NLC Service Line Warranty Program

by

HomeServe

AGING WATER INFRASTRUCTURE:

THE PROBLEM OF PRIVATE SERVICE LINES

INTRODUCTION

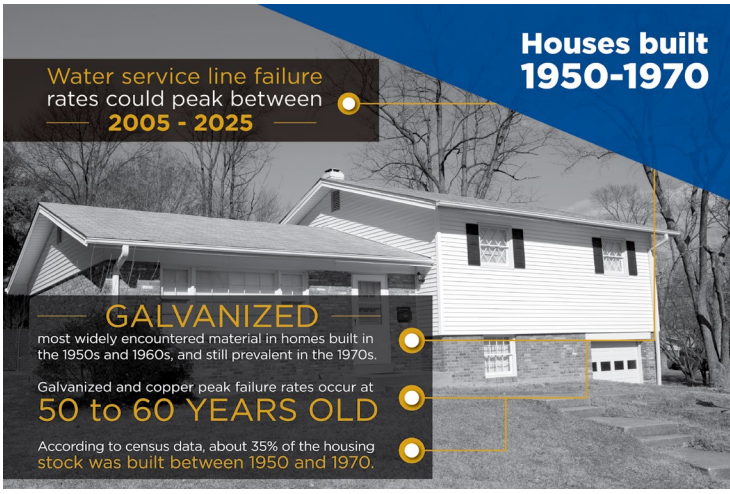
It isn't a matter of if water service lines will fail, it is a matter of when – and that "when" will be sooner than many think, as research has shown that older lines, made of materials such as lead, copper and galvanized steel, have reached the end of their usable lifespans while newer materials lack longevity.

Private service lines are part of our country's larger aging infrastructure problem, one that includes a large price tag, but no clear-cut solution. The American Society of Civil Engineers continues to give the 1.6 million miles of water and sewer infrastructure "D" grades. The report on drinking water informs readers that over 2 trillion gallons of water are wasted each year as a result of an estimated 240,000 water main breaks.

The American Water Works Association estimates that $1 trillion in investment will be necessary to meet water demands over the next 25 years. However, that doesn't include the costs to repair or replace private service lines that are quickly approaching the end of their lifespans.

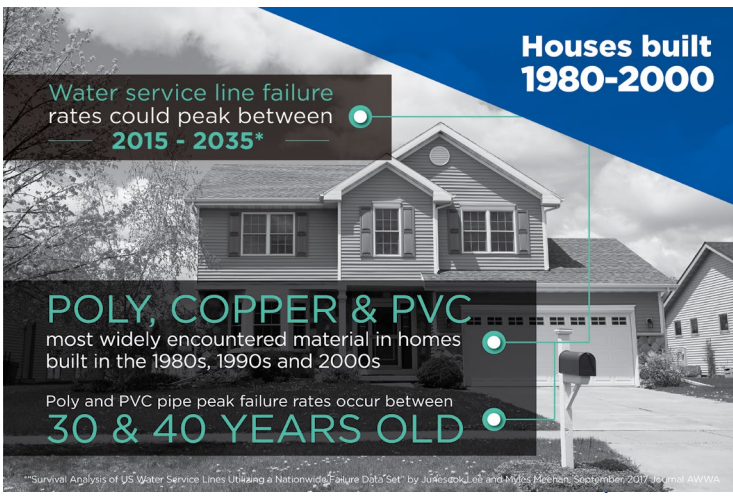
LOSING MONEY AND NO FIX IN SIGHT

Dr. Juneseok Lee, formerly an Associate Professor of Civil and Environmental Engineering and California Water Service Co. Chair Professor at San Jose State University and currently at Manhattan College, researched water line failures and how pipe materials affect survival rates. In the study, published in the Journal of the American Water Works Association, Lee used nearly ten years of national historical water line failure data from HomeServe, a home repair service plan provider.



A significant percentage of U.S. housing stock is poised for potential service line failure. In this study, galvanized steel was the most widely encountered material in homes built in the 1950s and 1960s, and was still widely seen (second only to copper) in the 1970s. With galvanized and copper pipes demonstrating peak failure rates at between 50 and 60 years of age, the failure rates for these older homes are peaking between 2005 and 2025.

Newer homes are not expected to fare much better. The study revealed that poly, copper and PVC were the most widely encountered material in homes built in the 1980s, 1990s and 2000s, with peak failure rates for these newer materials occurring between 30 and 40 years of age. That means expected failure rates for these newer homes would peak between 2015 and 2035.



Lee's research found that some systems are losing water to leakage at rates as high as 32 percent and that service lines are the weakest points in the drinking water distribution system, with large amounts of real water loss occurring in the service

lines, fittings and connections between the curb stop and meter. In addition, because service line leaks rarely flow upward, or emerge from the ground, it's all too common for service line leaks to go undetected for a long period of time, letting water – and money – leak away.

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OLDER PIPES AREN'T SAFE

Although older service lines are made of sturdier materials and generally last longer, they can contribute to health issues, according to Lee's study. Homeowners may notice odors, discoloration or an unpleasant taste to their tap water, but rarely do they realize much of the problem could be within their own plumbing.

The study found "abundant evidence" of water quality problems related to service line issues, and an examination of the quality of drinking water in private service lines can differ "considerably" from the wider system with higher bacterial counts. Low pressure in service lines can allow the water to be contaminated with chemicals and bacteria, and galvanized steel frequently corrodes from the inside out, reducing pressure.

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It would be hard to be unaware of the lead poisoning in Flint, Michigan, and Lee's research found that, depending on corrosivity, diameter, flow rates and water use, lead service lines account for 50 to 75 percent of lead found in samples taken at the tap. Because of lead's longevity, adaptability and affordability, lead service lines were standard in many cities from the dawn of public water systems through the 1950s and even until the lead pipe ban in 1986.

Although lead service lines have been in the spotlight, copper can also leach into drinking water through service lines. In addition, older pipes may have been joined with lead solder, allowing two different metals to leach into a home's water, courtesy of the water service line.

COMMUNITY IMPACT: RESIDENTS REELING FROM FINANCIAL SHOCK

For many, a water service line failure can cause financial shock, putting pressure on already limited finances. Replacing a water or sewer line could cost thousands, but one in three homeowners don't have even $500 set aside for an emergency home repair, according to HomeServe's Biannual State of the Home Survey.

*We saw people at risk of **having to leave their homes** because of the financial hardship of having to pay for an expensive water line repair.*

–John Sharp, retired Kansas City, Missouri, councilman

As cities struggle to make badly needed upgrades to their public water infrastructure, there needs to be a plan to include investment in private-side infrastructure improvements.

"A failing water or sewer service line can result in a financial disaster for a citizen and in extreme cases, result in loss of the home for families living paycheck to paycheck," Jim Hunt, long-time Mayor and Councilmember in Clarksburg, West Virginia, and Past President of the National League of Cities and Advisor to the NLC Service Line Warranty Program, said.

In Birmingham, Alabama, where some of the water infrastructure is more than 100 years old, city leaders saw the necessity of providing options to their residents.

"Many Birmingham Water customers were experiencing broken water lines," said Rick Jackson, Public Relations Specialist and Spokesperson for Birmingham Water Works. "Many were even falling behind on their water bills because of the high cost of repairs. When they called the city for help, there was nothing we could do, and that's not something we liked."

Shonte' Eldridge, Baltimore City's PMP Chief, Mayor's Office of Strategy and Transformation, became aware of how difficult the situation was for some residents when the City was modernizing its water system. As crews replaced meters, they found stark evidence of the water system's age: in some cases it was difficult to reconnect service because of deteriorating service lines and, in other cases, when they could be reconnected, resuming water pressure damaged them.

A WAY FORWARD

"We knew residents were having breaks and we could not just turn the water off and say 'good luck,'" Eldridge said. "That's not good leadership and that's not what citizens expect from government, so we had to look for another plan."

Lee recommends that water systems and municipalities educate customers about their responsibilities with regard to service lines, providing information that presents their options when faced with a service line failure. In addition, water utilities and municipalities should consider programs they can offer as a solution to help customers manage the cost and inconvenience of a failure when it occurs.

"Adopting these kinds of proactive approaches will minimize water loss by improving leak response times, thus ultimately reducing the cost to both customers and water utility operations," Lee said. "Adopting such strategies may well produce a 'halo effect' in that the ensuing customer satisfaction could build good will and help the United States as a whole to navigate the challenging times ahead for the nation's infrastructure."

Choosing your partner

Public-private partnerships have been utilized for decades by municipalities seeking the best of both worlds for the benefit of the community while reducing financial risk.

While there are many home services available, partnering allows the municipality to direct residents to a fully vetted, reputable company that they know will deliver excellent service.

An attractive partner considers how their actions impact the municipalities in which they operate and gives back to the community, whether through volunteer work or grant programs.

Cities cannot shoulder the cost of infrastructure repairs and replacement alone and need to look to innovative solutions to engage the private sector to help citizens and cities alike.

The NLC Service Line Warranty Program partners with over 750 municipalities and utilities to educate homeowners and offer affordable protection against potentially costly repairs to private service lines. The Program uses a network of local plumbers who have gone through background and drug screenings. The Program's 500-seat call center is staffed 24/7/365 to answer claims calls and dispatch contractors to address homeowners' emergencies.

The Program is provided at no cost to cities, and partner cities can receive royalties based on participation.

To find out how you can help your residents achieve peace of mind, visit NLC.org/serviceline.