



Village of Riverdale, IL

Water Affordability Analysis and Action Plan

OCTOBER 2025

Acknowledgements

Project Team

Liesel Hans, PhD | Director of Programs, Alliance for Water Efficiency (*former*)

Devin Foster Smith, PhD | Researcher, Alliance for Water Efficiency

Amanda Christophe | Program Manager, Alliance for Water Efficiency

Village of Riverdale Municipal Partners

April Wayne | Deputy Clerk

Vida Summers | Chief of Staff

Elevate Support Team

Justin Keller | Strategist, Water Programs, Elevate

Rachael Burchett | Program Manager, Water Programs, Elevate

Funding Support

Alliance for Water Efficiency wishes to express our gratitude and appreciation to Elevate and the Cook County Bureau of Economic Development for providing the funding and support for this project.

About Alliance for Water Efficiency

Alliance for Water Efficiency (AWE) is a nonprofit dedicated to the efficient and sustainable use of water across North America. Based in Chicago, IL, AWE advocates water efficient products and programs, and provides information and assistance on water conservation efforts. AWE works with more than 550 member organizations, providing benefits to water utilities, business and industry, government agencies, environmental and energy advocates, universities, and consumers.

Chicago, IL 60606 | a4we.org | contact@a4we.org

Table of Contents

Acknowledgements	2
Funding Support	2
About Alliance for Water Efficiency	2
Executive Summary	4
1. Introduction	7
Purpose	7
Cook County Water Affordability Program	7
Scope	7
2. Village of Riverdale Background	9
Overview.....	9
Demographics & Trends	9
Community Initiatives & Assets	10
Water in Riverdale	12
3. Water Use & Affordability Analysis	17
Methods	17
Water Affordability, Riverdale IL.....	22
4. Riverdale Community and Municipal Perspectives	51
Overview.....	51
Engagement Strategies.....	51
Key Themes Emerging from Community Outreach and Engagement.....	53
5. Recommendations and Action Plan	60
Section Overview	60
Intervention Strategy 1: Customer Service, Outreach, and Engagement	60
Intervention Strategy 2: Operations and Data Management	65
Intervention Strategy 3: Water Conservation and Resident Leakage	67
Intervention Strategy 4: Water Rates and Billing Practices.....	71
Intervention Strategy 5: Water Bill Burden and Debt.....	74
References	81
Appendix A: Community Flyer.....	84
Appendix B: Full Village of Riverdale Water Affordability Recommendations List	85

Executive Summary

Equitable access to clean water is a challenge faced by small communities across the United States. In a recent study focused on the City of Chicago¹, water affordability challenges were shown to be disproportionately weighted in low-income communities where the accrual of water bill-related debt increases financial instability over time. The Village of Riverdale, a City of Chicago suburb, faces some of these same systemic challenges. This report provides the Village of Riverdale leaders with a qualitative investigation of resident experience and quantitative analysis of residential water use and billing to understand the Village's unique challenges regarding residential water affordability. Strategies and recommendations to make water more affordable for Riverdale residents are rooted in community perspectives, municipal priorities, and quantitative data analysis. This work was supported by the Cook County Bureau of Economic Development in partnership with Elevate through the Cook County Water Affordability Program. As part of this three-component program, this report aims to identify localized water affordability strategies for the Village of Riverdale through (1) billing and water consumption data analysis, (2) community engagement, and (3) informed affordability recommendations.

Billing & Water Consumption Analyses

The Village of Riverdale provided bi-monthly billing and consumption data (2019 – 2024) and unbalanced account data (1995 – 2025) to support this study's residential water affordability analysis. Accounts were grouped by dwelling type as single-family, multifamily, and single-family + small multifamily. Across all groups, average water use and costs remained stable from 2019 – 2024, though variability was high due to extreme consumption by a small number of accounts.

This billing and water consumption information directly related to an investigation of account delinquency which showed most delinquent accounts were within 30 days of the previous bill or over 120 days delinquent. These two delinquent account types represent the incidence of circumstantial short-term financial hardship and long-term financial hardship within the community. The prevalence of leaks and inefficient appliances was assessed by determining an indoor water consumption threshold.

Findings showed that elevated water consumption is common in winter months, supporting the community sentiment that leaks are frequent occurrences which can cause financial hardship. These findings supported insights gleaned from community perspectives.

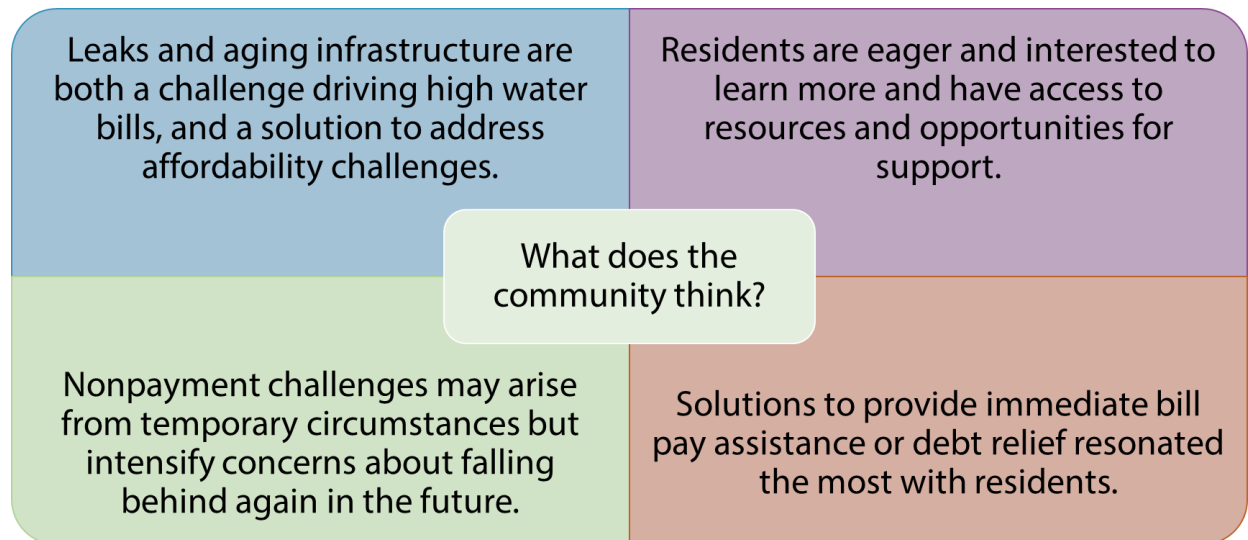
¹ Gore, A., Sharrow, L., & Keller, J. (2022). *City of Chicago Water Affordability Analysis City of Chicago Water Affordability Report*.

Community and Municipal Perspectives

The goal for community outreach and engagement was to gather insights from residents and Village staff on water use, billing, and affordability; provide residents with information and resources; and integrate community and staff perspectives into the analysis and action plan. Engagement strategies included:

- **An online resident survey** to gather insights into the nature of water affordability challenges residents are facing and ideas for solutions.
- **A “Coffee with the Mayor” Community Meeting** to provide an introduction on the Cook County Water Affordability Program, share educational resources with residents, gather input and ideas, listen to water affordability challenges, and answer questions.
- **Interviews with Village staff and residents** to understand individual perspectives, opportunities, challenges, and priorities relating to water affordability in Riverdale.

Below are key themes and takeaways that emerged from community engagement. These themes are outlined in more detail in [Section 4](#) of this report and were used to inform study recommendations.



Recommendations & Action Plan

Based on the quantitative analysis and community and municipal engagement outcomes, this report outlines recommendations for policy and programmatic recommendations tailored to the Village of Riverdale’s unique water affordability challenges.

Recommendations are categorized into five intervention strategies. Each recommendation includes rationale based on the analysis and industry best practices, implementation considerations, timeline, and level of priority. A full list of recommendations is provided in

the table below. More detail is provided on each recommendation in [Section 5](#) of this report.

Intervention Strategy Category		Implementation Timeframe		
1	Customer Service, Outreach, and Engagement	ST	MT	LT
1.1	Develop a dedicated water affordability webpage on the Village website to provide residents with access to education and resources relating to water bills, water use management, and assistance opportunities.	X		
1.2	Develop and implement a resident outreach campaign to promote the Village's new online payment portal.	X		
1.3	Implement a water affordability outreach campaign to educate residents on water bill and use management, including one-on-one communications, a series of workshops, and investing in community partnerships focused on water affordability.		X	
1.4	Partner and coordinate with electric utility staff (ComEd) to compile individual multifamily unit account information in order to share water billing information with individual units and renters.	X		
2	Operations and Data Management	ST	MT	LT
2.1	Upgrade and streamline the Village's internal data management, databases, and record keeping systems for customers on payment plans, delinquent accounts, or residents subject to shut off.		X	
3	Water Conservation and Resident Leakage	ST	MT	LT
3.1	Continue partnering with Elevate to advertise and enroll qualifying residents in the Cook County Leak Repair Program.	X		
3.2	Expand current offering of public works home leak inspections as Village pilot program.		X	
3.3	Issue high water use alert notices to residents via water utility bill, text and/or email when water consumption for current bill was 30% greater than average indoor consumption.		X	
4	Water Rates and Billing Practices	ST	MT	LT
4.1	Move customers to a monthly billing cycle		X	X
4.2	Conduct a cost-of-service study and explore alternative water rate structures that promote water affordability, water conservation, and equitable billing across customers.			X
5	Water Bill Burden and Debt	ST	MT	LT
5.1	Review and update notification processes for delinquent payments and shut off warning and notices.		X	X
5.2	Evaluate the Village's payment plan to determine successes and needed improvements.		X	
5.3	Provide partial relief to customers that experience extraordinary water charges due to hidden leaks, line breaks, or circumstances outside of the reasonable control of the account holder.			X
5.4	Develop a customer assistance program targeted to Village of Riverdale senior residents.			X

1. Introduction

Purpose

This report provides the Village of Riverdale staff and elected officials with a quantitative and qualitative analysis of residential water use and billing to understand their unique challenges regarding residential water affordability and to identify strategies for making water more affordable.

Cook County Water Affordability Program

In August 2024, the Cook County Bureau of Economic Development launched the [Cook County Water Affordability Program](#) in partnership with Elevate, which aims to provide “immediate relief to suburban Cook County residents struggling with water costs while creating long-term solutions for water affordability in the region.” (Cook County Government 2024). The program is tackling water affordability in the region through three main components: (1) Water Affordability Technical Assistance, (2) Water Bill Relief, and (3) Leak Repair.

The Water Affordability Technical Assistance Program (Cook County TAP) supports suburban municipalities in understanding the extent and nature of water affordability issues within their communities. Through an analysis of water use and billing data, this component of the Cook County Water Affordability Program identifies localized water affordability strategies and provides recommendations to inform relief strategies and customer assistance efforts.

As part of Cook County TAP, Alliance for Water Efficiency (AWE) provided technical assistance to two suburban Cook County municipalities. This report details work conducted in partnership and on behalf of the Village of Riverdale, IL.

Scope

The Water Affordability Action Plan for the Village of Riverdale draws on census, water consumption, and billing data to assess the scope of affordability challenges across different customer types. In addition, the plan summarizes outcomes from outreach and engagement with municipal staff, residents, and community groups, shedding light on the lived experiences of Riverdale residents. This combination of quantitative and qualitative analysis emphasizes recommendations that are data-driven as well as suitable and responsive to local needs.

With funding and coordination support from Elevate, Alliance for Water Efficiency entered a partnership with Village of Riverdale to complete the following tasks as part of the Cook County TAP: Task 1: Data Collection; Task 2: Data Analysis; Task 3: Recommendations.

2. Village of Riverdale Background

Overview

Spanning approximately 3.7 square miles The Village of Riverdale is located along the Little Calumet River in the Southeast Cook County region, approximately 16 miles south of Chicago’s downtown. It is bordered by Chicago in the northeast; Dolton to the east and south; Harvey to the southwest; and Dixmoor and forest preserved to the west; and Calumet Park to the northwest (Chicago Historical Society 2005).

First settled in 1835 and incorporated in 1892, Riverdale grew from a farming community into an industrial hub, with lumber, distilleries, sugar refining, and later Acme Steel and major railroads shaping its economy. Today, Riverdale operates as a small municipality governed by a mayor and board of trustees, providing essential services such as police, fire, and public works. “A Village with a Vision” Riverdale emphasizes inclusion and civic engagement, with current leadership focused on building a stronger, more connected community (Village of Riverdale 2025c).

Demographics & Trends

According to the 2019-2023 American Community Survey, the Village of Riverdale, Illinois, has a population of 10,515 residents with a median age of 33.5 (Chicago Metropolitan Agency for Planning 2025). The community is predominantly Black (Non-Hispanic), comprising approximately 88% of the population, followed by Hispanic or Latino residents making up 6.9%. Over time, Riverdale’s population has shifted, declining by about 30% since 2000. The population is also aging. In 2023, 20.3% of the population was between ages 50 and 64, compared to 8.8% in 2000. At the same time, ages 19 and under have decreased by around 8%. Approximately 67.6% of the population either have a High School Diploma or less, and 10.1% of residents hold a bachelor's degree. Household income and employment provide insight into residents’ ability to manage their water bills. The median household income is \$45,709, down from just over \$50,000 a decade earlier and about 44% below the countywide median. About one in three households earn less than \$25,000 annually. The unemployment rate is 14.1%, which has fallen by 7% since 2009.

Housing patterns further highlight cost of living trends over time. Just over half of households own their homes, and 47% rent. However, the share of renters has increased since 2000. Single family homes account for 62.5% of the housing stock, and the average household was built in 1957. Housing costs vary by income level: 22.6% of households earning under \$20,000 spend 30% or more of their income on housing, compared to 2.3% of households earning \$75,000 or more. Housing costs disproportionately impact lower-

income households. Among those earning under \$20,000, 22.6% spend 30% or more of their income on housing, compared with just 2.3% for households earning \$75,000 or more. This highlights an equity challenge, as lower-income households allocate a much larger share of their limited resources to housing. Across all income levels, housing costs as a share of income have risen over time (Chicago Metropolitan Agency for Planning 2025).

Community Initiatives & Assets

Below is a summary of assets to the Village of Riverdale that may be leveraged in the consideration and implementation of recommendations detailed in [Section 5](#).

RainReady Green Infrastructure Plan Implementation for Calumet Area

The RainReady Calumet Corridor initiative was launched in 2016 by the Center for Neighborhood Technology (CNT) in collaboration with six south-suburban municipalities, including Riverdale, to respond to decades of chronic flooding, basement backups, and infrastructure stress in the Calumet region (Center for Neighborhood Technology 2017). As part of this initiative, CNT convened municipal staff, elected representatives, business owners, and residents to craft a localized plan that aligns water-resilience improvements with broader goals around economic development, greenspace, and community revitalization. The “Riverdale Steering Committee,” comprised of community leaders, was developed to support plan development, implementation, and communications. The plan outlines strategies such as separating sanitary and storm sewers in vulnerable neighborhoods, deploying green infrastructure (rain gardens, permeable surfaces, bioswales), and reimagining vacant parcels—like the granary site—for mixed-use or ecological purpose (Center for Neighborhood Technology 2017).

An outcome of the 2017 RainReady Plan included a \$7.4 million sewer-separation project in the northeast part of Riverdale to reduce combined-sewer flooding impacts. Most recently, in 2022, Cook County committed \$6 million (including ARPA funds) to accelerate green infrastructure projects in the corridor communities. Via a contract with the County, CNT, and GreenPrint Partners are working directly with residents and local steering committees to support homeowner-scale resilience through education, home assessments, sewer retrofits, installations of rain barrels and rain gardens, and other green infrastructure strategies (Center for Neighborhood Technology 2017). This work is underway and is expected to continue through 2026.

Community and Economic Development Association of Cook County (CEDA)

The Community and Economic Development Association of Cook County (CEDA) is a nonprofit community action agency that provides social services and economic support to Cook County residents in need. Services include utility bill assistance; home weatherization; housing services; support to women, infants, and children; case management; and other short-term family assistance services (Cook County Government 2022a).

In 2022, CEDA implemented the Low-Income Household Water Assistance Program (LIHWAP) across Cook County, which provided financial assistance and relief to low-income households with challenges regarding water and wastewater bills, including households that were disconnected, facing disconnection, or had past due balances of at least \$250 (Cook County Government 2022b).

Communications and Resources

The Village of Riverdale seeks opportunities to connect with residents and share information about municipal services. Two notable examples include the Village's "Coffee with the Mayor" community meeting opportunities and their "New Residents Guide."

These assets relate particularly to recommendations in [**Intervention Strategy 1: Customer Service, Outreach and Engagement.**](#)

The "Coffee with the Mayor" community meetings are ad-hoc opportunities for the Village to engage with residents on community issues and priorities, celebrate and gather for community events, or share information and resources on municipal initiatives. They are held at Village Hall and typically include presentations, opportunities for questions and discussion, and the sharing of information.

Last updated in 2017, the "New Residents Guide" is a PDF document that include relevant information for residents that are new to the Village of Riverdale. It provides information on all municipal services and policies, including public works and the provision of water services. The guide includes the following language on high water bills: "Most high water bills are due to leaks on your property. To help prevent high bills, you should check your property periodically for any running or dripping water in toilets, sinks, bathtubs, furnace humidifiers, hot water tanks, and water heating systems" (Village of Riverdale 2017a).

Water in Riverdale

Source Water

The Village of Riverdale sources public water from Lake Michigan indirectly by purchasing water from the City of Chicago. The water is stored in three reservoirs within the village limits (Village of Riverdale 2017b). From 2008 to 2018, the total withdrawals from Lake Michigan declined 14.7% from 1.55 million gallons per day (MGD) to 1.32 MGD (Chicago Metropolitan Agency for Planning 2025). Despite a decline in withdrawals, this translated an increase daily per capita consumption of 3.6% (113.9 – 118.0 gallon per capita per day) due to declining Riverdale population from 2008 to 2018 (Chicago Metropolitan Agency for Planning 2025). Riverdale has a combined sewer system and separate storm sewer systems sewer and stormwater systems to clean and/or return storm water to the nearby waterbody (Center for Neighborhood Technology 2017).

Water Rates & Billing

The Village of Riverdale water utility bill includes multiple services, and it is sent on a bi-monthly (every 2 months) basis. These services include water, sewer (wastewater), sanitation (trash). Residents are also billed for a standard capital improvement cost and pay tax on the services. Discounts on sanitation charges are applicable for seniors (+65 years of age), and there are no other group discounts for utility bills.

Table 1. Village of Riverdale Water Utility Bill Cost and Rate by Service.

Service	Cost/Rate
Water	\$9.50 / 1000 gallons <i>Minimum charge of \$19.50</i>
Sewer	Minimum charge of \$6.75 <i>Volumetrically charged</i>
Sanitation	\$ 45.00 <i>\$43.50 for Senior Citizen</i>
Capital Improvement Charges	\$4
Tax	3% of total utility bill

Water utility bills can be paid in person, by mailing check, online or by phone via the Illinois E-Pay system. The E-Pay system can take 3 days to post the payment to the resident's account, and the bill payment is considered late if it arrives late due to E-Pay processing. E-Pay payments are not accepted if a payment is late. The Village has an official policy to for delinquent accounts. The policy is outlined in

Table 2.

Table 2. Steps in Delinquent Payment Events and Penalty Response.

Delinquent Payment Event	Penalty Response
Bill unpaid with 14 days of rendering	Fee of 10% of total bill
Bill unpaid with 30 days of rendering	Account subject to termination (shut off)
Bill unpaid with 60 days of rendering	Village Clerk may file a lien claim with the recorder of deeds of Cook County upon the premises
Account terminated	\$100 termination service fee
Account reconnected	\$100 reconnection service fee + all fees and arrears paid

The Village will provide written notice of approaching water service termination seven days prior to the termination date. The amount owed must be paid in full within seven days to avoid shut off. If the account is terminated, the total amount owed (\$200, arrears, and fees) must be paid in full before water service is resumed. An emergency shut off outside of normal operating hours is subject to a \$125 fee to turn water service off and back on. The Village also permits account termination if the resident has failed to make the meter accessible to authorized officials or Village employees and any waste or misuse of water and/or sewer services. If the water utility bill is unpaid for more than sixty days, a lien on the property may be filed for non-payment of water and utility services (Village of Riverdale 2025a).

Water Loss

The Village of Riverdale water nonrevenue was reported as 0.47 MGD in 2017, which is the most up-to-date Lake Michigan Water Allocation Program Report (Chicago Metropolitan Agency for Planning 2025; Stantec 2017). This value represents ~34% of total water supplied in 2017 (1.39 MGD) (Stantec 2017). Non-Revenue water is classified as the difference between total water supplied and the sum of billed authorized water consumption. This may include water loss due to leaks in the distribution system, unauthorized consumption, unbilled authorized consumption, under-registration of meters and/or systematic data errors (Chicago Metropolitan Agency for Planning 2025). The total value of Riverdale nonrevenue water in 2017 was approximately \$777,000.

Related Policies & Ordinances

New Customer Deposit

New water utility customers are required to pay a deposit ranging from \$150 (5/8-inch meter, 3/4-inch) to \$850 (4-inch meter). The deposit for most residential customers is

\$150. This deposit will be applied to the final bill upon termination of water service. If the account is shut off due to a delinquency, the security deposit is applied to the delinquency, and a new deposit shall be provided to the Village treasurer before water service is resumed (Village of Riverdale 2025b).

Adjustments & Meter Testing

Meter tests are conducted by the Village upon written request of the resident, where the resident pays a fee for the testing, meter shipping, and 15% of labor charge. If the meter is running over 100% speed, the account owner will be provided a refund for the percentage of the water costs amount to over 100% (e.g. meter read at 140% speed, the account owner is refunded 40% of water charges). If the meter is running less than 100% the account owner will be charged the difference from 100% (e.g. meter running at 95% speed, the account owner will be charged an additional 5% of water charges)(Village of Riverdale 2025a).

Outdoor Water Use

The Village of Riverdale has outlined an official Sprinkling policy (Section 13.04.080). Irrigation, termed Sprinkling in Chapter 13.04, is regulated from May 15 – September 15 for all residential, business, and corporation customers (Village of Riverdale 2025a). Outdoor irrigation by sprinkler is not allowed between 12:00 pm and 6:00 pm. Regulations by address are listed in Table 3.

Table 3. Annual Water Regulation from May 15 – September 15 Determined by Last Digit of House Number.

House Number Ends In	Water Days
1, 3, 5, 7, 9	Odd-number days of the month
0, 2, 4, 6, 8	Even-number days of the month

If the Village provides written or verbal notice of insufficient Village water supply or inadequate permit, residents may not irrigate at any time of the day. If residents’ watering practices do not align with these regulations, they are subject to a ticket between \$25 and \$200. If a sprinkling violation occurs more than once in 30 days, the account may be shut off by the Village.

Village Programs

Amnesty Program

The Village of Riverdale Amnesty Program was initiated in response to the COVID-19 pandemic. While the Village could not waive the cost of water, they provided this program

to waive late fees for residents. Residents are eligible to apply for the amnesty program once a year.

Utility Payment Plans

The Village of Riverdale offers a formal plan for residents who are unable to pay their water utility bill on time and in full. Customer must contact the Village to set up a formal payment plan with the Village staff. Plans are tailored to the individual's situation and typically extend from 6 to 12 months. The plan can extend to 24 months, however this is uncommon. The residents are required to pay 35% of the bill per payment in addition to their current bill. This is considered when developing a payment plan to keep bills affordable for residents. If an account in arrears owes over \$1,000 the Village staff seeks to set up a formal payment plan.

In many situations the Village of Riverdale staff will support residents with an informal payment plan. The distinction between formal and informal is a written agreement among the parties. The informal payment plan is founded on trust and resident follow-through on small payment toward the owed amount to avoid a water shut off. These informal payment plans are agreed upon in a one-on-one appointment with the resident and staff. These informal payment plans can be short, less than one week, or longer.

Short-Term Informal Payment Example

A resident visits the Village to let them know that their household is unable to pay the \$150 water utility bill on-time and in full, but they will be able to pay in full when they received their wages in a few days. To avoid a delinquency or water shut off, the Village staff will request a smaller, partial payment (e.g. \$50) on day of the inability to pay notice and accept the full amount when the resident is receives their wages. If the resident does not follow through on their commitment to pay, the Village will shut the water off.

Informal payment may extend for longer periods, where the Staff records payments by the resident over time based on a verbal agreement. Additional fees are typically waived as a courtesy for these residents.

Long-Term Informal Payment Example

A resident visits the Village to let them know that their bill was much higher than normal due to a leak that they have now fixed. The bill is \$500 for two months and they cannot afford to pay the bill in full. The Village staff will organize a partial payment schedule with the resident over the next billing period (e.g. \$100 over 5 weeks, or \$50 over 10 weeks). If the resident does not follow through on their commitment to pay, the Village will shut the water off.

The majority of residents who are on payment plans are on an informal payment plan. The Village of Riverdale staff work directly with residents to provide them with bill pay assistance.

3. Water Use & Affordability Analysis

Methods

Data Collection

Riverdale Data

The Village of Riverdale provided water consumption and utility water bill account data from 2019 to 2024. These data detailed bi-monthly billing and corresponding water consumption for all accounts (active and inactive) during the period of analysis. The Village also provided a list of only active accounts in February 2025 and unbalanced accounts. Unbalanced accounts listed all accounts as of July 17, 2025. The record of unbalanced accounts extends back 120 days.

Census Data

Census datasets used to support visual representation of demographic information and calculation of key affordability analysis indicators (U.S. Census Bureau and U.S. Department of Commerce 2023b; 2023a; 2023c; 2023d). Census datasets utilized in this study were

S1701: 2019 – 2023 American Community Survey 5-Year Estimate Poverty Status in the Last 12 Months (2023),

B19080: 2019 – 2023 American Community Survey 5-Year Estimate Household Income Quintile Upper Limits (2023),

S2503: 2019 – 2023 American Community Survey 5-Year Estimate Financial Characteristics (2023), and

S2504: 2019 – 2023 American Community Survey 5-Year Estimate Physical Housing Characteristics for Occupied Housing Units (2023).

Data Organization & Cleaning

Data Group Type Classes

Each Riverdale account is accompanied by a geolocation tag, which supported the grouping of accounts by class type and dwelling type. First, accounts were grouped by class type and subsequently grouped by dwelling type. Table A. shows the groups of accounts based on class and dwelling. Class groupings were residential (R), rehab (RHB), excluded (EXLD), business and industry (BI), sprinkler (SPK), village (V) and off (OFF).

Table 4. Village of Riverdale Account Grouping by Class Type and Subsequent Dwelling Type.

Group Type	R			RHB	EXLD	BI	SPK	V	OFF
Dwelling Type	SF	MF	SF + sMF	Excluded from analyses					
Geolocation	M1	M11	M2	W	WCW	BUS	(blank)	PWMT	BUS
	M1MT	M12	M3		MI	BUS*		VOP	M1
	M2MT	M14	M4		M13	BLANK		V	M10
	MFD1	M18	M6		M10	PWMT			M12
	MI	M20	GH3			VOP			M13
	Owner	M5							M18
	PWL	M52							M1MT
	PWMT	M56							M2
	SEN	M8							M2Mt
	VBR	M9							M3
	VBRHUD	M96							M4
	WCW	CONDO							M6
	CR1								M8
	FO								OWNER
	R-SF*								PWL
									PWMT
								REHAB	
								VBR	
								(blank)	

*Reclassified from a blank geolocation based on ground truthing

There was a total of 3,860 residential accounts included in analysis across 32 geolocation tags (

Table 4). Only residential accounts were included in the water affordability analysis. All other account types were excluded. A total of 191 business and industry accounts (BI) and 5 village accounts (owned and managed by the village) were excluded from analyses. In some instances, accounts with geolocations that had residential geolocation tags were classified as excluded (EXLD). There were 4 accounts with insufficient information to classify. Details on the four accounts that were excluded:

- Geolocation tags M10 and M13 had one account line. The account numbers did not overlap with any other geolocations.

- Geolocation tag WCW had one account line. The account number did not overlap with any other geolocations.
- Geolocation tag MI had no consumption and no individual or entity associated with the account.

If account was denoted as “off”, or there was insufficient information to group these accounts based on type and/or dwelling. There were 297 accounts denoted as “off” based on the name associated with the account (e.g. “INACTIVE/OFF”, “FIRE INACTIVE/OFF”, “INACTIVE / BOARDED UP / OFF”).

There was a total for four residential dwelling accounts with a REHAB geolocation, each with a single account billing line. These accounts were assigned to the RHB class. Blank geolocation tags were reassigned for residential and/or business and industry accounts. In some instances, an account with a residential geolocation tag was reclassified based on the account name and a ground truth check through Google Maps verification. Key words used to identify these accounts included but were not limited to “village, industry, rail(road)(way), construction, company, hydrant”. Lastly, there was 1 sprinkler account with no geolocation tag (blank) that was excluded from analysis as a sprinkler. All group type classifications and dwelling groups were confirmed with a Village of Riverdale staff member.

Data Dwelling Type Classes

Dwelling groups were divided into **(1)** single family, **(2)** multifamily, and **(3)** single family and small multifamily (SF + sMF) based on geolocations. Multifamily homes in the SF + sMF dwelling group were typically less than or equal to 10 units. Dwelling types were ground truthed by random selection for each geolocation grouped by dwelling. Ground truthing was conducted virtually by typing in the address to Google Maps and using street view to confirm the dwelling type.

Analyses

Affordability Indicators

Affordability indicators of Household Burden Indicator (HBI) and Poverty Prevalence Indicator were calculated for this study. The HBI is the annual water and wastewater bills as a percentile of household income for a given census tract. This metric can be used to demonstrate how water utility bills impact the most financially vulnerable households. The HBI is calculated by

$$HBI = \frac{\textit{Average Annual Household Water and Wastewater Bill}}{\textit{Upper Boundary of Lowest Quintile Income}}$$

where, in this study, the average annual household water and wastewater bill for single family dwellings is calculated for the Village of Riverdale and the upper boundary of the lowest quintile income is obtained for the four census tracts within the municipal boundary of Riverdale, IL from the (U.S. Census Bureau and U.S. Department of Commerce 2023b).

The Poverty Prevalence Indicator measures poverty within a geographic boundary. It is measured by the percentage of households below 200% of the Federal Poverty Limit (Raucher et al. 2019). This indicator is calculated by

$$PPI = \frac{\text{Population Below 200\% of Federal Poverty Level}}{\text{Population for Whom Poverty Status is Determined}}$$

where, for this study, both values were obtained from the U.S. Census Bureau and U.S. Department of Commerce (2023b; 2023a) for the four census tracts that overlap the municipal boundary of Riverdale, IL.

Water Consumption and Billing Trends

Residential water consumption amounts and bill values were assessed on bi-monthly billing cycles (February, April, June, August, October, December) for all residential individual accounts, geolocations, and dwelling groups. Irregular and inconsistent water consumption and corresponding water utility bills were documented during odd months (January, March, May, July, September, November). These were not included in the analyses conducted for this report. All water consumption is measured and reported in 1,000 gallon units (1 kGal) by the Village of Riverdale. All quantitative analyses were reported in kGal units.

To conceptualize consumption patterns across the community, the data were aggregated into average consumption values per billing cycle and plotted with the range in consumption per account to demonstrate the variability among residents. During the study period (2019 – 2024), water consumption was measured on an annual and seasonal basis. Indoor water use (February, April, October, December) and outdoor water use seasons (June, August) were evaluated to identify patterns of water consumption within the community. In consumption analyses at the account level, accounts with zero consumption or blank consumption values were removed from analysis. This cleaning process was applied to datasets after the accounts were filtered by class type and dwelling type.

Water utility bills and the cost of water services were analyzed on an annual basis and bi-monthly basis in parallel with water consumption. However, accounts with zero consumption were not filtered out of water utility bills. This is because a base charge for

water consumption plus, sewer, sanitation, and capital costs are all included in the bill. On an annual basis, bills were divided into service components to show the average breakdown of water utility bill service costs among dwelling groups. On a bi-monthly billing basis, the range of payment for water services was analyzed to demonstrate the range in water service costs which corresponded to consumption.

Prevalence of Leaks and Outdoor Water Use Investigation

Village of Riverdale residential accounts were assessed for evidence of leaks by dwelling group – single family, multifamily, and single family + small multifamily dwellings. Each account was assessed individually, and results were amalgamated by dwelling group. Since the Village water meter readings and corresponding bills are bi-monthly, a threshold was determined to identify if a dwelling was more likely to have experienced a leak during the previous 2-month billing period. This threshold was a water consumption value of 30% greater than the annual average indoor water consumption for that customer, hereon termed the baseline indoor water consumption. The 30% + average water consumption threshold was defined within the context of recent work by Naseri et al. (2025), which demonstrated from 24,411 accounts that indoor water consumption varies 21 - 27% on average from low to high water users. A value of 30% greater than the annual indoor average baseline acts as a conservative buffer around variation of indoor water use so that water consumption greater than the average + 30% is indicative of elevated indoor water consumption due to a leak, inefficient appliance, alternative use of water indoors, or outdoor water use.

To calculate the indoor baseline average water consumption value, billing periods of primarily indoor water consumption were averaged. In Illinois, where seasonality results in large temperature swings, water is primarily used indoors in the late fall to early spring months. Billing periods of indoor water consumption were defined as bills sent in February, April, October, and December. Bills sent in June and August were assumed to have outdoor water use associated with the bill. As part of this analysis, any consumption value of zero or no value for a given month was excluded from the analysis so that the average indoor water consumption value would not be biased toward a lower value.

For every account, the consumption of each month was compared to the indoor baseline consumption for each year (2019 – 2024). If the monthly water was 30% greater than the indoor baseline consumption value for that year, the account was flagged as having an elevated consumption. In this report, the percentage of accounts for each billing cycle of each year is presented by dwelling group. This analysis was only done for the accounts with consumption values (i.e. not 0 or blank) so that the percentage of active accounts with potential leaks for each billing was not deflated for each billing cycle. This clarification

is relevant because customers may open an account midway through a year or show inconsistent consumption patterns, which could impact on the results if zero and blank values were not removed.

Spatial Analyses

Spatial representation of data was conducted in ArcGIS Pro. Census tract boundary, Cook County boundaries, and Village of Riverdale municipal boundary data were accessed from U.S. Census Bureau (2024) and Cook County Government (2025). Census tract data were clipped to the Village of Riverdale for all analyses. Affordability indicator and demographic metrics were affiliated with each census tract for spatial projection of these indicators.

Water Affordability, Riverdale IL

The findings in this section focus on residential accounts in the Village of Riverdale from 2019 – 2024. This section investigates water consumption and utility bill trends, leaks and outdoor water use, and senior citizen water consumption. The accounts included in all analyses were based on the data cleaning methods. Figures and tables presented in this section of the report provide support for the water affordability recommendations.

Riverdale Affordability Indicators

Two affordability indicators were calculated by census tract for the Village of Riverdale. Figure 1 shows the household burden indicator (HBI), where the proportion of water and wastewater bills is represented as a percentage of the upper limits of the lowest quintile income for each census tract. The HBI values range from 2 to 5%, and when the full utility bill is accounted for in the HBI indicator calculation (water, wastewater, sanitary, tax, capital improvement) the HBI increases 1 – 2 % by census tract, **8215** (7%), **8266** (6%), **8267** (7%), **8268** (4%).

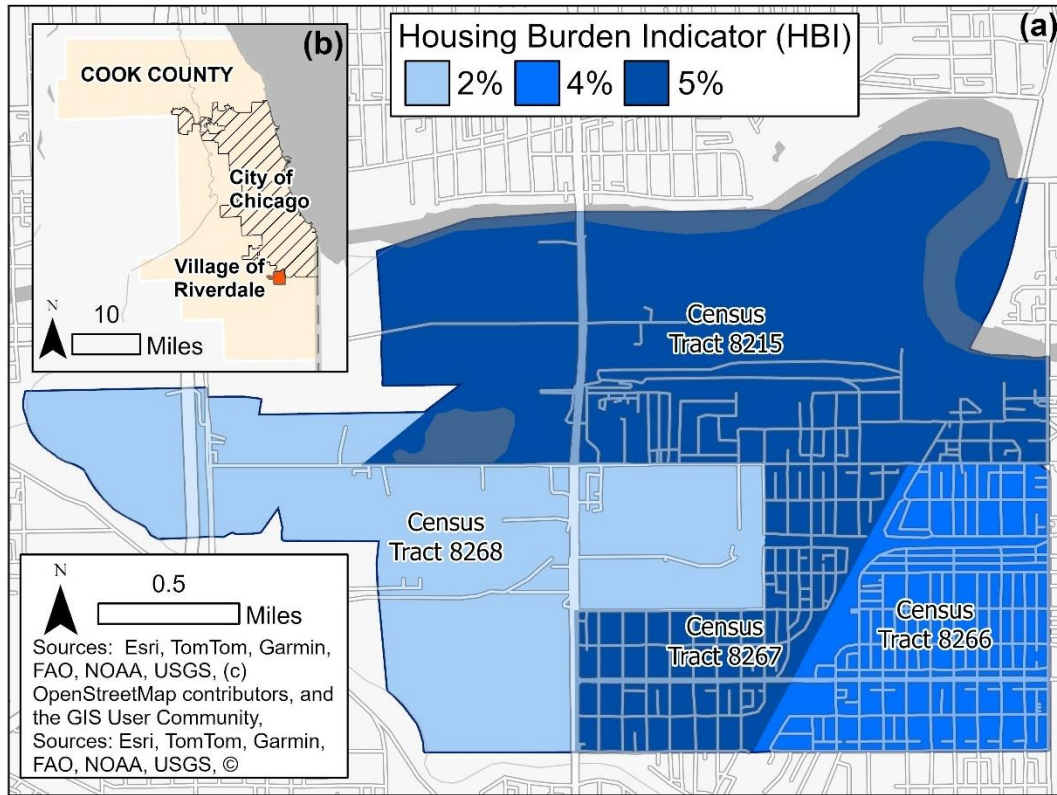


Figure 1. (a) Village of Riverdale Household Burden Indicator (HBI) by census tract (U.S. Census Bureau 2024). Colors denote the HBI percent, where darker colors are a higher percentage and lighter colors are a lower percentage. (b) Inset map area of Cook County, with the municipal boundaries of the City of Chicago and Village of Riverdale (orange) outlined (Cook County Government 2025).

There is minimal stratification of HBI across Village of Riverdale’s census tracks. The same pattern is apparent for poverty prevalence indicator (PPI), which is shown in Figure 2.

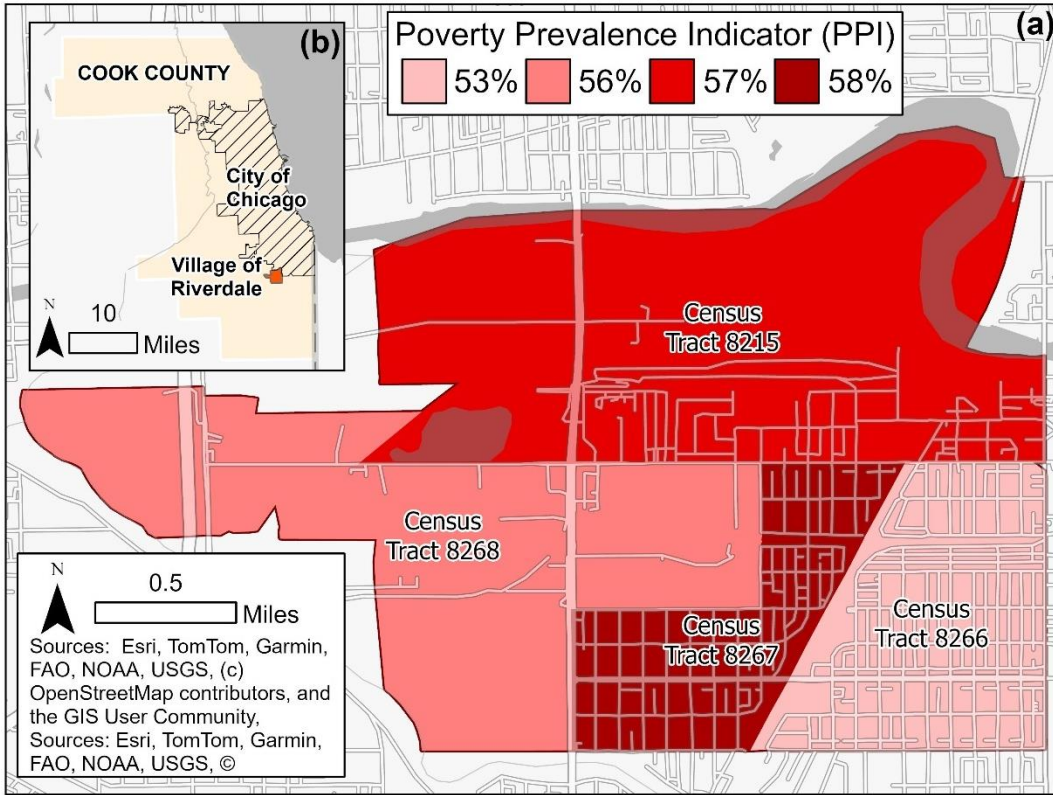


Figure 2. (a) Village of Riverdale Poverty Prevalence Indicator (PPI) by census tract (U.S. Census Bureau 2024). Colors denote the HBI percent, where darker colors are a higher percentage and lighter colors are a lower percentage. (b) Inset map area of Cook County, with the municipal boundaries of the City of Chicago and Village of Riverdale (orange) outlined (Cook County Government 2025).

There is a 5% stratification of PPI across the four census tracks. Additional metrics, such as income stratification and percentage of renters and household owners within Riverdale can provide further context for water affordability. Income by census track is shown in Figure 3.

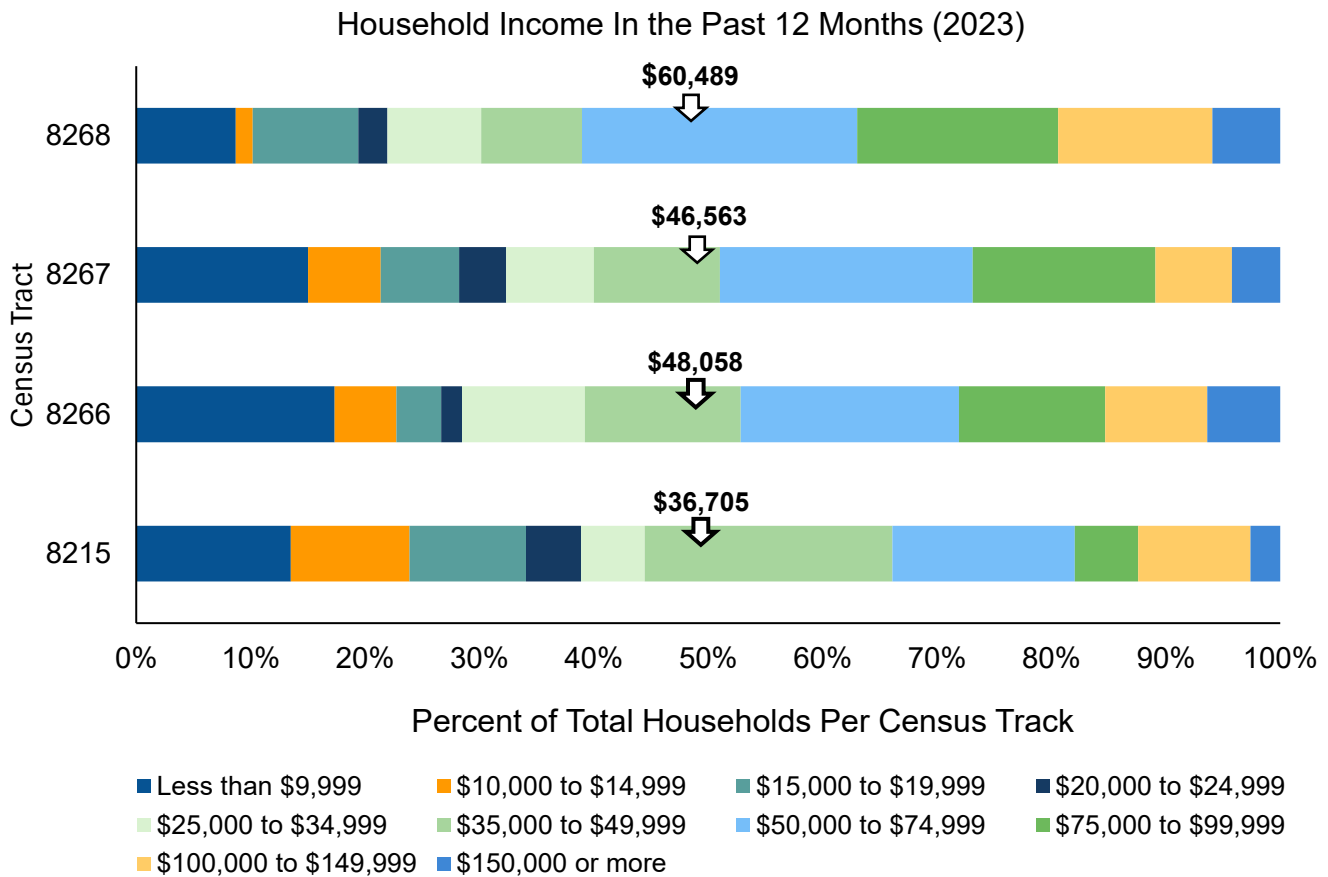


Figure 3. Annual Household Income in the past 12 months (2023, adjust for 2023 inflation dollars) for census tracts that overlap the municipal boundaries of the Village of Riverdale. The arrows and corresponding dollar amounts associated with each census track data represent the estimated median household income for the census track.

Household income distribution can act as important context when evaluating affordability indicators. There is approximately a 40% difference in the median household income ranges compared to a 3% and 7% range in HBI and PPI, respectively. The insights gained from these analyses show that even though some areas of the Riverdale community have a relatively higher income, the financially vulnerable population of Riverdale is distributed throughout the community.

This distribution is not necessarily determined by the distribution of renters that reside within community. Table 5 shows the difference between owners and renters of households paired with the affordability metrics and median income of each census track that overlaps the Village of Riverdale boundaries. The track with the highest renter population (75%) has the lowest median income. However, as previously mentioned, the affordability metric indicators do not demonstrate a notable difference from the other census tracks. A takeaway from this table is that there is a high renter population across the Village of Riverdale.

Table 5. Table of the percent of households that are owner- and renter-occupied with household median income, HBI and PPI (U.S. Census Bureau, 2023). Darker colors denote lower percentages, and lighter colors denote higher percentages.

Census Tracts	8215	8266	8267	8268
HBI	5%	4%	5%	3%
PPI	56%	60%	57%	53%
Median Income	\$ 36,705	\$ 48,085	\$ 46,563	\$ 60,489
Owner Occupied Housing Units %	25%	64%	54%	54%
Renter-Occupied Housing Units %	75%	36%	46%	46%

Water Consumption Trends

Water consumption values varied across residential dwelling groups. There were 3,472 single family dwelling accounts included in this analysis from 2019 – 2024². During any billing cycle, between 2,501 – 2,626 accounts had active consumption. The average consumption per billing cycle for single family dwellings ranged from 7 to 10 kGal. The maximum consumption during a single billing cycle ranged from 106 to 1,072 kGal. The minimum consumption was 1 kGal. Figure 4a shows the fluctuation in Village of Riverdale single family consumption data and the entire range of the consumption from 2019 – 2024. High consumption values were anomalies and are indicative of a major leak or other causes of extreme water consumption. The dark blue shaded area on Figure 4a represents 99% of the single family account consumption values during the billing cycle. During a single billing cycle, 99% of single family account holders had bi-monthly consumption below 27 to 54 kGal from 2019 – 2024. The extreme consumption values shown by the light blue shaded area only accounts for 1% of single family account holders during a billing cycle.

Figure 4b is zoomed in to focus on the average single family bi-monthly water consumption to demonstrate annual fluctuations. Orange boxes during warm-season billing cycles of June and August reflect the potential for outdoor water use during this period. For single family dwellings, average consumption was typically greater during these warm-season months, as more water is used during warm and hot weather for both indoor and outdoor activities (e.g. greater frequency of showers, watering lawns). However, there were several instances when the average increases in a cool-season month, which may be attributed to leaks or alternative high indoor water use. This is discussed further in the report in the [Leaks & Outdoor Water Use](#) Section.

² All residential accounts underwent a review and cleaning process prior to being included in the consumption analysis. Details are provided in the [Methods Section](#).

Single Family Water Consumption from 2019 – 2024

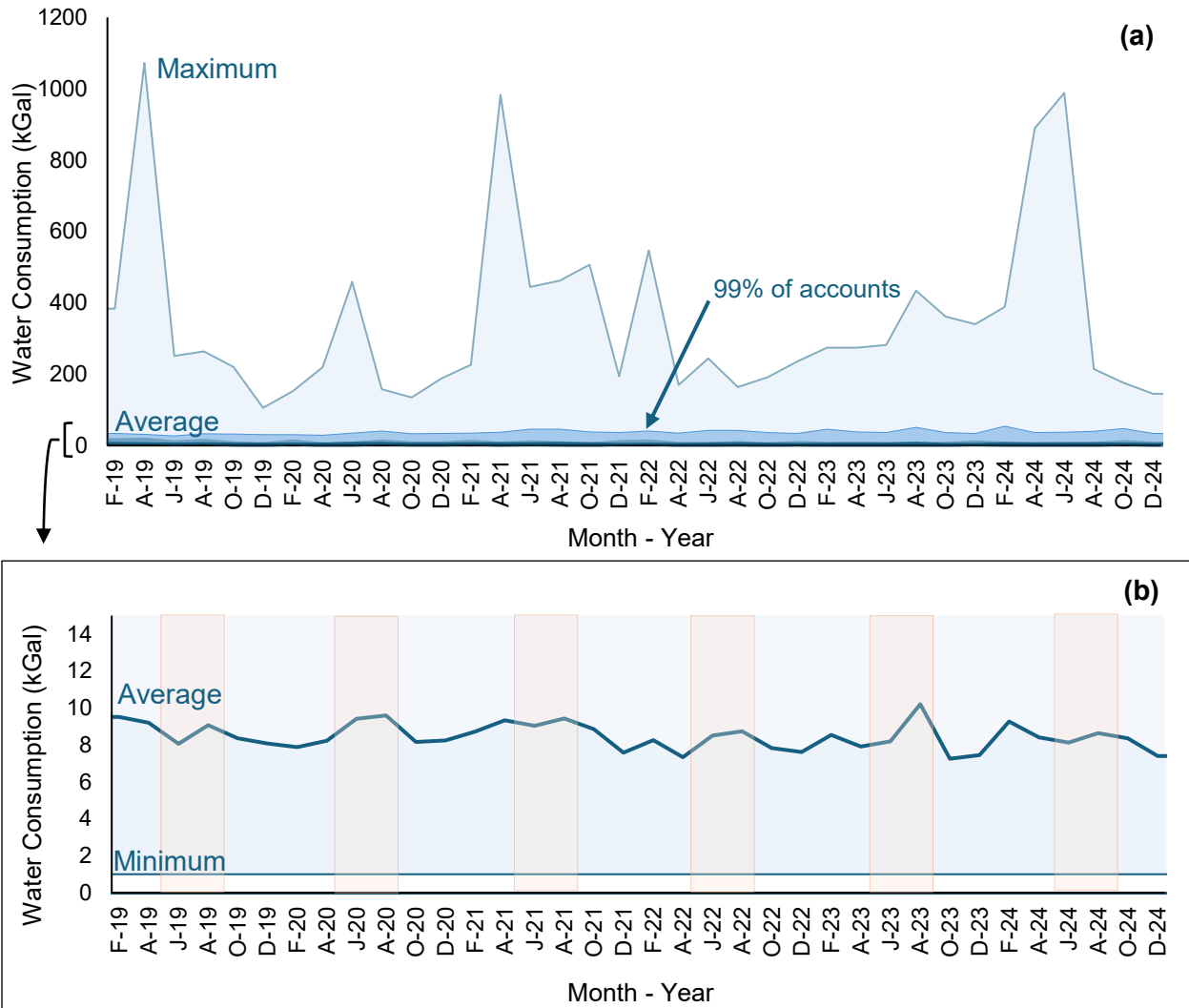


Figure 4 (a) Single family water consumption for bi-monthly billing cycle from 2019 – 2024. Average is shown as a dark blue line, and the maximum and minimum consumption values are shaded light blue. The darker blue shading represents 99% of account consumption for the billing period, meaning that most accounts fall within the dark blue shaded area. (b) Zoomed into the average consumption for single family accounts, the orange boxes represent the warm-season billing periods of June and August.

Single family + small multifamily dwelling accounts had seasonal patterns similar to single family dwellings. A total of 268 accounts were considered in this analysis, and during any billing period a range of 143 – 151 accounts had active consumption³. Average consumption values ranged from 20 – 31 kGal and the maximum consumption values ranged from 76 – 679 kGal. Figure 5a shows the variation in these data. The max values in this figure represent the greatest water consumption from a single account. For 99% of

³ All residential accounts underwent a review and cleaning process prior to being included in the consumption analysis. Details are provided in the [Methods Section](#).

accounts, the consumption was always below 69 – 201 kGal per billing cycle. These values are reflected in Figure 5a by the dark blue shaded area. Unlike single family accounts, the maximum consumption more closely matched 99% of accounts. This may be due to the mixed dwelling type and the smaller number of accounts in this dwelling group.

Figure 5b focuses on the average water consumption per billing cycle to capture the fluctuation in average consumption throughout the year. Like the single family consumption analysis (Figure 4b), the orange boxes represent the warm-season billing periods of June and August. In many instances, average consumption was greatest during warm season billing periods, however there were also increases in consumption corresponding to the February billing cycle, which suggests higher indoor water use or water loss from a leak.

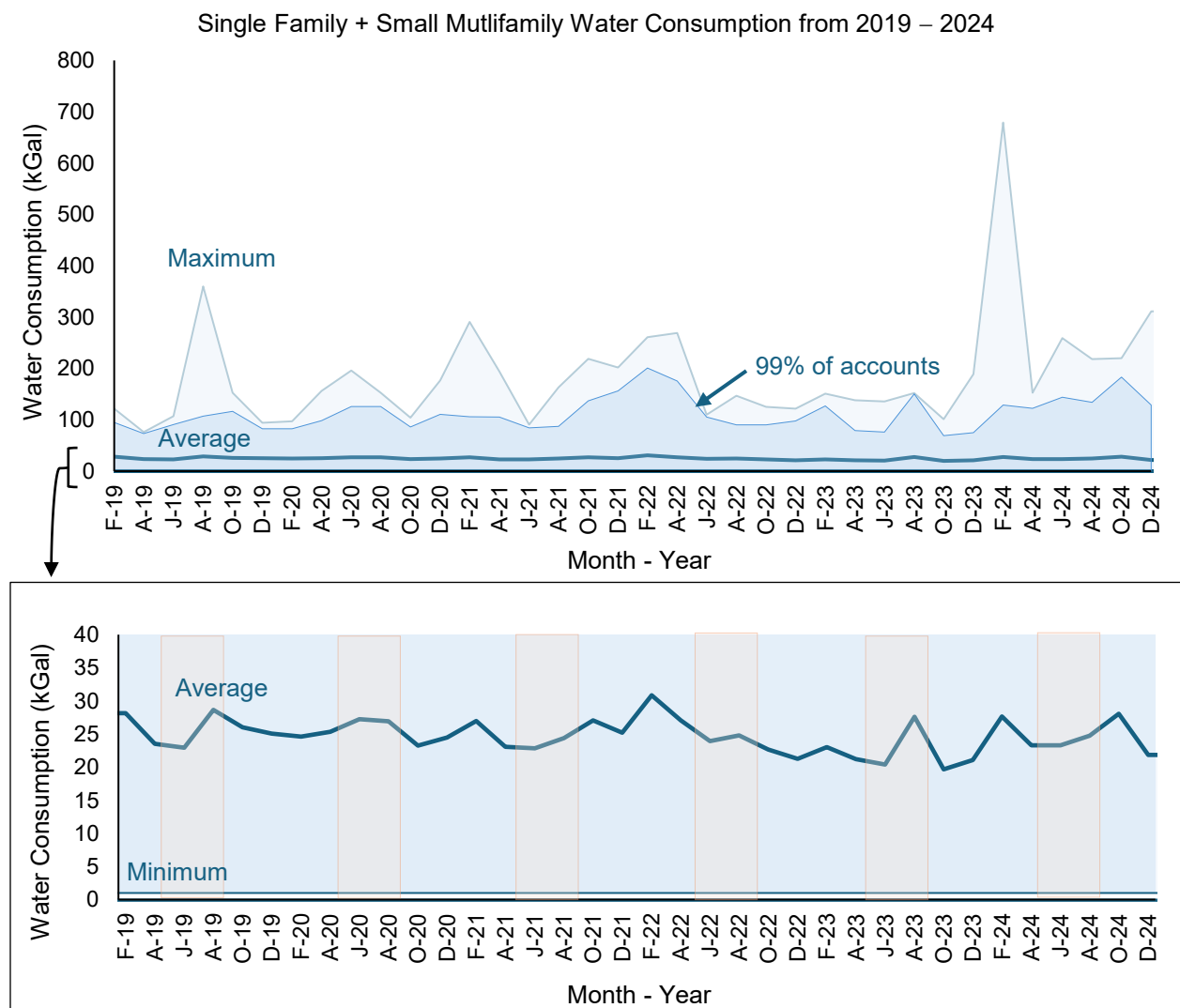


Figure 5. (a) Single family + small multifamily water consumption for bi-monthly billing cycle from 2019 – 2024. Average is shown as a dark blue line, and the maximum and minimum consumption values are shaded light blue. The darker blue

shading represents 99% of account consumption for the billing period, meaning that most accounts fall within the dark blue shaded area. (b) Zoomed into the average consumption for single family accounts, the orange boxes represent the warm-season billing periods of June and August.

Multifamily accounts showed distinct consumption patterns compared to single family and single family + small multifamily dwelling accounts. A total of 120 multifamily accounts were considered in this analysis with a range of 72 to 100 accounts with active consumption during a single billing period. Figure 6a illustrates the range in consumption for multifamily accounts. The light blue area represents the maximum account consumption for a billing cycle, and the dark blue shaded area presented the consumption amount for 99% of all multifamily accounts. The single blue line is the average consumption for all active accounts during a billing period. The maximum consumption for a single account during the analysis period was 626 kGal. During any given billing period, the consumption of 99% of multifamily accounts was less than a range of 237 – 509 kGal, depending on the billing cycle. The maximum consumption values per account followed the pattern of 99% of account consumption. Similar to the interpretation for the single family + small multifamily dwelling group, this was likely due to the type of dwelling and smaller number of accounts included in analysis.

Figure 6b focuses on the average consumption value for multifamily dwellings. The orange boxes represent the warm-season billing months. Unlike the single family and single family + small multifamily dwelling groups, the average consumption for multifamily accounts did not consistently show an increase in consumption during warm-season months. While some billing periods did show an increase in consumption, the pattern was not as apparent as the other groups. This was likely due to the less outdoor water use on large multifamily properties.

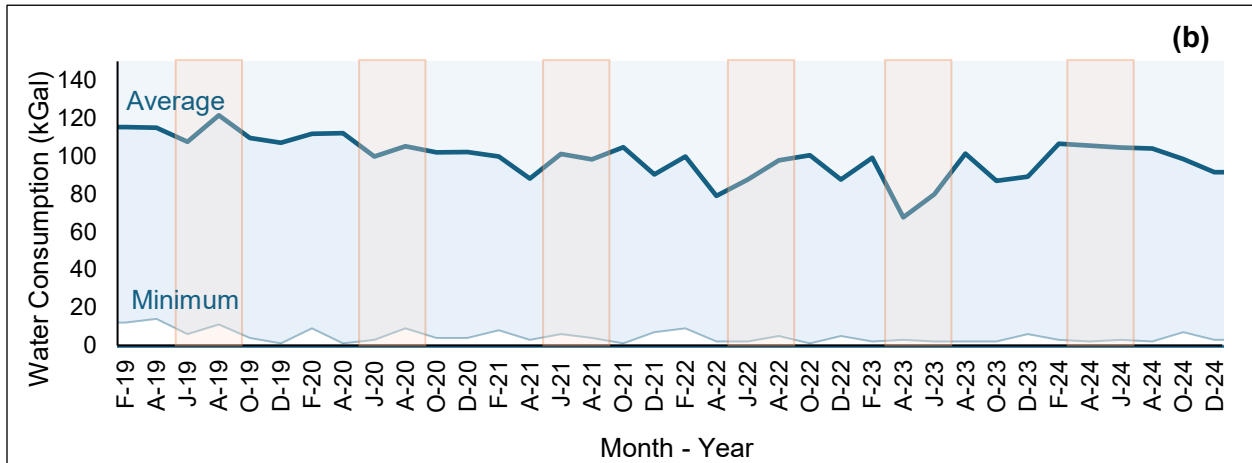
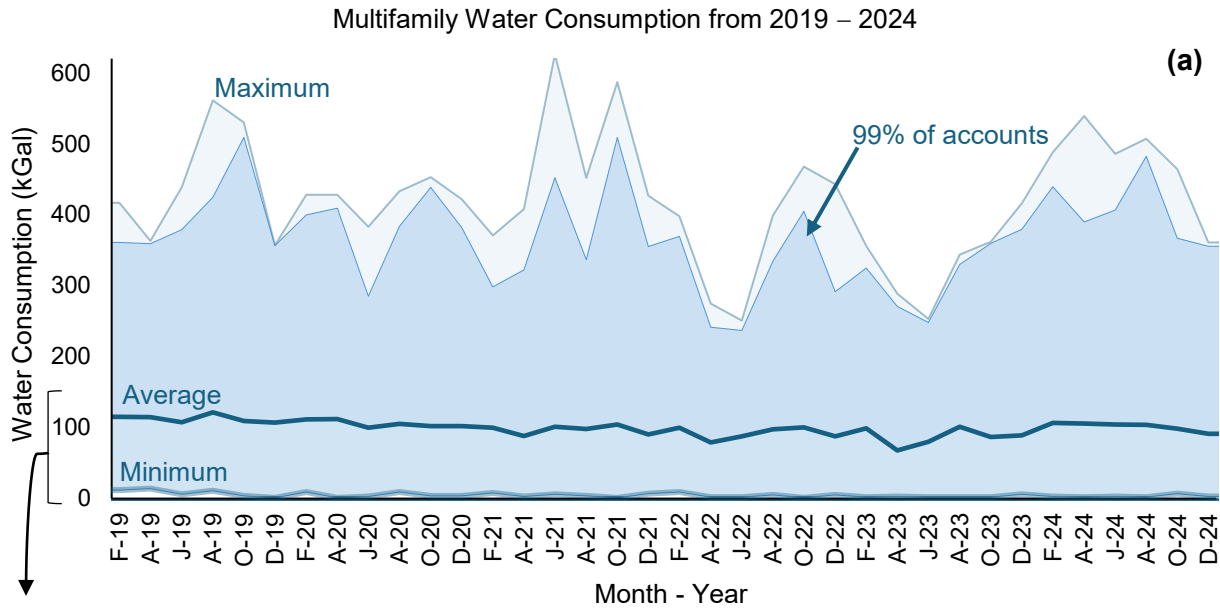


Figure 6 (a) Multifamily water consumption for bi-monthly billing cycle from 2019 – 2024. Average is shown as a dark blue line, and the maximum and minimum consumption values are shaded light blue. The darker blue shading represents 99% of account consumption for the billing period, meaning that most accounts fall within the dark blue shaded area. (b) Zoomed into the average consumption for single family accounts, the orange boxes represent the warm-season billing periods of June and August.

Takeaways

Water consumption volumes vary widely across the residential dwelling groups. Single family accounts had the lowest average consumption, yet this group of account holders also exhibited the greatest variation in water use. High water consumption was likely due to a major leak and not reflective of intentional water consumption. While single family + small multifamily accounts also experienced variation in water consumption, it was not as extreme as single family account holders. These groups had similar seasonal consumption patterns, where bi-monthly water consumption was greater in warm-season billing periods of June and August when more water was used for indoor and outdoor activities. In

contrast, multifamily accounts did not express the same seasonal swing in water consumption. While some elevated water consumption aligned with warm-season billing periods, it was not a consistent pattern from 2019 – 2024.

Among all three residential dwelling groups, the average consumption did not show an increasing or decreasing trend. The maximum consumption also did not reveal a trend, but variation was greater across the three groups. A key takeaway from these analyses is that the average consumption among Riverdale residents remained stable, but high consumption is volatile and can lead to financial burden.

Water Utility Bill Annual Trends

Village of Riverdale residential water utility bills were analyzed by dwelling type. The average of water utility bills from 2019 – 2024 fluctuated 7%, 12% and 20% for single family, single family + small multifamily, and multifamily dwelling types, respectively.

Multifamily dwellings had the highest water utility bill of the three groups, as shown in Figure 7 and Figure 8. The average water utility bill from 2019 – 2024 ranged from \$1,428 – \$1,787. Water costs were between averages of \$799 and \$1,034 (56% – 58% of the bill). Sewer costs were \$236 – \$303 (17% of the water utility bill), and sanitation costs were \$358 – \$395 (22% - 24% of the water utility bill). Capital costs of \$4 were less than 1% of the bill, and taxes were between an average of \$40 – \$52 (3% of the water utility bill).

Single family home accounts had average water utility bills that ranged from an average of \$143 – \$154 from 2019 to 2024. Water service costs were the greatest proportion of this bill, accounting for about 50% each year (Figure 7, Figure 8). Average sanitation costs were between \$43 – \$40 (26% – 28% of the water utility bill). Average sewer costs were \$24 – \$26 per bill (17% of the water utility bill), capital costs were always \$4 (3% of the bill), and taxes were \$4 (3% of the water utility bill).

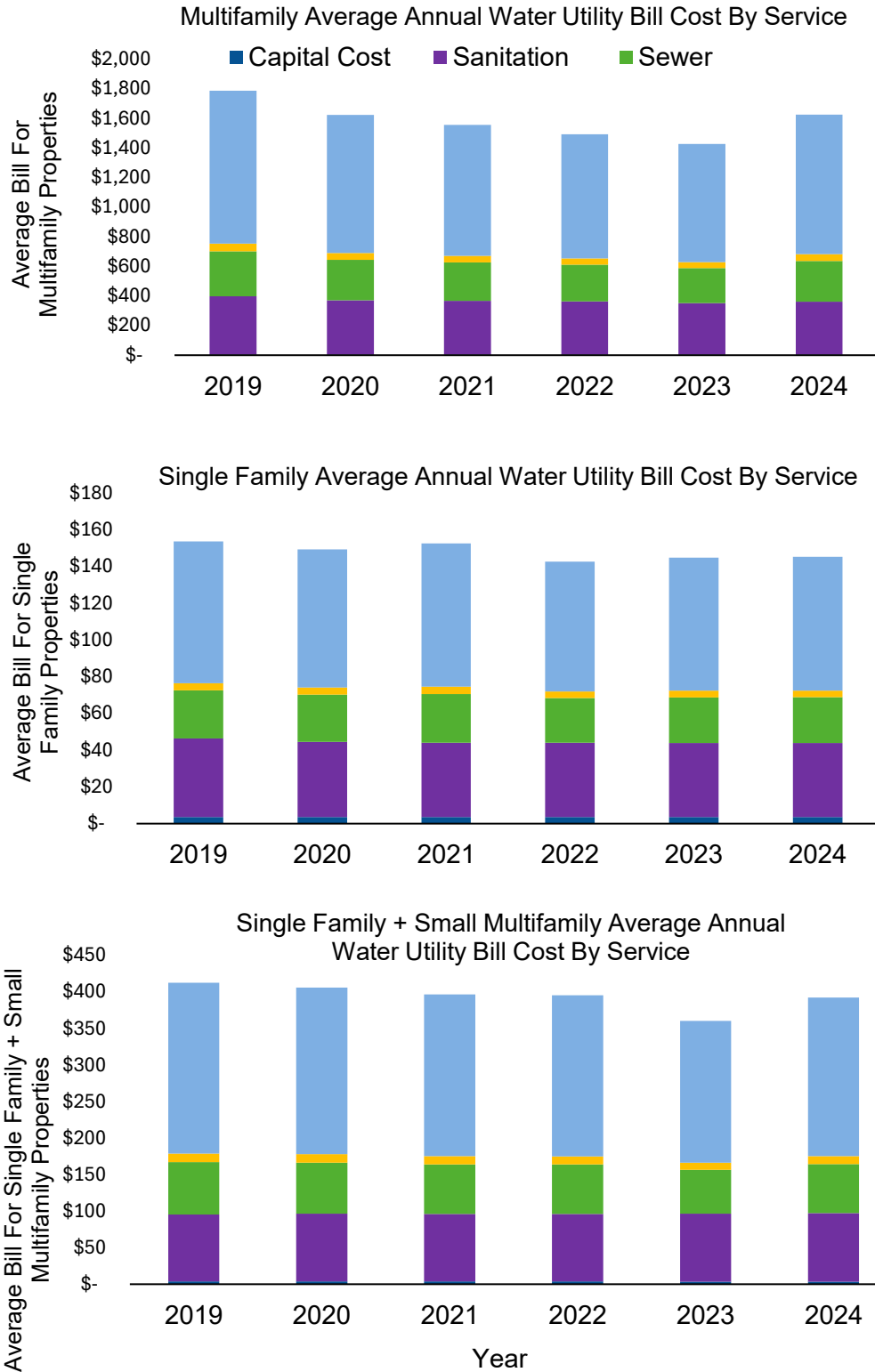


Figure 7. Average bi-monthly water utility bill for multifamily, single family, and single family + small multifamily dwelling group from 2019 – 2024. Average bills are shown as average dollar amounts and percentage of total bill.

Bills for the single family + small multifamily dwelling group were greater, due to the inclusion of larger buildings in this dwelling group. Figure 7 shows how water utility bills fluctuated from 2019 – 2024, and Figure 8 demonstrates the change in service percentage of the entire water utility bill. The average water utility bill from 2019 – 2024 ranged from \$361 – \$413. The cost of water ranged between \$194 – \$234 (54% – 57% of the water utility bill). Sewer costs ranged from \$68 – \$71 (17% of the water utility bill), and sanitation ranged from \$92 – \$94 (22% – 26% of the water utility bill). Capital cost charges remained \$4 (1% of the bill), and tax remained 3% of the bill, accounting to \$10 – \$12 on average.

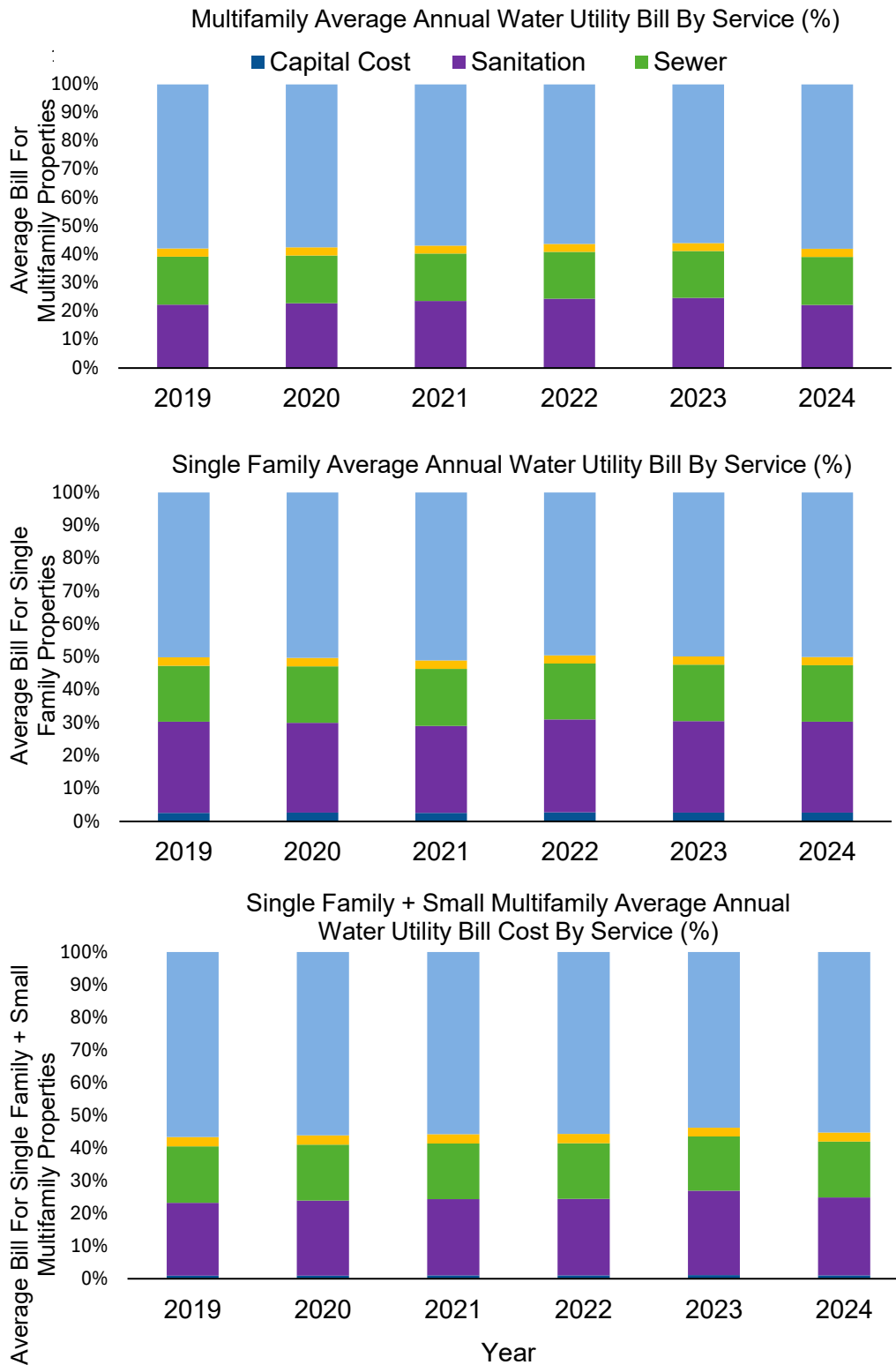


Figure 8. Average bi-monthly water utility bill for multifamily, single family, and single family + small multifamily dwelling group from 2019 – 2024 shown as the percentage of services toward the total bill.

Overall, the percent breakdown among the different classes remained similar. Due to the relatively lower dollar value of the single family dwelling bills compared to dwelling classes which include multifamily units, the cost of water accounted for a slightly lower proportion of the entire bill. Across the study period, annual difference in proportion of water costs compared to the entire water utility bill was 4% – 8% for the three dwelling groups.

Water Utility Bill – Cost of Water

To further identify the cost of water and variation among water utility bills for accounts, the cost of water for each bi-monthly bill from 2019 – 2024 is shown as a box plot for single family, multifamily, and single family + small multifamily dwelling types. In each boxplot, the ‘x’ represents the average water service cost per bill. The box shows the range of 25% – 75% of bill water cost, with the line in the middle representing the median (50%). The whiskers represent 1.5 times the interquartile (the box) range. Data points beyond the whiskers are outliers. Outliers can be considered extraordinary (extraneously high) water costs.

Single family dwelling groups reflected the greatest variation in the cost of water (Figure 9). The median and average cost of water service stayed consistent during billing periods. In relation to elevated average consumption during summer billing period, the average cost of water among Riverdale single family account holders was greater during June and August billing periods as well (Figure 9). The highest water cost was approximately \$10,000. In general, the highest water costs, which are represented by the data points that are greater than the box and whisker area, were residents who experienced a very high bill due to an extreme consumption of water. These high bills were not attributed to same account holder with repeatedly high consumption. Instead, extraordinary water costs were experienced by a resident account holder with an unusually high bill once or a couple of times.

Boxplot of Single Family Cost of Water
For Water Utility Bills 2019 - 2024

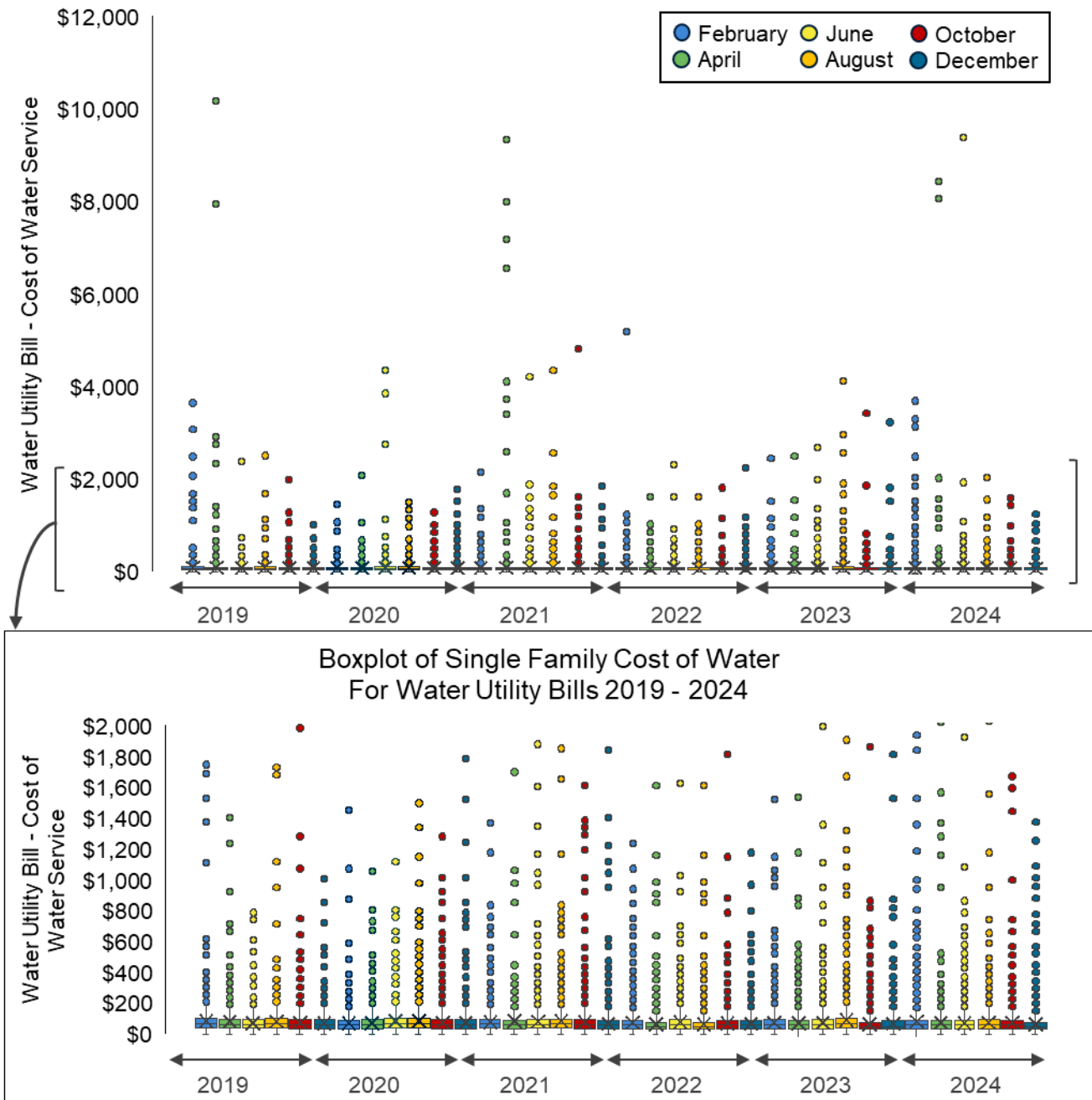


Figure 9. A boxplot showing the cost of water service for Village of Riverdale single family accounts from 2019 – 2024. The x represents the average water cost and the box. The upper and lower limits of the box represent 25% and 75% of the account water costs, with the line in the middle representing the medium. The whiskers reflect 1.5 times the inner quartile area and the data points are outliers and can be considered extraordinary water costs. The cost (y-axis) on the secondary graph is zoomed in to better visualize the boxes.

Multifamily accounts also showed a range in water service cost but did not have as great as variation in costs as single family homes (Figure 10). The greatest water cost was

approximately \$6,000 compared to an average of around \$1,000, which varied among billing cycles. In general, there was not a seasonal pattern in average bill, meaning multifamily accounts did not show a pattern of higher water service cost during summer billing cycles (June and August) compared to cool-season billing cycles (February, April, October, December).

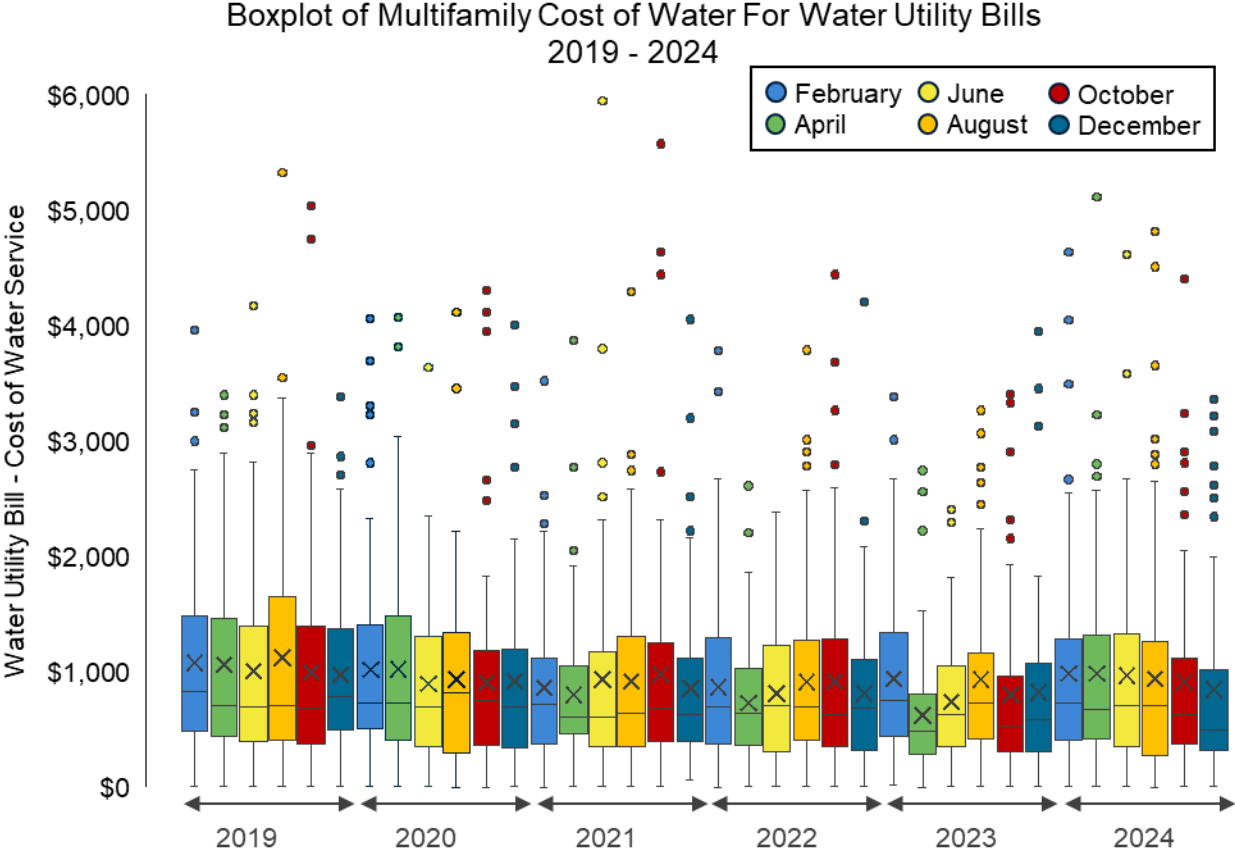


Figure 10. A boxplot showing the cost of water service for Village of Riverdale single family accounts from 2019 – 2024. The x represents the average water cost and the box. The upper and lower limits of the box represent 25% and 75% of the account water costs, with the line in the middle representing the medium. The whiskers reflect 1.5 times the inner quartile area and the data points are outliers and can be considered extraordinary water costs.

Single family + small multifamily accounts followed a similar pattern, where the average and median cost of water service remained low and consistent from 2019 – 2024. Figure 11 shows the range in water cost for this dwelling group. Outliers ranged from approximately \$500 – \$3400. The average cost of water fluctuated around \$220.

Boxplot of Single Family + Small Multifamily Cost of Water For Water Utility Bills 2019 - 2024

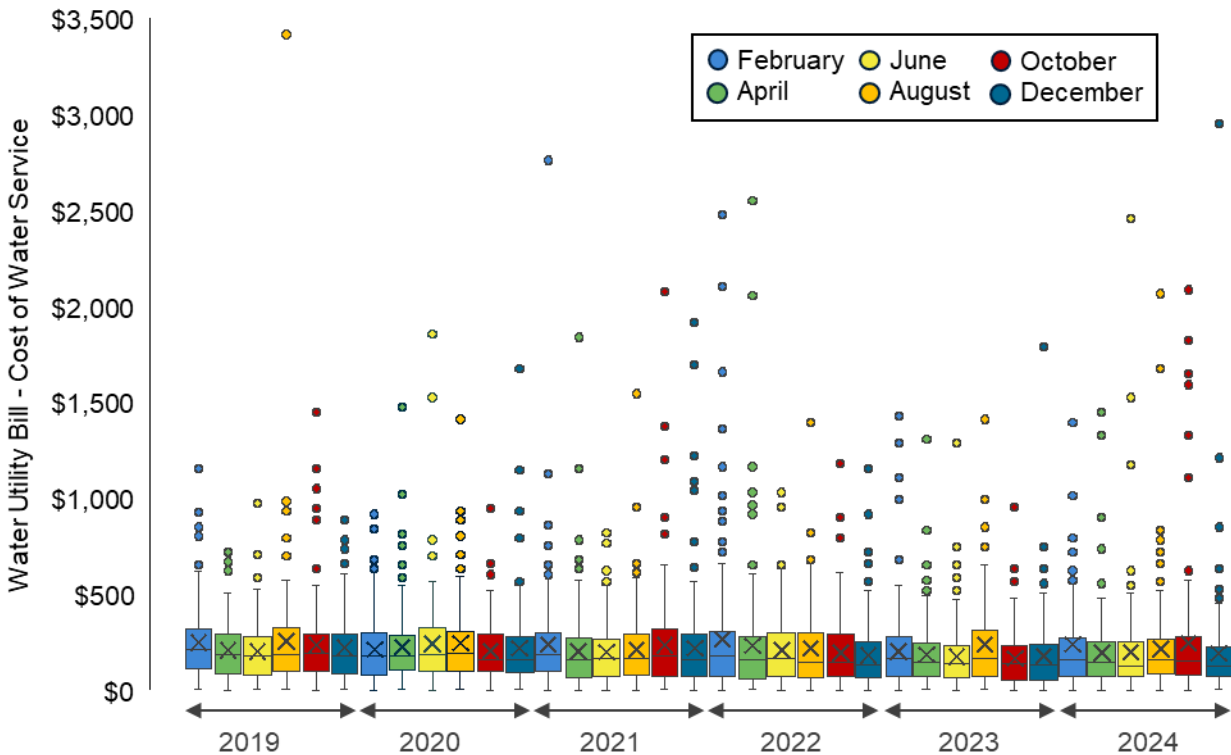


Figure 11. A boxplot showing the cost of water service for Village of Riverdale single family accounts from 2019 – 2024. The x represents the average water cost and the box. The upper and lower limits of the box represent 25% and 75% of the account water costs, with the line in the middle representing the medium. The whiskers reflect 1.5 times the inner quartile area and the data points are outliers and can be considered extraordinary water costs.

Takeaways

The annual water utility bill trends provide an overview of average bills by dwelling group to show differences and the contribution of each service to the entire utility bill (Figures 7, 8). Water service accounts for the largest percentage of the water utility bill, and total bill value varied widely by dwelling type. The cost of water service was greater for dwelling groups with multifamily residences. Regardless, the breakdown among services within the water utility bill reflected that the proportion of each service was similar among the dwelling groups.

While these averages showed consistency over the years, they did not reflect the full variation in bill and water service cost. Figure 9, 10, and 11 represent this variation through water service cost by billing period from 2019 – 2024. While the average and median customer bills remained consistent throughout time, high bills that may indicate a leak or other cause of excessive water use were frequent and could have caused financial strain for Riverdale residents.

Unbalanced Accounts

The Village of Riverdale provided a list of unbalanced accounts for the previous 120 days from July 17, 2025. These data do not directly align with the other data provided in this analysis (2019 – 2024). However, these data provide an understanding of the state of unbalanced Riverdale Accounts. The current (July 17, 2025) outstanding balance owed to the Village of Riverdale was \$3,876,438. Approximately 54% of the balance due was penalty charges. The dollar amounts due to the Village are separated in Table 6. Unapplied cash refers to fees owed, however this amount owed has not been allocated to a specific service within the Riverdale billing system. The lag in allocating fees to water utility bill service is due to a switch in bill system platforms, where the new billing system platform, Locis, technical associates and Riverdale staff are resolving these issues, as of September 23, 2025.

Table 6. Summary of amount owed to the Village of Riverdale from unbalanced accounts as of July 17, 2025. The service categories include all categories on the water utility bill, water, sewer, sanitation, capital improvement, and tax. They also include Miscellaneous (Misc. Services), unapplied cash, and penalty charges. Misc. Services include but are not limited to fees to shut water off or turn water back on. Unapplied cash are fees owed to the Village that have not been allocated to a specific service within the billing system. Penalty charges are applied to late water utility bill payments.

Service	Amount	Percent
Water Services	\$ 962,578	25%
Sewer Services	\$ 271,473	7%
Sanitary Services	\$ 372,730	9%
Capital Improvement Charge	\$ 31,620	<1%
Tax	\$ 48,060	1%
Misc. Services	\$ 155,271	4%
Penalty Charges	\$ 2,084,398	53%
Unapplied Cash	\$ 49,695	1%
Total	\$ 3,876,438	100%

The total number of accounts in arrears was 2,912 accounts as of July 17, 2025. These accounts included inactive accounts at the time the report was published. For example, 634 accounts had a *Last Bill Date* before 2025, indicating that these accounts had not been billed in the current calendar year and are likely inactive.

Figure 12 illustrates the number of accounts in arrears by year and the corresponding annual debt balance. This figure includes all accounts, including businesses accounts. The data are shown in reference to the last bill date, with the oldest year of 1995. The year 2025 (until July 17) had the greatest number of accounts and corresponding balance due increases because active account can continue to incur debt, while older, closed accounts cannot. The total debt owed to the city of Riverdale from January 1 – July 17, 2025

was \$1,565,755, with \$385,435 of that total sum under a designation of *Current*, indicating that the outstanding balance was directly related to the last bill.

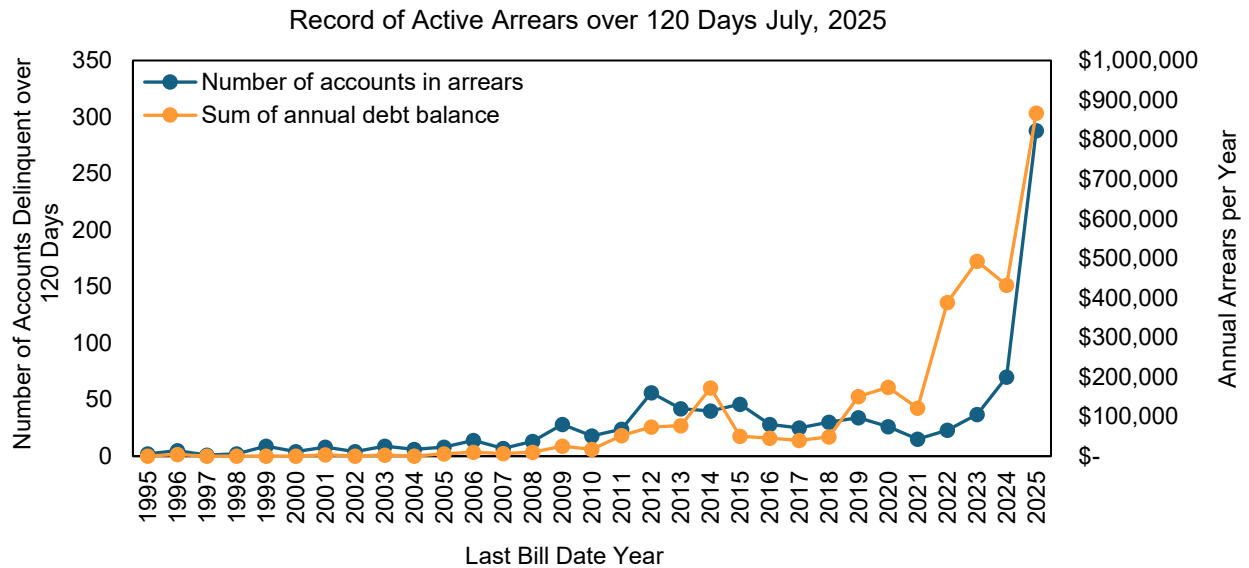


Figure 12. The total number of delinquent accounts and corresponding balance due for each year from 1995 to July 17, 2025. The year was determined by the last bill date of the unbalanced account.

There are a few other notable trends from Figure 12. The number of unbalanced accounts and corresponding debt stayed relatively consistent and low from 1995 to 2008. In 2009, there was an initial increase in number of accounts in arrears corresponding to debt amount. This initial increase in unbalanced accounts aligned with the impact of the financial crisis in 2008. The number of unbalanced accounts in arrears remained higher in the upcoming years, compared to the previous 15 years. Nevertheless, from 2020 to 2023, the number of accounts in arrears dropped, demonstrating formal and informal financial support in response to the COVID-19 pandemic (Cook County Government 2022a). However, the amount owed by accounts over those years increased, reflecting that while fewer accounts were in arrears, the debt owed from those accounts increased.

Returning to the large number of accounts in arrears and debt owed in 2025, these data were broken down for residential customers by dwelling class (Figure 13). Business accounts, excluded accounts, sprinkler accounts, blank accounts, and accounts with no details on the last day of bill sent were not included in this analysis. A total of 1,987 accounts were included in the analysis. Figure 13 displays the breakdown of debt owed by timeframe for single family, single family + small multifamily, and multifamily accounts.

Most accounts in arrears were single family accounts, with a total debt of \$730,608. Approximately 33% of water utility bill costs were due within the last 30 days of the

previous bill, and 52% of water utility bill costs were older than 120 days. Overdue charges and penalties from 30 – 60 days were 6% of total debt, and overdue charges and penalties from 60 – 90 days were 8% of the total debt. No debt was overdue 90 – 120 days. For this group of residents, outstanding payments were either longstanding debt that cannot be paid off within a billing period (i.e. long-term financial burden over 120 days) or short-term debt from the previous bill that may be circumstantial.

Multifamily accounts had a debt of \$89,434 across 37 accounts. As noted in the water bill section, bills are much larger for this customer group due to the size of the properties and many units within the property. Across multifamily accounts in arrears, most of the debt (53%) was current and within the last 30 days of the previous bill. Thirty-four percent of water utility bill charges were over 120 days delinquent. Only 5% of debt was 30 days overdue and 9% of debt was 60 days delinquent. No debt was incurred between 90 and 120 days. While there were fewer multifamily accounts in arrears, these bills were typically higher resulting in greater debt value than single family and small multifamily accounts.

There were 92 delinquent single family + small multifamily accounts that amounted to \$25,891 in charges and penalties. Current debt accounted for 55% of all debt and 26% of debt was greater than 120 days. Like other dwellings, debt overdue 30 and 60 days was low. Debt overdue 30 days was 5% of total debt and debt overdue 60 days was 13% overdue. No debt was incurred between 90 and 120 days.

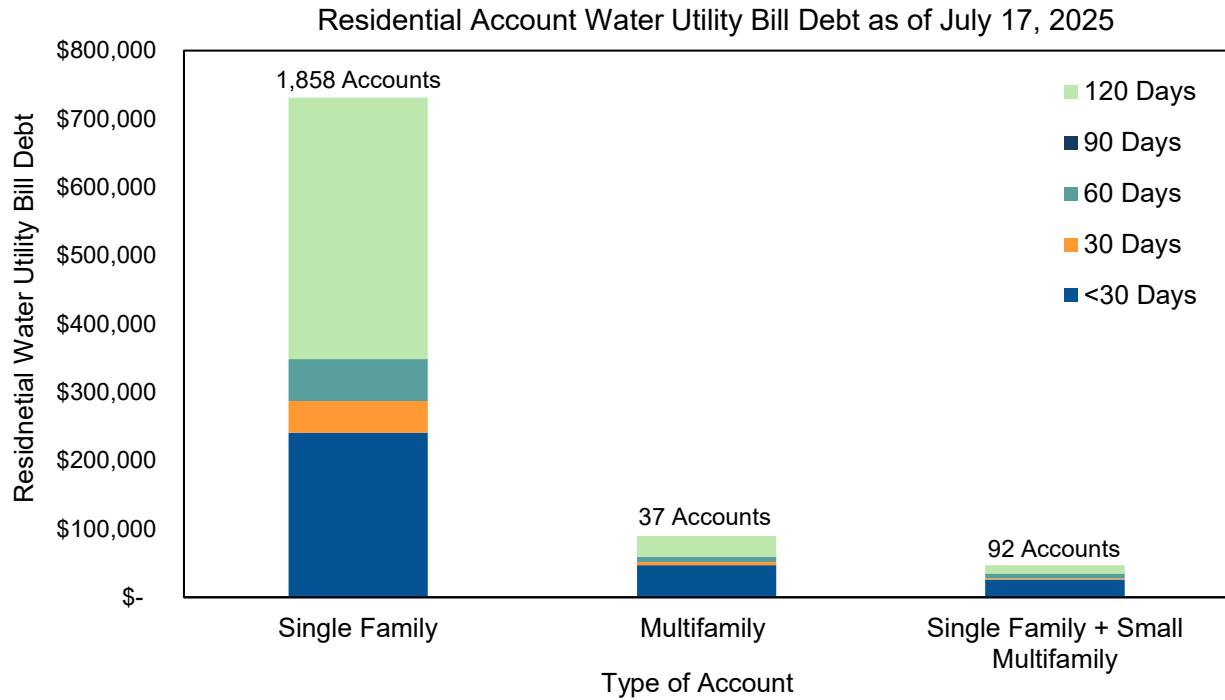


Figure 13. Debt value incurred for Village of Riverdale residential accounts that were active in 2025. The debt is divided by dwelling group and further split into current debt incurred, within the last 30 days of the bill, debt incurred from 30 – 60 days, 60 – 90 days, 90 – 120 days.

Takeaways

The dollar amount and frequency of unbalanced accounts have increased with time, as shown in Figure 12. It is expected that accounts active in 2025 would have the greatest debt because these accounts are still active. However, the figure shows that since 2009 the frequency of unbalanced accounts and corresponding debt was greater than the period of 1995 – 2008. It should also be noted that these data only represent the current unbalanced accounts as of July 17, 2025. Indicating that it does not reflect the entirety of unbalanced accounts in the previous ~30.5 years, only the accounts which remained unbalanced and are indicative of long-term financial hardship.

In any year, the number of unbalanced accounts may look like the data represented in Figure 13, where current debt may be large but paid off before the next billing cycle. Short-term financial hardships were also reflected in the community survey, discussed in Section 4. Single family accounts derive the greatest debt value but also have the greatest number of accounts. As of July 17, 2025, approximately 54% of single family accounts, about 31% of multifamily accounts, and 36% of single family + small multifamily accounts

were in arrears⁴. This was largely due to current debt that may be resolved prior to the next bill, however across all categories, at least 34% of debt was due over 120 days. Whether short-term or long-term, a high proportion of accounts were in water utility debt where the greater sum of the debt was due to penalty charges (54%). The greatest debt for any service is water (25%), which aligns with the proportion of the water utility bill attributed to water service costs (Figure 7, 8).

During the period of 2019 – 2025, there were 2,471 unbalanced accounts. Of those accounts, 1,000 accounts single family accounts, 34 multifamily accounts, and 78 single family + small multifamily accounts had water consumption above indoor baseline consumption during at least one cool-season billing period (February, April, October, December) from 2019 – 2024. The high number of unbalanced accounts with high indoor water consumption demonstrates a connection among high water use and inability to pay water utility bills. As discussed in the next section, high water consumption can be an indication of leaks, inefficient appliances or alternative high indoor water use in cool-season months, while it is an indication of outdoor water use in warm-season months. This analysis does not draw a correlation-causation conclusion due to lack of information regarding the cause of elevated water consumption and unbalanced account details. Instead, these relationships are used as information to infer the potential cause of unbalanced accounts but not definitively relate water utility bill debt to high consumption in support of recommendations.

Leaks & Outdoor Water Use

The Village of Riverdale staff and residents noted that leaks were a key problem in the Village that led to high water consumption and corresponding water utility bills. To support the real-life experiences that staff members and residents shared, the prevalence of leaks among Riverdale residents was investigated. This investigation was conducted by calculating the indoor baseline water consumption for each active account during a billing period⁵. Consumption greater than 30% of the indoor baseline consumption was defined as elevated water consumption. Each dwelling group was evaluated separately and will be discussed as such.

Single Family Dwellings

There was a total of 3,472 single family resident accounts between 2019 and 2024. During any given billing period 2,501 – 2,626 accounts recorded consumption. The range of total

⁴ This statistic only includes accounts considered in this analysis. Methods of data cleaning can be reviewed in the [Methods Section](#).

⁵ See [Prevalence of Leaks and Outdoor Water Use Investigation Methods](#) for indoor baseline calculation details.

accounts with consumption greater than 30% of indoor baseline was 166 (April 2021) to 1,073 (August 2023). These values translate to 6% and 41% of all accounts (Figure 14). During billing periods of June, August it is expected that water consumption for a portion of single family accounts be greater than indoor baseline due to outdoor water use. These billing periods are part of late April, May, June, July, and August. As the need to water the lawn or cool off with outside water-related activities increases, so does the percentage of accounts with consumption greater than 30% of indoor baseline. This pattern matches that of Figure 4, where consumption increases from the beginning of the calendar year, into the summer months, and falls toward the end of the calendar year.

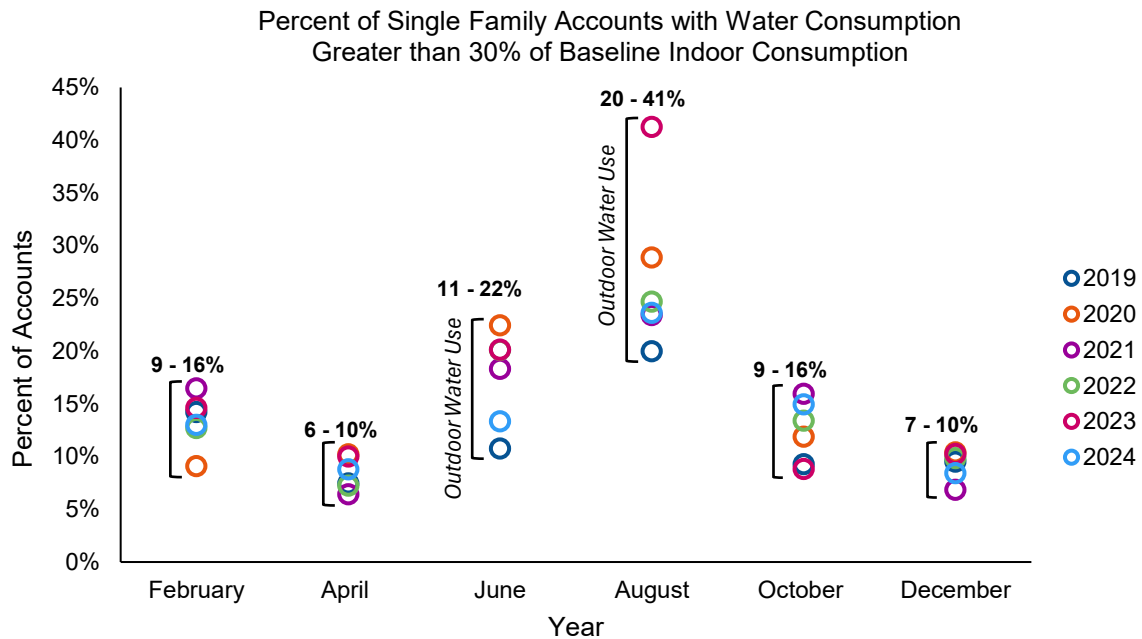


Figure 14. The percentage of single family dwelling accounts with monthly consumption greater than 30% of indoor baseline consumption. Each data point represents the percentage of accounts for that year and month. The range in percentage across years is denoted by the numbers over each month.

The percentage of accounts during February, April, October, and December billing cycles likely have little to no outdoor water use associated with household consumption for those bi-annual billing periods. It is likely that customers with elevated consumption experienced irregular and/or unintended consumption. Underlying issues that typically drive high water consumption can include high occupancy in the household, inefficient appliances, new appliances that use water, or a leak. The first three elements are permanent or long-lasting variables that are unlikely to cause a sudden spike in water consumption over a two-month period that is not reflected across other months of the year. This could occur if a household purchased a new appliance (e.g. a household purchased a washing machine), but the increased consumption should be reflected in the

following months. Based on the number of accounts with water consumption from the October billing cycle through the April billing cycle, it is likely that leaks were the primary cause of this elevated water consumption.

April and December billing cycles had very similar range of percentage of single family accounts with an elevated water consumption. The percentage of accounts with elevated water consumption in February and October billing cycles were greater. Greater percentage of accounts with elevated water use in October may be due to extended outdoor water use in warm years in addition to leaks. However, February billing cycle months are the average coldest of the year in Chicago, IL (National Weather Service 2020). A cold snap could cause water in the pipe to freeze and expand. In turn, this would increase pressure and stress on the pipe, potentially resulting in a crack to create a slower leak, or a burst to create a rapid leak. While leaks happen throughout the year, the increased number of households with higher consumption during winter months (particularly February billing cycle) aligns with community statements regarding the prevalence of winter leaks.

Single Family + Small Multifamily Dwellings

There were 268 single family + small multifamily dwelling accounts between 2019 – 2024. During a single billing cycle, between 143 and 151 accounts had consumption associated with the billing period. The range in number of accounts with consumption greater than indoor baseline ranged from 9 – 47 accounts during bill cycles of April 2022 and August 2023. These values translated to 6% and 32%. Figure 15 demonstrates how the percentage of accounts with water consumption is greater than indoor baseline fluctuated during billing cycles.

Similar to the single family dwelling group, the percentage of single family + small multifamily accounts with consumption greater than baseline was greatest in summer months due to outdoor water use. There is little to no outdoor water use during February, April, October, and December billing cycles, as discussed with single family homes. Therefore, consumption greater than 30% of indoor water use is indicative of a leak or alternative high water consumption activity. Like single family dwelling group, the percentage of accounts above this threshold was greatest during the February billing cycle (Figure 15), likely due to increased incidence of leaks.

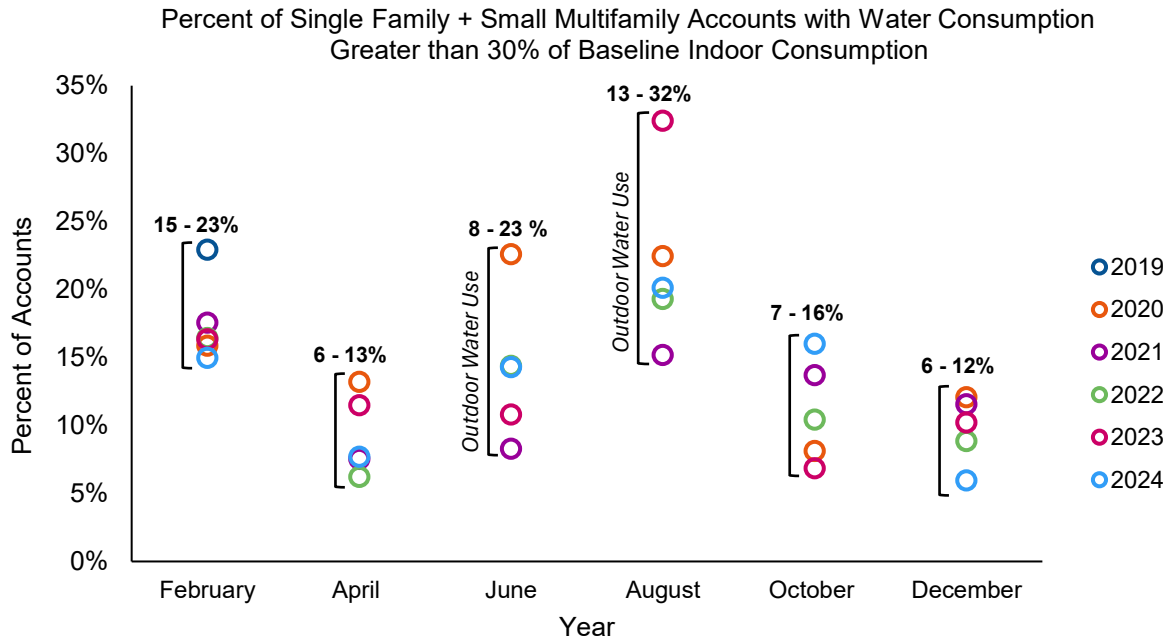


Figure 15. The percentage of single family + small multifamily dwelling accounts with monthly consumption greater than 30% of indoor baseline consumption. Each data point represents the percentage of accounts for that year and month. The range in percentage across years is denoted by the numbers over each month.

Multifamily Dwellings

There were 120 multifamily accounts from 2019 – 2024, and during any billing period a range of 72 – 100 accounts had active water consumption during the bill period. The total number of accounts with consumption values greater than 30% of indoor baseline consumption ranged from 5 to 31 accounts in December 2019 and August 2023, respectively. Figure 16 shows the percentage of accounts for each bill period with consumption greater than indoor baseline. The multifamily accounts demonstrated a different pattern compared to single family and single family + small multifamily dwelling groups. Except for August 2023, the summer billing periods of June and August did not show a greater percentage of households with elevated consumption compared to the other four annual billing periods (Figure 16). This was due to difference in landscape characteristics among single family, small multifamily, and large multifamily properties. The latter will frequently have a small or no landscape to water. The accounts with elevated consumption during these summer billing periods were likely still influenced by outdoor water consumption. However, the number of accounts were fewer due to the lower demand for outdoor water use from this dwelling class. This pattern was also apparent in the annual consumption patterns for the multifamily dwelling group.

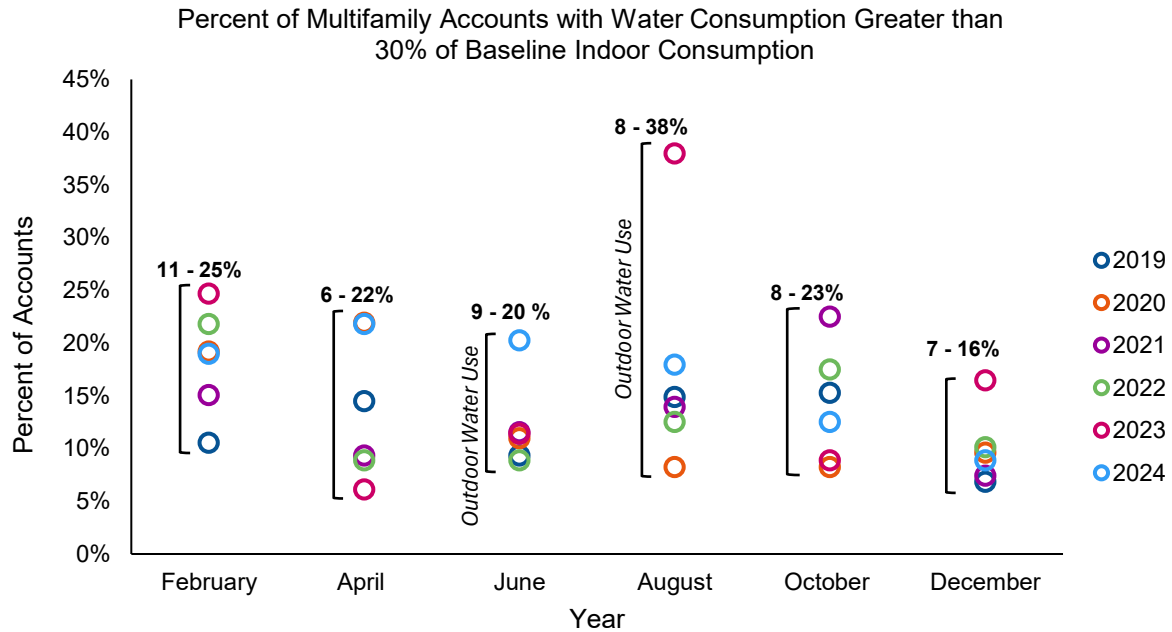


Figure 16. The percentage of multifamily dwelling accounts with monthly consumption greater than 30% of indoor baseline consumption. Each data point represents the percentage of accounts for that year and month. The range in percentage across years is denoted by the numbers over each month.

Similar to the single family and single family + small multifamily dwelling groups, the percentage of accounts with elevated indoor water use in February was greater than October and December. Further supporting the prevalence of leaks and indoor plumbing issues in these cold winter months. Notably, there was also a wider spread of accounts with elevated water consumption during the April billing period. In some years (e.g. 2020, 2024), this may have been the result of prolonged or new indoor plumbing issues in larger facilities, which cause higher water consumption (Figure 16).

Takeaways

Across all dwelling group types, there were at least 7% of accounts during any given bill period with elevated water consumption. In summer billing periods, the accounts with consumption greater than baseline can be attributed to outdoor water use in addition to elevated indoor consumption. In August 2023, all dwelling groups had a high percentage of accounts with elevated water use. During this billing period (mid-June to mid-August), Chicago weather faced oscillating wet and dry periods, where precipitation volumes totals were above normal and temperatures were in the range of long-term normal (National Weather Service 2023). The weather was not abnormally hot or dry. The elevated consumption was a consistency across that billing period, and while it should be acknowledged that the consumption was particularly high, no direct cause was identified.

During cool-season billing periods of February, April, October, and December, the elevated consumption values were likely due to leaks or other indoor inefficiencies. While the exact cause of the elevated water use cannot be discerned, these data provide a robust overview of the number of accounts that may be facing higher water utility bills due to elevated consumption.

Senior Residents

Senior resident consumption and bills were considered individually due to feedback from Village staff and Riverdale residents. Both Riverdale staff and residents expressed that Riverdale's population is aging, and those aging individuals need additional support. Account holders may be identified as senior (geolocation is SEN). Accounts denoted as SEN receive a \$1.50 discount on sanitary (trash) services.

There were only 26 SEN accounts logged in the system from 2019 – 2024 and included in this analysis. The SEN geolocation was categorized as a single family (SF) dwelling type. Therefore, water consumption and bill comparisons among seniors and other accounts were only conducted for SF dwellings. On a monthly average, senior water costs from 21 accounts with non-zero bill consumption values were 28% to 60% lower than the average water costs for other single family accounts, where the total number of accounts ranged from 2,484 to 2,609 accounts for a billing cycle. The comparison of senior and other single family accounts may seem impractical given the difference in number of accounts for each group. However, this analysis indicates that individuals with accounts designated as seniors (SEN) consistently had a lower water bill (water cost only) compared to other single family accounts. The bi-monthly range of water cost for SEN accounts from 2019 – 2024 can be seen in Figure 17. In addition to demonstrating how the average water cost ranged across years, the colors denote how the cost of water shifts for this group throughout the year.

Average Bi-Monthly Senior Water Cost from 2019 – 2024

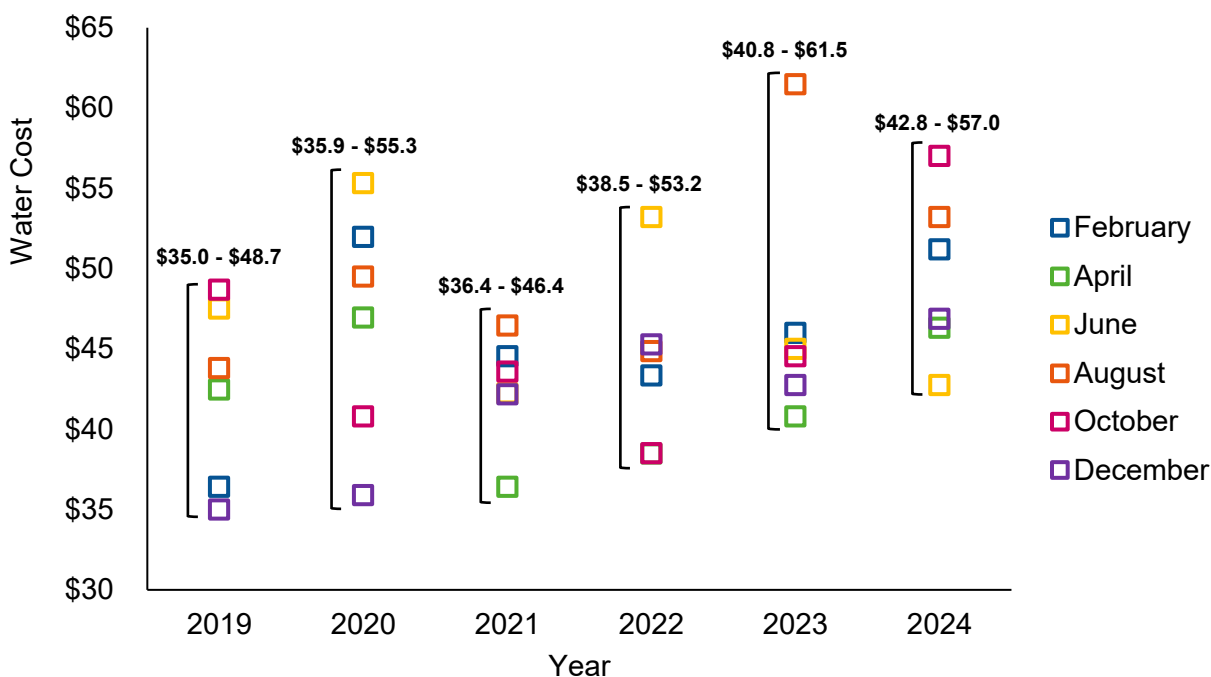


Figure 17. The water utility bill cost of water for residential senior (SEN) accounts from 2019 – 2024. Each square represents the average cost of water for SEN accounts for each bi-monthly billing cycle. Only accounts with non-zero consumption were considered in this analysis. The Village of Riverdale had a total of 21 SEN accounts from 2019 – 2024, and in any given month 13 to 20 were billed. These billed accounts were used to calculate the average cost of water each month.

The takeaway from this figure is that there was a range in the cost of water throughout the year and there is not a consistent pattern. If there was a seasonally driven pattern, it would be expected that costs were lower in the winter because residents used less water, and it would be expected to be higher in the summer because of higher water use both indoors and outdoors. This takeaway indicates that other factors are influencing water consumption and the corresponding bill. For example, the average cost of SEN water in the bill cycle of February 2020 was second only to June. High water use in winter months indicates leaks (Natural Resources Defense Council and National Consumer Law Center 2022d). This interpretation was supported by elevated water consumption (>13,000 gallons) from four SEN accounts. The same pattern occurred in February 2021, 2023, and 2024, where 2 – 3 SEN accounts each February billing cycle had water consumption greater than 10,000 gallons, but not to the extent of values in 2021.

The importance of this analysis relates to account delinquency. A total of two thirds (66%) of SEN accounts were in arrears as of July 17, 2025. Most accounts had a past balance due

within the last 30 days, which is considered current. One account had been unbalanced for +60 days, and one account had been unbalanced for more than 120 days. The median total balance due was \$80.82 (minimum \$0.56, maximum \$4,360), the median current balance due was \$73.70 (minimum \$0.56, maximum \$175).

Takeaways

The current senior customer geolocation has small number of accounts, but there is an opportunity to expand this group of customer accounts so that additional senior residents can take advantage of senior discounts. The water utility bill water costs in correlation to high proportion of accounts in arrears from this customer group demonstrate the need for additional resources for this demographic in the Village of Riverdale.

4. Riverdale Community and Municipal Perspectives

Overview

This section summarizes the approach and outcomes from outreach and engagement conducted with municipality staff and residents throughout the project.

The purpose of engagement was to gather qualitative information and perspectives on water affordability offerings, opportunities, and challenges to supplement findings from the quantitative analysis and to inform recommendations provided to the Village.

Goals and objectives for conducting engagement with municipal staff and residents were as follows:

1. **Gather information on how Riverdale residents engage with water use and their bills.**
2. **Capture Village staff experiences and perspectives working with residents on water management and billing.**
3. **Provide residents with information and resources to manage water use and bills.**
4. **Document Riverdale residents' perspectives, challenges, and opportunities relating to water affordability.**
5. **Incorporate community and staff input and perspectives in the analysis and action plan.**

Engagement Strategies

Strategy 1: Village Municipal Staff Interviews

The project team worked closely with Village staff throughout the course of the study to inform the research and project approach. Several meetings were held to gather information on the Village's programs, policies, and processes; understand the Village's priorities and challenges relating to water affordability; understand the Village's relationship with residents; and to identify and build buy-in for solutions.

Strategy 2: Resident Interviews

The project team conducted interviews with two Riverdale residents and one community-based organization. The interviews were semi-structured and were held virtually via

Microsoft Teams. Conversations were not recorded; however, the project team took notes on resident responses to questions. During interviews, residents shared their experiences managing their water use, bills, and participating in assistance or relief programs, and provided feedback on what may help alleviate water affordability challenges across the community. The project team also shared information about the Cook County Water Affordability Program and invited residents to complete the resident survey and attend the community meeting.

Strategy 3: Water Affordability Resident Survey

The Water Affordability Resident Survey (Survey) was conducted to gather perspectives on what water affordability challenges residents are facing; understand barriers and opportunities for residents seeking assistance and relief; and to identify potential water affordability intervention strategies for the Village's consideration.

The survey was available from April 22nd through June 8th, 2025. It was available online via JotForm. Printed copies were also available at Village Hall and were distributed during a "Coffee with the Mayor" community meeting.

The survey was distributed via a virtual flyer posted to the Village's website, physical flyers posted at Village Hall, direct emails to residents, and through a direct mailer to all Village customers along with the April 2025 water bill. The flyers were also posted at Village community gathering areas, including local churches and schools. A copy of the flyer is available in [Appendix A](#).

There were 59 total respondents to the survey. Of all survey respondents:

- 78% of respondents have lived in Riverdale between 5-10 or over 10 years,
- 97% are homeowners,
- 34% earn a household income of \$25,000 - \$49,000 (before taxes),
- 52% live in a household with 1-3 individuals ages 65 or older,
- And 59% have been unable to pay their water bill on time or in full in the last five years.

Residents were encouraged to complete the survey by entering a raffle to win a \$50 Jewel Osco gift card. After the survey response period closed, 15 survey respondents were randomly selected and were provided with either a physical or e-gift card.

Strategy 4: “Coffee with the Mayor” Community Meeting

On June 7th, 2025, the project team and Village staff hosted a “Coffee with the Mayor” community meeting focused on the topic of water affordability. The meeting was held from 10:00 am to 12:00 pm at Village Hall.

The purpose of this event was to:

- Share resources available to residents to manage water use and bills
- Answer residents’ questions on their bills
- Hear resident concerns and perspectives on their ability to pay their bills and address affordability challenges
- Provide opportunity for residents to fill out short survey

The community meeting began with an introduction to the Cook County Water Affordability Program and the purpose of the project, followed by an open Q&A with residents. The project team then walked through educational resources on how to check for household leaks and how to read a water bill, giving residents a chance to ask clarifying questions and build practical knowledge on at-home water management strategies. A poster board activity invited residents to share input on water affordability by adding sticky notes to prompts around the room, while at the same time residents could engage in one-on-one conversations with the project team, Village staff, and fellow community members. These discussions gave residents an open platform and space to ask specific questions about their own bills, share personal experience and/or raise concerns about payment challenges, and offer ideas for how the Village could better support the community. Residents also had time to complete a paper version of the survey during the event.

Key Themes Emerging from Community Outreach and Engagement

Below is a summary of key themes gleaned from the community engagement activities detailed above, including individual interviews, the survey, and community meeting. It is important to acknowledge that these themes are based on first-hand resident accounts, and as a result may not capture the full range of perspectives across Riverdale. However, they provide insights into the unique lived experiences, challenges, and opportunities that were identified by community participants and provide a broad understanding of what issues are top of mind relating to water affordability.

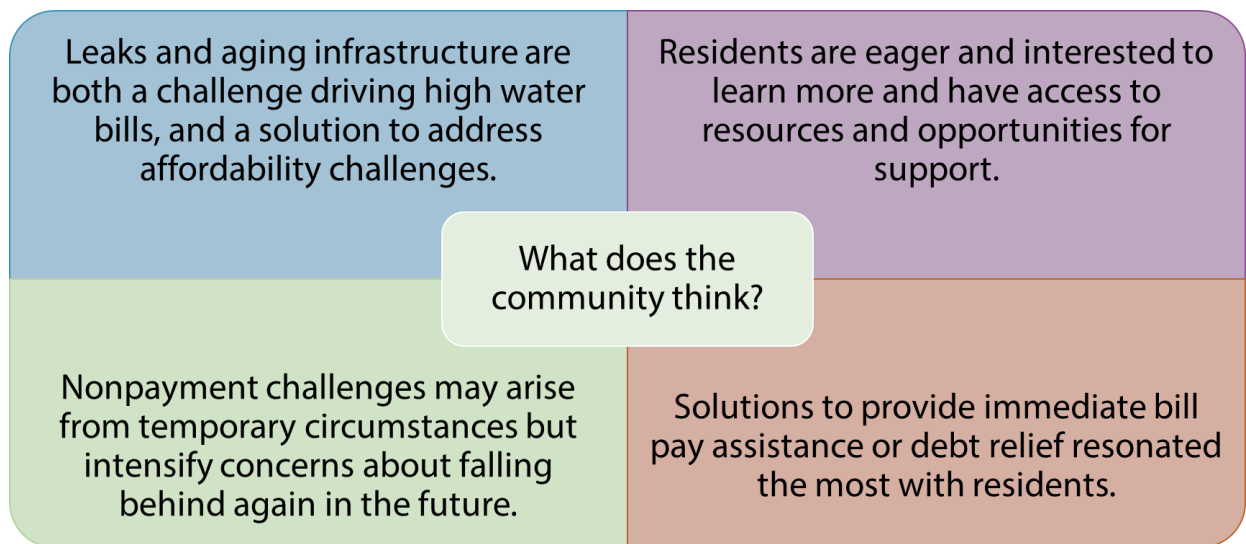


Figure 18. Summary of Key Themes Emerging from Community Engagement.

First, residents commonly cited leaks and aging infrastructure as a key aspect of water affordability— both as a challenge driving high water bills, and as a solution to lower bills in the long-run.

When asked about their household’s water use characteristics, 27 residents shared that they’ve had at least one leak or running toilet in the last year (Figure 19). Additionally, Figure 20 shows that about one third (33%) of survey respondents who reported leaks or broken, outdated, or inefficient appliances also were recently unable to pay their water bill. This was also consistent in one-on-one conversations, where residents reflected that a leak contributed to a high bill or that participation in CEDA’s Low Income Household Water Assistance Program seems to have lowered bills over time. One resident shared that when they experience a high bill, they typically check their water meter to identify a leak.

Similarly, when asked what solutions would be most helpful, many residents were interested in opportunities to address leaks (including several questions about how to sign up for the Cook County’s Leak Repair Program), the ability to have proactive leak notifications before receiving a high bill, education on how to check for leaks, and where to find local plumbers and contractors to identify and fix leaks.

Not only were leaks top of mind for residents, but Village staff acknowledged that many of the extraordinary high bills that they see are typically attributed to leaks. Village staff shared they try to get in touch with residents when they see water use patterns associated with leaks and were interested in solutions to address this issue throughout the study.

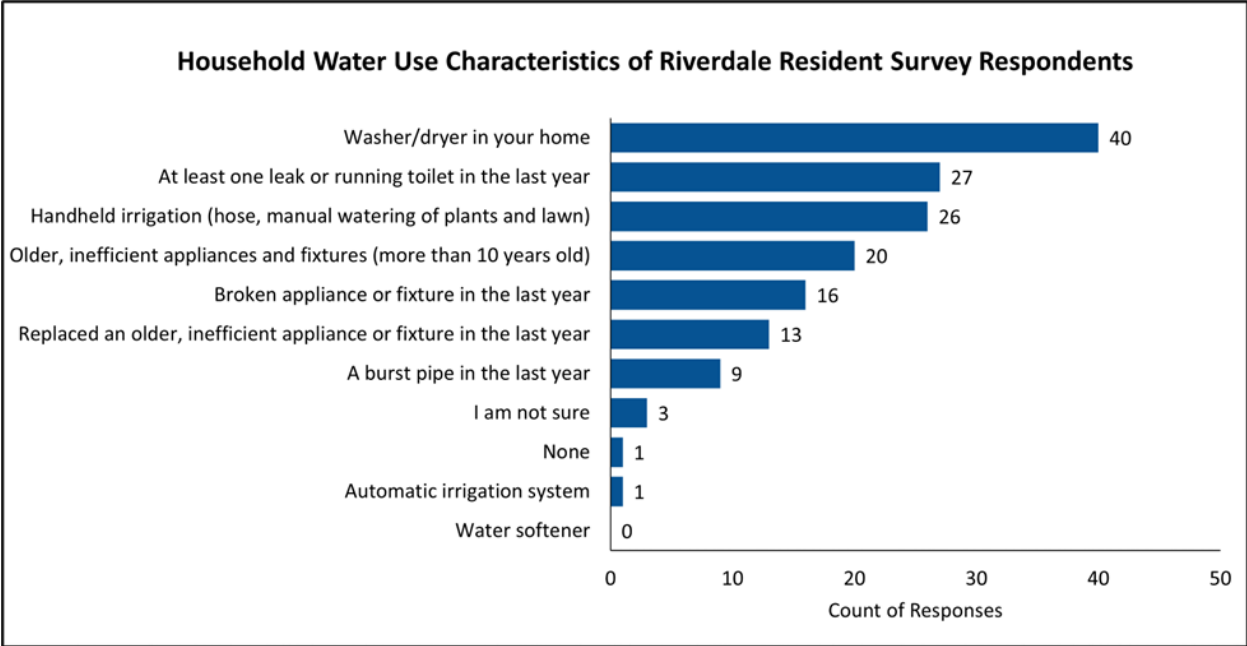


Figure 19. Household Water Use Characteristics of Riverdale Resident Survey Respondents

Riverdale Resident Survey Respondents Ability to Pay Their Water Bill On Time and In Full Over the Last Year.

		Yes, more than once in the last year	Yes, once in the last year	Not in the last year, but yes within the last five years	No
Riverdale Resident Survey Respondents Experience with Leaks and Inefficient Appliances	At least one leak or running toilet in the last year	12%	10%	4%	12%
	Broken appliance or fixture in the last year	9%	4%	4%	3%
	Older, inefficient appliances and fixtures	7%	4%	4%	13%
	Burst Pipe	4%	3%	1%	3%

59 responses, 68 indications of leaks and/or inefficient appliances

Figure 20. Riverdale Resident Survey Respondents' Ability to Pay Their Bill on Time or In Full Based on Experience with Leaks and Inefficient Appliances. The percentage value in the box indicates the percentage of responses to each question cross-section.

Additionally, many residents were eager and interested to learn more about how to better manage water use, bills and what opportunities are available to them for support.

This shows that residents recognize the challenges they face and want to take action but may not know where to start. Improving residential education and access to resources relating to water bills, water use, and available support services can empower residents to resolve water-related issues early on and before they become difficult to manage. For example, some residents shared they were unaware of assistance opportunities at the Village. Others had questions about how their water bill is calculated or noted that they do not receive billing information because they are renters.

For residents who participated in the project, nonpayment was commonly tied to external life circumstances as opposed to chronic financial insecurity.⁶

As shown in Figure 21 from the survey, most respondents cited issues such as needing to pay other non-utility bills, changes to employment status or income, medical hardships, or having a higher bill than normal as reasons for missing a water bill payment. This is reflected in Figure 22, which shows that although most respondents have not experienced service shut offs, those who have often cited issues like a leaking toilet or not realizing they had an outstanding balance as reasons for missed payments. This theme was also apparent through other engagement opportunities throughout the project, where participants shared that a recent change in employment status or a family loss contributed to a missed payment and shut off. This underscores the situational nature of payment difficulties and suggests that water affordability is one piece of a larger cost of living challenge faced by residents.

⁶ It is important to note that this takeaway is indicative of the lived experiences and individuals who participated in outreach and engagement, as opposed to a formal analysis of all Riverdale customers. There may be individuals dealing with chronic financial insecurity who did not participate in the study, and this takeaway does not discredit those individual circumstances.

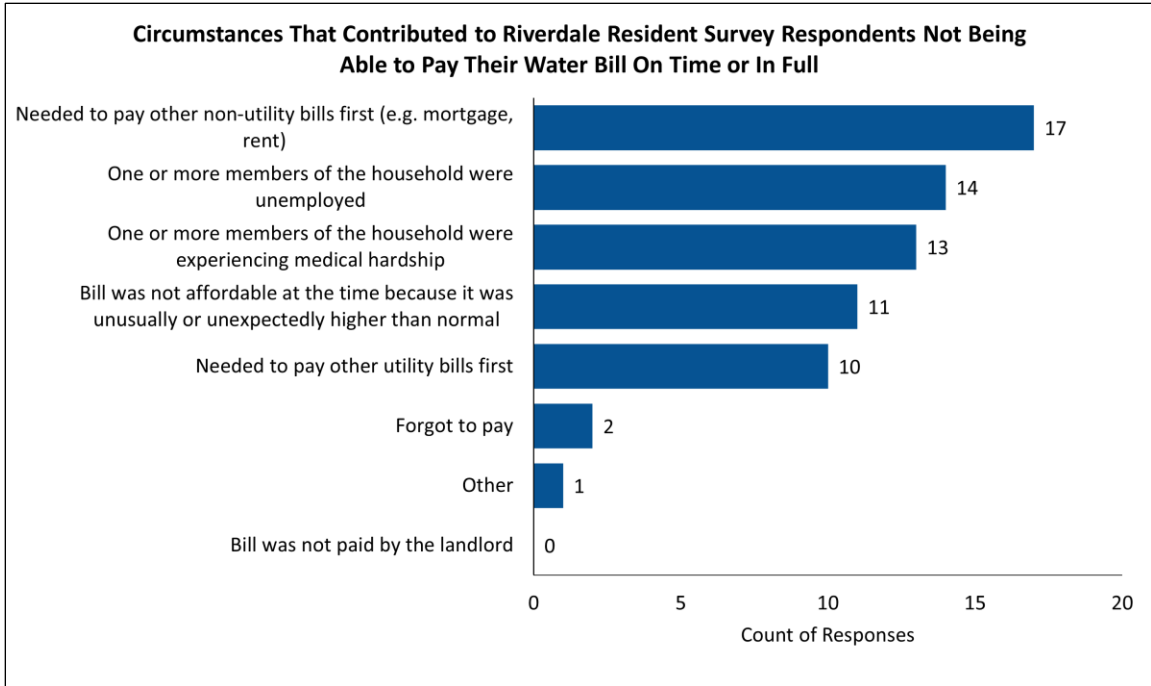


Figure 21. Circumstances That Contributed to Riverdale Resident Survey Respondents Not Being Able to Pay Their Water Bill on Time and In Full.

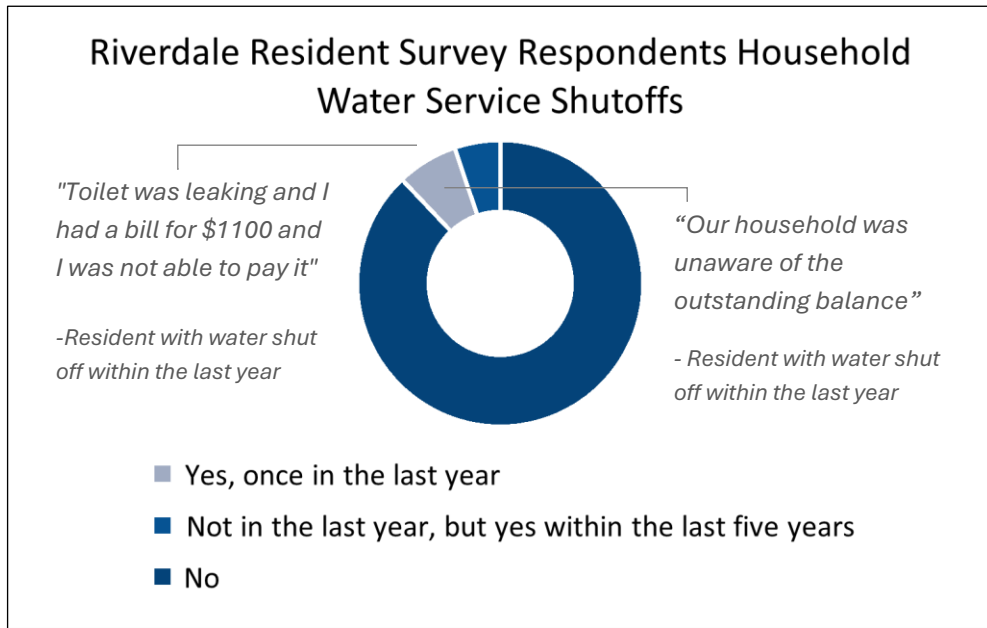


Figure 22. Riverdale Resident Survey Respondents Who Have Experienced Household Water Service Shut offs.

However, while nonpayment challenges may start from a specific circumstance or situation, they often intensify residents' concerns about falling behind again in the future.

A survey respondent shared, “...if we fall behind cause a lot of people do not have jobs and a lot of people is not working right now and if they don’t pay the bill they will come and shut it off.” As shown in Figure 23 from the survey, residents who have struggled with payment in the past tend to be more concerned about their ability to pay in the future, with 30% of respondents who’ve had a late payment stating they are “extremely concerned” or “very concerned” about being able to pay their water bills in the future.

		How concerned is your household about being able to pay the water utility bill in the future?				
		Extremely concerned	Very concerned	Moderately concerned	Slightly concerned	Not at all concerned
"Has your household been unable to pay a water bill on time and in full over the last year?"	Yes, once in the last year	2%	5%	4%	5%	0%
	Yes, more than once in the last year	14%	9%	7%	5%	0%
	Not in the last year, but yes within the last five years	4%	0%	4%	0%	0%
	No	2%	5%	5%	20%	9%
<i>56 Total Responses</i>						

Figure 23. Riverdale Survey Respondents Concern for Being Able to Pay Water Utility Bills Based on Past Missed Payments. The percentage value in the box indicates the percentage of responses to each question cross-section.

This suggests that once someone starts falling behind or begins accumulating debt, it may become increasingly difficult to catch up, creating a snowball effect over time and potentially leading to a shut off. This concern was echoed by Village staff, who noted that a key priority and motivation for participating in this study was not only to help residents avoid falling behind their bills, but also to ensure that once residents get out of water debt, they stay out of it in the long run.

As a result of the nature of water affordability challenges residents are facing, many of the suggested solutions shared were focused on providing immediate bill pay assistance or debt relief.

In conversations with residents, many noted they had either previously worked with the Village staff to create a payment plan, or they were interested in setting one up and

learning more. One resident noted, “I was treated with Grace and compassion as it related to resolving my unpaid with a verbal payment plan which was so so much appreciated and needed. I rarely receive help I lived in riverdale for 23 years raised both my children in the community of Riverdale.” This was also reflected in survey responses, where payment plan options and information on assistance programs were the most common strategies selected to help residents better manage water bills and use (Figure 24).

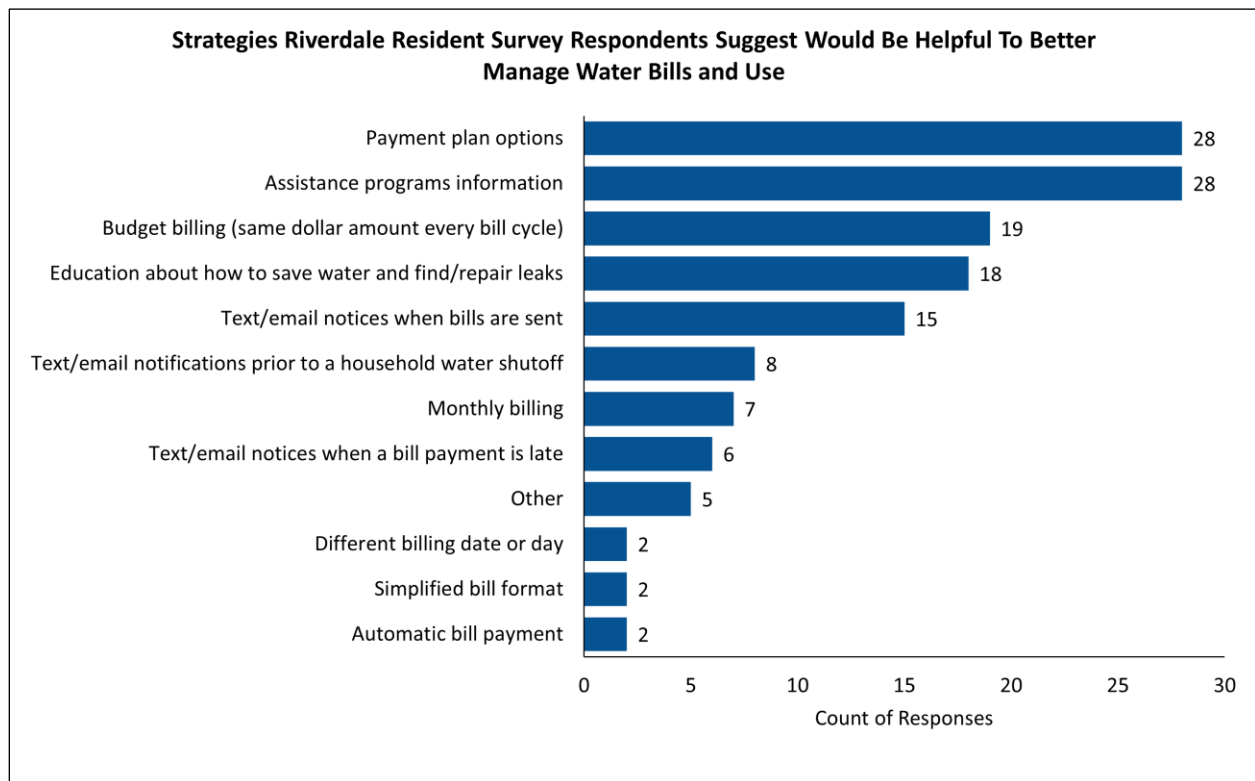


Figure 24. Strategies Riverdale Resident Survey Respondents Suggest Would Be Helpful to Better Manage Water Bills and Use.

Changes to late payment fees, penalties, and delinquency notification processes were also commonly cited as helpful interventions to help residents with their water bills. Many project participants noted that increasing the grace period for when a bill is sent and when it is due would help residents pay bills on time. Similarly, some noted issues with receiving notifications, reflecting they did not have enough time to address a late payment from the time between receiving a shut off warning and being shut off. Others noted that the late fee was too high. One resident noted that “penalties for late payment shouldn't be the same for someone with a \$200 bill or a \$5000 bill,” reflecting that the fee should be proportionate to the amount owed.

5. Recommendations and Action Plan

Section Overview

Based on the findings from the quantitative water affordability analysis and community engagement, the project team developed a list of recommendations to be considered for implementation by the Village of Riverdale. Recommendations are categorized according to five general intervention strategies, namely: (1) Customer Service, Outreach, and Engagement; (2) Operations and Data Management; (3) Water Conservation and Residential Leakage; (4) Water Rates and Billing Practices; (5) Water Bill Burden and Debt. Furthermore, recommendations include solutions that fall under short-term (ST), medium-term (MT), and long-term (LT) implementation timeframes. Recommendation categories were selected to align with Elevate Energy's *City of Chicago Water Affordability Analysis* to encourage a unified approach to water affordability strategies across the region (Shimabuku et al. 2025).

The following sections describe all recommendations based on the intervention category and implementation timeframe. Each recommendation also includes supporting rationale based on the study's quantitative and qualitative analysis as well as industry best practices, and details relevant implementation considerations. A summary of all recommendations is provided in [Appendix B](#).

Intervention Strategy 1: Customer Service, Outreach, and Engagement

Utility customer assistance programs are typically under-subscribed despite water affordability challenges growing significantly since 2000 (Vedachalam and Dobkin 2021). Part of this is due to the challenge for utilities to effectively increase awareness to available water affordability and assistance programs among eligible customers. For this reason, communications and outreach are key strategies for increasing participation in water affordability programs and ultimately addressing community-wide affordability challenges (Shimabuku et al. 2025).

Recommendations

1.1 Develop and maintain a dedicated webpage on the Village website to provide residents with access to educational resources relating to water use management best practices and customer assistance opportunities.

Water utilities rely on their websites as a primary way of communicating with customers, presenting a large opportunity to increase awareness and education on water affordability. Residents expressed strong interest in having access to educational resources, tools, and clear information about their water bills and available assistance programs during

community engagement activities, as discussed in [Section 4](#). Currently, information about these opportunities is limited and primarily shared through word of mouth, creating barriers for those in need of support. The Village’s existing “Pay Your Water Bill Online” webpage already provides essential operational details, including information on billing frequency, penalties for late payments, deposit requirements for new residents, accepted payment methods, and a link to the online payment system. However, expanding this page to include additional educational and self-help content would help address residents’ expressed needs and align with best practices for utility customer service, communications, and transparency.

By building upon the existing webpage, the Village could create a more comprehensive and user-friendly hub for water billing information, conservation resources, and affordability support. New sections could include step-by-step guidance on how to read a water bill, resources for checking for leaks at home, details about available assistance programs, and updates on upcoming community events. These self-help tools would empower residents to better understand and manage their water use while also reducing staff time spent responding to individual inquiries. Establishing this webpage represents an important first step toward building a more comprehensive and effective water affordability strategy.

Implementation Considerations:

- **Content Development and Maintenance:** Identify key topics (e.g., how to read a water bill, detect leaks, conserve water indoors and outdoors, and access financial assistance programs). Establish a process for regularly reviewing and updating materials to ensure accuracy and relevance.
- **User Accessibility and Navigation:** Ensure the webpage is easy to find from the Village homepage and designed for readability on both desktop and mobile devices. Include clear headings, concise text, and translated content or accessibility tools (e.g., screen reader compatibility) as needed.
- **Community Outreach and Awareness:** Promote the new webpage through existing communication channels such as utility bill inserts, social media, newsletters, and community meetings to raise awareness and encourage residents to use the resources.
- **Partnership and Resource Sharing:** Coordinate with community groups and local partners to share existing educational materials and assistance program information.

- **Performance Tracking:** Establish simple metrics—such as webpage traffic, click-throughs to assistance resources, or resident feedback—to assess effectiveness and guide future improvements.

Priority: High

Phasing: Short-term

Resources Needed:

- The Village of Riverdale staff time to develop and regularly maintain website and resources
- Development of educational materials

Who Leads: The Village of Riverdale

1.2 Promote the Village’s new online payment portal system.

The Village recently transitioned to a new online payment portal; however, many residents continue to pay their water bills in person and in cash. Encouraging more residents to use the online system could make it easier for them to pay on time, reducing the risk of late fees or penalties and improving overall payment convenience and efficiency.

Figure 13 supports this by showing the number of accounts that are less than 30 days overdue. Making payment options more accessible may reduce the “current” unbalanced accounts (i.e. within 30 days of the bill).

Implementation Considerations:

- **Outreach and Communication:** Use multiple communication channels, such as bill inserts, email notices, the Village website, and community events, to inform residents about the new online payment option and its benefits.
- **User Support and Education:** Provide clear step-by-step instructions on how to register, navigate, and make payments through the portal. Consider offering in-person or virtual demonstrations for residents who may be less familiar with online systems.
- **Communicate Added Value:** Highlight that using the online portal allows residents to track their billing history and payment activity more easily, helping them monitor water use, pay bills on time, and manage household budgets.

Priority: Medium

Phasing: Short-term

Resources Needed: The Village of Riverdale staff time

Who Leads: The Village of Riverdale

1.3 Conduct a water affordability outreach campaign to educate residents on water bills and use management.

Riverdale residents shared positive feedback about engagement opportunities throughout this study and were generally appreciative of having the opportunity to participate in the effort, demonstrating residents' interest in continuing to engage and to learn more about water affordability issues in Riverdale. By building on this momentum through continued engagement and communication on water affordability, the Village can sustain trust and collaboration with the community in advancing to the next phase of this program.

The Village may consider sharing the results of this study, communicating any planned actions based on the study's findings, and working with residents to better refine and tailor solutions. Future activities may include another round of community meetings, workshops or focus groups, or a survey that dives into specific recommendations that the Village may be interested in implementing, such as adjustments to the rate structure, billing practices, or the development of a new assistance or pilot program.

Implementation Considerations

- **Leverage Existing Assets:** Revise the Village of Riverdale's "New Resident Guide" with educational resources and more detailed information on water bill management and affordability. Share the updated guide with new and current residents.
- **Targeted Messaging:** Develop clear, accessible materials that explain how to read and understand water bills, the factors that influence costs, and practical steps residents can take to manage water use and reduce expenses.
- **Multi-Channel Outreach:** Use diverse communication methods, such as community workshops, social media, flyers, bill inserts, and local events, to reach residents with varying levels of digital access and engagement.
- **Community Partnerships:** Collaborate with trusted local organizations, schools, and faith-based groups to expand outreach and ensure materials reach residents who may be most impacted by water affordability challenges.

- **Interactive Education:** Incorporate hands-on elements such as bill review sessions, leak detection demonstrations, or resource fairs to make information more engaging and actionable.
- **Monitoring and Feedback:** Track participation rates and gather resident feedback to assess effectiveness and identify where additional education or support may be needed.

Priority: Medium

Phasing: Medium-term

Resources Needed:

- The Village of Riverdale staff time
- Community partners, local organizations
- Local media and communication platforms
- Educational materials
- Funding for campaign

Who Leads: The Village of Riverdale in partnership with consultant and/or local partners

1.4 Partner and coordinate with electric utility staff (ComEd) to compile individual multifamily unit account information to share water billing information with individual units and renters.

Although lower-income populations are more likely to rent and live in multifamily households, many utilities face limitations in designing and offering affordability programs to these households because they are not directly bill-paying customers (Shimabuku et al. 2025). Instead, renters may pay for water and sewer services indirectly through their rent or through fixed charges to their property manager or landlord. And, because they do not have individual water accounts, they are typically not eligible for customer protection or assistance programs, and do not have established relationships with their utility. As a result, renters are among the most vulnerable water users (Natural Resources Defense Council and National Consumer Law Center 2022c).

Village of Riverdale staff have expressed similar challenges in reaching the renter community in Riverdale, as most do not receive water billing information directly from the Village. Because of this, staff have limited ability to communicate important water billing, usage, and assistance information with renters or those living in multifamily homes. This barrier to direct communication and information sharing has led to situations where tenants may experience water shut offs due to unpaid bills by property managers, often without the renter’s prior knowledge of the non-payment. This gap highlights a key communication and outreach challenge for the Village, underscoring the need for

strategies to better connect with renters to ensure all residents have access to important information regarding their water service.

The NRDC’s Water Affordability Toolkit provides additional solutions and examples for how to improve water affordability among renter communities, including ways to expand assistance programs to renters, how to ensure renter protections against shut offs when landlords fail to pay the bill, and providing guidance and regulation on how landlords bill tenants for water (Natural Resources Defense Council and National Consumer Law Center 2022c).

Implementation Considerations:

- **Interagency Coordination:** Establish a formal partnership with ComEd to outline roles, responsibilities, and protocols for securely exchanging customer information.
- **Data Matching and Verification:** Develop a process to accurately link electric utility account data with corresponding water service addresses and accounts to avoid errors in sharing information.
- **Resident Communication:** Inform residents about the purpose and benefits of this coordination, such as improving transparency in water billing and helping renters better understand and manage their water use.
- **Pilot Implementation:** Consider beginning with a small-scale pilot (e.g., one or two multifamily properties) to test receptiveness of outreach and refine approach before expanding.

Priority: Medium

Phasing: Short-term

Resources Needed:

- The Village of Riverdale staff time
- Data collection and sharing
- Distribution of resources to multi-family and renter households

Who Leads: The Village of Riverdale in partnership with ComEd

Intervention Strategy 2: Operations and Data Management

Effective data collection, management, and reporting are essential for understanding the nature of a community’s water affordability challenges. Yet, many utilities lack reliable customer data, often due to limited staff capacity to compile and maintain this information. Without accurate and accessible data, utilities face difficulties in identifying customer needs, delivering effective services, and assessing the impacts of decisions on low-income and vulnerable households. Additionally, streamlining

administrative processes, data collection, and operations not only helps advance water affordability goals, but it also reduces staff workload and time spent gathering this kind of information. The NRDC's Water Affordability Toolkit provides best practices for data collection to effectively deliver a water affordability program (Natural Resources Defense Council and National Consumer Law Center 2022a).

Recommendations

2.1 Upgrade and streamline the Village's internal data management system, including any databases and record keeping systems for customers on payment plans, delinquent accounts, or residents subject to water shut offs.

The Village of Riverdale is transitioning to a new payment system called Locis. During this transfer process there are opportunities to streamline data management and improve record keeping for customers. Currently, the Village staff is able to pull current accounts in arrears from this system and do not have record of residents on payment plans recorded within the system. This recommendation focuses on streamlining these data to improve ease of water utility bill management for staff and allow improved long-term record keeping. Long-term record keeping can be improved by discharging old debt. Figure 12 shows the Village of Riverdale's long-term record of delinquent accounts and corresponding debt from each year back to 1995. Debt owed from these inactive accounts may be discharged or forgiven to remove the sum from the Village of Riverdale's balance.

Furthermore, streamlining record keeping of delinquent accounts and shut offs will aid customer management. As shown in Figure 13, many Riverdale residential accounts were in arrears within 30 days of the bill being sent. These individuals were at risk of a water shut off. Streamlining delinquent account records keeping and corresponding notification processes will aid these individuals and support payment processes for the Village. Additionally, accounts in arrears longer than 30 days, which are eligible for shut off or are already on a payment plan, will benefit from record keeping. A consistent method of record keeping for payment plans will ensure that all parties, resident and Village staff, follow through on payment agreements.

Implementation Considerations:

- **System Sustainability:** Establish a record keeping method and system that will align with the current billing platform (Locis) but allow for records to be easily transferred and updated if a new billing system is adopted and/or if records need to be archived and transferred elsewhere.
- **Streamline formal & informal payment plans:** The inclusion of formal and informal payment plans encourages trust among Riverdale residents and staff.

Rather than formalizing all payment plans, record keeping of all payment plans should be streamlined and upgraded for easy management.

- **Implementation Phase-In:** The process to streamline a record keeping system is lengthy. Focusing on one aspect (e.g. delinquent accounts, shut offs, or payment plans) at a time will encourage sustainable implementation.

Priority: Medium

Phasing: Medium-term

Resources Needed:

- The Village of Riverdale staff time
- Collaboration with Locis technical assistants
- Data collection and reorganization

Who Leads: The Village of Riverdale in partnership with Locis

Intervention Strategy 3: Water Conservation and Resident Leakage

While water bill payment assistance programs provide short-term financial relief to households in need, they often do not address the long-term or underlying causes of high-water use and unaffordable costs. These root issues are frequently linked to leaks and inefficient fixtures or appliances and are particularly persistent in older homes and among low-income households, many of which may lack the resources to make necessary repairs or upgrades (Alliance for Water Efficiency 2024; U.S. Environmental Protection Agency 2024). Providing customers with resources and programs to address leaks, improving water use efficiency, and upgrading household appliances help residents save water and, in turn, provide large potential in bill reductions to improve water affordability in the long run (Natural Resources Defense Council and National Consumer Law Center 2022c).

Recommendations

3.1 Continue partnering with Elevate to advertise and enroll qualifying residents in the Cook County Leak Repair Program.

The Water Use & Affordability Analysis in [Section 3](#) demonstrated the prevalence of leaks among Riverdale customers. This theme also arose through community engagement, as detailed in [Section 4](#), where residents shared experiences managing high bills due to leaks and expressed strong interest in participating in the Cook County Leak Repair Program. A few Riverdale participated in the program; however others who applied were placed on a waitlist for the next round of repairs due to a large influx in demand for the program across Cook County.

The program is offered at no cost to the Village, with the administrative and programmatic infrastructure already in place by Elevate and Cook County, meaning the main need is support for outreach and marketing. Providing clear information to residents about when the program will reopen would help ensure broader participation and allow more households to benefit from timely leak detection and repair. The Village may consider prioritizing outreach to customers who are eligible to participate in the program, have known leaks, and/or who are experiencing extraordinarily high water bills due to leaks.

Implementation Considerations:

- **Sustained Coordination with Elevate:** Maintain regular communication with Elevate staff to align outreach timelines, share enrollment updates, and coordinate follow-up with referred residents as needed.
- **Targeted Resident Outreach:** Use Village communication channels to raise awareness of the Leak Repair Program among income-eligible households most likely to benefit.
- **Alternative Support Options:** For residents who are not eligible or unable to participate in the Leak Repair Program, provide other forms of support, such as do-it-yourself repair guides, connections to local plumbers, or offering other assistance or relief to manage high water bills due to leaks.
- **Tracking and Evaluation:** Work with Elevate to track participation rates, completed repairs, and overall water savings to measure program impact and identify areas for improvement.

Priority: Medium

Phasing: Short-term

Resources Needed:

- Village of Riverdale staff time
- Media and communication platforms
- Funding provided by Cook County
- Implementation and administration managed by Elevate

Who Leads: Elevate with support from Village of Riverdale

3.2 Expand current offering of public works home leak inspections as a Village pilot program.

The Village currently offers a leak assessment service in which a Public Works staff member visits residents' homes to help identify potential leaks. This service is provided on a limited, one-off basis (typically once a week on Thursdays), and is not formally advertised or supported by a structured sign-up process. During the community meeting, residents

inquired about this opportunity and were interested in having Public Works staff assess their homes. There is opportunity to build upon this existing asset and program infrastructure to develop a formalized pilot leak assessment program across the Village. Given that the Village currently bills on a bi-monthly schedule, many residents expressed that when they receive their bill, they've already had an ongoing leak for a long period of time and had no way of knowing, which amounted to an extraordinarily high bill. By formalizing and promoting the program, residents can detect and repair leaks more quickly, ultimately reducing the accumulation of high bills due to leaks.

This may include adding information about the service to the Village website, creating a simple sign-up form to track participation and interest, increasing the number of days and/or staff available to conduct at-home assessments, and access to post assessment resources to address leaks such as referrals to licensed plumber or the Cook County Leak Repair Program. The Village may consider strategies to manage high demand, such as starting with a pilot in community areas with known leaks, conducting assessments on a neighborhood-by-neighborhood basis, or by prioritizing program eligibility to low income or senior customers. Enhancing the program in this way would not only support residents better manage water use and costs, but it would also improve the Village's ability to track and respond to leak issues across the community.

Implementation Considerations:

Priority: Medium

Phasing: Medium-term

Resources Needed:

- Village of Riverdale staff time
- Collaboration with Village public works staff
- Development of inspection sign-up / scheduling system
- Development of promotional materials
- Funding

Who Leads: Village of Riverdale in partnership with consultant to support pilot development and launch

3.3 Issue high water use alert notices to residents via water utility bill, text and/or email when water consumption for current bill was 30% greater than average indoor consumption

Hidden leaks, inefficient appliances, or outdoor water use can result in elevated water use and corresponding higher bills. If the leak is relatively small, for example a leaky toilet

flapper, leak below a sink, or from a basement pipe, it may go unnoticed for an extended period of time. Overtime the amount of water loss and corresponding bill can add up. To support residents, this recommendation focuses on leak notification at the time of billing. Figure 14, 15, and 16 illustrate the percentage of accounts with water use greater than 30% of indoor baseline consumption, termed elevated water consumption, for each dwelling group. During any bill period from 2019 - 2024, 6% to 41% of accounts had elevated consumption. These data present an information gap and opportunity to inform residents about elevated consumption. Figure 14, 15, and 16 demonstrate elevated consumption compared to an annual average indoor baseline. However, for a continuous customer, the previous indoor billing cycles of February – April and October – December (bi-monthly or monthly billing) can be used to determine indoor baseline on a rolling basis. The rolling basis allows for continuous elevated water use monitoring, rather than monitoring on an annual basis.

In practice, this notice may be sent with the water utility bill or be sent via text or email. While advance notification is always preferable, this recommendation is designed to work with the current system and resources that the Village of Riverdale can access. The notice would be a notification of elevated water use. It would not be specified as a leak, inefficient appliance or outdoor use. However, it could reference these listed items as potential causes of the elevated water consumption. Elevated consumption could also be from increased occupancy, a new appliance added to the household, or a new use of water. Regardless, the purpose of this notification is to provide account holders with information to manage water systems and bills but identifying elevated water consumption and/or loss sooner.

Implementation Considerations:

- **Staff Capacity:** The process of preparing the system for data analysis, generating communication copy, and setting up communication systems will take staff time and partnership with external organizations.
- **Data Analysis:** This recommendation will require that the billing system (Locis) be able to calculate the average indoor baseline consumption and flag an account that is greater than the 30% threshold. This will require Locis expertise and time to set up. If this is not possible within the system, an alternative process may be set up but will require technical expertise.
- **Transparency:** This information will be new to customers, and it will take time for them to be comfortable receiving an elevated water use notification. Focusing on transparency of information will aid communications with customers.

- **Pilot Implementation:** This type of implementation is a large task. Piloting notifications among a customer group or a subsection of a customer group will allow for testing and modification if changes need to be made.

Priority: Medium

Phasing: Long-term

Resources Needed:

- Village of Riverdale staff time
- Collaboration with Locis technical assistance or alternative technical experts
- Development of system data analysis
- Creation of communication materials
- Collection of customer phone numbers and/or emails

Who Leads: Village of Riverdale in partnership with Locus technical assistance or alternative technical experts

Intervention Strategy 4: Water Rates and Billing Practices

Among the many strategies used to address water affordability challenges within a community, modifying billing frequency and water rate structures can have a significant positive impact (Natural Resources Defense Council and National Consumer Law Center 2022b). Increasing the frequency of billing allows customers to pay lower bills on a regular basis and catch high water use caused by leaks or inefficient appliances sooner. In addition, altering the rate structure to support low water users through conservation-oriented rates can make bills more equitable by ensuring that customers who use less water pay a proportionally smaller amount compared to higher or discretionary water users. Overall, modified billing practices and rate structures can make bills more affordable for those who experience the highest financial burden.

Recommendations

4.1 Move customers to a monthly billing cycle.

Village of Riverdale customers currently receive a bill every two months. A transition to a monthly billing cycle could support customers in managing high water bills and detecting causes of high water use sooner, reducing a financial burden. Data showing the range in water consumption from 2019 – 2024 (Figure 4, 5, 6) and the percentage of accounts with consumption greater than indoor baseline (Figure 14, 15, 16) support this recommendation. While these figures show that the average consumption across accounts remains low, a smaller number of accounts have experienced high consumption which may be attributed to a leak. High consumption values were particularly apparent for

single family + small multifamily group customers, and even more so for single family group customers. The impact of consumption data is displayed in Figure 14, 15, 16, which represents the percentage of accounts with elevated water consumption. As referenced in the analysis, elevated water consumption and corresponding bills are frequently not repeated with the same accounts from 2019 – 2024. Instead, it is an event over one or two billing periods which causes high consumption and corresponding water bills (Figure 4, 5, 6). A monthly bill frequency allows for more opportunity for account holders to note the high bill and water consumption, thereby reducing their risk of water utility debt.

In addition to benefiting the account holder, a monthly billing cycle with lower bills will support the Village of Riverdale. The increased bill occurrence will require more staff time; however, more frequent billing will allow for more opportunities for the Village to be paid. These amounts will be lower and more obtainable for residents, encouraging account holders to pay on time.

Implementation Considerations:

- **Staff Capacity:** The process of moving customers to a monthly billing cycle will increase staff labor, particularly during the transition phase. Make a plan to prepare staff for additional meter reads and process and consider hiring additional staff to support the effort.
- **Policies & Processes:** Consider conducting a formal update to the Village's Water Rates and Charges Ordinance (Chapter 13.12).
- **Customer Communication:** Communicate the change in billing cycles through multiple avenues and well in-advance of the transition to reduce confusion once the transition of monthly billing has begun.
- **Transition Leniency:** Despite well-intentioned communication, some residents will still be surprised by a switch to monthly billing. Provide a 2-month period of grace during the first year to support Village of Riverdale residents during the transition.

Priority: High

Phasing: Medium-term

Resources Needed:

- Village of Riverdale staff time
- New Riverdale staff member and funding for staff
- Development of communication materials
- Integration of monthly billing into current billing process

Who Leads: Village of Riverdale with help from Locis technical assistance to support integration of monthly billing into current system.

4.2 Conduct a cost-of-service study and explore alternative water rate structures that promote water affordability, water conservation, and equitable billing across customers.

Village of Riverdale residents expressed that water affordability is a challenge within the community. The number of unbalanced accounts, particularly single family accounts with a total of 1,858 in 2025 as of July 17th, support the sentiment we heard among community members (Figure 13). One of the ways to ease water affordability challenges is to conduct a cost-of-service study and explore an alternative water rate structure.

Currently, the Village of Riverdale charges a flat rate of \$9.50 per 1,000 gallons with a minimum charge of \$19.50. This minimum charge, flat rate structure may introduce water affordability challenges for Village of Riverdale customer groups. A minimum for all customers is a disproportionately large percentage of total water cost for those who use smaller amounts of water compared to a large water users. This is particularly notable for individuals who live alone and only use water for necessary domestic needs. Based on survey results as a representation of the broader Riverdale community, a majority (41% of survey respondents) live alone, which aligns with 2019 – 2023 American Community Survey five-year estimates information, where a majority (31.1%) of Riverdale residents live alone (Chicago Metropolitan Agency for Planning 2025). Furthermore, a flat rate is the same for everyone no matter how much water they use. Other rate structures may be volumetric based, where the cost of water increases as consumption rises (inclining block rate), or a lifeline rate, where water costs to cover indoor water use are provided at a lower rate compared to water beyond this value (Natural Resources Defense Council and National Consumer Law Center 2022b).

These are only examples, as a study is needed to explore potential alternative rate structures. Key variables which need to be identified in the study include **(1)** the Village of

Riverdale’s cost of services, maintenance, and capital investment, **(2)** assessment of current infrastructure maintenance needs **(3)** costs allocation among customer groups, **(4)** financial reserves and goals, and **(5)** the community characteristics and needs. These will support the investigation and adoption of a revised rate structure (Carroll et al. 2024).

Implementation Considerations:

- **Data Collection & Analysis:** Current and historical data on service costs, revenue, and water consumption should be gathered assessed to support the study. This may take time and provides an opportunity to modify management financial records if it would be beneficial for the Village.
- **Financial & Infrastructure Planning:** Conducting a cost-of-service analysis and investigating a new rate structure provides an opportunity to invest time in financial and infrastructure planning to prepare the community for future water needs.
- **Community Information:** Review community characteristics through census data and community surveys to support the data gathering component of the study.
- **Resident Perspectives:** Consider launching a survey or holding Coffee with the Mayor meetings to discuss the rate study with residents throughout the process. This transparency will foster community trust and support in the rate restructuring.
- **Utilize Resources:** Take advantage of previous studies and resources on rate structures which may inform the cost-of-services study and rate structure consideration.

Priority: Medium

Phasing: Long-term

Resources Needed:

- Village of Riverdale staff time
- Consultant to support cost-of-services study
- Historical financial records
- Historical consumption records

Who Leads: Village of Riverdale in partnership of a consultant to conduct the study

Intervention Strategy 5: Water Bill Burden and Debt

Water debt is growing across the country, and low-income households are spending an increasing share of their income on water utility bills (Water Affordability Needs Assessment: Report to Congress 2024). Additionally, unpaid bills lead to late fees and potentially water shut offs, which negatively impact quality of life and exacerbate cost-of-living challenges faced by low-income households. Water utilities must

therefore identify strategies that provide immediate financial relief to customers in need, while also addressing the long-term unaffordability of water bills that lead to non-payments. Water debt relief and bill pay assistance programs are therefore key pieces to an effective water affordability strategy. These strategies are most effective when they help keep households from accruing debt over time while also preventing late payments in the future (Natural Resources Defense Council and National Consumer Law Center 2021).

Recommendations

5.1 Review and update notification processes for bill payments and shut off warning and notices.

During community engagement, residents consistently reported that notifications about delinquent payments and potential shut offs often arrived too close to when late fees or service interruptions were applied, leaving little time to respond. In Figure 24 from the survey, respondents also shared that text and email alerts when a bill is sent, prior to shut offs, and when a bill payment is late are helpful strategies to help better manage usage and bills. As outlined in the Village Water Rates Ordinance (Chapter 13.12), water bills are considered delinquent fourteen days after the bill is sent to customers, at which point a 10% late fee is added to the bill. Shut offs occur if a payment is not received 30 days after the date of the bill. Given that many residents receive and pay their bills by mail and receive paper notices, the Village may consider extending the grace period between bill rendition and payment to account for mailing delays. Additionally, a flat penalty rate does not incentivize timely payment and penalizes a customer that is late by one day to the same degree as a customer that is late by two weeks, for example. This was also reflected in a resident interview. Instead, a penalty that accrues based on length of nonpayment can improve equitability and effectiveness. For example, a water bill from City of Chicago is due after 21 days of rendition and late fees accrue at a rate of 1.25% per billing cycle on late balances (City of Chicago 2025).

By reviewing and updating these processes, the Village could provide residents with earlier, clearer warnings, giving them a better opportunity to pay on time or proactively engage with the Village staff to discuss tailored options such as enrolling in a payment plan to avoid a shut off, waiving late fees, or other support. For those who are still unable to make a payment after receiving notification, it may indicate underlying financial or household challenges that require additional attention. The Village may also consider a 3-day grace period for residents paying through the online portal, given that it may take up to 3 days for the payment to post to the customer account after the bill is due.

Implementation Considerations:

- **Communicate early and often:** Consider a tiered notification system, starting with a friendly reminder and escalating to more urgent messages as the due date approaches. Review and update the timing and content of notifications to ensure residents receive adequate advance notice before late fees or shut offs occur. Use multiple channels to reach at risk residents.
- **Integration with online payment system:** Send notifications directly to the Village’s online payment platform (Locus) to reduce delays from paper mail, and to make it easy for residents to take action.
- **Provide information and resources:** Include clear instructions on next steps, payment plan options, and available assistance programs.
- **Pilot testing:** Test revised notifications with a small group of residents to gather feedback on clarity, timing, and usability before full implementation.
- **Track and monitor effectiveness:** Gather information and feedback on whether new notification processes prevent delinquency or shut offs.
- **Connect with renters:** Consider ways to share notices with renters when their landlord or property manager has not paid their water bill.

Priority: High

Phasing: Medium & Long-term

Resources Needed:

- Village of Riverdale staff time
- Updated notification language and process documentation
- Funding to support development and implementation of new delinquent payment policies and processes

Who Leads: Village of Riverdale in partnership with consultant to implement notification and process changes

5.2 Evaluate the Village's payment plan to determine successes and needed improvements.

Through engagement opportunities, many residents shared that they were either previously enrolled in or expressed interest in the Village’s bill payment plan. Payment plans also emerged as a key strategy for addressing water affordability challenges and providing residents will immediate financial relief, as previously discussed in [Section 4](#) on Community and Municipal Perspectives. Currently, Village staff work directly with residents to establish payment plans based on their unique circumstances. This one-on-one, tailored approach allows staff to better understand each resident’s situation, build trust, and create a payment plan that is responsive and realistic to individual financial

constraints and needs. It also reduces the barrier for participation for residents who are hesitant to seek assistance or may otherwise have trouble filling out enrollment documents or forms.

Village staff shared that those experiencing ongoing financial hardships are not necessarily the residents participating in the current payment plan, highlighting a need to ensure the program reaches those who need it most. The recent implementation of the Village's new online payment system is timely, as it allows residents to combine the payment plan and current bill into a single account, rather than managing two separate accounts, which previously caused confusion for some residents. The system also allows the residents to drop the bill as much as they can afford and then place the remaining balance on a payment plan, helping residents fulfill both past and current bills without letting the payment amount to a large, unaffordable bill.

However, because the process remains largely informal, it is challenging for the Village to track how well it helps residents stay current on their bills both in the short and long term. By evaluating past and current payment plan offerings, the Village can gather insights into how many participants successfully completed their plans, whether there are residents who are facing ongoing payment challenges, and how much assistance residents typically need or how long they remain on a plan. A simple, consistent enrollment process and a data tracking system would also strengthen program management, enabling the Village to better monitor participation, outcomes, and overall effectiveness on an ongoing basis.

Implementation Considerations:

- **Update Policies and Procedures:** Review and update the Village's Utility Payment Plan Ordinance (Chapter 13.02) to ensure that processes are up to date and reflect any changes made to the program.
- **Data Collection and Analysis:** Review recent participation data to understand how many residents are enrolled in payment plans, completion rates, and overall trends in payment behavior.
- **Resident Feedback:** Conduct short surveys or focus groups with participants to understand their experiences, barriers to adhering to payment plan, and suggestions for improvement.
- **Staff Input:** Engage Village staff to identify administrative challenges, workload impacts, and areas where clearer procedures or communication could improve efficiency of payment plans.
- **Equity and Accessibility:** Assess whether the current payment plan structure adequately serves low-income or vulnerable residents and consider adjustments.

- **Participant Tracking Improvements:** Identify ways to better track and analyze data on past participants to distinguish between residents **facing** one-time financial hardship and those experiencing ongoing affordability challenges, helping tailor future assistance or outreach efforts.
- **Benchmarking and Best Practices:** Compare the Village’s payment plan policies with those of nearby municipalities to identify effective strategies and potential enhancements.
- **Reporting and Implementation:** Summarize key findings and proposed improvements in a brief report or presentation to guide decision-making and future policy updates

Priority: High

Phasing: Medium-term

Resources Needed:

- Village of Riverdale staff time
- Funding to support implementation of payment plan evaluation and potential payment to consultants

Who Leads: Village of Riverdale in partnership with consultant to conduct payment plan evaluation and recommendations

5.3 Provide partial relief to customers that experience extraordinary water charges due to hidden leaks, line breaks, or circumstances outside of the reasonable control of the account holder.

Due to a variety of causes, Riverdale residents may face extraordinary water bills due to extreme water consumption. This happened repeatedly over the period of analysis (2019 – 2024), as shown by maximum water consumption over the five years (Figure 4, 5, 6) and the corresponding high-water costs (Figure 9, 10, 11). While accounts holders that experienced this extreme use were the minority, they face major financial strain in attempting to repay the high bill.

This recommendation focuses on extraordinary water consumption that is beyond the control of the account holder and is not due to negligence. The customer must provide evidence that the occurrence was extraordinary, and steps were taken to resolve the issue (e.g. repair the leak). If these conditions are met, partial relief may be provided. A cost analysis should be considered for the Village to determine an amount or percentage of the bill that is financially feasible to forgive. Data to consider when determining a threshold of

partial relief should include the average, historical peak, and 99-percentile of consumption and bill data for all different dwelling groups.

Implementation Considerations:

- **Funding:** To allow this relief for Riverdale customers in extraordinary circumstances, a support fund must be allocated to cover the cost of water.
- **Financial Analysis:** A financial analysis should be conducted to determine the total value or percentage of the extraordinary bill is feasible for the Village to forgive.
- **Standard Operating Procedure (SOP):** System process and guidelines must be established and recorded to facilitate this program for residents. This includes record keeping to align with payment plans and delinquent accounts.
- **Confirmation Processes:** Develop a system to confirm if the extraordinary use was beyond control of the account holder.
- **Application Development:** Develop an application for account holders to complete for relief eligibility.

Priority: Medium

Phasing: Long-term

Resources Needed:

- Village of Riverdale staff time
- Reallocation of funds or additional funds to support water costs
- Communications development to share program details
- Development of program SOP to ensure viability

Who Leads: Village of Riverdale

5.4 Develop a customer assistance program targeted to Village of Riverdale senior residents.

Village of Riverdale staff and residents expressed that water affordability is a problem for senior citizens on a fixed income in the community. While seniors are eligible for sanitation discounts, there is not currently a water consumption related discount (Village of Riverdale 2022). The analysis of senior (SEN) water costs and corresponding 66% of seniors with unbalanced accounts supported the statements from community members (Figure 17). Overall, the relatively small number of senior citizens designated as a SEN account compared to the wider population of seniors in the community (11.1%) indicates that there is potential to expand this program (Chicago Metropolitan Agency for Planning 2025). Furthermore, as the largest percentage of the population of ages 50 – 64 (20.3%) age into seniors, there will be higher demand in coming years for a senior program. Establishing a program in the short term will have long-term benefits. The Village may consider providing

a discount on water costs for senior citizens or waiving the base fee to lower bills. While this group is not a high-water consumer, as indicated by the range in bi-monthly bill, they still face affordability issues and could benefit from reduced water utility bill costs in addition to the \$1.50 sanitation discount.

Implementation Considerations:

- **Financial Planning:** To provide a discount to this group of customers, financial scenarios should be mapped out based on projected participation to ensure that the Village is financially prepared to offer the discount.
- **Community Communication:** Prepare to share this widely with community members and anticipate an increase in discount participation in response to advertising the discount.
- **Record Keeping:** Integrate this information into customer billing records and consumption data.

Priority: Low

Phasing: Long-term

Resources Needed:

- Village of Riverdale staff time
- Funds reallocations to support water costs
- Communications development to share program details

Who Leads: Village of Riverdale

References

- Alliance for Water Efficiency. 2024. *Improving Water Affordability by Creating a New Federal Plumbing Repair and Efficiency Assistance Program Policy White Paper*.
<https://allianceforwaterefficiency.org/resource/improving-water-affordability-by-creating-a-new-federal-plumbing-repair-and-efficiency-assistance-program/>.
- Carroll, Deborah A, Kate Albrecht, Laura Medwid, et al. 2024. *Water Rate Setting in Northwestern, Central, and Southern Illinois Principal Investigator*. Springfield.
- Center for Neighborhood Technology. 2017. *RainReady Calumet Corridor Plan for Riverdale, IL*.
<https://rainready.org/calumet-corridor/riverdale.php>.
- Chicago Historical Society. 2005. "Riverdale, IL." Encyclopedia of Chicago.
<http://www.encyclopedia.chicagohistory.org/pages/1078.html>.
- Chicago Metropolitan Agency for Planning. 2025. *Riverdale Community Data Snapshot Municipality Series August 2025 Release*. https://www.cmap.illinois.gov/wp-content/uploads/dlm_uploads/Riverdale.pdf.
- City of Chicago. 2025. "Finance General Billing Questions."
https://www.chicago.gov/city/en/depts/fin/supp_info/utility-billing/common-questions-on-utility-services.html.
- Cook County Government. 2022a. "Cook County and CEDA Announce Low-Income Household Water Assistance Program." February 17. <https://www.cookcountyl.gov/news/cook-county-and-ceda-announce-low-income-household-water-assistance-program>.
- Cook County Government. 2022b. "Cook County and CEDA Announce Low-Income Household Water Assistance Program." February 17.
- Cook County Government. 2024. "Cook County Announces \$11.5 Million Cook County Water Affordability Program in Partnership with Elevate." August 28.
- Cook County Government. 2025. "Maps and Geospatial Data."
<https://www.cookcountyl.gov/CookCentral>.
- Naseri, Md Yunus, Grant Bernosky, Peter W. Mayer, and Landon T. Marston. 2025. "Patterns and Predictors of Residential Indoor Water Use Across Major US Cities." *Earth's Future* 13.
<https://doi.org/10.1029/2024EF005467>.
- National Weather Service. 2020. "1991 - 2020 Monthly and Yearly Normals for Chicago and Rockford." National Oceanic and Atmospheric Administration. National Oceanic and Atmospheric Administration.
- National Weather Service. 2023. "NWS Forecast Office Chicago, IL." National Oceanic and Atmospheric Administration. <https://www.weather.gov/lot>.

- Natural Resources Defense Council, and National Consumer Law Center. 2021. “Water Debt.” In *Water Affordability Advocacy Tool Kit*. Preprint. <https://www.nrdc.org/resources/water-affordability-advocacy-toolkit>.
- Natural Resources Defense Council, and National Consumer Law Center. 2022a. “Data Collection and Transparency.” In *Water Affordability Advocacy Toolkit*. Preprint, September. <https://www.nrdc.org/resources/water-affordability-advocacy-toolkit>.
- Natural Resources Defense Council, and National Consumer Law Center. 2022b. *Equitable Water Rates*. <https://www.nrdc.org/resources/water-affordability-advocacy-toolkit>.
- Natural Resources Defense Council, and National Consumer Law Center. 2022c. “Protections and Support For Renters.” In *Water Affordability Toolkit*. Preprint, September. <https://www.nrdc.org/resources/water-affordability-advocacy-toolkit>.
- Natural Resources Defense Council, and National Consumer Law Center. 2022d. *Water Efficiency and Plumbing Repair Assistance*. <https://www.nrdc.org/resources/water-affordability-advocacy-toolkit>.
- Raucher, R, J Clements, E Rothstein, J Mastracchio, and Z Green. 2019. *Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector*.
- Shimabuku, Morgan, Christine Curtis, Gregory Pierce, Grace Harrison, Sridhar Vedachalam, and Lisa O’fiesh. 2025. *5179: Feasibility and Applicability of Leading and Innovative Utility-Led Water Affordability Efforts*. Denver. www.waterrf.org.
- Stantec. 2017. *LMO-2: Lake Michigan Water Allocation, Water Supplied and Non-Revenue Water Summary Table*. https://dnr.illinois.gov/content/dam/soi/en/web/dnr/waterresources/documents/lma-final-report_20220504_stantec.pdf.
- U.S. Census Bureau. 2024. “2024 TIGER/Line Shapefiles.” TIGER/Line Shapefiles, January. <https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.2024.html#list-tab-790442341>.
- U.S. Census Bureau, and U.S. Department of Commerce. 2023a. “Financial Characteristics.” In *American Community Survey, ACS 5-Year Estimates Subject Tables*, Table S2503. Preprint.
- U.S. Census Bureau, and U.S. Department of Commerce. 2023b. “Household Income Quintile Upper Limits.” *American Community Survey, ACS 5-Year Estimates Detailed Tables*.
- U.S. Census Bureau, and U.S. Department of Commerce. 2023c. “Physical Housing Characteristics for Occupied Housing Units.” In *American Community Survey, ACS 5-Year Estimates Subject Tables*, Table S2504. Preprint.

- U.S. Census Bureau, and U.S. Department of Commerce. n.d. “Estimate Poverty Status in the Last 12 Months.” In *2019 – 2023 American Community Survey 5-Year Estimate*, Table S1701. Preprint.
- U.S. Environmental Protection Agency. 2024. *Water Affordability Needs Assessment: Report to Congress*. <https://www.epa.gov/system/files/documents/2024-12/water-affordability-needs-assessment.pdf>.
- Vedachalam, Sridhar, and Randall Dobkin. 2021. *H2Affordability: How Water Bill Assistance Programs Miss the Mark*. Washington D.C. www.osti.gov/biblio/1413878-water-wastewater-.
- Village of Riverdale. 2017a. *New Residents Guide*. Village of Riverdale. <https://villageofriverdale.net/wp-content/uploads/2024/01/NEW-RESIDENTS-GUIDE-2017-Draft.pdf>.
- Village of Riverdale. 2017b. *New Residents Guide*. Village of Riverdale. <https://villageofriverdale.net/wp-content/uploads/2024/01/NEW-RESIDENTS-GUIDE-2017-Draft.pdf>.
- Village of Riverdale. 2022. *Water Rates and Charges*. <https://www.codepublishing.com/IL/Riverdale/#!/Riverdale13/Riverdale1312.html#13.12>.
- Village of Riverdale. 2025a. “Water Rates and Charges.” 13.12 in *The Riverdale Municipal Code*. <https://www.codepublishing.com/IL/Riverdale/#!/Riverdale13/Riverdale1312.html#13.12>.
- Village of Riverdale. 2025b. “Water Regulations.” 13.04 in *Riverdale Municipal Code*. <https://www.codepublishing.com/IL/Riverdale/html/Riverdale13/Riverdale1304.html>.
- Village of Riverdale. 2025c. “Welcome to The Village of Riverdale.” <https://villageofriverdale.net/about/>.
- Water Affordability Needs Assessment: Report to Congress*. 2024.

Appendix A: Community Flyer

Having trouble with your water bill? The Village of Riverdale is here to help!



Step 1: Take the Water Affordability Community Survey

- Share your experience managing water bills and water use
- Identify solutions to make water more affordable for residents
- Complete by June 8th for a chance to win a \$50 gift card to Jewel Osco!



Scan the QR code to take the survey!

Step 2: Participate in the Cook County Leak Repair Program

- Free plumbing repairs and fixture upgrades for income-qualified residents
- Help you stop leaks and save money on water bills
- Check your eligibility and enroll at CookCountyLeakRepair.org

Step 3: Attend the June Coffee with the Mayor Meeting

- Share your experience managing water bills with Village staff & learn about solutions
- Saturday, June 7, 2025, 10:00 am to 12:00 pm
- Village Hall: 157 W. 144th Street, Riverdale, IL 60827



The Village Of
RIVERDALE

Questions? Please reach out to April Wayne at awayne@villageofriverdale.net

Appendix B: Full Village of Riverdale Water Affordability Recommendations List



Intervention Strategy 1: Customer Service, Outreach and Engagement

1.1 Develop a dedicated water affordability webpage on the Village website to provide residents with access to education and resources relating to water bills, water use management, and assistance opportunities

1.2 Develop and implement a resident outreach campaign to promote the Village's new online payment portal

1.3 Implement a water affordability outreach campaign to educate residents on water bill and use management, including one-on-one communications, a series of workshops, and investing in community partnerships focused on water affordability

1.4 Partner and coordinate with electric utility staff (ComEd) to compile individual multifamily unit account information in order to share water billing information with individual units and renters.



Intervention Strategy 2: Operations and Data Management

2.1 Upgrade and streamline the Village's internal data management system, including any databases and record keeping systems for customers on payment plans, delinquent accounts, or residents subject to water shut offs.



Intervention Strategy 3: Water Conservation and Resident Leakage

3.1 Continue partnering with Elevate to advertise and enroll qualifying residents in the Cook County Leak Repair Program.

3.2 Expand current offering of public works home leak inspections as a Village pilot program.

3.3 Issue high water use alert notices to residents via water utility bill, text and/or email when water consumption for current bill was 30% greater than average indoor consumption



Intervention Strategy 4: Water Rates and Billing Practices

4.1 Move customers to a monthly billing cycle.

4.2 Conduct a cost-of-service study to explore alternative water rate structures that promote water affordability, water conservation, and equitable billing across customers.



Intervention Strategy 5: Water Bill Burden and Debt

5.1 Review and update notification processes for bill payments and shut off warning and notices.

5.2 Evaluate the Village's payment plan to determine successes and needed improvements.

5.3 Provide partial relief to customers that experience extraordinary water charges due to hidden leaks, line breaks, or circumstances outside of the reasonable control of the account holder.

5.4 Develop a customer assistance program targeted to Village of Riverdale senior residents.