

Lead Service Line Replacement Plan

City of Collinsville, IL

The logo for whks features the lowercase letters 'whks' in a bold, dark blue, sans-serif font. A light blue, curved swoosh underline is positioned beneath the letters, starting from the left and ending to the right of the text.

engineers + planners + land surveyors

Executive Summary

The City of Collinsville (CWS# 1194280) provides water for 12,598 services. To complete the material inventory of the services, the Collinsville Water Department was able to use well-kept logs dating back to the year 2000. These logs contain detailed information on any work completed within the water system, including lead and non-lead service line replacements. Based on this information, the City selected the year 1940 as a potential cutoff year of non-lead and began potholing water services of buildings built in 1940. The buildings selected were scattered around town to get representative data. Nine lead services were found. Therefore, additional potholing was conducted for buildings constructed in 1941-1945. Again, homes were selected so that each quadrant and street was represented in the sample. None of these services were found to be lead.

Of the 921 services potholed by the City, only 5 services with a building date later than 1940 had a lead service. It was found that the neighboring addresses of each of these 5 services had been built prior to 1930, so they could be labeled as outliers. Based on all this information, and with an added buffer for safety, the first year for non-lead services was deemed to be 1945. Madison County tax records were acquired to input build years and identify services built in 1945 or after as non-lead.

In addition, the City was able to use the material composition of their water mains to identify service line materials. Construction records, hydrant age, and research shows that that PVC water mains weren't used until the 1950s and Asbestos Cement water mains weren't used until the late 1940s. Upon installation of these water mains, any lead services connected to the main were switched to copper.

Lastly, in addition to the 1986 federal ban of lead lines, the City of Collinsville utilized a 1936 ordinance from the City of Troy. These services were annexed into the City of Collinsville water system. Any services in this area built after 1936 were deemed non-lead.

After the identification process described above was complete, there were a total of 457 unknown services remaining. To determine how many of these require replacement, the City used information from potholing. To date, a total of 921 unknown services have been potholed and 37, or 4%, were found to be lead. Using this 4% lead detection rate, it can be calculated that of the remaining 457 unknowns, 18 additional lead services will be discovered.

Of the 37 lead services that have been discovered, 25 require replacement, 10 have already been replaced, one has been disconnected, and another will be disconnected this year.

The total amount of services to be identified and/or replaced is 482. This includes the 457 currently unknown services, plus the 25 that require replacement. The quantity yet to be identified as non-lead or replaced each year is 34 (7% of 482 = 33.74). The City has established a goal to replace 20% of the known and newly discovered lead lines each year and ultimately focus on identifying the remaining unknowns.

The City will pay for 100% of lead service line replacements with the cost being factored into current water rates. During identification and replacement of unknowns, the high-risk facilities will be prioritized, and notice of work and procedures has been and will continue to be in accordance with the ILEPA Guidelines.

Table 1. Service Line Materials in the City of Collinsville as of April 15, 2024.

Service Line Material (Public Side: Private Side)	Count
Lead : Galvanized Requiring Replacement	6
Lead : Non-Lead	20
Non-Lead : Non-Lead	12,115
Unknown : Unknown	457
Total	12,598

*Note about Galvanized Requiring Replacement (GRR): these were reported as galvanized but are assumed to be GRR until they can be proven to never have been downstream of lead

Lead Service Line Replacement Plan

- 1. 415 ILCS 5/17.12 (q)(1) Name and identification number of the Community Water Supply (CWS):**

City of Collinsville, CWS Number 1194280

- 2. 415 ILCS 5/17.12 (q)(2) Total number of service lines connected to the distribution system of the CWS:**

12,598

- 3. 415 ILCS 5/17.12 (q)(3) Total number and location of suspected lead service lines connected to the distribution system of the CWS:**

There are 18 suspected lead service lines connected to the distribution system. The specific locations are to be determined, but they are expected to be found within the unknowns shown in the attached map. The number (18) was calculated by taking the lead occurrence rate found from City potholing experience: To date, 921 of the unknown services were potholed and 37 (4%) were found to be lead. Using the 4% lead detection rate, it was calculated that of the remaining 457 unknowns, 18 additional lead services will be discovered.

- 4. 415 ILCS 5/17.12 (q)(4) Total number and location of known lead service lines connected to the distribution system of the CWS:**

Of the 37 lead services found in the City, 10 have been replaced, and one has been disconnected, leaving 26 known lead service lines. Their locations are shown in Table 3. One of these services is on a vacant lot and is planned to be disconnected, so only 25 are requiring replacement.

- 5. 415 ILCS 5/17.12 (q)(5) Total number and location of lead service lines connected to the distribution system of the community water supply that have been replaced each year beginning in 2020:**

Ten total lead service lines have been replaced; nine in 2023 and one in 2024. Locations are provided in Table 3. Additionally, one lead service line was disconnected from the main in 2023 and another one will be disconnected since it is no longer in use on a vacant lot.

- 6. 415 ILCS 5/17.12 (q)(6) Proposed lead service line replacement schedule that includes one-year, 5-year, 10-year, 15-year, 20-year, 25-year, and 30-year goals;**

The total amount of services to be identified and/or replaced is 482. This includes the 457 currently unknown services plus 25 that require replacement. This is not counting the one lead service line that will be abandoned this year as noted in item number 4. Per ILEPA requirements, 7%, or 34, at a minimum, will be identified or replaced per year. The plan for replacement is shown below.

Table 2. Proposed Lead Service Line Replacement and Identification Schedule.

	Total Lead or Unknown Services Remaining	No. Replaced or Identified as Non-Lead	Total No. Replaced or Identified as Non-Lead
April 2024 (current)	482		
one-year (2025)	448	34	34
5-year (2029)	312	136	170
10-year (2034)	142	170	340
15-year (2039)	0	142	482
20-year (2044)			
25-year (2049)			
30-year (2054)			

7. 415 ILCS 5/17.12 (q)(7) An analysis of costs and financing options for replacing the lead service lines connected to the community water supply's distribution system, which shall include, but shall not be limited to:

- A. A detailed accounting of costs associated with replacing lead service lines and galvanized lines that are or were connected downstream to lead piping;**
- B. Measures to address affordability and prevent service shut-offs for customers or ratepayers;**
- C. Consideration of different scenarios for structuring payments between the utility and its customers over time;**

See Table 4 for costs associated with service line replacement. Items B and C are not applicable. The City is to pay for 100% of lead service replacements and the replacements have been factored into current water rates.

8. 415 ILCS 5/17.12 (q)(8) Plan for prioritizing high risk facilities such as preschools, day care centers, group day care homes, parks, playgrounds, hospitals, and clinics, as well as high-risk areas identified by the community water supply.

All of the 25 service lines that are known to be lead and require replacement have been investigated and none are classified as high-risk facilities.

There are 457 services that remain unknown. Of these, 18 are estimated to be lead. These will be identified as high-risk or not-high-risk before undergoing further investigation to identify service line material so that they may be prioritized.

9. 415 ILCS 5/17.12 (q)(9) Map of the areas where lead service lines are expected to be found and the sequence with which those areas will be inventoried and lead service lines replaced.

A map of the 482 unknown and lead services is attached. It is expected that 4%, or 18, of the unknowns services will be lead (see 415 ILCS 5/17.12 (q)(3)). The sequence of inventory and replacement will be as follows:

- 1) Services that supply high-risk facilities.
- 2) Services in close proximity to those that have already been identified as lead.



- 3) Services adjacent to areas where work is already planned.

After these three primary areas of focus, the next areas to be inventoried will be from west to east on the map.

10. 415 ILCS 5/17.12 (q)(10) Measures for how the community water supply will inform the public of the plan and provide opportunity for public comment.

The City will post the replacement plan on the same webpage as the inventory. It will be completed and up to date within 45 days of this submittal. The working link is:
https://colgisportal.collinsvilleil.org/server/rest/services/Hosted/Lead_Line_Status/FeatureServer

11. 415 ILCS 5/17.12 (q)(11) Measures to encourage diversity in hiring in the workforce required to implement the plan as identified under subsection (n).

Collinsville will be using local funds and resources to complete services for the project.

12. 40 CFR 141.84 (b)(2) Procedure for conducting full lead service line replacement.

All lead service lines will be replaced completely, up to 18" inside the building or to the buildings first shut-off valve. The City will complete work outside of the building and contract a plumber to do any work on the foundation and into the home.

The City will notify the building owner via mail with a minimum of 45 days' notice before work is scheduled to begin to obtain permission to access to the building. If the owner is unresponsive after 15 days of the notice being sent, the City will post the notice at the building entrance. If permission is not granted, the City will request that the building owner signs a waiver (to be provided in the building owners language). If the building owner fails to respond, the City will notify the Department in writing within 15 working days.

13. 40 CFR 141.84 (b)(3), 40 CFR 141.84 (b)(5) Procedure for informing customers before a lead service line replacement and flushing directions to remove particulate lead form service lines and premise plumbing.

All notifications to customers and instructions for flushing will be provided in compliance with ILEPA regulations. The building owner and residents will be provided with the notice via mail and at structure entrance at least 45 days prior to a planned replacement. The notice will include work to be performed, information about the dangers of lead, and instructions to ensure health and safety of residents, including:

- 1) A warning that the work may result in sediment, possibly containing lead from the service line, in the building's water.
- 2) Information concerning the best practices for preventing exposure to or risk of consumption of lead in drinking water, including a recommendation to flush water lines during and after the completion of the repair or replacement work and to clean faucet aerator screens.
- 3) Information regarding the dangers of lead exposure to young children and pregnant women.