

Raleigh seeks – and finds – aging pipes that need fixing

By Paul A. Specht

aspect@newsobserver.com



AUGUST 27, 2015 05:37 PM



Raleigh is using cameras to search for problems in sections of its aging sewer system, including this video that shows a major break and a significant crack in a line. BY CITY OF RALEIGH

RALEIGH

A two-man maintenance crew lowered a tiny, track-mounted camera into a Martin Street sewer line last week looking for problems.

The pipe could be 50 years old or older, city officials say, so it was on a long list of aging tubes that Raleigh hopes to inspect over the next few years. Video streamed from the camera back to the crew's truck showed it was in pretty good shape.

Raleigh doesn't have a real-time monitoring system for its water and sewer lines, some of which were laid in the 1860s.

But, since launching an infrastructure assessment program two years ago, the city has found that many of its pipes – some of them 100 years old – need repairs and immediate attention.

Crews have performed emergency maintenance on water and sewer pipes 30 times this year, up from 21 over the same period last year.

Many of the city's oldest pipes are below downtown Raleigh streets, and that's where a bulk of the repairs have taken place. Repairs have been made on pipes below Fayetteville, Lenoir, West, Martin, Salisbury, Edenton and Morgan streets, among others.

"We're finding quite a bit of failing pipe that we're having to repair," said Robert Massengill, Raleigh's public utilities director.

The assessment effort could also affect other communities on Raleigh's utility system - Garner, Knightdale, Rolesville, Wake Forest, Wendell and Zebulon - in coming years, as the city looks for problems in those towns.

Inspections often require utility crews to park a truck next to a manhole and block a lane or intersection for an hour or two, as the crew did last Monday at the intersection of Martin and East streets near downtown.

If emergency maintenance is needed, crews can block off part of the road for weeks as they dig through the asphalt to patch a hole or crack in a pipe. The city recently closed a turn lane at the intersection of Hillsborough Street and Oberlin Road for two weeks after workers discovered a water main needed to be replaced immediately.

"We're entering an era where replacement and repair is a major component of management," said John Sorrell, a project engineer in Raleigh's utilities department.

The city in 2013 increased its water and sewer management budget and plans to spend \$6.86 million over the next 10 years. The spending plan is front-loaded, with \$4.66 million budgeted for the next two fiscal years.

The city will pay for most of it with money generated from service fees. Before expanding its budget, the city mostly performed emergency maintenance if pipes started to leak, Sorrell said.

Raleigh is trying to avoid emergency repairs by inspecting some of the city's oldest pipes first - primarily inside the Beltline - or those that lead to health care centers.

It's much cheaper to assess and plan for repairs than it is to perform emergency maintenance, Sorrell said.

"Emergency replacement is rough because a lot of times you're dealing with overtime work," he said. "A main could fail at 10 (p.m.) on a Friday."

More than half of the city's water and sewer pipes were laid in the last 25 years, but a lot of the rest was installed before World War II.

In fact, some of the pipes - including a cast-iron pipe that brings water to downtown - were laid in 1886 as part of the city's first water and sewer system.

"They put in really, really thick-walled pipe back then," Sorrell said.

“We have bits and pieces of information,” Sorrell said. “Some of our old infrastructure may still be very good.”

In most cases where a pipe needs to be repaired or replaced, it’s because the pipe is old and cracking or corroding. In some cases, pipes become blocked by tree roots or grease that residents pour down their drains.

It’s hard for anyone besides utility crews to detect malfunctions, Sorrell said, but low water pressure or discoloration could be a sign.

The city recently completed a sweep of the pipes between Five Points and Hillsborough Street north of downtown, and recently hired a consultant inspecting pipes in Southeast Raleigh.

That consultant, Hydromax USA, was inspecting the Martin Street sewer line last Monday. Cars and buses curled around the Hydromax truck as it hovered over a manhole in the intersection.

Martin Chafin controlled the camera using a knob panel inside the truck. Sorrell watched a video screen as the camera crawled through Martin Street’s red-clay bowels, which appeared healthy.

“Clay (pipes) was mostly phased out in the ’70s,” Sorrell said. “But hey, stuff like this that’s old but good – let it run.”

Paul A. Specht: [919-829-4870](tel:919-829-4870), [@AndySpecht](https://twitter.com/AndySpecht)



A workman for Moffat Pipe Inc. out of Wake Forest, NC signals a large excavator digging a narrow but deep trench under Hertford Street in the Country Club Hills neighborhood Friday, August 14, 2015. Moffat Pipe is a contractor working for the City of Raleigh to replace older, leak prone terra-cotta sewer lines with new larger 8-inch ductile iron sewer pipes before sewage leaks become chronic. HARRY LYNCH HLYNCH@NEWSOBSERVER.COM