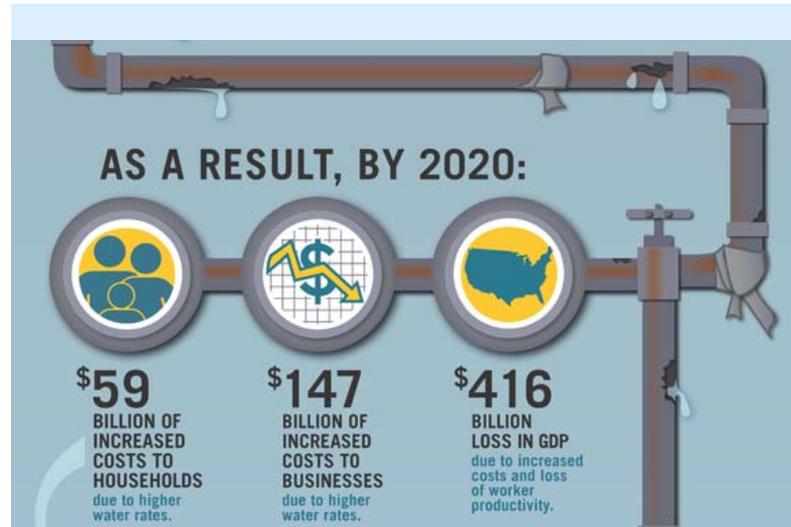
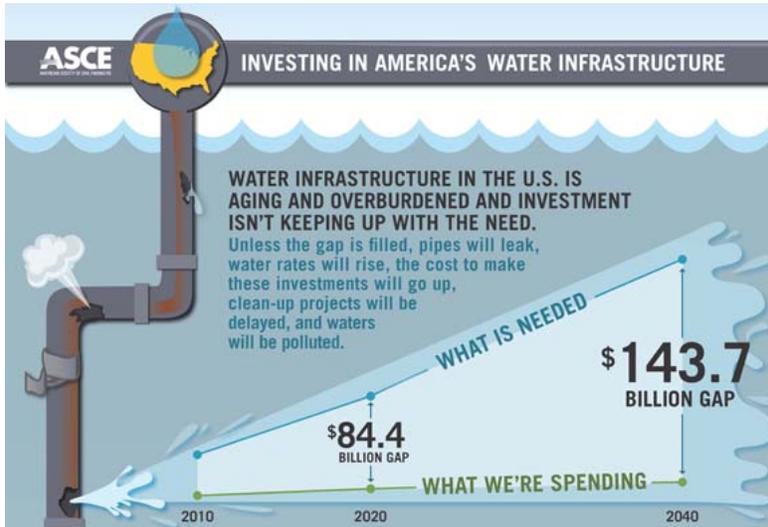


Deteriorating Water Infrastructure

The Challenge:



Source: ASCE 2013 Report Card of America

Our Industry's Solutions:

Final Barrier.

When water leaves a municipal treatment facility, it meets all the guidelines of the Safe Drinking Water Act. But, as water travels a long distance to reach a home or business, the water coming out of the faucet may not. Older water pipes underground and/or in a home can decrease the water quality, such as lead service lines leaching lead into the water. The "Final Barrier" is the use of drinking water filtration systems to ensure quality drinking water is available at the water faucet.

Economically Feasible.

Infrastructure repairs to help decrease the pollutants in the water is expensive and takes time. Point-of-Use and Point-of-Entry (POU/POE) - at the tap or whole house water treatment - provides a solution for communities that cannot immediately afford infrastructure updates. These water treatment technologies can assist in filtration and disinfection.

Product Certification.

The American National Standards Institute (ANSI) accredits certification bodies (ex. WQA Gold Seal and WQA Sustainability Programs) to test and certify products to the material safety requirement and contaminant reduction claim(s) as specified by the standard. Products that display the certification body's seal provides assurance that they have been rigorously tested and meet the requirements of the standard, program policies, and plant inspection policies. Visit WQA.org for a full list of WQA certified products.

Professional Certification.

Professional certification allows consumers to reach professionals that have an expertise in water chemistry and POU/POE systems - at the tap or whole house water treatment - water quality improvement. Visit WQA.org to find a water treatment provider and certified professionals in your area.

Deteriorating Water Infrastructure



Point-of-Use & Point-of-Entry Technologies Provide Feasible Solutions

The EPA National Assessment (2013) of the public water infrastructure needs reported a total of **twenty-year capital improvement need of at least \$384.2 billion**. This represents the projects necessary from Jan. 1, 2011, through Dec. 31, 2030 for water systems to continue supplying safe drinking water. In the meantime, deteriorating distribution systems pose health risks to the public, such as lead and water main break contamination.

Fortunately, there is an available approach that can go far in making sure everyone has access to safer and healthier water. The use of POU/POE systems - at the tap or whole house water treatment - can ensure that everyone has water that is up to standard. By helping everyone receive the treatment they need exactly where they need it, the United States can realize its goals of public health in a cost-effective and reliable way.

Deteriorating Infrastructure Effects Around the Country

LA Times (Feb 16, 2015) reported about one-fifth of the city's water pipes were installed before 1931 and are responsible for close to half of all water main leaks. Replacing them will cost \$1 billion. By 2050, AWWA (2012) concluded the aggregate investment needs will be more than \$1.7 trillion and ASCE's (2013) report card on water infrastructure saw the needs are greater than \$1,000 per person in five regions: Far West, Great Lakes, Mid-Atlantic, Plains, and Southwest.

[Lead]

Potential Health Effects:

- Children are more at risk than adults
- Reduced intelligence, impaired hearing and decreased growth in children
- Damage to the brain, Kidneys, and bone marrow
- Damage to the nervous system and red blood cells

Treatment Methods (POU/POE):

- | | |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Reverse Osmosis | Strong Acid Cation Exchange (Na ⁺ form) |
| Solid Block and Precoat Adsorption Filters (proper designed submicron filtration with adsorption media) | Distillation |

[Water Main Breaks]

American Society of Civil Engineers (ASCE) estimates 240,000 water main breaks per year in US.

Potential Risks:

- Microbial contamination vulnerability
- Water loss

Treatment Methods (POU/POE):

Systems Certified to bacteria cyst reduction claims through an American National Standards Institute (ANSI) accredited Certification Body (example: UV, distillation etc.)

About WQA:

The Water Quality Association (WQA) has thousands of members nationwide and internationally, including major corporations as well as family-owned businesses that are involved in the water treatment industry. Dedicated to consumer education and public awareness, the Water Quality Association is a not-for-profit trade group of businesses that provide treatment solutions for safe, clean water throughout the world – in homes, schools, commercial and industrial settings, and more. WQA promotes best practices for superior products and environmental sustainability with the guidance of respected, independent standards. Its labs conduct rigorous testing and certification, and training programs promote professionalism and ethics. Learn more: wqa.org