GREAT LAKES WATER INFRASTRUCTURE PROJECT ISSUE BRIEF:

WATER AFFORDABILITY

SUMMARY

Rising water rates adversely impact households which are already experiencing financial distress. Some utilities struggle to comply with providing affordable water service while also complying with health and environmental regulations. Achieving water affordability requires a multi-pronged approach of asset management, water conservation, appropriate rate setting, and customer protections and affordability programs.

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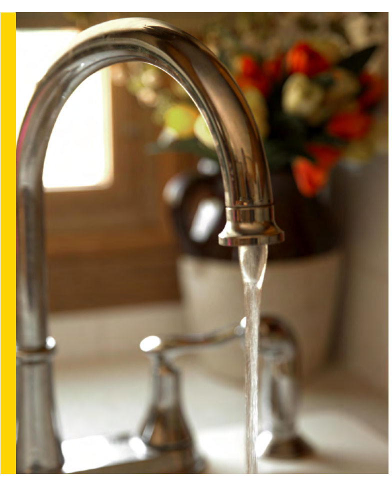
ISSUE

Shrinking Great Lakes cities are challenged by the loss of residents and industry, and higher rates of poverty and unemployment.[1] Many water utilities in these cities are faced with 1) decreased water sales due to fewer customers; 2) legacy infrastructure nearing the end of its service life; and 3) historically low water rates insufficient for adequate infrastructure investment. Under these conditions, water infrastructure may deteriorate until it fails, at which point a water rate increase becomes politically feasible.[2] However, rising water rates significantly impact households which are already experiencing financial distress. Residents can be evicted or foreclosed upon due to unpaid water bills. If water service has been suspended, social workers are required to put children into foster homes. In one case of mass shut offs, water was unavailable to families with "children who needed [it] to cleanse nebulizers for asthma...and disabled residents with breathing machines that require water."[3] Utilities and local agencies may respond with customer assistance such as repayment plans and subsidies, but these measures fall short of adjusting water rates to reflect household ability to pay.[4]



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POLICY CONTEXT

The U.S. EPA's affordability criterion for water ("water burden") is 4.5% of median household income for the combined cost of drinking water and wastewater service. Some utilities, particularly small water systems, struggle to comply with meeting the affordability criterion while also complying with health and environmental regulations.[5] The primary federal funding programs for water infrastructure improvements are the Drinking Water State Revolving Fund (SRF) and the Water Infrastructure Finance and Innovation Act (WIFIA). WIFIA offers loans at U.S. Treasury fixed interest rates, with flexible repayment terms, and the ability to delay repayment until five years after project completion. Critics argue that WIFIA prioritizes private projects, particularly oil- and gas-related projects. WIFIA also competes with the well-established SRF for the same pool of available dollars.[6]

BEST PRACTICES

Asset Management

Asset management programs enable utilities to proactively assess and invest in their infrastructure. Asset management programs include: an inventory of the infrastructure system; an infrastructure assessment process; and a condition rating for each infrastructure asset (e.g., pipe, pump). For example, Portland's (OR) asset management program identified pipes with the highest risk of failure, then prioritized repairs according to the highest level of benefit, thus reducing the impact of capital costs on customers.[7]

Resource Conservation & Efficiency

Drinking water utilities can reduce lost revenue by conducting a water loss audit, which determines the amount of drinking water produced at the plant versus the amount of drinking water consumed by customers. Other measures, such as energy efficiency upgrades for treatment plants, reduce operating costs. For customers, in-home leak repair and efficiency programs can be effective in reducing bills. For example, Philadelphia offers a conservation consultation if a customer's usage is particularly high, indicating a leaking pipe or running toilet.

The Philadelphia Water Department's affordability program builds on its established asset management and water loss audit program. The utility developed an affordability-based rate structure for customers with an income below 150 percent of the federal poverty level. Water bills for these customers are limited to 2 to 4 percent of household income. Residents who exceed the income limit can still qualify for the program if they've suffered a hardship, such as job loss, domestic violence, or other destabilizing events.[11]

Appropriate Water Rates

Once a utility conducts a cost-of-service rate study, the rate setting process can begin. The rate structure should reflect several key principles. Rates should be based on accurate financial and customer information. Rates should result in a revenue level that fully funds the cost of operation, maintenance, and capital investment. Water revenue should not be used for other municipal services. Rates must be fair and equitable, and incorporate affordability provisions for economically disadvantaged customers. The rate structure should be transparent and understandable to customers, easy to administer, and annually reviewed.[8]

Affordability Programs & Customer Protections

Best practices in implementing affordability programs include standard bill discounts, arrearage forgiveness,[9] and mandated protection of vulnerable populations. Bill discount programs include lifeline rates, income-qualified programs, and percentage of income payment plan (PIPP). Lifeline rates, available for all customers, establish a fixed, low rate for a small amount of water. Income-qualified programs offer discounts for customers whose income is lower than a given threshold. PIPP programs set utility bills at a percent of a customer's income, provided that consumption remains below a certain level. Arrearage forgiveness allows utilities to forgive debts if customers pay their bills on time over a period of time. And lastly, water service disconnection may be prohibited for vulnerable populations such as low-income households with children under 18, elderly over 65, pregnant and lactating women, persons with disabilities, and persons with chronic or catastrophic illnesses.[10]

1. US Census Bureau. *American Community Survey* data 5-year estimates: 2010 - 2014.
2. Metropolitan Planning Council. (2013). *Immeasurable loss: Modernizing Lake Michigan water use.* Chicago, IL. Retrieved from https://www.metroplanning.org/uploads/cms/documents/mpc_immeasurable_loss_final_web.pdf
3. Unitarian Universalist Service Committee (UUSC). (2016). *The invisible crisis: Water unaffordability in the United States.* Cambridge, MA: Jones & Moulton. Retrieved from http://www.uusc.org/sites/default/files/the_invisible_crisis_web.pdf
4. Michigan Welfare Rights Organization (MWRD), Sierra Club, People's Platform, and Detroit Resisting Emergency Management (D-REM). (2015). "Statement on Water Affordability vs. Water Assistance for DWSD Low Income Customers: Assistance is not Affordability." Retrieved from http://www.d-rem.org/statement-on-water-affordability-vs-water-assistance-for-dwsd-low-income-customers-assistance-is-not-affordability/
5. Pontius, F. (2008). "Are drinking water regulations affordable?" *American Water Works Association, 100(10), 24-34.* Retrieved from https://www.awwa.org/publications/journal-awwa/abstract/articleid/15975.aspx
6. Fried, K. (2016). "Guess who WIFIA is really going to help? (Hint: It's not Flint, Mich.)." *Food & Water Watch.* Retrieved from https://www.foodandwaterwatch.org/news/guess-who-wifia-really-going-help-hint-it%E2%80%99s-not-flint-mich
7. Buonadonna, D. & Cleys, T. (2017). "Lessons on Rightsizing Water and Sewer Infrastructure Projects." *Water Online.* Retrieved from https://www.wateronline.com/doc/lessons-on-rightsizing-water-and-sewer-infrastructure-projects-0001
8. Midwest Assistance Program, Midwest Rural Community Assistance Partnership. *Formulate Great Rates The Guide to Conducting a Rate Study for a Water System.* Washington DC. 2011. Retrieved from http://www.rcapsolutions.org/wp-content/uploads/2013/06/RCAP-Formulate-Great-Rates.pdf
9. American Water Works Association (AWWA). (2014). *Thinking Outside the Bill: A Utility Manager's Guide to Assisting Low-Income Water Customers. 2nd Edition.* Retrieved from http://www.awwa.org/portals/0/files/resources/water%20utility%20management/thinkingoutsidethebill-2ed.pdf
10. Community Lawyering Clinic. (2016). *Needless Drought.*
11. Nadolney, T. L. (2017). "For low-income residents, Philadelphia unveiling income-based water bills." *The Philadelphia Inquirer.* Retrieved from http://www.philly.com/philly/news/politics/city/for-low-income-residents-philadelphia-unveiling-income-based-water-bills-20170620.html