



## Designing Affordable Water & Sewer Rates

By Naeem Qureshi, PE, Sambatek, LLC

The affordability of water and wastewater services has become one of the greatest concerns over the past decade as utilities struggle to fund aging and long delayed infrastructure reconstruction projects. With more than 16% of North America’s underground infrastructure exceeding design service life, it is no surprise that there are more than 240,000 watermain breaks a year, with a 27% increase in break rates since 2012. The problem continues to worsen with up to 30% nonrevenue water in some utilities. Affordability is increasingly being discussed by decision makers as councils and utility boards decide how to pay for infrastructure investments. The old practice of cutting off service for nonpayment of water bills is no longer desirable as nobody can live in a house without water service, resulting in neighborhood blight.

For the first time in a generation, water and sewer infrastructure is on the national political agenda especially after the Flint, Michigan crisis. Over the past few years there has been a steady increase in the cost of housing and healthcare – essential costs for living. This combined with a generation of wage stagnation, especially for the lower and middle working class, has caused a real squeeze on the resources needed to pay for necessities of life. This had put affordability at the forefront of the national conversation about water.

Despite the importance of water and sewer services, providing drinking water at affordable rates is a challenge for utilities faced with significant capital needs and increasing operating costs. Low-income households spend 16.5% of their disposable income on water and sewer bills. According to National Energy Assistance Directors’ Association, 20 million households are behind on utility bills, owing \$16.1 billion with an average outstanding bill of \$788. According to AWWA 2021 study “Public Perception of Tap Water”, roughly a quarter of the respondents reported struggling to pay their water bill. Residential water service costs have increased at twice the rate of inflation over the last 20 years.

One third of large drinking water utilities offer some type of customer assistance programs (CAP), which offer some subsidies to increase the ability of financially constrained households to maintain access to water services. This may include bill discounts, special rate structures, and other means.

The Federal Government Low Income Household Assistance Program presently has \$1.138 billion to assist low-income households pay past due bills for drinking water and/or wastewater services. The program is designed especially for those households facing imminent disconnection.

To ensure that assistance is provided to deserving households, it is important to examine records of delinquent bills and disconnected accounts due to nonpayment of bills and reconnect accounts. It is important to publicize the CAP possibility by phone since delinquent customers

avoid opening a bill and thus may never learn that the program existed. Delinquent customers should be allowed to apply online so they can easily get the help they need.

Meaningful and accurate assessment of affordability is critical as utilities seek to serve low-income customers while raising the revenue needed to maintain and advance public health and conservation.

The Detroit Water and Sewage Authority (DWSD) has implemented an income based water Residential Assistance Program (WRAP) as shown below:

TIER 1 135% FPL* YOU PAY MONTHLY <b>\$18</b> For water, sewer & drainage if your income is:		TIER 2 136% - 150% FPL* YOU PAY MONTHLY <b>\$42</b> For water, sewer & drainage if your income is:		TIER 3 151% - 200% FPL* YOU PAY MONTHLY <b>\$56</b> For water, sewer & drainage if your income is:	
Number of People Living in the Household	Maximum Annual Household Income	Number of People Living in the Household	Maximum Annual Household Income	Number of People Living in the Household	Maximum Annual Household Income
1	\$18,075	1	\$20,395	1	\$27,380
2	\$24,352	2	\$27,465	2	\$36,620
3	\$30,630	3	\$34,545	3	\$46,060
4	\$36,908	4	\$41,625	4	\$55,500
5	\$43,185	5	\$48,705	5	\$64,940
6	\$49,463	6	\$55,785	6	\$74,380
7	\$55,740	7	\$62,865	7	\$83,820
8	\$62,018	8	\$69,945	8	\$93,260

This Lifeline Plan based on income eliminates past due balances on enrollment into the program and provides water, sewer and drainage service for as low as \$18 per month. This is funded by 0.5 % of the Great Lakes Water Authority (GLWA) serving Detroit and the suburbs and by Federal Funding through the Low-Income Household Water Assistance program (LIHWAP).

Steps in providing meaningful assistance to low-income households struggling to pay the water and sewer bills include:

- Understand the community.
- Work on identifying areas of greatest density of delinquent bills and shut-offs.
- Partner with community-based organization to raise awareness of CAP. Contact by phone frequently to delinquent households instead of letters to see the human side of economic hardship.
- Move the CAP under the utilities administration for quick access to data.
- Provide plumbing assistance to low-income households with high water use to fix leaking fixtures causing high bills.
- Lower fixed charges to benefit low water users who usually are low-income households.

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