The crisis in Flint, Mich., has pushed drinking water quality into the forefront of national conversation, but problems with the Midwest’s aging drinking water infrastructure are not new. Plenty of lead pipes nearing the end of their service lives remain, and nonpoint source pollution from agricultural runoff besets watersheds and municipal water systems before ultimately afflicting the Great Lakes, Mississippi River and Gulf of Mexico.

States have taken steps to clean up their water systems and sources (several of which were noted in Stateline Midwest’ September 2015 edition), but the overall tab to modernize is tremendous.

At least $1 trillion will be required nationwide through 2035 to replace pipes at or reaching the end of their service lives, according to a 2010 report, “Buried No Longer: Confronting America’s Water Infrastructure Challenge,” from the American Water Works Association. The Midwest’s aggregate share (including Missouri) was estimated at $172.2 billion.

“As daunting as the figures in this report are,” the authors say, “the prospect of not making the necessary investment is even more chilling.”

Out of sight, but not out of mind

Water infrastructure is critical, but being underground, it’s “out of sight, out of mind” until something goes wrong, says Nick Schroeck, executive director of the Great Lakes Environmental Law Center at Wayne State University.

As systems age beyond their service lives, some health hazards can be contained by vigilant, skilled water system operators — but only to a point, Schroeck says. Aging systems also mean more breakdowns in equipment, boil alerts for customers, and problems maintaining pressure.

“You always have to have pressure going through these systems; you need positive pressure,”
meaning the pressure inside pipes is greater than pressure outside them. This keeps contaminants from getting into the system.

“If you have a water main break and you don't have that positive pressure, then you can get water leaking into the system and there is the potential for health hazards,” says Schroeck, adding “there are literally lives at stake with breakdowns in this infrastructure.”

One outcome of the Flint disaster is that water infrastructure, at least for the time being, is now “top of mind,” among the public and policymakers at all levels of government. If that leads to more money going to replace this aging infrastructure, Schroeck says, “that's a silver lining to a really, really tragic situation.”

**Minnesota eyes statewide water plan**

Minnesota has begun increasing its spending on water infrastructure as part of a constitutional amendment passed eight years ago by the Legislature and the state’s voters. Starting in 2009, the state’s sales tax was raised by 0.375 percent to fund water, outdoor preservation and arts initiatives.

Approximately 33 percent of the money from the Legacy Amendment is dedicated to a [Clean Water Fund](#), of which at least 5 percent must be used to protect drinking water sources. Funded projects include loan programs to help smaller communities pay for infrastructure upgrades, watershed and groundwater well monitoring, and desedimentation.

“It’s given us a pretty good income stream to deal with drinking water issues,” says Rep. Denny McNamara, who chairs the House Environment and Natural Resources Policy and Finance Committee.

More recently, Gov. Mark Dayton announced plans earlier this year for a $1.4 billion bond package that would include $220 million to help communities upgrade their drinking water systems and fund projects that protect water quality.

If approved by the Legislature, the governor’s plan would include $80 million for a water infrastructure funding program, $62 million to help municipalities upgrade treatment plants, and $25 million to assist local governments in matching federal grants or low-interest loans.

These funds would augment existing financing programs already administered by the Minnesota Public Facilities Authority.

“I think we’ll have broad, bipartisan support for that [bond package],” McNamara said in advance of his state’s 2016 legislative session.

With the greater state investment, too, will come a first-ever attempt by Minnesota to develop a comprehensive plan that guides its future investments.

“This is the first time that anyone has looked at the state’s clean water infrastructure as a whole rather than picking one project at a time,” says Matt Swenson, the governor’s press secretary and senior communications adviser.

**State responses to Ohio, Michigan crises**

Two years ago, a harmful algae bloom in Lake Erie knocked the city of Toledo’s water system offline
for a short time, leaving hundreds of thousands of people without their supply of drinking water. The crisis garnered national attention and led one year later to the passage of SB 1 [7], which targets a primary source of these toxic algae blooms — nutrient runoff in the western Lake Erie basin.

The new law bans the spreading of manure on frozen or snow-covered soil, or when the top two inches are saturated. It also bans granular fertilizer from being laid if local forecasts call for heavy precipitation. Other parts of SB 1 require additional phosphorus monitoring at wastewater treatment facilities and establish the state-level position of harmful algae management and response coordinator.

Some Ohio lawmakers are also now calling for a constitutional amendment to invest in local water systems. Introduced last year, SJR 3 [8] would authorize the issuance of $1 billion in bonds over the next 10 years to help local governments pay for sewer and water infrastructure.

In the wake of water crises in Flint (drinking water being contaminated) and Detroit (water being shut off due to residential bills not being paid), a host of bills have been introduced in Michigan, including a “Human Right to Water Act.” [9]

This proposal (HB 5101) frames a 10-bill package dealing with — among other subjects — water access, billing, service shut-offs and testing. And under HB 5120, local water users would have to be notified within 72 hours of a “Tier II” violation of the state’s drinking water standards. (Tier II is defined in Michigan law as violations or situations other than short-term exposure to contaminants that could “have serious adverse effects on human health.”)

Within Flint itself, the city has launched a $55 million “Fast Start” initiative to replace lead pipes with copper ones, kick-started by $2 million from the state and technical expertise from the city of Lansing, which is in the midst of its own lead pipe replacement program.

Flint officials have also announced a low-interest $25 million loan program from Union Labor Life Insurance Co. to further boost the program. First in line are houses in neighborhoods with the highest concentration of children under 6, senior citizens, pregnant women, people whose immune systems are compromised, and homes where tap water tests have already shown high lead levels.

In a March press release, Gov. Rick Snyder outlined [10] some of the state responses to the crises:

1. offering $30 million in credits on residents’ water bills dating back to April 2014;
2. assisting homeowners with lead abatement;
3. replacing water fixtures in day care centers, hospitals and schools;
4. placing nine nurses in local schools to monitor students’ health; and
5. supplying free bottled water, water faucet filters (and their replacement cartridges) and water testing kits.

According to Snyder, the state had spent $70 million between October 2015 and early March.

**Action brewing in cities, and D.C., too**

Some cities didn’t wait for legislative action before acting to “get the lead out.” Madison, Wis., spent $15.5 million over 11 years to remove all lead pipes in the late 1990s and early 2000s after a series of consent orders with Wisconsin’s Department of Natural Resources.

In Michigan’s capital city of Lansing, local officials are removing their lead pipes and have offered technical assistance to Flint. In February, a lawsuit filed in an Illinois circuit court seeks to force the city of Chicago to replace its lead pipes. (Chicago required lead water-service pipes until 1986;
the Chicago Tribune recently reported that almost 80 percent of properties in the city still have lead connections, and that city officials do little to warn residents when work on water mains might create higher levels of lead in their tap water.

The federal Lead and Copper Rule, which limits concentrations of those elements in drinking water and sets acceptable pipe corrosion levels, says cities should replace old lead and copper water fixtures. While lead’s health hazards are well known (there is no safe ingestion level and no cure for lead poisoning), the problems with copper are more complex. Bodies need it for proper metabolic and organ functions, but too much can cause upset stomachs, nausea and diarrhea, and other tissue damage (primarily in the liver).

A lack of coordination and funding between federal and state governments, utilities and customers has prevented the wholesale removal of the nation’s old pipes, Schroeck says.

“The collective ‘we’ have known there is a problem for many years … and it hasn’t been a priority for many reasons to go in and replace them,” Schroeck says. “Flint has shined a light on this problem, but people in the industry have known about this for years.”

The U.S. Environmental Protection Agency is currently considering revisions to the Lead and Copper Rule, soliciting comments about how to improve oversight of corrosion control treatments and potential requirements for “additional actions that equitably reduce the public’s exposure to lead and copper when corrosion control treatment alone is not effective.”

Flint’s crisis exposed gaps in the existing rule. And these gaps “are the most significant policy question at hand right now,” says Joel Brammeier, president and CEO of the Chicago-based Alliance for the Great Lakes.

One concern, he notes, is how states’ water samplers conduct tests and interpret data. Currently there is much confusion about the testing methodologies that determine lead and copper levels and, as a result, potential violations of existing health standards.

The EPA’s National Drinking Water Advisory Council, meanwhile, is recommending that the federal government pursue a full replacement of lead pipes, including into customers’ meters. That recommendation is now getting a lot of attention from the EPA and the U.S. Congress, Brammeier says.

“That would be a huge shift nationally to go down that path,” he adds. “It would be a significant recalibration of how we pay for water.”

Rep. Mason hopes at least one positive can come from the tragedy in Flint.

“It put everyone on notice that you’d better figure out the expiration date on your aging infrastructure and start making plans to replace [it],” he says.

As if that’s not difficult enough, Mason says, what happens if there’s no political will to do anything?

“I think that’s going to be the toughest question going forward.”

By:
Tuesday, March 15, 2016 at 12:00 AM
Attachment Size
Stateline Midwest: March 2016 [14] 2.45 MB