



# Old Sewers & New Technologies

**More than one-third of Portland's sewer pipes are over 80 years old. Environmental Services is using several new technologies to inspect and repair those old pipes.**





Working on a trench  
for a sewer repair project  
at NE 14th Avenue and  
Beech Street in the 1930s

City of Portland (OR) Archives,  
A2009-009.2653

# Old Sewers & New Technologies

When the city first built its sewers, construction required digging trenches. In addition to the open trench method, Environmental Services has other tools available to inspect and repair sewer pipes. Here's a look at a few of today's technologies.

**Sewer Inspection**—City maintenance crews use closed-circuit television cameras to look for problems inside sewers. Cameras mounted on remote-controlled, wheeled transporters can inspect pipes as small as six inches wide. Last year, crews inspected nearly 762,000 feet of sewer pipes.



**Remote-controlled cameras are used to inspect sewer pipes.**

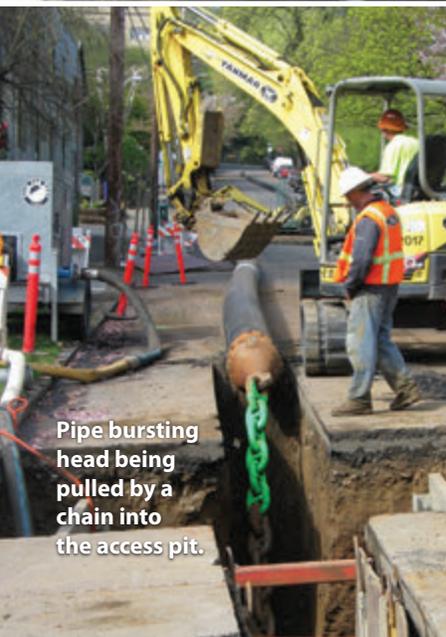
**Pipe Lining (CIPP)**—Cured-in-place pipe lining reduces disruption to roads. Work crews access manholes to insert a flexible liner inside the old pipe. As the liner cures, it hardens and forms a rigid, smooth surface that seals cracks and restores the pipe to near-new condition.

**Pipe Bursting**—Pipe bursting is another repair method that doesn't require digging trenches. Crews dig an access pit to insert a bursting head into an existing sewer line. The bursting head breaks the old pipe apart and pulls the new pipe into place behind it.

**Open Trench**—Environmental Services still relies on this traditional sewer repair technique. Excavating trenches to access pipes remains an effective way to repair or replace old sewer pipes. Learn more about these and other sewer construction methods at [www.portlandoregon.gov/bes/methods](http://www.portlandoregon.gov/bes/methods).



CIPP liner  
is prepared  
for use.



Pipe bursting  
head being  
pulled by a  
chain into  
the access pit.

**ON THE COVER:**  
A worker pauses  
from sewer  
improvement  
work on SE Foster  
Road near 92nd  
in 1921.

City of Portland (OR)  
Archives, A2001-008.45

# Sign up for email updates about sewer repair projects near your home, work or school

In 2008, Environmental Services launched a large-scale sewer repair and replacement program to fix more than 43 miles of aging and deteriorating pipe in Portland's public sewer system. More than 65 percent of Portland neighborhoods will experience construction as part of that sewer repair program.

You can learn about current and upcoming sewer repair projects near your home, work or school by going to **[www.portlandoregon.gov/bes/construction](http://www.portlandoregon.gov/bes/construction)**. While there, sign up to receive email updates with information on road closures, work schedules, work locations and more for the projects near you.



ENVIRONMENTAL SERVICES  
CITY OF PORTLAND  
working for clean rivers



Nick Fish, Commissioner • Michael Jordan, Director

## Environmental Services

1120 SW 5th Avenue, Room 1000 • Portland, OR 97204  
**[www.portlandoregon.gov/bes](http://www.portlandoregon.gov/bes)** • **503-823-7740**

## You can help keep everyone safe



Construction can make life difficult.  
**Thank you for your patience**  
as Environmental Services continues  
work to repair older parts of the system.

Please help keep work areas safe for everyone.

- Stay clear of all construction activities and keep children, pets and vehicles out of construction and equipment storage areas.
- Cooperate with flaggers and follow signs when passing near or through construction zones.

The City of Portland complies with all non-discrimination laws including Title VI (Civil Rights) and Title II (ADA). To request a translation, accommodation or additional information, please call 503-823-7740, or use City TTY 503-823-6868, or Oregon Relay Service: 711.

Printed on recycled paper. OD 1661 DEC 2016 and JAN, FEB 2017