

Comprehensive Water Division Report

June 5, 2024

Public Utilities &
Infrastructure Meeting



Presentation Overview

Discussion Topics

- Water Rates
- Unmetered and Metered Users
- Overview Capital Improvements
- High-Level Financial Overview
- Additional Departmental Details



Water Rates and Unmetered & Metered Users



Types of Accounts

- 12,711 metered accounts
- 80,957 flat rate accounts

Switching to a Meter

- Residents decide to install a meter
- Paid for by the resident



How Water Billing is Determined

- Metered accounts bills are based on two components. There is a fixed component based on the size of meter and a consumption component based on amount of water consumed.
- Flat rate accounts are billed based on fixed rates for various components of the resident (room, water closet, bath/shower, frontage).
- A typical single family residences: 6 rooms, 2 toilets, 1 bath, 35ft of frontage
- **The Water Division does not attribute an equivalent water usage to each of the flat rate components.**



Rates for Large Non-Profits

- **Hospitals / Charitable Institutions**
 - \$1.12 per 100 cubic feet for the First Year, \$1.34 per 100 cubic feet for the Second and Third Years.
- **School Rates/ Museums**
 - \$1.25 per 100 cubic feet for the First Year, \$1.50 per 100 cubic feet for the Second and Third Years.
- **Zoological Parks**
 - \$1.12 per 100 cubic feet for the First Year, \$1.34 per 100 cubic feet for the Second and Third Years.



Rates for High-Volume Customers

- Declining Block Rate structures are typical for utilities that have large users and a plentiful supply of water.
- It is less costly for a utility to supply a bulk water user than it is to supply multiple smaller customers who combined use the same amount of water.



Water Service Shut Offs

- MSD is notified when an account is opened and is closed. MSD is provided our customer's billing information. We do not notify MSD if we turn off water, but the account remains opened.
- The previous administration instituted a water moratorium during the pandemic, the current administration is exploring options on how to address water relief for people with delinquent accounts.



Wholesale Customers

- For FY23, the total volume of water sold to wholesale customers was 7,902,748 ccf or 5,911.2 million gallons.
- The total revenue received from these sales was \$5,807,000 . Revenue from wholesale accounts is used to support our general budget.
- Wholesale customers are supplied with water based on long term contracts. Water rates charged to these customers are adjusted annually based on actual costs of providing service.



Capital Improvements and Financial Overview



Master Plan

- In the process of hiring a consultant to review the utilities needs and develop a Master Plan.
- Consists of an evaluation of the existing water infrastructure through the review of historical data, reports, previous asset management work and other information
- The Master Plan will look at water rate projections using the current rate structure, but will not look at changing current rate structure itself. Changing the current rate structure would be a separate study.
- Expected cost approximately \$500,000.



Black & Veatch Rate Sufficiency Study 2021

- The Black & Veatch Rate Sufficiency Study was completed pre-COVID
- 2021 Recommendation: \$75,000,000 bond issuance.
- Operating costs have increased exponentially since 2021, B&V Study is now outdated.
- The Master Plan will provide a capital investment plan for a 20 year time period.



Capital Improvement Priority List

This is the priority list given to Black & Veatch for the Rate Sufficiency Study in 2020

CR Lime Slaking Facility Design and Construction \$ 5,500,000

Lime is used in water treatment to soften the water and adjust its pH. This investment is expected to pay for itself in a few years by the reduction of lime usage.

CR River Tower Intake Rehabilitation \$2,000,000

The two historic river towers at the Chain of Rocks Plant are not in service and need repairs. Restoring one of them to working condition would provide an alternate intake option in the event of a chemical spill on the river or if the shore intake needs to be taken out of service for repairs.

Aging Water Main (6"-36") Replacement/Rehabilitation \$14,000,000

The Water Division has identified a number of water mains that need to be replaced or rehabilitated. These water mains are at a point where it is more economical to replace them than it is to continue to make emergency repairs as they repeatedly break.

Transmission Conduits Improvements \$10,000,000

The Water Division has a number of large diameter transmission mains that move water from the treatment plants to the distribution system and move water internally within the distribution system from one area to another. Some of these conduits are starting to have issues and need to be replaced or rehabilitated.

Transmission Conduits (60" Dia. or Greater Reinforced Mortar Lining) \$14,000,000

The Water Division would like to mortar line some of the transmission conduits coming from the treatment plants to the distribution system. The lining will help protect the conduit corrosion and strengthening the pipe to extend its useful life.



Capital Improvement Priority List Contd.

Replacement of 36" Steel Main In Hampton from Arsenal to Chippewa \$2,000,000

This water main is currently out of service due to the number of leaks/breaks.

Pumps, Motors and Control Replacement \$25,500,000

The large pumps, motors and controls at our treatment plants are 50-60+ years old are in need of replacement. There has been a marked increase in the frequency of failure of this equipment requiring emergency repairs which is costly and requires the pump to be out of service for an extended period of time.

Valve Replacement \$1,000,000

The pump stations at our two treatment plants have a number of large valves that need to be replaced.

Intake Screens \$1,000,000

The moving intake screens remove debris from the river water are 70+ years old and are increasingly difficult to keep running.

Total Water Division Estimated Projects \$75,000,000

These repairs and upgrades are expensive on a scheduled repair. They are much more expensive on a non-scheduled or (emergency) repair.



State and Federal Requirements for Drinking Water

- Discharge Permits
- Revised Lead Regulations
- Forever Chemicals (PFOS & PFAS)
- We monitor and test our water for over 150 possible contaminants
- Consumer Confidence Report Rule Revisions

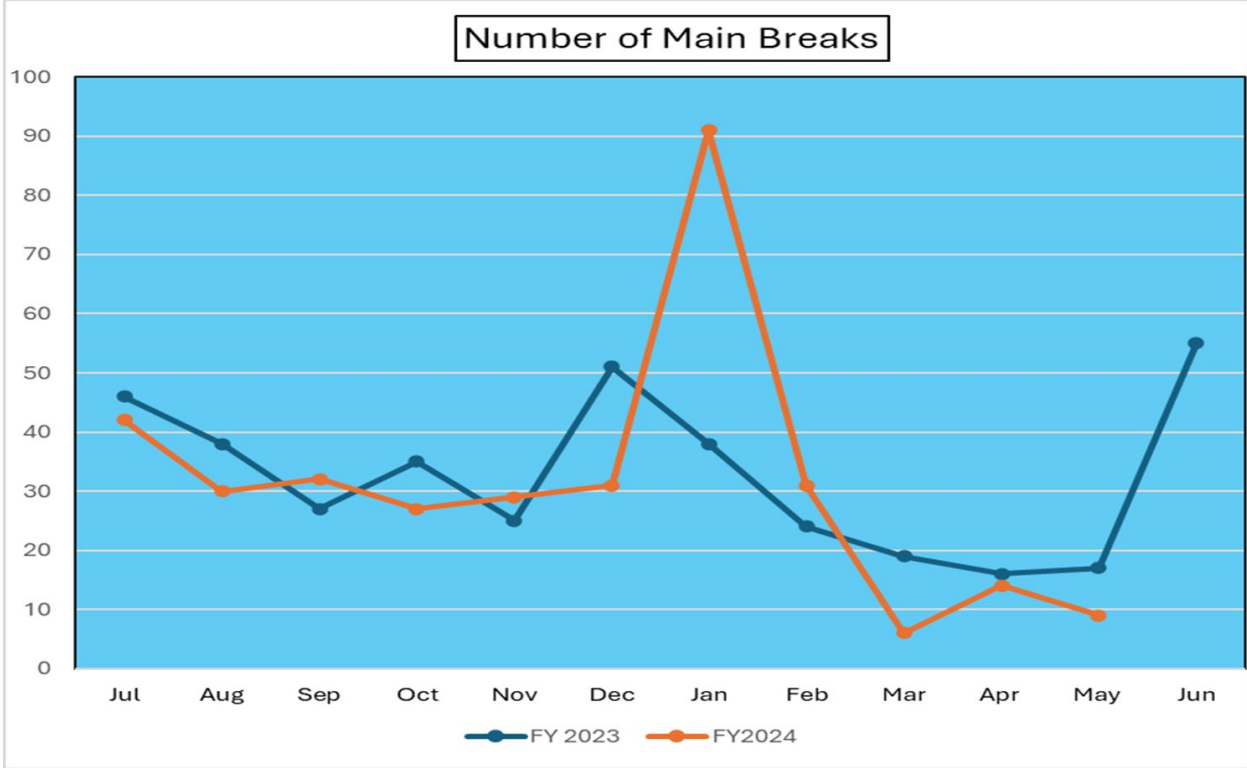


Leaks & Water Main Breaks

Water Loss Study

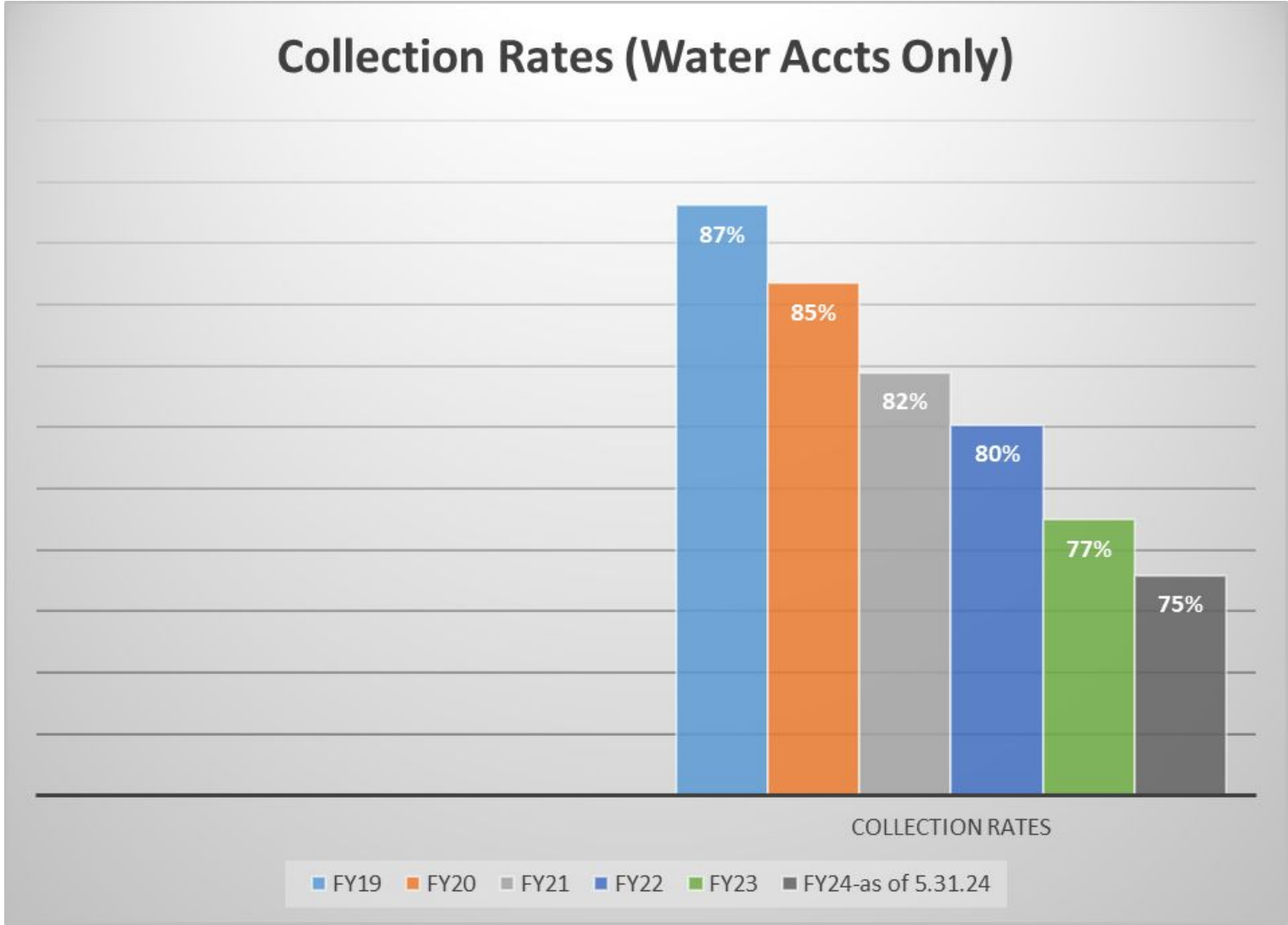
- Not conducted

Water Main Breaks

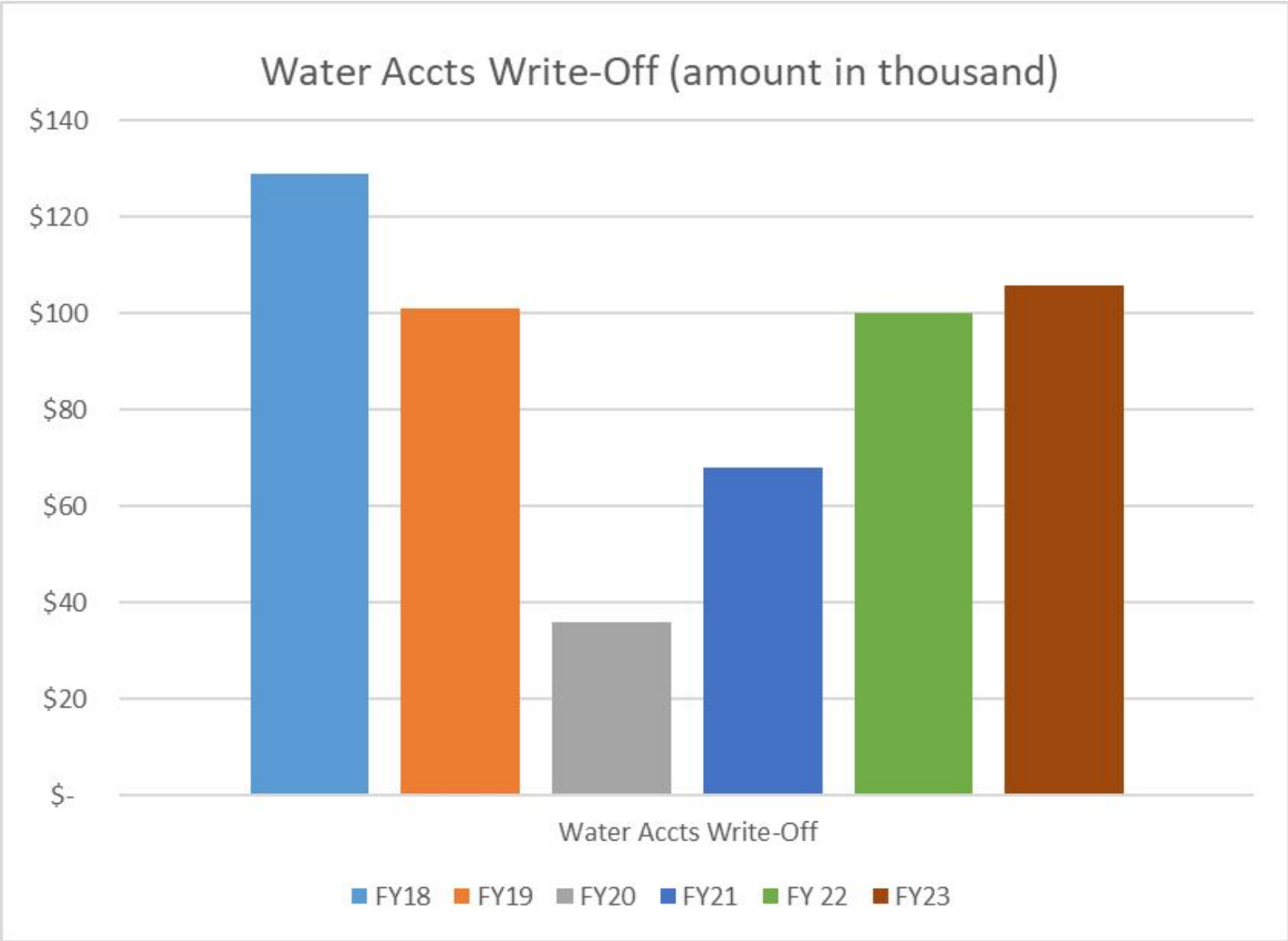


Collection Rates

Collection Rates (Water Accts Only)



Water Accounts Write-Off



Federal and State Grants

ARPA from the City

- \$1.0 million for customer assistance
- \$1.2 million for capital improvements

ARPA & Bipartisan Infrastructure Legislation (BIL) Funding from the State

- 1. ARPA - Lead Service Line Inventory Grant - \$200k
- 2. BIL - Lead Service Line Inventory Grant - \$400k
- 3. BIL - Lead Service Line Replacement Plan - \$50k
- 4. BIL - Lead Service Line Replacement - \$5M



Department Overview

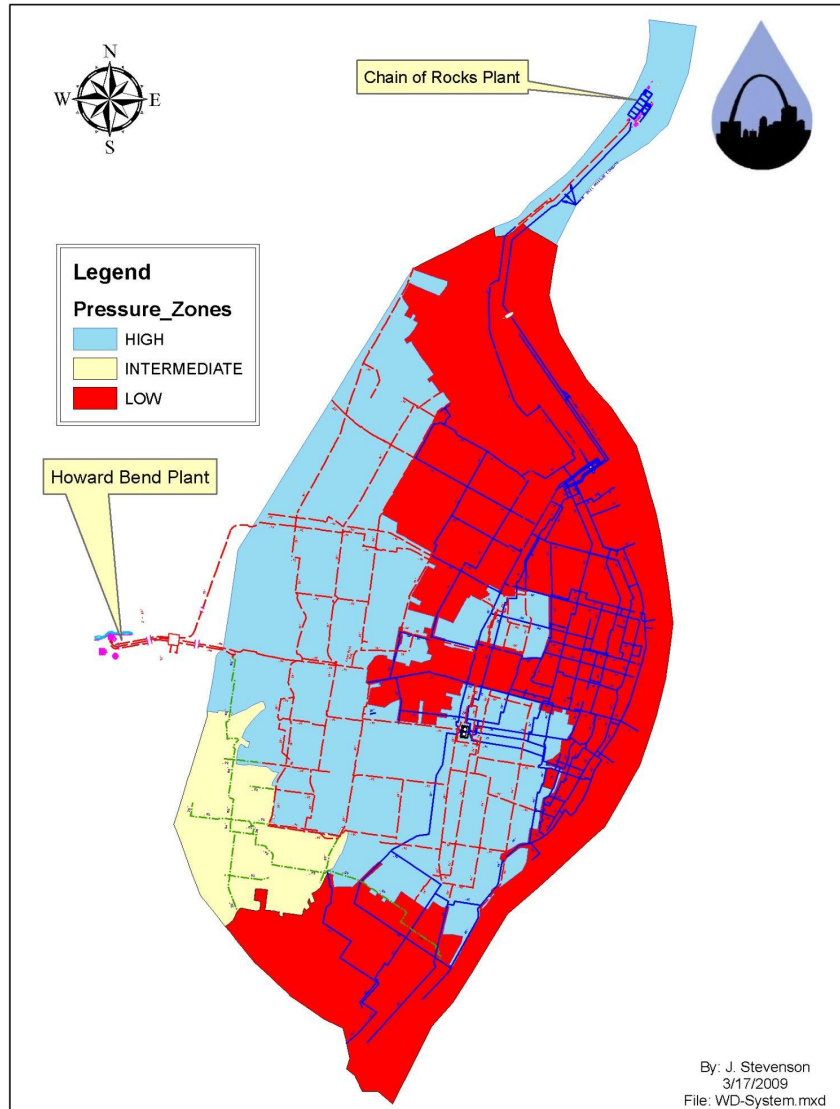


Excellent Water Quality

- Chain of Rocks and Howard Bend water treatment plants are 20 year Director Award winners from the Partnership for Safe Water.
- Recognizes utilities who have optimized their treatment process to consistently produce high quality water.
- Peer reviewed process.
- Consumer Confidence Report (CCR) available online



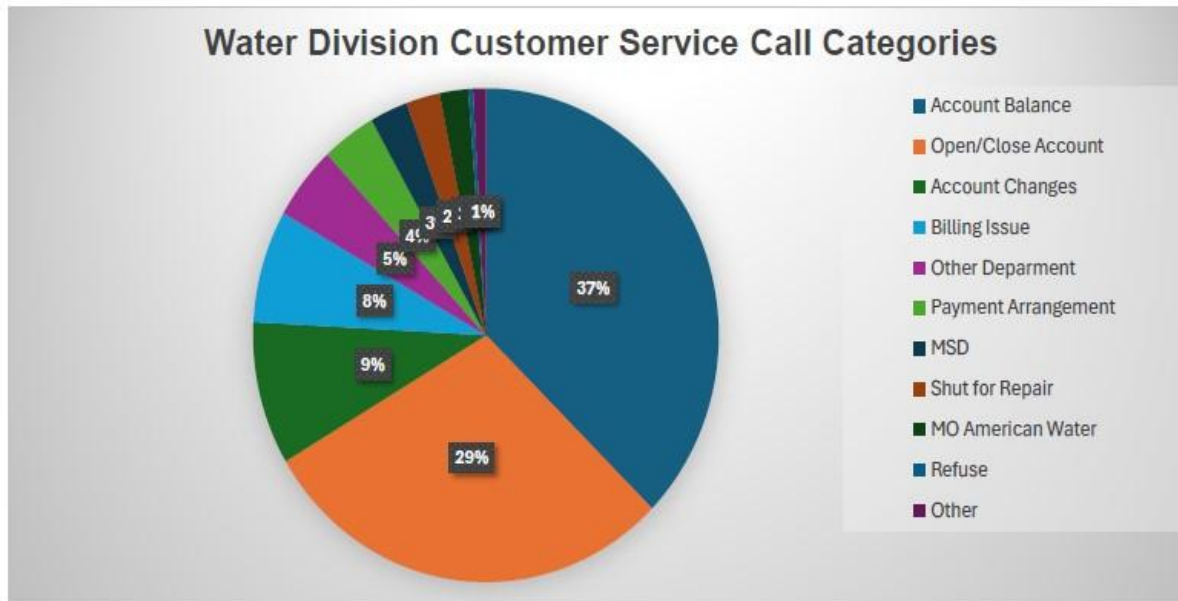
System Map



- Two water treatment plants
- 1300 miles of water mains
- 23,000 valves
- 15,500 fire hydrants
- Three pressure zones



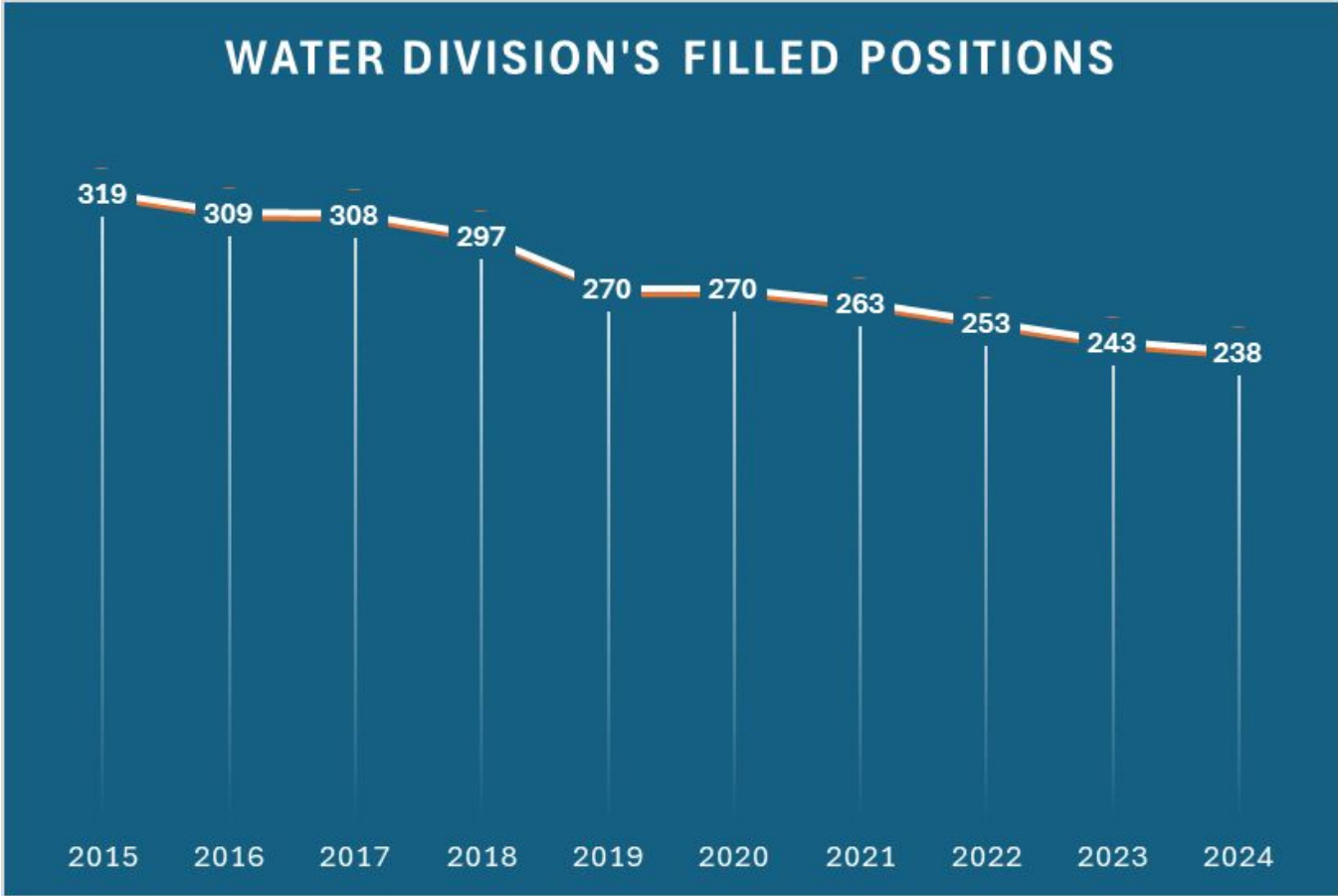
2024 YTD. WATER DIVISION CUSTOMER SERVICE CALL CATEGORIES



	Account Balance	Open/Close Account	Account Changes	Billing Issue	Other Department	Payment Arrangement	MSD	Shut for Repair	MO American Water	Refuse	Other
Month	201	202	401	402	304	203	302	404	301	303	Other
Jan-24	56	92	8	38	19	11	4	17	10	1	3
Feb-24	25	20	5	5	8	7	4	1	0	1	2
Mar-24	159	84	43	16	11	10	6	3	8	0	2
Apr-24	63	29	8	4	2	3	6	0	0	0	1
May-24	36	39	21	4	4	3	4	0	0	1	0
Report Summary	339	264	85	67	44	34	24	21	18	3	8
	37%	29%	9%	7%	5%	4%	3%	2%	2%	0%	1%



Staffing Levels Over the Years



Payroll Expenses Over the Years

