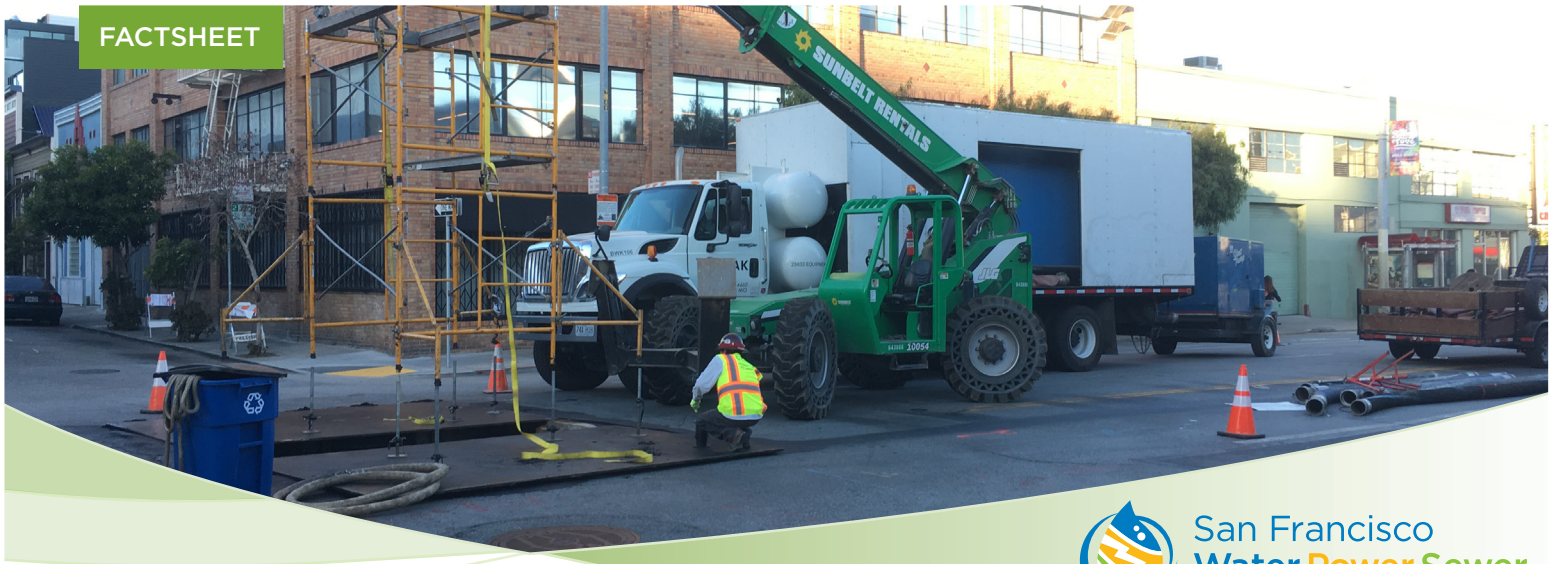
FACTSHEET



San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Cured-in-Place Liner (CIPL) Sewer Rehabilitation

Keeping Our Sewer System in a State of Good Repair

The San Francisco Public Utilities Commission (SFPUC) operates and maintains the City's combined sewer system that operates 24/7 to protect public health and the environment. We have almost 1,000 miles of sewer mains under our streets, of which 300 miles are more than 100 years old.

Every year, we routinely repair or rehabilitate approximately 12 miles of sewer pipes, and we partner with other City departments like SFMTA and SF Public Works when possible, to "dig once" and upgrade our infrastructure in conjunction with their projects.

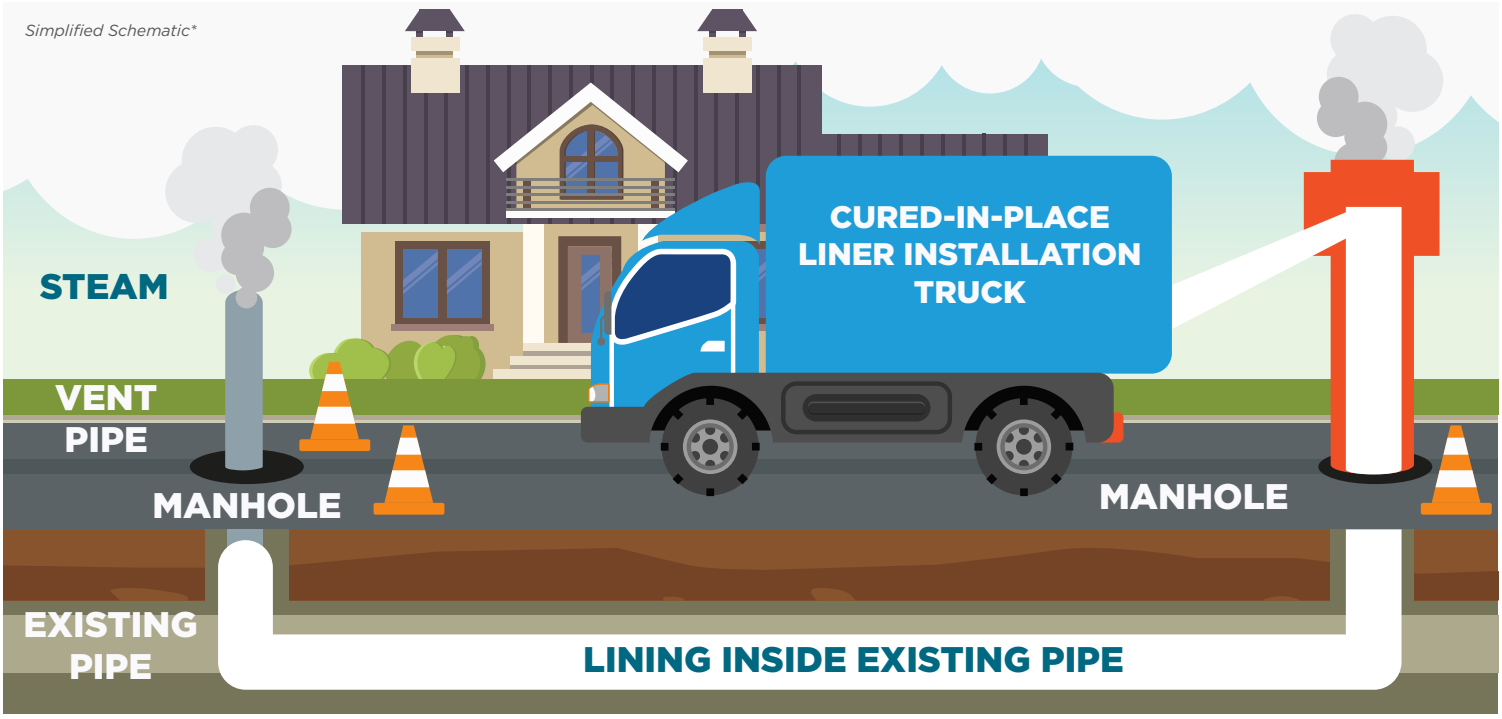
The SFPUC follows standard industry practices to replace or rehabilitate aging sewers and considers the size of the sewer and potential disruption to the adjacent neighbors and businesses.

BENEFITS OF THE CURED-IN-PLACE PIPE METHOD:

- **Less disruption to neighbors and those using the roadway by avoiding extensive excavation and street repaving.**
- **Reduced construction duration compared to open-cut construction method.**
- **Less expensive than replacing the existing pipe.**
- **Long-lasting with a 50-year design life.**

Two Primary Methods For Sewer Rehabilitation:

- **Open-Cut (Trenching):** This method involves opening the road surface to excavate and replace the underground pipe. In some cases, the new sewer is installed in a new location and the old sewer is removed or left in place and filled (for structural support). This method involves extensive impacts to the road, parking and the adjacent neighborhood.
- **Cured-in-Place Pipe Lining (Trenchless):** This trenchless method rehabilitates pipes by inserting a new synthetic pipe inside an existing one. This method involves accessing the pipe through existing manholes or a similar access point. This method of rehabilitation is called Cured-In-Place Pipe Lining. Due to its lower cost, reduced impacts to the public and typically shorter construction duration, Cured-In-Place has become the industry standard for large sewer pipe rehabilitation.



Site Preparation

- Clean & remove debris.
- Traffic restrictions posted.
- Liner Prepared off-site.

Estimated Timeline

- Lining is approximately 3 -- 5 days, depending on the traffic needs, and is continuous throughout the night .

Post – Lining

- The liner is inspected before demobilization.

The actual pipe lining process typically takes two to three days to complete for each segment (approximately half of a block). The duration can depend on the size of the pipe.

What to Expect During Construction

- **TRAVEL LANE/PARKING RESTRICTIONS** - Although less disruptive than the open-cut method, trenchless work still requires access to the sewer main under the street.
- **ODORS** - This sewer rehabilitation method uses resin to provide the structural rigidity needed to rehabilitate the pipe. These resins can give off an odor during the curing process. These odors typically dissipate fairly quickly after the process is completed. We continue to evaluate industry best-practices and new technologies, including non-styrene-based resins to further reduce the impact of our work.
- **"IN-PIPE" NOISE** - During the pipe lining process, a humming noise called an in-pipe noise can sometimes be heard. Covering drains can help reduce this noise.

What You Can Do to Reduce Odors

To help reduce odors, run water in all sinks and drains to make sure p-traps are filled (p-traps are the "u" shape portion of drain pipes). Drains can also be covered with a wet towel. If weather permits, close your windows during the work.

For more information on how our combined sewer system works, visit **sfpuc.gov/about-us/our-systems**.

San Francisco Water Power Sewer
Services of the San Francisco Public Utilities Commission

Follow us @MySFPUC