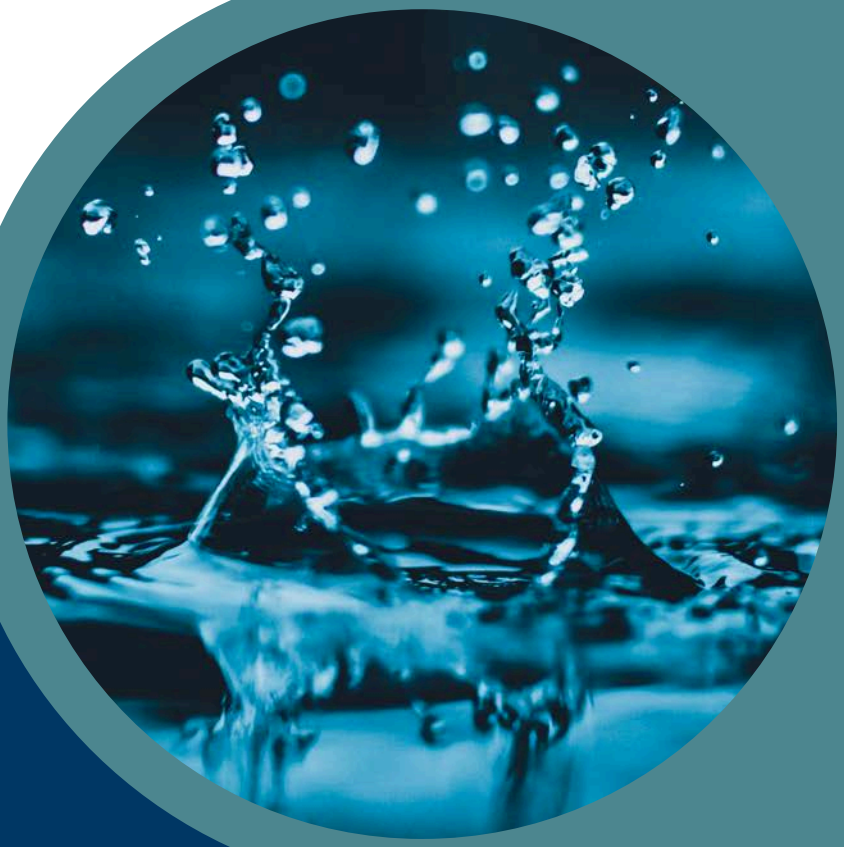
Attachment A

CITY OF
WHEATON
Illinois

WATER RATE STUDY



July 2024

City of Wheaton
Water Rate Study
July 2024
Table of Contents

I. Executive Summary

A team of City staff, including the Director of Finance, Finance Analyst, Director of Engineering, Director of Public Works, Water Superintendent, and Management Analyst, was established to conduct a Water Rate Study. The objective was to evaluate the financial sustainability of the water utility system and develop strategies for long-term stability, ensuring adequate funding to support its operations, maintenance, and infrastructure needs. To achieve this, staff developed a rate model utilizing cash flow analysis to support the pricing of water utility services, using a cost-of-service analysis with a planning period of three years (2025-2027).

Background

The City of Wheaton (City) delivers clean, safe, and reliable water service to around 16,600 accounts, serving a population of approximately 53,000 residents, businesses, and visitors. The primary source of water supply for the City is from Lake Michigan, purchased from the DuPage Water Commission (DWC), sourced from the City of Chicago.

The City funds the water utility system through the Water Fund, an enterprise fund that is entirely self-sustaining, supported solely by user charges and fees, without any reliance on tax revenues. Revenues from the Water Fund are used to support the operations, maintenance, and infrastructure needs of the water utility system.

Study Findings and Conclusions

The Water Rate Study revealed several key findings and conclusions:

- **Challenges to the Water Fund**. The City's Water Fund is facing ongoing financial challenges that could lead to financial instability over the next five years. Operating and maintaining our water utility system is becoming increasingly costly, driven by factors like inflation, rising energy costs, and increases in material prices. Over the past five years, the Consumer Price Index has increased by approximately 19%. Essential components of our water infrastructure, including water mains, storage tanks, and pumping stations, require continuous maintenance and periodic upgrades to maintain optimal performance. Many of these assets are aging and require repair or replacement to prevent leaks, uphold water quality, meet regulatory requirements, and ensure dependable service delivery. These factors underscore the necessity of adjusting rates and fees, which have not been increased since 2015.
- **Purchased Water Expenses**. Continued rate increases by the City of Chicago and DuPage Water Commission (DWC) have significantly reduced available funding for annual operations and infrastructure investment. Since 2015, the City has not increased rates, whereas the City of Chicago and DWC have both passed along increases of 19.3% and 15.1% respectively. On average, costs for purchasing water from the DWC comprise 70% of the City's total operating expenses in the Water Fund.
- **Infrastructure Investments**. Aging infrastructure is a critical concern for the water utility system. Across the nation, much of the water infrastructure is reaching the age where replacement is necessary. As a result, the City's annual investments in replacing water mains and lead service lines are crucial. The risk of service disruptions, property damage,

inadequate fire flow, and business interruptions due to aging water mains will likely increase, especially in the 2030s as the oldest mains approach the end of their useful life. Replacing these aging mains is expected to reduce non-revenue water loss and mitigate high emergency repair costs.

- **Recommendations from Past Studies.** Previous reports highlighted that the City was replacing water mains at a 268-year replacement cycle. Recommendations in 2012 emphasized a more realistic spending level ($1.8 million - $2.2 million) to achieve a replacement cycle of 100-to-150 years (2.15 miles per year), aligning with industry best practices. Recent challenges such as escalating costs and supply chain disruptions have further delayed annual replacements, extending the replacement cycle to 298 years. The current cost to replace 2.15 miles per year is $3.8 million.

Recommendations

The following recommendations were developed from the Water Rate Study.

- **Three-Year Rate and Fee Structure**. Approval of a structured plan with annual adjustments to usage rates and fees to provide financial support for the water utility system through 2027.
  - **Usage Rates.** Given the impact of water purchased from the DWC on the City's operating expenses, staff recommends splitting the City's current usage rate of $5.05 per 100 cubic feet into two separate usage rates: (1) a direct pass-thru rate for DWC charges (DWC Usage Rate) and (2) a City Usage Rate.

Proposed Usage Rates
2025 – 2027

Year	City Usage Rate	DWC Usage Rate	Total Usage Rate	Change $	Change %
2024	$ 5.05	$ -	**$ 5.05**	$ -	0.0%
2025	$ 1.84	$ 4.30	**$ 6.14**	$ 1.09	21.6%
2026	$ 1.90	$ 4.43	**$ 6.33**	$ 0.19	3.1%
2027	$ 1.95	$ 4.56	**$ 6.51**	$ 0.18	2.8%

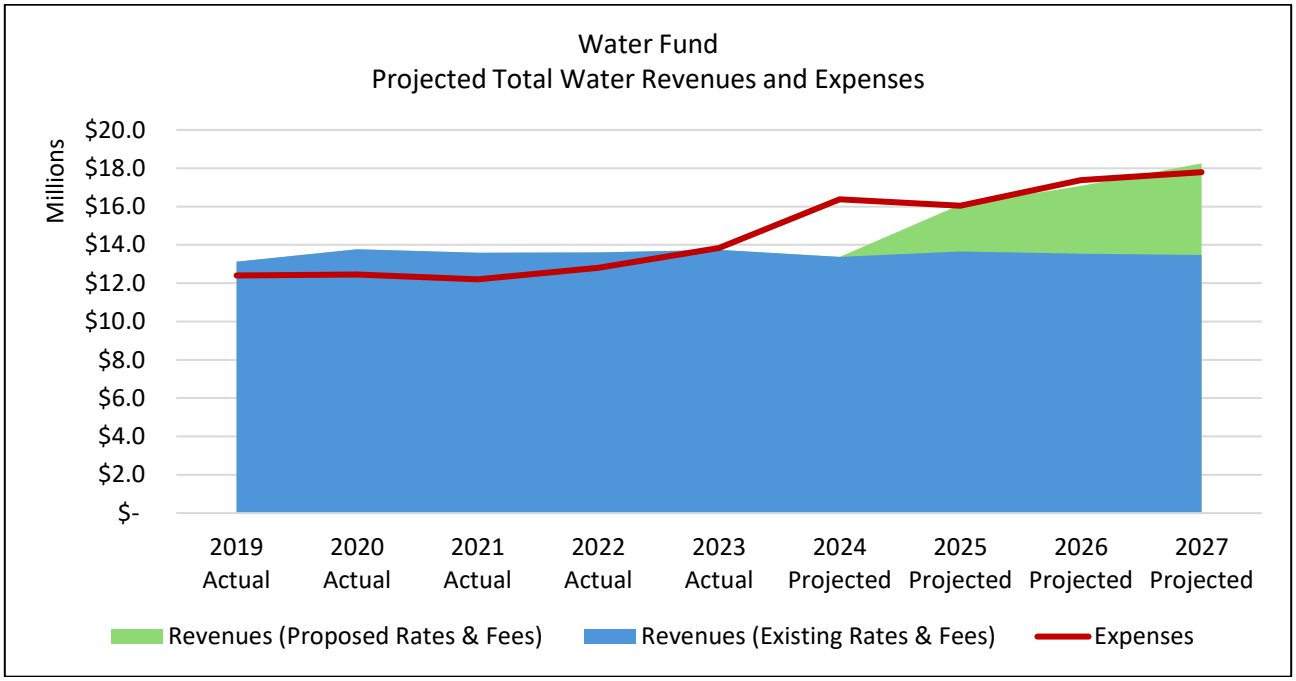
  - **Fixed Fees**. Proposed increases in fixed monthly fees over the next three years to stabilize revenue, address consumption charge fluctuations, and fund operational and infrastructure needs.

Proposed Fixed Fees
2025 – 2027

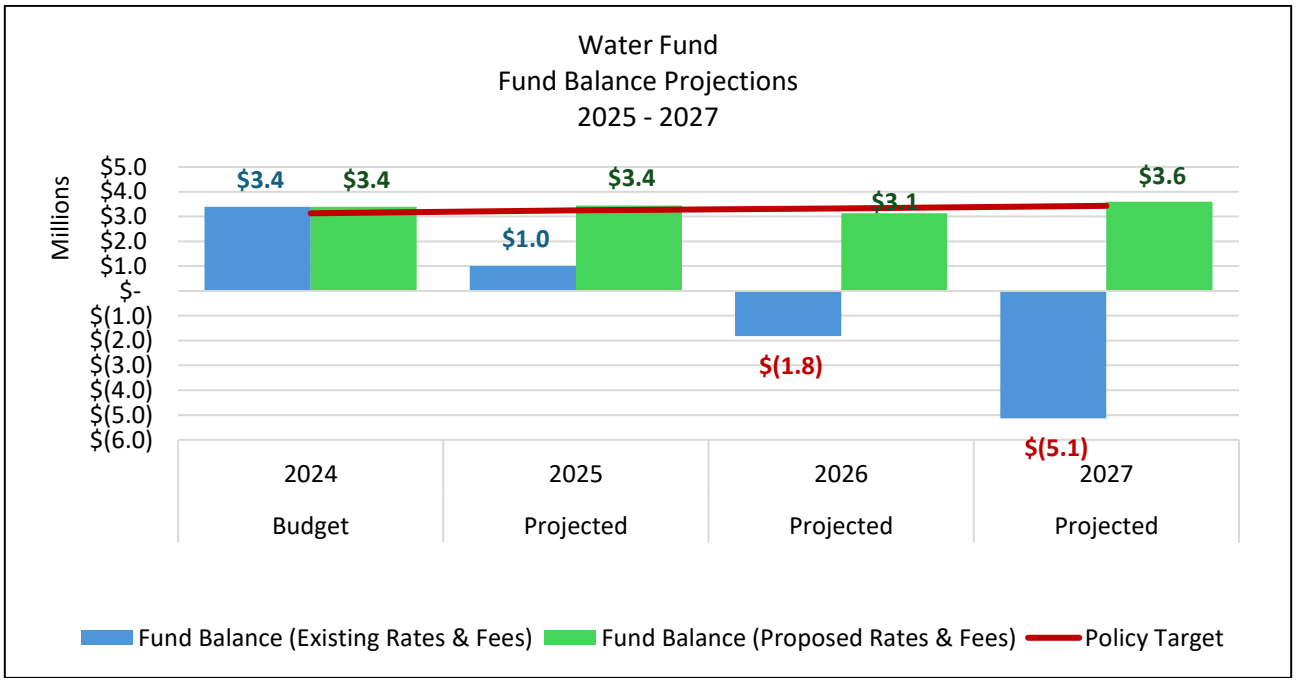
Meter Size	2024 Current Fees	2025	2026	2027
5/8"	$ 13.59	$ 14.95	$ 17.94	$ 21.53
5/8" by 3/4"	$ 13.59	$ 14.95	$ 17.94	$ 21.53
3/4"	$ 13.59	$ 14.95	$ 17.94	$ 21.53
1"	$ 27.18	$ 29.90	$ 35.88	$ 43.06
1½"	$ 54.35	$ 59.79	$ 71.75	$ 86.10
2"	$ 86.96	$ 95.66	$ 114.79	$ 137.75
3"	$ 163.06	$ 179.37	$ 215.24	$ 258.29
4"	$ 271.76	$ 298.94	$ 358.73	$ 430.48
6"	$ 543.53	$ 597.88	$ 717.46	$ 860.95

Financial Projections

The combined adjustments to usage rates and fixed fees are projected to maintain a structurally balanced budget for the Water Fund. Detailed financial projections compare scenarios with and without proposed adjustments, illustrating their impact on the Water Fund's fund balance reserves through 2027.



The proposed changes to rates and fees bring the fund balance within the policy target by 2027.



Customer Impact

The impact on customer's monthly water bills will vary based on meter size and consumption levels under the proposed rate and fee adjustments through 2027. Below is a breakdown illustrating how the average monthly bill for customers will change under the proposed usage rate and fee increases during this period, categorized by meter size. These calculations incorporate both the fixed fee and usage charges based on the 2023 actual average consumption per meter size. Most customers in the City have 5/8" x 3/4" meters, using 500 cubic feet, are expected to see a $6.82 increase in their monthly water bill in 2025.

Projected Total Monthly Water Bill

Meter Size	Average Consumption (per 100 CF)	Existing Monthly Bill	2025	2026	2027
5/8"	5	$ 38.84	$ 45.66	$ 49.58	$ 54.10
5/8" by 3/4"	5	$ 38.84	$ 45.66	$ 49.58	$ 54.10
3/4"	8	$ 53.99	$ 64.09	$ 68.57	$ 73.64
1"	11	$ 82.73	$ 97.47	$ 105.49	$ 114.72
1.5"	43	$ 271.50	$ 323.93	$ 343.88	$ 366.21
2"	63	$ 405.11	$ 482.66	$ 513.49	$ 548.15
3"	52	$ 425.66	$ 498.80	$ 544.33	$ 597.03
4"	394	$ 2,261.46	$ 2,719.23	$ 2,852.19	$ 2,997.11
6"	1,246	$ 6,835.83	$ 8,251.88	$ 8,602.86	$ 8,977.75

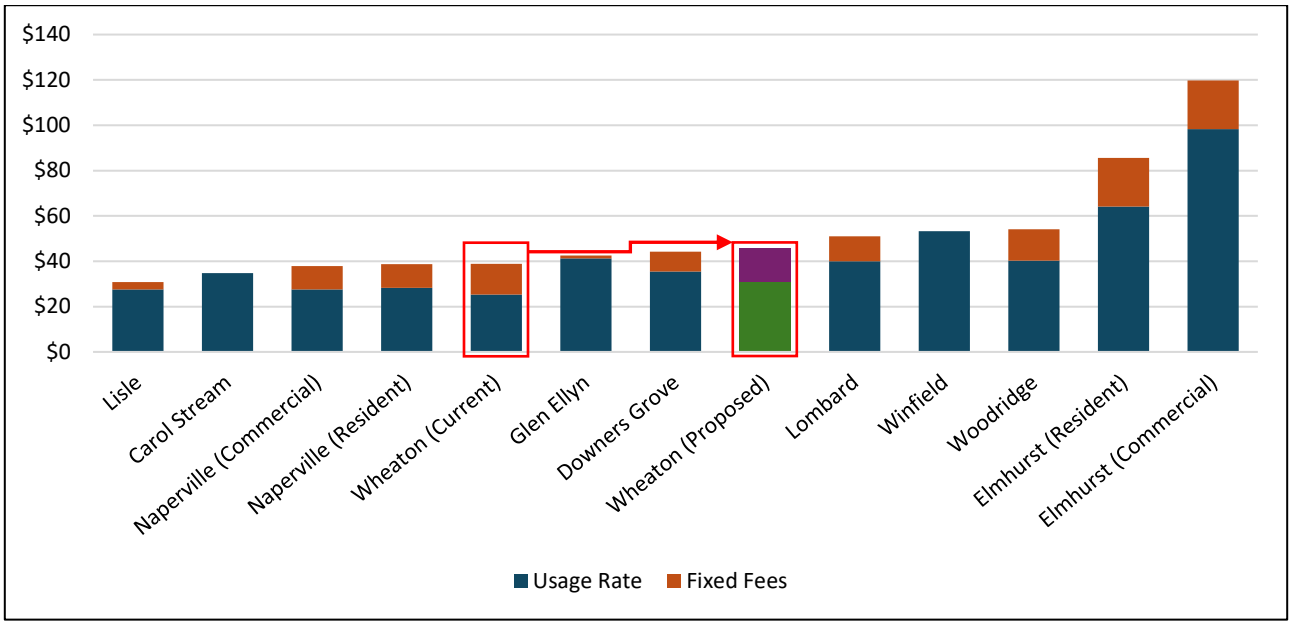
The following table outlines the dollar amount and percentage increase for each customer, categorized by meter size and based on the same average consumption totals.

Projected Increases to Total Monthly Water Bill

Meter Size	2025		2026		2027	
	$	%	$	%	$	%
5/8"	$ 6.82	17.6%	$ 3.92	8.6%	$ 4.52	9.1%
5/8" by 3/4"	$ 6.82	17.6%	$ 3.92	8.6%	$ 4.52	9.1%
3/4"	$ 10.10	18.7%	$ 4.48	7.0%	$ 5.07	7.4%
1"	$ 14.74	17.8%	$ 8.02	8.2%	$ 9.23	8.7%
1.5"	$ 52.43	19.3%	$ 19.95	6.2%	$ 22.33	6.5%
2"	$ 77.55	19.1%	$ 30.83	6.4%	$ 34.66	6.7%
3"	$ 73.14	17.2%	$ 45.53	9.1%	$ 52.70	9.7%
4"	$ 457.77	20.2%	$ 132.96	4.9%	$ 144.92	5.1%
6"	$ 1,416.05	20.7%	$ 350.98	4.3%	$ 374.89	4.4%

The following chart compares the average monthly water bill for a 5/8” by 3/4” meter customer in Wheaton with bills from other DWC communities.

Monthly Water Bill
Most Common Water Customer
5/8” by 3/4” Meter Using 500 Cubic Feet of Water



Comprehensive Study of the Water Utility System

To enhance long-term planning and operational efficiency, staff have recommended engaging a consultant for a comprehensive, risk-based analysis of the water utility system. This study would provide recommendations for annual infrastructure replacement and maintenance costs, create a prioritization and implementation plan, and explore funding alternatives.

Conclusion

The Water Rate Study underscores the City's commitment to ensuring sustainable, reliable water services amidst escalating challenges. By implementing recommended rate adjustments and investing in infrastructure, Wheaton aims to safeguard its water utility system for current and future generations, maintaining service quality and fiscal responsibility.

II. Background

The City of Wheaton (City) delivers clean, safe, and reliable water service to around 16,600 accounts, serving a population of approximately 53,000 residents, businesses, and visitors. The primary source of water supply for the City is from Lake Michigan, purchased from the DuPage Water Commission (DWC) via the City of Chicago. The City has made substantial infrastructure investments building the water utility system, which includes the following major components:

- 2 elevated storage tanks with a total storage volume of 3 million gallons,
- 5 ground storage reservoirs with a total storage volume of 4.3 million gallons,
- 3 pump stations with 21 high-service pumps,
- 6 emergency backup wells,
- 3 standby electrical generators,
- 2,500 fire hydrants,
- 3,200 valves, and
- 230 miles of water mains, with 215 miles being City-owned.

The City funds the water utility system through the Water Fund, an enterprise fund that is entirely self-sustaining, supported solely by user charges and fees, without any reliance on tax revenues. Revenues from the Water Fund are used to support the operations, maintenance, and infrastructure needs of the water utility system. Like many municipal water utilities across the nation, the City faces ongoing challenges, particularly the need for infrastructure investment in the water utility system and the increases in the cost of purchased water from the City of Chicago and DuPage Water Commission (DWC). These pressures have prompted staff to conduct a detailed water rate study to evaluate the Water Fund and explore options to ensure the fund's long-term sustainability. Staff has developed a rate model to determine the appropriate rates, fees, and charges necessary to ensure the long-term stability of the Water Fund.

Scope of Work

The water rate study encompasses the following specific tasks:

- **Revenue Requirements.** Project the necessary funds for the water utility system from 2025 to 2027, including operations, maintenance, infrastructure investments, and fund balance reserves.
- **Cost of Service and Financial Plan.** Conduct a cost-of-service analysis to determine appropriate cost allocations and develop a financial plan to ensure that water rates, fees, and charges generate sufficient revenues over a three-year projection period.
- **Rate Design.** Design a water rate structure that appropriately distributes costs among the City's customers.
- **Customer Impacts.** Assess and document the impact of proposed rate and fee changes on customers.
- **Benchmark.** Compare the proposed rate and fee changes with those of similar water utility systems in the area, measuring the proposed rates and fees with DWC communities.

Assumptions

The following principles and assumptions guided the cost-of-service rate study:

General Principles

- **Self-Supporting System:** The water utility system must be self-sustaining, funded solely by the fees and charges collected from water customers.
- **Reserves:** The City should maintain reserves to provide sufficient cash flow for operations and unanticipated expenses, ensuring sufficient funds for appropriate infrastructure replacements.
- **Long-Term Rate Stability:** Water rates and fees shall be kept as low as possible over time. While it is possible to keep rates low for a short period of time by not investing sufficiently in the water utility system, eventually the system will deteriorate and require substantial investments leading to the need for significant and immediate rate increases.

The study uses the 2024 adopted budget along with 2023 actual financials as the base years for developing forecasted figures. The rate and analysis focuses on projecting costs and revenue requirements for 2025 through 2027.

Expense Assumptions

- **Purchased Water:** Cost projections for purchased water are based on a five-year average of water consumption billed by the DWC, with an assumed annual rate increase of 3%, slightly below the 3.9% average DWC rate increase over the past three years.
- **Personnel & Benefits:** Salaries and wages are calculated based on the current union contract, assuming an annual 3% increase. Benefits are projected based on City trends, with assumed increases ranging from 0% to 5%.
- **Charges & Services:** Expenses include various services, notably contractual services and utility costs, with assumptions based on historical experience over the past five years and annual increases ranging from 0% to 5%.
- **Supplies & Materials:** Costs for supplies and materials include postage, bill printing, general supplies, road materials, tools, repairs, and chemicals, with annual changes based on historical expenses and increases ranging from 2% to 5%.
- **Internal Services:** These expenses include internal transfers from the Water Fund for fleet replacements/services, administrative services, health insurance, and liability insurance, with assumed annual increases between 4% and 5%.
- **Infrastructure Investments:** The study assumes $3.0 million annually for infrastructure projects. Preliminary assessments indicate this may be inadequate for the City's infrastructure needs, including lead service line replacements and above-ground assets. A full system assessment by an outside consultant is recommended to better understand investment requirements to maintain efficiency and quality. The assessment will allow staff to develop a prioritization schedule and evaluate other funding options such as bonding to address infrastructure investments.

Revenue Assumptions

- **Billed Water:** Staff estimated billed water consumption based on a five-year average from the City's monthly utility bills between 2019 and 2023.
- **Miscellaneous Revenues:** No significant changes are assumed for other revenue sources such as connection fees, late fees, permits, and service termination charges. A three-year average of revenues is used to avoid outlier figures from the pandemic.

Rate Study Goals & Objectives

General Goal

- **Long-Term Financial Plan:** Develop a comprehensive financial plan to support the operational and infrastructure needs of the water utility system, including the replacement of water system assets.

Strategic Priorities

- **Financial Stability:** Maintain structurally balanced budgets with a continued focus on operating expenditures and infrastructure investment.
- **Enhanced Infrastructure:** Establish annual investment and operating targets to maintain existing and support new infrastructure.

Rate Structure Development Criteria

- **Fairness**: Ensure rates and charges do not result in undue burden among customer categories (residential, commercial, etc.). While fairness is generally tied to the cost of service, customer acceptance hinges on their perceptions of fairness.
- **Efficiency:** Design rate and fee schedules to encourage wise use of the resources devoted to the services provided by the utility.
    - Rates and fees should reflect the cost of providing service.
    - Rates and fees should be similar for customers or customer categories served under similar conditions.
    - Rate and fee schedules should be understandable, enabling customers to make informed decisions about their service usage.
- **Revenue Adequacy:** Recognize that rates and fees are cost-driven. Rates and fees should generate sufficient revenue to operate the system and accommodate changes in demand for services.
- **Sustainability:** The rate and fee methodology should aim to keep rates and fees low over the long term, not to merely keep them low for the short term by omitting or deferring needed expenses such as maintenance, infrastructure investment, and funding of necessary cash reserves.
- **Administrative Simplicity:** Recognize that limits must be placed on the number of customer categories, the complexity of the rate and fee schedule, and the frequency of billing to ensure ease of administration.
- **Justifiable Rates:** Set rates and fees in accordance with best practices from nationally recognized authorities such as the American Water Works Association (AWWA) and Water Environment Federation (WEF).

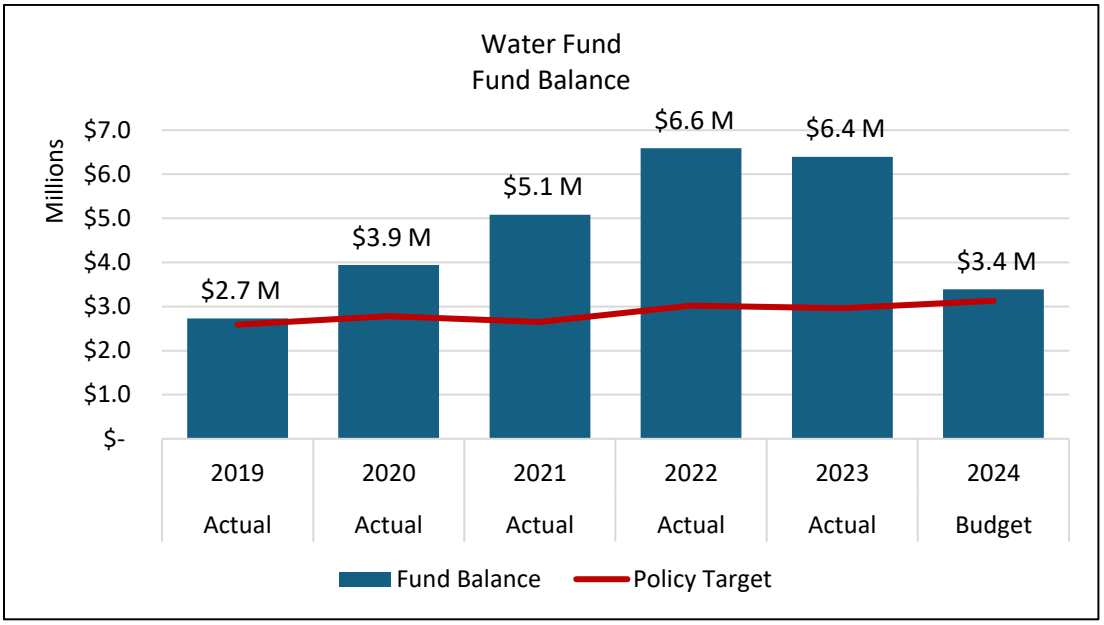
- **Limit Non-Revenue Water**: Maintain non-revenue water at or below the Illinois Department of Natural Resources' (IDNR) Standard of 10%.

Water Fund Financial Overview

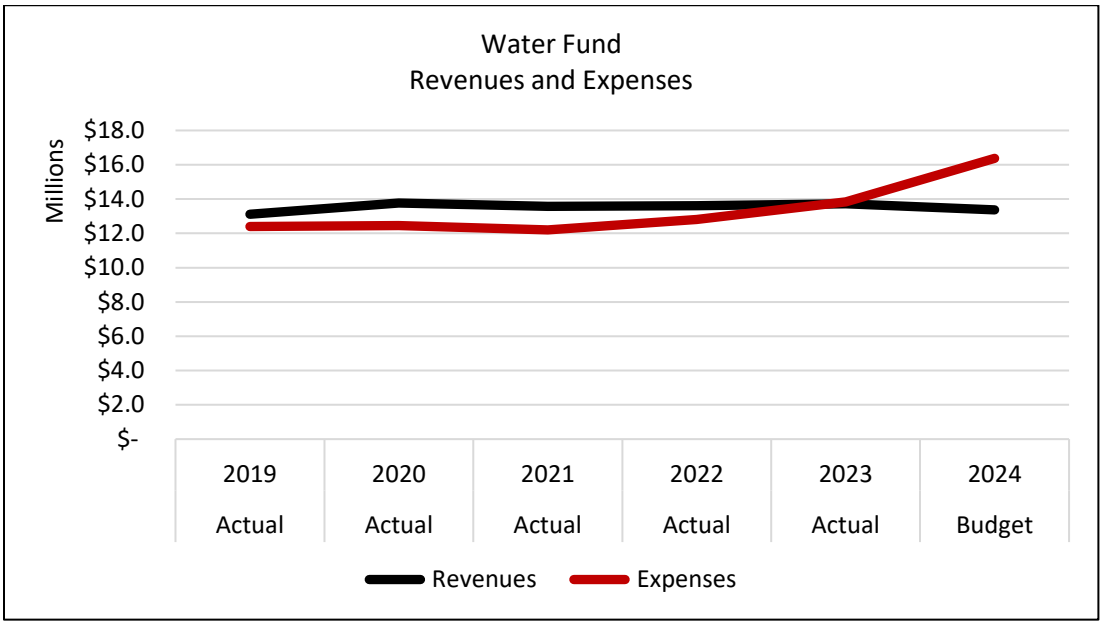
The City's Water Fund is currently encountering several persistent challenges that may lead to financial instability over the next five years. Operating and maintaining our water utility system is becoming increasingly costly, driven by factors like inflation, rising energy costs, and increases in material prices. Essential components of our water infrastructure, including water mains, storage tanks, and pumping stations, require continuous maintenance and periodic upgrades to maintain optimal performance. Many of these elements are aging and require repair or replacement to prevent leaks, uphold water quality, meet regulatory requirements, and ensure dependable service delivery. These factors underscore the necessity for adjusting rates and fees, which have remained unchanged since 2015.

Fund Balance. The Water Fund entered 2023 with a fund balance of $6.6 million due to a reprieve in two major expenses (capital and purchased water) during the pandemic. Supply chain shortages and unanticipated price increases forced several capital projects to be deferred. Additionally, the price of purchased water remained constant, as the DWC opted for no rate increases between May 2019 and May 2022.

Currently, both expense categories are projecting increases, which will reduce the fund balance over the next five years. The 2024 Budget reflects $3.0 million in deficit spending, driven by a 13.2% increase in total expenses, primarily related to infrastructure investments; specifically lead service lines.



Revenues and Expenses. From 2019 to 2023, the Water Fund generated an average of $13.6 million annually in revenue and incurred $12.7 million in annual expenses. Revenue fluctuations are common due to weather variations, with dry years typically leading to increased water consumption. In 2023, the City collected $13.7 million, boosted slightly by higher water use due to low summer rainfall. That same year, expenses rose to $13.8 million, driven by increases in both purchased water costs ($0.6 million) and infrastructure expenses ($1.3 million).



III. Water Billing Analysis

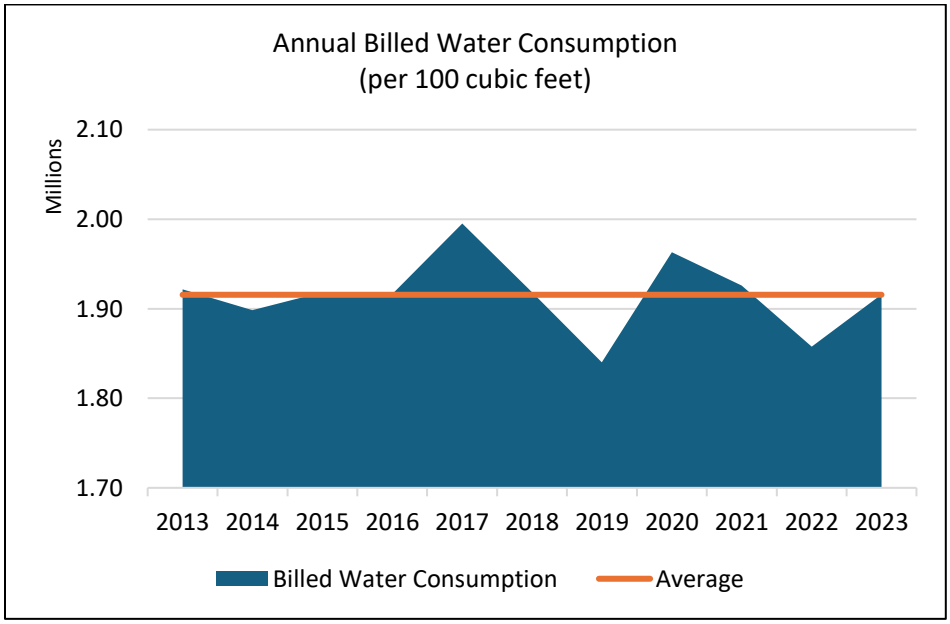
Water Customers Profile

The City's current rate and fee structure includes a uniform usage rate of $5.05 per 100 cubic feet of water consumption, along with a fixed fee based on the meter size attached to the property. There are five customer categories: residential, commercial, industrial, institutional, and municipal. The City supplies water to an average of 16,600 customers annually, with the majority being residential—15,744 accounts, or 94.8% of the total billed accounts.

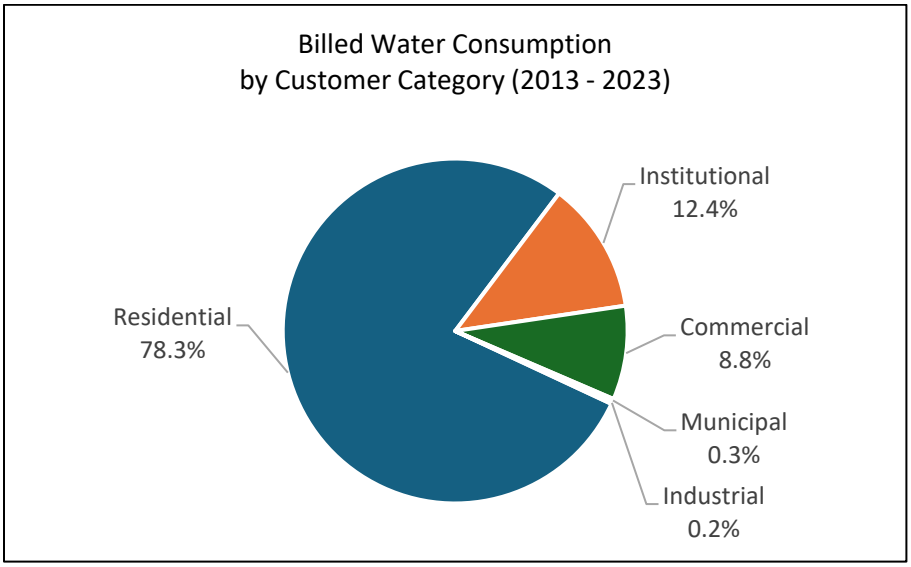
Customer Category	No. of Customers	% of Total Customers
Residential	15,744	94.8%
Commercial	612	3.7%
Institutional	230	1.4%
Municipal	22	0.1%
Industrial	1	0.0%
Total	**16,609**	**100.0%**

Water Consumption Billed

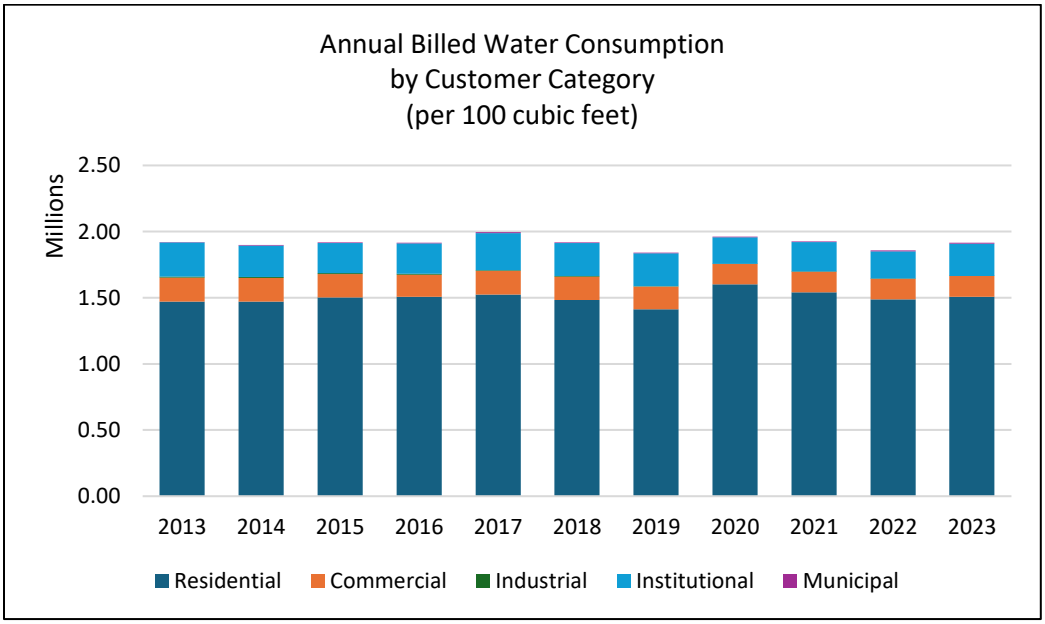
Water consumption billed to customers in the City has been steady since 2013, averaging 191.6 million cubic feet annually. From 2013 to 2023, the lowest annual billed usage was 184.0 million cubic feet, while the highest was 199.5 million cubic feet.



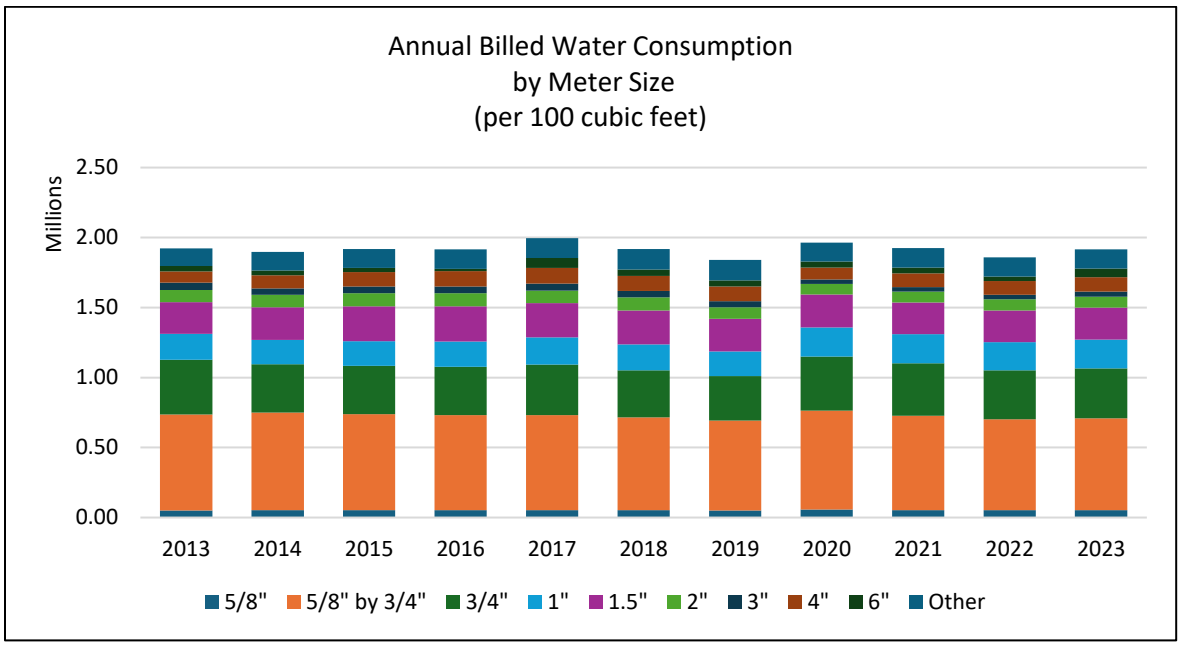
The following chart shows the majority of the City's billed water consumption comes from residential customers, who have made up 78.3% of the total over the past decade.



The chart below offers an overview of the City's water consumption totals by customer category since 2013. Since most of the City's customer base falls under the residential (including residential/multi-housing), most of the water consumption is attributed to residential use.



As mentioned above, the majority of the City's customers are classified as residential. However, rates and fees are not determined by customer category. Instead, the City applies fixed fees based on meter size. There are a total of nine (9) fee codes in the water utility billing system, covering meters ranging from 5/8-inch to six inches in diameter. The City also has a small number of compound meters that generate water consumption readings but do not receive a fee code to prevent duplicate fixed fees from being applied to a single meter. The following chart shows annual water consumption by meter size since 2013.

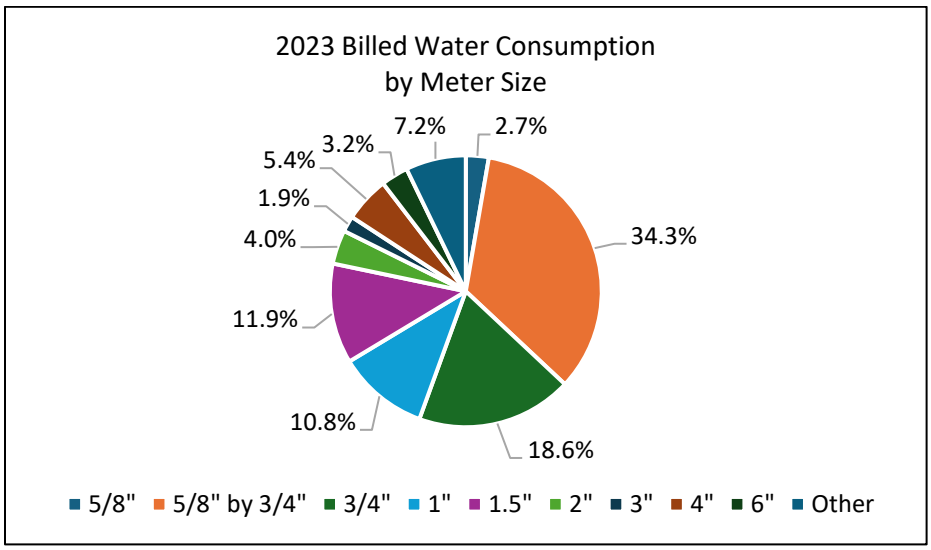


The consumption totals were reviewed to ensure the City did not have any outlier users and verified residents and small business customers accounted for most of the consumption. The following table provides a cross-section overview of the City's 2023 customer profile showing water consumption by meter size and customer category.

2023 Total Annual Water Consumption by Meter Size and Customer Category

Meter Size	Residential	Commercial	Industrial	Institutional	Municipal	Total Consumption	% of Total Consumption
5/8"	50,962	844	-	422	-	**52,228**	**2.7%**
5/8" by 3/4"	644,697	9,441	-	1,992	275	**656,405**	**34.3%**
3/4"	346,482	8,162	-	999	11	**355,654**	**18.6%**
1"	180,788	22,091	-	2,937	1,393	**207,209**	**10.8%**
1.5"	155,773	56,487	31	14,953	1,012	**228,256**	**11.9%**
2"	40,750	18,142	1	15,497	3,093	**77,483**	**4.0%**
3"	7,217	9,217	-	17,636	1,895	**35,965**	**1.9%**
4"	19,436	11,542	-	72,229	-	**103,207**	**5.4%**
6"	-	-	-	62,038	-	**62,038**	**3.2%**
Other	60,391	22,803	-	54,204	-	**137,398**	**7.2%**
	1,506,496	**158,729**	**32**	**242,907**	**7,679**	**1,915,843**	**100.0%**

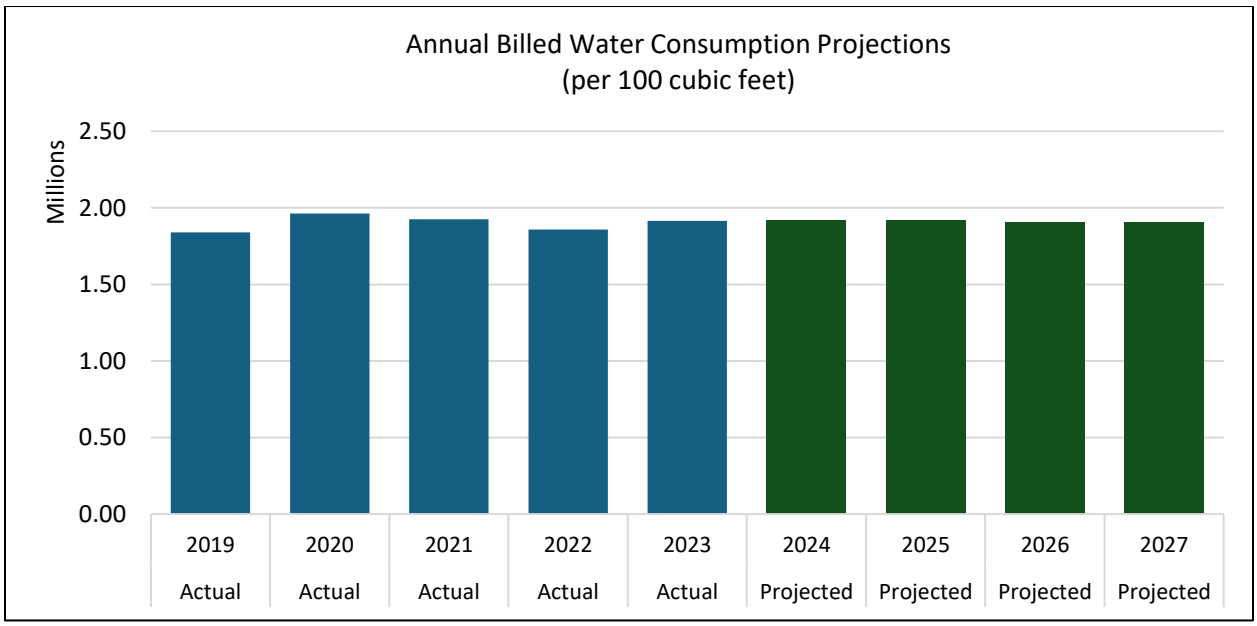
In 2023, the majority of water consumption was recorded through 5/8" by 3/4" meters, accounting for 34.3% (or 656,405 cubic feet) of the total.



Water Demand Projections

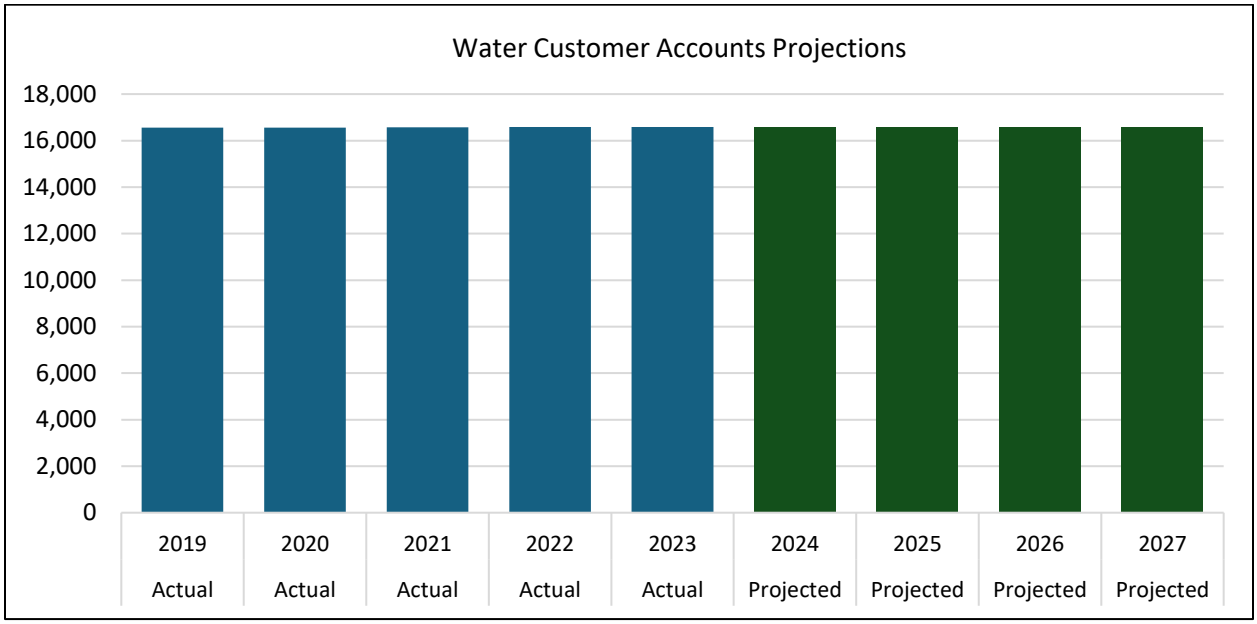
Consistency in consumption and customer profile provides a reliable foundation for the City's rate and fee analysis. Proposed rates and fees were calculated using water demand projections based on the City's actual billed water consumption totals. Water demand was estimated independently of the projected purchased water projections, as water loss levels can vary annually.

From 2013 to 2023, the City billed an average of 191.6 million cubic feet of water per year. Based on these figures, staff used a five-year average of utility bills to project an average annual water consumption of 190.8 million cubic feet. The following chart shows the annual billed water consumption from the past five years, along with projections for 2024 through 2027.



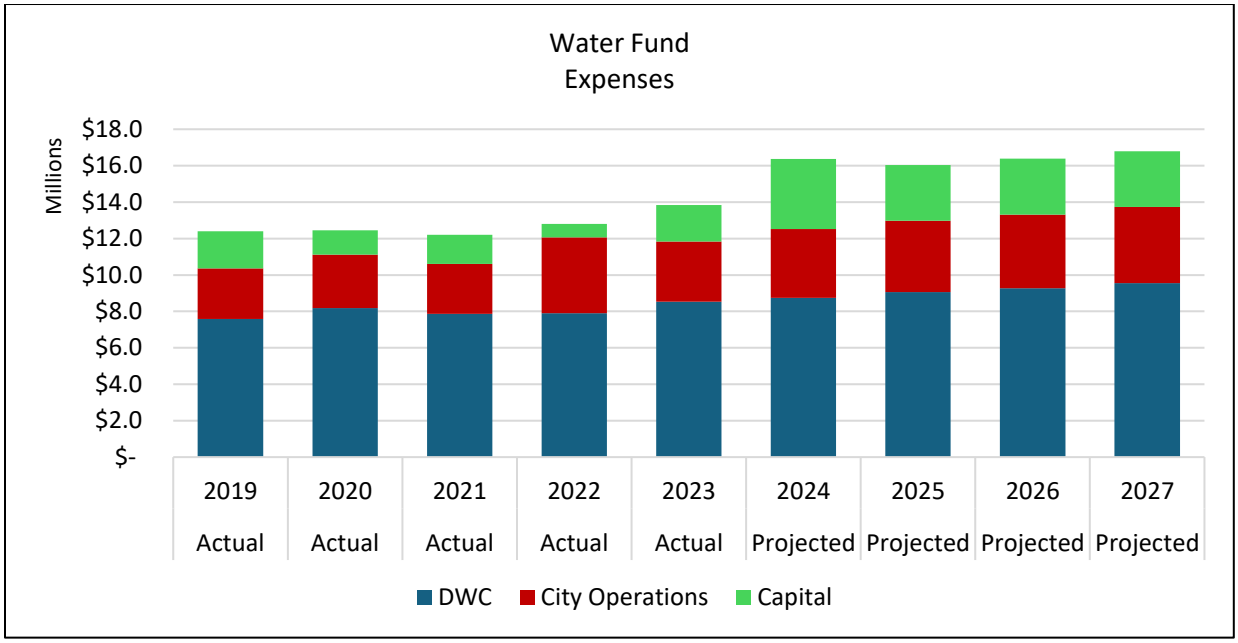
Water Customer Projections

Over the past decade, the City has consistently maintained an average of 16,600 customers annually. The rate study assumes no significant increases in customer numbers for the years 2024-2027. The following chart shows the number of water customer accounts over the past five years, along with projections for 2024 through 2027.



IV. Revenue Requirements

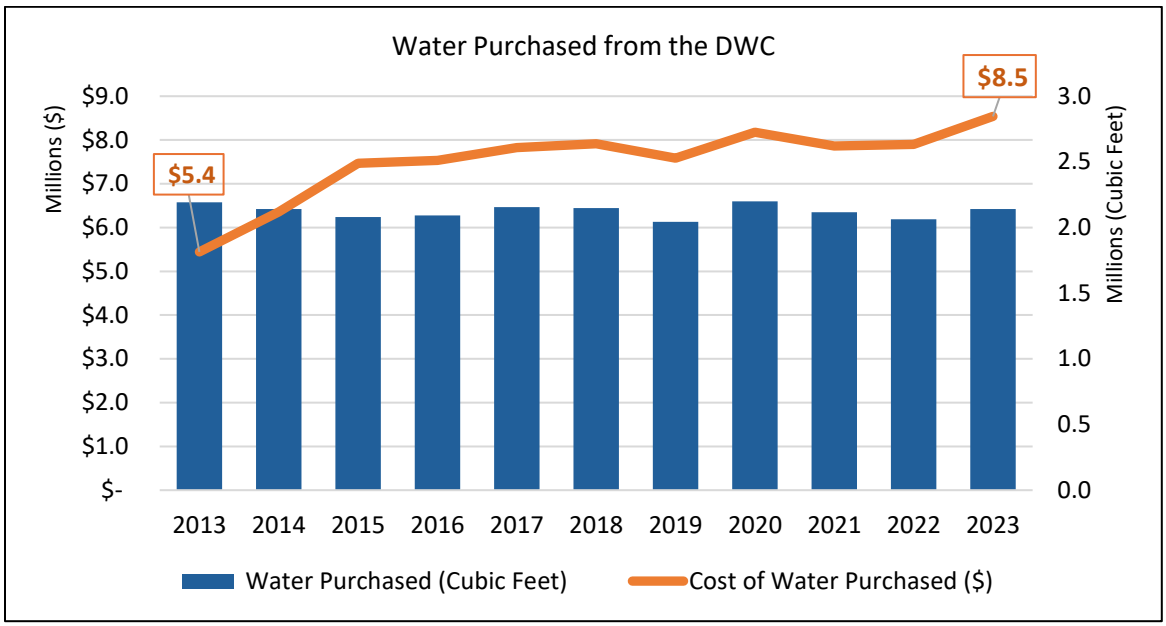
This section details the current and projected costs for operating and maintaining the City's water utility system, forming the basis of the revenue requirements. The calculation method involves a thorough review of each expense incurred by the City to ensure a comprehensive cost of service. The revenue requirements are categorized into four sections: purchased water expenses, operating and maintenance expenses, infrastructure investments (capital), and fund balance reserves. All costs considered in the revenue requirements analysis are derived from historical financial data. The following chart shows actual Water Fund Expenses from the past five years, along with projections to 2027.



Purchased Water Expenses

The City purchases Lake Michigan water from the DuPage Water Commission (DWC), sourced from the City of Chicago. Under this arrangement, Chicago sells water to the DWC, which then distributes it to various water utility systems across DuPage County. Consequently, the cost of water for the City is first established by the City of Chicago and subsequently by the DWC. On average, the expenses associated with purchasing water from the DWC comprise 70% of the City's total operating costs in the Water Fund.

On average, the City purchases 212.5 million cubic feet per year from the DWC. The following chart shows how the amount of water purchased from the DWC by the City has remained relatively consistent since 2013, while the total cost of water purchased has increased from $5.4 million to $8.5 million in 2023.



A key takeaway of the 2012 Rate Study was adjusting the City's rates to accommodate anticipated increases by both the City of Chicago and the DWC. The following table presents an overview of the rates as of January 1, including those from both service providers and the City's usage charge rate.

Historic Usages Rates as of January 1
(per 100 cubic feet)

Year	City of Chicago Rate	City of Chicago Change (%)	DWC Rate	DWC Change (%)	City of Wheaton Rate	City of Wheaton Change (%)
2012	$ 1.88	-	$ 2.04	-	$ 3.45	-
2013	$ 2.16	14.9%	$ 2.48	21.6%	$ 3.81	10.4%
2014	$ 2.48	14.8%	$ 2.97	19.8%	$ 4.49	17.8%
2015	$ 2.85	14.9%	$ 3.50	17.8%	$ 5.05	12.5%
2016	$ 2.85	0.0%	$ 3.63	3.7%	$ 5.05	0.0%
2017	$ 2.85	0.0%	$ 3.59	-1.1%	$ 5.05	0.0%
2018	$ 2.90	1.8%	$ 3.65	1.7%	$ 5.05	0.0%
2019	$ 2.95	1.7%	$ 3.70	1.4%	$ 5.05	0.0%
2020	$ 2.97	0.7%	$ 3.72	0.5%	$ 5.05	0.0%
2021	$ 3.05	2.7%	$ 3.72	0.0%	$ 5.05	0.0%
2022	$ 3.08	1.0%	$ 3.72	0.0%	$ 5.05	0.0%
2023	$ 3.23	4.9%	$ 3.87	4.0%	$ 5.05	0.0%
2024	$ 3.40	5.3%	$ 4.03	4.1%	$ 5.05	0.0%

Since 2015, the City has not increased the City's usage rate, whereas the City of Chicago and the DWC have both raised their rates by over $0.53 per 100 cubic feet. This represents a 19.3% increase by the City of Chicago and a 15.1% increase by the DWC. Consequently, the City is incurring higher costs for purchased water without corresponding revenue increases, reducing the funds available for operating expenses and infrastructure investments.

From 2019 to 2021, the City collected approximately $1.8 million in net revenues from the City's usage rate, which amounted to less than 20% of the total revenue. In 2022, following a three-year rate freeze, the DWC raised its rates, reducing the City's margin to 16.1% of total revenues ($1.5 million). This trend persisted in 2023, with only 11.9% of usage revenues ($1.2 million) allocated to City operations and infrastructure investment. The following table illustrates the revenues collected from City's usage rate and the costs of water purchased from the DWC from 2019 to 2023.

Purchased Water Costs Compared to City Usage Rate Revenue

	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Actual
City Usage Rate - Revenues	$ 9,291,545	$ 9,875,342	$ 9,761,052	$ 9,415,062	$ 9,692,706
Purchased Water - Expenses	$ 7,581,641	$ 8,179,800	$ 7,865,080	$ 7,900,302	$ 8,538,887
Net Margin	*$ 1,709,904*	*$ 1,695,542*	*$ 1,895,972*	*$ 1,514,760*	*$ 1,153,819*
Percentage to City Operations & Infrastructure	*18.4%*	*17.2%*	*19.4%*	*16.1%*	*11.9%*

When the initial usage rates were set in 2013, the City designated 35% of the City's usage rate for City operations and infrastructure investment, with a plan to gradually adjust the City's usage rate so the usage rate would equal the DWC rate plus an additional 30% for City operations and infrastructure investment. However, without any rate adjustments, the distribution has shifted such that the City's usage rate now covers the full DWC rate with only a 20% addition for operations and infrastructure investment. This proportion decreased further when the DWC implemented another rate increase on May 1, 2024. The following table provides a history of the City's usage rate in comparison to the DWC purchased water rate since 2013.

City Usage Rate Compared DWC Rate History

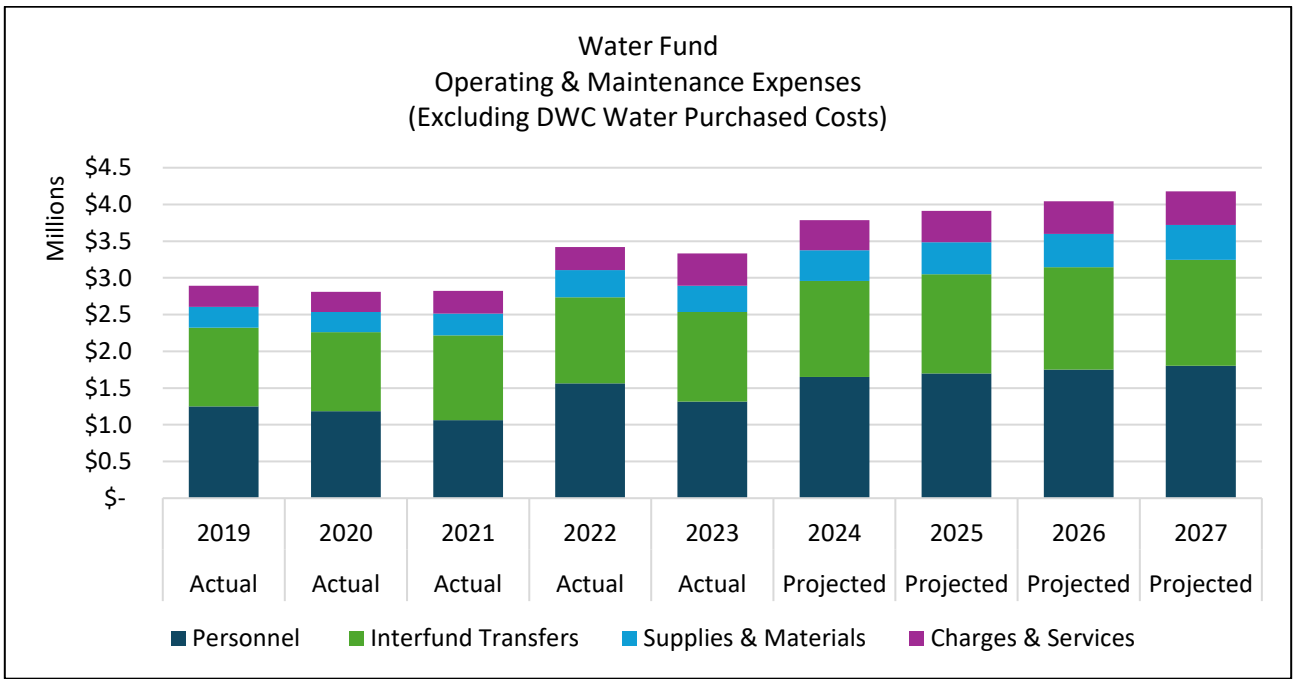
Year	City Rate	DWC Rate*	% to City Operations and Infrastructure	% to DWC
1/1/2013	$ 3.81	$ 2.48	35%	65%
1/1/2014	$ 4.49	$ 2.97	34%	66%
1/1/2015	$ 5.05	$ 3.50	31%	69%
5/1/2015	$ 5.05	$ 3.63	28%	72%
5/1/2016	$ 5.05	$ 3.59	29%	71%
5/1/2017	$ 5.05	$ 3.65	28%	72%
5/1/2018	$ 5.05	$ 3.70	27%	73%
5/1/2019	$ 5.05	$ 3.72	26%	74%
5/1/2020	$ 5.05	$ 3.72	26%	74%
5/1/2021	$ 5.05	$ 3.72	26%	74%
5/1/2022	$ 5.05	$ 3.87	23%	77%
5/1/2023	$ 5.05	$ 4.03	20%	80%
5/1/2024	$ 5.05	$ 4.17	17%	83%
			** Rate Converted to 100 cubic feet*	

Consequently, the water utility system primarily relies on revenues from fixed fees and miscellaneous charges, such as connection fees, late fees, permits, and service termination fees. Given the stability of the City's customer base, the fixed fee revenue consistently totals around $3.4 million annually. However, with rising costs for purchased water, the City will eventually see all revenue from the City's usage rate go solely towards covering DWC water purchases, leaving no additional funds for operations and infrastructure.

Operating & Maintenance Expenses

Operating and maintenance expenses in the Water Fund, excluding DWC purchased water costs, encompass personnel, employee benefits, supplies and materials, charges and services, and internal services charges. All projected increases are based on historical trends and aim to maintain current service levels. Projections for the next three years (2025 to 2027) increase by an average 3.3% annually from the 2024 Budget, as no significant changes are anticipated.

The largest projected increases are in personnel services and internal services charges. Personnel costs for salaries and wages are expected to rise by 3.1% annually, amounting to approximately $45,600 per year. Internal services charges, which include fleet services, administrative services, and insurance premiums, are projected to increase by 3.4% annually, equating to roughly $46,000 in additional yearly expenses. The following chart shows the operating and maintenance expenses in the Water Fund, excluding DWC water purchased costs, with five years of actuals and projections through 2027.



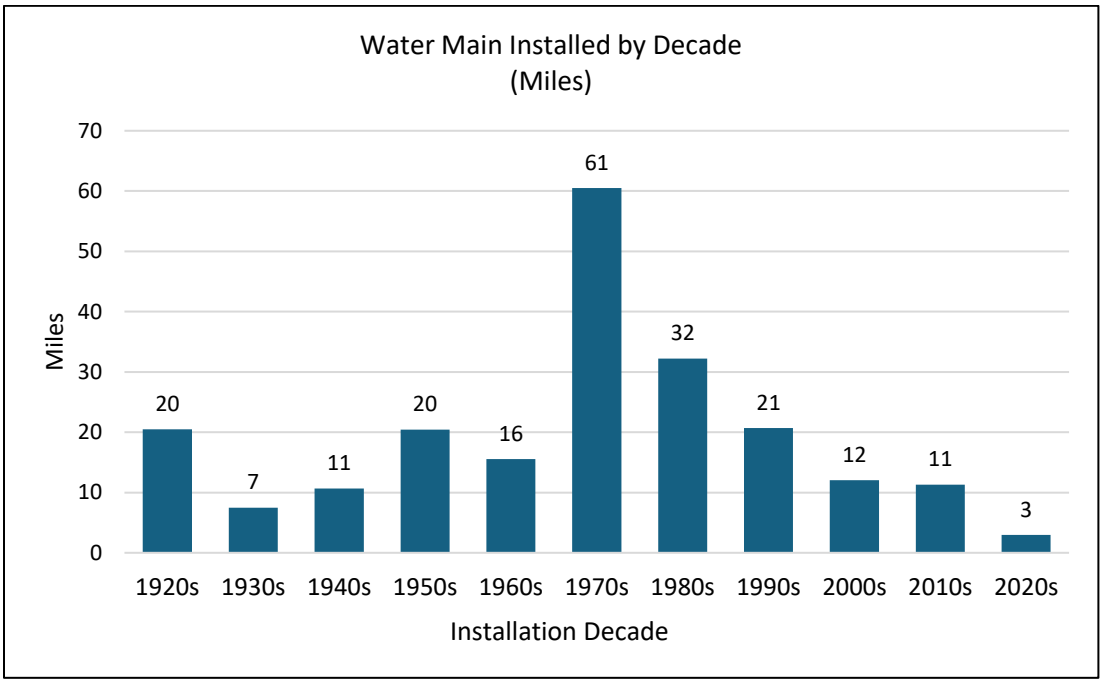
Infrastructure Investments

The City's water utility system consists of both underground and above-ground assets. One of the biggest issues facing the water utility system is aging infrastructure. All across the country, much of our water infrastructure is approaching the age at which it needs to be replaced. We are facing a

challenge as a nation to begin rebuilding our water utility systems. This section focuses on the three most prominent infrastructure components of the City's water utility system: water main replacements, lead service line replacements, and above-ground assets.

Water Main Replacements.

The City has 230 miles of water mains, with 215 miles being City-owned. These water mains range in size from 2 inches to 24 inches in diameter and in age from over 100 years to less than a year old. They are made of cast iron, ductile iron, or PVC. The water main material is either cast iron, ductile iron, or PVC. As the City's population expanded with new developments, developers installed water mains with varying pipe materials and installation practices. The following chart illustrates the City's current water main infrastructure and the decades of installation, noting a significant increase (93 miles) in installations during the 1970s and 1980s.



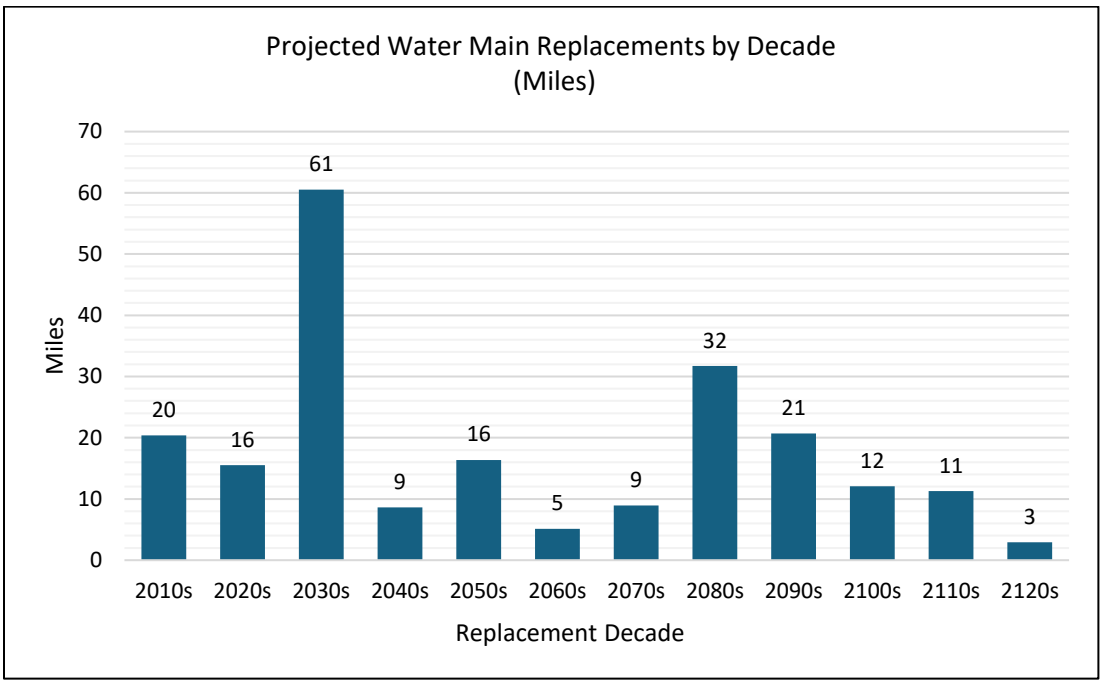
Various reports provide differing estimates regarding the average life expectancy of water mains. A 2001 Water Research Foundation report estimated that water mains currently in the ground have an average expected service life of 85 years. A 2023 University of Illinois Chicago report states that the life expectancy for much of the water mains in the U.S. is 75-100 years.

A 2012 AWWA report mirrors the same average useful life for water main materials installed in the City (cast iron, ductile iron, and PVC) providing an average useful life of 95 years. This report also detailed how water main manufacturing, construction practices, and ground conditions affect lifespan, categorizing water mains into "short life expectancy" and "long life expectancy." Generally, as it pertains to the City, water mains installed from 1950 through 1980 are expected to have a "short life expectancy" while water mains installed after 1980 are expected to have a "long life expectancy".

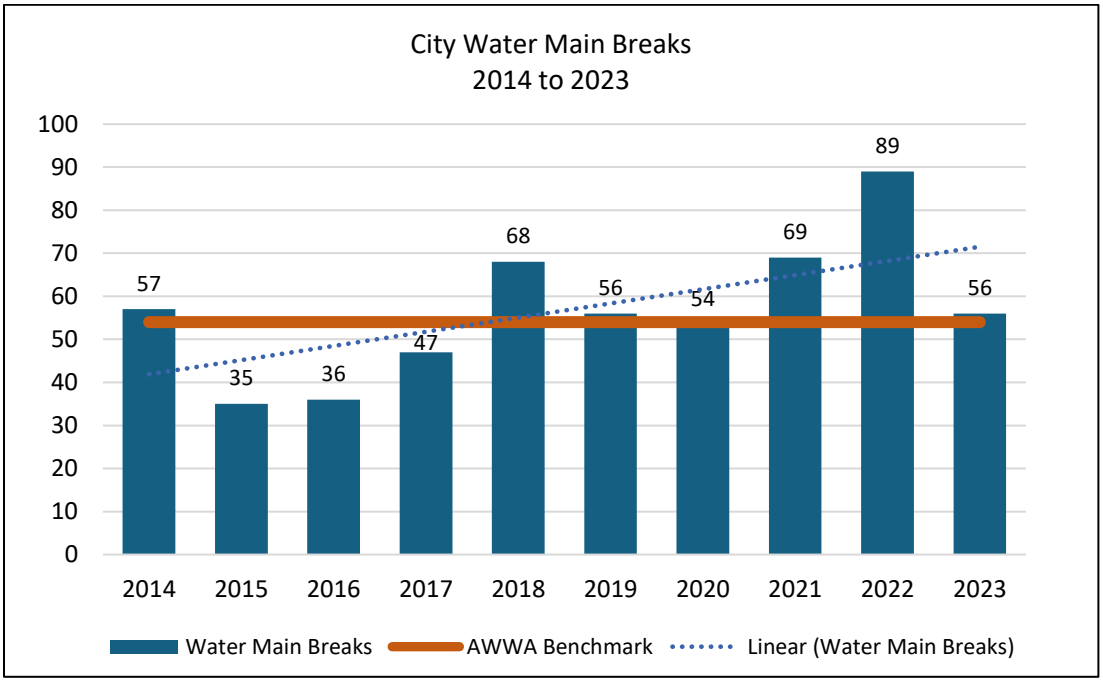
The following chart outlines the projected water main replacements by decade, based on the estimated life expectancy of the City's water mains. The Staffs' assumptions for estimated life expectancy are:

- Water mains installed between 1920 and 1949 have an estimated life expectancy of 125 years
- Water mains installed between 1950 and 1980 have an estimated life expectancy of 60 years.
- Water mains installed after 1981 have an estimated life expectancy of 100 years.

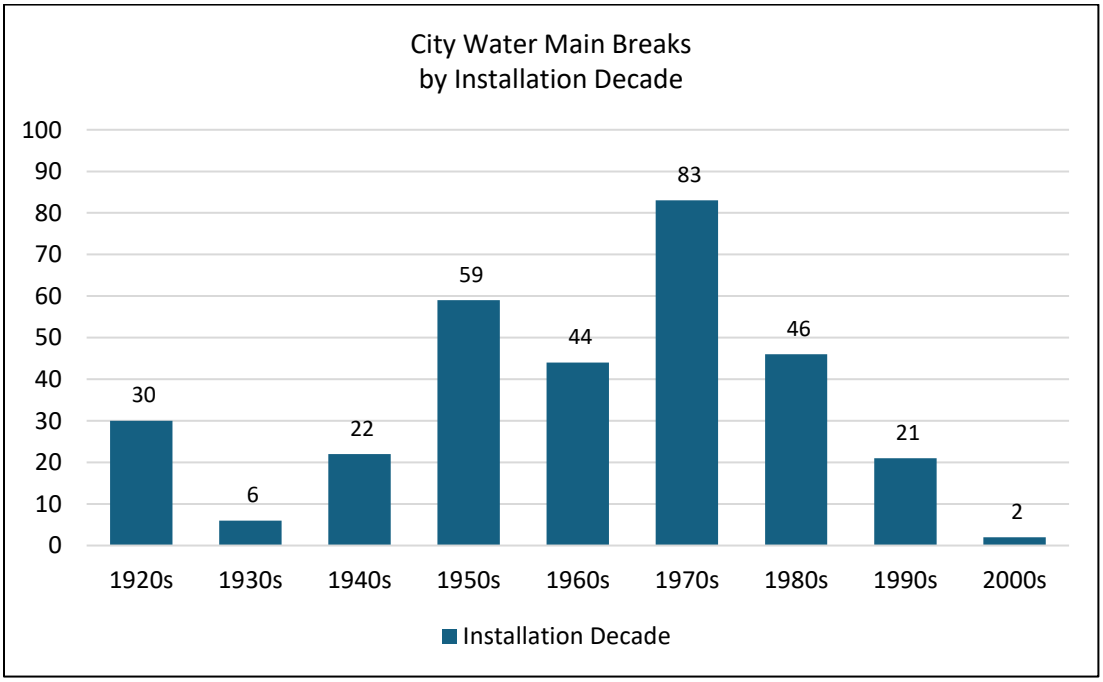
Based on these life expectancy estimates, 45% of the water main system is due for replacement between 2010 and 2039, with 28% of the entire water main system expected to be due for replacement in the 2030s alone.



As water main systems age, their structural condition and hydraulic capacity typically deteriorate, impacting overall system performance. Older systems often experience frequent water main failures, leading to higher maintenance costs, increased purchased water costs, and substantial emergency maintenance and personnel expenses. Repairing main breaks also prevents staff from engaging in more proactive maintenance of the water utility system. With the City's aging infrastructure, water main breaks have become more common. As illustrated in the following chart, over the past five years, the annual number of water main breaks has consistently met or exceeded the AWWA's recommended benchmark of 25 water main breaks per 100 miles of water main.



An analysis of water main breaks revealed that the City is encountering issues with water mains installed in the 1950s and 1970s, aligning with Staff's projected useful life of 60 years for water main materials used during those decades. The following chart shows a clear trend of water main breaks in water mains installed at least 40 years ago.



Over the past five years, 72% of the 313 water main breaks in the City occurred in cast iron mains, while the remaining breaks involved ductile iron mains. External corrosion, a sign of aging materials,

was identified as the most common cause of these failures. The following table presents a five-year review of the causes of each water main break and the decade in which the pipes were installed. Notably, over a quarter of the recent breaks occurred in pipes installed during the 1970s.

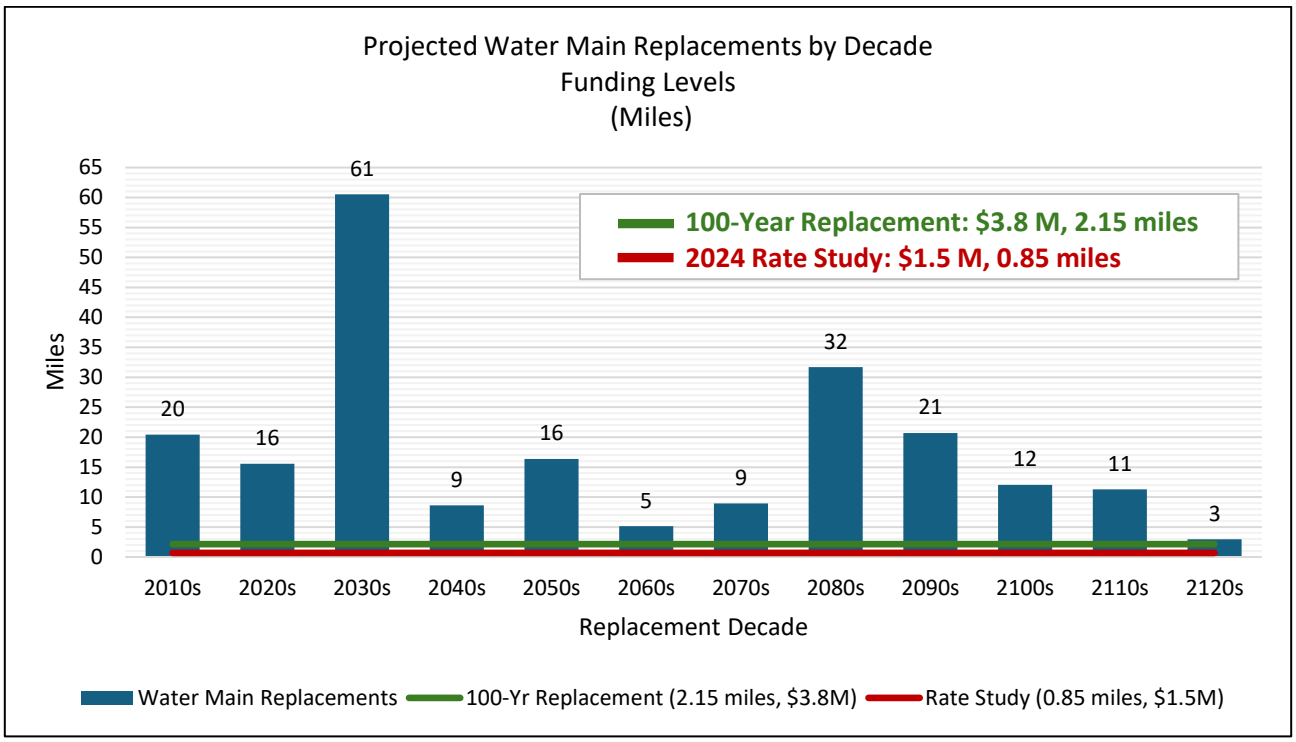
City Water Main Breaks
Causes of Breaks
By Installation Decade

Decade Installed	Defective Pipe	Excessive Pressure	External Corrosion	Ground Shifting	Improper Bedding	Water Hammer	Unknown	Total
1920s	-	3	12	8	-	5	2	30
1930s	-	-	4	-	-	1	1	6
1940s	-	4	8	7	-	2	1	22
1950s	-	4	29	20	1	4	1	59
1960s	-	2	23	18	-	1	-	44
1970s	-	9	52	14	-	8	-	83
1980s	1	3	39	3	-	-	-	46
1990s	-	-	17	2	-	-	2	21
2000s	-	-	1	-	-	1	-	2
Total	**1**	**25**	**185**	**72**	**1**	**22**	**7**	**313**

Both the 2012 Water Rate Study Report and the 2013 Water Distribution System Hydraulic Analysis Report calculated that the City was replacing water mains at a 268-year replacement cycle. Since this was significantly beyond the life expectancy of water mains, both reports recommended a more realistic spending level ($1.8 million - $2.2 million) on water main replacement should result in a 100-to-150-year cycle, which would be more in line with industry best management practices.

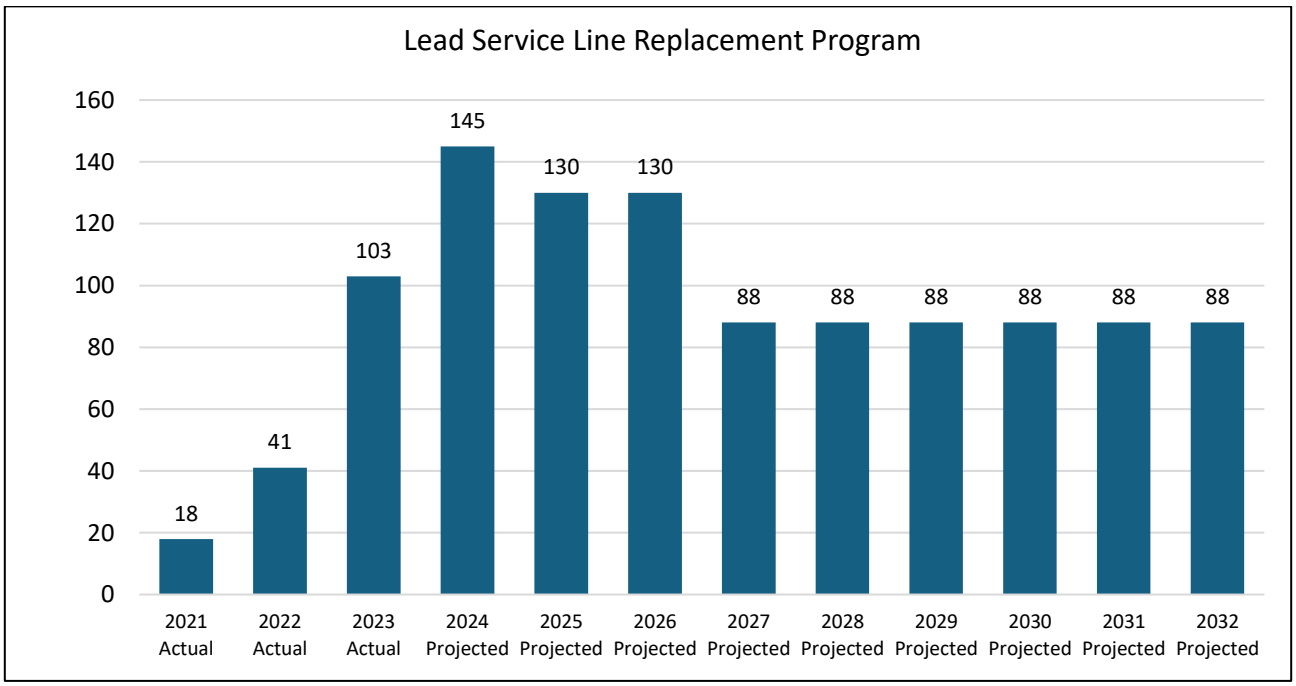
Since the 2012 Water Rate Study report, the price for materials, such as ductile iron pipe, has significantly increased, and over the past three years has become difficult to obtain due to manufacturing and shipping delays. As a result, many water utilities, including Wheaton, are behind schedule with annual water main replacements. Based on installation and cost trends over the last decade, the City is now on a 298-year replacement cycle.

Annual investment in water main replacements is crucial to address the deterioration of the water main system. As the oldest water mains approach the end of their useful life, particularly in the 2030s, the risk of service outages, property damage, insufficient fire flows, and business disruptions due to breaks in these aging mains will increase. Replacing these mains is expected to reduce non-revenue water loss and high emergency repair costs. The following chart shows the annual funding levels outlined in the 2024 Rate Study, along with the estimated $3.8 million needed for a 100-year replacement cycle, which involves replacing 2.15 miles of water main annually. These costs pertain solely to water main replacements and do not account for other capital investments.



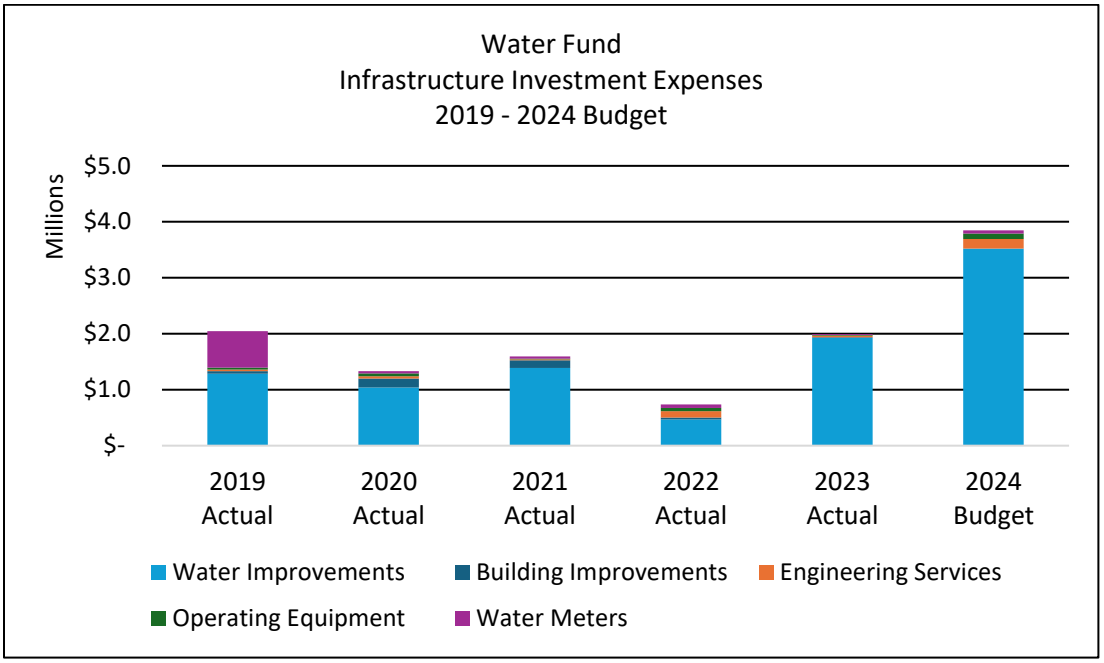
Lead Service Line Replacements.

The removal of lead service lines is a top priority for the City, which has established an aggressive, multi-year program to replace them. The Water Fund will cover 100% of the costs for the removal and replacement of both public and private service lines. The following chart provides an overview of the City's Lead Service Line Replacement program, with a total of 1,095 replacements estimated to be completed by 2032.



Above-Ground Assets.
The above-ground assets of the water utility system include three water pump stations and pressure-adjusting stations with 21 high-service pumps, five ground storage tanks and two elevated tanks with a total storage capacity of 7.3 million gallons, three standby power generators, and six emergency backup wells. These assets require proactive management to ensure the optimal performance of the water utility system. Capital investment requirements for these assets will be evaluated in greater detail as part of a comprehensive analysis of the water utility system.

Infrastructure Investments Expense History. Since 2019, the Water Fund averaged $1.5 million in annual infrastructure investment expenses, which included a significant dip in expenses when costs and materials were difficult to obtain between 2020 and 2022. The 2024 Budget shifted from the $1.5 million average with a total of $3.85 million earmarked for various infrastructure investment projects, including $1.5 million for water main replacements, $0.7 million for lead service line replacements, and $0.6 million for the Reber Pump Station generator replacement. The 2024 budget represented a $1.85 million increase over 2023.



Infrastructure Investments Projections for 2025 - 2027. Staff completed a three-year projection for infrastructure investment projects based on current industry trends and an internal evaluation of the water utility system. The following table provides an overview of the projected infrastructure investments for 2025 – 2027 for the water utility system. The total amount of infrastructure investments equals $13.3 million over the next three years, ranging from $3.6 million to $5.2 million annually.

Infrastructure Investment Projections
2025 – 2027

Infrastructure Investment Projects	2025 Projected	2026 Projected	2027 Projected	3-Yr Total
Water Main Replacement Program	$ 1,550,000	$ 1,550,000	$ 1,550,000	$ 4,650,000
Road, Sewer, Water Rehab Program - Water Main Repl.	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 4,500,000
Lead Service Line Replacements	$ 668,000	$ 486,000	$ 486,000	$ 1,640,000
Water - Building Renovations	$ 575,000	$ -	$ -	$ 575,000
President Street Pump Station Repairs	$ 500,000	$ -	$ -	$ 500,000
Advanced Metering Infrastructure	$ -	$ 500,000	$ -	$ 500,000
Equipment	$ 15,000	$ 410,000	$ -	$ 425,000
Flow Control Valves	$ 315,000	$ -	$ -	$ 315,000
Well Inspections	$ 75,000	$ -	$ 80,000	$ 155,000
Orchard Tower Mixer Maintenance	$ -	$ 15,000	$ -	$ 15,000
Total	**$5,198,000**	**$4,461,000**	**$3,616,000**	**$13,275,000**

Although the need for additional water main replacement places significant additional pressure on the infrastructure investment budget, staff assumed only a $3.0 million annual infrastructure investment budget to prevent significant spikes in customer rates and fees. However, based on preliminary assessments of the system and lead service line replacements, $3.0 million in annual infrastructure investment funding will not be adequate to address the City's infrastructure investment needs.

Staff has recommended hiring a consultant to conduct a risk-based comprehensive analysis of the water utility system. The comprehensive study of the system would provide annual infrastructure replacement recommendations and costs, annual maintenance cost recommendations for existing infrastructure, create a prioritization and implementation plan, and funding alternatives.

Fund Balance Reserve Requirements

The final component of revenue requirements involves determining the contributions to fund balance reserves. These reserves, in the form of unrestricted net assets, are essential for funding unplanned water utility system repairs, managing annual budget fluctuations, and enabling the City to finance future capital infrastructure projects.

The City's current policy is to maintain a minimum unrestricted fund balance reserve equal to 25% of annual operating expenses, excluding depreciation and capital improvements. This reserve ensures sufficient cash flow for operations and provides funds for unexpected capital replacements and repairs. Additionally, the policy advocates for planning future capital improvements by maintaining a capital reserve. Annual budgets are adopted to replenish the reserve balance to appropriate levels after any drawdown.

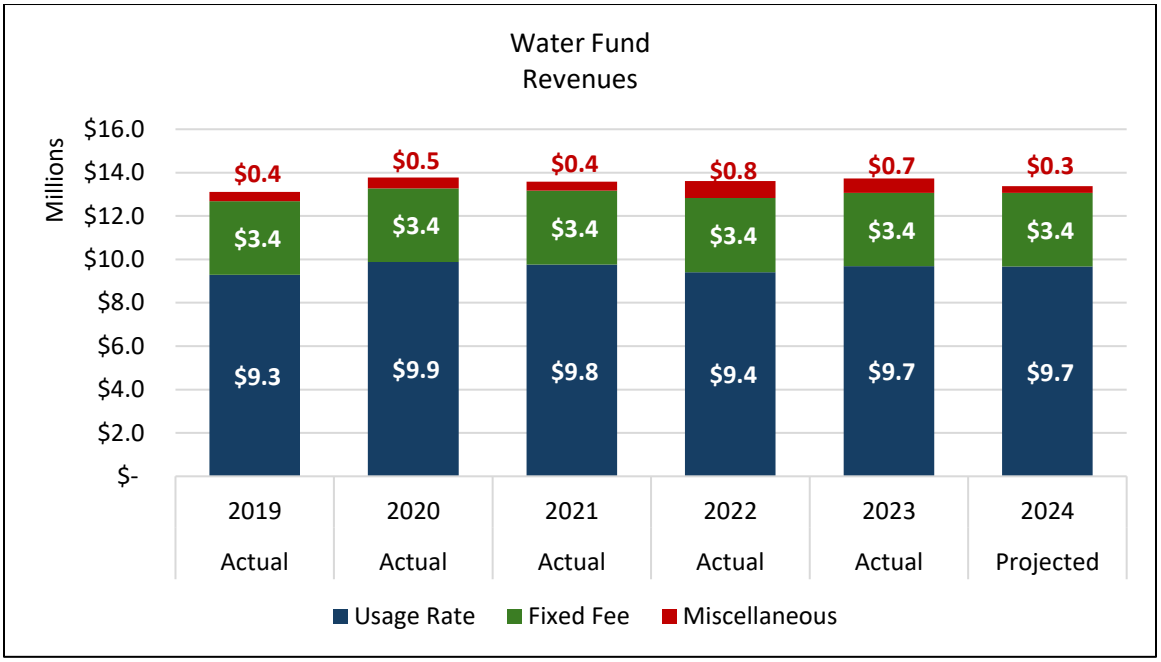
While the City has the flexibility to adjust reserve levels, there is no requirement set by a governing body. The American Water Works Association (AWWA) recommends establishing a reserve level that meets the water utility system's needs, emphasizing that well-designed reserve policies are beneficial for both the utility and its customers, and are integral to financial sustainability. The

AWWA suggests reviewing the approach to reserve policies every five years, considering operational and capital risks, risk tolerance levels, governing financial requirements, future capital funding needs, revenue volatility, and other financial risk management strategies. It also recommends annual monitoring of reserve levels to ensure compliance with reserve policies and appropriate financial resource levels.

Staff recommends maintaining the current reserve policy at this time. Potential revisions to the policy are anticipated as part of a comprehensive analysis of the water utility system and may require changes, such as establishing reserve funds for debt service if debt is issued.

V. Revenue Overview

The Wheaton water utility system derives revenue from three sources: water usage rates, fixed fees, and miscellaneous revenues. The majority of the Water Fund's revenue comes from water usage rates, which are determined by customer water consumption. The following chart illustrates the annual revenue collected from these sources from 2019 to 2024. On average, the Water Fund generates $13.5 million annually. Revenue from usage rates is the largest source, averaging $9.6 million (71.1% of total revenues). Fixed fees contribute an average of $3.4 million annually (25.1% of total revenues), while miscellaneous revenues average $0.5 million annually (3.8% of total revenues).

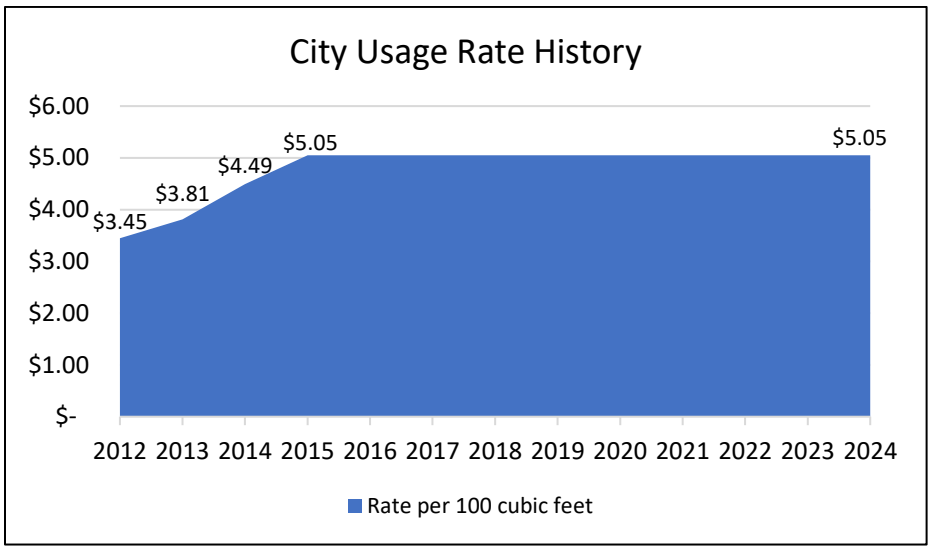


Usage Rate Charges

The City's last water rate study, completed in 2012, established a new rate structure and set rates and fees for 2013 through 2015 to account for significant increases from the City of Chicago and the DWC. Since 2015, there have been no increases in water rates and fees. The existing rate structure includes a uniform usage rate of $5.05 per 100 cubic feet of water consumption and a fixed fee determined by the property's meter size. Water meters are read at the beginning of each month, with bills mailed on the 15th and a minimum billable amount of 100 cubic feet for all customers.

With no rate increases since 2015, the City's usage rate charge revenues have remained consistent over the past nine years. The City does not expect significant changes in overall water consumption, which typically fluctuate with substantial changes in the customer base. Consequently, projected water consumption is expected to align with the five-year average of utility bills from 2019 to 2023.

The following chart shows the City's usage rate since 2012.



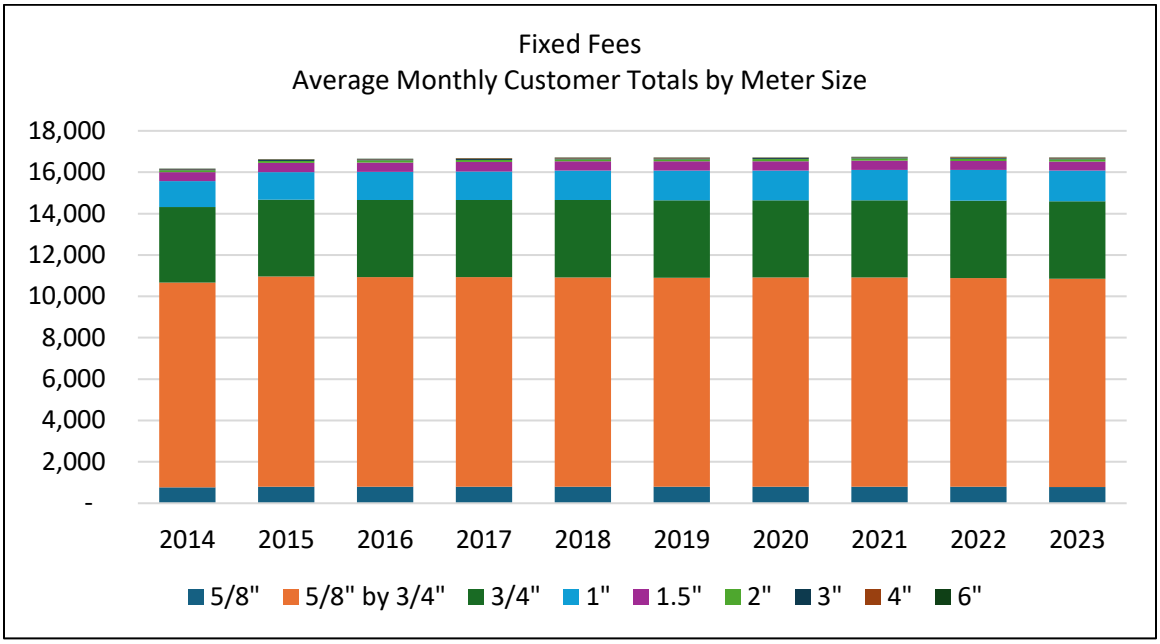
The City is vulnerable to price increases from suppliers and will continue to be in this position for the foreseeable future. Consequently, annual rate adjustments will likely be necessary to ensure the City's Water Fund remains structurally balanced and operationally efficient.

Fixed Fees

In the 2012 water rate study, the City established a new fixed fee to provide a stable revenue source to address fluctuations in water consumption charges. Fixed fees contribute an average of $3.4 million annually in revenues. Fixed fees are used by many utilities as a method to recover a portion of operational and capital costs. Fixed fees are based on the meter size of each customer and are split into nine (9) categories as shown in following table.

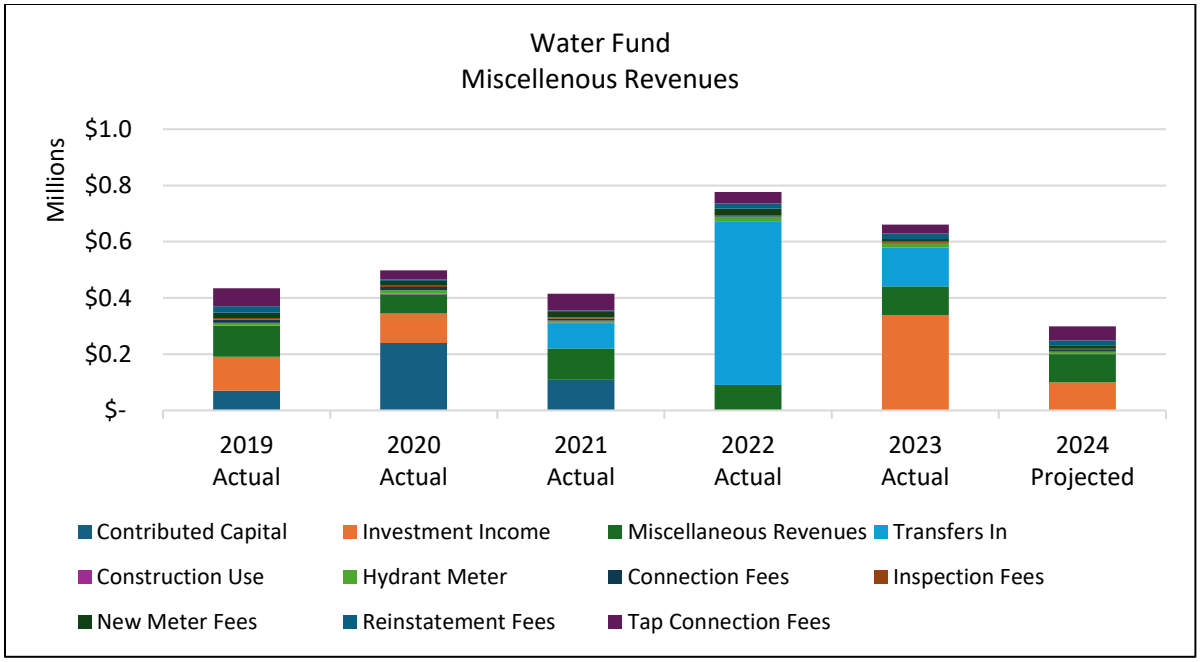
Meter Size	2012	2013	2014	2015 - Current
5/8"	$ -	$ 5.86	$ 9.38	$ 13.59
5/8" by 3/4"	$ -	$ 5.86	$ 9.38	$ 13.59
3/4"	$ -	$ 5.86	$ 9.38	$ 13.59
1"	$ -	$ 11.72	$ 18.76	$ 27.18
1½"	$ -	$ 23.44	$ 37.53	$ 54.35
2"	$ -	$ 37.51	$ 60.05	$ 86.96
3"	$ -	$ 70.33	$ 112.59	$ 163.06
4"	$ -	$ 117.22	$ 187.65	$ 271.76
6"	$ -	$ 234.44	$ 375.30	$ 543.53

Revenues from fixed fees are primarily generated by residential customers with 5/8" by 3/4" meters, which make up the majority (60.3%) of the City's customer base. The chart below shows the average monthly customer totals paying fixed fees by meter size since 2014.



Miscellaneous Revenues

Staff reviewed miscellaneous revenues, which encompass charges for various water services and investment income. This review included connection fees, inspection fees, service reinstatements, new meter fees, and charges for hydrant meters and construction water usage to ensure rates cover the full cost of each service. Overall, miscellaneous revenues are projected based on a five-year average of collections ($0.5 million) from 2019 to 2023. Although this category can fluctuate due to unique situations, such as changes in investment income and new development, the City assumes the average will remain constant from 2025 to 2027. The following chart provides an overview of miscellaneous revenues since 2019.



VI. Rate and Fee Analysis

To establish appropriate rates and fees, the City explored various rate structure options and revenue requirements. This section details the rate structure options evaluated and scenarios considered before determining the adjustments to rates and fees.

Rate Structure Evaluation

Currently, the City uses a blended method with a uniform usage rate and a fixed fee based on the size of the water meter. This blended approach is common in the area. However, several structures were evaluated and considered, with four common rate methods detailed below:

- **Uniform Flat Rate**: Customers pay the same fixed amount regardless of water use. The structure eliminates the need for meters but is highly inequitable and promotes high water consumption since a fee is not attached to actual usage. This is similar to the City's current fixed fee.
- **Single Block Rate**: Customers are charged a uniform rate based on water consumption, typically with a minimum charge to stabilize revenues. The City currently uses this method with a uniform rate of $5.05 per 100 cubic feet and a minimum charge of 100 cubic feet applied to each customer. This structure is popular due to its ease of administration and ability to encourage water conservation.
- **Decreasing Block Rate**: Uses block rates or tiered pricing that decreases with water usage. The per-unit charges for water decrease as the amount of water use increases. The first block is charged at one rate, the next block is charged at a lower rate, and so on. This model is attractive for high-volume users but does not promote water conservation and can result in low-volume users subsidizing high-volume users.
- **Increasing Block Rate**: Uses block rates or tiered pricing that increase with water usage. The per-unit charges for water increase as the amount of water used increases. The first block is charged at one rate, the next block is charged at a higher rate, and so on. This model is common in areas dealing with water availability issues, as it incentivizes water conservation among customers. However, the model also affects high-volume users and potentially discourages some industries from locating to the area.

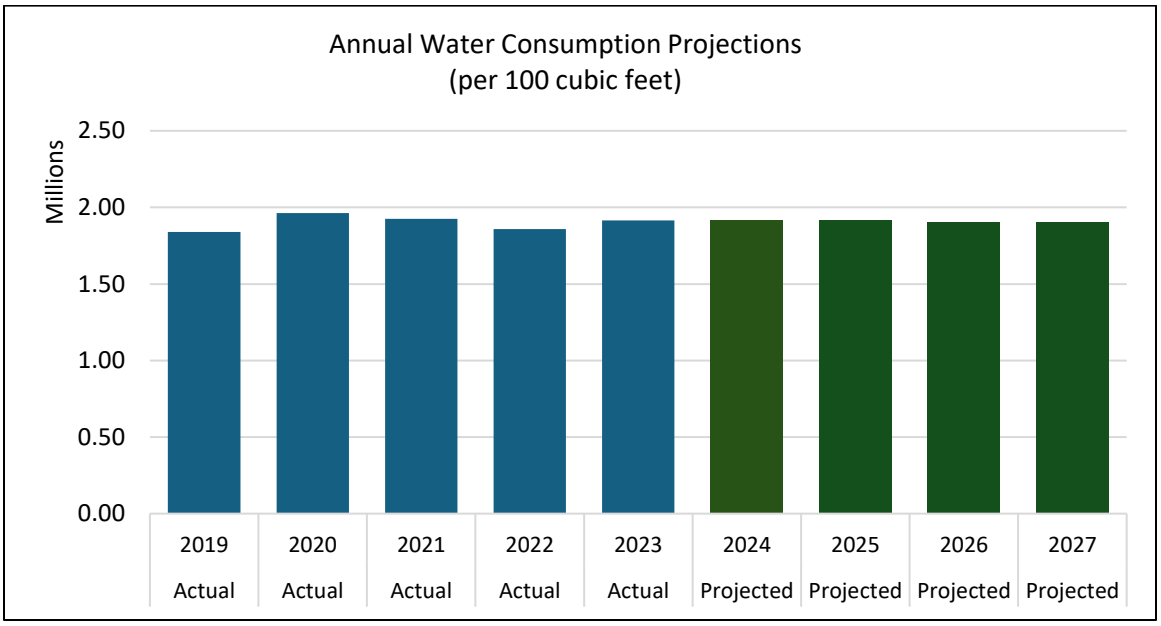
The City recommends maintaining the current rate structure to minimize variables that could create uncertainty in revenue projections. Changing the structure would require additional assumptions, increasing the risk of rates and fees falling short of expectations. Additionally, implementing a new structure would require extensive changes to the utility billing system and communication with customers.

2025 - 2027 Revenue Requirements

Assuming no rate changes, the Water Fund is estimated to need an additional $10.7 million in revenue to cover costs between 2025 and 2027, an average of $3.5 million annually. Staff is recommending changes to several areas of the City's rate structure to address this deficit, including the creation of a purchased water usage rate (DWC Usage Rate) that will mirror the rate the City is charged from the DWC for water purchased.

Usage Rate Adjustment Analysis

To develop revenue projections from the usage rate, staff used a five-year average of billed consumption to determine the consumption for 2025 through 2027. The following chart shows the actual figures from the past five years, along with projections for 2024 through 2027.



Given the impact of water purchased from the DWC on the City's operating expenses, staff recommends splitting the City's current usage rate of $5.05 per 100 cubic feet into two separate usage rates:

- DWC Usage Rate
- City Usage Rate

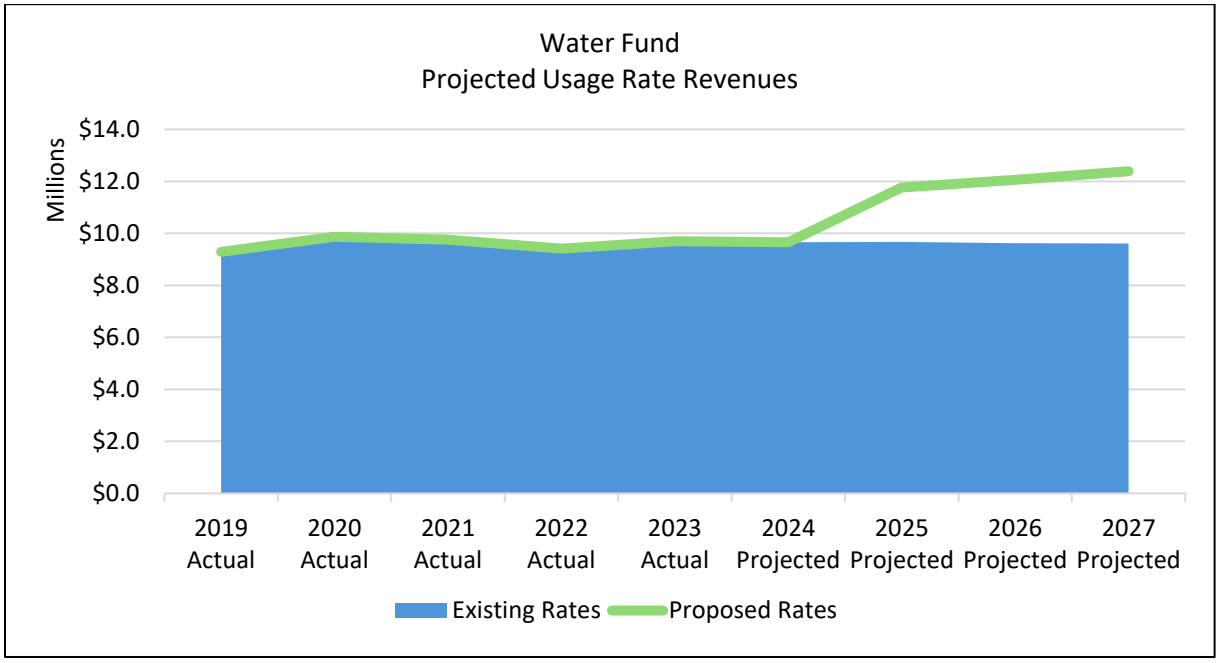
The DWC Usage Rate will be a direct pass-through rate that matches the rate charged to the City for purchasing water, applied fully to City customers. This will enable the Water Fund to recover nearly all costs associated with water purchased from the DWC. The City Usage Rate will be built off the DWC rate and will support water operations and infrastructure investments.

The proposed rate adjustments assume a 3% annual rate increase by the DWC for purchased water. The rates would be adjusted accordingly to reflect actual rates once they are known. This approach provides the City with the flexibility to adapt based on the Water Fund's primary cost driver—purchased water. The proposed rates for 2025-2027 in the following table are set to ensure the City receives 30% of the combined usage rate charges for operations and infrastructure investments. This split can be adjusted based on the needs of the water utility system.

Proposed Usage Rate Adjustments
2025 – 2027

Year	City Usage Rate	DWC Usage Rate	Total Usage Rate	Change $	Change %
2024	$ 5.05	$ -	**$ 5.05**	$ -	0.0%
2025	$ 1.84	$ 4.30	**$ 6.14**	$ 1.09	21.6%
2026	$ 1.90	$ 4.43	**$ 6.33**	$ 0.19	3.1%
2027	$ 1.95	$ 4.56	**$ 6.51**	$ 0.18	2.8%

The proposed adjustments to the usage rates outlined above are projected to generate an additional $7.3 million for the Water Fund between 2025 and 2027, an average of $2.4 million annually. The following chart provides an overview of the impact on usage revenues with the proposed usage rate adjustments.



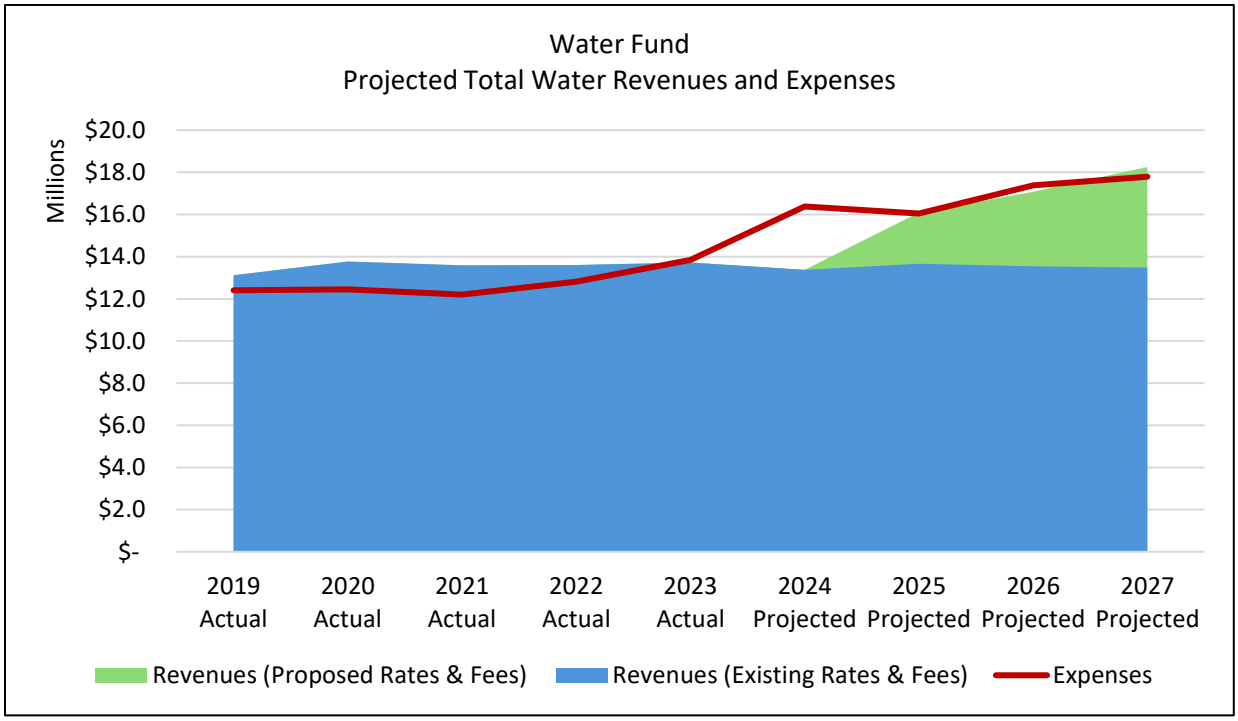
Fixed Fee Adjustment Analysis

The proposed adjustments to the usage rates will not fully cover the projected deficits in the Water Fund, necessitating an increase in the monthly fixed fee. Even with the proposed changes to the usage rate, the City will need an additional $3.2 million between 2025 and 2027 to avoid annual deficits. To address this gap, staff recommend increasing the monthly fixed fees by 10% in 2025, followed by 20% increases in both 2026 and 2027. The following table provides the recommended adjustments to the monthly fixed fees.

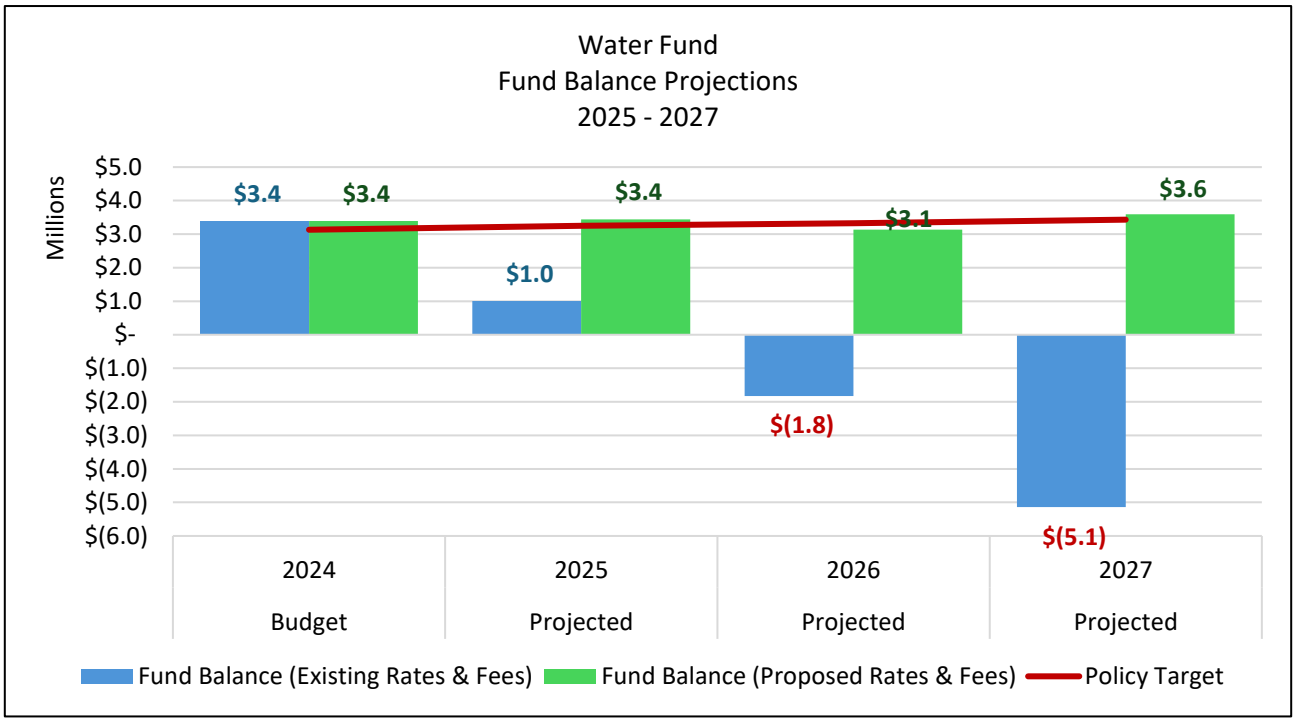
Proposed Monthly Fixed Fees Adjustments
2025 - 2027

Meter Size	2024 Current Fees	2025	2026	2027
5/8"	$ 13.59	$ 14.95	$ 17.94	$ 21.53
5/8" by 3/4"	$ 13.59	$ 14.95	$ 17.94	$ 21.53
3/4"	$ 13.59	$ 14.95	$ 17.94	$ 21.53
1"	$ 27.18	$ 29.90	$ 35.88	$ 43.06
1½"	$ 54.35	$ 59.79	$ 71.75	$ 86.10
2"	$ 86.96	$ 95.66	$ 114.79	$ 137.75
3"	$ 163.06	$ 179.37	$ 215.24	$ 258.29
4"	$ 271.76	$ 298.94	$ 358.73	$ 430.48
6"	$ 543.53	$ 597.88	$ 717.46	$ 860.95

The proposed adjustments to the fixed fees are estimated to generate an additional $3.7 million between 2025 and 2027. The combined changes to the usage rate and monthly fixed fees are projected to enable the Water Fund to operate with a structurally balanced budget, with a slight deficit in 2026 and revenues slightly exceeding expenses in 2025 and 2027. The following chart provides an overview of the total projected revenues and expenses through 2027, comparing scenarios with the proposed adjustments to rates and fees and without any adjustments.



The following chart illustrates the Water Fund balance projections through 2027 under both existing rates and fees, and with the proposed adjustments. The proposed changes to rates and fees bring the fund balance within the policy target by 2027.



VII. Benchmark Analysis

The proposed rate and fee adjustments were analyzed against those of DWC customers to ensure they do not place a significant disadvantage on customers in the City. The proposed increases, detailed in the rate and fee analysis section of this report, were used to conduct a benchmark analysis of the projected average bill for Wheaton customers with the proposed adjustments. The model also factored in the average monthly consumption totals from each customer type and applied the rates of other area water utilities to compare the City's adjusted rates with those of other communities.

City Customer Impact - Average Monthly Water Bill

The average monthly water bill for City customers will increase at different amounts depending on their meter size and water usage (consumption). The table below shows how the average monthly bill for customers will change under the proposed usage rate and fee increases through 2027, categorized by meter size. The monthly bill includes the fixed fee amount and usage amount based on the 2023 actual average consumption by meter size.

Projected Total Monthly Water Bill
Includes Usage Charge and Fixed Fee
2023 Actual Average Consumption by Meter Size

Meter Size	Average Consumption (per 100 CF)	Existing Monthly Bill	2025	2026	2027
5/8"	5	$ 38.84	$ 45.66	$ 49.58	$ 54.10
5/8" by 3/4"	5	$ 38.84	$ 45.66	$ 49.58	$ 54.10
3/4"	8	$ 53.99	$ 64.09	$ 68.57	$ 73.64
1"	11	$ 82.73	$ 97.47	$ 105.49	$ 114.72
1.5"	43	$ 271.50	$ 323.93	$ 343.88	$ 366.21
2"	63	$ 405.11	$ 482.66	$ 513.49	$ 548.15
3"	52	$ 425.66	$ 498.80	$ 544.33	$ 597.03
4"	394	$ 2,261.46	$ 2,719.23	$ 2,852.19	$ 2,997.11
6"	1,246	$ 6,835.83	$ 8,251.88	$ 8,602.86	$ 8,977.75

The following table displays both the dollar amount and percentage increase for each customer, categorized by meter size and based on the same average consumption totals. Most customers, who have 5/8" x 3/4" meters, would experience a $6.82 increase in their monthly water bill in 2025.

Projected Increases to Total Monthly Water Bill
2023 Actual Average Consumption by Meter Size

Meter Size	2025		2026		2027	
	$	%	$	%	$	%
5/8"	$ 6.82	17.6%	$ 3.92	8.6%	$ 4.52	9.1%
5/8" by 3/4"	$ 6.82	17.6%	$ 3.92	8.6%	$ 4.52	9.1%
3/4"	$ 10.10	18.7%	$ 4.48	7.0%	$ 5.07	7.4%
1"	$ 14.74	17.8%	$ 8.02	8.2%	$ 9.23	8.7%
1.5"	$ 52.43	19.3%	$ 19.95	6.2%	$ 22.33	6.5%
2"	$ 77.55	19.1%	$ 30.83	6.4%	$ 34.66	6.7%
3"	$ 73.14	17.2%	$ 45.53	9.1%	$ 52.70	9.7%
4"	$ 457.77	20.2%	$ 132.96	4.9%	$ 144.92	5.1%
6"	$ 1,416.05	20.7%	$ 350.98	4.3%	$ 374.89	4.4%

Comparison Analysis to DWC Customers

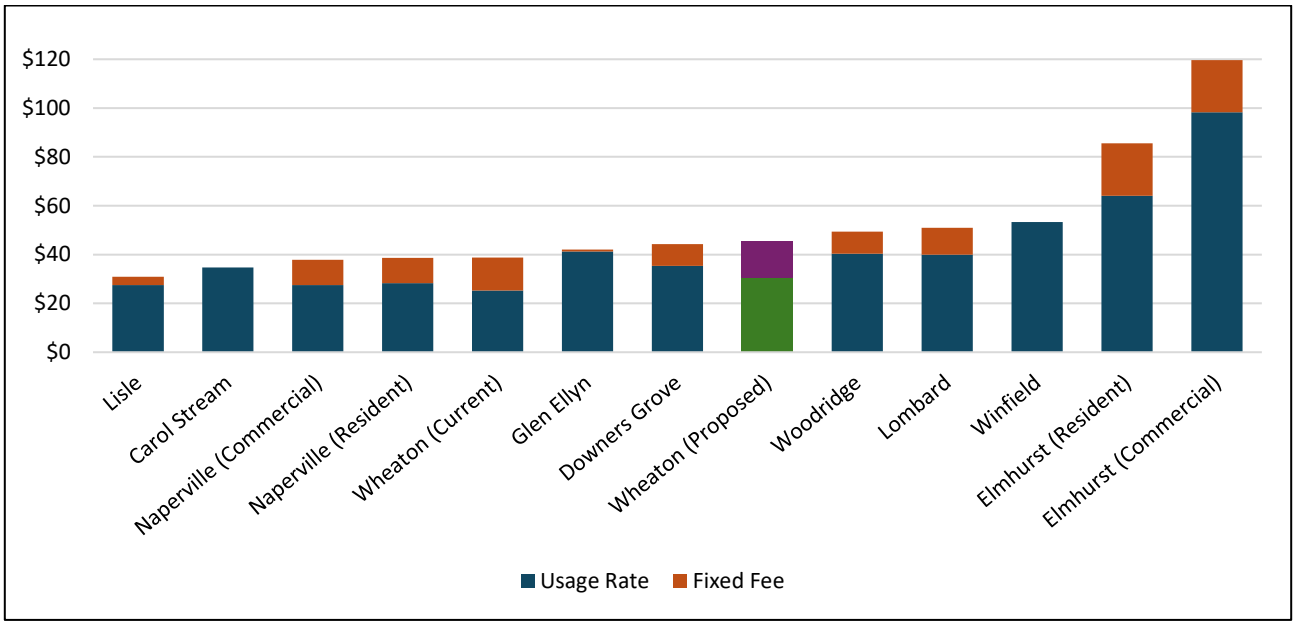
For the comparative analysis, the rate model used the City's actual average monthly water consumption totals by meter size from 2023 to calculate bills for other DWC customers. The analysis involved nine communities for rate comparisons: Carol Stream, Downers Grove, Elmhurst, Glen Ellyn, Lisle, Lombard, Naperville, Winfield, and Woodridge.

The comparisons strictly focused on water rates and charges. The study did not incorporate other utility services, such as sanitary or storm sewer fees. This omission is significant, as many communities consolidate water and sewer services into a single fund to streamline utility finances. This integration allows some communities to balance water service rate increases by adjusting costs associated with sewer services.

5/8" Meter

Rate analysis for the City's smallest meter size assumed consumption of 500 cubic feet. The following chart compares the average monthly water bill for a 5/8" meter customer in Wheaton with bills from other communities.

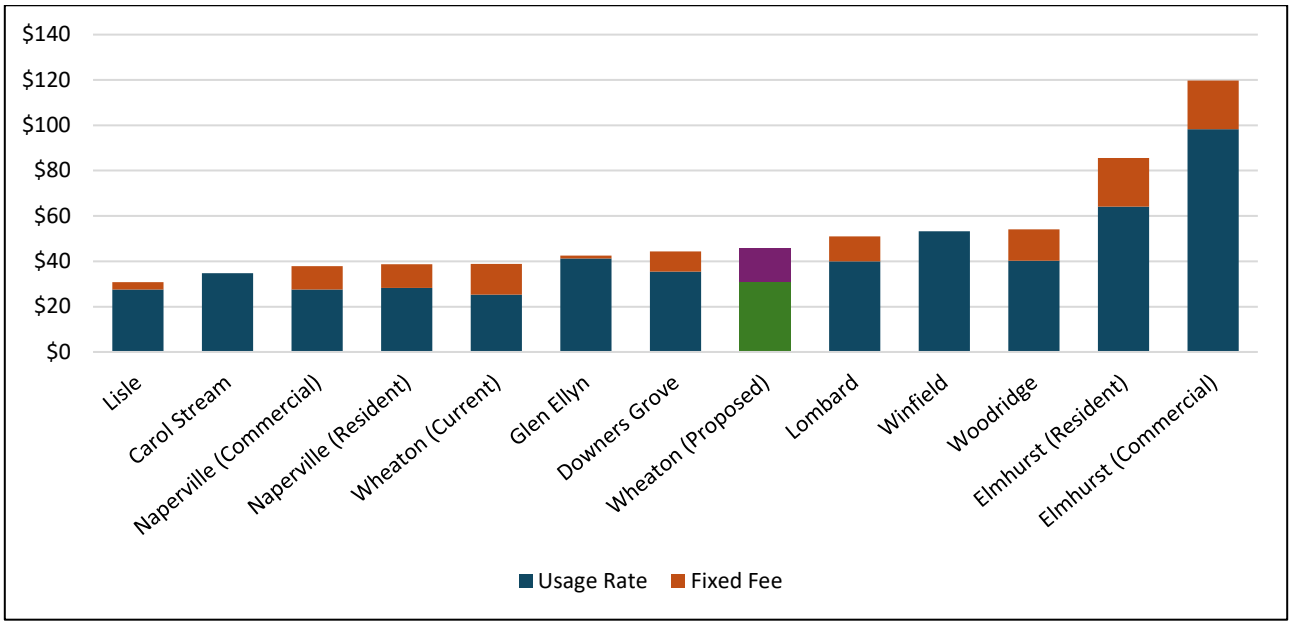
Monthly Water Bill
5/8" Meter Using 500 Cubic Feet of Water



5/8" by 3/4" Meter

Rate analysis for the City's most common meter size (60.3% of total meters) assumed consumption of 500 cubic feet. The following chart compares the average monthly water bill for a 5/8" by 3/4" meter customer in Wheaton with bills from other communities.

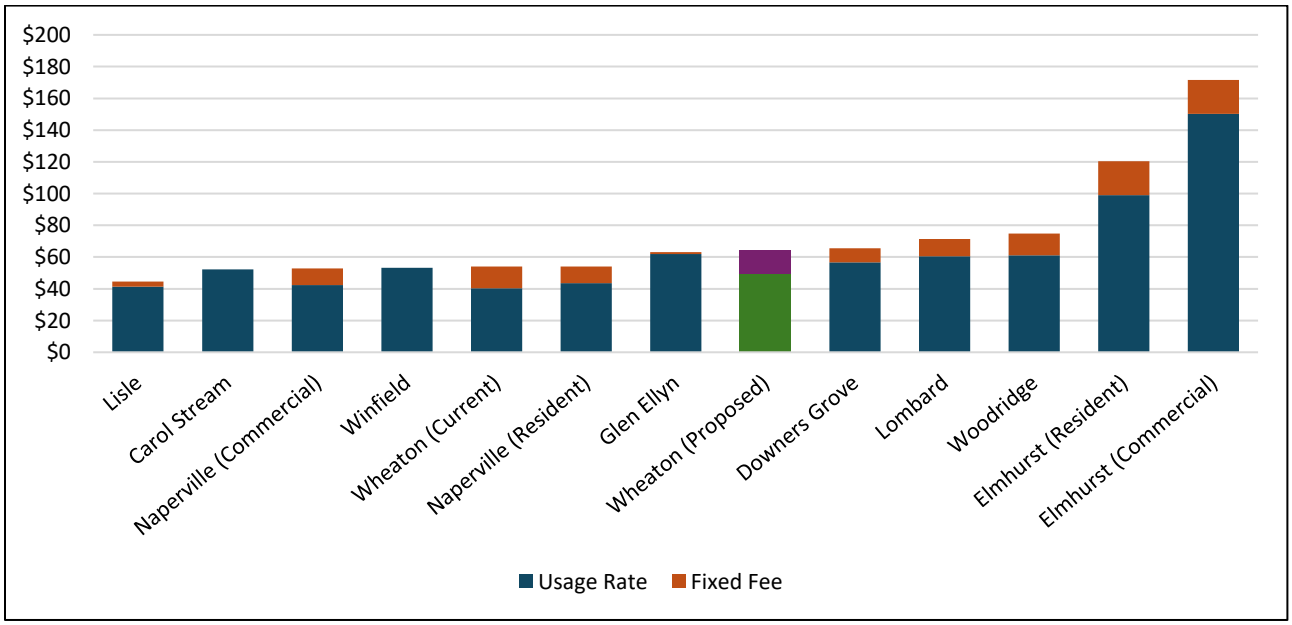
Monthly Water Bill
Most Common Meter Size
5/8" by 3/4" Meter Using 500 Cubic Feet of Water



3/4" Meter

Analysis for customers with 3/4" meters assumed consumption of 800 cubic feet per month. The following chart compares the average monthly water bill for a 3/4" meter customer in Wheaton with bills from other communities.

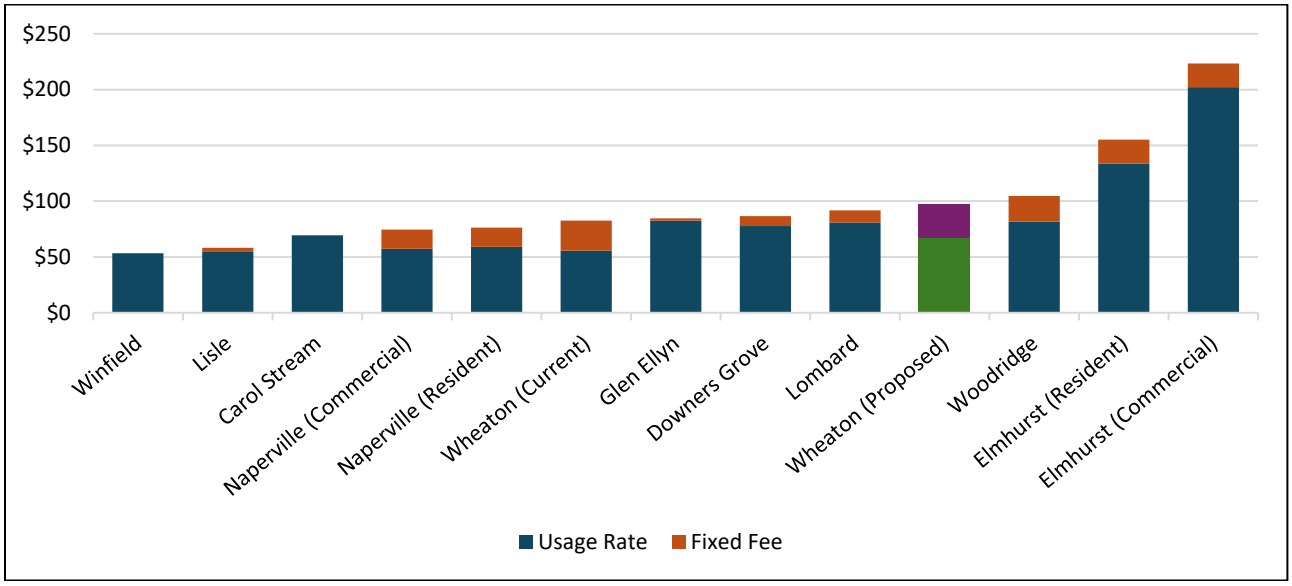
Monthly Water Bill
3/4" Meter Using 800 Cubic Feet of Water



1" Meter

Analysis for customers with 1" meters assumed consumption of 1,100 cubic feet per month. The following chart compares the average monthly water bill for a 1" meter customer in Wheaton with bills from other communities.

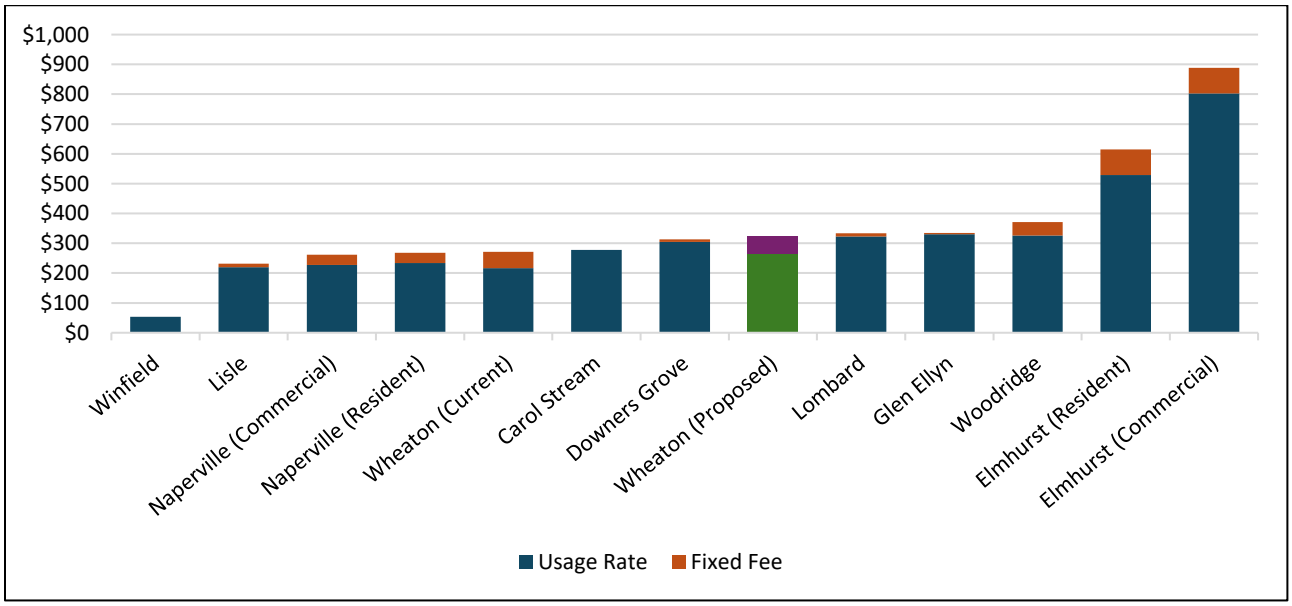
Monthly Water Bill
1" Meter Using 1,100 Cubic Feet of Water



1.5" Meter

Analysis for customers with 1.5" meters assumed consumption of 4,300 cubic feet per month. The following chart compares the average monthly water bill for a 1.5" meter customer in Wheaton with bills from other communities.

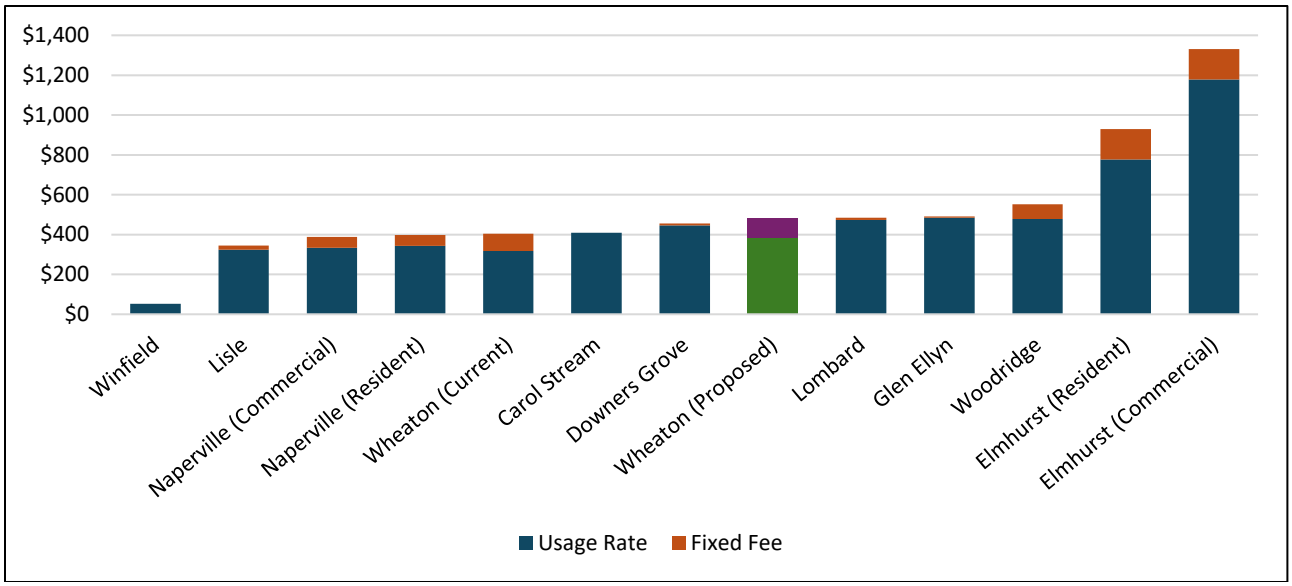
Monthly Water Bill
1.5" Meter Using 4,300 Cubic Feet of Water



2” Meter

Analysis for customers with 2” meters assumed consumption of 6,300 cubic feet per month. The following chart compares the average monthly water bill for a 2” meter customer in Wheaton with bills from other communities.

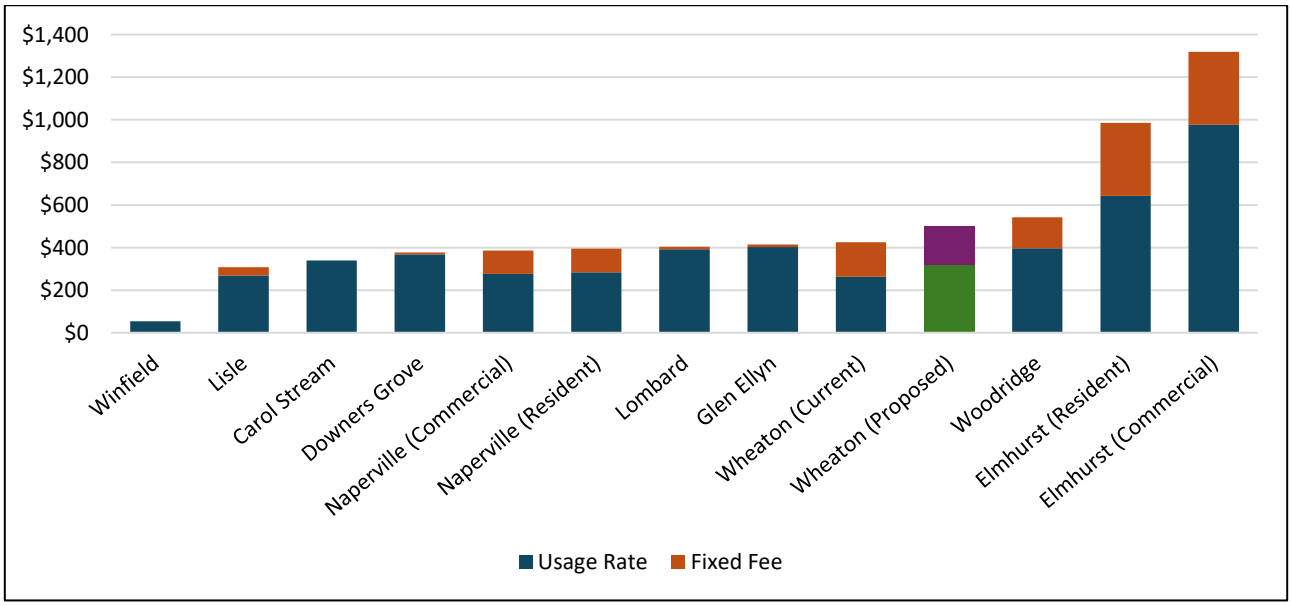
Monthly Water Bill
2” Meter Using 6,300 Cubic Feet of Water



3” Meter

Analysis for customers with 3” meters assumed consumption of 5,200 cubic feet per month. The following chart compares the average monthly water bill for a 3” meter customer in Wheaton with bills from other communities.

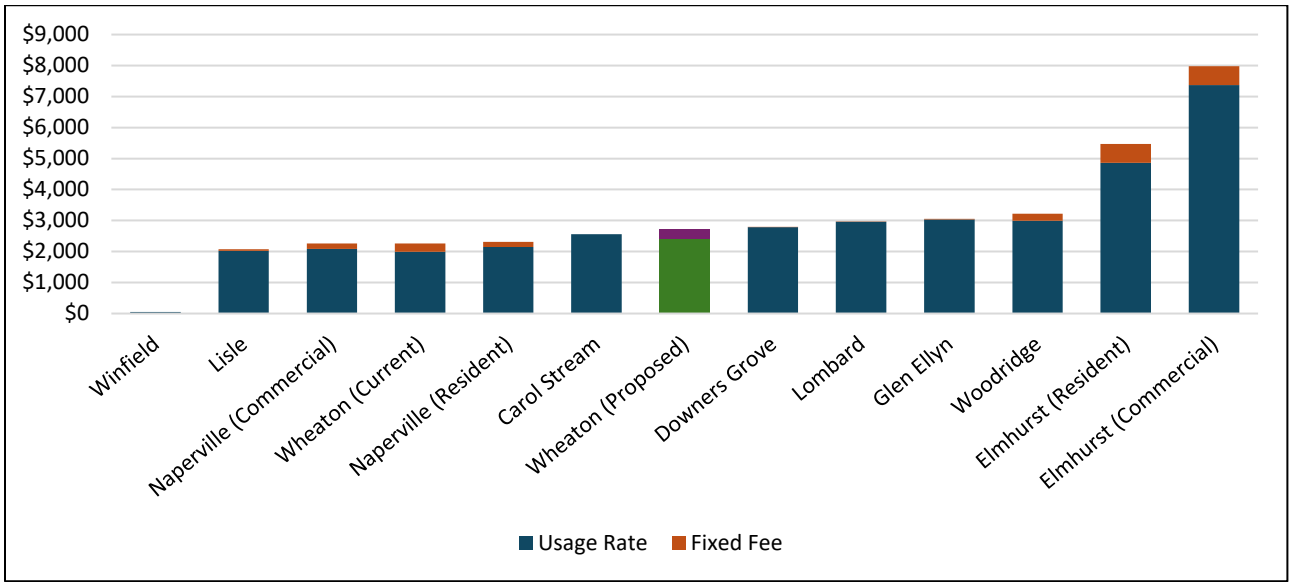
Monthly Water Bill
3” Meter Using 5,200 Cubic Feet of Water



4” Meter

Analysis for customers with 4” meters assumed consumption of 39,400 cubic feet per month. The following chart compares the average monthly water bill for a 4” meter customer in Wheaton with bills from other communities.

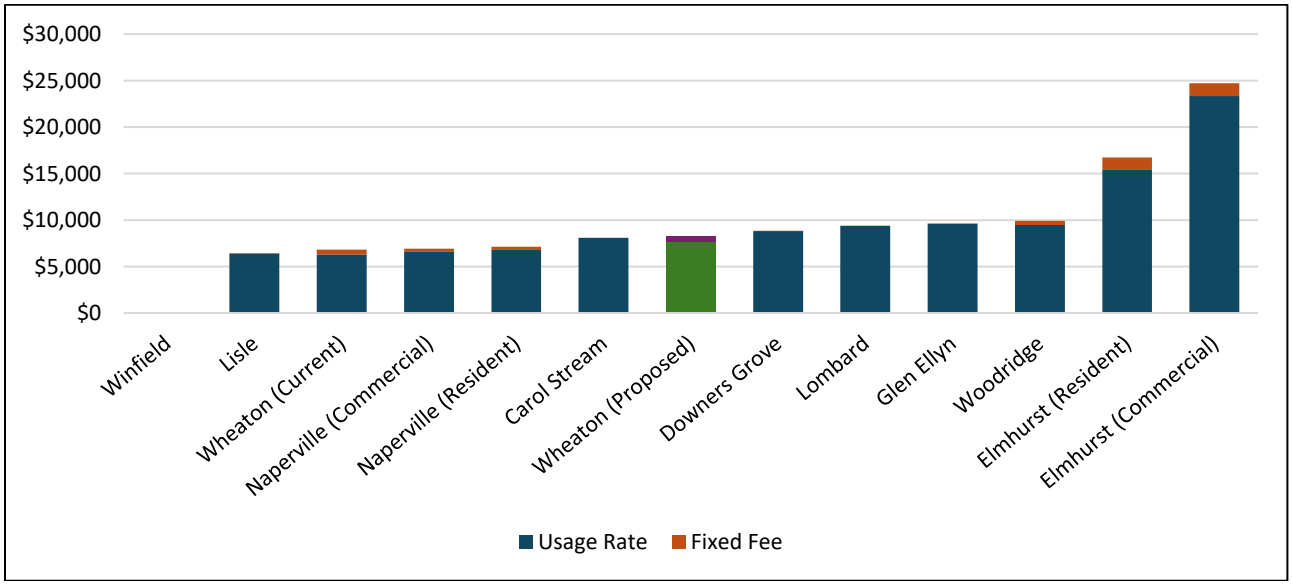
Monthly Water Bill
4” Meter Using 39,400 Cubic Feet of Water



6” Meter

Analysis for customers with 6” meters assumed consumption of 124,600 cubic feet per month. The following chart compares the average monthly water bill for a 6” meter customer in Wheaton with bills from other communities.

Monthly Water Bill
6” Meter Using 124,600 Cubic Feet of Water



VIII. Implementation

The implementation of any rate change is recommended to take effect on January 1, 2025. This timeline allows Wheaton staff sufficient time to update the billing system for the new rates and conduct thorough testing to ensure accurate bill generation.

Staff estimates that updating the billing system will require 2-3 months, including testing to verify billing accuracy. Given that the City has not adjusted rates or fees since 2015, it is crucial to establish a timeline that provides staff with ample preparation and assessment time for all bill adjustments.

Communication Plan

Discussion of the rate and fee changes will be communicated through the City's website, social media pages, newsletter, and monthly utility bills. The Water Rate Study and presentation will be posted on the City's website. Additionally, the inclusion of a DWC rate will be separately itemized on the utility bills, with detailed information provided in advance for the first bill under the new rates and fees.