

INFRASTRUCTURE: THE PROBLEM IS REAL, BUT SO ARE HIDDEN AGENDAS

By: Bonner R. Cohen



With the November election rapidly approaching, candidates of every size and shape are falling all over themselves with unbridled promises of good things to come, including overhauling America's "crumbling infrastructure."

The run for the White House features a veritable bidding war between Hillary Clinton and Donald Trump over who can lavish more money on programs to fix the nation's decrepit roads, bridges, and tunnels Clinton has unveiled a five-year, \$275 billion plan that includes a \$25 billion "national infrastructure bank," which, her website says, will be used to leverage "up to an additional \$225 billion in direct loans, loan guarantees, and other forms of credit enhancement." All told, the Clinton scheme would amount to \$500 billion in "federally supported investment," to be paid for by what her campaign delicately refers to as "business tax reform."

To Trump, Clinton's \$275 billion or \$500 billion is chump change. He vows to spend "at least double her numbers" on infrastructure. As to how it's to be paid for, Trump told Fox Business Network that "we'll get a fund. We'll make a phenomenal deal with a low interest rate."

Infrastructure projects, with their lure of lucrative government contracts and well-paying construction jobs, have long been a staple of voter-hungry office-seekers. But absent strict oversight, these projects can become colossal boondoggles. Boston's infamous "Big Dig," a megaproject built in the 1990s-2000s involving the construction of two tunnels, a bridge and a greenway, was known for shoddy workmanship, use of substandard materials, cost overruns going into the billions and missing its targeted completion date by nine years.

Oddly, neither Trump nor Clinton has mentioned what is by far the nation's most pressing infrastructure problem: thousands of miles of leaking, corroded underground iron water pipes. Unlike roads and bridges, these pipes are hidden from view, but the effects of decaying underground water networks — from water-main breaks to substandard drinking water — are widespread. Gregory Baird, former chief financial officer of Aurora Water, Colorado's third-largest water utility, calculates that leaking, corroded pipes lose 2.6 trillion gallons of drinking water every year, or 17 percent of all water pumped in the U.S.

The U.S. Conference of Mayors projects that \$3.8 trillion will have to be spent by 2028 rehabilitating the nation's water and wastewater systems. According to EPA, underground water pipes account for 60 percent, or \$2.28 trillion, of that total.

This is real money. If it isn't spent prudently, municipal water systems could find themselves saddled with their own "Big Digs," at an enormous cost to ratepayers and taxpayers. At its core, having a safe drinking-water infrastructure is a public-health issue, as the water-contamination disaster in Flint, Mich., demonstrated all too clearly. This is why efforts to address the problem that manipulate data and misrepresent scientific findings have no place in a discussion this serious.

A case in point is a recent paper published by the University of Michigan, which was funded by the Ductile Iron Pipe Research Association, a trade group. Titled "A Framework to Evaluate the Life-Cycle Costs and Environmental Impacts of Water Pipelines," the study could have provided valuable guidance to municipalities struggling with critical procurement decisions related to upgrading their water systems. Instead, the paper's three authors violated the basic principles of scientific research. Specifically, in comparing the longevity of ductile-iron and polyvinylchloride (PVC) pipes, they claim that the life of PVC pipe is 41-60 years, citing a 2012 paper by Steven Folkman, director of Utah State University's Buried Structures Laboratory. Dr. Folkman made no such statement in the paper and is on record, in a 2014 report, at putting the life cycle of PVC pipe "in excess of 100 years." In a recent letter to the University of Michigan, professor Folkman cites 15 studies from around the world in support of his position.

The Michigan study further claims that ductile iron-pipe has a life expectancy of 100 years. While it's true that some old, thick cast-iron pipes could last up to 100 years, most become degraded by corrosion, with attendant public health and safety concerns, and their service life expires decades short of the century mark. DIPRA, on its own website, puts the life cycle of today's thin-walled ductile-iron pipes at 50 years. A 2011 report by the American Water Works Association found that thin-walled metallic pipes in moderately corrosive soils have a life expectancy of only 11-14 years. The finding is significant considering that 75 percent of all water utilities operate in corrosive soil conditions.

The stakes are high in the infrastructure game — whether for a bridge spanning a river or a pipe bringing drinking water into a home. Fudging the numbers in support of a project, product or technology is a temptation that will not always be resisted. In choosing the materials that best serve their needs, municipal officials should have at their disposal the most unbiased information possible. Buoyed by a truly open competitive bidding process where contenders can slug it out in the spirit of "may the best technology win," municipalities can upgrade their water systems and avoid the road that leads to Flint.

Trump and Clinton may not yet appreciate how vulnerable the nation's water infrastructure is, but local officials responsible for providing their communities with safe drinking water know that an ill-informed decision on their part can have disastrous consequences.