

# A lucky break?

## Main breaks are down this year —but no, it's not just luck

**W**ater main breaks sometimes make the news—especially if there's a lot of water in the road, as in the photo at right of the December 2017 break at Oak and Clay Streets.

But the news this year is that, so far, the overall number of breaks is low. Year-to-date, there were 193 main breaks at the end of July, which is significantly lower than the same period in 2019 (311) as well as the five-year average (307).

Why so low? The weather has been a big factor, said Joe Schmitt, Director of Distribution Operations. He pointed out that most breaks happen on distribution mains, which are pipes that can range up to 16 inches in diameter, but the 6- and 8-inch mains are the ones that break most often.

“Many of these mains are cast iron and have been in service well over 60 years,” Schmitt said. “The age and material of construction of these mains makes them especially vulnerable to failure during extreme cold weather.”

He added that “main break frequency can also pick up in the summer months when we have extended periods of dry weather. The ground shrinking puts additional stress on our buried facilities.”



Because the past winter was relatively mild and the summer hasn't been especially dry, Louisville Water hasn't had an abundance of breaks—but it's not just a lucky streak of weather that has led to the low number.

### Main Maintenance Means Fewer Failures

Schmitt said the Main Replacement and Rehabilitation Program [MRRP] “has also certainly had a positive impact on reducing breaks on smaller distribution mains. The Infrastructure Planning group does a great job identifying which mains in our system have reached or exceeded their life span and are in need of replacement.”

He also pointed out that “the condition assessment program has been very successful. There is no doubt that this has had a positive impact on reducing the frequency of failures and breaks on our transmission mains [pipes that range from 20 to 60 inches in diameter and carry large amounts of water over long distances].”



### ***How old is “old” for a water main?***

*Mains can last for decades but a range of factors—including the weather and sudden pressure fluctuations — can cause a break. The older a pipe is, the more vulnerable it is.*

The lower number of failures means the Distribution Operations Department has been able to focus more time and effort on infrastructure improvements instead of repairing breaks and leaks.

## A Financial Break Too

The low number of breaks this year also provides a bit of a financial break for Louisville Water.

Sue Purdy, Director of Finance/Accounting, pointed out that “we traditionally work with the Operations area to budget for an average number of main breaks. They may be repaired by our own crews or by outside contractors, so dollars are budgeted in materials and supplies as well as contractual services.”

Of the nearly \$1.5 million set aside for main breaks through the end of July, Louisville Water spent 15 percent less on contractual services and more than 28 percent less on materials and supplies, which means we’re well below projected expenses on main break repair.

But there’s also some concerning budget news this year. Louisville Water has had several unexpected expenses because of the pandemic and the protests, including increased security and IT expenses.

“In addition and maybe more importantly,” Purdy said, “we have also lost water revenue related to businesses being shut down earlier in the year, and there’s a considerable amount of other revenue lost from late fees and service de-activation fees, which have been turned off since March due to the governor’s mandate. So we are trying to cover those losses in order to increase our net income.”

Although the lower number of main breaks doesn’t provide enough savings to make up for the lower revenue and unexpected expenses, Purdy said it “does leave us with dollars to help us towards our goal of meeting the bottom line.”

So having these extra dollars available in 2020 is a bit of a lucky break, but it’s also a return on our investments in inspecting and maintaining our pipes.

