

The Facts about Drinking Water

Providing a safe and reliable water supply is critical to protecting public health and safety (fire protection), and is necessary for economic development.

The Need

Throughout the Commonwealth of Massachusetts, cities, towns and water authorities are grappling with the need to repair and upgrade old, failing infrastructure. Some pipes are more than 100 years old. Water main breaks are often in the news – cutting off supplies, flooding streets and buildings, and adding a risk of contaminants entering the water supply. We must increase our investment in drinking water infrastructure to preserve our ability to deliver clean drinking water across the Commonwealth without interruption. But it's a costly proposition. The Massachusetts Water Infrastructure Finance Commission says the Commonwealth conservatively faces a \$10.2 billion gap in resources for drinking water infrastructure over the next 20 years.

The Process

There are approximately 1,700 public water systems in Massachusetts serving 6.3 million people. Most residences are served by community water systems, thus most of the responsibilities for daily operations of water utility systems are at the municipal or community level.



All drinking water begins as rainfall or snowmelt. As this water travels over land or through the ground, it dissolves naturally occurring minerals and can pick up substances and contaminants resulting from the presence of animals or from human activity. Some of these will be removed or reduced by natural processes of filtering through the ground or by dilution upon reaching a water supply. Although public water supplies are treated to remove contaminants, it is critical to protect the quality of the source (reservoir, well or river) to avoid having to build expensive, new processes to remove more contaminants. To accomplish this, many communities and authorities are focusing on protecting land around drinking water supplies and wells.

Water treatment is necessary as the second barrier of protection that reduces the level of contaminants to a safe range. A comprehensive cross-connection control program is the third barrier of protection, and it occurs within the water distribution system. A cross connection is an actual or potential interconnection between a drinking water line and any source of pollution or contamination such as a piping arrangement that allows drinking water to come into contact with non-drinkable water, chemicals, gases or other potentially harmful substances.

The Challenges

Americans are fortunate to have sophisticated water distribution systems that provide constant access to water at household taps and for fire protection. Maintaining these systems, however, constitutes a major challenge because of the sheer amount of infrastructure involved: nearly 1 million miles of pipes nationwide and countless pumps, valves, storage tanks, reservoirs, meters, fittings and other hydraulic equipment. Further, critical water infrastructure is aging, especially in older communities, and will require significant investments not only to repair and replace, but also for research, management and planning. Cost is increased by requirements to provide ever cleaner water through improved science and procedures to remove elements that were previously not considered a risk to public health.

The public is often unaware of the true costs of fully supporting, operating, maintaining and investing in our water infrastructure. Pressing needs to replace and repair aging infrastructure are putting increasing strain on underfunded water utilities, resulting in pressure to raise water rates.

Consumers also generally underestimate the value of water in protecting public health and safety, promoting economic vitality, creating jobs and preserving our environment. Most of all, the public and policymakers at all levels often misunderstand the consequences of failing to invest, from the high costs of deferred maintenance and emergency repairs to the missed opportunity to grow the economy by strengthening our infrastructure.

The result is a lack of public attention to and support for policies that will ensure we have the resources necessary to rehabilitate our aging infrastructure, meet the challenges of environmental regulation, and continue to provide safe, clean and reliable drinking water across the Commonwealth.

Coalition Recommendations

The MCWRS supports the recommendations of the Massachusetts Water Infrastructure Finance Commission, which include:

- Increasing funds available for water-related infrastructure at all levels, in particular state and federal contributions to the Water State Revolving Funds.
- Establishing a new Trust Fund, to be funded annually at \$200 million and used for a mixed program of direct payments to cities and towns, low interest loans, and grants.
- Incentivizing all communities, authorities and districts to utilize rate structures that reflect the full cost of water supply.
- Providing strong incentives for municipalities, districts and authorities to use best management practices.
- Assisting municipalities, districts and authorities in retiring their existing debt.
- Identifying creative ways to address affordability for municipalities and individual ratepayers.
- Encouraging investments and regulations that are aligned with environmentally sustainable principles.
- Promoting innovation.

Since drinking water, wastewater and stormwater systems share a common infrastructure based on watershed geography, the Coalition also believes that Massachusetts needs an enlightened state and federal permitting approach with a fair and constructive process that produces meaningful, cost-effective environmental benefits. Such a process is possible, as long as all parties desire to move beyond the status quo.

Communities ultimately bear the cost for all environmental compliance activities associated with wastewater, stormwater and drinking water services. Protecting water supplies for sustainable use also requires innovative solutions and sound policy decisions. Regulators should create incentives for communities that are willing to develop integrated water resource management plans.

Read more about the Coalition's recommendations on our website, www.mcwrs.org.

Join the Coalition

And make your voice heard! The more members the Coalition has, the more regulators and policy makers will pay attention to our calls for increased funding, regulatory reform and better science. Please join today. Visit the Coalition website for membership information.