

PARTIAL LEAD SERVICE LINE REPLACEMENT

Guidance

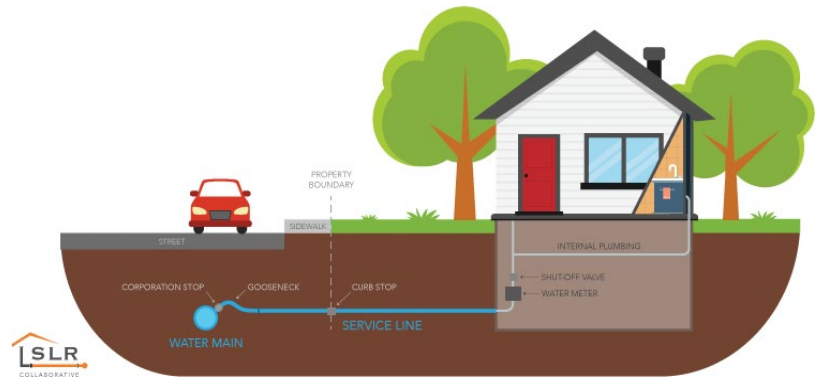
WHAT IS A PARTIAL LEAD SERVICE LINE REPLACEMENT?

LEAD SERVICE LINE (LSL): If any portion of your service line, the underground pipe that delivers water from the water main to your home, is made of lead, then you have a lead service line. The service line continues to the first shutoff valve inside your home, or 18” inside your home, whichever is shortest.

SERVICE LINE REPLACEMENT: A service line replacement is the process of removing the existing service line and installing a new service line. This may be a planned process as part of a water main replacement project or an emergency response to a leak or break.

Full LSL replacement: When all portions of the service line that are made of lead (or galvanized iron pipe downstream of lead) are replaced, regardless if they are on the public and/or private sides of the property, before water service is restored.

Partial LSL replacement: When part of a service line is replaced, and any remaining portion of the service line is made of lead (or galvanized iron pipe downstream of lead) when water service is restored.



STUDIES SHOW THAT PARTIAL LSL REPLACEMENTS CAN INCREASE THE AMOUNT OF LEAD IN A HOME'S DRINKING WATER²

The Michigan LCR has **banned** partial LSL replacements, except as a result of an emergency repair, to prevent the risk of increased lead exposure after partial LSL replacements:

- **Lead levels increase** after a partial LSL replacement².
- Digging and cutting during partial LSL replacements **release particulate lead**^{3,4,5,6}.
 - **Particulate lead** is a concern because the lead content can be very high.
- New materials from partial LSL replacement activities can **increase corrosion**^{3,4} and **create galvanic corrosion**⁷.

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SCIENTIFIC SOURCES:

²United States Environmental Protection Agency. *Science Advisory Board Evaluation of the Effectiveness of Partial Lead Service Line Replacements*. EPASAB-11-015 ed., 2011. www.epa.gov/sites/production/files/2015-09/documents/sab_evaluation_partial_lead_service_lines_epa-sab-11-015.pdf.

³Deshommes, E, et al. "Short- and Long-Term Lead Release after Partial Lead Service Line Replacements in a Metropolitan Water Distribution System." *Environmental Science & Technology*, vol. 51, no. 17, 9 Aug. 2017, pp. 9507-15.

⁴Dore, E, et al. "Study of the long-term impacts of treatment on lead release from full and partially replaced harvested lead service lines." *Water Research*, vol. 149, 25 Nov. 2018, pp. 566-77, doi:10.1016/j.watres.2018.11.037.

⁵St. Clair, J, et al. "Long-Term Behavior of Simulated Partial Lead Service Line Replacements." *Environmental Engineering Science*, vol. 33, no. 1, 2016, pp. 53-64, doi:10.1089/ees.2015.0337.

⁶Trueman, B F., et al. "Evaluating the Effects of Full and Partial Lead Service Line Replacement on Lead Levels in Drinking Water." *Environmental Science & Technology*, vol. 50, no. 14, 2016, pp. 7389-96, doi:10.1021/acs.est.6b01912.

⁷Welter, Gregory, et al. *Galvanic Corrosion Following Partial Lead Service Line Replacement*. Water Research Foundation, 2013, www.waterrf.org/PublicReportLibrary/4349.pdf.

CONTENT DEVELOPED, IN PART, BY THE UNIVERSITY OF MICHIGAN WITH SUPPORT FROM THE CS MOTT FOUNDATION.