



## Shoring Up Water Infrastructure

*A growing population, intensifying natural disasters and changing weather patterns are driving capital into this once overlooked sector.*

After decades of neglect, U.S. water infrastructure is finally getting some attention. The need is glaring. According to the most recent infrastructure report card from American Society of Civil Engineers, U.S. drinking water infrastructure got a “D” while wastewater infrastructure got a “D+.”<sup>1</sup> The age of the assets is part of the problem. Adding to the pressure are increased population and outdated infrastructure technology.

Spending on water infrastructure has been paltry for decades; now that’s starting to change, thanks to growing investor interest and government funding. In 2019, total spending on water infrastructure at the local, state and federal levels totaled approximately \$48 billion, \$81 billion short of the \$129 billion investment needed.<sup>2</sup>

“The growing population along with climate change disrupting weather patterns, creating a bit of unpredictability and risks of water availability and contamination, is driving demand for more clean water. We’re anticipating a continued need to invest in infrastructure and water infrastructure,” says Mansi Patel, head of U.S. infrastructure and project finance at MetLife Investment Management (MIM).

### A growing need

The cost of fixing and upgrading these facilities is great, but the consequences of ignoring them

are even greater. Service disruptions and flooding cost U.S. households an estimated \$2 billion in 2019.<sup>3</sup>

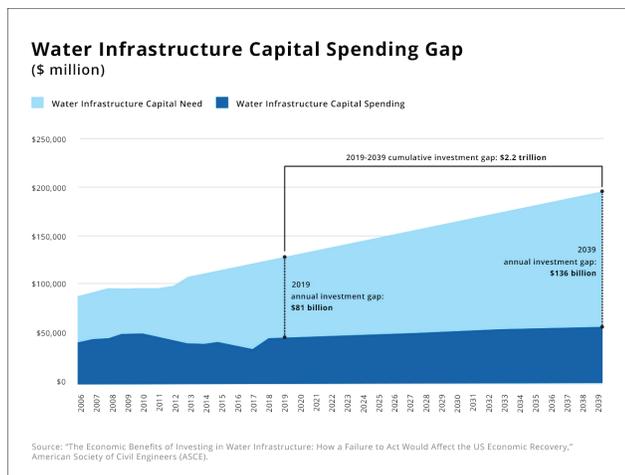
Because of the poor condition of water infrastructure, state and local governments are starting to allocate significant resources for the repair and maintenance of water pipelines. Some U.S. water pipes date back to the 19th century, while even ones laid after World War II are near the end of their lifespan of 75 to 100 years.<sup>4</sup> Old pipes leak, and water systems currently lose an average of 6 billion gallons of water every day.<sup>5</sup>

There’s also an increased focus on improving water efficiency and reusing water. In drought-ridden California, some municipalities rely more on treated wastewater, with up to 50% to 75% of potable water coming from wastewater treatment plants, says Syed Ahmed, director of infrastructure and project finance at MIM.

*“Infrastructure can be an attractive asset class in a downturn. The need for water, power, heat and energy don’t necessarily change despite the macro environment. We view it to be an essential sector.”—Mansi Patel, Head of U.S. Infrastructure and Project Finance, MetLife Investment Management*

Another urgent effort within water infrastructure is improving the resiliency of existing equipment to withstand increasingly drastic weather patterns. Ahmed sees many such projects on the horizon, “given the amount of flooding that we’re starting to see with all these one-in-a-thousand-year floods.”

Last year, MIM became the sole lender for \$197.8 million in financing to support a project in the cities of Fargo, North Dakota, and Moorhead, Minnesota, where there have been multiple so-called thousand-year floods in the last two decades, causing billions in damage. North Dakota has the second-highest inland flood risk in the U.S., after Louisiana. The area was home to 7 of the 10 largest U.S. floods in the last 25 years.



Source: “The Economic Benefits of Investing in Water Infrastructure: How a Failure to Act Would Affect the US Economic Recovery,” American Society of Civil Engineers (ASCE).

Affected states and municipalities developed a plan to divert floodwater by building a 30-mile channel, an embankment and other protection measures, including levees, floodwalls and stormwater lift stations. To finance the project, MIM led a private placement that included institutional investors along with other sources of financing.

**Sizing up the opportunities**

Funding for water infrastructure hasn’t kept pace with need, but several government programs are stepping in to shore up the country’s aging water

infrastructure. The Infrastructure Investment and Jobs Act, signed in November 2021, allocates \$60 billion to the Environmental Protection Agency (EPA), with nearly 83%, or \$50 billion, going toward water infrastructure projects.<sup>6</sup> The EPA also oversees the Drinking Water State Revolving Fund, which offers financial assistance to states to replace old service lines,<sup>7</sup> as well as the Clean Water State Revolving Fund, which helps finance state projects through low-interest loans to combat water pollution, preserve water sources and support other types of water infrastructure remediations.<sup>8</sup>

Far from a short-term need, water infrastructure requires billions in investment over decades. It can also be an attractive investment option, even during downturns.

Infrastructure debt is generally viewed as stable, with long-term, higher-quality stable cash flows and lower default rates. “Infrastructure can be an attractive asset class in a downturn. The need for water, power, heat and energy don’t necessarily change despite the macro environment. We view it to be an essential sector,” Patel says, adding that water infrastructure specifically “is an attractive portfolio diversifier.”

One change that’s creating more investment opportunities in infrastructure is the increased adoption of public-private partnerships, in which the private sector is involved in the construction and/or operation of an asset. One example is a private developer that designs and builds an infrastructure asset in exchange for a portion of the revenue. These public-private partnerships, or P3 projects, are most often seen in education, transportation and social infrastructure assets.

Between the urgent need and ramped-up attention, investment in U.S. water infrastructure has a positive long-term outlook. “We think water investments will continue to support the need for long-term sustainability goals and allow growing populations access to clean and reliable water,” Patel says.

## Sources:

1. "The Economic Benefits of Investing in Water Infrastructure," American Society of Civil Engineers, 2020.
2. Ibid.
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4. "2021 Infrastructure Report Card," American Society of Civil Engineers, 2021.
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7. "How the Drinking Water State Revolving Fund Works," U.S. Environmental Protection Agency, June 24, 2022.
8. "Learn About the Clean Water State Revolving Fund (CWSRF)," U.S. Environmental Protection Agency, Apr. 11, 2022.

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