



Water & Sewer Service Affordability in Ohio *Assessment & Opportunities for State Policy*

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Executive summary

Ohio communities face significant costs to replace and upgrade aging water and sewer infrastructure while maintaining health and environmental quality—a challenge that mirrors national trends. As these costs drive increasing utility prices, Ohio leaders are interested in ensuring that the economically vulnerable can afford to pay for these essential services. To that end, this study assesses the affordability of basic drinking water and sewer utility service for low-income households in the state of Ohio, identifies important correlates of affordability, describes current state-level efforts to address water affordability across the United States, and outlines avenues for policy development aimed at water and sewer affordability.

Method. A total of 1,187 community water systems currently operate in Ohio. This study uses a stratified, randomized, and representative survey of water and sewer rates from 300 Ohio water systems to gauge low-income affordability with two metrics: the *Affordability Ratio* at the 20th income percentile (*AR₂₀*) and basic service price expressed as *Hours at Minimum Wage* (*HM*). *AR₂₀* measures basic water and sewer price as a percentage of disposable household income for a family of four at the local 20th income percentile. Affordability is also measured as the hours of labor at minimum wage that would be necessary to pay for basic water and sewer service. The resulting assessment provides a snapshot of current affordability conditions in Ohio and allows analysis of the community-level correlates of affordability.

Affordability in Ohio. Ohio utilities charge an average of \$47.73 per month for water and \$48.73 for sewer service to a four-person, single-family residential household that uses 50 gallons per person per day. Because prices are generally higher in smaller systems, these monthly averages are lower when weighted by population: \$38.67 for water and \$46.76 for sewer. The population-weighted average *AR₂₀* value in Ohio is 10.6, meaning that basic water and sewer service cost an average of 10.6% of disposable income for households at the 20th income percentile. *HM* ranges from 1.8 to 26.6, with a weighted average of 10.0; that is, basic water and sewer service requires the equivalent of ten hours of minimum wage labor. Figure ES1 shows the distribution of affordability in Ohio.

At current rates, a 4-person Ohio household at the 20th income percentile must pay an average of 10.6% of its disposable income and/or work ten hours at minimum wage to pay for a month of basic water and sewer service.

Patterns of affordability. Analysis of affordability statewide reveals that basic water and sewer prices are negatively correlated with utility size, which likely reflects significant economies of scale. Figure ES2 shows this relationship, with prices depicted in *HM* units. However, this relationship disappears when affordability is measured with *AR₂₀*, suggesting that the affordability challenge in Ohio is not specific to urban, suburban, or rural communities. Average affordability is roughly similar across different types of utility, with no significant differences in average *HM* or *AR₂₀* between municipal, special district, and investor-owned systems. Basic water and sewer prices also do not vary significantly across communities by their racial, ethnic, or socioeconomic conditions. Although race and ethnicity undoubtedly inform socioeconomics in many communities, there is no evidence that water and sewer affordability is fundamentally a racial or ethnic issue in Ohio.

Figure ES1. Water & Sewer Affordability in Ohio, 2019

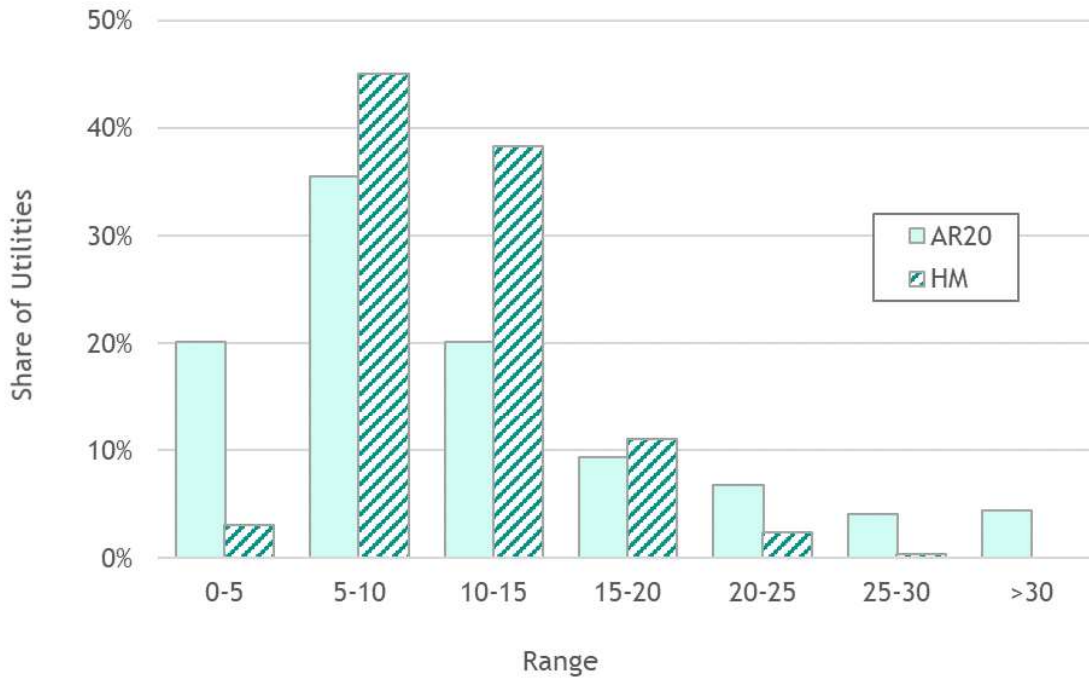
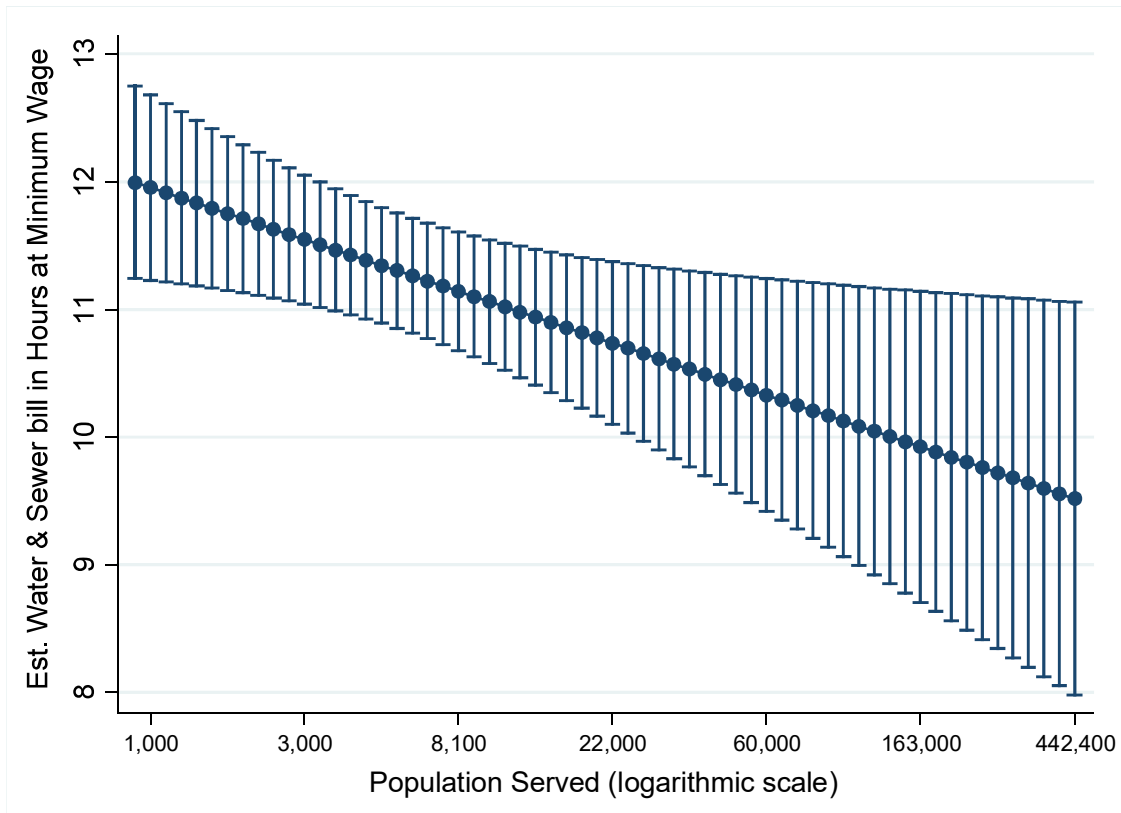


Figure ES2. Estimated *HM* by population served, 2019.



Note: Spikes represent 95% confidence intervals.

However, affordability is strongly correlated with income inequality, indicating that much of Ohio’s water and sewer affordability challenge follows from a skewed distribution of income *within* communities—a finding that mirrors national conditions.

Is water affordable in Ohio? This study measures water and sewer affordability across Ohio, but cannot determine what is “affordable.” When confronting affordability, leaders are grappling with fundamental values: what *sacrifices are reasonable to expect low-income households to make in order to pay water and sewer bills?* The analysis here indicates that in nearly 80 percent of Ohio communities a month of basic water and sewer service requires more than eight hours of labor at minimum wage. In about 45 percent of Ohio communities a household at the 20th income percentile must pay more than ten percent of disposable income for basic water and sewer service. These figures reflect the real tradeoffs that low-income households face.

What economic sacrifices are reasonable to expect low-income households to make in order to pay water and sewer bills?

State-level affordability policies elsewhere. At present, state government efforts to ameliorate water and sewer affordability problems are mostly limited to utility-level grant and low-interest loan programs that benefit water and sewer *systems*, but not necessarily low-income *customers*. At the time of this writing, no U.S. state has a fully operational, state-level water and sewer Customer Assistance Program (CAP) or other customer-focused affordability policy. Many utilities run CAPs for their own customers under state laws. A majority of states—including Ohio—do not provide express authority for CAPs, and so utilities that pursue them must navigate the law carefully.

Three states have proposed statewide CAPs in some stage of development. Legislators in Massachusetts and Pennsylvania have introduced bills for CAPs similar to the federal Low-Income Home Energy Assistance Program, but neither state has enacted such a program. California is the only state that has passed legislation for development of a statewide CAP for water service: the 2015 Low-Income Water Rate Assistance Act (W-LIRA). The California State Water Board has been developing W-LIRA over the past four years, culminating in a draft plan published earlier this year. In its proposed form, W-LIRA would cost \$606 million annually and provide assistance to residential customers that are below 200 percent of the Federal Poverty Limit. W-LIRA benefits would vary according to water expenses, income and household size.

Avenues for policy development. Some promising elements of a comprehensive, statewide water/sewer affordability strategy are discussed here. First, Ohio may seek to build economies of scale and organizational capacity through utility consolidation. Reducing the number of systems and increasing their average size is likely to both reduce prices and improve water quality. Second, the state may improve affordability through rate design by encouraging rate structures that feature low fixed charges and/or progressive volumetric pricing. Addressing affordability through rate design can improve affordability without placing additional administrative costs on utilities or burdens on customers. Third, the state could encourage water/sewer CAPs and other community-level programs through clearer enabling legislation for local utilities. Finally, Ohio might develop a statewide means-tested CAP to be administered independently or in conjunction with local utilities.