



CITY OF MENDOTA

Lead Service Line Replacement Plan

Introduction

The Lead Service Line Replacement and Notification Act (Act), State of Illinois Public Act 102-0613, went into effect on January 1, 2022. This Act required that every owner or operator of a community water supply (CWS) that has known or suspected lead service lines (LSLs) create a plan to replace each lead and galvanized service line (if connected downstream of lead piping); submit that initial plan to the Illinois Environmental Protection Agency (Agency) by April 15th, 2024; submit by April 15th of each year after 2024 until 2027 an updated lead service line replacement plan to the Agency; and submit by April 15th, 2027 a final lead service line replacement plan to the Agency.

The Act also requires that the plan is posted on the community water supply's website. This Plan will be available on the City's website until April 15, 2026, at which time it will be replaced with an updated Plan. The City of Mendota has prepared an initial Lead Service Line Replacement Plan (Plan) in compliance with the Act and its requirements. The Plan includes the name and identification number of the CWS; an inventory of the total service lines, known and suspected LSLs.

Overview of the Community Water System

The City of Mendota (CWS ID No. 0990550) provides drinking water to approximately 7,300 residents. Based on 2024 data, the City pumped an average of 725,000 gallons of water per day supplied by three wells and three water treatment plants which use aeration and pressure filtration for treatment. Chlorine gas and polyphosphate are added to the finished water prior to distribution. The City's distribution system contains two elevated water storage tanks and one ground storage tank, with a storage capacity of 2.0 million gallons. In addition to the storage tanks, the city also maintains 2,783 service connections to the water distribution system. Through its inventorying efforts City staff has been able to determine that most of its known and probable lead service lines are located near the City's core.

Material Inventory Summary, Subsection (q)(1) – (5)

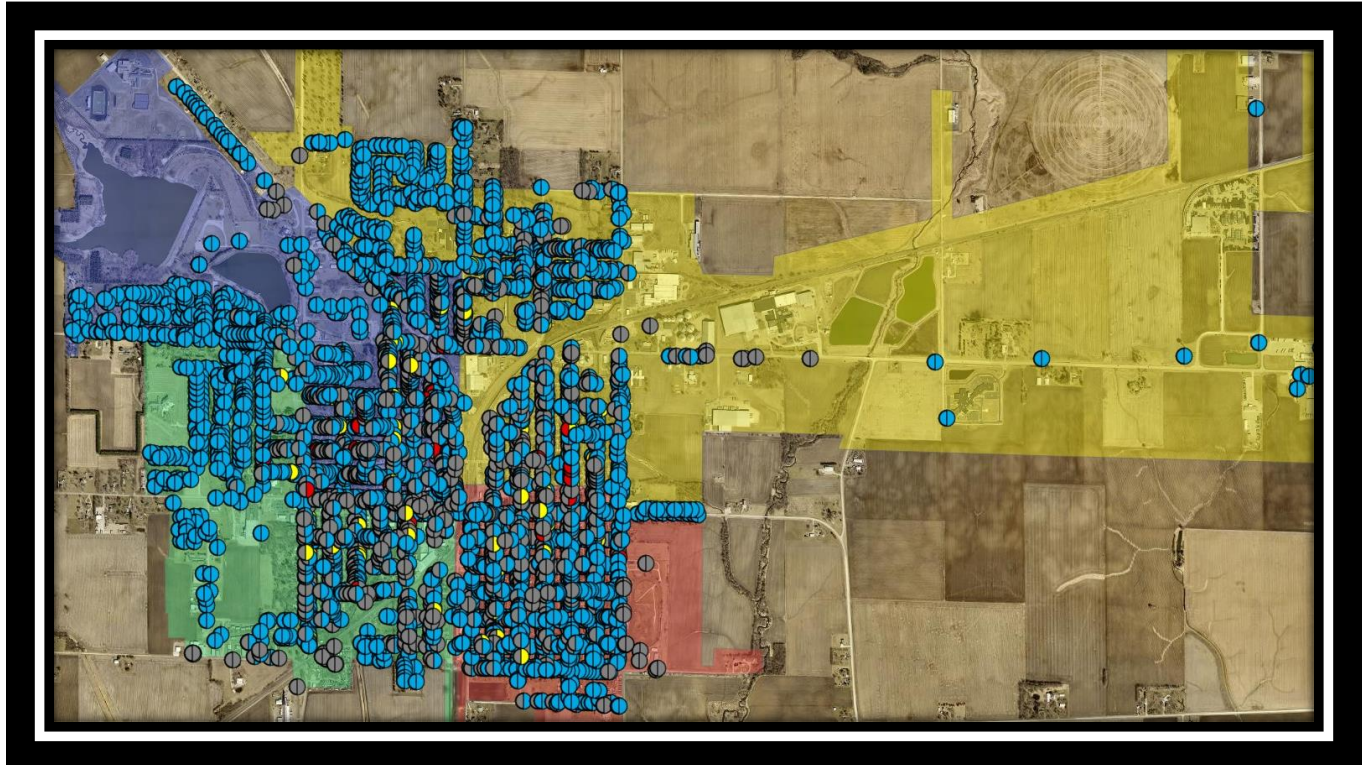
The City has completed and submitted the required material inventory to the IEPA every year when submittal was mandatory. Since 2020, the city has removed and replaced 17 LSL's that were attached to its water supply. A summary of the most current material inventory is presented in the table below.

Total Non-Lead	1419
Unknown	1255
Known Lead	40
Known Galvanized Requiring Replacement	69
Total	2783

The number of service lines requiring replacement presented in this report is preliminary only. The City has continually reviewed historical documentation, as-built drawings, subdivision plans, and made observations in the field to determine service line material construction. As a result, the accuracy and detail of the inventory has improved over time and will continue to do so. The City utilizes the Illinois EPA Service Line Material Inventory Template as the basis for its Lead Service Line (LSL) Material Inventory. The most current version of the City's Material Inventory is posted on the City's website. The City also maps its material inventory with a geographic information system (GIS) in the IEPA classifications of Non-Lead, Lead, and Suspected Lead. The most current map is shown below.



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LSL Replacement Goals, Subsection (q)(6)

The City has developed a plan for replacing the known and suspected LSLs connected to the City's distribution system. Currently The City has 109 known lines needing to be replaced. The City is expecting approximately 10% of the unknown Service Lines to be lead service lines (LSLs) or suspected lead service lines (SLSLs). The number of known lead service lines (LSLs) and suspected lead service lines (SLSLs) requiring replacement in the City's material inventory as of April 2024 was approximately 235: 109 LSLs and 126 SLSLs. This figure will likely decrease as inventorying efforts continue through resident surveys and potholing, planned for 2025 and possibly subsequent years as well, depending on funding availability. The City could replace some service lines requiring replacement in conjunction with water main replacement projects, with road resurfacing projects, or as standalone projects. As such projects often take time to plan, fund, and release for bid, and assuming a worst-case scenario in inventorying, for the purposes of this report it is assumed there will be 235 service lines to be replaced. Because the City estimates it will have fewer than 1,200 lead services at the end of 2026, according to the requirements of the Act in Subsection (v) the City will be required to replace at least 7% of their LSLs beginning in 2027. This requirement equates to the City replacing 17 LSLs minimum per year (approximately 7% of 235) for 12 years and 16 LSLs in the 13th and 14th year, although the City will likely accelerate the replacement schedule once the



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replacement projects are further developed. A map showing the location of the service lines to be replaced is available under Service Line Replacement Map.

Financial Analysis, Subsection (q)(7)

There are several factors that control the cost associated with replacing lead service lines including cost of materials, construction methods, extent of replacement, availability of qualified contractors, demand, and competition. Although these factors will certainly change over the next 15 years, the City has made a good faith effort to estimate the cost of replacing lead service lines. Recognizing the uncertainty of future costs warrants adding a contingency to the cost estimates. The uncertainty in estimating future costs is relatively high so therefore, it is recommended that a 10% contingency is added to the best estimate of cost. Based on recent bid results for LSL Replacement in nearby communities, the City has developed the following estimated costs for lead service line replacement:

- Public side (water main to curb stop): \$5,000 to \$7,500
- Private side (curb stop to water meter): \$4,500 to \$7,000

The City is still accessing the best measures to address the affordability and the potential for service interruptions to its customers.

Prioritizing High Risk Facilities, Subsection (q)(8)

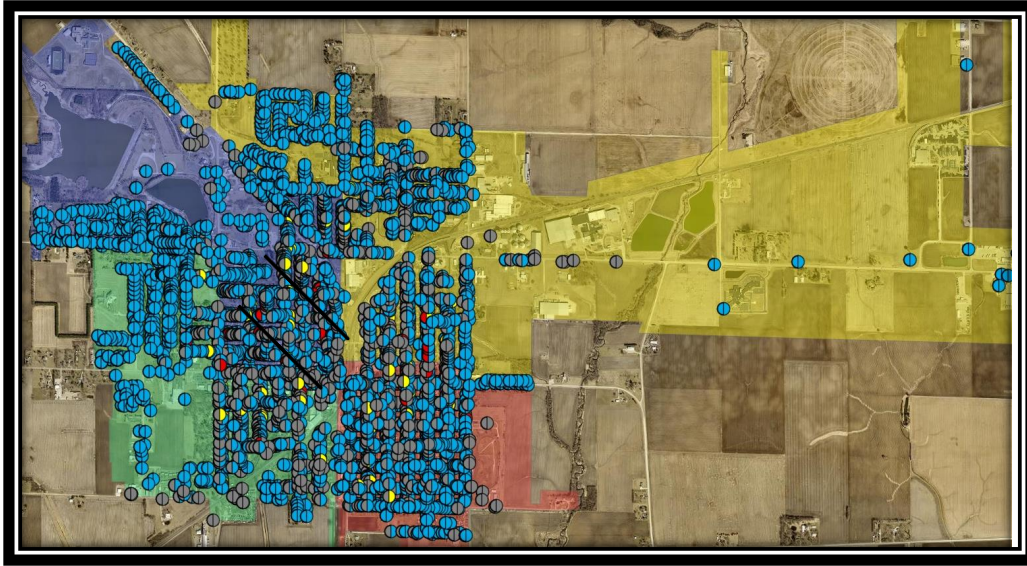
The City recognizes that some facilities, such as preschools, day care centers, day care homes, group day care homes, parks, playgrounds, hospitals, and clinics, may represent an increase in lead exposure to children, who are the most susceptible to the effects of lead. According to the Center for Disease Control and Prevention, children less than six years old are at a higher risk of lead exposure. This is because their bodies are rapidly developing and more susceptible to taking in lead if exposed. Although the City has sought to identify lead service lines that serve such facilities, to date the City has not identified any such facilities as having lead service lines.

Service Line Replacement Map, Subsection (q)(9)

The map presented below shows the approximate locations of LSLs and SLSLs to be replaced. The City is in the process of determining the sequence of areas to be replaced. Sequencing will depend on many factors, including but not limited to planned street resurfacing projects, water main replacement projects, responses from homeowners regarding permission to construct, and bundling lead service line replacement (LSLR) areas together to ensure projects are cost-effective and efficient. The City is working on developing criteria for efficient and equitable replacements.



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Public Engagement, Subsections (q)(10) and (p)(5)

The Lead Service Line Replacement Plan will be presented to the City Council during a regular City Council meeting if necessary (i.e., there are LSLs remaining to be replaced as of December 31, 2026). The Plan will be included in the meeting agenda packet and residents will be given an opportunity to comment on the Plan during the meeting. In addition, the City will post the Plan on its website. The posting will provide instructions on how residents can submit comments regarding the Plan to the City. Comments received will be considered during the implementation or future updates of the Plan.

Construction, Subsection (q)(11)

The City has replaced isolated LSLs so far through emergency replacements, but doesn't have any standard procedures for replacements as part of a planned program. The policies and procedures as presented in this replacement plan are a work in progress, so they could be amended as the City completes further replacements. Information on its construction policies and procedures is as follows.

Measures to Encourage Diversity in Hiring in the Workforce, Subsections (n) and (q)(11)

The City will make a good faith effort to use contractors and vendors owned by minority persons (minority-owned business, MBE), women (woman-owned business, WBE), and persons with a disability (disabled-owned business, DBE) for 20% or more of the total contracts [11% MBE, 7% WBE, and 2% DBE], and report to the IEPA on its efforts and those results in its yearly report.

Procedures for Conducting Lead Service Line Replacement

If the City plans to replace its LSLs and SLSLs as part of a multi-year effort, at the start of each year the City will hold public information sessions for those residents or businesses who will be affected by the planned work. Just prior to replacement, the City will provide fliers or door hangers to all impacted residents that states a temporary water shutoff will be occurring as a result of LSLR work, which includes contact information for the resident engineer and an employee from Public Works should the homeowner have any questions. When conducting LSLR, the City's Contractor will utilize one of the three common methods: open cut excavation, trenchless methods, or lead extraction. The exact method of replacement will vary depending on site constraints or the Contractor's available equipment. Whenever possible, the City would like to avoid open cut excavation and opt for a less disruptive method such as trenchless or lead extraction. Open cut excavation will be considered a last resort option after all other



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methods have been exhausted or only if the construction circumstances warrant its use. In the event of an emergency repair where a partial service replacement is being completed (either main to curb stop or curb stop to meter) and lead is discovered on the other side of the service, additional measures must be taken to ensure compliance with Illinois regulations. Currently, regulations do not allow for partial replacements, so if the remainder of the lead service to be removed is on the private side, the resident will either have to allow for the replacement of the private side of the service or sign a waiver indicating they are opting out of the program. Removal of the remaining lead service line must be completed within 30 days of the initial repair or partial replacement of the lead service line. The City will also facilitate the residents with replaced service lines with drinking water filters certified to NSF/ANSI 53 and NSF/ANSI 42 standards for the reduction of lead and particulate. After the replacement of the lead service, the line is properly flushed, the resident is notified of restoration, and any landscaping restoration services as necessary are completed. Notification must also be provided to the Illinois Department of Public Health (IDPH) if a full lead service line replacement could not be completed due to refusal of entry or denial by the property owner. More detailed information on the three methods of LSLR replacement is as follows:

Open Cut Excavation Open cut excavation is a conventional approach that requires the saw cutting and/or breaking of service materials and excavation of soil from the corporation stop at the water main along the entire length of the service line to be replaced. In this technique, precautions must be taken since other underground utilities may not have been properly located. The excavation equipment employed in the open-cut replacement method should be appropriately scaled to accommodate the entire depth of the hole. Safety measures should be implemented concerning both the resident's property and any nearby pedestrian and/or vehicular traffic. Upon proper exposure and identification of the service line, the existing pipe is disconnected from the main as well as the private side of the connection. The new service line properly connected to the main and private side and the new material should meet the requirements of the Safe Drinking Water Act and other federal regulations for potable water systems. Select bedding and/or designated fill material, in conjunction with the surface treatment, is placed to comply with all applicable requirements. The new service line placement should reduce or eliminate the possibility of settling beyond the allowable limit along the excavation path.

Trenchless Methods A trenchless lead service line replacement involves the use of equipment to install a new service line in a new location while abandoning the old pipe in place in the ground. Trenchless methods require minimal excavation, and typically only two access pits are required to be excavated: one at the water main to make the new connection, and one at the property line to install the new curb stop. Additional access pits may be required, but typically excavation is kept to a minimum and no open cutting is required along the new service line. In order to accomplish this, various machines can be used including horizontal directional drills, where a machine drills the path of the new water service from the point of connection through the foundation, or a pneumatic hammer where the machine creates pulses to move underground creating the path for the new water service. With both of these machines, the new water service pipe is pulled back through the new path to set the service in place. Soil conditions may dictate which machine is viable, and open cutting may be required if bedrock is encountered. Trenchless methods are not viable options in every service line replacement instance.

Lead Extraction An additional method of replacing lead service lines without cutting an open trench is lead extraction, otherwise known as pipe pulling or pipe splitting. Pipe pulling removes and extracts the existing pipe while simultaneously replacing it with a new pipe, and pipe splitting leaves the existing pipe in the ground but enables the new pipe to be installed along the original route as it splits open the original pipe. Both methods require access pits to be excavated at the curb stop and the water main and also for the service line to be disconnected at the point of replacement. A cable is fed through the existing service line and a mechanical device is attached to the cable at one end. For pipe pulling, the mechanical device serves as an anchor and the lead pipe is removed from the ground when the cable is pulled. New replacement pipe is attached to the mechanical device and pulled into the ground simultaneously. With pipe splitting, the mechanical device attaches to the replacement pipe and the cable pulls the new pipe within the old one, splitting it open and depositing the new pipe along the original route. These methods are easy to use and less invasive, but soil conditions and pipe conditions such as bends or encrustation can act as impediments to straightforward replacement. This method will also not work with any galvanized pipe requiring replacement, as galvanized steel is more rigid than lead.



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REPLACEMENT PROCEDURES (IL0990550)

1. At least 45 days prior to replacement, the City or the City's representative shall contact the property owner by written notice of the potentially affected service line to request access and permission to replace the lead or GRR water service line.

a. If the property owner does not respond within 15 days, the City shall post the request on the building entrance.

i. If private side replacement is denied due to the property owner not granting access to the property, the City will request that the property owner should sign the Illinois Department of Public Health's (IDPH) Waiver of Complete Lead Service Line Replacement. The City may continue with the replacement of the public side and continue with steps 2 through 5. If a property owner of a nonresidential building or residence operating as a rental property denies a complete water service line replacement, the property owner is responsible for installing and maintain point-of-use filters at all fixtures intended to supply water for the purpose of drinking, food preparation or making baby formula. The filters must meet NSF/ANSI 53 and NSF/ANSI 42 standards for the reduction of lead.

ii. If the owner fails to respond, the City shall notify IDPH within 30 days by filling out the Partial Lead Service Line Replacement – IDPH Notification Form. The City may continue with the replacement of the public side and continue with steps 2 through 5.

2. At least 14 days prior to replacement, by mail/posted at entrance/electronically, the City or the City's representative shall notify the owner and occupants of the upcoming replacement. The notice will include the following information:

a. The replacement of the lead or GRR water service line may result in a temporary increase in lead levels.

b. Information on best practices to reduce lead in drinking water.

c. Information regarding health dangers to young children and pregnant women.

3. The standard method of conducting full lead service line replacement shall be directional drilling, which will minimize the area disturbed by construction and reduce restoration costs. However, site conditions will vary and may require other construction methods, such as pulling a new water service line or performing open-cut replacement.

a. When using directional drilling or the pulling construction method, a water service line may be replaced at or in close proximity to the same location of the existing lead or GRR water service line, even if water-sewer service separation requirements are not met, so long as the water service line is either encased or Type K Copper is used, and there is no observed leak on the sewer service per IDPH's Sewer/Water Service Separation Variance. In the event of open-cut replacement, if the water-sewer service separation requirements are not met, the water service will require encasement.

4. At the time of replacement, the City shall provide the property owner with a point-of-use filter or pitcher filter meeting NSF/ANSI 53 and NSF/ANSI 42 standards and provides 6 months of filtration.

5. Within 24 hours of replacement, the City shall notify the owner and occupants of the executed replacement, including:

a. The replacement of the lead or GRR water service line may result in a temporary increase in lead levels for the next six months.

b. Information on best practices to reduce lead in drinking water, including the flushing procedures described in Section 4.3.

c. Information regarding health dangers to young children and pregnant women. d. Offer to have the property's water sampled for lead in the next 3 to 6 months by the City or City representative.

Flushing Procedures After Lead Line Replacement:

At the time of a lead or GRR water service line replacement, lead particles can migrate into a property's plumbing during the construction effort. Due to this, it is strongly recommended that property owners flush out all of the plumbing within the property. The following flushing instructions are in accordance with ANSI/AWWA C810-17 (First Edition) Replacement and Flushing of Lead Service Lines Section 4.4.2 "Flushing by the customer after lead service replacement". Property owners should follow the below flushing instruction the day of replacement or before



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water is used following a lead or GRR water service line replacement to reduce particulate lead. The steps below should be followed every two weeks for three months following replacement. Hot water should not be used until initial flushing is complete.

1. Locate all faucets in the building, including laundry tubs, hose-bibs, bathtubs, and showers.
2. Remove aerators and screens from faucets where possible, including showerheads.
3. Open faucets in the basement or lowest floor in the building. Using cold water, leave faucets running at the highest rate possible.
4. Open faucets on the next highest floor in the building, going from lowest level to the highest level in the building, until all faucets are open on all floors in the building.
5. Once all faucets are open, leave the water running for at least 30 minutes.
6. After 30 minutes, turn off faucets in the order they were opened.
7. Clean aerators or screens at each faucet.