GOVERNMENT FINANCE RESEARCH CENTER

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# Water Rate Increases in Northwestern, Central, & Southern Illinois

## Policy Bite

The Illinois General Assembly commissioned the Government Finance Research Center to conduct a "Water Rate Setting Study." This brief is based on the second report from the study, which focuses on Northwestern, Central, and Southern Illinois (NCSI). Water bills are increasing three times the inflation rate and faster than other essential utility costs. This brief examines the factors driving these increases.

- It is the least costly for municipalities to source from groundwater and self-produce their drinking water provided to residents, which is reflected in the water rates collected for 595 NCSI municipalities. When wholesalers increase their rates, municipalities purchasing water often pass these increases on to residents.
- Municipalities often must raise water rates to receive SRF funding for system upgrades and necessary infrastructure repairs. Analysis reveals that for every million dollars borrowed from the state revolving fund (SRF), municipalities charge $0.34 more in standardized monthly water bills. For every million dollars borrowed, municipalities also require an average of $1.56 less in customer deposits to initiate service.
- Inflation, infrastructure upgrades, and regulation compliance are among the key drivers of water rate increases.

## Research Brief

Much of Illinois' aging infrastructure has exceeded its intended lifespan and continues to challenge public water systems in delivering safe, reliable, and affordable water to residents. In 2022, the quality of critical infrastructure for drinking water received a grade of D+ from the Illinois Section of the American Society of Civil Engineers (ASCE). In 2019, a total of 444 community water systems were in violation of one or more of the U.S. Environmental Protection Agency's (EPA) drinking water compliance programs.

Although significant federal funding is available for water-related infrastructure projects, as well as addressing emerging contaminants and replacing lead service lines, it is insufficient to address the needs. Thus, infrastructure needs present significant challenges for affordability because the associated costs are almost entirely borne at the local level. Smaller communities in Illinois face significant but unique challenges, including the depletion of groundwater resources that could be unusable within 15 years, with even more at risk of depletion by 2050.

Analysis of the drivers of water rates reveals that water source and quality, factors related to municipal governance, and geographic characteristics of the service area are associated with variations in water rates across the NCSI regions. It is least costly for municipalities to source from groundwater and self-produce rather than purchase wholesale. Since groundwater is generally less costly to sanitize than surface water, these municipalities have average standardized monthly bills of approximately $6.42 lower. Municipalities purchasing surface water tend to charge an average of $3.92 more per month.

Regression analysis suggests water contamination violations are not statistically significantly related to water rates, even for high-cost contaminant violations. At the same time, there is a negative correlation between water rates and consumer confidence. This result may indicate that customers who perceive lower-quality water may only be willing to pay lower prices.

Examining the association between water quality and compliance and policies related to affordability suggests that municipalities with volatile organic compounds (VOCs) in their water supply are associated with an average of 6.32 more days until bills are due before they are considered delinquent. Further, source water protection is associated with an average of 5.5 fewer days for customers to pay bills before a lien may be imposed.

The number of formal facility actions the water utility takes to address violations is associated with a 3.49-day average increase in the payment window before customers are considered delinquent. Each formal facility

action is also associated with an extended timeline of approximately 9 days until water may legally be disconnected due to nonpayment. These results suggest that municipalities with more formal EPA actions may face challenges in implementing policies that efficiently recover funds, potentially limiting their ability to invest in initiatives to improve compliance.

Two common sources of low-cost financing for infrastructure improvement and replacement for municipal water systems in Illinois are funded through the U.S. EPA via the Clean Water State Revolving Funds (SRF) and USDA's Rural Development Programs. Figure 1 shows the disbursement of USDA funds to municipal water systems in NCSI from 2012 to 2022. A total of 238 grants of approximately $150 million and 229 loans of approximately $397 million were awarded.

Regression analysis of the relationship between SRF funding and water rates and affordability policies revealed municipalities that applied for and received SRF funding are associated with charging an average of $0.34 more per month on water bills for each million dollars received. In addition, for every million dollars of SRF funding received, municipalities require $1.56 lower deposits on average. This suggests that utilities receiving more external funding may be able to lower deposit requirements, perhaps because these funds help stabilize utility finances. Also, these municipalities likely face greater infrastructure funding requirements, as indicated by their reliance on SRF support.

Interviews with representatives of municipal water providers reveal:

- Many municipalities implement automatic water rate increases to manage large system expenses and ensure their water system's financial viability. These automatic increases are often tied to inflation.
- A significant driver of water rate increases is the cost of maintaining and upgrading aging infrastructure.
- Emerging contaminants like PFAS (per- and polyfluoroalkyl substances) present new challenges for water systems. These contaminants require additional treatment and monitoring, which may significantly increase operational expenses and, consequently, rates.
- In some cases, necessary water quality improvements, such as removing sediment from reservoirs, require significant infrastructure investments, which can increase water rates.
- When wholesalers increase rates, municipalities pass these increases on to residents.
- Municipalities that complete applications for SRF loans anticipate or have been required to raise water rates to be able to take advantage of the additional funding for system upgrades and necessary infrastructure repairs.

**Read the full report HERE.**

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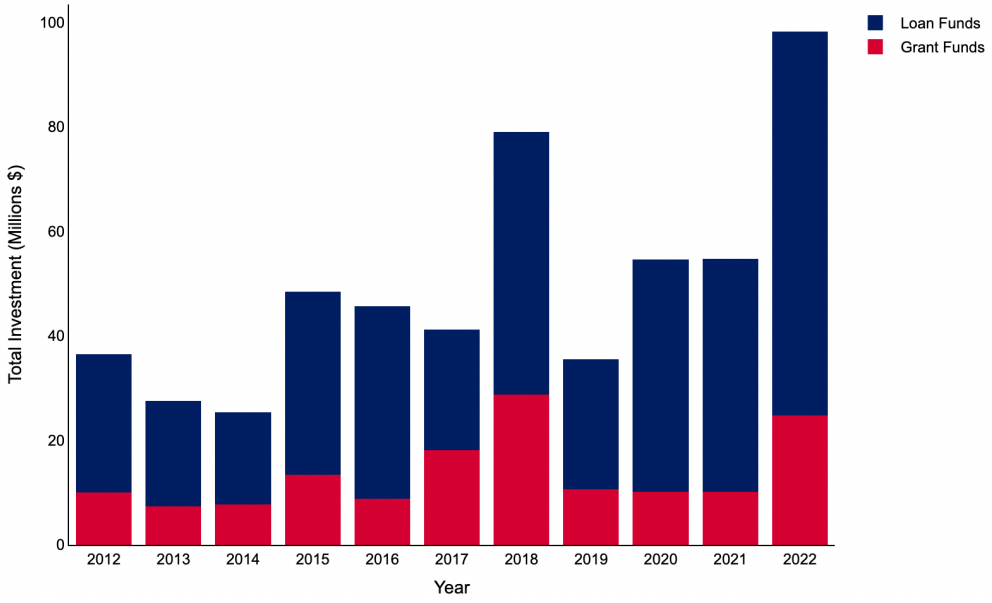
**Figure 1. USDA Rural Development Funding for Water and Wastewater**