



Transforming Small Water Systems

How Private, Regulated Providers are Helping Small Systems Build a More Sustainable Future

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Introduction

Safe, clean and reliable water and wastewater service is essential to public health, economic growth and vitality, and community well-being. Yet across the country, many small water and wastewater systems face increasing challenges in maintaining aging infrastructure, meeting evolving regulatory requirements and securing the technical expertise needed to operate effectively. As drinking water and wastewater requirements become more complex, these challenges are particularly significant for communities served by systems with fewer than 3,300 people, where limited resources can make long-term planning and investment more difficult.

This pressure falls especially hard on small communities with limited capital reserves, years of deferred maintenance and difficulty retaining qualified personnel required to operate modern and increasingly complex systems. As these challenges persist, communities may experience signs of system distress:

- Recurring main breaks and service interruptions
- Water quality concerns
- Inadequate fire protection
- Treatment violations

Private, regulated water and wastewater providers are helping communities stabilize distressed systems and deliver professional water service at a time when local resources have been unable to meet these challenges.



According to Pew Charitable Trusts,

Small water systems serving fewer than 3,300 people make up

81%

of public water systems in the United States

But account for

93%

of federal drinking water noncompliance violations.

These statistics can erode public confidence and stall economic development.

Water Infrastructure Is Entering a More Demanding Era

Many small water and wastewater systems were developed to serve communities in a completely different operating environment. Today, water and wastewater utilities manage increasingly sophisticated treatment processes, regulatory requirements and infrastructure investments while continuing to provide reliable service to customers.

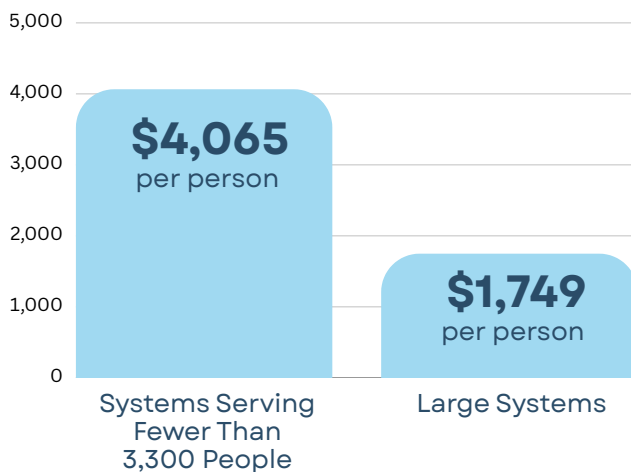
More stringent water quality regulations illustrate the growing responsibilities facing small systems:

- In 2024, EPA finalized new drinking water regulations establishing enforceable standards for PFOA and PFOS and required public water systems to conduct monitoring, public notification and compliance activities over the coming years.

- Also, in 2024, EPA's Lead and Copper Rule Improvements require drinking water systems to identify and replace lead pipes within 10 years, strengthen tap sampling, lower the threshold for action and improve public communication about lead risks and replacement plans.

According to Pew Charitable Trusts

Projected Drinking Water Infrastructure Needs



This illustrates the financial difficulty small systems face to achieve regulatory requirements compared to larger systems.



The Funding Gap Is Becoming an Affordability Challenge

Water and wastewater systems depend on continued investment to maintain treatment facilities, replace aging pipes and support all the infrastructure from source to tap and back to the source. Many communities fund these investments through customer rates, municipal financing, state revolving loan funds and other financing tools.

The scale of infrastructure investment continues to grow nationwide.

The American Water Works Association estimates that drinking water systems will require between

\$2.1 trillion - \$2.4 trillion

in infrastructure investment between 2026 and 2050, with an annual funding gap of approximately

\$56.6 billion

The American Society of Civil Engineers reports that more than

9 million

lead service lines remain in service nationwide and identifies approximately

\$625 billion

in drinking water infrastructure needs over a 20-year period.

Small water systems serve roughly

7%

of the population yet account for approximately

16%

of total drinking water infrastructure need

For small community water systems, infrastructure planning often involves balancing affordability with continued system improvement. Private, regulated water and wastewater providers utilize long-term investment strategies that can help communities renew critical assets, improve reliability and sustain service quality for future generations.

Workforce Scarcity Is Now an Infrastructure Risk

Safe, clean and reliable water and wastewater service depends on people as much as physical assets. Plant operators, engineers and skilled trades people keep water flowing for everyone and shape water quality, system reliability and daily operational performance. Several national studies highlight the importance of workforce development across the water sector:

The U.S. Government Accountability Office reports that many utilities **experience difficulty recruiting** certified operators and other skilled professionals.

More than 300,000 employees operate and manage local water systems across the United States, according to the US Water Alliance.

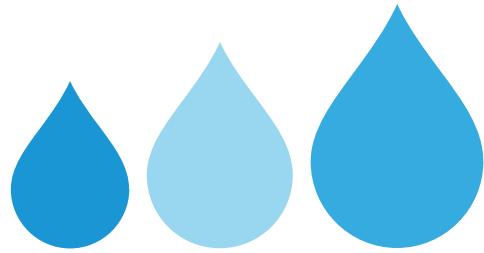
The EPA estimates that **30% to 50% of the water workforce** may become eligible for retirement during the coming decade.



For small water systems, workforce scarcity can directly affect water quality, environmental performance, regulatory compliance, emergency response and customer confidence.

Private, Regulated Providers are Transforming Water and Wastewater Service in Small Communities

Across the country, communities have shown that distressed water and wastewater systems do not have to define the future of water service. Private, regulated water and wastewater providers have leveraged access to capital, professional operations and technical expertise to assist small community water systems with stabilizing service, modernizing infrastructure and rebuilding public confidence.



West Virginia: Bringing Capacity to Distressed Systems

In West Virginia, The Town of Cedar Grove and the Armstrong Public Service District (PSD) both faced significant challenges in providing water service. Partnership with a private, regulated water provider developed a path to stabilize operations, modernize infrastructure, and restore confidence in essential water service.



Cedar Grove's transfer of its distribution system to a private, regulated water provider facilitated access to long-term investment and operational expertise after years of deferred maintenance, chronic leaks and water main breaks. The result was an investment of approximately \$9.3 million and **a reduction in water loss by more than 90%.**



Armstrong PSD, which had been declared a distressed utility by state regulators and mandated to transfer ownership to a private, regulated water provider also benefited from **more than \$9 million in infrastructure investments**, a new regional water supply connection, systemwide meter replacement and restored fire protection capabilities.

Missouri: Restoring Confidence in Ironton and Garden City

Small communities in Missouri have also engaged the expertise of private, regulated water and wastewater providers to support infrastructure modernization.



In Ironton, voters approved the sale of the city's water and wastewater systems to a private, regulated water provider for \$3.7 million, bringing professional service to more than 1,400 customers. Subsequent improvements included:

- More than \$6 million invested in drinking water infrastructure
- \$2.5 million invested in wastewater improvements

Garden City had recorded 27 drinking water treatment violations between 2015 and 2021, and its wastewater system had also fallen out of compliance with the Clean Water Act. More than 67% of voters in a public referendum approved the sale of the water and wastewater systems to a private, regulated provider. Following approval from the state public service commission, the provider assumed operations in December 2021.

The private provider has since invested \$10 million in drinking water infrastructure and \$2.5 million in wastewater improvements.



Pennsylvania: Stabilizing Service in Greene County



East Dunkard Water Authority served approximately 1,800 customers across Greene County, Pennsylvania. Years of financial instability, water quality violations and service interruptions created significant operational pressures that exceeded the Authority's capacity. After a major system failure in October 2023 left residents without water for several days, state regulators supported emergency intervention and authorized the sale of the system to a private, regulated water provider.

During receivership, the private provider **invested \$2 million to repair 82 leaks** and restore safe, reliable drinking water service. Following approval from the state regulator, the provider **committed \$16.1 million over five years** for treatment plant upgrades and water main replacements. The transition in ownership restored compliance, maintained existing rates and expanded customer assistance programs.

Delivering the Resources Communities Need

While every community's circumstances are unique, successful partnerships are often built on a common objective: ensuring that customers continue to receive safe, clean and reliable service. Successful transitions to private, regulated providers are characterized by a set of capabilities that help communities strengthen utility performance and plan for the future.

Private, regulated providers help communities:

- Invest in infrastructure modernization and asset renewal.
- Apply specialized expertise in utility management and regulatory compliance.
- Expand workforce resources and operational support.
- Strengthen system reliability through capital investment and long-term planning.
- Enhance customer service support and affordability programs

Conclusion

All communities deserve water and wastewater solutions that are practical, affordable and sustainable. Communities are being asked to exceed some of the highest expectations for water quality and environmental performance in history with fewer resources and growing structural challenges.

Small water and wastewater systems face a defining moment that reflects a new era in which water and wastewater systems must be managed as long-term, capital-intensive and technically complex essential services. For these small systems, private, regulated providers can offer a durable path forward by bringing capital and professional expertise to systems that need long-term stabilization.



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Trust in Water is a 501(C)(4) non-profit entity created to provide education about the role of private water and wastewater providers as trusted partners in delivering safe, clean, reliable, and sustainable water solutions to communities across America.