

Small Water Systems and the Private Sector

America's drinking water and wastewater sector is highly fragmented with over 53,000 community drinking water systems, 84 percent of which each serve fewer than 3,300 people.ⁱ According to the EPA, key challenges facing small and midsize water utilities include: a lack of expertise to operate and maintain their systems, a lack of financial resources, and aging infrastructure. Many smaller local systems are facing shrinking budgets and have smaller populations of customers to share the increasing costs of providing safe drinking water and reliable wastewater services.ⁱⁱ

As more water utilities wrestle with regulatory compliance and costly infrastructure needs, it is important to understand the specific challenges these systems face:

ACCESS TO CAPITAL

Accessing capital for investments can be difficult for small and midsize systems. Water systems are highly capital intensive and require investment in critical infrastructure to provide reliable services and meet EPA water quality regulations.

OPERATIONAL EFFICIENCY

Given high fragmentation, basic services such as billing, customer service and water testing often must be duplicated across neighboring small and midsize systems, raising costs.

COMPLIANCE WITH EPA REGULATIONS

Each new EPA regulation demands greater expertise from the utility operators and costs more money to implement and maintain. Small systems often don't have the expertise or resources necessary to maintain compliance.

PURCHASING POWER

Smaller systems have less bargaining power and oftentimes pay higher prices for equipment, tools, services and chemicals.

STAFFING

Small systems often don't have the ability to put in place continuity plans that address the challenges associated with an aging workforce, which results in a regular turnover of critical knowledge resources.

UNDERPRICING OF WATER SERVICES

Often small and rural water utilities are unable to charge their customers the full cost of supplying safe drinking water. That often results in neglected repairs and upgrades to the water systems.

FINANCIAL MANAGEMENT

Long-term fiscal planning and rate setting are essential for utilities to maintain financial health. These skills ensure rates are set optimally, giving small and midsize systems the ability to finance projects while continuing to provide safe drinking water to customers.

NAWC members have a proven record of helping small water systems address these unique challenges. Private water companies have a strong record of complying with the Safe Drinking Water Act, have a strong record of and high capacity for infrastructure investment, and can provide expertise and efficiencies that smaller systems cannot achieve on their own.

Examples of small water systems successfully leveraging the private sector to address their infrastructure and operations needs are provided below.



Ransom, Illinois

Illinois American Water



The Village of Ransom in central Illinois has a population of 371. In 2015, the village's drinking water showed high levels of radium, leading the village government to begin providing bottled water to residents. Lacking the resources and expertise to address the radium problem on its own, the village transferred its water system to a private company, Illinois American Water, in 2016.ⁱⁱⁱ

Illinois American Water invested approximately \$2 million to install 10 miles of water main to connect the village's customers to its existing water-distribution system serving nearby areas. As a result, Ransom's residents and businesses regained access to safe drinking water in compliance with EPA requirements, allowing the village to end its distribution of bottled water.

Despite the additional investment, operational efficiencies in connecting to Illinois American Water's larger system meant that customer bills declined by approximately 15 percent on average, from \$53 to \$45 per month.^{iv}

Keystone, South Dakota

ECO Resources, Inc. / Southwest Water Company



The town of Keystone, South Dakota, with a year-round population of 370, is the gateway to Mount Rushmore. During tourist season, the town's population can surge to as many as 8,000 people.

In the mid-1990s, a new state law rendered Keystone's wastewater treatment plant out of compliance. At the same time, a separate law limited the amount the town could borrow to update the plant. Instead of using its entire debt capacity for the wastewater project, Keystone chose to contract with a private partner to design, build, finance, and operate for 20 years a new facility, in exchange for annual payments from the town. The private company would finance the project with privately issued bonds, saving Keystone's debt capacity for other priorities.

Under the contract, the town paid operational costs plus a reasonable return for the private partner, ECO Resources (Southwest Water Company). As a result of the partnership, Keystone was able to build a wastewater treatment facility that exceeds state and federal compliance standards even during peak seasons without sacrificing debt capacity.^v



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Holyoke, Massachusetts

Aquarion Water / SUEZ North America



A small city in western Massachusetts, Holyoke previously operated a wastewater system that sent hundreds of millions of gallons of untreated water into the Connecticut River each year. State and federal assessments in 1995 and 1997 found that the wastewater system made the river unsafe for swimming or fishing and was increasing the average pathogen count in the river by 12,678 percent.^{vi}

Faced with an estimated \$45 million to \$78 million cost to fix the sewer overflow problem, the city of Holyoke sought a public-private partnership to design, build, operate, and maintain an updated wastewater treatment system.^{vii} In 2005, Aquarion Operating Systems was selected as the private partner and was contracted for a 20-year agreement.^{viii} In addition to building a new \$24 million treatment facility, Aquarion also agreed to upgrade and operate the current wastewater infrastructure, which included \$6 million for 14 capital improvements. The city financed the project by combining a low-interest loan from the state's revolving fund with capital from the private partner.^{ix}

Aquarion Operating Systems was subsequently purchased in 2007 by United Water, which is now SUEZ North America. The Holyoke sewer project, which was completed a year ahead of schedule, saved the city \$10 million in capital, operation, and maintenance costs and enabled the city to exceed EPA mandates to reduce overflow discharges.^x Between 2007 and 2010, the new wastewater facility reduced overflow into the Connecticut River by 92 percent.^{xi}

McHenry County, IL

Aqua Illinois



Three of the rural water systems that Aqua Illinois has acquired since 2015 are Crystal Clear Water Company, Eastwood Manor Water Company, and Nunda Utilities. Each of these systems required urgent infrastructure updates and repairs before being acquired. In fact, all three systems had each recently faced EPA consent orders for repeated water treatment, supply, monitoring and management violations.^{xii} Given these failures, the Illinois Commerce Commission (the PUC) strongly supported the sale of the utilities to Aqua, noting the company's expertise and relevant experience turning around troubled systems.^{xiii} Customers of these systems have enjoyed the benefits of

millions in much-needed infrastructure improvements, including the replacement of water mains, service lines, hydrants, meters, and storage facilities. These investments and the added operational expertise provided by professionals with Aqua Illinois have improved service, increased efficiencies, and conserved water by replacing aged, leaking infrastructure.^{xiv}



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Wardsville, Missouri

Missouri American Water



Missouri American Water completed its acquisition of the Wardsville, Missouri, water and wastewater systems in May 2017.^{xv} The acquisition allows Wardsville's 475 drinking water customers and 406 wastewater customers to join the more than 150 communities in Missouri served by Missouri American Water that have received more than \$490 million in investment from the company since 2015.^{xvi} Future investments enabled by the private sector ensure Wardsville customers will receive reliable service that meets all water quality and environmental standards. At the time of the acquisition, Wardsville officials said costs and rates would have increased dramatically had the town continued to operate the system.^{xvii}

The complex challenges struggling water systems face require an examination of all possible options, not reliance on just one solution, business model, organization or financial partner. Consolidation is a successful, growing trend, especially among rural water systems, and it encompasses a wide range of options for struggling utilities, including partnerships with larger regional operators. Highly fragmented states, like Kentucky, have successfully gone from thousands of disconnected small systems to several hundred consolidated systems, reducing the operational and financial capacity challenges for utilities across the state.

Private water professionals are helping struggling communities across the country make substantial capital investments, apply innovative technologies, and forge successful partnerships. NAWC members stand ready as a trusted partner to communities that face urgent infrastructure investment and utility operation needs.

ⁱ National Association of Water Companies fact sheet, "Water is a Big Deal"

ⁱⁱ U.S. EPA, "Small Drinking Water Systems Research" (<https://www.epa.gov/water-research/small-drinking-water-systems-research-0>) accessed 8 February 2018; CoBANK Knowledge Exchange, "Rural Infrastructure Briefings: When Rural Water Systems Combine" October 2017.

ⁱⁱⁱ The Times, "Ransom approves water system sale" 15 August 2015

^{iv} BusinessWire, "Illinois American Water Acquires Village of Ransom Water System," April 26, 2016.

^v National Council for Public-Private Partnerships, "Keystone, SD Wastewater Treatment Services Partnership." Available at: <http://www.ncppp.org/resources/case-studies/waterwastewater-infrastructure/keystone-sd-wastewater-treatment-services-partnership/>

^{vi} Pioneer Valley Planning Commission, "CSO Fact Sheet #1: Combined Sewer Overflows (CSOs) and Our Rivers" February 2005.

^{vii} House Subcommittee on Water Resources and the Environment, Testimony of the Honorable Michael Sullivan, Mayor of Holyoke, March 2003. Available at: http://www.mayors.org/urbanwater/sullivan_031903.pdf

^{viii} Environmental Protection Agency, Authorization to Discharge Under the National Pollutant Discharge Elimination System, July 2009. Available at: <https://www3.epa.gov/region1/npdes/permits/2016/finalma0101630permit.pdf>

^{ix} Water Industry, "Aquarion set for final Holyoke public review" 2004.

^x Business Wire, "City of Holyoke and United Water Win National Distinguished Infrastructure Award" December 2010; United Water, "United Water in Holyoke Massachusetts" 2009. Available at: https://unitedwater.com/brochures/112009%20update_UW_8.5x11_Project_Flyer_Holyoke_FINAL_screen.pdf

^{xi} National Council for Public-Private Partnerships, "Berkshire Combined-Sewer Overflow (CSO) Abatement Facility." Available at: <http://www.ncppp.org/resources/case-studies/waterwastewater-infrastructure/berkshire-combined-sewer-overflow-cso-abatement-facility/>

^{xii} Circuit Court of the Twenty-Second Judicial Circuit in McHenry County IL, "Consent Order with Crystal Clear Water Company, Inc." filed 5 September 2012; Illinois EPA "Annual Groundwater and Drinking Water Program Review, Calendar Year 2015" June 2016; Circuit Court of the Twenty-Second Judicial Circuit in McHenry County IL, "Consent Order with Eastwood Manor Water Company and Nunda Utility" filed 11 August 2011.

^{xiii} ICC Final Order, Docket #15-0596; ICC Final Order, Docket # 15-0384.

^{xiv} Aqua America Annual Report 2016.

^{xv} BusinessWire, "Missouri American Water Announces Acquisition of Village of Wardsville Water and Wastewater Systems" 23 May 2017.

^{xvi} BusinessWire, "Missouri American Water Files Rate Request" 30 June 2017; BusinessWire, "Missouri American Water Announces Acquisition of Village of Wardsville Water and Wastewater Systems" 23 May 2017.

^{xvii} News-Tribune, "Missouri American Water eyes diving into Wardsville" 25 December 2016.

