits of the new metering system include:

- Customers will be able to track their own daily consumption online, providing those that want to conserve with the tools to do so. .
- Allows MWU to transition to monthly billing.
- Identification of costly residential water leaks and alerts to customers - hundreds have already been alerted.
- Eliminates the need for a water meter reader to visit each premise. This also diminishes the risk of employee injuries due to vehicle accidents and falls in snow, ice, and other adverse conditions.
- Provides an energy efficient, accurate, and cost effective way for MWU to read water meters.
- Helps the utility operate the entire system more efficiently with accurate consumption data.

## Completed Projects

### Well 15 VOC Mitigation

[Well 15](#) operates year-round and serves the East Washington corridor including Westchester Gardens, Mayfair Park, Bluff Acres, Carpenter-Ridgeway, Eken Park, and Emerson East neighborhoods. Well 15 also serves the High Crossing area located east of Interstate 90/94. This well has shown increasing concentrations of a single volatile organic compound (VOC) tetrachloroethylene (PCE).

A low-profile air stripper was installed at the well site to remove VOCs. It is housed in an addition to the building that was built over the existing buried reservoir. MWU worked closely with a Citizen Advisory Panel and held 2 public meetings and 8 CAP meetings on this project. Construction was completed in June 2013, and water quality testing confirms that the air stripper is very effective at removing PCE.

While the newly-built air stripper at the well has been extremely effective at removing VOCs from the water, it also removes acidity, raising the pH level. MWU is adding a small amount of sulfuric acid to the treated water to restore the natural pH. The acid is NSF Certified as safe and appropriate for use in drinking water systems and is the treatment option least likely to have secondary effects on the water supply, sewer treatment system, and lakes.



WELL 15 WITH NEW ADDITION TO HOUSE THE VOC AIR STRIPPER

## Current and Upcoming Projects

MWU invites citizens to become active in the development of Water Utility projects through participation on a [Citizen's Advisory Panel](#) (CAP). Through this participatory process, citizens provide valuable input and feedback and help produce high quality projects that meet and exceed public expectations.

### Well 7 Iron and Manganese Mitigation

Drilled in 1939, [Well 7](#) operates year-round and primarily serves the Village of Maple Bluff, Sherman Avenue neighborhoods south of Almo Avenue/Sheridan Street and west of Packers Avenue, and areas of the isthmus between Livingston Street and the Yahara River. One recommendation of the East Side Water Supply Project was construction of iron and manganese filters at Well 7.

Due to the age and condition of Well 7, MWU will be demolishing the structure and completely replacing the facility. Two residences adjacent to the property were acquired to provide additional space necessary for water treatment and other improvements. Construction is expected to begin in spring of 2014 and will take about a year.



ARCHITECTURAL RENDERING OF THE NEW WELL 7 FACILITY

## Booster Pump Station 106 Reconstruction

[Booster Pumping Station 106](#) (BPS-106) is an interzone transfer pumping station located on Madison's near west side in the sloped embankment of Reservoir Park. The primary function of BPS-106 is to transfer water from Madison's main pressure zone (PZ 6, central Madison) into the City's southwest pressure zone (PZ 7, west side, southwest side). This pumping facility has been operating since 1926, making it Madison Water Utility's oldest operating facility.

The BPS-106 reconstruction project addresses both condition/deterioration problems and will increase the reliability of this critical system facility. Construction began in September of 2013 and is expected to be completed in May of 2014.



EXISTING FACILITY



ARCHITECTURAL RENDERING OF RECONSTRUCTED FACILITY

## Well 31 (formerly known as Zone 4 Water Supply Augmentation)

A new well in Zone 4 is necessary to supplement supply in the southeast part of the city. This will improve fire fighting capacity and system reliability. A site on Tradewinds Parkway has been selected, and the well was drilled at the end of 2013. The facility will be designed in 2014, and construction will begin in 2015.

## Lakeview Reservoir Reconstruction

[Lake View Reservoir](#) provides water storage and fire protection to a large portion of the Lake View Hill Neighborhood. This reservoir is undersized and has reached the end of its useful life. MWU proposes to construct a larger reservoir, as well as utilize the site to improve water storage for the remainder of the city's north and east side.



LAKEVIEW RESERVOIR

## 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 existing facility is undersized and does not meet work needs with regard to functionality, employee health and safety, and work flow. It is critical to address these deficiencies in order to increase efficiency and provide a safe working environment for all employees. Construction is planned to begin in late 2014 and will take approximately a year.



CURRENT OPERATIONS CENTER FACILITY AT 110 S. PATERSON ST.



# WATER QUALITY

Madison drinking water meets all primary (health-based) drinking water standards. The water utility website allows customers to find out [which wells serve their address](#) and to receive detailed water quality information for each well. The Water Utility Board places the highest expectation on MWU to provide water of excellent quality. Federal and state drinking water standards are subject to revision as new compounds of concern are identified. This dynamic is a result of technology improvements and ongoing health and environmental studies.

## Annual Water Quality Report

The [Annual Water Quality Report](#) for 2012 was issued May 13, 2013. For the first time, MWU distributed this report largely online rather than mailing the full report to every water customer. Postcards were sent to customers letting them know where to find the report online or how to request a paper copy.

Switching from paper to electronic delivery saved 2.8 tons of paper, 7.24 pounds of ink, and \$6,452 in production and postage (a 22.8% savings over the prior year). In addition to the dollar savings, electronic distribution lowered the water footprint of the report by 5,600-16,800 gallons and the energy footprint by 22 gallons of gasoline or 240 kWh of electricity (estimated water and energy used to produce 2.8 tons of paper).

## Water Quality Technical Advisory Committee

MWU established a Water Quality Technical Advisory Committee (WQTAC) in 2008 to provide a forum for discussion of complex and technical issues with local experts. The WQTAC meets eight times a year and includes volunteers with expertise in water chemistry, water treatment, microbiology, hydrogeology, and environmental toxicology.

## 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 the systematic opening and closing of distribution system valves and hydrants, one section of main at a time, to force the water through the pipes at high velocity, removing accumulated mineral sediment until the water is clear.

In 2012, 356 miles of water main were flushed unidirectionally and 385 miles of main were flushed conventionally. Due to dry weather conditions and the resulting increase in water demand, all routine flushing was suspended from June 26 to August 13, 2012. In 2013, 409 miles of water main were flushed unidirectionally and 481 miles were flushed conventionally.

Flushing operations may lead to temporary low pressure and discolored water, which can be drawn into nearby homes and businesses if the water is being used during or immediately following the flushing. Such events should affect customers for a few hours at most. The discoloration is caused by iron (red color) or manganese (black color) particles being dislodged from the water main. 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.

## Unregulated and Emerging Contaminants

Every five years, the [EPA](#) identifies substances that are suspected to be present in drinking water but do not have health-based standards set under the Safe Drinking Water Act. Testing for the third Unregulated Contaminant Monitoring Rule (UCMR3) will occur during 2013-2015.

MWU voluntarily conducted pre-screening sampling at some wells in 2012 and 2013. Twenty-two contaminants, including seven hormones, were not detected at any of the wells tested. Cobalt, 1,1-dichloroethane, 1,4-dioxane, and strontium were found at trace levels at some wells. MWU will be required to sample all of its wells for these unregulated compounds twice during 2015.

## 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.

## Private Well Abandonment

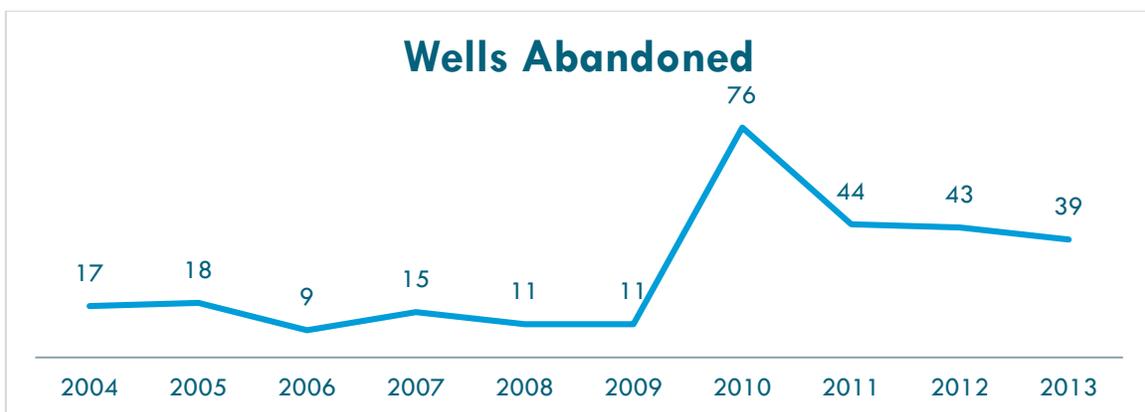
Unused and improperly abandoned wells pose a significant threat to water quality because they can present a direct pathway for surface contaminants to reach our groundwater supply. This

threat is especially serious when unabandoned wells are located within the vicinity of a municipal well.



EXAMPLE OF AN UNABANDONED PRIVATE WELL FOUND IN MADISON

In 2010, the City of Madison initiated the [Well Abandonment Reimbursement Program](#) to encourage property owners to properly abandon unused and unsafe private wells. In addition, MWU began conducting comprehensive external and internal surveys within our wellhead protection areas to identify improperly abandoned private wells. These efforts have resulted in the abandonment of over 200 wells in the City of Madison since 2010.



## **Madison Kipp Corp. Contamination Investigation and Well 8**

Madison-Kipp Corporation (MKC) has operated in the city since 1902 as a producer of precision parts for automobiles and other vehicles. Until 1989, chlorinated degreasing solvents were used at their property at 201 Waubesa St., resulting in contamination of soil and groundwater. Monitoring at the MKC facility shows the presence of a plume of tetrachloroethylene (PCE)-contaminated groundwater. The Wisconsin Department of Natural Resources (WDNR) is overseeing the investigation and cleanup effort. More information is available on the [WDNR website](#).

[Well 8](#) is located less than 2,000 feet to the southeast of the MKC property. Neither PCE nor its immediate breakdown product trichloroethylene (TCE) has been detected at Well 8. A related compound, cis-1,2-DCE, has been detected at very low concentrations in Well 8 since the early 1990s but the source is unknown.

Operation of Well 8 is limited to the summer months because of high levels of naturally occurring iron and manganese. These constituents are not harmful but may cause discolored water and staining. In 2012, pumping from Well 8 was limited to 11 million gallons of water, between July and September. In 2013, water from the well was never put into the city's water distribution system, however the well was placed in standby mode over the summer to ensure an adequate water supply in the event of a major fire or other supply emergency in the area.

Well 8 is an essential part of the water supply system. Long-term plans for Well 8 include the installation of an iron and manganese filter so it can be used year round. However, MWU is carefully monitoring the location and possible movement of the groundwater contamination plume at Madison Kipp before beginning that project. The seasonal use of Well 8 will also take on critical importance during the summer of 2014, when Well 7 will be offline for a filter installation. While Well 7 is out of service, Well 8 will be crucial for meeting water supply and fire suppression needs on Madison's east side.

# EDUCATION & OUTREACH

## Water Wagon

Madison's one and only [Water Wagon](#) is truly an original. It was designed and built by MWU staff to provide clean, cool, and refreshing Madison water at outdoor events. It made its debut at the 2012 Ride the Drive Downtown and has been quenching thirsts ever since. In 2013, it made more than 50 appearances at 26 separate events across Madison! It was also the winner of the Wisconsin Water Association's 2013 Gimmicks & Gadgets Award.



WATER WAGON AT THE DOWNTOWN FARMERS MARKET, SUMMER 2013

## Social Media and "Inside MWU"

In 2013, MWU implemented several new communications tools to provide customers with new ways to obtain information and interact with their water utility. Customers can now follow MWU on [Facebook](#) and [Twitter](#). In addition, a new webpage, [Inside MWU](#) has been launched and includes articles on a variety of topics, from the history of the utility to the graywater experiment at our administration building.

## Tapping Teams

Tapping competitions feature water utility teams racing against the clock and each other to tap a copper line into a gushing cast iron water main. This simulates a process used to connect homes to the water mains running under the street.



**MAD CITY TAPPERS DEMONSTRATION IN DOWNTOWN MADISON, APRIL 2013**

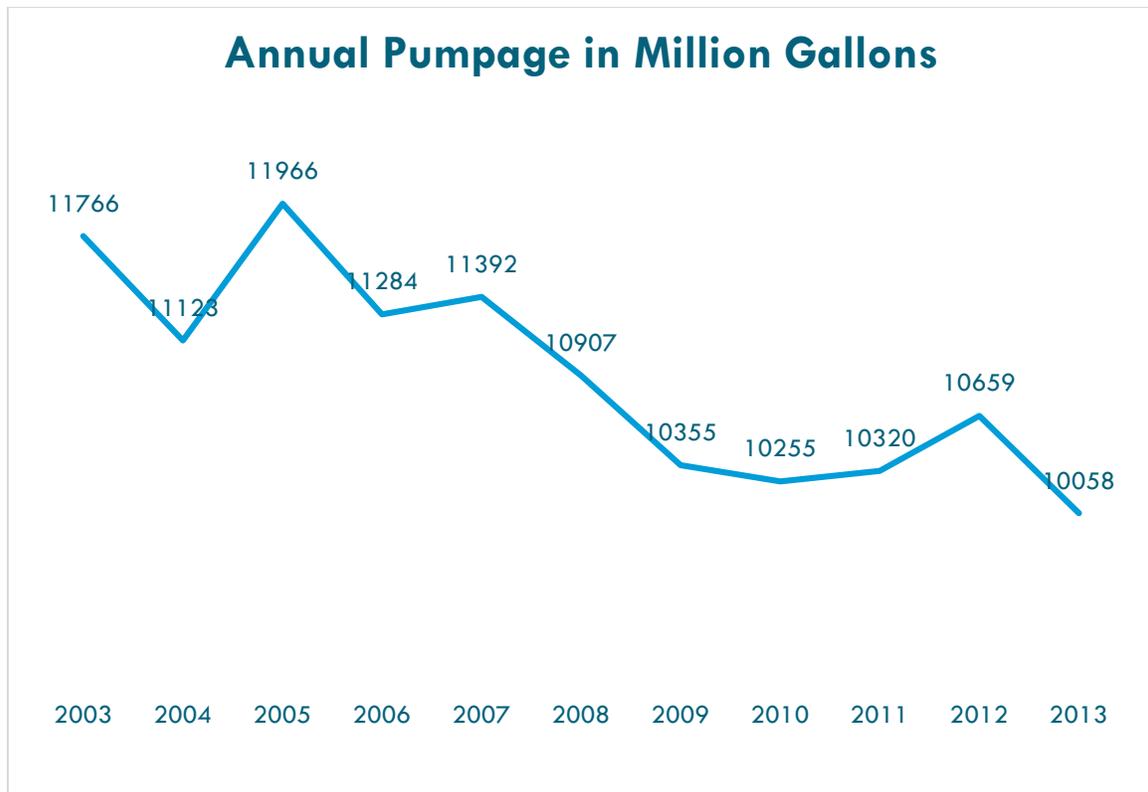
MWU has [two tapping teams](#): The Mad City Tappers and Wisconsin's first ever women's team, the Mad Women on Tap. Both teams qualified for the national competition at the American Water Works Association Annual Conference, which will be held in Boston, Massachusetts in June 2014.

# WATER SUPPLY & OPERATIONS

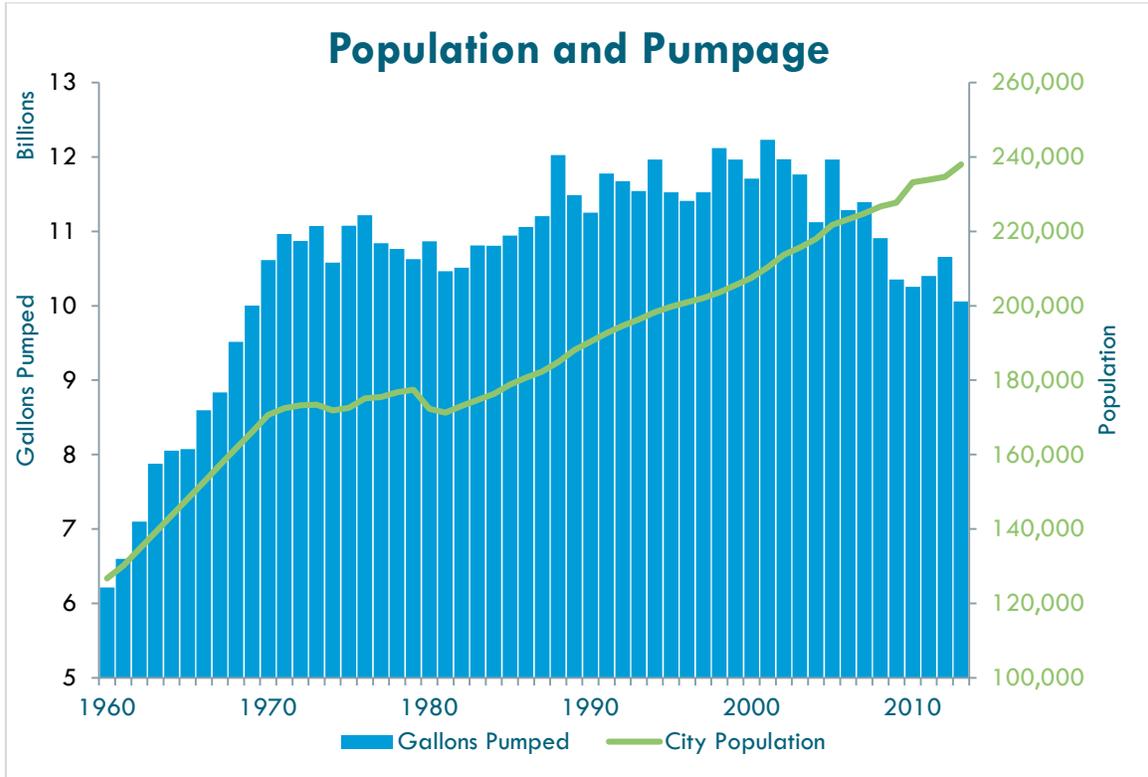
## Pumpage

In 2012, MWU pumped 10,658,538,000 gallons, a 3.3% increase over 2011. Average daily pumpage was 29.1 million gallons and the maximum day was 49.9 million gallons. Dry conditions during the summer of 2012 caused a significant increase in water demand. MWU met the increase in demand by using all of its seasonal wells and encouraging customer best practices to limit outdoor watering and use water wisely. In addition, there were no mechanical or equipment failures during the drought.

In 2013, MWU pumped 10,057,545 gallons, a 5.6% decrease over the previous year.



As is illustrated in the graph below, pumpage has generally been declining over the last ten years even as the City of Madison’s population has grown. This is consistent with a national trend of net declines in water use per household. A variety of factors may contribute to declining use, including wetter weather, changes in household sizes and types, conservation efforts, and price increases. In Madison, the primary cause appears to be the proliferation of low-flow toilets, fixtures, and appliances in homes over the past 20 years.



## Service Interruptions

There were 306 service interruptions due to water main breaks in 2013, the highest number of main breaks in a year since MWU began keeping records in 1980. Main breaks are due to an aging piping system. They are difficult to control and impossible to predict. Winter weather is also a factor as the ground freezes and thaws. The spike in 2013 was likely due to extreme weather in January, February, and December.



Over the past ten years, MWU has experienced an average of 240 main breaks per year. This calculates to an average of 29 breaks per year per 100 miles of distribution system pipe.

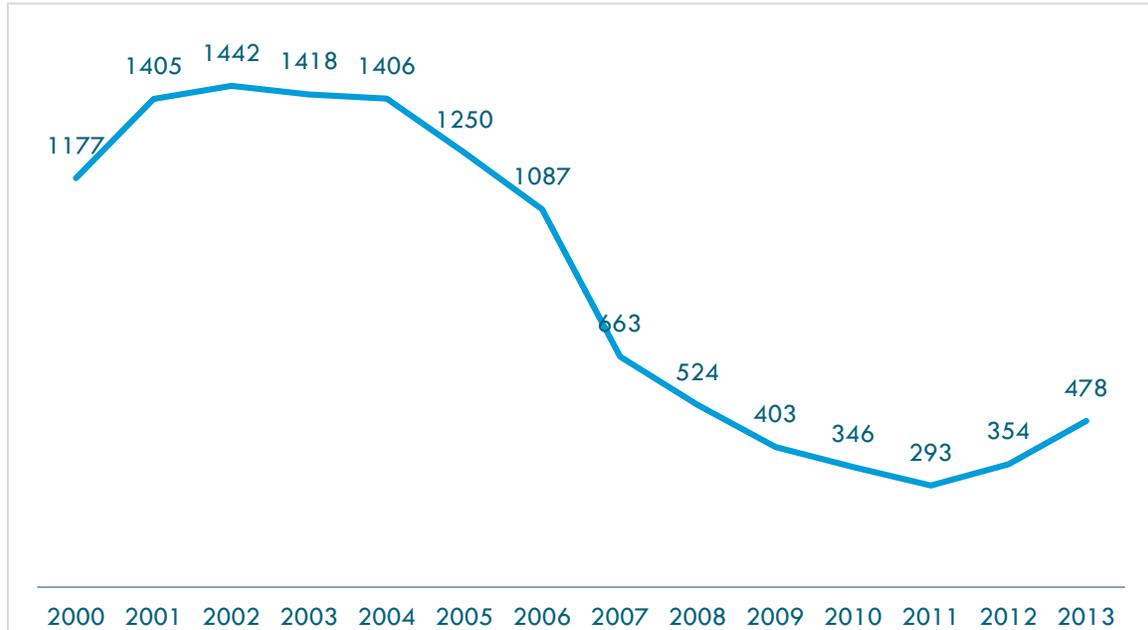
Madison Water Utility is undertaking the aggressive goal of replacing or relining more than half our water mains as part of our [infrastructure renewal program](#). As pipe is replaced, the risk of main breaks is reduced.



MWU CREW REPAIRING A WATER MAIN BREAK ON BUCKEYE ROAD

## Service Applications

In 2012, the utility received 354 new applications for service, compared with 293 new applications received in 2011. This was the first year with an increase from the previous year since 2002. In 2013, 478 service applications were received.



# SUSTAINABILITY

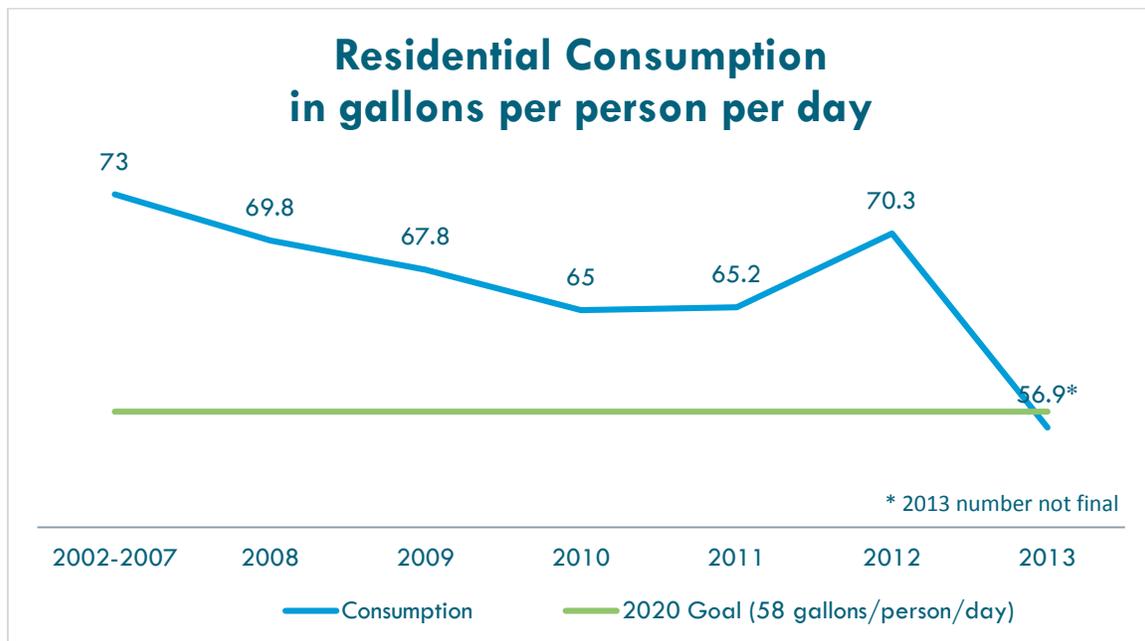
## Water Conservation

It may seem counterintuitive for a utility that sells water to plan for conservation, but a sustainable rate of pumpage must be maintained to ensure clean and abundant water supplies for future customers. The Water Utility Board works closely with the General Manager on several fronts to ensure MWU’s financial viability while pursuing conservation goals.

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. However, a consequence of conservation can be a decrease in revenue if water rates remain steady and less water is sold. MWU plans to apply for a rate structure that will increase customers’ financial incentive to conserve while maintaining revenue necessary to meet its expenses. The Public Service Commission sets water rates, and it has instructed MWU to shift to monthly billing prior to applying for a “conservation rate structure”. This is a critical aspect of Project H<sub>2</sub>O, which facilitates the change to monthly billing.

### Conservation and Sustainability Plan

In 2008, MWU developed the [Water Utility Water Conservation and Sustainability Plan](#) which established conservation goals and suggested actions that could be taken by MWU, the city, and its residents and businesses to reduce our impact on water resources. MWU’s conservation goal is to maintain groundwater pumping at a sustainable level while reducing residential per capita water use by 20% before the year 2020.



## 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](#) which offers rebates of up to \$100 to residential customers who replace existing toilets with EPA WaterSense-rated models. The program was expanded in 2010 to include apartment buildings. Over 10,000 toilets have been replaced through this program, resulting in water savings of approximately 289 million gallons citywide since 2009.

Year	Toilet Rebates
2009	1724
2010	2504
2011	2466
2012	1536
2013	2298

## Energy Conservation Research Project

Pumping water hundreds of feet up out of the ground and maintaining sufficient pressure in the system requires a great deal of energy. In 2012, 21 million kilowatt hours of energy were used for pumping and other utility operations. Through MWU's graduate research program, a UW-Madison Engineering Graduate Student completed a study on energy use. The goal of the study was to identify best practices for evaluating facility performance, developing maintenance projects, and keeping pumps operating at peak efficiency. This research will ultimately help MWU reduce its energy use.

# FINANCES

## 2012 Financial Highlights

- **Operating revenues increased** \$1.846 million or 6.57% from 2011. The higher revenues were due to a 9% rate increase effective May 3, 2011, that was fully included beginning with the January 1, 2012 customer bills. Extreme heat and drought conditions increased the demand for water during the summer of 2012, also contributing to increased revenue.
- **Operating income increased** \$2.73 million or 31.39% from the prior year. The increase was due primarily to the increase in operating revenue and lower operation, maintenance and taxes expense.
- **Payment in Lieu of Taxes (PILOT)** by MWU to the City of Madison **increased** \$497,000 (11%) from \$4.52 million in 2011 to \$5.017 million in 2012. This was due to the structure of PILOT and MWU's ongoing investment in its water system infrastructure.
- **Cash and investments decreased** to \$2.67 million in 2012 from \$4.422 million in 2011. This was because the City chose to receive the 2012 PILOT payment from the utility in 2012, while the 2011 PILOT payment was also made in 2012.

## Rates

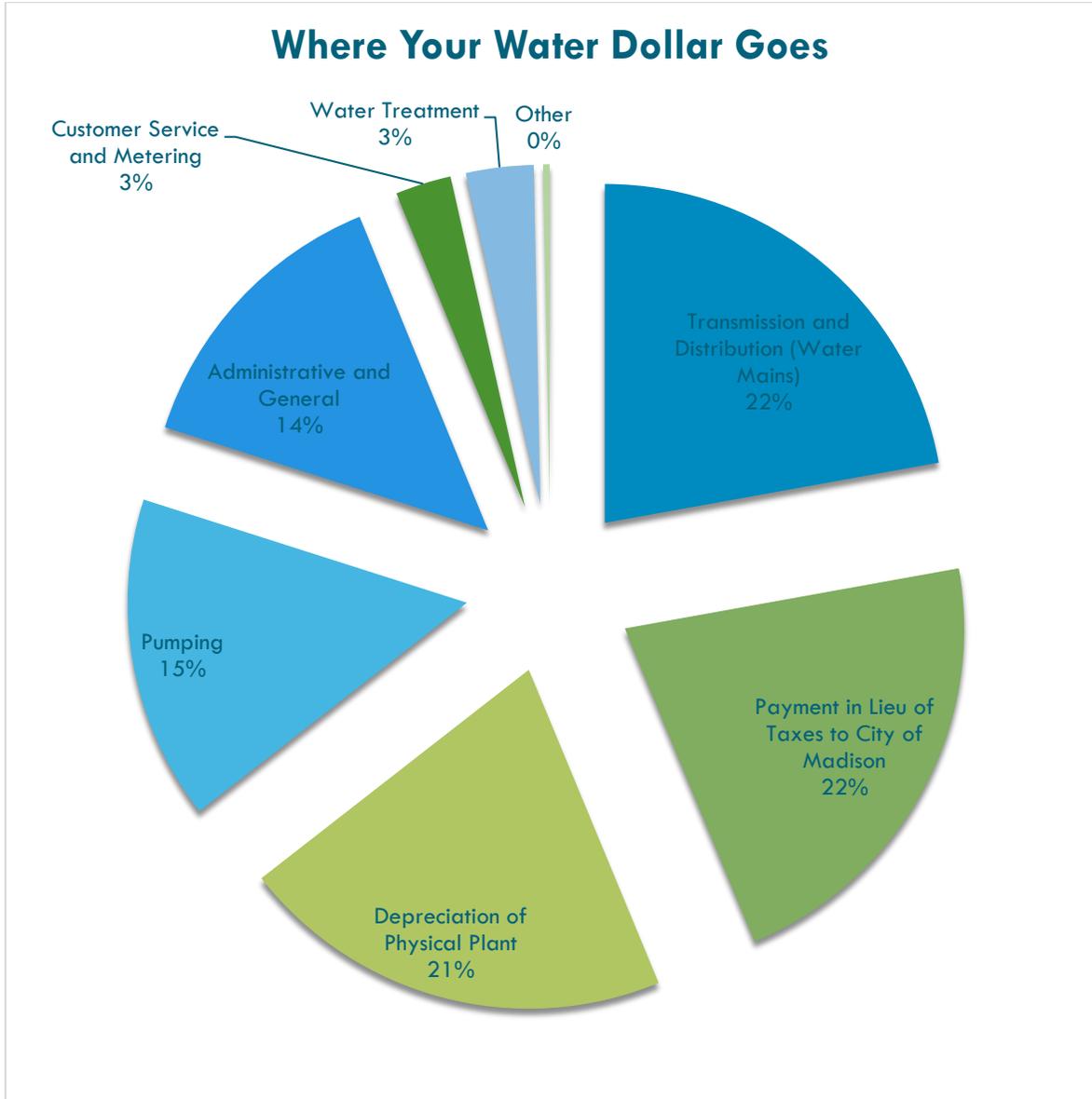
MWU last increased rates on May 3, 2011, when a 9% rate increase was granted by the Public Service Commission of Wisconsin (PSC). Due to the sixth-month billing cycle, the rate increase was not fully realized until January 1, 2012. The average 6 month residential bill (water only, 29,500 gallons used) is \$109.90, which is \$18.32 per month. This does not include sewer, stormwater, and other charges on the Madison Municipal Services bill. MWU's rates are below the median for utilities of a similar size (classified as AB, over 4,000 customers) in Wisconsin.

In 2013, local media reported on a potential water rate increase of 22% in 2014. As a result, the Water Utility Board modified three aspects of its policy on the affordability of water:

1. The MWU will calculate and report an annualized rate increase so that customers may compare changes in the cost of water to other utilities and services.
2. Rate applications to the PSC will be limited to an annualized rate of 9% per year.
3. Rate applications to the PSC will maximize the allowable return rate on MWU's assets. This amount of revenue is determined by the PSC and is a useful guide for necessary and reasonable reinvestment in the water supply system.

## Cost of Service and Debt

### Cost of Service



Operation and maintenance expenses totaled \$13.71 million in 2012 compared to \$14.86 million in 2011, a decrease of \$1.15 million or 7.74%. This was due to fewer water main and service breaks during the mild winter and spring of 2012, decreased employee pension and health insurance benefits expense due primarily to the enactment of Wisconsin Legislative Act 10, and a \$122,000 decrease in well maintenance expense.

Interest and amortization expense was \$4.32 million in 2012, compared with \$3.85 million in 2011, an increase of \$470,000 or 12.21% due to increased borrowing.

## Long-Term Debt

Date	Purpose	Final Maturity	Interest Rates	Original Amount	12/31/12 Amount Outstanding
<b>REVENUE BONDS</b>					
12/01/07	Refunding debt and system improvements	1/01/28	4.00-4.75%	\$27,185,000	\$22,755,000
12/09/09	Refunding debt and system improvements	1/01/30	2.00-5.00%	\$48,540,000	\$45,540,000
11/10/10	System improvements	1/01/31	0.90-5.25%	\$13,250,000	\$12,750,000
12/22/11	System improvements	1/01/32	2.00-4.00%	\$19,370,000	\$19,370,000
12/19/12	System improvements	1/01/33	2.00-4.00%	\$21,095,000	\$21,095,000
	Totals			\$129,440,000	\$121,510,000
<b>ADVANCE FROM MUNICIPALITY</b>					
10/19/10	Payoff unfunded pension liability	10/01/24	3.41%	\$1,404,052	\$1,291,229
01/01/08	Advance from City, Burke Utility District #1	n/a	1.10%	\$393,762	\$428,481
<b>LOAN FROM MUNICIPALITY</b>					
08/04/05	Advance from City of Madison	n/a	1.10%	\$4,573,000	\$5,355,000

On August 4, 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. No formal schedule for repayment has been established, but MWU is making payments of \$765,000 a year plus interest.



## ADDITIONAL RESOURCES

- [Inside MWU](#)
- [Project News](#)
- [2012 Drinking Water Quality Annual Report](#)
- [2012 Annual Report to the Public Service Commission of Wisconsin](#)
- [2012 Madison Water Utility Financial Statements](#)