

HARRISONBURG PUBLIC UTILITIES ABOUT US AND OUR BUSINESS MODEL



Updated 4.26.2024

Harrisonburg Public Utilities

The City of Harrisonburg is an independent city located in the central Shenandoah Valley region of Virginia. It is the county seat of Rockingham County and encompasses 17.3 square miles, serving a population of approximately 54,000. Harrisonburg is located right along Interstate 81 and is only two hours away from both Richmond, Virginia and Washington, D.C.. Harrisonburg is home to two university campuses – James Madison University and Eastern Mennonite University – as well as numerous other businesses, non-profit organizations, and a vibrant downtown. The Department of Public Utilities is responsible for providing water and sewer services to residences and businesses in the City of Harrisonburg and some in neighboring Rockingham County. Currently, our department manages 3 raw surface water sources, a class 1 multi-media filtration plant, 294 miles of waterlines, 186 miles of sewer pipes while serving approximately 18,000 accounts. We are member of the Harrisonburg Rockingham Regional Sewer Authority for enhanced nutrient removal plant.

Harrisonburg Public Utilities Mission Statement

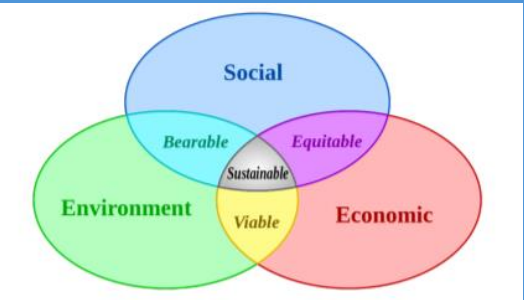
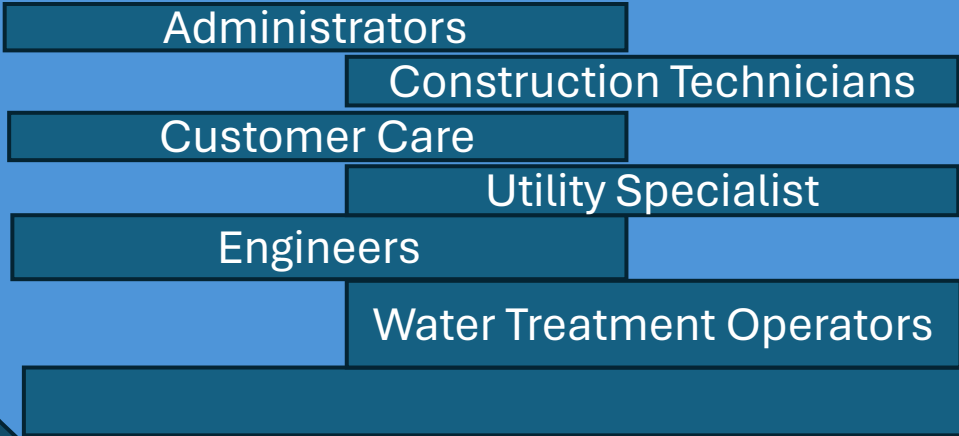
HPU is endowed with the mission to continuously operate and improve under a business model that is effective and efficient to deliver water and sewer service to all our customers. The service that we provide will meet the expectations of our stakeholders, will achieve sustainability through economic, social, and environmental balance, and will embellish the core value from the City Of Harrisonburg City Council. The business model that we create will safeguard our future for strategic, tactical, and operational performance through principles of high performance, asset management, and project management.



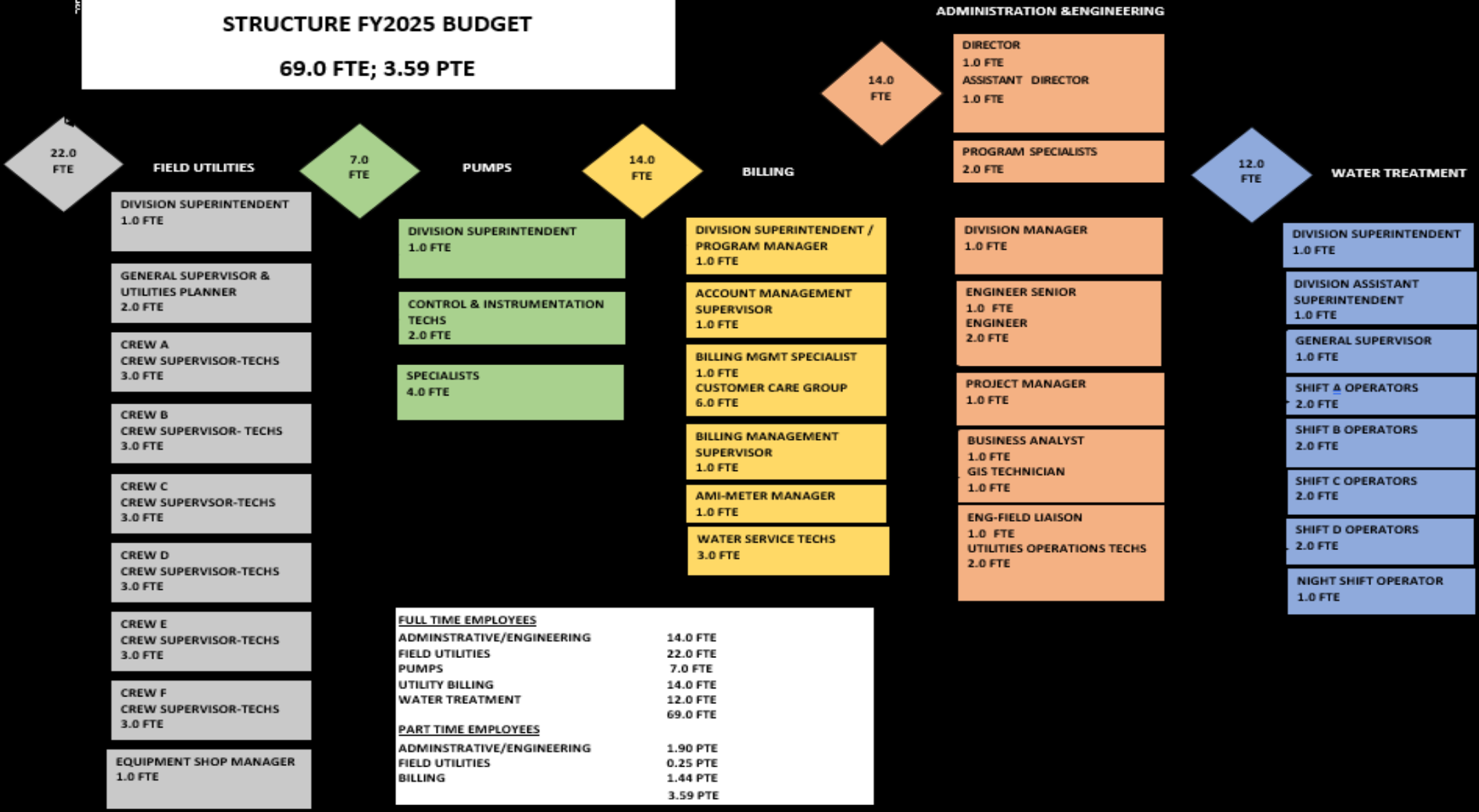
Mike Collins
Director

Organization Overview

Our staff of 69 employees manage \$24M in revenue that is generated from customer payments; we balance priorities for environmental, social, and economical sustainability for 18,000 account owners and \$404M in assets that are essential to providing service to our customers.



CITY OF HARRISONBURG, VIRGINIA
PUBLIC UTILITIES DEPARTMENT ORGANIZATION
STRUCTURE FY2025 BUDGET
69.0 FTE; 3.59 PTE



YOUR MONTHLY PAYMENT

Revenue

Expenses

Your monthly payment for combined water + sewer (5,000 gallons typical residential use) was in 2023.

\$49.80

While the Virginia statewide median was

\$93.73

50%

of your bill was channeled to operating:

\$7,065,667 water

**\$9,754,454 sewer
(\$4,860,000- HRRSA treatment)**

50%

of your bill was channeled to capital re-investments to replace assets (R&R).

Water assets inventory = \$251M

Required \$2.87M per year for R&R

Sewer inventory = \$153M (excludes HRRSA)

Required \$935K per year for R&R

ANNUAL FINANCIAL CYCLE & LTFM RECOMMENDATIONS

Long Term
Financial Model
(LTFM)

Annual
Budget

Capital
Improvement Plan

Annual Asset
Management
Assessments



Our operating cost are market favorable; we face rate increases through 2029 to fund retiring infrastructure yet we will remain market favorable in total cost to our customers.

Sustainability Based Water & Sewer Rates

2023 LTFM Model Outputs for Rates

H'burg Rate

Fy2023	*\$49.80
FY2024	*\$51.80
FY2025: 5.0% water + 2.75% sewer	
\$20.05 + \$31.80	*\$52.75
FY2026: 5.0% water + 2.75% sewer	
\$21.99 + \$32.68	*\$54.67
FY2027: 5.0% water + 2.75% sewer	
\$23.09 + \$33.57	*\$56.67
FY2028: 5.0% water + 2.75% sewer	
\$24.25 + \$34.50	*\$58.75
FY2029: 5.0% water + 2.75% sewer	
\$25.46 + \$35.45	*\$60.91

Virginia Median 2023 ***\$93.73**

* Is the monthly cost for 5,000 gallons water + sewer

Harrisonburg Public Utilities Environmental Sustainability Aquatic Protection for Raw Water

Dry River Intake (DRI)

HPU operates Switzer Dam above our DRI; we also control the bypass at our DRI to maintain 500,000 gpd in the stream below. In the future the intake will be retrofitted with 2 mm screens for protection against entrainment and entrapment of aquatic organisms.



North River Intake (NRI)

HPU manages raw water intake from the NRI to less than 12% of the instream daily flow rate. In the future the intake will be retrofitted with 2 mm screens for protection against entrainment and entrapment of aquatic organisms.

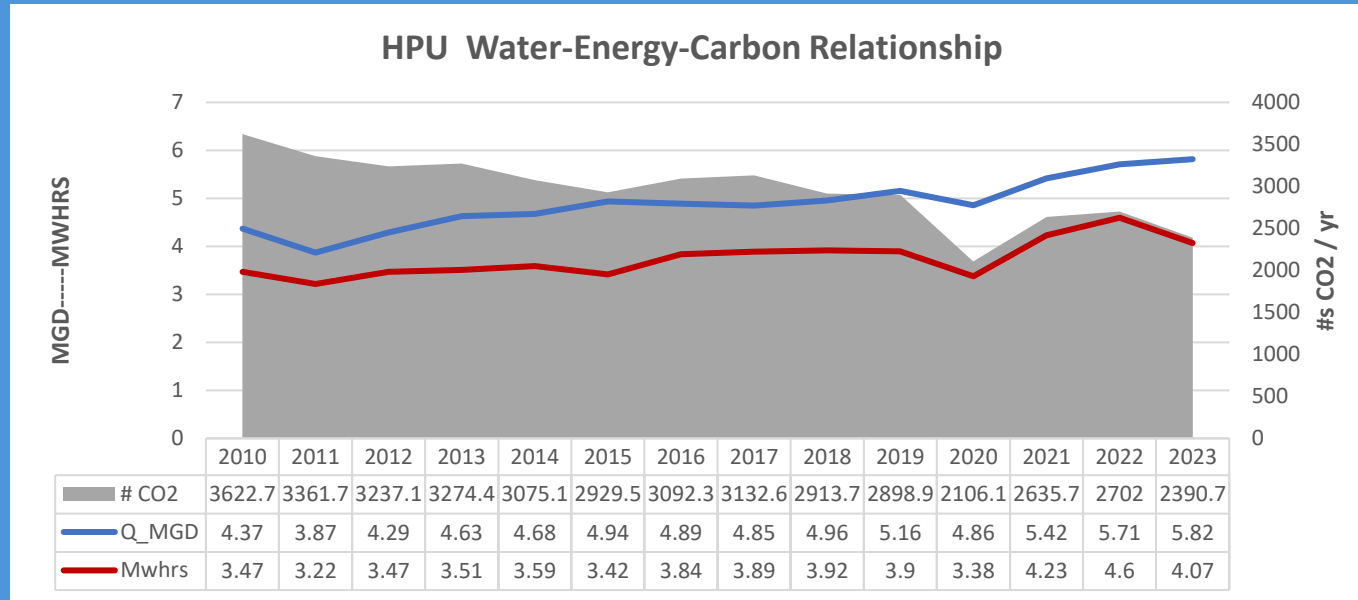


South Fork Shenandoah River Intake (SFI)

HPU manages raw water intake from the SFI to less than 10% of the instream daily flow rate. In the future the intake will be retrofitted with 2 mm screens for protection against entrainment and entrapment of aquatic organisms.

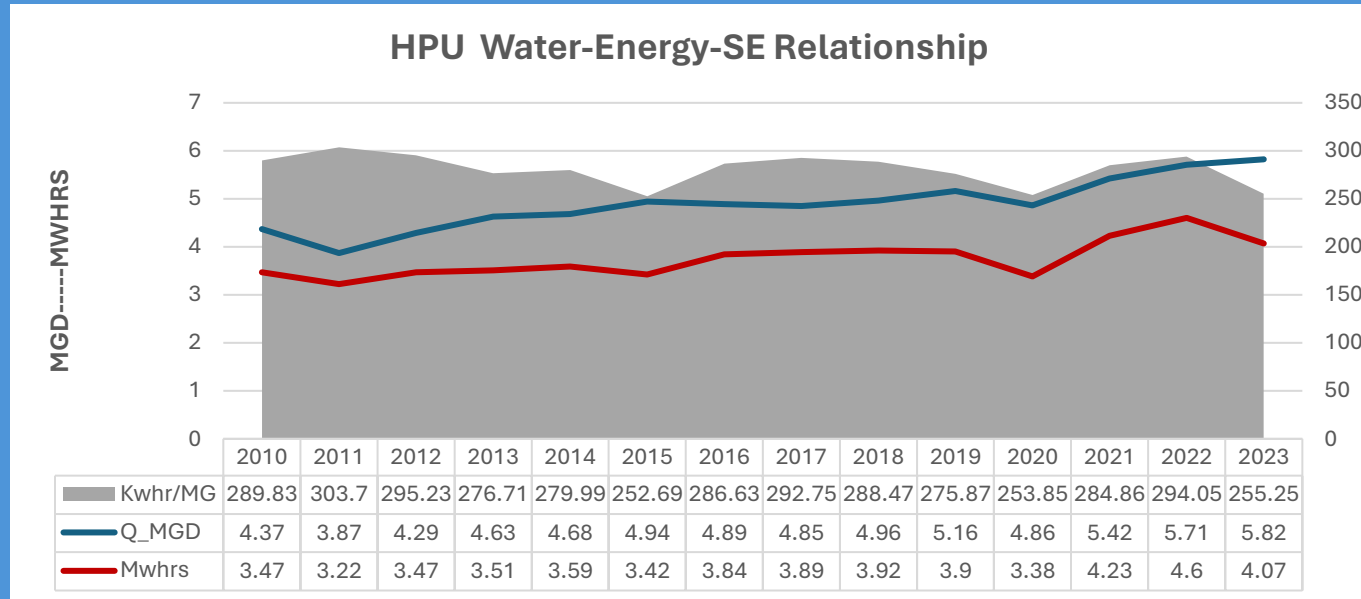


Harrisonburg Public Utilities Environmental Sustainability The Carbon Footprint



Our carbon reduction (34%) is dependent upon the carbon reduction by our energy providers.

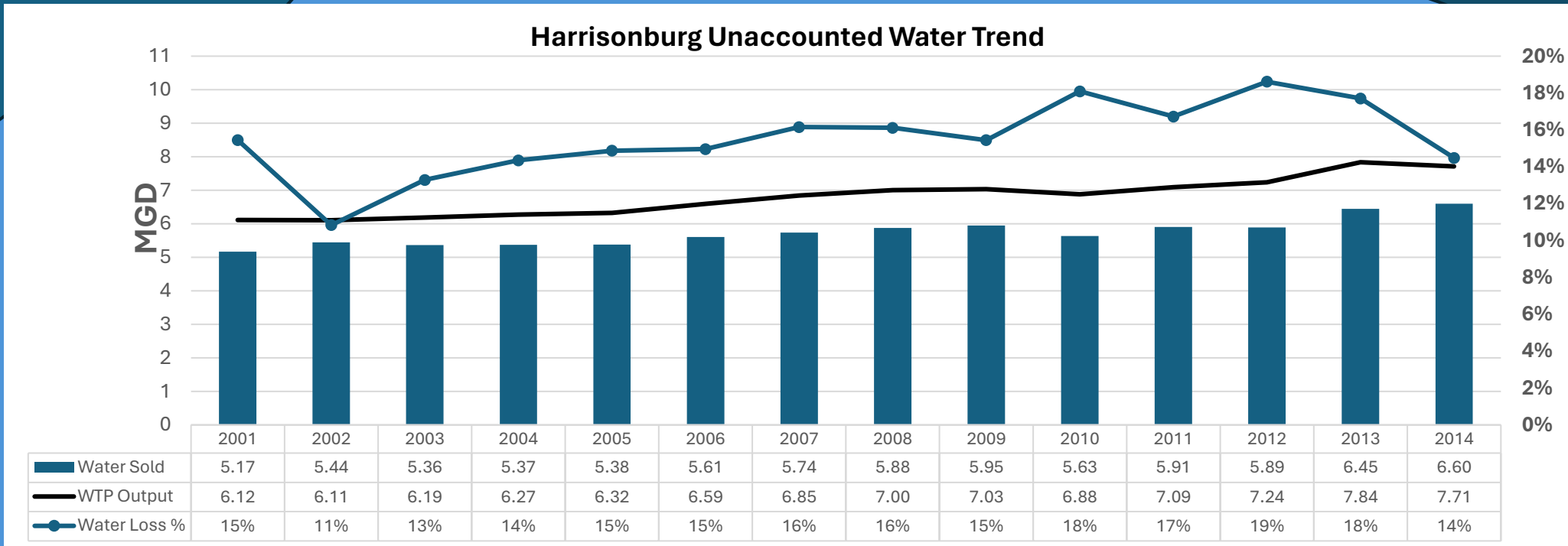
Harrisonburg Public Utilities Financial & Environmental Sustainability (Specific Energy = kilowatt hours per MG water)



We use AI internet continuous monitoring in our largest pump demand center; we perform six month SE pump inspections at each of our smaller demand centers.

Holding our energy per water ratio (SE) at status quo has been challenging as our increasing demands are pushing our asset harder and into areas of higher energy intensity use (example: east of I-81).

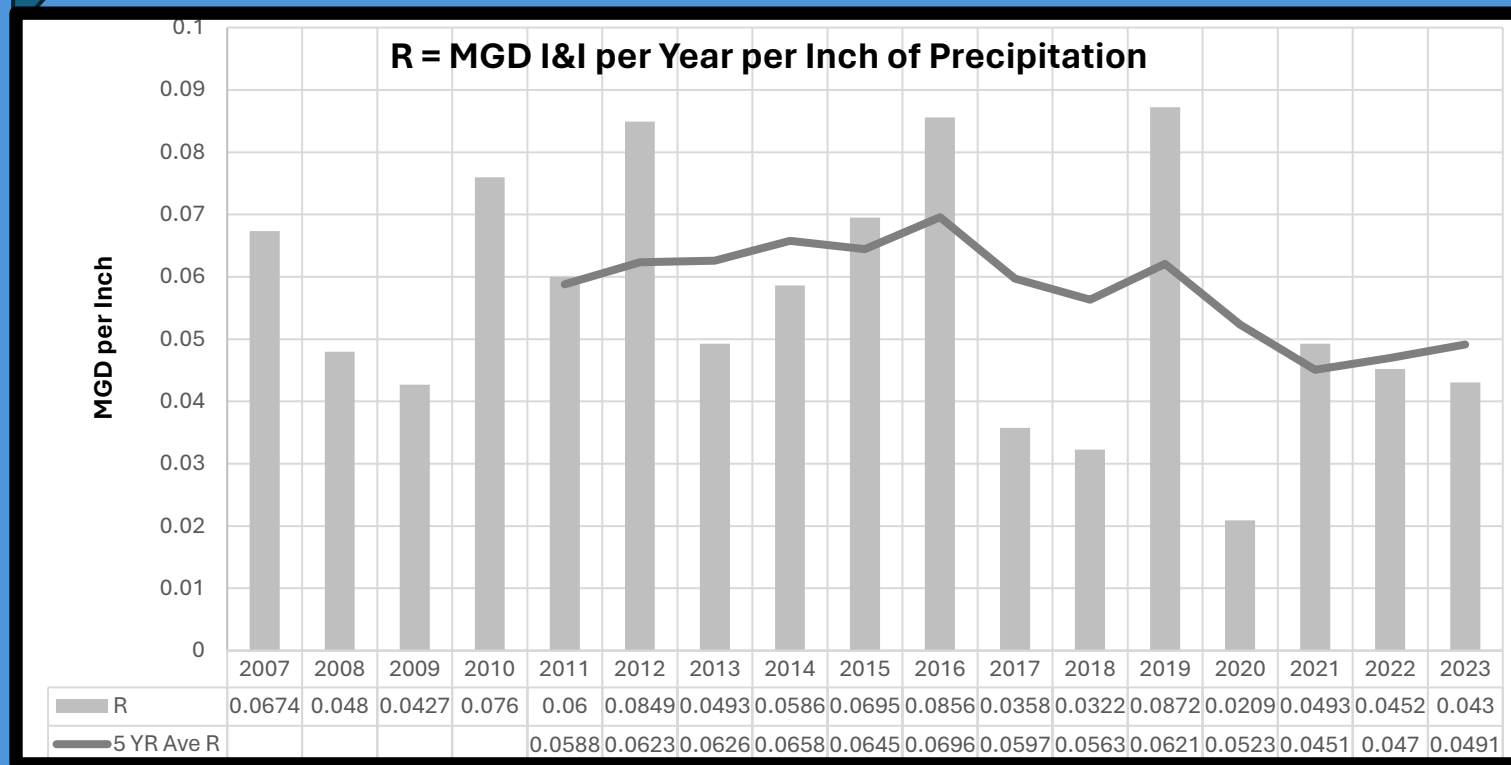
Harrisonburg Public Utilities Environmental & Financial Sustainability



A reasonable goal for unaccounted water is 15% with an upper performance level at 10%.

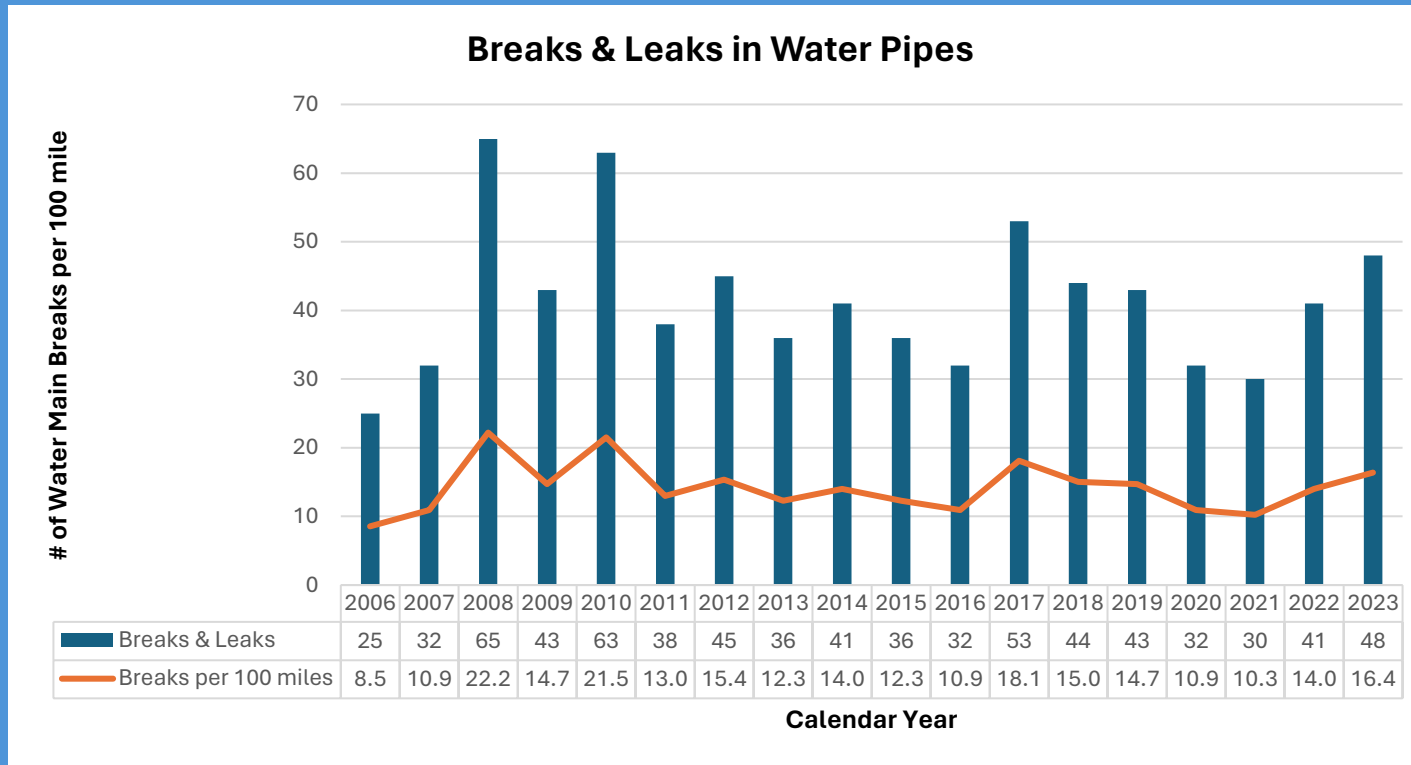
We use meter testing & manual leak detection; we are evaluating AI such as satellite detection and AMI metering with acoustical monitoring.

Harrisonburg Public Utilities Financial & Environmental Sustainability (Sewer system infiltration & inflow)



Our benchmark for undesirable I&I has shown a reduction near 17% since 2011.

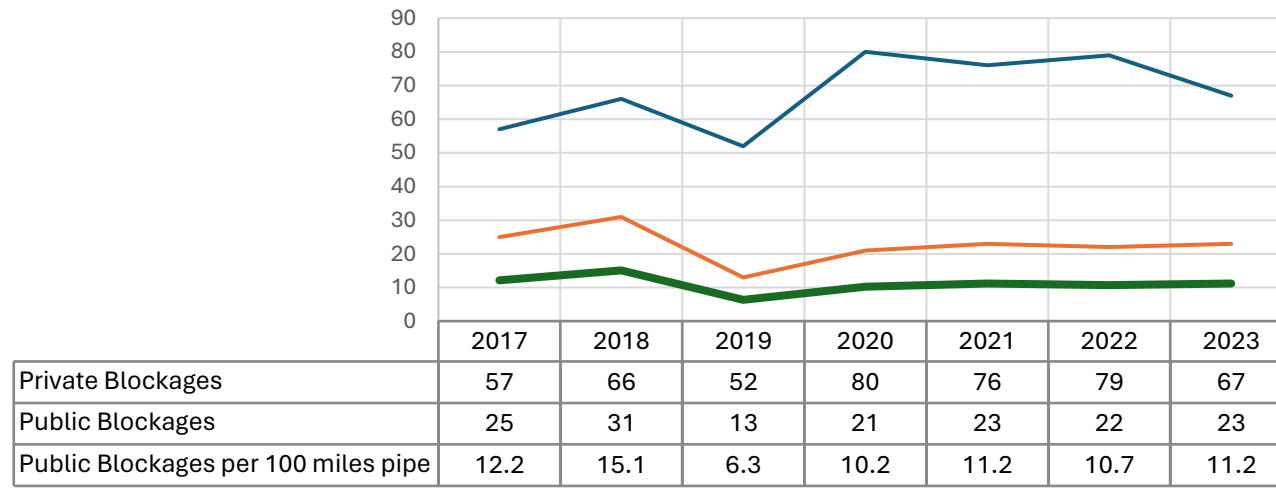
Harrisonburg Public Utilities Social Sustainability (Reliability—Water System Interruptions)



We are heavily invested in cast iron water pipe. We experience between 25-65 interruptions per year with 7/24/365 response . Our benchmark average is 15.5 per 100 miles of pipe which is favorable to the national average of 25-30 per 100 miles of pipe.

Harrisonburg Public Utilities Social Sustainability (Reliability—Sewer System Interruptions)

Sanitary Sewer Blockages 2017-2023



— Private Blockages — Public Blockages — Public Blockages per 100 miles pipe

We respond 7/24/365 to an average of 91 call-outs per year for interrupted sewer services. About 75% of them require our customers to take further action to meet their private responsibilities. Our benchmark average is 11 public interruptions per 100 miles of pipe; the nationwide average fluctuates significantly so we strive for continuous improvement.

Harrisonburg Public Utilities Asset Sustainability

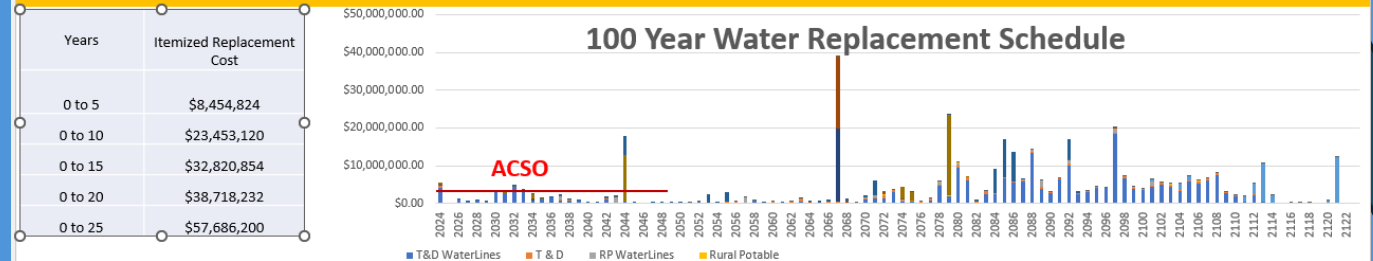
Assets Ownership 8.23.23

<u>CIP Fund</u>	<u>CARV</u>	<u>ACSO</u>
Western Raw Water	\$ 28.9M	\$300k/yr.
Eastern Raw Water	\$ 40.0M	\$ 0K/yr.
Rural Water Distribution	\$ 15.5M	\$ 80K/yr.
Pumping, Storage, SCADA	\$ 33.7M	\$260K/yr.
City Water Distribution	\$109.4M	\$1.3m/yr.
Water Treatment	\$ 21.4 M	\$675k/yr.
Metering	\$ 2.4M	\$ 25k/yr.
Total Water System	\$251.3M	\$2.87M

Interceptors	\$ 29.6M	\$100k/yr.
Collectors	\$129.5M	\$550k/yr.
Pumping	\$ 1.8M	\$ 50K/yr.
Metering	\$ 2.4M	\$ 25k/yr.
Other		\$ 10K/yr.
Sewer System	\$153.3M	\$735K/yr.

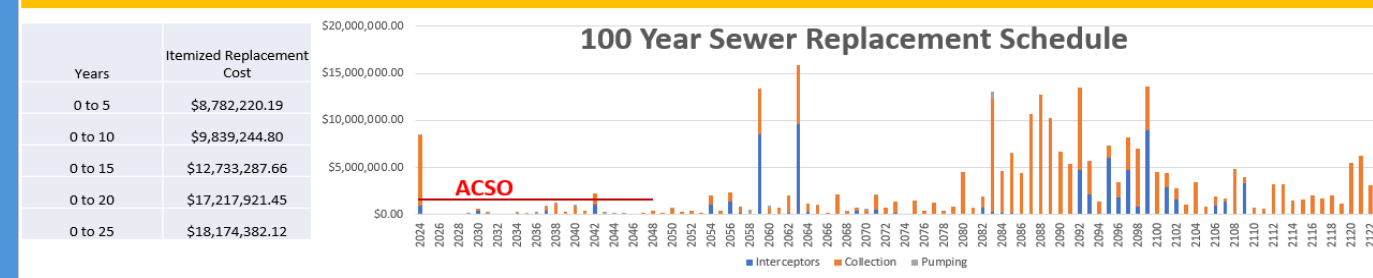
(1) Add \$220k per year supplemental for I&I

WATER CAPITAL: RETIREMENT & REPLACEMENT CHALLENGE



Asset assessment delivers the ACSO which is the annual funding needed to efficiently retire assets.

SEWER CAPITAL: RETIREMENT & REPLACEMENT CHALLENGE





Switzer Lake: A combined flood protection and water storage structure that was constructed in the early 1970's. It is one of the many valued assets that provide the City of Harrisonburg with financial, social, and economical sustainability.