



Drinking Water Guide Fact Sheet: Water Affordability

Key Points

- Drinking water infrastructure, operations, and maintenance are expensive, and many aging water systems need to be repaired and improved.
- Funding sources for drinking water systems may include federal funding sources, such as the Drinking Water State Revolving Fund, and rates paid by customers.
- Developing a water affordability plan or Customer Assistance Program can help ensure that people can pay their water bills and avoid water shutoffs due to missed payments.

What Costs are Associated with Drinking Water?

Collecting, treating, and distributing clean and safe drinking water is expensive. While there are some sources of federal funding for water systems, most funding comes from the local level. Ideally, water rates would be set and structured to recover the full cost of providing safe drinking water without placing an undue burden on any individual ratepayers.

The cost of delivering water to your home falls into two general categories: capital costs (i.e., physical infrastructure) and operations and maintenance costs. Some costs include:

- Constructing and replacing infrastructure for capturing water from sources and for treatment and distribution
- Protecting and monitoring source water
- Managing pollution within the watershed
- Treating water to remove contaminants
- Storing water and pumping water to customers
- Maintaining and inspecting infrastructure and equipment
- Recording water usage and issuing bills
- Paying technical, management, and other support staff to operate and/or manage the water system



How is Water Infrastructure Funded?

Federal Funding


Drinking water systems across the country are facing a significant challenge in maintaining and paying for aging infrastructure. In many communities, current drinking water infrastructure was installed using investments made by past generations, often via funding from the federal government. Federal funding continues to support drinking water infrastructure.

One program is the [Drinking Water State Revolving Fund \(DWSRF\)](#), which provides an important source of funding that can be leveraged in creative ways. States disburse low-interest loans to eligible entities, such as community water systems, for water system capital improvement projects. States must provide a 20% match for their federal grant each year. Learn more about the DWSRF in [River Network's SRF Advocacy Toolkit](#).

Another federal funding opportunity is the [Water Infrastructure Finance and Innovation Act \(WIFIA\)](#). This act created an additional EPA credit program for large-dollar-value water and wastewater infrastructure projects. Eligibility is limited to projects of at least \$20 million for large communities and \$5 million for smaller communities with populations under 25,000.

Water Rates

Unless water rates go up, some communities' water systems will not have sufficient funds to keep pace with operations, maintenance, and infrastructure needs. Billing rate structures may include flat fees, uniform rates, increasing block rates, declining block rates, seasonal rates, and water budget-based rates.



Flat Fees	Uniform Rates	Increasing Block Rates
All customers charged the same fee.	Constant per unit price applied to metered units.	Unit price of each block is charged at a higher rate than the previous unit.
Declining Block Rates	Seasonal Rates	Water Budget-Based Rates
Unit price of each block is charged at a lower rate than the previous unit.	Rates vary according to the time of year.	Households are given a water budget based on anticipated needs.

Rate increases for many water systems must be approved by local authorities that hold public meetings to obtain community input as part of that process. For investor-owned public water systems, and publicly owned water systems in some states, any rate increases must be approved by the state's Public Utility Commission with public input.

Water Affordability

With rate increases comes the issue of water affordability. According to the Pacific Institute, “water affordability” can be defined as the **“cost of essential water and sanitation should be inexpensive enough that cost does not prevent access, nor interfere with other essential expenditure.”**

Just as there is no single definition for water affordability, there is also no perfect approach to measuring it. Here are some ways water affordability has been measured:

- Annual cost of water bills as a percentage of median household income (MHI)
- Poverty levels
- Unemployment rates
- Percentage of people receiving other federal benefits (e.g., Supplemental Nutrition and Assistance Program [SNAP] benefits)
- An “affordability ratio”
 - Includes the costs of water and sewer
 - ...compared to disposable income for a community’s 20th income percentile
 - ...and through the hours of labor at a community’s minimum wage needed to pay a family’s water bill.

Beyond water affordability, “Customer Assistance Programs” (CAPs) may also provide relief. Assistance programs are intended to help consumers deal with short-term challenges and emergencies that may disrupt their ability to pay their water bills. They include approaches such as a discount on bills, changing payment plans, debt forgiveness, temporary assistance, and free water efficiency upgrades.

Affordable water rates and CAPs allow for people to maintain their water and sewer service without hardship, preventing harmful water shutoffs from unpaid bills.

Why is my water bill going up?

Water bills may increase for several reasons:

- You are using more water than in the past. Note that usage fluctuations can happen during certain times, such as in summer with outdoor irrigation.
- There is a leak or other problem leading to excess water loss
- Your water system has increased water rates to account for increased costs in operations and maintenance.
- Your water system has changed its pricing structure

The increase may also be linked to things beyond your personal control that the community could address collectively.



Case Studies

Detroit Water Shutoffs

Water affordability has reached a crisis level in many communities, including Detroit, Michigan, where aging infrastructure, a declining population, and rising water costs led the Detroit Water and Sewerage Department to shut off service to tens of thousands of residents unable to pay their water bills. The mass shutoffs started in the wake of Detroit's 2014 bankruptcy, and they continued unabated, with no provisions for vulnerable populations such as pregnant and nursing women, children, elderly, disabled or chronically ill individuals, until the water shutoff moratorium in Michigan during the COVID-19 pandemic. Organizations like [We the People of Detroit](#) and the [People's Water Board Coalition](#) helped provide emergency water relief during the shutoffs and continue to advocate for a long term water affordability plan.

Advocacy Opportunities

Making a Business Case for Affordability Programs

Community advocates can help to make the business case for incorporating affordability considerations into water rates, to their local water system. By ensuring more regular payment, even at lower levels, a water system can save money by avoiding the administrative costs of shut-offs and bill collection. Natural Resources Defense Council (NRDC) has created a [Water Affordability Business Case Tool](#) to help utilities assess the business case for a low-income customer discount program.



One example of making a business case is in Atlanta, Georgia, where estimates show that 50% of households face water affordability issues. The city's Care and Conserve program helps single-family, low-income customers facing financial hardships manage water bill payments through financial assistance and promoting conservation. Atlanta considers affordability support as a benefit to both the city and customers, alleviating a financial burden, while addressing plumbing problems and installing more efficient devices that save the city money and conserve valuable water resources in the long-term.

Additional Resources

- [Water: What You Pay For \(Alliance for Water Efficiency\)](#).
- [How One Small Idea Led to \\$1 Million of Paid Water Bills \(Tiffani Ashley Bell/TED\)](#).
- [Mapping the Water Crisis eBook \(We the People of Detroit\)](#).
- [Policy Statement on Affordability \(American Water Works Association\)](#).
- [Drinking Water Report Card \(American Society of Civil Engineers\)](#).
- [Right To Water: Could 2023 Be The Year Michigan Ends Shutoffs? \(Circle of Blue\)](#).
- [State Policy Hub: Water Affordability \(River Network\)](#).