

Water Infrastructure

Legislative Summary

Senate Bill 44, the Missouri Water and Infrastructure Act, creates a process for filing a water and sewer infrastructure rate adjustment (WSIRA) to recover revenue outside of the normal ratemaking process. SB 44 also increases the competitive bidding process to be used for 20% of the water corporation's external expenditures.

Highlights

- Missouri's water infrastructure system requires continued maintenance and is expected to need \$8.9 billion from 2015 - 2034.
- SB 44 creates a process to allow water corporations serving greater than 8,000 customers to adjust rates outside the normal ratemaking process.
- 12% of the U.S. population has unaffordable water and sewer rates and rates are expected to increase; the same population can be at risk for delayed maintenance.

Limitations

- Common metrics to assess water affordability consider median incomes and average water use, which may not be as applicable to the most vulnerable water customers

Research Background

Maintaining and Financing Water Infrastructure

Access to quality and affordable water is vital for drinking, cooking, and sanitation. Maintaining water infrastructure is critical to avoid health problems from microbial and chemical contamination and further costs (e.g., water main breaks, leaks). Water utilities face intersecting challenges including aging infrastructure, climate change, and changing water usage. The American Society of Civil Engineers graded Missouri's drinking water infrastructure as a C-, slightly higher than the national grade of D.¹ In 2015, the EPA estimated Missouri's 20-year water infrastructure needs to be \$8.9 billion through 2034. About 26% of these costs are for large systems (greater than 100,000 people), 27% of these costs are for small systems (less than 3,300 people) and the plurality of costs apply to medium sized systems.²

Water and sewer rates vary in their structure and by the ratemaking authority. Private utilities work with the Public Service Commission (PSC) in the rate setting process, which incorporates stakeholder feedback to establish reasonable costs for the consumer and for the company to recover costs. Local elected officials decide public utility rates.³ As low-income households often use less water than average, rate structures that charge low-volume users more than high volume users may disproportionately affect affordability. Progressive rate structures depend more heavily on high volume users, often non-essential water use, which can be a less stable revenue source.^{3,4}

In addition to rates, utilities may seek grants and loans. For example, Missouri's Department of Natural Resources administers several grant and loan programs for water and

sewer utilities, including the Drinking Water State Revolving Loan and the Clean Water State Revolving Fund which help finance water infrastructure projects.⁵⁻⁷

Utilities may also recover costs via surcharges. Surcharges can be flat rates or fluctuate. SB 44 allows utilities to file a petition for Infrastructure Rate Adjustment to recover costs on some projects outside of the normal ratemaking process. Proponents argue that surcharges increase rates incrementally while recovering costs quickly.⁸ Opponents argue surcharges will have less oversight outside of the ratemaking process, reducing incentives for companies to control costs.⁹ Measures to increase transparency, capping the amount recovered, and auditing can help protect customers.¹⁰ Missouri, along with 15 other states, currently allows Infrastructure System Replacement Surcharge (ISRS) (Mo. Rev. Stat. 393.1000) with a few specific restrictions.¹⁰ Missouri American Water faced legal challenges on a surcharge to St. Louis County residents, when the county fell below 1 million residents, a requirement in statute. The Missouri Supreme Court rendered the argument moot in 2017, leaving clarification up to the legislature.¹¹ SB44 specifies that private water or sewer corporations serving more than 8,000 customers may file a petition for WSIRA. Of Missouri's private water and sewer utilities, Missouri American Water has the most customers, with 467,802 water customers and 13,753 sewer customers. The next largest private utility is Raytown Water Company with 6,628 customers (all as of 2019).¹²

Water Affordability and Safety

Low-income populations are at risk for unaffordable water as rates increase; furthermore, these same groups are at-risk for water contamination from inadequate maintenance. Community affordability is often measured as the average cost of water and sewer as a percentage of the median household income, with values below 4.5% considered affordable. This metric is considered flawed in that it is an arbitrary cutoff based on median income instead of low-income households and average water use rather than essential water use. Roughly 12% of U.S. households have unaffordable rates, and this is expected to increase as water rates increase faster than incomes.¹³ Census tracts with higher rates of disability, unemployment and concentrations of Black and Hispanic people are most likely to face affordability challenges.¹³ Some utilities provide assistance, including discounts and emergency assistance to prevent disconnections.³ Deferred maintenance costs or cost-cutting efforts may also have unintended consequences, such as in Flint, Michigan, where switching to a corrosive water source led to a Legionnaires's disease outbreak that sickened 79 people and killed 12 people, and blood lead poisoning, where at least 561 children had blood lead levels higher than the CDC safety limit of 5ug/dL, estimated to result to \$65 million in social costs.^{14,15}

In accordance with the Safe Drinking Water Act, the Missouri Department of Natural Resources monitors the water for 91 potential health concerns, including lead, fecal bacteria, and chemical contaminants.¹⁶ In 2019, 90.1% of Missouri's 2,741 public-serving water systems met all health requirements, a drop from 2018 (98.8%). The majority of violations were related to surface water treatment rules due to unanticipated conditions from floods. As average precipitation and heavy precipitation events are predicted to continue increasing in the Midwest, water utilities may face further water quality issues.¹⁷

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