



2021 Annual Report



**Madison
Water Utility**

119 E Olin Avenue
Madison, WI 53713
Tel : 608-266-4651
www.cityofmadison.com/water



CONTENTS

| | |
|-------------------------------------|----|
| Introduction | 2 |
| Message from the General Manager | 4 |
| MWU at a Glance | 5 |
| Managing our Finances | 7 |
| Upholding High Water Quality | 9 |
| Managing our Infrastructure | 11 |
| Serving our Customers and Community | 13 |
| MWU in Summary | 16 |

MADISON WATER UTILITY
METER MAINTENANCE

W-41



**Madison
Water Utility**

A small version of the Madison Water Utility logo, including the dome icon and the text 'Madison Water Utility', is visible on the side of the white truck.

Madison Water Utility's Mission

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

Founded as a public utility in 1882, Madison Water Utility (Madison Water) is proud to bring safe, high-quality water to more than 250,000 people across the Madison area. Madison Water has always been a groundwater system, despite being surrounded by lakes; a deep, high-quality aquifer beneath Madison is the source of our water supply.

Purpose of Annual Report

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.”

This reporting period covers audited 2021 financial statements, 2021 water quality monitoring, and 2021 projects, events, operations, and accomplishments.

Madison Water Utility Board Governance

The Madison Water Utility Board (Board) is described by Wisconsin state statute and the City of Madison ordinance. The Board is charged with authority for managing and operating Madison Water 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 Madison and Dane County Public Health (or their designee) is an ex officio member.

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

Madison Water Utility Board Members

OFFICERS



President: Eugene McLinn
National Sediment Market
Leader, Burns & McDonnell



Vice President: Patrick Delmore, PhD
Instructor, Edgewood College
School of Education



Secretary: Debra Simon
(Retired) Budget and Audit
Manager, City of Madison

ALDER BOARD MEMBERS



Gary Halverson
District 17



Nasra Wehelie
District 7

CITIZEN BOARD MEMBER



Michael R. Dailey

EX OFFICIO MEMBER



John Hausbeck
Public Health Madison &
Dane County

Madison Water Utility Senior Leadership Team

Krishna Kumar, *General Manager*

Joseph Grande, *Water Quality Manager*

Joe DeMorett, *Water Supply Manager*

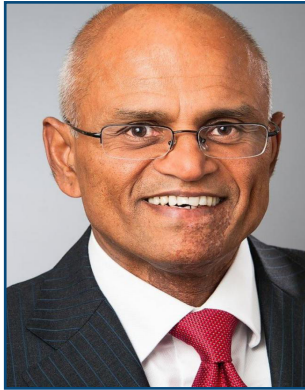
Adam Wiederhoeft, *Chief Engineer (Interim)*

Kathryn Schwenn, *Finance Manager*

Dan Rodefeld, *Operations Manager*

Marcus Pearson, *Public Information Officer*

MESSAGE FROM THE GENERAL MANAGER



Trusted and Reliable

Madison Water's reputation is built on providing customers with some of the highest quality drinking water in the country. What might surprise you is the extent of our operations and the massive infrastructure required to provide reliable drinking water services.

Madison Water has a proud history of meeting challenges since our inception in 1882. For over a century, we have been a trusted source of reliable, safe drinking water to area residents.

Water is vital to the health of our community, economy and environment. Madison Water is on the front lines responding to the greatest issues of our time: the COVID-19 pandemic, climate change, racial justice and equality, access to water and aging infrastructure. Prioritizing and maintaining infrastructure renewal at a sustainable and healthy pace is a key goal that Madison Water constantly pursues.

Madison Water Utility works year round, 24 hours a day, to deliver vital services to the communities we serve. We do this by carefully managing our water supply, protecting our watersheds, providing community assets, and implementing programs that protect our great aquifer.

Thank you for entrusting us to keep Madison Water's system running strong now and into the next hundred years.

“

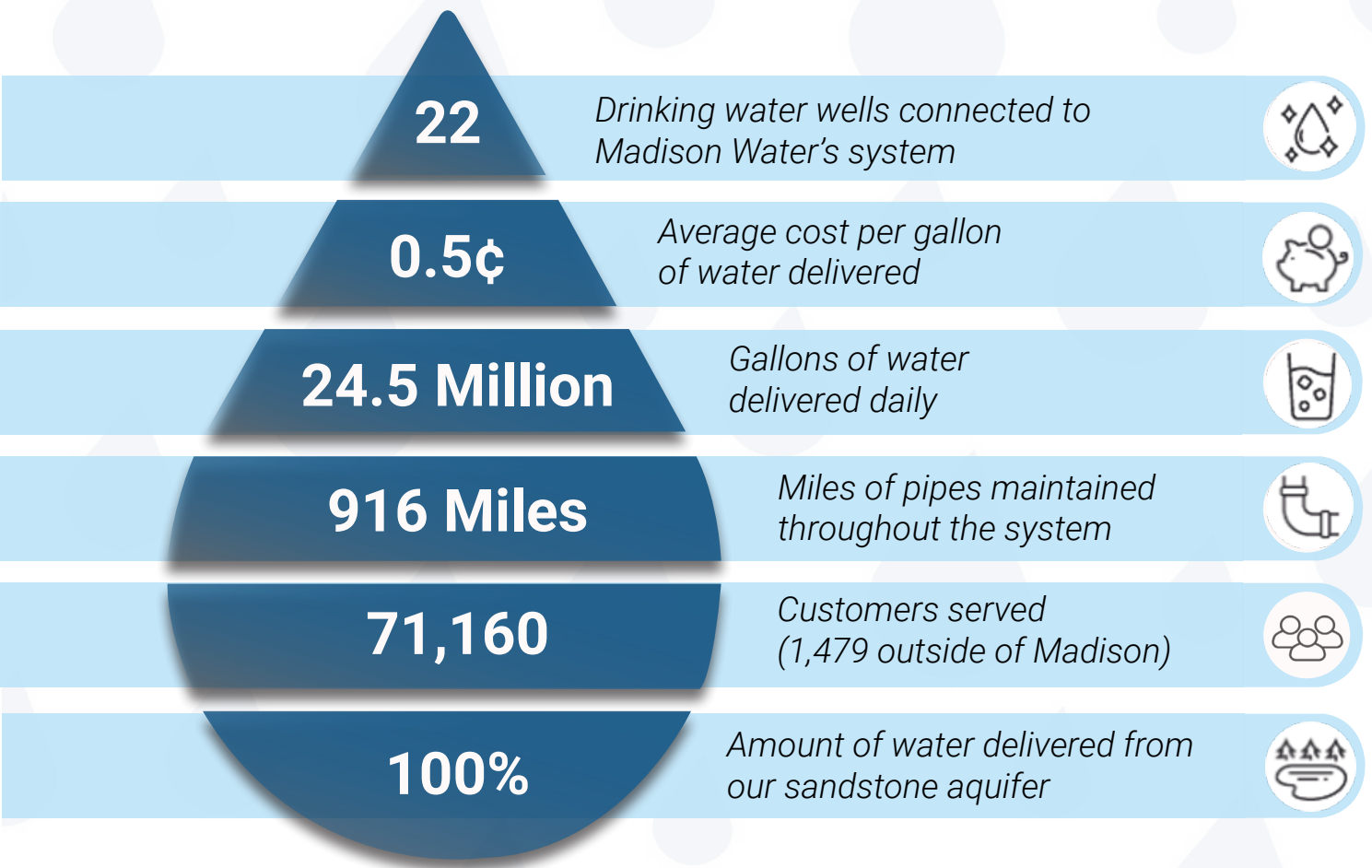
Madison Water's reputation is built on providing customers with some of the highest-quality drinking water in the country. What might surprise you is the extent of our operations and the massive infrastructure required to provide **reliably clean water.**

”

A handwritten signature in blue ink, which appears to read 'Krishna Kumar'. The signature is fluid and cursive.

KRISHNA KUMAR
General Manager

Madison Water at a Glance



LEADING FROM THE FRONT

Lead Services Replacement Program

The landmark Lead Service Replacement program helped our community remove or replace nearly 8,000 lead pipes. In 2021, there were no known lead services remaining in our system.

Cured-in-Place Pipe (CIPP)

Madison was the first city in Wisconsin to rehabilitate aging water mains using Cured-In-Place Pipe (CIPP) relining methods in 2011. Since then, Madison Water has utilized this cost-effective technology to successfully repair several water mains in our system, expected to last at least another 50 years.

BY THE NUMBERS January 1, 2021 through December 31, 2021

0.5 cent

average cost per gallon of water delivered

24.5 million

Gallons of water used per day on average

29.7 thousand

Water quality samples collected

\$47.1 million

Total revenue generated from water sales

34.5 thousand

Calls fielded by customer service representatives

\$45.6 million

Adopted Operating Budget

\$306.2 million

Value of capital assets in our water system

0

Reportable water quality citations or violations

\$6.6 million

Adopted Capital Budget



Fiscal Year 2021 Finances in Brief

WHAT WE RECEIVED (IN THOUSANDS)

| Source | |
|----------------------------|------------------|
| Sales of Water | \$ 47,149 |
| Investment Income | (32) |
| Water Tower Revenue | 297 |
| Other Operating Revenue | 665 |
| Other Nonoperating Revenue | 116 |
| Total | \$ 48,195 |

HOW IT WAS USED (IN THOUSANDS)

| Program | |
|----------------------------------|------------------|
| Investment in Infrastructure | \$ 5,697 |
| Operations & Maintenance | 15,927 |
| Principal and Interest | 16,921 |
| PILOT (Payment in-lieu of taxes) | 7,625 |
| Reserves | 2,025 |
| Total | \$ 48,195 |

Managing Our Finances

Strengthening financial resources through careful planning and reasonable rates

A Budget Built on Reliability

Madison Water is investing in the complex infrastructure that brings our customers high-quality tap water and protects our aquifer. Our budget aims to maintain and upgrade pipelines, treatment facilities, tanks, and reservoirs that serve our customers.

We work hard to make smart decisions about how rate dollars are wisely invested to protect and preserve vital water infrastructure for the long term benefit and use of the communities we are proud to serve. Whether we deliver one gallon of water or 8 billion gallons, the infrastructure that delivers this resource must be maintained and preserved.

Reflecting that effort, funding of our Capital Improvement Program (CIP) increased over the last decade to over \$20 million per year. Adopted annual budgets for 2019 - 2021 significantly reduce spending in order to keep the utility's debt load and rate increases manageable for our customers.

Madison Water remains committed to providing the highest level of drinking water services while keeping rates fair and reasonable as we undertake the vital work needed to maintain our systems.

2021 Budgets

Adopted Operating Budget:
\$45,600,921

Day-to-day operating expenses

Adopted Capital Budget:
\$6,640,000

Infrastructure upgrades and improvements





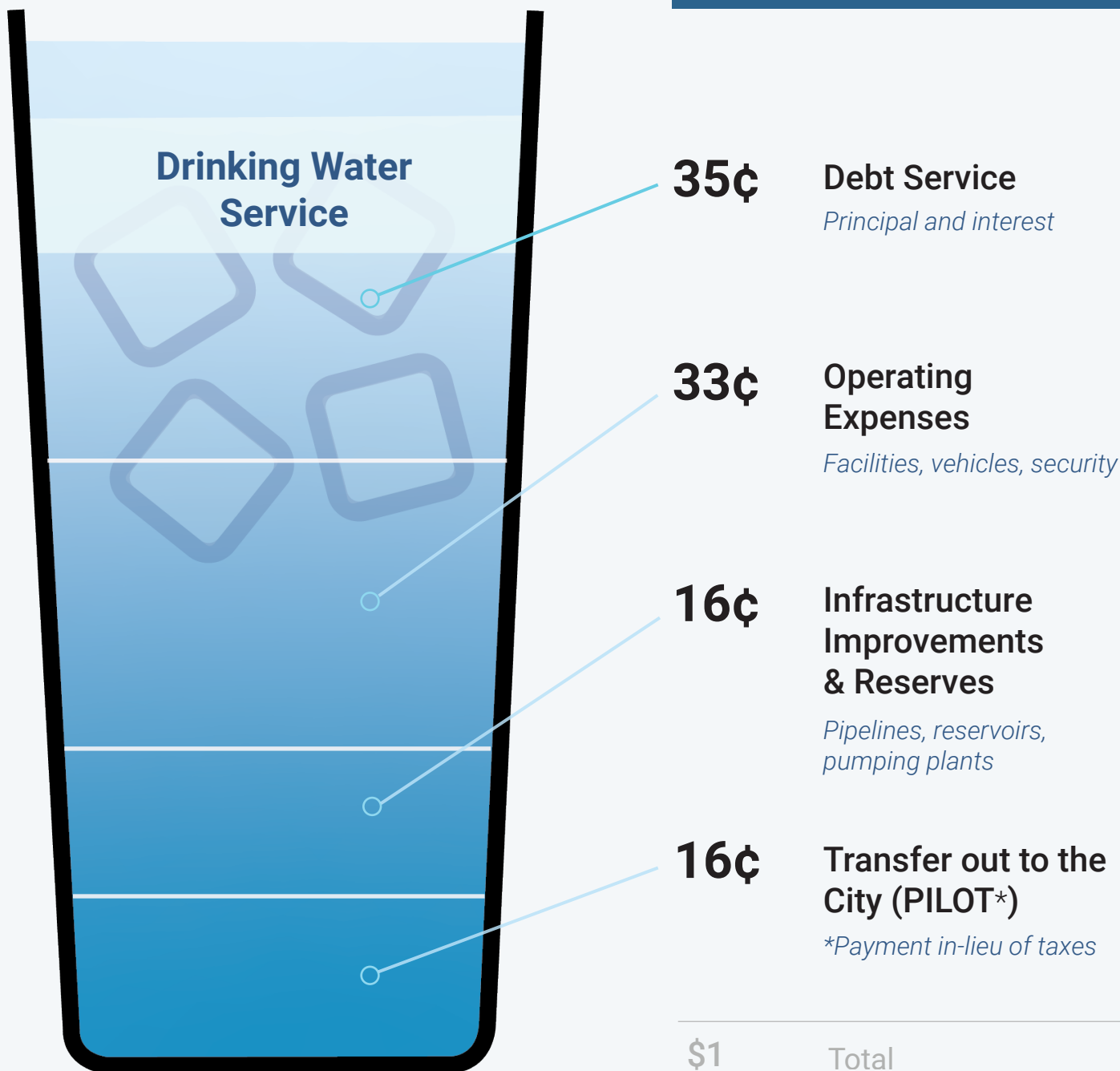
Where Does Each Rate Dollar Go?

\$47.1 million total rate revenue received from customers



Key Financial Milestones

- Earmarked \$5 million from cash reserves toward debt repayment.
- Maintained recommended levels of cash on hand.
- Operation and Maintenance Expense decreased by \$1.1 million.



Upholding High Water Quality

Protecting public health one drop of water at a time

Clean Tap Water Delivered Daily

The water flowing from faucets originates from the plentiful sandstone aquifer beneath the growing Madison region. This is where high water quality begins.

While our water is not “treated”, chlorine is used in very small amounts (generally 0.3 milligrams per liter) to destroy harmful water-borne viruses, bacteria and microbes. Additionally, in 1948, Madison Water Utility began adding fluoride to Madison’s water at the direction of the Common Council, as part of a city policy to reduce the risk of dental cavities, particularly for children with little access to routine dental care.

Protecting our groundwater resources requires the combined efforts of many entities including Madison Water Utility, regulatory agencies, and individual customers and businesses. To improve water quality and minimize discoloration, water mains are comprehensively flushed by a technique known as unidirectional flushing. This procedure is performed in warm-weather months and forces water through the system at high velocity to clean the pipes by removing accumulated mineral sediment.

Madison Water’s Wellhead Protection Program also 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.

Be SaltWise!

Madison relies on road salt to maintain safe conditions on our roads, sidewalks, parking lots and driveways during winter, but oversalting leads to irreversible damage to the quality of our water.

To combat salt infiltration, the City of Madison has implemented a voluntary Winter Salt Certification Program which provides strategy for winter maintenance professionals to reduce salt use to protect our water resources, but still keeps parking lots, roads, sidewalks and driveways safe.

More information about road salt and how to make a difference at:

cityofmadison.com/water

Combating PFAS

In 2021, Madison Water Utility tested all 23 drinking water wells for up to 30 chemicals collectively known as "PFAS" or per- and polyfluoroalkyl substances - a widely-used class of chemicals found in non-stick cookware, food packaging, water-resistant clothing, upholstery, carpeting, and firefighting foams.

At least one PFAS was found in 14 Madison wells. Well 15, which had the highest levels, was taken out of service back in March 2019.

PFAS testing is not required by US EPA or the State of Wisconsin; however, every well currently operating in Madison meets all PFAS standards set by any state.

In an effort to uphold the highest water quality possible and combat PFAS contaminants, **testing of all Madison wells will be doubled in 2022.**

29,735 tests

of our drinking water conducted in 2021



29,735
Water Quality Tests Performed

26,728
Tests for chemical contaminants

Iron & Manganese

PFAS

Other

3,007
Tests for bacterial agents

Total Coliform / *E. coli*

Water Quality Control Measures

51

Well operation permits issued

1,974

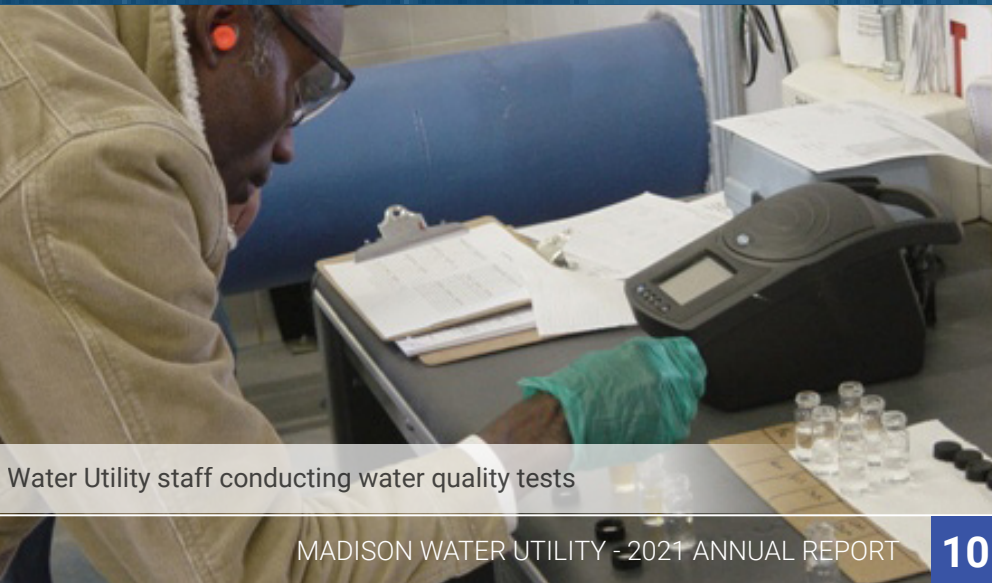
Cross connection control inspections

653

Residential

1,321

Non-Residential



Water Utility staff conducting water quality tests

Managing Our Infrastructure

Maintaining critical infrastructure to ensure reliable, high-quality service

Next Generation Pipelines

Madison Water's over 900 miles of pipelines, under bustling neighborhoods and busy streets, delivers high-quality water to customers throughout the Madison area. Madison Water is proactively replacing pipelines in many parts of the city to improve water service, improve conservation, and reduce the number of future pipeline breaks.

Madison Water's pipeline replacement program focuses on pipes nearing the end of their lifespans. Since the cost to replace a pipeline is greater than the cost to repair, we carefully select which pipelines to replace, by utilizing innovative technology.

When main breaks occur, we respond 24 hours a day to repair leaking pipes and restore water service. In the past two years, we repaired more than 400 main leaks. These are among the many construction and maintenance actions underway to keep critical infrastructure running smoothly.

In addition to pipeline maintenance and replacement, Madison Water continues to upgrade wells, booster, and other facilities within the system to ensure the highest quality water possible for our customers.

Lead Services? Not in Madison!

Madison Water Utility has removed all known lead services.

The landmark Lead Service Replacement program helped our community remove or replace nearly 8,000 lead pipes between 1995 and 2011. Water quality tests conducted in 2020 show that lead and copper corrosion have been significantly minimized.

Miles of Pipeline Replacements Completed

7.3 Miles of pipeline replaced on average in last 10 years

FY 2020

4.3 Miles

Completed

FY 2021

1.9 Miles

Completed

FY 2022

2.9 Miles

Target

Key Capital Investments (2021)



Water Main Projects
Miles improved: **2.5** | Investment: **\$4.4 million**



Unit Well #9 Pump Station
Project Status: Completed | Investment: **\$100 thousand**



Unit Well #12 Generator
Project Status: Completed | Investment: **\$40 thousand**



Unit Well #17 Public Space
Project Status: Ongoing | Investment: **\$60 thousand**



Unit Well #18 Rehabilitation
Project Status: Completed | Investment: **\$180 thousand**



Unit Well #23 Abandonment
Project Status: Completed | Investment: **\$30 thousand**



Unit Well #26 Pump Upgrade
Project Status: Ongoing | Investment: **\$450 thousand**

Serving our Customers and Communities

Building trust through excellent service, communication and education



Community Advisory Process

Madison Water makes a concerted effort to be involved in the communities we serve. Community involvement is a vital part of our operations, as it allows us to provide credible information to customers and receive essential feedback used to inform future decisions.

Community Advisory Process was adopted by the Common Council in 2014. Community members are able to subscribe to receive email updates regarding public meetings, availability of meeting notes, design drawings, photos, and more.

34,595

calls fielded by customer service representatives



21,365

customers paid bills electronically via eBill, making payments easier



1,104

Rebates availed through Toilet Rebate Program



422

Low-to-moderate income residents helped through Project Home



Madison Water in the Community

Madison Water continues its focus on community outreach and education to raise awareness, broaden public understanding, and increase community engagement. This is done through programs such as our Water Wagon - a fun, mobile station that serves up clean, cool, refreshing water at community events across the city during the warm weather months.

Madison Water also gladly offers in-person facility tours (suspended during 2020-2021) and other virtual learning resources for schools and other community groups.



Mayor Rhodes-Conway at Water Wagon



Resident enjoying Water Wagon

Key Outreach Initiatives

Community outreach and valuable partnerships are key to effectively serving our customers

Toilet Rebate Program

Madison Water offers bill credits of up to \$100 for customers who replace high water using toilets with EPA WaterSense-rated High Efficiency Toilet (HET) models. The program is a key part of Madison Water's sustainability initiative to protect the deep-well aquifer that supplies the Madison area. Toilets eligible for rebate are on the Environmental Protection Agency's (EPA) WaterSense list.

Learn more at: cityofmadison.com/water/sustainability/toilet-rebate

Got Water Initiative

The "Got Water?" initiative is Madison Water's partnership with the Madison Metropolitan School District and Healthy Kids Collaborative based at American Family Children's Hospital, which brings hydration stations to schools throughout the Madison area as a way to educate students and influence the practice of sustainability and conservation.

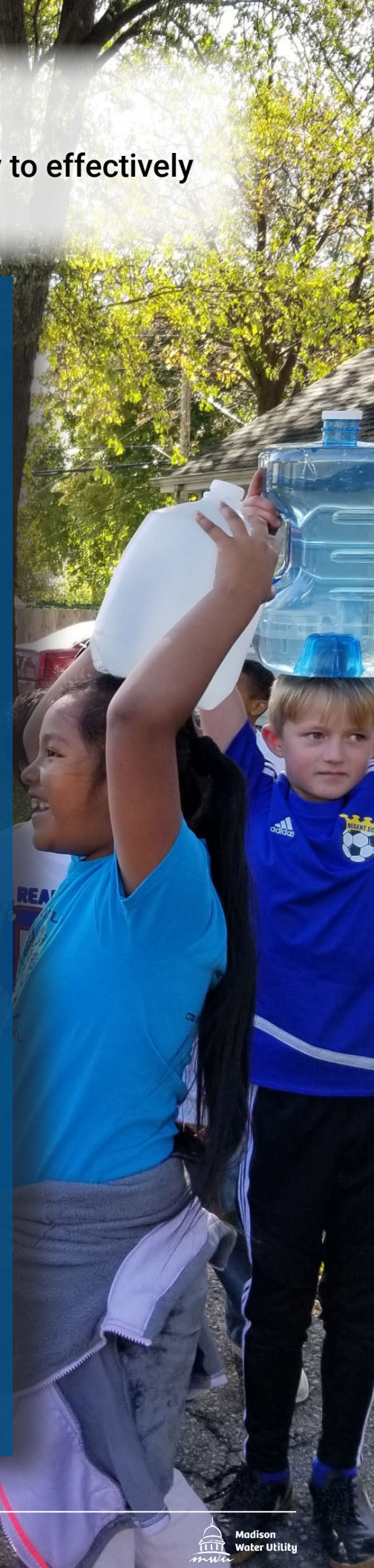
The "Got Water?" project, aimed at helping kids make healthy beverage choices by giving them easy access to water, has provided hydration stations and reusable water bottles to schools since 2015. Currently, half of the elementary schools in Madison and three middle schools have water bottle refilling stations because of the program.

Learn more at: cityofmadison.com/water/insidemwu/got-water-initiative-reaches-more-than-11000-students

Home Water Conservation Program

Madison Water teamed up with Project Home to create 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. Since the launch of the program in 2016, it has positively impacted over 400 low-to-moderate income residents by replacing old toilets with high-efficiency ones, fixing leaks, and installing other water saving devices.

Learn more at: cityofmadison.com/water/sustainability/home-water-conservation-program





MADISON WATER UTILITY EMERGENCY REPAIR VEHICLE

W-18



Madison Water *in Summary* (2021)

- » 71,160 customers served
- » 916 miles of distribution pipelines
- » 8.9 billion gallons pumped
- » 22 groundwater wells
- » 43 million gallons of storage
- » 10 pressure zones
- » 29 booster stations
- » 24.5 million gallons of water delivered daily on average
- » 29,735 water quality tests conducted
- » 34,595 calls fielded by customer service representative
- » \$306 million worth of capital assets in water system



**Madison
Water Utility**

Annual Report

2021



119 E Olin Avenue
Madison, WI 53713
Tel : 608-266-4651



www.cityofmadison.com/water

Quality and Reliability since 1882