



ELEVATE
Equity through climate action


Metropolitan**Planning**Council

Village of Broadview

Water Affordability Analysis

FEBRUARY 2023



Acknowledgements

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Elevate wishes to thank the Charles Stewart Mott Foundation, McDougal Family Foundation, and the Joyce Foundation for their ongoing support of projects related to, research into, and collaborations on water affordability.

About Elevate

Elevate is a nonprofit organization that works nationally and is headquartered in Chicago. Elevate designs and implements programs to ensure that everyone has clean and affordable heat, power, and water in their homes and communities — no matter who they are or where they live. For more information, visit ElevateNP.org.

About MPC

An independent planning and policy organization founded in 1934, Metropolitan Planning Council changes perceptions, conversations, and the status quo. MPC works to shape a Chicago region where every community is valued, every person has a voice, and every neighborhood thrives. For more information, visit Metroplanning.org.

This report is part of a larger body of work including a literature review, a program and policy solutions paper, an interactive tool, and more, which can be found at ElevateNP.org/Water-Affordability and Metroplanning.org/WaterAffordability.

Contents

Executive Summary	6
Project Background	9
Project Context.....	11
Water in Broadview.....	14
Quantitative Analysis.....	18
Qualitative Analysis	24
Key Findings & Recommendations	28
Conclusion	34
Appendix A: July 2020 debt snapshot for Residential accounts.....	35
Appendix B: July 2021 debt snapshot for Residential accounts.....	36
Appendix C: July 2022 debt snapshot for Residential accounts.....	37
Appendix D: Further Reading	38

February 8, 2023

Hon. Katrina Thompson
Mayor, Village of Broadview
Broadview, IL



Dear Friends and Neighbors,

As you know, transparency with Broadview residents has been a top priority for me as mayor, so I am eager to share a new report with you: Village of Broadview: Water Affordability Analysis.

What is the report about?

It is about the cost of water services to residents, businesses, and local government.

As you may know, Broadview purchases its water from the City of Chicago, and, since 2016, Chicago has been increasing the price of its water provided to Broadview and other communities based on changes to the Consumer Price Index.

To avoid passing the full cost of Chicago's water price increases onto Broadview water customers, Broadview has chosen to implement smaller, multi-year increases. But those increased Chicago water costs have become very expensive for Broadview's budget. So, we commissioned the report to better understand how to fairly manage the rates we charge for water.

The study reviewed billing data from July 2020 to July 2022 for residential, industrial, commercial and government users. Specifically, 87.5% of customer bills are residential, but more than half of Broadview's water consumption is by industrial and commercial users. Additionally, based on personal interviews, residents and small businesses owners are generally satisfied with Broadview's water service, but there is room for improvement.

Because of the current rate structure, a smaller group of customers are paying less despite their comparative larger consumption of water. The report recommends a redesign of rates to accurately reflect consumption and cost, with a particular emphasis on ensuring universal water access and affordability of water service.

The report is an important starting point for a transparent discussion about water rates with all stakeholders – residents, businesses, and local government. I look forward to having that discussion with you.

Please let me know if you have any questions about the report.

Sincerely,

Katrina Thompson



Executive Summary

Building on a body of work aimed at addressing water affordability in northeastern Illinois, Metropolitan Planning Council and Elevate, with support from Illinois-Indiana Sea Grant, entered into a limited partnership with the Village of Broadview for a pro bono technical assistance project.

The project includes analysis of the Village's water billing data to understand the scope of water usage, billed amounts, and affordability by account type. This quantitative analysis is supplemented by interviews with local stakeholders including residents, small business owners, municipal staff, and elected officials to gather experiential data related to the provision and consumption of water service.

This report provides staff and elected officials in the Village of Broadview with an overview of water affordability issues identified through our analysis. It includes key findings and recommendations to guide future water rate discussions and the adoption of affordability-based programs and policies, ensuring they meet the needs both of the municipality and its ratepayers.

Municipal Context

- The Village of Broadview is a municipality located in central Cook County, Illinois, with a population of 7,998 individuals and 3,174 households as of the 2020 census. The majority of Broadview's population are Black residents, at 73%. Homeownership is high, predominantly single-family detached, and the largest land uses are industrial and single-family residential. The middle class is roughly comparable to that of Cook County and the broader region of northeastern Illinois.
- Broadview purchases treated Lake Michigan water from the City of Chicago via the Broadview-Westchester Joint Water Agency. Broadview employs a three-tiered rate structure, and higher consumers get a percent discount based on usage.
- Unlike municipalities that produce their own water (e.g., through municipally-owned groundwater wells), purchased water rates can impact water affordability in the Village of Broadview. Chicago water rates significantly increased in the early 2000s, and, since 2016, Chicago adopted a policy whereby rates are adjusted in accordance with the Consumer Price Index. Annual rate increases imposed by the City of Chicago automatically trigger a rate increase for the Broadview-Westchester Joint Water Agency's customers, including the Village of Broadview. To avoid passing a heavy water burden onto municipal water customers, the current Broadview administration has chosen to implement incremental, multi-year increases, but percent increases generally lag behind increases in Chicago's rates.

Quantitative Overview

- The study covered water billing data for a period of two years, from July 2020 to July 2022. The bills were for four customer account types – residential, industrial, commercial, and government.
- There were differences in consumption and billing by customer type, with industrial and commercial accounts using more but paying less per unit consumed. Specifically, 88% of customer accounts are residential, but more than half of Broadview's water consumption is by industrial and commercial users, with a combined total of 60%. This despite accounting for only 12% of accounts.

- For residential accounts, we received and analyzed nearly 62,000 individual bills, excluding accounts with a history of vacancy. Average residential bills for the study period totaled \$50.26 per month, including penalties for late payments, and customers generally paid on time.
- Three point-in-time debt snapshots provide additional insights into residential customer account behavior, with approximately 85% having no past due balances at each point analyzed. Among customers with water debt, approximately 60% had less than \$100 in past due balances in each snapshot.
- From those debt snapshots, approximately 1-2% of residential customers were greater than \$500 in arrears. This relatively small group of customers accounted for 68% of Broadview's total outstanding water debt in July 2020, 73% in July 2021, and 78% in July 2022. The increase over time is notable but, perhaps, too limited in scope to imply an ongoing trend, especially in consideration of the pandemic-era statewide water shutoff moratorium. The main takeaway is that a small group of residential customers account for the majority of Broadview's water debt.

Qualitative Overview

- Interviews were conducted with the following stakeholder groups: residents, small business owners, elected officials, and municipal staff.
- Staff and elected officials prioritize good communications and customer service and cite the installation of smart meters as a significant capital improvement, enhancing both administrative and communication efforts. The cost of water was listed as a concern, and elected officials will soon begin their process to establish new five-year rate increases.
- Based on a limited sample size, residents and small business owners were generally satisfied with water in the Village, but there remains room for improvement, particularly with regards to assistance for seniors and communication applications using smart meter data.

Recommendations

The report focuses on recommendations based on the findings of the data analysis and stakeholder engagement. These include:

KEY FINDING 1 – Customers are generally satisfied with Village water and their interactions with the administration.

Recommendation: Continue providing a high level of customer service, paying attention to trends in customer feedback to identify larger, potentially systemic issues/opportunities and targeting outreach to groups identified as needing additional assistance.

KEY FINDING 2 – Customers generally carry low amounts of water debt, but a small cohort of consistently past due accounts hold a significant amount of debt.

Recommendation: Target direct outreach to accounts with significant and consistent arrearages to identify appropriate assistance options, potentially involving debt forgiveness and the elimination of punitive practices such as penalties, shutoffs, and liens for income-eligible customers.

KEY FINDING 3 – Because of the tiered rate structure, a smaller group of customers are paying less despite their comparatively larger impact on the system.

Recommendation: Determine the top rate-setting priorities and redesign rates, with a particular emphasis ensuring universal access to, and affordability of, water service.

KEY FINDING 4 – Water rates do not reflect the cost of purchasing water from the City of Chicago.

Recommendation: To ensure funds remain available for timely system maintenance and repairs, establish a policy where customer rates are responsive to changes in municipal costs while offering support to customers who currently cannot afford water costs as well as those who will experience difficulties as rates increase.

Foundational recommendations are also included from previous water affordability reports – namely, reduce costs, promote water conservation, design and implement equitable rates, strengthen customer assistance programs, target the hard-to-reach, and develop a water workforce.

Project Background

Purpose

This report provides staff and elected officials in the Village of Broadview with an overview of water affordability issues identified through quantitative and qualitative analyses. The report includes key findings and recommendations to ensure future water rate structures and affordability-based programs and policies can meet the needs of both the municipality and its ratepayers. This report intends to help Village officials and staff make informed decisions as Broadview continues to work on this important issue.

Water Affordability in Northeastern Illinois

In 2018, Metropolitan Planning Council (MPC), Elevate, and Illinois-Indiana Sea Grant collaborated to produce the report, “Water Affordability in Northeastern Illinois: Addressing Water Equity in a Time of Rising Costs.”¹ This report analyzed water affordability challenges across northeastern Illinois and concluded:

- Affordability is a continuum, not a dichotomy, meaning the same water rate might be affordable to some and a considerable burden to others.
- As opposed to being concentrated in certain parts of the region, potential water affordability issues were found throughout northeastern Illinois, and every municipal drinking water utility should take steps to identify and address local impacts.
- As water system maintenance costs and rates rise, careful examination of ability to pay within a municipal drinking water utility’s customer base will become increasingly important.

As an outgrowth of this work, MPC and Elevate with support from Illinois-Indiana Sea Grant worked with the cities of Chicago and Evanston to conduct water affordability analyses and identify potential solutions to affordability challenges.

Upon completion of these projects, the team sought partnerships with municipalities with less spread between the lowest and highest income earners – that is, less income diversity – to identify the unique types of challenges and applicable solutions for such municipalities. MPC and Elevate partnered with the Village of Broadview and the City of Harvey on water affordability technical assistance projects.

Goals & Objectives

The water affordability project with the Village of Broadview includes analysis of actual water billing data to understand the scope of water usage, billed amounts, and affordability by account type. This quantitative analysis was supplemented by interviews with local stakeholders, including residents, small business owners, municipal staff, and elected officials to identify water affordability challenges and opportunities in the Village.

¹ MPC & Elevate (2020). Water Affordability in Northeastern Illinois: Addressing Water Equity in a Time of Rising Costs. elevatenp.org/publications/water-affordability-in-northeastern-illinois-addressing-water-equity-in-a-time-of-rising-costs/

These analyses sought to identify the scale and scope of water bills, water debt, water shutoffs, municipal data management, and customer service and to propose solutions tailored to Broadview's needs.

These services were provided to the municipality on a pro bono basis by MPC and Elevate with analytical support provided by Illinois-Indiana Sea Grant.

Scope of Work

The Village of Broadview entered into a limited partnership with MPC and Elevate to fulfill the following scope:

1. Conduct a quantitative analysis of billing and usage data to identify potential issues related to water affordability.

Purpose: To understand the impact of water usage, shutoffs, debt, leaks, and consumption patterns in the Village

Task: MPC will work with Village staff to collect, clean, and analyze water usage, billing, and other data relevant to understanding the unique water affordability challenges posed to the Village itself and its customers.

Deliverable: Completion of quantitative analysis and summary figures

2. Conduct a qualitative analysis with officials, staff, water customers, and other stakeholders to identify potential issues related to water affordability.

Purpose: To learn stakeholder perspectives on water billing, data management, assistance programs, customer service, etc. in the Village

Task: Elevate will conduct one-on-one interviews and hold focus groups with relevant stakeholders to gather and understand experiential data related to the provision and consumption of water in the Village. This will support and build on past research with local and national water service providers, customers, and advocates.

Deliverable: Completion of qualitative analysis with key takeaways highlighted

3. Produce a water affordability report summarizing the analysis and recommending tailored solutions

Purpose: To make recommendations for addressing issues of water affordability in the Village

Task: MPC and Elevate will produce a report summarizing the findings of the quantitative and qualitative analyses and recommendations for the Village to address any water affordability-related issues and opportunities uncovered through MPC and Elevate's work. As available, stakeholders interviewed as part of the qualitative analysis (item #2 above) will vet these findings and recommendations prior to finalizing the report. The final report will then be presented to Village officials and staff at a venue deemed appropriate, after which MPC and Elevate will transition to a support role for implementation.

Deliverable: Completion of a final summary report and presentation(s) to the Village

Project Context

Overview

The Village of Broadview is a municipality located in Proviso Township in central Cook County, Illinois, incorporated under the trustee-village form of municipal government with a president, clerk, and six trustees elected at-large.² The Village has a total population of 7,998 individuals and 3,174 households as of the 2020 census.³

History

The land that became the Village of Broadview was and still is occupied by people of the Council of Three Fires, an alliance of the Ojibwe, Odawa, and Potawatomi North American tribes.⁴

Early non-native settlers, mostly of German descent, partially drained a small lake and other marshy areas in the 1800s for agricultural uses. Formal development began with the purchase of 240 acres of land in 1835 from the United States government. In 1893, the land was subdivided by a real estate firm, hoping to capitalize on the World's Columbian Exposition, though the area remained mostly agricultural. In December 1914, approximately 200 residents voted to incorporate as a municipality, and the Village took its name from the Illinois Central Railroad depot, which was named Broadview.⁵

Large population increases followed World War II, peaking at 9,623 individuals in the 1970 census.⁶ Around the same time, the Village decided to apportion a significant amount of land for industrial uses.⁷ Today, the Village's largest land uses are industrial and single-family residential – respectively, 330 acres (29% of Village land) and 315 acres (28%). The third largest land use, at 306 acres (27%), is transportation and other,⁸ and the Village is situated adjacent to multiple modes of local and long-distance transportation.

Demographics

The Village's population grew through the mid-20th century, with the largest increases coming in the post-war years and leveling out in the 1970s (see Fig. 1). The period after 1970 also saw a significant demographic shift, with Black residents (less than 6% in 1970⁹) now estimated to comprise 73% of Broadview's population.¹⁰

² Village of Broadview Illinois (2020). Village Government. broadview-il.gov/town-council/

³ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

⁴ Village of Broadview Illinois (2020). Broadview History. broadview-il.gov/broadview-history/

⁵ Village of Broadview Illinois (2020). Broadview History. broadview-il.gov/broadview-history/

⁶ Wikipedia (n.d.). Broadview, Illinois. en.wikipedia.org/wiki/Broadview,_Illinois

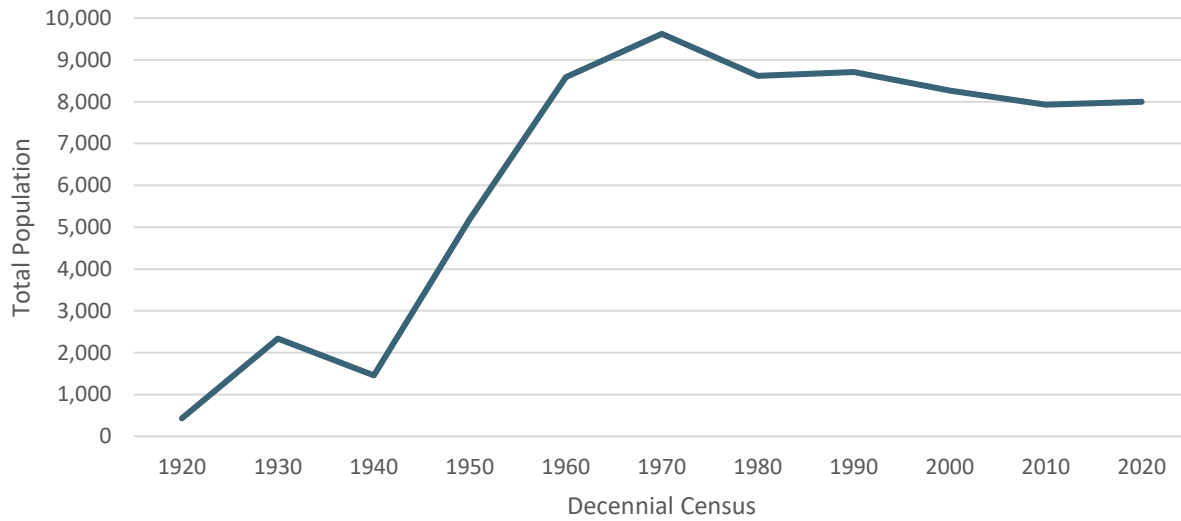
⁷ Rose, P. K. (n.d.). Broadview, IL. Encyclopedia of Chicago. encyclopedia.chicagohistory.org/pages/170.html

⁸ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

⁹ Rose, P. K. (n.d.). Broadview, IL. Encyclopedia of Chicago. encyclopedia.chicagohistory.org/pages/170.html

¹⁰ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

FIGURE 1. BROADVIEW POPULATION CHANGE^{11,12}



Housing & Income

Broadview’s homeownership rate exceeds that of both Cook County and the seven-county region of northeastern Illinois, while the rate of vacant housing units is lower than both, as shown in Table 1.

Broadview’s housing stock is oriented more towards single-family and light density than the broader county and region, shown in Table 2.

Median income in Broadview is lower compared to Cook County and the region (see Table 3). Although the Village has a greater concentration of residents in lower income brackets (less than \$50,000), it is home to a middle class (\$50,000-\$149,999) slightly larger than the county and region.¹³

TABLE 1. HOUSING OCCUPANCY ESTIMATES, 2016-2020¹⁴

Geography	Owner-occupied	Vacant
Broadview	70.1%	5.9%
Cook County	57.2%	9.4%
Region	64.2%	7.8%

¹¹ Wikipedia (n.d.). Broadview, Illinois. [en.wikipedia.org/wiki/Broadview, Illinois](https://en.wikipedia.org/wiki/Broadview,_Illinois)

¹² Rose, P.K. (n.d.). Broadview, IL. Encyclopedia of Chicago. encyclopedia.chicagohistory.org/pages/170.html

¹³ A Pew Research Center study defines “middle income” or “middle class” as approximately \$52,000-\$156,000 annual income for a family of three in 2020 dollars. For more information, see: Kochhar, R. & Sechopoulos, S. (2022). How the American middle class has changed in the past five decades. Pew Research Center. pewresearch.org/fact-tank/2022/04/20/how-the-american-middle-class-has-changed-in-the-past-five-decades/

¹⁴ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

TABLE 2. HOUSING CHARACTERISTICS, 2016-2020¹⁵

Geography	Single-family (detached and attached)	Multi-family (2-19 units)	Multi-family (>20 units)
Broadview	67.3%	27.3%	4.5%
Cook County	45.7%	34.7%	18.8%
Region	57.7%	26.9%	14.5%

TABLE 3. INCOME CHARACTERISTICS, 2016-2020¹⁶

Geography	Median household income	Low income (less than \$50,000)	Middle income (\$50,000-\$149,999)	High income (\$150,000 and higher)
Broadview	\$54,537	44.2%	46.9%	9.0%
Cook County	\$67,886	38.0%	44.1%	17.9%
Region	\$76,606	33.5%	46.0%	20.4%

¹⁵ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

¹⁶ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

Water in Broadview

Source Water

Lake Michigan is the source of potable water for 56% of the population of the State of Illinois, including the Village of Broadview.¹⁷ Broadview purchases water from the City of Chicago via the Broadview-Westchester Joint Water Agency.

The City of Chicago has two water treatment plants, the Jardine Water Purification Plant and the Eugene Sawyer Water Purification Plant. The former serves the Broadview-Westchester Joint Water Agency, from which Broadview purchases water. (Broadview's Village President is also co-director of this agency.)

Water Quality

Although Lake Michigan is a freshwater lake, the untreated water is not clean enough to drink. Chicago's water purification plants use industry-standard processes to make the water safe to consume before pumping it into the system.¹⁸ The Broadview-Westchester Joint Water Agency re-treats the water with chlorine to kill residual contaminants, and the water is then ready to be delivered and consumed.¹⁹

Broadview-Westchester Joint Water Agency

Treated, potable water is delivered via the Jardine Water Purification Plant in the City of Chicago to the Broadview-Westchester Joint Water Agency, located at 2222 S. 10th Avenue in Broadview. This Agency formed in November 1927 by intergovernmental agreement between the Village of Broadview and the Village of Westchester as a cost-effective means of supplying Lake Michigan water to their customers.

The Agency is governed by a Board of Directors – the Village Presidents of each municipality – and a six-person Executive Committee, which includes the two Presidents plus two appointees from each Village. Agency assets include the 10th Avenue Pump Station and Water Storage Facility. The Agency employs a superintendent and up to two water operators to oversee operations of the waterworks system.²⁰

Current customers include:

- **Charter customers**
 - Village of Broadview, Illinois
 - Village of Westchester, Illinois
- **Contract customers**
 - Hines Veterans Administration Medical Center, located in Hines, Illinois
 - Madden Mental Health Center, located in Hines, Illinois
 - Loyola University Medical Center, located in Maywood, Illinois

¹⁷ Illinois State Water Survey (2017). The Distribution of Water Use in Illinois (SWS Map Series 2017-01). isws.illinois.edu/maps

¹⁸ City of Chicago (n.d.). Water Treatment. chicago.gov/city/en/depts/water/supp_info/education/water_treatment.html

¹⁹ K. Thompson, personal communication, August 30, 2022.

²⁰ Broadview-Westchester Joint Water Agency (2021). Overview of: BWJWA governmental structure; Water system facilities, equipment and real estate; Finances; Water rates and service rates and charges; Recent, pending and proposed projects; Water regulations; Personnel.

Charter and contract customers are charged different rates, and these fund the administration as well as maintenance and operations of the system, including but not limited to the following:

[...] the purchase cost and transmission costs of Lake Michigan Water from the City of Chicago, the Agency's own transmission costs of water throughout the Waterworks System, and for the purpose of paying any outstanding bonds and interest and other debt relating to the Waterworks System and for the purpose of funding reserves for the future maintenance and replacement of the Waterworks System.²¹

Unless the Agency chooses to do otherwise, annual rate increases imposed by the City of Chicago automatically trigger a rate increase for the Agency's customers.

Chicago Water Rates

After years of charging water rates that were insufficient to cover the cost of pipe replacement and other needs,²² the City of Chicago began adjusting rates upward by significant percentages. Rate increases in the range of 14% to 25% were seen over a period of several years between 2008 and 2015.²³

These rate increases affected Chicago's suburban wholesale water customers. That is, in addition to ratepayers within city limits, suburban municipalities and other suburban water customers were charged higher rates for water by the City of Chicago. Beginning in 2016, Chicago adopted a policy whereby, "the annual water rates shall be adjusted upwards, if applicable, by applying the previous year's rate of inflation [...] based on the Consumer Price Index."²⁴ Thereafter, rate increases were more modest: 1.8% in 2017, 1.5% in 2018, 0.8% in 2019, and so on. The highest increase was in 2022, when rates jumped 5%, again based on the rate of inflation.

Over the past 20 years, the rates charged by the City of Chicago have only gone up – from approximately \$1.20 to \$4.33 per 1,000 gallons – and these rates are almost certain to continue to rise. Suburban municipalities that purchase Lake Michigan water via Chicago – like the Village of Broadview – must decide when and how to pass these increases on to local water customers, whether immediately or over time.

Broadview Water Rates & Billing

The Village is approaching the end of a planned, five-year incremental rate increase, with the final increase scheduled to go into effect on May 1, 2023 (see Table 4). As of the final rate increase in May 2023, the rate for Broadview's Tier 1 water customers will be \$13.08 per 1,000 gallons compared to Chicago's rate of approximately \$4.33 per 1,000 gallons. Broadview, like other municipalities that purchase water from Chicago, must charge enough to pay for the cost of water as well as for operations and maintenance of the system. The

²¹ Broadview-Westchester Joint Water Agency (2021). Overview of: BWJWA governmental structure; Water system facilities, equipment and real estate; Finances; Water rates and service rates and charges; Recent, pending and proposed projects; Water regulations; Personnel.

²² Elevate & MPC (2022). City of Chicago Water Affordability Analysis. elevatenp.org/publications/city-of-chicago-water-affordability-analysis/

²³ City of Chicago (n.d.). Water and Sewer Rates. chicago.gov/city/en/depts/fin/supp_info/utility-billing/water-and-sewer-rates.html

²⁴ City of Chicago (n.d.). Water and Sewer Rates. chicago.gov/city/en/depts/fin/supp_info/utility-billing/water-and-sewer-rates.html

Village has undertaken a process to raise rates over time (i.e., not automatically passing on Chicago’s percent increases) with the goal of easing the burden on customers.

The five-year rate increase was based on a community engagement process to gather stakeholder input and communicate the need for such increases. This process will begin anew in 2023, led by the Village Board’s Water and Sewage Committee, to prepare for the next five-year phased increase.

Currently, Broadview employs a three-tiered rate structure, based on usage as indicated by monthly readings generated by meters. The second and third tiers receive a 5% and 10% rate discount, respectively, applied to total consumption for a given month.

TABLE 4. WATER RATE TIERS AND RATE INCREASES²⁵

Usage (per 1,000 gals)	Tier	Effective Date					Discount
		1/1/2020	5/1/2020	5/1/2021	5/1/2022	5/1/2023	
0-25	1	\$ 9.22	\$ 10.19	\$ 11.15	\$ 12.12	\$ 13.08	0%
26-50	2	\$ 8.76	\$ 9.68	\$ 10.59	\$ 11.51	\$ 12.43	5%
>50	3	\$ 8.32	\$ 9.20	\$ 10.06	\$ 10.94	\$ 11.80	10%

Broadview’s water customers are billed monthly. Bills are sent out on the 15th of the month (or the previous business day), and payments are due on the last business day of the month. Payments can be made online or in-person at the Village of Broadview Municipal Building. A 10% penalty is assessed for any unpaid balance after the due date, and payments are credited to past due balances first.

In addition to charges based on the water rate tiers above, bills include sewer service and rubbish collection. Sewer service is charged at a rate of \$0.81 per 748 gallons, and residential customers pay a flat fee of \$17.15 per month for rubbish collection.²⁶

Payment plans are available. Payment plans are offered based on the need of residents, and every arrangement is negotiated individually. Residents can make an arrangement with the Village administrator who notates the payment plan in the system.²⁷ For customers currently enrolled in a payment plan, penalties stop accruing. For eligible customers, additional assistance is available through nonprofit aid organizations, such as the Community and Economic Development Association of Cook County (also known as CEDA), Housing Forward, and the Proviso Leyden Council for Community Action. The Village generally contacts customers with past due balances in the range of \$100-500 and above to connect them with these aid organizations.²⁸

The Village does not currently offer discounted rates for seniors, disabled veterans, etc.²⁹

²⁵ Village of Broadview (n.d.). Water Bill Rates. broadview-il.gov/water/water-bill-rates/

²⁶ L. Jones, personal communication, February 9, 2023.

²⁷ L. Jones, personal communication, January 28, 2023.

²⁸ L. Jones, personal communication, December 13, 2022.

²⁹ L. Jones, personal communication, January 28, 2023.

Recourse for Non-Payment

Shutoffs for non-payment were suspended during the pandemic but are set to resume in April 2023.³⁰ A \$10 administrative fee is assessed for water service shutoffs, and a \$50 fee is assessed to restore service after full payment (including any penalty amount) is received.³¹

The Village may also file liens against property for non-payment of water bills, but none have been filed under the current Village President's administration.³² Additionally, all water charges must be paid in full for a property owner to receive a Certificate of Compliance from the Village's Building Department, without which the property cannot be sold or otherwise conveyed.³³

³⁰ L. Jones, personal communication, December 13, 2022.

³¹ Village of Broadview (2020). Penalty Phase. broadview-il.gov/water/penalty-phase/

³² L. Jones, personal communication, December 13, 2022.

³³ Village of Broadview Building Department (2019). Village of Broadview procedures for purchase and sale of property real estate in Broadview, Title 13 compliance stamp guidelines. broadview-il.gov/wp-content/uploads/2020/06/TITLE-13-UPDATED-2.pdf

Quantitative Analysis

Overview

With this background in mind, we proceed to the analyses conducted by MPC and Elevate. For the quantitative analysis, MPC worked with Village staff to collect, clean, and analyze water usage, billing, and other data to understand the unique water affordability issues and opportunities in the Village.

A summary of our findings follows.

Data Overview

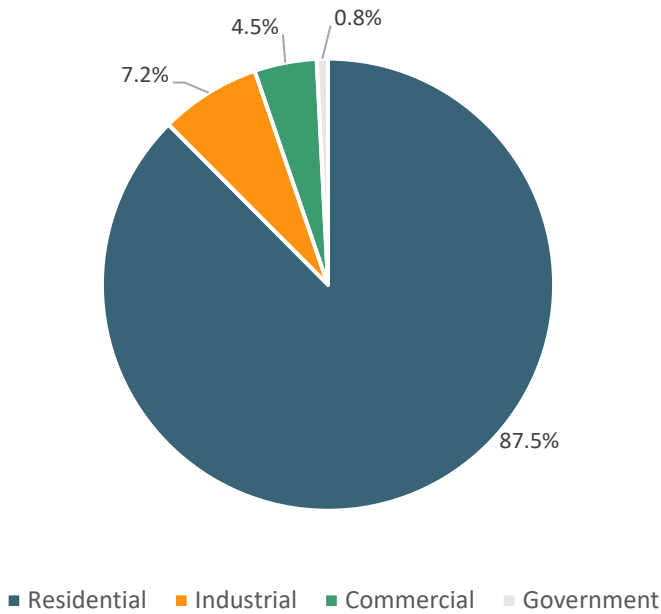
Important notes regarding the quantitative analysis include the following:

- The study covered water billing data for a period of two years, from July 2020 to August 2022.
- The bills received were for four customer account types – residential, industrial, commercial, and government.
- For residential accounts, we received and analyzed 61,949 individual bills, representing 2,385 accounts. Accounts with a history of vacancy or those that were not active for the duration of the study were not included.
- Water accounts in Broadview are registered to a specific meter, and many of the Village’s multi-family residences share a single meter. To account for multi-family residences in the analysis, bills and debt were divided by the number of units in a building. This analysis uses the terms “service cost,” which is the combined water and sewer charges, and “total bill,” which is the service cost plus any penalties, as applicable.

Consumption & Billing by Account Type

As shown in Fig. 2, the vast majority of customer accounts are residential (88%). More than half of Broadview’s water consumption is by industrial and commercial users, though, with a combined total of 60% (see Fig. 3) while accounting for only 12% of customer accounts.

FIGURE 2. CUSTOMER INVENTORY BY ACCOUNT TYPE



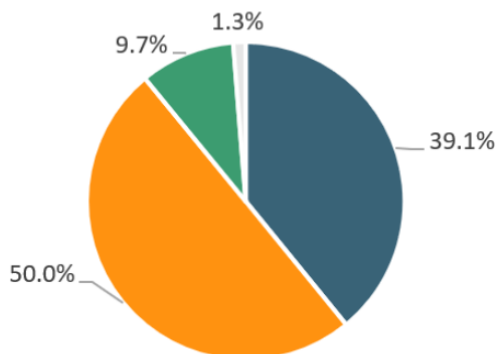
Resulting from Tier 2 and Tier 3 discounts for higher consumers (see *Broadview Water Rates & Billing* in the previous section), industrial and commercial users consume 60% of all services but account for 57% of total billed amounts, as shown in Fig. 3.

This represents a burden-shift through the rate structure. In other words, although the difference is small, some customers are using more water and, thereby, are responsible for a larger share of system costs but are paying less per unit of water.

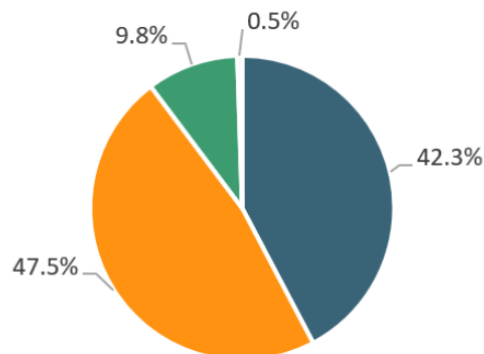
FIGURE 3. COMPARISON OF CONSUMPTION AND TOTAL BILLED AMOUNT BY CUSTOMER ACCOUNT TYPE

■ Residential ■ Industrial ■ Commercial ■ Government

Water Consumption by Account Type



Total Billed by Account Type

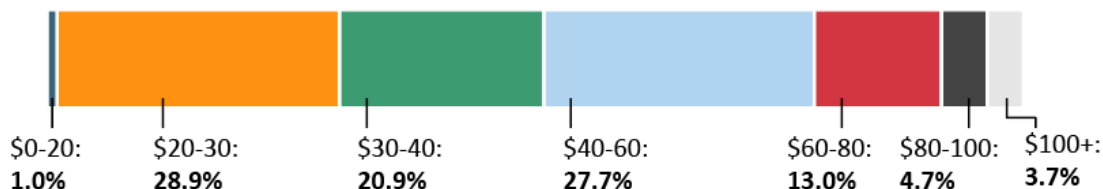


Cost of Service

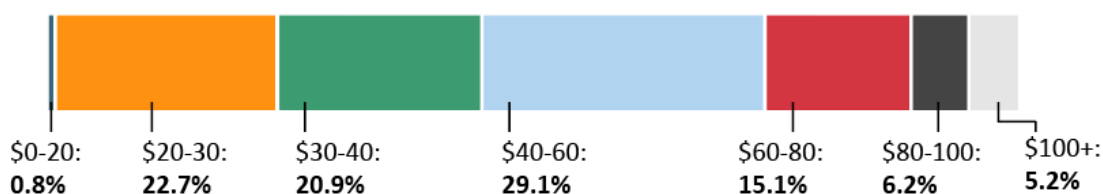
Service cost refers solely to the customer’s cost for water and sewer services and does not include late penalties or other services. Over the two-year study period, the average monthly service cost was \$45.92 for residential accounts, and 78% of residential customers had a monthly cost of service below \$60 (see the top half of Fig. 4).

FIGURE 4. COMPARISON OF THE DISTRIBUTION OF COSTS FOR SERVICE COST ALONE VERSUS SERVICE COST PLUS PENALTIES

Distribution of Service Cost for Residential Accounts



Total Billed Amount for Residential Accounts, Including Service Cost and Penalties



Total Bill

Total bill includes the service cost and penalties for late payment, if any. Over the study period, the average total bill was \$50.26 per month. Compared with service cost alone, when penalties are factored in, there is a moderate shift of bills into higher price brackets, i.e., the share of customers with monthly bills in the \$80-\$100 and \$100+ ranges increase – compare the bottom and top halves of Fig. 4.

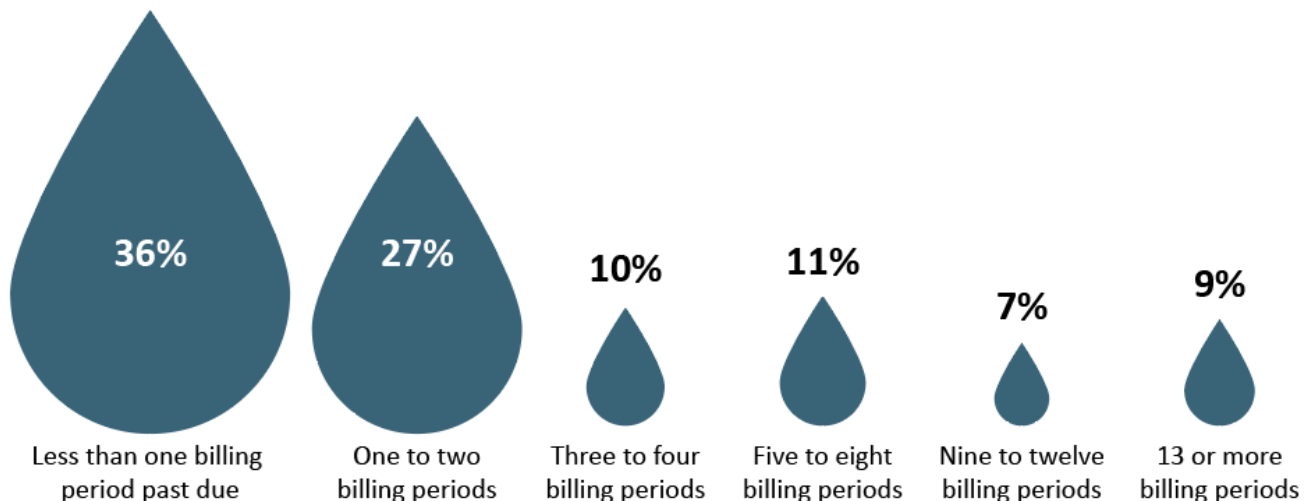
Past Due Balances

Of the 2,385 unique residential accounts analyzed – specifically, accounts with consistent billing activity and no reported vacancy – 64% of accounts carried a balance for two or fewer months per year, on average. Additionally, throughout the study period, an average of 350 accounts carried a balance from one month to the next. This means Broadview’s residential customers generally pay their bills on time or no more than two months late.

However, 7% of accounts carried balances for 9-12 months of the two-year study period, and 9% carried a balance for greater than 13 months. This means that roughly 15% of customers paid late for at least 40% of billing periods in the study period (see Fig. 5). While accounts with no carried balances had lower average bills than those that did, there does not appear to be a significant relationship between bill size and frequency of past due payments. The average cost of service for accounts which carried no balances was \$40.91, compared to \$47.79 for accounts with 1-2 months of late payments or \$48.36 for accounts with 13 or more months of late

payments. To further clarify these statements, we now provide a debt snapshot at three points in time over the study period.

FIGURE 5. RESIDENTIAL ACCOUNTS BY NUMBER OF MONTHS WITH PAST DUE BALANCES



Water Debt Snapshots

To analyze changes in customer debt over time, we looked at the month of July in each year of the study period (2020, 2021, and 2022). As can be seen from the snapshots provided below, approximately 85% of residential customers had no past due balances at each point analyzed, and, among customers with water debt, approximately 60% had less than \$100 in past due balances in each snapshot.

However, approximately 1-2% residential customers were greater than \$500 in arrears during the study period. This relatively small group of customers accounted for 68% of Broadview's total outstanding water debt in July 2020, 73% in July 2021, and 78% in July 2022. The increase over time is notable but, perhaps, too limited in scope to imply an ongoing trend, especially in consideration of the pandemic-era statewide water shutoff moratorium. The main takeaway is that a small group of customers account for the majority of Broadview's water debt.

TABLE 5. SUMMARY OF WATER DEBT SNAPSHOTS IN JULY DURING STUDY PERIOD

Year	% Residential with no debt	% with <\$100 debt, for Residential with debt	Number of accounts with high debt	% total debt held by accounts with high debt
2020	88%	59%	20 (0.8%)	68%
2021	87%	65%	22 (0.9%)	73%
2022	83%	58%	51 (2%)	78%

1. July 2020 Debt Snapshot (see [Appendix A](#))

- Broadview's residential water customers carried low amounts of water debt, with 88% of customers having no past due balances in July 2020.

- Among customers who were carrying water debt, 59% had less than \$100 in past due balances.
- A small cohort of 20 consistently past due accounts (0.8% of total customers) held a significant amount of debt, accounting for 68% of total past due balances.

2. July 2021 Debt Snapshot (see [Appendix B](#))

- Broadview’s residential water customers carried low amounts of water debt, with 87% of customers having no past due balances in July 2021.
- Among customers who were carrying water debt, 65% had less than \$100 in past due balances.
- A small cohort of 22 consistently past due accounts (0.9% of total customers) held a significant amount of debt, accounting for 73% of total past due balances.

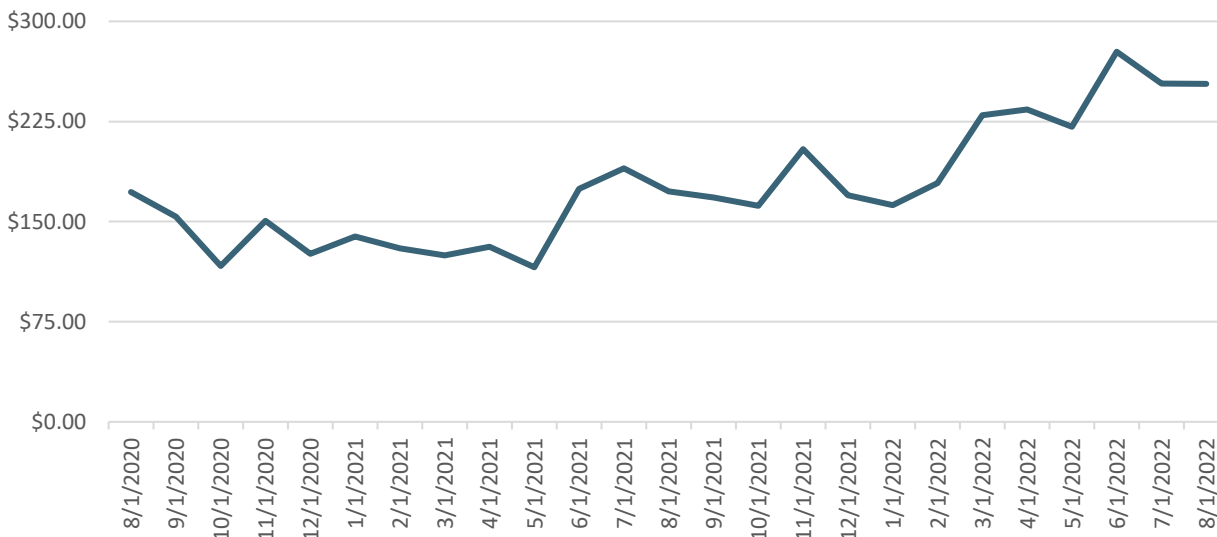
3. July 2022 Debt Snapshot (see [Appendix C](#))

- Broadview’s residential water customers carried low amounts of water debt, with 83% of customers having no past due balances as of July 2022.
- Among customers who were carrying water debt, 58% had less than \$100 in past due balances.
- A small cohort of 51 consistently past due accounts (2% of total customers) held a significant amount of debt, accounting for 78% of total past due balances.

Average Past Due Balances

The number of customers carrying balances between billing periods averaged 350 accounts between July 2020 and July 2022. The average past due balance for customers carrying water debt has steadily increased over the study period, from \$172 in July 2020 to \$253 in July 2022 (see Fig. 6). This has largely been driven by growth in the balances of high debt customers, with customers having more than \$500 in past due balances accounting only for 2% of total customers and 13% of indebted customers while holding 78% of outstanding water debt as of July 2022.

FIGURE 6. AVERAGE OUTSTANDING BALANCE FOR PAST DUE RESIDENTIAL ACCOUNTS OVER ENTIRE STUDY PERIOD



Again, there is not enough information to draw a conclusive long-term trend, especially in consideration of the pandemic and pandemic-era shutoff moratorium. What is clear is that the total cost of water, sewer, and penalties is proving a significant burden for a small group of residential customers – indeed, just 51 accounts – in need of targeted assistance.

Qualitative Analysis

Overview

Building on the quantitative analysis, Elevate conducted interviews with the following stakeholder groups:

1. Residents
2. Small business owners
3. Elected officials
4. Staff

The purpose of these interviews was to gather experiential data and identify potential issues and opportunities related to water affordability. Interviews covered topics including water billing, data management, assistance programs, customer service, and more. Our findings are compiled and summarized below. See the following section, “Key Findings & Recommendations,” for an analysis of the findings.

Residents

Village staff assisted the project team in connecting with five residential customers for stakeholder interviews. Discussions were designed to help us learn about the experiences and concerns of Broadview’s residential water customers as they relate to billing, billing assistance, customer service, and other topics involving water affordability.

We acknowledge the small sample size and, therefore, difficulty in making generalizations based on the feedback received.

- Among the five individuals interviewed, three were highly satisfied with the cost of water as well as leadership and transparency from the water department and elected officials.
- Several customers reported that installation of smart meters has been helpful for tracking water consumption between billing cycles. Others believe the installation of smart meters will cause their water bills to go up.
- One residential customer had a serious, one-time complaint. The individual pre-paid their water bill in anticipation of out-of-town travel but later learned they had a leak in their internal plumbing, resulting in a water bill of roughly \$2,000. This customer felt the Village should have noticed the spike in usage via the smart meter and made an attempt to shut off the customer’s water.³⁴ At this point, the customer is simply hoping CEDA can assist with the expense.

³⁴ Note: Upon reviewing an earlier draft of this report, Village staff wished to clarify the process. Staff receive a notification when smart meters detect a spike in usage, and they contact the customer and provide a list of plumbers. If a plumber identifies the problem as being within the Village-owned portion of the service line, b-box (also known as a buffalo box, valve box, or curb box), meter, etc., public works staff will verify and fix the issue, as necessary. (L. Jones, personal communication, February 9, 2023.)

- Senior citizens expressed the need for more support and assistance. Another residential customer informed us that they do not qualify for assistance programs, such as CEDA, due to their immigration status.

Small Business Owners

We also spoke with five small business owners, closely mirroring the discussion topics of residential stakeholders.

- Overall, the feedback of business owners was that water in the Village is reasonably priced and suitable for their needs.
- One respondent, however, told us they would not have chosen to establish their business in the Village of Broadview had they known the water rates would increase this much.
- Another said the water is not suitable for their needs and requires expensive additional treatment, but this was specific to the type of business they conduct.

Municipal Officials

A special committee meeting was held at the Village of Broadview Municipal Building on November 15, 2023, from 6:30-7:30 p.m. The purpose of the meeting was: 1) To learn what goals Broadview's elected officials have regarding water, water rates, and billing; and 2) To hear what challenges have been raised by the municipality's constituents and water customers. Responding to Mayor Thompson's desire for a transparent process, this meeting was open to the public, broadcast online, and recorded.

- Water is viewed by some elected officials as Broadview's most valuable resource. It is an asset that can attract new residents and commercial ventures, and – especially given the number of food manufacturers located in the Village – staff and elected officials take water quality very seriously.
- The installation of smart meters has allowed the Village to track usage better and provide data-based responses to customers when bills or usage spike and potentially help identify a leak early as opposed to waiting until a high bill arrives.
- Public education is high on the list of priorities for both elected officials and staff, reflecting a desire to help constituents understand their water, the water system, and costs associated with keeping the water flowing. This allows all interested stakeholders to participate in informed, collaborative conversations about everything associated with delivering water from source to tap. The current administration has a strong commitment to transparency and desires to work together with stakeholders to ensure water is affordable while providing sufficient revenues to maintain a high-quality system.
- Chicago raising water rates are a concern, and one which the Village cannot control, but the Village's elected officials are working with customers to implement incremental rate increases so that water bills do not cause an undue or excessive burden.

Staff

One-on-one conversations with staff members, as well as monthly check-in meetings with staff and elected officials, informed our process and added deeper understanding to both the quantitative and qualitative findings. Since staff was our primary source of engagement, these findings are slightly more expansive and, to aid comprehension, are broken down into categories of Public Education, Data Management, Customer Service, Communication, and Infrastructure Management.

PUBLIC EDUCATION

Staff repeated what we heard from elected officials. The main concern is public education to improve understanding of the water system and what rates pay for. Under the current administration, billing switched from usage based on cubic feet to gallons in order to aid in billing literacy, as cubic feet was reported to be confusing.

DATA MANAGEMENT

The switch to smart meters is now 97% complete minus some vacant properties and businesses that declined, but the goal is 100%. This switch facilitates the Village's data management goals and allows it to run reports measuring water consumption and costs and to understand trends. Additionally, when customers have questions, the software can produce data reports to help explain consumption over time – month to month or even day to day. The Village has no complaints with its current software systems, which staff feel are working well and allow multiple departments to access the data.

CUSTOMER SERVICE

Village staff expressed a sincere desire to serve the public, whether helping to identify leaks, connecting them with financial assistance, or whatever is needed. When customers are experiencing issues, staff wants to know so that they can provide assistance. To address this, there is a monthly meeting of department heads to review and evaluate concerns and make recommendations to meet the needs of the community.

COMMUNICATION

Staff (and elected officials) endeavor to be communicative, and their main channel to share information with the community is the quarterly newsletter. This is mailed to seniors as well as posted on all departments' social media accounts and shared by the library, churches, and the park district. Additionally, Mayor Thompson records weekly robocalls, which are particularly beneficial for seniors. A new video is planned, too, as part of the Village's video series. This video will explain how to read the water bill and will be posted on the Village's website. Also, department heads endeavor to return customer calls within 24-48 hours. If not, the customer can file a complaint with the Village President.

INFRASTRUCTURE MAINTENANCE

Much of the Village's underground infrastructure is past its life expectancy and in need of repairs and replacement. New infrastructure is needed, too, to comply with recent requirements imposed on the City of Chicago's suburban wholesale water customers. Broadview's water rate increases are consistently lagging behind increases from the City of Chicago. This has an impact on how much of the collected revenue can go back into Broadview's system – i.e., addressing leaks and other infrastructure needs – after paying Chicago. Despite the large capital outlay required, the Village prioritizes projects that can address multiple issues simultaneously to take advantage of efficiencies, such as replacing water mains while redoing alleys, replacing sewer laterals during road reconstruction, etc. Also, the Village leverages connections at the county and state level for funding

and develops partnerships with other units of government for improved economies of scale. Importantly, the Village hired a grant writer, which the Director of Public Works reported to be very helpful.

Key Findings & Recommendations

Overview

Based on the findings of both the quantitative and qualitative analyses, we now proceed to a summary of the key takeaways and recommendations for addressing issues of water affordability in Broadview.

Findings & Recommendations for the Village of Broadview

Every community is unique, and a one-size-fits-all set of solutions does not exist for local water affordability challenges. Many factors impact the availability and potential efficacy of policies and programs aimed at improving water affordability. These factors include socio-demographic characteristics, community financial and management capacity, age of the water system, source water quality and quantity, customer base size and makeup, housing and land use characteristics, customer water-use patterns, vulnerability to climate change and other risks, and more.

Based on our analysis, the following key findings and recommendations stand out as priorities for the Village of Broadview:

KEY FINDING 1 – Customers are generally satisfied with Village water and their interactions with the administration.

Recommendation: Continue providing a high level of customer service, paying attention to trends in customer feedback to identify larger, potentially systemic issues/opportunities and targeting outreach to groups identified as needing additional assistance.

Explanation: Leadership matters, and, throughout our interactions with the Village, we have been impressed by staff commitment to the analytical process and desire to identify ways to improve the customer experience. Most staff have told us that this leadership comes from the top, with Mayor Thompson setting a tone (and expectation) for transparent, responsive, service-focused municipal ethos. One example of this is with senior citizens, where the Village pays special attention to ensure communication channels are meeting the needs of the customer by providing print and radio channels in addition to digital. This communication can be even more impactful by establishing two-way communication channels to ensure that there is space for feedback of vocal minorities, and that feedback is reflected in both large and more incremental service improvements for all impacted customers. Additionally, the Village appears to prefer a hands-on approach to resolving customer complaints. Currently, spikes in usage trigger a leak alert for a Public Works Department representative to contact the resident or business owner, and customers can contact the Village to access their usage data. Some customers, however, may prefer a web portal or other automated system (e.g., email, text messages) where usage data from smart meters can be accessed, especially when spikes in service occur. Deliberate, targeted outreach is encouraged for customers identified by this analysis as severely water burdened, many of whom may not have the time or inclination to engage voluntarily.

KEY FINDING 2 – Customers generally carry low amounts of water debt, but a small cohort of consistently past due accounts hold a significant amount of debt.

Recommendation: Target direct outreach to accounts with significant and consistent arrearages to identify appropriate assistance options, potentially involving debt forgiveness and the elimination of punitive practices such as penalties, shutoffs, and liens for income-eligible customers.

Explanation: Over the study period, the average cost of service was \$45.92. When penalties are added, that average increased only to \$50.26. However, a small percentage of customers are greater than \$500 in arrears, and this accounts for a significant portion of Broadview’s total outstanding water debt. Unfortunately, this situation appears only to be getting worse, with a slow but inconclusive upward trend in outstanding debt for all customers indicated by the data. Broadview should conduct direct outreach to these customers to find needed solutions, particularly focused on debt relief and preventing the conditions that resulted in such high levels of arrears, especially for customers with the greatest water debt. The data does not show us the reasons behind the debt or the types of assistance that would have the greatest impact. Village staff is best suited to conduct this type of targeted outreach and engagement.

The Water Affordability Advocacy Toolkit³⁵ provides a thorough examination of water affordability challenges and promising practices. The sections on water debt, plumbing repair assistance, and affordability and assistance programs, in particular, may provide useful information for the Village of Broadview. Some of the practices included in that report are yet to be tested, as water affordability is still a growing field of research, and practical examples are limited or have not been around long enough to draw conclusions. Accordingly, MPC and Elevate use the term “promising practices” instead of referring to these interventions as proven “best practices.”

That said, a variety of municipal examples exist, such as the Cleveland Public Water Systems program that offers a lower base charge and lower per-unit rate for eligible customers. Cleveland also partners with a nonprofit to provide a 40% discount on water charges.³⁶ Some local examples include the City of Chicago’s Utility Billing Relief program, which provides a 50% rate discount for eligible customers and the ability to have past due balances wiped out after 12 payments at the reduced rate.³⁷ The City of Evanston adopted a reduced water and sewer rate for income-qualified owners and renters. Evanston households that do not pay a bill directly can receive an annual rebate reflecting their estimated savings.³⁸ Chicago’s program addresses arrearages directly while Evanston’s attempts to keep arrearages from accumulating. Chicago also recently ended the practice of residential water service disconnection for nonpayment of charges related to water, sewer, and refuse collection.³⁹

These are relatively new programs and practices, and their impact has not yet been studied fully. The Village should explore which, if any, programs would be appropriate for their customers, especially those carrying high

³⁵ For more information, see: Natural Resources Defense Council & National Consumer Law Center (2022). Water Affordability Advocacy Toolkit. [nrdc.org/resources/water-affordability-advocacy-toolkit](https://www.nrdc.org/resources/water-affordability-advocacy-toolkit)

³⁶ Vedachalam, S. & Dobkin, R. (2021). H₂Affordability: How water bill assistance programs miss the mark. Environmental Policy Innovation. policyinnovation.org/publications/h2affordability

³⁷ City of Chicago (n.d.). Utility Billing Relief. chicago.docugateway.com/main/guest/billing_relief/

³⁸ City of Evanston (n.d.). Affordable Water/Sewer Rate. cityofevanston.org/government/departments/public-works/services/water-sewer-rates/affordable-water-sewer-rate

³⁹ City of Chicago, Office of the City Clerk (2022). Amendment of Municipal Code Chapters 2-164, 3-12, 7-28 and 11-12 regarding water shutoffs, water privatization and associated reporting. chicago.legistar.com/LegislationDetail.aspx?ID=5725331&GUID=A11D231D-19A8-4D70-AE49-322DA5642A70&Options=&Search=

balances from month to month, while also ensuring the utility collects sufficient revenue to sustain operations and maintenance. In the meantime, the Village should market the Low Income Household Water Assistance Program administered by CEDA and make sure all eligible customers are taking full advantage of the benefit.

KEY FINDING 3 – Because of the tiered rate structure, a smaller group of customers are paying less despite their comparatively larger impact on the system.

Recommendation: Determine the top rate-setting priorities and redesign rates, with a particular emphasis ensuring universal access to, and affordability of, water service.

Explanation: The process of determining the revenue requirements of a water utility, allocating costs to the various users, and then designing a rate is a complicated process, generally led by accountants and engineers. The outcome is driven by multiple priorities and objectives and guided by input from a broad spectrum of stakeholders. Rates can be used to serve a variety of purposes, from incentivizing conservation (by charging more for higher consumers) or maintaining revenue stability (by charging a higher base rate but lower volumetric rate) to incentivizing use during certain hours (by, for example, charging lower rates when energy costs are lower) and many others. Often rates must meet multiple purposes and are a compromise amongst all stakeholders.

As the purpose of this report is to ensure affordability for all users, an equitable approach should be considered whereby rates reflect the apportioned demand placed on the system by each user class *in a way that ensures universal access to, and affordability of, the service without overburdening municipal finances, which are ultimately born by residents*. That is, a cost-of-service study should include an assessment of, among other things: 1) the semi-fixed charges related to purchasing, treating, and pumping water plus any administrative costs, 2) revenue requirements to operate and maintain the system, and 3) the cost of subsidizing universal access to water, especially for eligible low-income and disadvantaged customers, whether through a customer assistance program, discounted base charge and/or volumetric rate, income-indexed billing, or other mechanism.

There is a risk of passing too much expense to customers who use a large volume of water. For example, are the fixed costs of delivering a high volume of water to manufacturing and industrial facilities via a single large diameter pipe significantly lower than costs associated with operating and maintaining a network of pipes serving homes and smaller businesses? If so, the tiered rate may be appropriate. Alternatively, some locally-owned small businesses that use high volumes of water may be negatively impacted by changes to the tiered rate structure even if the increase is warranted by their comparative impact on the system – such as laundromats, home-based day care providers, and small child care centers. The rate-setting process is rife with not-insignificant trade-offs. As the Village of Broadview begins anew the process of determining rates for the next five years, the analysis provided in this report can provide the foundation for data analysis and to guide discussions and improve water affordability.

KEY FINDING 4 – Water rates do not reflect the cost of purchasing water from the City of Chicago.

Recommendation: To ensure funds remain available for timely system maintenance and repairs, establish a policy where customer rates are responsive to changes in municipal costs while offering support to customers who currently cannot afford water costs as well as those who will experience difficulties as rates increase.

Explanation: The City of Chicago’s water rate is adjusted upwards based on the previous year’s inflation, and the policy of the Broadview-Westchester Joint Water Agency is to automatically pass these increases on to its customers, including the Village of Broadview. The Village has undertaken a process to raise rates over time and has based these rates on community input. Involving community members in the process is a recommended best practice, and the Village is to be commended.

Raising water rates, in addition to being politically unpopular, can increase the financial burden on customers who are already struggling to afford their bills and can push additional customers over the edge to unaffordability. Careful consideration needs to be built into the suite of affordability initiatives to ensure water remains accessible and affordable. Not to raise rates, though, could end up costing customers more in the long run if it results in deferred maintenance, increased water loss, and costly emergency repairs.

In 2017, water loss for the Village was 28%⁴⁰ – that is, the amount of water that enters the system but does not reach a paying customer due to leaks, theft, metering inaccuracies, etc. (minus authorized unbilled consumption, such as municipal public works operations). Per the Illinois Department of Natural Resources, 10% water loss is the threshold for Water Year 2019 and beyond for Lake Michigan Allocation Program permittees. In addition to the loss of water itself, the Village’s losses include the cost of chemicals to treat the water, the energy to pump it, and any administrative costs. Additionally, emergency repairs tend to be much more expensive than smaller fixes and planned replacement over time. Charging more for water and covering a larger percentage of the cost of the service may result in higher costs in the near term but generally yields significant savings over time.⁴¹

Foundational Actions for All Municipalities

In addition to the targeted actions above, we include foundational actions that all municipalities should consider to ensure equitable access to water and affordable water in their community. These recommendations were developed based on a nationwide review of water affordability policies and programs conducted by Illinois-Indiana Sea Grant.⁴²

Foundational actions for all municipalities include:

Strategy 1: Reduce Costs

Addressing escalating water service costs is one way to make water bills more affordable. Strategies to reduce water costs include: 1) asset management, 2) fully leveraging federal or state funding sources, such as the State Revolving Fund, and 3) regional collaboration, such as service sharing and joint procurement.

Strategy 2: Promote Water Conservation

Strategy 2A: Water conservation at the utility scale decreases water costs and, for water utilities at or near capacity, can reduce or delay the need for infrastructure expansion. Examples of utility scale water

⁴⁰ Chicago Metropolitan Agency for Planning (2022). Broadview, Community Data Snapshot, Municipality Series, July 2022 Release. cmap.illinois.gov/documents/10180/102881/Broadview.pdf

⁴¹ American Water Works Association (2016). The State of Water Loss Control in Drinking Water Utilities. [awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control](https://www.awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control)

⁴² For more information, see: Illinois-Indiana Sea Grant (2019). Water Affordability Programs & Policies: A National Review. iiseagrant.org/publications/water-affordability-programs-policies-a-national-review/

efficiency strategies include: 1) leak detection and repair, 2) metering (which Broadview has already undertaken), 3) water conservation planning, and 4) water re-use (where legal).

Strategy 2B: Customer level conservation and efficiency measures can impact affordability by keeping consumption low. There are costs for the municipality, of course, in funding these initiatives, but, as they can result in lower bills and improved water affordability, there is potential to decrease administrative costs associated with collections and more severe penalties. These measures include: 1) municipally-funded retrofits and rebate programs for things such as low-flow toilets and fixtures,⁴³ 2) water conservation ordinances, such as limiting lawn watering to certain days or times, and 3) conservation-focused outreach and education campaigns.⁴⁴

Strategy 3: Design and Implement Equitable Rates

Water rate structures can be designed to provide targeted assistance to specific customer groups, though it may be difficult to benefit all customers who need assistance and may involve making trade-offs with other utility objectives. Rate design strategies include: 1) setting rates based on periodic cost-of-service studies informed by capital improvement and asset management plans, 2) reducing the fixed charge, minimum bill, and/or minimum use allowance, and 3) exploring lifeline rates and other rate strategies to address affordability.

Strategy 4: Strengthen Customer Assistance Programs

Customer assistance policies can assist customers with being able to afford water bills. Examples of customer assistance policies include: 1) providing income-based rate discounts, arrearage forgiveness, and crisis assistance, 2) adopting budget billing practices to help customers who find it easier to pay smaller, more regular bills, 3) revising collections policies and breaking the cycle whereby utilities investing in debt recovery results in higher water rates and fees, and 4) piggy-backing on other existing federal assistance programs for low-income customers to provide water assistance.

Strategy 5: Target the Hard-to-Reach

Water affordability assistance programs typically target owner occupiers who receive a water bill. Alternate interventions are often required to reach households that do not directly pay for water, such as renters and multi-family building occupants who generally pay for water through rent and homeowner association fees and, accordingly, experience water bill increases in the form of higher rents or assessments. Providing assistance to these customers requires a different set of strategies, including: 1) providing vouchers, rebates, and discounts to landlords or tenants, and 2) targeting conservation programs and water efficiency improvements to multi-family buildings to lower water bills.

Strategy 6: Develop a Water Workforce⁴⁵

⁴³ For a municipal example, see: Village of Oak Park (2015). Free water-saving kits available. oak-park.us/newsletters/january-2015/free-water-saving-kits-available

⁴⁴ For a municipal example, see: City of La Verne (n.d.). Residential Audit Checklist for Water Use Efficiency. cityoflaverne.org/DocumentCenter/View/1601/Residential-Audit-Checklist-for-Water-Use-Efficiency-PDF?bidId=

⁴⁵ Note, this recommendation was not included in the report on water affordability policies and programs conducted by Illinois-Indiana Sea Grant. It has been added for the sake of this report.

A variety of jobs and job types exist within the water sector and can yield transferrable skills and improved job prospects.⁴⁶ As a complement to water affordability programs, workforce development initiatives provide water utilities with the opportunity to invest in the community's people as they invest in its infrastructure, especially in an era of historic Federal infrastructure investments. Strategies include: 1) partnering with a training or educational institution to develop a water workforce, such as local community colleges or the Illinois Section American Water Works Association's Operator in Training Program.⁴⁷

Some of these strategies may be infeasible or inappropriate for Broadview but, in tandem with the targeted recommendations above, comprise a suite of recommendations for consideration by municipal decision makers. These recommendations can be implemented over time, either by going for the "low hanging fruit" first or, the opposite, taking on one or two big-impact initiatives. The Village of Broadview's staff capacity and the availability of resources to secure the help of consultants, as needed, will impact this decision.

As a final note, water touches on every aspect of municipal life. Accordingly, water plans and recommendations reports should not exist in a vacuum. Rather, they should be referenced or incorporated into land use decisions, area plans, comprehensive plans, capital improvement plans, and more.⁴⁸

⁴⁶ Kane, J.W. & Tomer, A. (2018). Renewing the water workforce: Improving water infrastructure and creating a pipeline to opportunity. The Brookings Institution. [brookings.edu/research/water-workforce/](https://www.brookings.edu/research/water-workforce/)

⁴⁷ Illinois Section American Water Works Association (n.d.). Utility Resource Center. [isawwa.org/page/Utilities](https://www.isawwa.org/page/Utilities)

⁴⁸ Hansman, H. (2021). Integrating Land Use and Water Planning for a Sustainable Future. Planning Magazine. [planning.org/planning/2021/summer/integrating-land-use-and-water-planning-for-a-sustainable-future/](https://www.planning.org/planning/2021/summer/integrating-land-use-and-water-planning-for-a-sustainable-future/)

Conclusion

As with other initiatives focused on diversity, equity, and inclusion, affordable water is a journey, not a destination. Water affordability solutions will require iterative phases of implementation, assessment, revision, and reassessment. Over time, the composition of Broadview’s customers will change, meaning this work will demand adaptation to meet the changing needs of the community. This partnership between MPC, Elevate, and the Village of Broadview is an important step as we continually work to ensure water is affordable for all.

Water affordability is a highly nuanced issue, and no two municipalities are the same. MPC and Elevate, with support from Illinois-Indiana Sea Grant, partnered with the Village of Broadview to identify the unique challenges and potential solutions for municipalities with less spread between their low- and high-income earners – that is, less income diversity. The data analysis and stakeholder engagement culminated with a suite of recommendations based on what the Village is doing well and where additional work is needed, particularly for the relatively small group of residents who regularly pay late and are carrying the bulk of the Village’s water debt.

Just as there is no one-size-fits-all solution for water affordability, there is no set of tried-and-true interventions. Additionally, it must be acknowledged that water bills are not the sole source of household-level financial burden. The Center for Neighborhood Technology, for example, has explored various cost-of-living categories to identify solutions to broader affordability challenges.⁴⁹

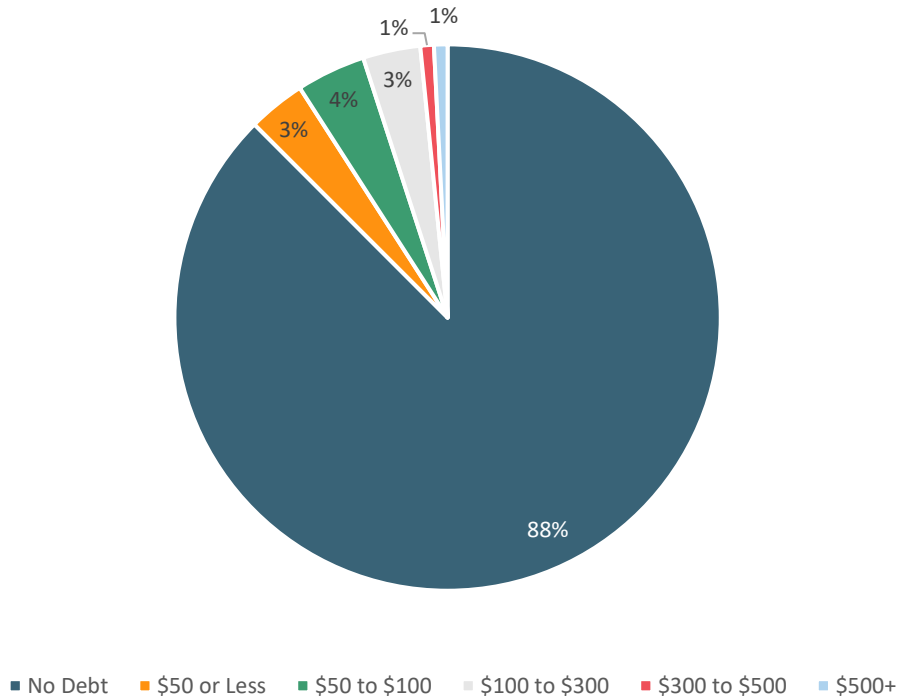
Many potential solutions exist, some of which are recommended in this report, but it will require innovative partnerships and iteration over time to implement, assess, revise, and reassess the water affordability solutions that will work for customers of the Village of Broadview long term. And it is likely that the makeup of Broadview’s customers will change over time, meaning this work will require constant iterations to meet the changing needs of the community.

Upon delivery of this report, MPC and Elevate will transition to a support role to advise on implementation and assist with the steps beyond. It was our sincere honor to collaborate with a group of such dedicated and committed public servants under the leadership of Mayor Thompson, and we look forward to partnering in the ongoing work of ensuring water is affordable for all.

⁴⁹ See: Center for Neighborhood Technology (2020). Beyond the Water Bill: A strategy guide for developing a water and community affordability action plan. [cnt.org/publications/water-and-community-affordability-action-planning-guide](https://www.cnt.org/publications/water-and-community-affordability-action-planning-guide)

Appendix A: July 2020 debt snapshot for Residential accounts

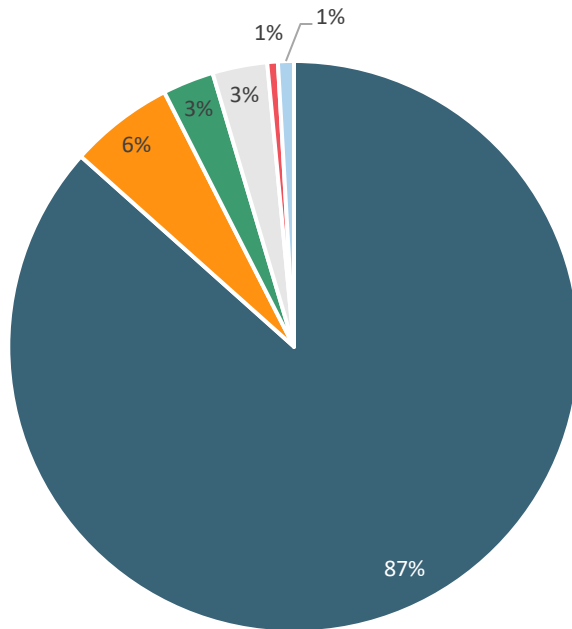
July 2020 Water Debt Snapshot



Debt Breakdown	# of Customers	% of Total Customers	% of Relevant Customers	\$ of Debt	% of Debt
No Debt	2,086	87.5%	N/A	N/A	N/A
\$50 or Less	81	3.4%	27.1%	\$2,362	2.5%
\$50 to \$100	97	4.1%	32.4%	\$7,194	7.5%
\$100 to \$300	81	3.4%	27.1%	\$13,848	14.5%
\$300 to \$500	20	0.8%	6.7%	\$7,452	7.8%
\$500+	20	0.8%	6.7%	\$64,517	67.6%
Total	2,385			\$95,373	

Appendix B: July 2021 debt snapshot for Residential accounts

July 2021 Water Debt Snapshot

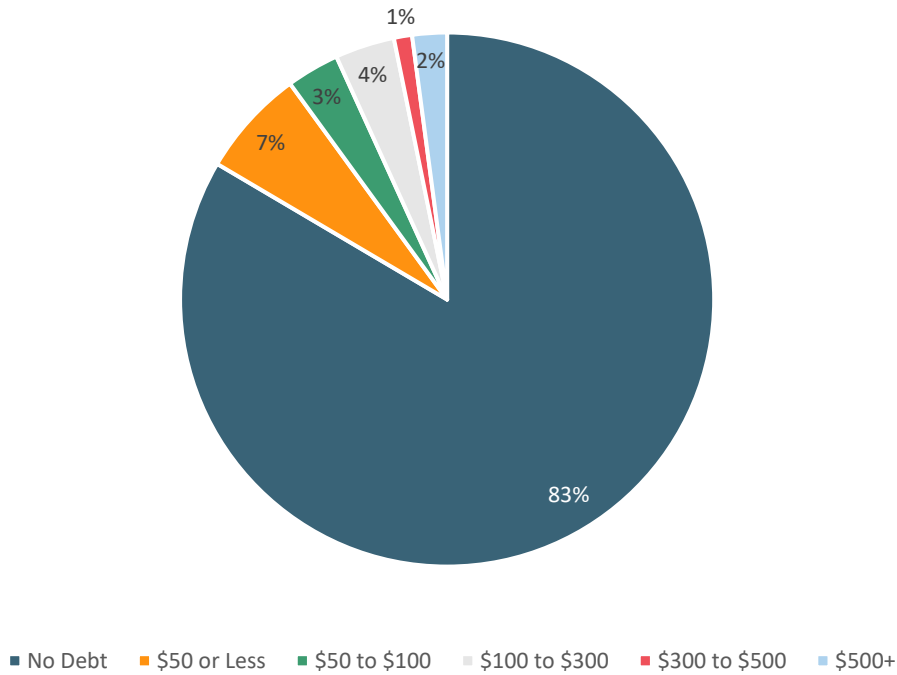


■ No Debt ■ \$50 or Less ■ \$50 to \$100 ■ \$100 to \$300 ■ \$300 to \$500 ■ \$500+

Debt Breakdown	# of Customers	% of Total Customers	% of Relevant Customers	\$ of Debt	% of Debt
No Debt	2,065	86.6%	N/A	N/A	N/A
\$50 or Less	141	5.9%	44.1%	\$2,938	3.0%
\$50 to \$100	68	2.9%	21.3%	\$4,921	4.9%
\$100 to \$300	74	3.1%	23.1%	\$13,023	13.1%
\$300 to \$500	15	0.6%	4.7%	\$5,821	5.9%
\$500+	22	0.9%	6.9%	\$72,744	73.1%
Total	2,385			\$99,447	

Appendix C: July 2022 debt snapshot for Residential accounts

July 2022 Water Debt Snapshot



Debt Breakdown	# of Customers	% of Total Customers	% of Relevant Customers	\$ of Debt	% of Debt
No Debt	1,989	83.4%	N/A	N/A	N/A
\$50 or Less	156	6.5%	39.4%	\$2,639	1.8%
\$50 to \$100	77	3.2%	19.4%	\$5,695	3.9%
\$100 to \$300	86	3.6%	21.7%	\$13,768	9.5%
\$300 to \$500	26	1.1%	6.6%	\$10,250	7.1%
\$500+	51	2.1%	12.9%	\$112,428	77.7%
Total	2,385			\$144,780	

Appendix D: Further Reading

Water Affordability in Northeastern Illinois: Addressing Water Equity in a Time of Rising Costs

elevatenp.org/publications/water-affordability-in-northeastern-illinois-addressing-water-equity-in-a-time-of-rising-costs/

MPC & Elevate (2020)

Water Affordability Programs & Policies: A National Review

iiseagrant.org/publications/water-affordability-programs-policies-a-national-review/

Illinois-Indiana Sea Grant (2019)

Water Affordability Advocacy Toolkit

nrdc.org/resources/water-affordability-advocacy-toolkit

Natural Resources Defense Council & National Consumer Law Center (2022)

Affordability and Equity Considerations for Rate-Setting

doi.org/10.1002/awwa.1766

Journal AWWA (2021)

Beyond the Water Bill: A strategy guide for developing a water and community affordability action plan

cnt.org/publications/water-and-community-affordability-action-planning-guide

Center for Neighborhood Technology (2020)

Community Task Force for Water Equity

ourwatersecurity.org/ctf

The Center for Water Security and Cooperation & DigDeep (2022)

H₂Affordability: How Water Bill Assistance Programs Miss the Mark

policyinnovation.org/publications/h2affordability

Environmental Policy Innovation Center (2021)

Ten Tenets of Water Equity: Considerations for Community Water Systems

morrisoninstitute.asu.edu/content/ten-tenets-water-equity

Morrison Institute for Public Policy (2021)

Advancing Equity Across the Water Sector: A Toolkit for Utilities

uswateralliance.org/initiatives/water-equity/racial-equity-toolkit

U.S. Water Alliance (2022)

Full-Cost Water Pricing Guidebook for Sustainable Community Water Systems

cmap.illinois.gov/programs/water/supply-planning/full-cost-pricing

Chicago Metropolitan Agency for Planning, Illinois-Indiana Sea Grant, & University of Illinois Extension (2012)

The State of Water Loss Control in Drinking Water Utilities

awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control

American Water Works Association (2016)