

Federal infrastructure spending in the water sector: a once-in-a-generation opportunity



By Patrick J. Hogan

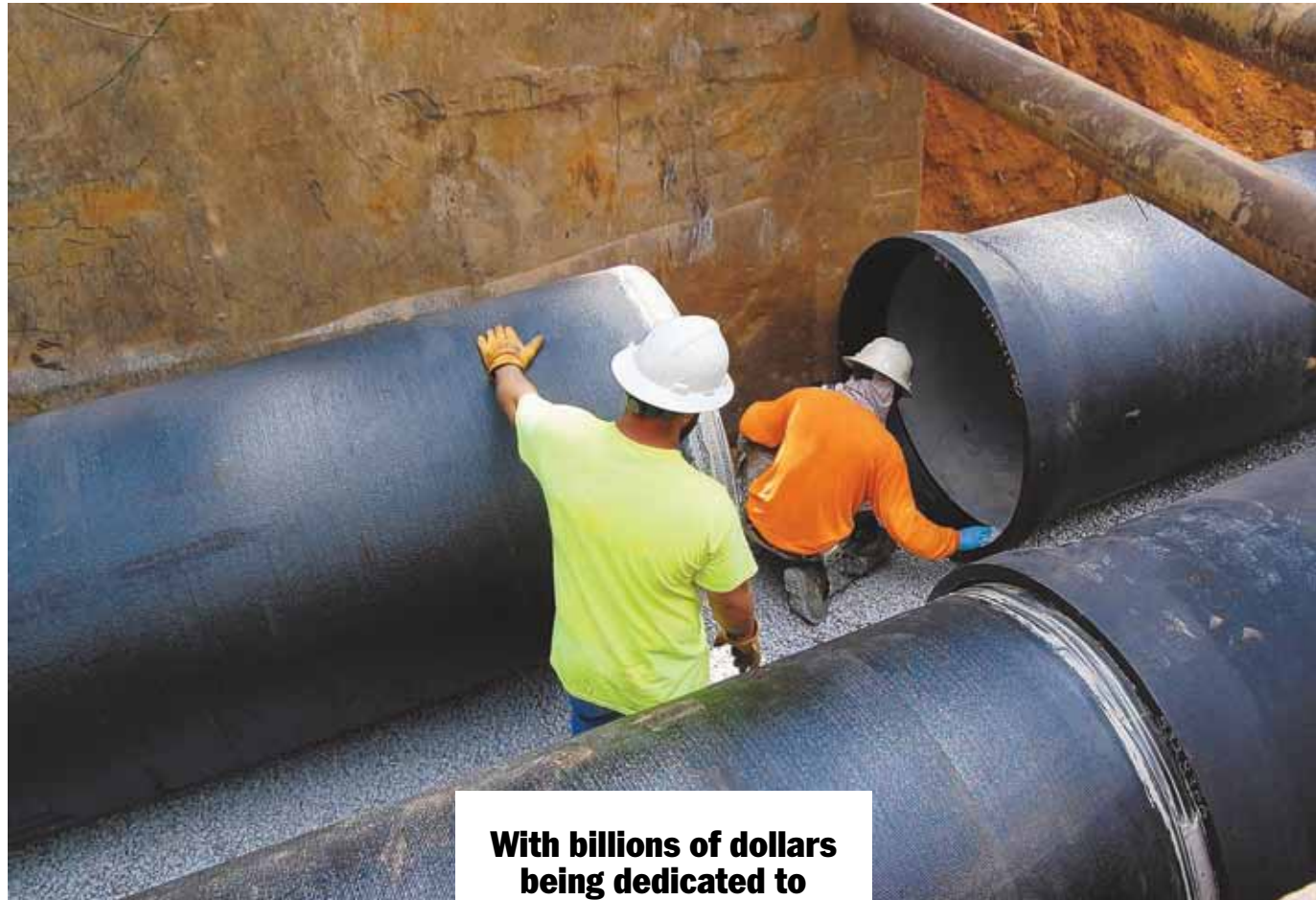
“Water, water everywhere but not a drop to drink.”

This old saying is sadly relevant today in too many communities throughout the United States who do not have access to enough safe, clean drinking water.

But in a positive development to tackle this challenge, there has been a tremendous push recently to invest in water infrastructure thanks to the new federal resources as a result of the COVID relief and federal infrastructure legislation. The U.S. EPA is developing new programs and, along with the U.S. Department of Agriculture, are making significant investments into State Revolving Funds to improve water systems, particularly rural ones.

With billions of dollars being dedicated to water systems, there is a great responsibility to elected officials, utility operators, and others responsible for making pipe decisions to select the best pipe for their communities. The Ductile Iron Pipe Research Association has long advocated for listening to engineers and experts on the ground. In fact, our association is proud to have on staff engineers who work with utilities and others to make sure they understand the application and specifications of Ductile iron pipes. Our engineers also work with researchers at colleges, universities, and elsewhere on projects that can affect buried water and sewer pipes and our understanding of how they can stand up to the challenges they face over decades (or longer).

Ductile iron pipe is the strongest, most resilient pipe to convey drinking water that is currently available. It is the descendant of cast iron, which has been used for more than 100 years – and in some communities for more than 150 years. DIPRA celebrates the strength and longevity of iron pipe with the [Century Club](#), which recognizes more than 580 municipalities and utilities in



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the U.S. and Canada that have iron pipes in use for more than 100 years, and the Sesquicentennial Club, which recognizes more than 30 municipalities and utilities in the same two countries with iron pipes more than 150 years old.

The technology and innovations from America’s Ductile iron manufacturers have resulted in pipes that can withstand seasonal weather pressures – whether it’s freezing or roasting temperatures – and also natural events such as wildfires, which are becoming stronger and more severe as we progress with climate change.

Other, and at times lesser, pipe materials frequently rupture under pressure or melting in wildfires, potentially leading to drinking water supplies contaminated with volatile chemicals. At times, the temptation to pay less for costly infrastructure projects with lower quality materials is tempting. But buyer beware. Lower quality pipes and those made of inferior materials will break more easily and not have the life cycle expectations of Ductile, potentially leading to repairs and replacement that could be more expensive than the initial pipe installation.

When comparisons between Ductile iron and other kinds of pipes are made fairly, including costs incurred over the entire service life, Ductile iron is, by far, the clear winner. Our pipes have a service

life upwards of 100 years, while other materials may only last 50 to 60 years. We manufacture pipes to last for generations – to provide clean, safe drinking water for your grandchildren’s grandchildren.

Don’t just take my word for it, though. Look at what others have recently said about Ductile iron pipes that are being installed in water systems.

The New York City Department of Design and Construction is installing Ductile iron pipe in the Westerleigh neighborhood because it is “[more resilient](#) to breakage.” The Suffolk County Water Authority, New York state, is installing Ductile iron pipe in Bridgehampton, noting that it is “far more resistant to breaking and [expected](#) to last well over 100 years.” [Connecticut Water](#) is replacing cast iron pipes with Ductile iron with the system’s manager of Distribution System Engineering commenting, “It is the latest

technology.” Similarly, communities and utilities all along the West Coast, from [Los Angeles Water](#) to [Portland, OR](#), and [Seattle, WA](#), have included Ductile iron as part of their seismic planning because of its superior resiliency in the face of natural disasters; which is why the East Bay MUD in Oakland, CA, describes the Ductile iron pipes they are installing as the “next generation of pipes” that the utility believes “should last 150 years.”

The amount of federal resources being put toward water infrastructure really is a once-in-a-generation opportunity to create the kind of water systems our communities deserve. No one should ever question whether their water is safe to drink, bathe in, or use to cook. The first step in designing these systems that will last generations is to use the best pipes – the ones that will last the longest, be the strongest and most resilient, and guarantee clean, safe drinking water. The only pipes that can stand up to that claim are made from Ductile iron.

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Patrick J. Hogan is president of the Ductile Iron Pipe Research Association (DIPRA). From its inception more than 100 years ago, DIPRA has provided accurate, reliable, and essential engineering information about cast iron – and now Ductile iron – pipe to a wide variety of utilities and consulting engineers.