



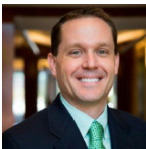
Economics of Water Report

How Communities Can Manage Water Risks and Plan Smarter

Communities face a range of daunting water and natural resources challenges, from rampant flooding to devastating droughts to rapidly deteriorating infrastructure. Many of these issues played out in cities nationwide this past year, taking major infrastructure upgrades from nicety to necessity. These challenges also provide the opportunity to develop smarter, cost-effective programs and processes. That's why MWH Global is launching a series of Economics of Water Reports. Each report will examine key issues and offer solutions from water and natural resources experts from MWH and its operating family, including construction-arm MWH Constructors and business consulting firm Hawksley Consulting.

In This Issue

- Reduce flood risks
- Austin meets water demands
- Turn big data into smarter decisions



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Three Steps To Help Communities Battle Flood Risks

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According to current trends and the best available scientific data, communities throughout the U.S. are facing one near certainty for the future: flood risks and flood disasters are steadily on the rise. **Today, flooding accounts for nearly 85 percent of all federal disaster declarations and results in more fatalities than any other natural hazard, spurred largely by population growth, urbanization and aging infrastructure.** What's more, evidence suggests that this trend will be compounded by rising sea levels and extreme weather in the coming years.

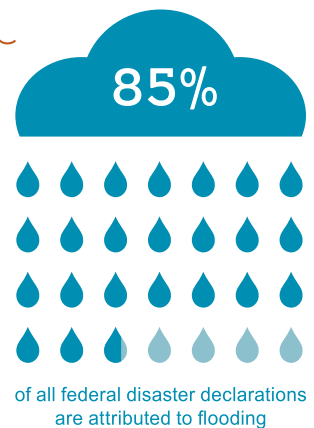
When it comes to flood risk management, local governments are on the front lines. For communities aiming to better manage their flood risks, plan smarter and stem the tide of rising flood insurance costs, the National Flood Insurance Program (NFIP) offers solutions. Currently, 96 percent of American communities are NFIP members. This means that most communities enforce at least some minimum standards for floodplain management. However, there's also an innovative and proven but widely underutilized program. Communities have the opportunity to join the NFIP's **Community Rating System (CRS)**.

The CRS provides a robust planning framework that allows community leaders to integrate and coordinate flood risk reduction efforts across local departments. In return, CRS participants are able to offer discounted flood insurance premiums for all resident policyholders. Communities need to focus on this benefit, especially with increasing flood risks and insurance costs.

Under CRS, the more a community does to reduce its flood risk, the greater the flood insurance policy discounts (ranging from 5-45 percent) – and the less likely it will be to suffer the next flood disaster.



**5-45% INSURANCE
POLICY DISCOUNTS**



Communities interested in joining CRS should take these three initial steps:

1

Become familiar with program, including how it operates, prerequisites for participation, and the types of recommended and creditable activities. Talk to the State NFIP Coordinator and/or FEMA Regional CRS Coordinator.

2

Complete a thorough evaluation of existing and proposed floodplain management activities, and how they compare to those recommended and credited under CRS. Consider all the long-term benefits and costs for program participation. Talk to program specialists and experts.

3

Designate a community CRS Coordinator to oversee the application process and subsequent activities related to joining and advancing through the program.





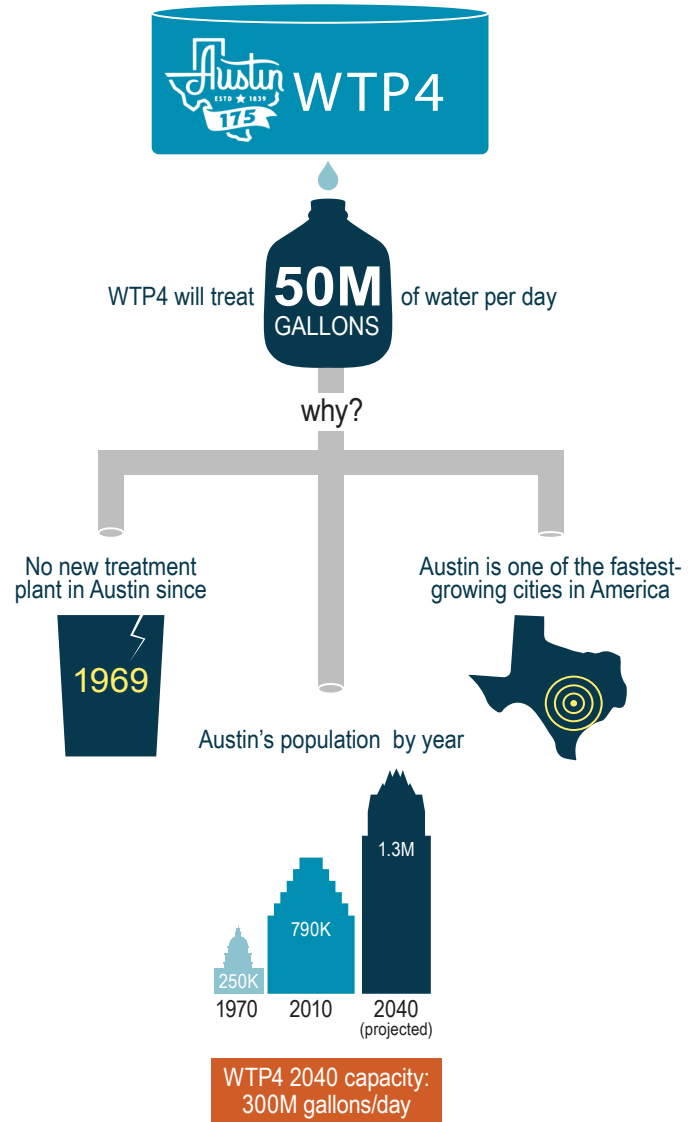
MWH®
CONSTRUCTORS

Meeting Growing Water Demands Deep in the Heart of Texas

In 2008, the City of Austin faced a booming population, a set of aging water treatment plants, and an economic downturn that pitted the long-awaited and much-needed Water Treatment Plant No. 4 (WTP4) against widely-publicized financial, environmental and community concerns. **MWH Constructors partnered with the City of Austin as the construction manager-at-risk for WTP4, deploying a synchronized approach to managing design, construction and budget in a way that delivered cost savings and on-time project delivery.** The project was completed last year and is capable of supplying 50 million gallons of water a day to Austin and surrounding areas. [See Austin WTP4 in action.](#)

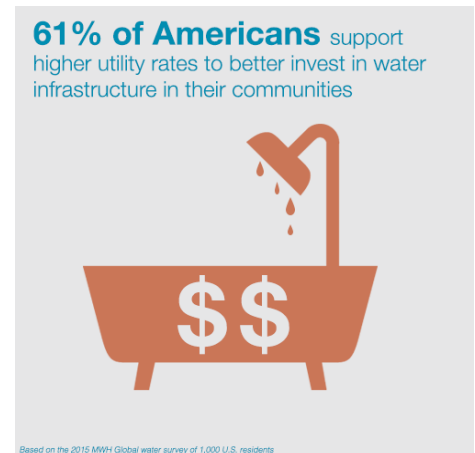
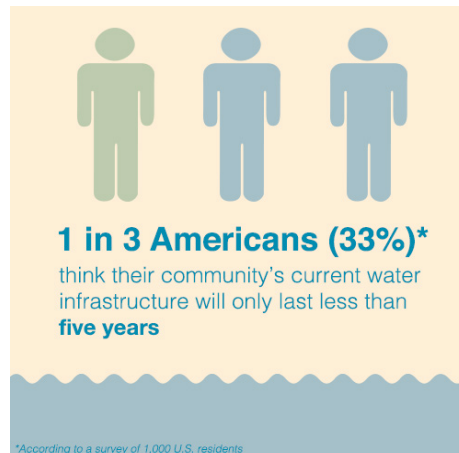
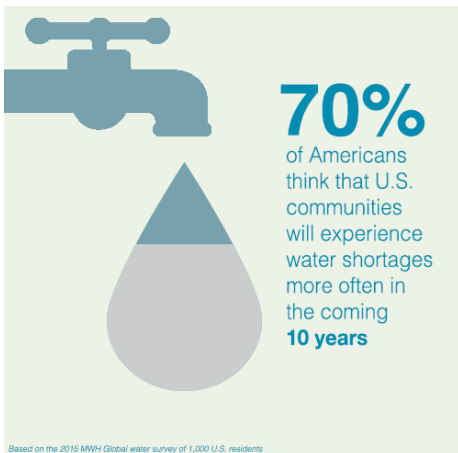
Four Insights

- **Hire local** – By engaging more than 200 local contractors, \$285 million of the project investment went back into the local economy
- **Room to grow** – With a current maximum capacity of 50 MGD, Austin WTP4 was designed to expand to 300 MGD with an eye on meeting future water and environmental needs of a growing population
- **Texas two-step** – Austin WTP4's CMAR and design teams collaborated on key design and construction elements during the planning process, saving time and money
- **Communication is key** – Project partners stayed connected with Austin's civic- and environmentally-minded local community via newsletters, public meetings and a 24-hour hotline



2015 MWH Global Water Survey

An MWH survey of U.S. consumers found these 3 important insights about water and infrastructure. [Click for more.](#)



*Based on the 2015 MWH Global water survey of 1,000 U.S. residents



Financial Benchmarking Data Leads to Smarter Utility Decisions

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Water and sewer utilities are among the most capital intensive industries. In fact, the average utility has to invest \$6.67 for every dollar of revenue, based on a review of financial data from over 500 municipal utilities in the new Hawksley Consulting Financial Benchmarking Database. In comparison, look at the airline industry. Southwest Airlines invests only \$0.77 in physical assets to earn a dollar of revenue.

With so much at stake, **utility managers are under pressure to make sound investment decisions and build greater financial resiliency into their organizations.** For some, this also means figuring out how much cash reserves to have on hand to deal with unforeseen events or future infrastructure needs.

Until recently, utility managers have been hard pressed to easily find guidance. Operating data in the industry has been surprisingly sparse, and quality financial benchmarks have been virtually nonexistent. We know, however, that data-driven decisions lead to better plans and better actions. **That's why Hawksley Consulting created a new Financial Benchmarking Database that currently includes data from more than 500 municipal utilities.** It's designed to make setting logical targets easier and smarter for utility managers. The database will continue to grow and has already proven useful for multiple utilities across the U.S. **Contact us to learn more.**

Financial Benchmarking Database includes data from

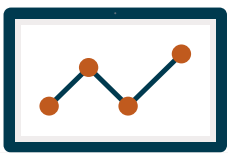


How Do You Compare to Your Utility Peers?



Here's an example of how the Financial Benchmarking Database can help utilities:

- Utility managers can use the database to set a liquidity target based on information from utilities that are similar in size, make-up and service area. For example, the database shows that liquidity – available cash divided by average daily operating expenses – has increased 10 percent in the industry since 2012 and now stands at a median of 623 days.
- Using the database, utility managers can dig deeper into this overall industry average to cross-reference, correlate and compare their organization to similar utilities. This yields narrower results and better information to make smart decisions about optimum reserve levels. For example, if your utility has \$3 to \$4 billion in assets, your peers actually have an average liquidity of 424 days – which is more meaningful information to guide your decisions and actions.



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