



Bryce Meier receives a pipe patch in a manhole for a sewer line repair.



Maintenance workers Jeremy Gruelle (left) and Bryce Meier prepare a pipe patch for a sewer line repair.

STAYING IN FRONT

The department's repair and rehabilitation work requires a small fleet of heavy equipment along with a new Vactor hydroexcavation unit and two water jetters. The jetters are routinely scheduled to clean out areas where FOG, roots or other impediments are recurring problems. The rated severity of each area, which is tabulated through inspections and monitoring, determines how often an area is cleaned.

The department recently began doing point repairs on lines using a CIPP patching system from Source One Environmental. The system involves remotely sliding a patch from a manhole to where a crack or hole in the pipe has developed and then holding it in place with a packer until it has cured. "We can do repairs on anything from a 6-inch line to a 26-inch pipe and do it all without having to dig up and then restore a site," Duncan says. More than 20 point-repair patches were made in 2017.

However, significant rehabilitation or replacement projects are contracted. Mainlines and manholes that need structural relining and pipes or manholes that have deteriorated beyond a point of feasible repair are bid out.

"We are trying to stay in our lane, to be really, really good at what we do," Hall says. "At this point, getting into the relining business or full replacement business just doesn't make sense and would not be cost-effective."

Hall says wastewater employees don't encounter a lot of sewer pipe needing replacement. "We try to get to pipelines before they collapse. We try to stay in front of it. We feel like our system is in really great shape." **I&I**



Florence Public Service Department maintenance worker Mark Teremi takes a depth measurement of a storm sewer.

SMOKING OUT SUMP PROBLEMS

Not all inflow and infiltration issues stem from condition problems in mainlines. The Public Services Department in Florence, Kentucky, has found an issue with sump pumps in homes and businesses that aren't set up properly. When they're connected to the wastewater system, the extra flow they contribute can cause problems.

The department's annual sump pump amnesty program is not unlike programs in other municipalities. Adam Duncan, operations superintendent, says smoke and dye testing are utilized to identify likely emission points of sump pump water. Once an illicit site is smoked out, contact is made with the resident at the address.

The assumption always is that the errant connection of the sump pump to the sewer was an honest mistake or that it once was in compliance with regulations. Hence, the amnesty approach. Regardless of intent, however, the resident is offered help with correcting the matter.

"Once we have made contact," Duncan says, "we offer to reimburse the resident the first \$1,000 of expense incurred to hook the sump pump to the stormwater system. The city also will match half of the total remaining cost of connection, up to \$2,000. I think this is an especially proactive approach. We essentially are offering to share the cost of what is their violation."

Fewer than 10 residents are cited each year for illicit sump pump connections.