



# **Cook County TAP Brief: Summary of Municipal Water Affordability Studies**

**MAY 2026**



# Acknowledgements

## Government Partner

In partnership with Cook County TAP, a municipal technical assistance program, this brief summarizes studies conducted as part of the Cook County Water Affordability Program. The Cook County Water Affordability Program is a first-of-its-kind initiative that helps suburban Cook County residents who are struggling with their water bills. Both initiatives are administered by Elevate in collaboration with the Cook County Bureau of Economic Development, funded through the American Rescue Plan Act by the U.S. Department of the Treasury.

## Consultants

The water affordability studies—available at CookCountyTAP.org—were overseen by Elevate and conducted by consultants with expertise in water and municipal finance. These consultants include: Alliance for Water Efficiency; Government Finance Research Center at the University of Illinois Chicago; One Water Econ; and Raftelis Financial Consultants.

## Participating Municipalities

Elevate was honored to partner with elected officials, staff, residents, and other stakeholders from the following municipalities. We wish to thank them for their time and contributions throughout the process:

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Village of Lynwood, Illinois

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Village of Phoenix, Illinois

Village of South Chicago Heights,

Village of Hazel Crest, Illinois

Village of Richton Park, Illinois

Illinois

Village of Lansing, Illinois

Village of Riverdale, Illinois

## About Elevate

Elevate is a 501(c)(3) nonprofit organization that works nationally and is headquartered in Chicago. Elevate seeks to create a just and equitable world in which everyone has clean and affordable heat, cooling, power, and water in their homes and communities. For more information, visit ElevateNP.org.

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## Non-Endorsement Disclaimer

The contents of this brief reflect Elevate’s analysis and does not imply endorsement by the funders or participating entities.



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# Executive Summary

## Overview

This brief synthesizes findings from ten municipal water affordability studies conducted through the Cook County Water Affordability Program. The studies provide a comprehensive view of the financial burden of water and sewer bills on residents—particularly in smaller, low- to moderate-income municipalities—and identify practical strategies to improve affordability, utility management, and customer engagement.

## Scale and Nature of the Challenge

Water affordability is a growing national concern, with an estimated 10-15% of U.S. households facing an unaffordable water burden. The brief defines “water burden” as the share of household income spent on water bills. In the participating suburban Cook County municipalities, affordability challenges are often unevenly distributed. While analyses using median income may suggest water is affordable, deeper analysis reveals significant hardship among low-income households, especially those in the lowest income quintile.

## Key Drivers of Water Affordability Challenges

The studies identify a consistent set of structural, financial, and administrative factors that increase water burden. These include:

- **Aging infrastructure and rising costs:** Older systems require costly maintenance and replacement, driving rate increases.
- **Dependence on water wholesalers:** Many municipalities rely on purchased Lake Michigan water, limiting local control over water costs.
- **Rate design limitations:** Existing water rate structures are often not optimized for equity or affordability nor, frequently, designed based on industry standard best practice.
- **Infrequent billing cycles:** Bi-monthly or quarterly billing cycles often result in large, harder-to-manage bills for households.
- **Limited assistance programs:** Financial and staffing constraints restrict municipalities’ ability to offer direct bill relief or formal assistance programs.
- **Operational constraints:** Utilities frequently operate with limited staff capacity and outdated systems, hindering effective billing and outreach.

At the household level, additional pressures further exacerbate affordability challenges, including fixed incomes for seniors, temporary hardships, and leaky or inefficient premise plumbing and fixtures.

### Gaps in Measurement and Engagement

The brief emphasizes the limitations of standard affordability metrics, particularly those based solely on median income, which can obscure disparities and mask hardship. More nuanced approaches, such as evaluating costs relative to income after essential expenses or examining burden at the lowest income levels, can provide a more accurate picture of household needs. Equally important are qualitative insights from residents and local leaders. Surveys and interviews reveal persistent challenges, including lack of awareness of assistance programs, difficulty understanding bills, limited time to pay, and insufficient communication from utilities.

### Role and Value of Water Affordability Studies

Water affordability studies serve as a critical first step for municipalities seeking to address these challenges. They combine quantitative analysis (income, rates, infrastructure condition) with qualitative insights (resident experiences, administrative constraints) to produce a comprehensive understanding of affordability issues and their root causes. These assessments also enable municipalities to identify tailored, evidence-based solutions and prioritize investments. This can be useful information to complement a water rate study, which is often the next step.

### Recommended Strategies for Improvement

Across the studies, several common strategies emerged for improving household affordability and the financial sustainability of the system:

- **Conduct water rate studies** to align pricing with actual costs while distributing impacts more equitably;
- **Conduct water audits and implement loss control measures** to reduce infrastructure, administrative, and other inefficiencies and address revenue losses;
- **Upgrade technological infrastructure**, including advanced metering systems and online billing systems, to improve billing accuracy, leak detection, and customer communication;
- **Expand and formalize assistance programs**, such as payment plans and targeted discounts, supported by better outreach; and
- **Enhance community engagement** through clearer communication, proactive outreach, and partnerships with local organizations.

### Conclusion

The findings underscore that water affordability is not solely a function of rates, but the result of interconnected factors—including infrastructure, administration and utility management, billing practices, and local socioeconomic conditions. Addressing these challenges requires both technical reforms and stronger relationships between utilities and the communities they serve. Water affordability studies provide municipalities with the analytical foundation to take action—helping to ensure access to essential water services while maintaining the financial sustainability of local utilities.

# Introduction

## Water Burden Defined

Many communities across the country are facing increasing concerns about water affordability. According to the U.S. Environmental Protection Agency (EPA), around 9.2% to 14.6% of households nationwide face unaffordable water services.<sup>1</sup> Water burden, for this brief, is defined as, “the percentage of a household’s income that goes toward paying water bills.”<sup>2</sup> When water burden exceeds a certain percentage of a household’s income, it is considered “high” or unaffordable. For analytical purposes, the EPA’s standard of 2.5% of median household income (MHI) spent on water bills is a commonly used threshold after which the bills, for comparison purposes only, are considered a high financial burden.<sup>3</sup> When sewer bills are combined with water bills into a single bill, the threshold increases to 4.5%.\*

## Water Affordability Studies

To help evaluate the financial burden of water bills for residents, Elevate has partnered with municipalities over the last several years to conduct studies that shed light on challenges and opportunities to improve water affordability. The Cook County Water Affordability Program continued these efforts through studies with ten municipalities in suburban Cook County.<sup>4</sup>

**All of the water affordability studies are available at [CookCountyTAP.org](https://cookcountytap.org).**

These municipalities’ populations range from around 1,200 to 28,000, with an average of around 9,000. Their respective MHI ranges approximately from \$25,000 to \$76,000. Along with the municipalities’ difference in population size and income, the water affordability studies show a variety of water rate design and water utility management strategies. Particularly for smaller municipalities, water rates often

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\* **Note:** The EPA threshold for water and sewer costs was originally intended to measure a municipality’s financial capacity to comply with Safe Drinking Water Act and Clean Water Act regulations. Because it was not designed to measure bill burden at the household level, the EPA’s approach has notable limitations despite its widespread use. For example, some argue that the percentages are arbitrary and that many households may be burdened by water bills comprising less than 2.5% of their income. High living costs and the analyses’ reliance on MHI, which is not representative of the lower ranges of household incomes, are among the factors that make this metric inadequate for truly understanding water bill burden.

<sup>1</sup> U.S. Environmental Protection Agency (2024). *Water Affordability Needs Assessment: Report to Congress (EPA 830-R-24-015)*. [epa.gov/system/files/documents/2024-12/water-affordability-needs-assessment](https://epa.gov/system/files/documents/2024-12/water-affordability-needs-assessment)

<sup>2</sup> Elevate (2023). *Much More Than a Drop in the Bucket: Impacts of Water Debt and Shutoffs on Residents and Utilities*. [elevatenp.org/publications/much-more-than-a-drop-in-the-bucket](https://elevatenp.org/publications/much-more-than-a-drop-in-the-bucket)

<sup>3</sup> Metropolitan Planning Council, Elevate, & Illinois-Indiana Sea Grant (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](https://elevatenp.org/publications/water-affordability-in-northeastern-illinois-addressing-water-equity-in-a-time-of-rising-costs)

<sup>4</sup> Cook County TAP (n.d.). *Water Affordability Studies*. [cookcountytap.org/water-affordability/water-affordability-studies](https://cookcountytap.org/water-affordability/water-affordability-studies)



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include fixed costs to cover operations and are more likely to be billed over periods of more than one month (between two to four months).

While some charge the same volumetric rate regardless of how much water is consumed, others use tiered rate structures that charge different rates as the volume of water consumed increases.

### **Source Water**

A majority of these municipalities purchase Lake Michigan water, either directly from Chicago or via one or more intermediaries, with only one sourcing its water from groundwater. In northeastern Illinois, purchased water often costs more than produced water as additional entities charge more to cover operations and maintenance costs. It is worth noting, however, that some of the municipalities in these analyses are both water purchasers and sellers.

### **Brief Overview**

The Cook County Water Affordability studies can inform other municipalities' efforts to assess and address potential water affordability challenges. This brief highlights the key findings and takeaways of these analyses for municipalities and utilities interested in pursuing their own water affordability analysis. Readers can expect to learn more about how the studies were designed, the methods used to calculate water bill burden, and the challenges and solutions identified to improve water bill affordability.

# Water Affordability Studies Matter

***Section Overview:*** Water affordability studies can serve as an important first step toward improving utility management and water bill affordability for residents. The primary purpose of these analyses is to provide a picture of the current burden that water bills pose for residents.

## Asset Management

To fully capture this burden and its causes, water affordability studies often look at more than just household incomes and water rates. Along with calculations of financial burden, these plans evaluate the state of utility infrastructure, both physically and managerially, including infrastructure condition, how water rates are set, and more.

When water utilities struggle with maintenance and administration, it often results in higher water bills, reduced access to assistance programs, or both.

## Qualitative Considerations

Another key facet these analyses explore is the relationship between utilities and residents through surveys and interviews. A lack of trust or poor communication between utilities and residents can increase the risk of unpaid bills or limited access to assistance with bill payments. With these components, analyses can help identify the challenges in making water bills more affordable and recommend solutions.

Without this qualitative understanding of challenges and opportunities, municipalities are less equipped to develop and implement effective and equitable changes to their water rate structures and utility management.

## Partnership Opportunities

Many municipalities, including those in the Cook County Water Affordability Program cohort, lack the resources required to conduct a thorough water affordability analysis. Hiring an external partner, such as a consulting firm or nonprofit organization, can help municipalities develop these analyses, but this does come at a cost to the municipality.

The Cook County Water Affordability Program funded analyses for the selected municipalities, illustrating how municipalities can leverage opportunities and resources to conduct analyses.

## What does it look like?

An analytical framework for a water affordability study can include:

- **Measuring Burden:** Analyses use socioeconomic and water use data to measure the extent to which water bills pose a financial burden on residents.

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- **Assessing Current Socioeconomic Data:** Analyses look at potential socioeconomic factors that can affect the affordability of bills, including household income and population age. These data are often compared with county-level or regional data to gain insights into how the municipality compares with the larger region.
- **Understanding Water System Management:** Analyses identify key information on water systems, including where water is sourced from (i.e., purchased or produced), the state of water system infrastructure, such as the age of pipes and meters, and how water rates are currently set.
- **Engaging with Local Leaders and Residents:** Along with quantitative data, analyses often release surveys for residents and conduct interviews with key stakeholders to understand opinions on the challenges and opportunities to improve water affordability.
- **Recommendations:** Analyses conclude with a series of recommendations that can be implemented to work toward more affordable water.

# Calculating Water Bill Burden

**Section Overview:** *Water bill burden is often calculated using income as a measure of water affordability. Debates on this method's accuracy have led to the inclusion of other socioeconomic indicators of potential burden.*

## Measuring Burden as a Percent of Income

Various types of water bill burden calculations are summarized in **Table 1**. The most common calculations for water burden measure water affordability as the percentage of a household's income that water bills consume. Typically, the average annual water bill cost (based on local water billing data) is divided by the municipality's MHI. If water costs exceed 2.5% of the MHI, then water bills can be considered a significant financial burden. MHI, however, can mask affordability challenges by not focusing sufficient attention on lower-income households. Based on past analyses conducted by Elevate, municipalities with a moderate or even high MHI relative to the county can, and frequently do, have areas with low-income households whose water burden is not identified through this calculation.<sup>5</sup>

For most municipalities in the water affordability study cohort, analyses using water bills as a percent of MHI failed to show a water burden. Meanwhile, a sometimes significant burden was identified in analyses using income quintiles, specifically the lowest earning 20% of the population. For some municipalities, the lowest quintile income (LQI) bracket was more than 50% lower than MHI. LQI for the five municipalities whose analyses recorded this calculation accounted for between 37% and 52% of each municipality's median income, with an average of 45%. Some studies also conducted this analysis at the tract level to geographically identify whether water-burdened households are clustered or spread across the municipality.

Another method to improve the accuracy of income as a measure of bill affordability is to subtract essential living costs from MHI or LQI and then identify what percentage of households' disposable income water bills represent. In many cases, other essential living costs exceed the monthly income available to low-income households, leaving them unable to pay their water bill or forced to make tradeoffs between water and other essentials.

## Additional Bill Burden Indicators

Along with income, studies also looked at other factors that may contribute to a high water burden, including population age, employment, minimum wage, and housing stock characteristics. Some municipalities have aging populations, or a small portion of the population is of working age. Seniors frequently live on fixed incomes, putting them at greater risk of being unable to afford bills, especially when water rates increase. A high unemployment rate, or water bills that require more than one day's

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<sup>5</sup> Elevate (2023). *Much More Than a Drop in the Bucket: Impacts of Water Debt and Shutoffs on Residents and Utilities*. [elevatenp.org/publications/much-more-than-a-drop-in-the-bucket](https://elevatenp.org/publications/much-more-than-a-drop-in-the-bucket)

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work (i.e., 8 hours) at the minimum wage, also increase the risk of high water bill burden. Finally, older homes, especially those built in the mid-twentieth century, as many are in the municipalities studied, tend to have older premise plumbing that is prone to leaks and likely to have inefficient faucets and fixtures, which can lead to increased water bills.

Having significant vacant housing or a declining population, a concern raised by some municipalities, also results in lost revenue due to a reduced ratepayer base, meaning system costs must be distributed among a smaller number of ratepayers.

**Table 1. Types of Calculations Commonly Used to Calculate Water Bill Burden**

Type	Description	Calculation	Data Needs	Limitations
Residential Indicator (RI)	Percent of MHI spent on water bills annually by a household; greater than 2.5% indicates a high burden	$\frac{\text{Total annual water cost for a household}}{\text{MHI}}$	MHI (U.S. Census Bureau), and Annual water cost (municipal billing data)	MHI is not representative of all incomes and can mask affordability challenges
Lowest Quintile Residential Indicator (LQRI)	Percent of income spent on water bills annually by households in the lowest income quintile; greater than 2.5% indicates a high burden	$\frac{\text{Total annual water cost for a household}}{\text{Upper limit of lowest quintile income}}$	Household income data (U.S. Census Bureau), and Annual water cost (municipal billing data)	Lowest income quintile indicates the burden on low-income households but does not account for other essential living costs that may compete with water bills
Affordability Ratio (AR)	Percent of income spent on water by households in the lowest quintile after accounting for other essential expenses; greater than 10% indicates a high burden	$\frac{\text{Monthly water and sewer costs}}{\text{Monthly household income} - \text{essential living expenses}}$	Household income data (U.S. Census Bureau), Monthly water cost (municipal billing data), and Living costs (various sources)	Calculating living expenses can be challenging
Hours Worked	Number of hours worked at the minimum wage required to pay a monthly water bill; greater than 8 hours is considered unaffordable	Minimum wage * Hours worked = monthly water bill	Minimum wage data, and Monthly water bill cost (municipal billing data)	Cannot be used independently for affordability assessments because minimum wage varies across municipalities

# Engaging Community Leaders

***Section Overview:*** Local government stakeholders, public works departments, and communities provide valuable insights into the relationships between residents, their water systems, and how these systems are managed.

## Local Leaders

All municipalities in the cohort have departments that focus on utility billing and water system operations and maintenance. These departments' staff offer crucial first-hand information on how water systems and billing are managed and what challenges exist—critical information for any water affordability analysis. When access to these staff was not possible, other informed municipal staff and elected officials, such as administrators or treasurers, were engaged in conversation.

Despite differences in water system management approaches, several common themes emerged from interviews with local leaders regarding the state of water affordability in their community. Themes include the following:

- **Staff Capacity:** Many utilities operate with limited staffing and legacy systems, which can make it challenging to manage assistance efforts and billing processes efficiently.
- **Payment Challenges and Revenue Stability:** Households often face financial constraints that make full and timely bill payment difficult, and this can make it challenging for utilities to balance revenue stability with efforts to support residents facing hardship.
- **Budget Constraints:** While there is strong interest in more equitable billing practices and assistance programs, revenue limitations—sometimes driven by high maintenance costs and water loss from aging infrastructure—can restrict municipalities' ability to invest in bill discounts, flexible payment plans, and other types of assistance.
- **Increasing Water Costs:** Municipalities that purchase water have limited control over the cost of the water they buy, and water wholesaler rate increases are often passed through to consumers, leaving municipalities with little flexibility to avoid rate impacts for residents.
- **Necessary Rate Increases:** While unpopular, rate increases are frequently necessary to cover the various costs of utility service provision, including water costs, debt service, and infrastructure repairs.

## Community Members

All analyses released surveys, with varying response rates, to understand residents' perspectives and views on the essential elements of water system management. Surveys focused on whether residents perceived their water bills as affordable, challenges they have related to bill payment, and how confident they are in their municipality's management of the water system.

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The utilities have different water rate structures and socioeconomic characteristics. Nevertheless, common themes emerged in survey results across the municipalities. These include the following:

- **Infrequent Billing:** Bi-monthly or quarterly billing, which are common among smaller utilities, make it difficult for households to budget and pay bills in one lump sum payment. Smaller, more frequent bills are easier to budget for and pay, especially for residents on tight budgets.
- **Not Enough Time to Pay Bills:** Many utilities offer between 10 and 15 days to pay bills, after which they are considered past due, and late fees are generally imposed. Surveys indicated this is often not enough time for residents, especially when bills are issued less frequently than monthly or when rates are high, both of which were frequently reported issues.
- **Difficult-to-Read Bills:** Bills are often not itemized, making it difficult to understand why bills are priced the way they are. This lack of transparency reduces residents' trust in utilities and the charges they are being asked to pay.
- **Limited Engagement:** Utility outreach efforts were often seen as insufficient, with many survey respondents reporting they were not aware of assistance programs or resources, even when their utilities did offer such support.

# Challenges to Water Affordability

***Section Overview:*** Across all municipalities in the water affordability study cohort, challenges in managing infrastructure, equitable water rate and assistance programs, and community engagement all were reported to have either a direct or indirect impact on water affordability.

## Physical and Technological Infrastructure

For most water utilities, infrastructure consists of two key components: 1) the physical storage facilities, pipes, valves, etc. that deliver water; and 2) the data collection, billing, and other technological systems that support administration and utility management.

Most municipalities in the cohort had water infrastructure built in the early- to mid-twentieth century, making them more likely to have significant system repair and replacement costs. Not only do they need to fund efforts to replace lead service lines, but their aging infrastructure is more likely to experience leaks and water main breaks, both of which place upward pressure on water rates at the utility scale.

Most in the cohort are in the process of upgrading, or have already upgraded, to Advanced Metering Infrastructure (AMI) systems that collect and transmit water meter data at regular intervals via cellular technology. Older meter technology required staff to walk or drive past an address to collect data via a hand-held transponder. The frequency of data transmissions in AMI systems enables identification of abnormal water usage that could indicate a leak, which benefits household water affordability.

While AMI can help identify potential leaks, municipalities also need the technological infrastructure to notify account holders. After upgrading to AMI, communications strategies are needed to make account holders aware of water consumer portals and encourage them to sign up for phone and email notifications. Barring this, it was not unusual for smaller municipalities in our cohort to have clerks review water usage logs and call residents who may have a leak. This labor-intensive task results in less time spent on other critical items.

## Property Owner Support

Utility support to identify and resolve leaks is limited. Public works staff may offer to visit a home and explain how to identify leaks but, generally, do not have programs to provide further assistance. Some utilities offer funding to resolve the issue or offer rebate programs to support installation of water efficient fixtures. This is uncommon, though, and none of the utilities in our cohort offered it. Among our cohort, some utilities offer to test meters upon request (at the property owner's expense) and adjust bills in cases where meter readings are found to be inaccurate.

Conversely, some of the municipalities penalize homeowners for failing to resolve identified leaks—specifically, when the portion of a service line on private property has been identified as the source of the leak—and this may result in service disconnection if not resolved in a timely manner. Once disconnected,

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there are also fees to restore service. Such penalties and fees, on top of the expense of finding and fixing a leak, can further compound affordability challenges for households.

### Water Rate Structures

The types of rates used by the cohort vary. Some use only volumetric rates based on the volume of water consumed. Others charge a fixed base fee covering a specified volume and then a volumetric-based rate after that. Another common rate type uses a tiered system where one rate is charged up to a certain volume, another rate for the next tier of consumption (either a higher or lower rate depending on the utility's goals), and so on.

Each structure has strengths and limitations in making household water bills affordable. A summary of some commonly identified rate-structure types in the Cook County Water Affordability analyses is provided in **Table 2**.

### Billing Frequency

Due to capacity constraints and outdated technological infrastructure, many municipalities in the cohort bill at least bi-monthly, though some bill quarterly. For utilities, billing frequency is often a cost consideration. Less frequent billing reduces the administrative burden of meter reading, bill processing, and customer service. In addition to administrative costs, there are printing, postage, and processing costs—often outsourced to third-party billing vendors—associated with each billing cycle.

The frequency of billing can result in affordability challenges, as discussed previously. Households that could feasibly afford a monthly bill may struggle with a bi-monthly or quarterly bill. Infrequent bills are harder to budget for and necessarily reflect higher balances since they account for multiple months of consumption. Regardless, these bills are generally due within 10 to 15 days of issuance.

Additionally, water bills are a key source of information for residents regarding water usage. While not as good as a leak alert notification from an AMI system, monthly water bills can flag unusual spikes in consumption sooner than bi-monthly or quarterly bills and help households resolve leaks before they become a higher financial burden.

### Rate Setting Practices

Across many municipalities in the cohort, water rates were not designed according to industry standard best practices. Best practice for water rate setting includes an analysis of the revenue requirements to operate the utility and then allocates those costs among the customer classes.

Among the cohort, rates were sometimes reported to be based on staff judgment rather than formal analysis. Additionally, water rate increases are often politically unpopular, and elected officials were reported to be reluctant to adopt higher rates. Accordingly, they can encourage administrative staff to keep rates artificially low, impacting ability to finance maintenance and repairs. In one case, a five-year water rate freeze was imposed, despite the risk to the municipality's ability to maintain its aging water system.



Table 2. Types of Water Rate Structures

Type	Description	Impact	Strengths	Limitations
Volumetric	Based on water volume, where users pay a rate per volume consumed	Affordability varies; because every user's bill is assessed at the same rate—regardless of whether residential, commercials, industrial, or other—this rate structure is often not tailored to distribute the cost of water use equitably.	Encourages water conservation. Can improve affordability if different rates exist for different customer classes, or if discounted rates are available based on eligibility factors.	Users with inefficient faucets and fixtures, or leaky premise plumbing, end up with higher bills.
Tiered/Blocks	Specified volumes (e.g., 0 to 4,500 gal/mo) of water consumption charged at a one rate and additional specified volumes charged at a different rate, either higher or lower	Can improve households' ability to cover their water use costs if their consumption is at the level set for the lower rate. The lowest tier can also be offered for free (known as a lifeline rate), either for all users or only eligible accounts.	Essential water use levels may be inexpensive or free. Additional use charged at a higher rate, providing utilities with necessary revenue while still offering basic water needs at a more affordable rate.	Some households may use more water than the lowest tier due to inefficient faucets and fixtures or leaky premise plumbing, resulting in higher bills.
Levelized	Monthly bills are the average of a year's worth of water bills for a user	May improve affordability, especially for seasonal fluctuations in water use. For example, summer months may see higher use to irrigation and other outdoor water uses. Averaging bills over a 12-month period allows users to budget more effectively.	Households can more effectively budget their income because water bill amounts are known in advance. Simultaneously, utilities receive necessary revenue since the rate still reflects actual consumption.	Additional effort to establish the necessary billing calculations and structure billing accordingly.
Flat	Fixed rate where users pay a set cost regardless of water volume consumed	Can improve affordability for households living on fixed incomes, such as seniors.	Households can better budget their income when the cost of water does not fluctuate.	Households may be discouraged from being efficient with water use, and utility revenue from water may decrease.

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Deferred maintenance increases the risk of leaks, breaks, and other emergency infrastructure repairs, which often cost more than planned, non-emergency work. Eventually, municipalities may be forced to raise water rates dramatically to cover accumulating water system costs.

### **Bundled Utility Billing**

Another frequently documented reason for affordability challenges in the studies is the addition of fees to cover services besides water, such as waste collection, stormwater management, and other services.

While these fees often fund vital municipal operations, bundling them as part of a water bill means higher bills. Higher bills increase the likelihood of late fees, service disconnection, or, in some cases, a lien being placed on the property.

### **Local Assistance Programs**

Many municipalities expressed interest in providing assistance but felt their financial and staff capacity were insufficient to implement them.

The most common type of assistance was a senior discount, generally as a fixed percentage deduction from bills. In one municipality, seniors were charged the same amount every billing cycle regardless of volume consumed, i.e., a flat rate. The municipality, however, stopped offering this benefit due to revenue losses. Though most municipalities do not offer direct financial relief, many do offer payment plans to pay back arrearages over time. This helps avoid late fees and shutoffs, and utilities continue receiving payments, even if a reduced amount.

Some payment plan offerings are formalized programs with agreements and consequences for not fulfilling the requirements thereof. Informal payment plans, where verbal arrangements are made and notated on customer accounts, are much more common. These frequently are not formally announced on the municipal website nor advertised as an option, which the analyses found is often by design. Municipalities expressed concerns that formal payment plan support programs would strain staff capacity and reduce water revenue. Unless a customer reaches out, they will not know such assistance exists.

### **Regional Assistance Programs**

All municipalities in the cohort mentioned directing residents to local and regional resources. If the municipality cannot provide assistance directly, for example, they may refer account holders to the Community and Economic Development Association (CEDA) of Cook County, a Community Action Agency that offers several assistance programs and previously administered the Low Income Household Water Assistance Program (LIHWAP).

Other sources of support include the Salvation Army or township programs that offer emergency financial assistance for eligible households. These programs are not specific to water, but they are often used to prevent drinking water service disconnections. Township resources are generally only available



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once per calendar year or only as funding is available, indicating that these programs are not guaranteed to have assistance available for all households referred to them.<sup>6</sup>

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<sup>6</sup> Illinois Legal Aid (n.d.). General Assistance basics. [illinoislegalaid.org/legal-information/understanding-general-assistance](https://illinoislegalaid.org/legal-information/understanding-general-assistance)



# Toward Water Affordability

***Section Overview:*** Identifying challenges to water affordability opens the door to identifying effective solutions tailored to meet local challenges. Common recommendations are discussed in this section and summarized in **Table 3**.

## Water Rate Studies

Almost all municipalities were advised to conduct a water rate study as a next step. These would provide a clear picture of revenue requirements for the utility as well as identify rate structures or assistance programs best suited to help with water affordability.

Alternatives do not necessarily mean lower rates and can instead be a structure that distributes costs more equitably. The most commonly cited challenge to offering more equitable billing structures, including income-based rates or discounts, is that they are costly to implement. Water rate studies can help utilities identify a rate structure that covers operations, maintenance, and other costs while also supporting the most burdened households.

## Water Audits

Water audits are another type of study that can complement water rate studies. Water audits help identify water losses caused by leaks, inaccurate meters, unauthorized consumption, and more. The corresponding water loss control plan recommends pressure management, meter testing, and other strategies to control water losses.

High loss levels can strain utility budgets, and the lost revenue could be allocated to assistance programs or to more affordable rates for burdened households. Consulting firms with expertise in leak detection can conduct these audits.

## Technological Infrastructure Upgrades

Advanced technological infrastructure helps departments better identify leaks, communicate with customers about billing and water usage, and raise awareness of resources that can help water-burdened households afford their bills. Commonly recommended technological upgrades in the Cook County Water Affordability Program studies include online billing portals and AMI systems.

Online billing portals are a convenient tool for streamlining communication with customers and resolving potential issues, such as leaks, before they become a significant burden on households. They can be moderately costly, depending on the software used, and implementing them will require a transition period to train staff.

These portals can also serve as communications tools to promote assistance programs and other resources, allowing utilities to send notifications to customers. Leak repair efforts, for example, can use portals to send leak alerts to households whose water usage trends appear abnormally high. Staff does

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not have to track usage manually or call residents, saving them time and enabling a more rapid response to leaks.

Outdated metering infrastructure can affect affordability by inaccurately reading consumption or by not automatically transmitting data wirelessly, meaning additional staff time and resources to collect the data. Over half of the municipalities in the cohort have either installed AMI systems or are in the process of installing them. AMI systems can more effectively detect potential leaks and improve readings, reducing the prevalence of inflated water bills for customers. Additionally, this infrastructure connects to online billing portals, making it easier for customers to track their usage trends.

### Expanding Assistance Offerings

At the local level, common recommendations among the cohort included formalizing assistance programs, such as payment plans. Having a formal structure in place can make it easier for utilities to manage the service and track costs, impacts, and progress in improving household ability to pay. With these data, utilities can confidently promote assistance programs, as they have clear expectations of what the support will entail and of their ability to fund it.

Another key element in the success of assistance programs is effective communication between utilities and residents. Outreach about assistance programs can be conducted in both passive and direct formats. Some passive forms of outreach that do not require direct engagement include automated SMS messages about resources, informational mailers with water bills, and informational webpages on a utility's website or, if available, a billing portal.

More direct forms include phone calls and community events. Phone calls are a more targeted way to reach residents struggling with water affordability. Hosting informational events can help build community trust, and they provide an opportunity for utilities to listen and learn about community needs. Community anchors, such as libraries and schools, can be useful partners for utilities to collaborate with to hold events about available assistance programs and resources.

**Table 3. Summary of Common Recommendations to Improve Water Bill Affordability**

Type	Benefits	Challenges	Resources	Potential Cost
Water Rate Studies	<p>Comprehensive analysis of budgeting, billing, and the financial burden of water bills</p> <p>Identify and evaluate assistance to meet utility needs and support water-burdened households</p>	<p>Requires data and records of existing management of billing structure, which may not be readily available</p> <p>Requires capacity and resources that may be outside of the utility or water billing department's scope</p>	<p>Data on water bills, management of billing, and utility budget</p> <p>Consulting firms (not necessary, but can be helpful)</p>	<p>Ranges from approximately \$35,000 to \$70,000, though costs vary locally</p>

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Water Audit and Loss Control Projects	Provides understanding of current water use and, in particular, highlights unauthorized water losses and strategies to control them	Requires data on water use and leaks, which may not be readily available  Requires capacity and resources that may be outside of the utility or water billing department's scope	Water use data  Consulting firms are recommended as this is a specialized analysis	Up to \$125,000, though costs vary locally
Billing System Upgrades	Allows for more accessible rate structures and billing, such as monthly payments  Streamlines data collection	Requires technological upgrades that may be costly	Technological upgrades, including online portals and AMI  Planning management of data	Varies depending on the degree of changes made to the billing and metering systems
Expanded Community Outreach	Educates stakeholders about available resources, such as assistance programs, and allows the utility to hear from customers  Builds trust between utilities and residents	Requires varying degrees of staff capacity depending on outreach types, such as e-newsletters versus in-person events  May require technological resources, such as online portals or a robust list of customer contact information	Communication tools such as SMS platforms, online billing portal, and email  Staff capacity to develop and conduct outreach  Partnerships with community institutions, local and regional entities	Varies depending on available technologies, access to portals, SMS platforms, or other tools to conduct outreach
Formalized Assistance Programs	Expands equitable access to assistance resources	Requires staff capacity for program management  Requires analysis and committed funding to support program sustainability	Staff to manage and promote the program  Financial planning to sustain the program	Varies depending on staff availability and how the assistance program is designed

# Next Steps

## Utility Self-Assessment

Considering your municipal water system, if some or all of the following statements resonate, you may benefit from a water affordability study:

- The municipality lacks sufficient financial and staffing capacity to manage billing, maintain infrastructure, and support water-burdened customers.
- Water infrastructure is aging, and leaks are increasingly common, with inadequate resources to track and resolve issues.
- Residents are increasingly reporting water bills as unaffordable, even as rate *increases* are needed to cover rising operations and maintenance costs.
- Rates of past due payments among ratepayers are high, and the underlying causes are unclear.
- Local elected officials have expressed significant interest in providing residents with additional resources to help manage water bills.

## Take Action

Conducting an analysis does not have to rely solely on the resources and capacity of your water department or utility. Resources are available to support municipalities in getting started with a water affordability study. NRDC, for example, offers a toolkit to help utilities identify and address the most common water affordability challenges.<sup>7</sup> With these resources and adequate planning, you can run a water affordability analysis and take the first step toward more affordable water bills and sustainable funding for your water system.

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<sup>7</sup> NRDC & National Consumer Law Center (2022). *Water Affordability Advocacy Toolkit*. [nrdc.org/resources/water-affordability-advocacy-toolkit](https://nrdc.org/resources/water-affordability-advocacy-toolkit)

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