

Strengthening Service Line Replacement Programs in Michigan

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Topics

1. Lead and Copper Rule of the State of Michigan
2. Distribution System Materials Inventory (DSMI): Addressing Unknown Service Lines
3. Service Line Replacement (SLR)
 - 3.1 Emergency lead or Galvanized Previously Connected to Lead (GPCL) service lines repair / partial replacement
 - 3.2 Best Practices for Emergency Repair of Lead or GPCL Service Line
4. Healthy Water Healthy Kids

1. Lead and Copper Rule (LCR) of the State of Michigan

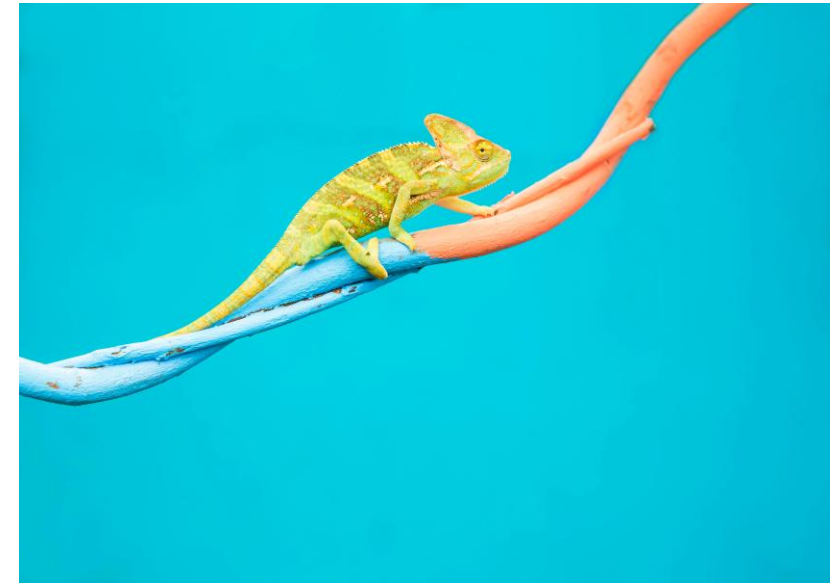


Purpose of Lead & Copper Rule (LCR)

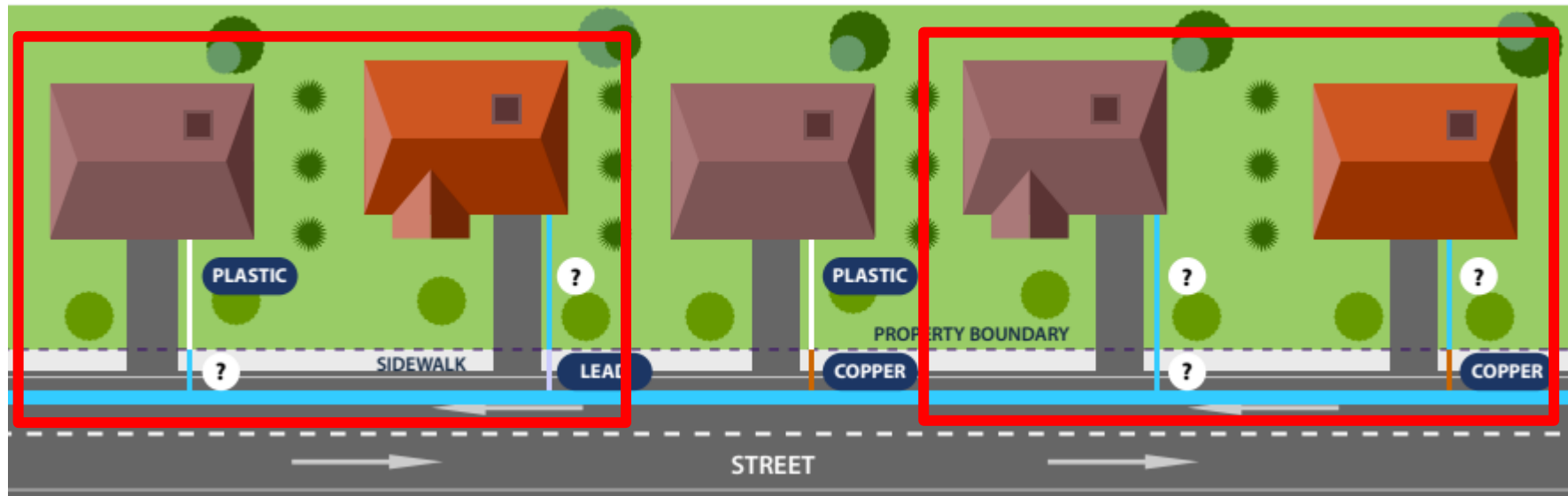
- **Reduce water corrosivity** to prevent corrosion of plumbing and distribution system components
- **Minimize lead and copper** in drinking water
- **Establish action levels (AL)**, which when exceeded, require supplies to take actions to reduce corrosion and exposure

2018 Revisions to Michigan's Lead and Copper Rule

- 2018 Changes related to service line replacement included:
 - **Definitions:** Service line and lead service line
 - **Inventory:** Distribution system materials inventory
 - **Service Line Replacement (SLR):** Annual goal (5%) and overall timeline (2021-2041, 20 years)
- Michigan is going through its rule-making process to adopt the 2024 Lead and Copper Rule Improvements (LCRI) that are in effect 11/1/2027.



2. Distribution System Materials Inventory: Addressing Unknown Service Lines



Terminology: Galvanized Service Lines

Galvanized Previously Connected to Lead (GPCL)

A galvanized service line that was previously connected to a lead service line or lead connector (gooseneck).

EPA Lead and Copper Rule Improvement (LCRI) 2027- Galvanized Requiring Replacement (GRR):

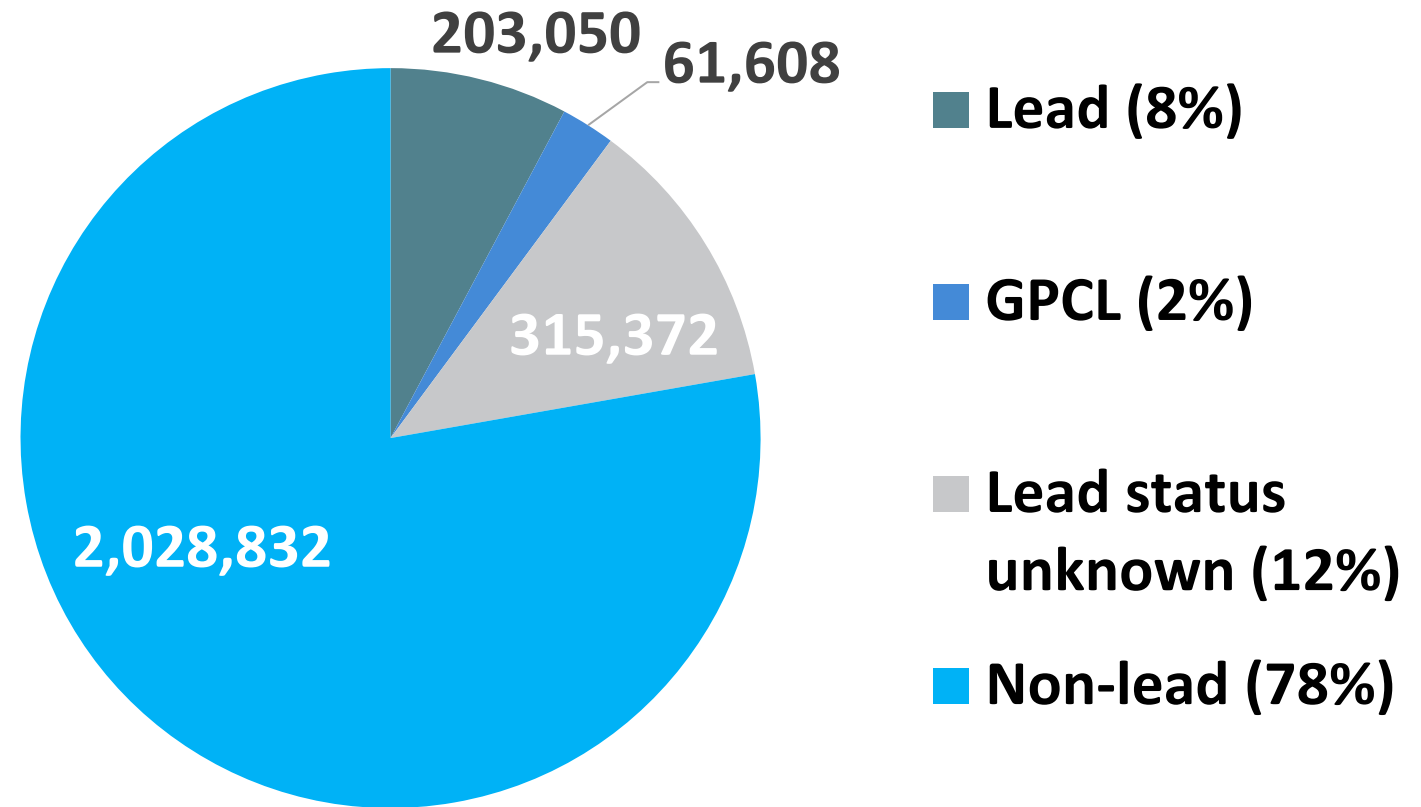
a galvanized service line that currently is or ever was downstream of a lead service line; or is currently downstream of a lead status unknown service line. If the water system is unable to demonstrate that the galvanized service line was never downstream of a lead service line, it is a GRR service line for purposes of the service line inventory and replacement requirements.

Distribution System Materials Inventory

Water supplies must maintain an inventory of service line materials in their distribution systems.

- Submission of preliminary inventory 01/01/2020.
- Submission of Complete inventory 10/16/2024.
- Inventory is always to be improved.

Michigan Service Line Materials Estimates



Statistics on Lead Status Unknown (LSU)

If we focus on known lead and GPCL, and the lead status unknown, **note the work still needed to identify lead status unknown service lines.**

Known lead
and GPCL

264,658

Lead Status
Unknown
(LSU)

315,372

Including Lead Status Unknown (LSU) in the Calculation of Annual Service Line Replacement (SLR) Rate

Any lead status unknown service lines not identified becomes part of the replacement pool unless proven to be non-lead.

Per the lead and copper rule improvement (LCRI), water supplies will be required to replace all lead and GPCL service lines in 10 years (2037, on average rate of 10% per year)

Known lead
and GPCL

264,658

Lead Status
Unknown
(LSU)

315,372

Identification of Lead Status Unknowns

- Review current inventory and classify the data available based on the four identification locations
- Use the following methods to collect missing information:
 - Use of records if historical data has been confirmed accurate through physical verification



Identification of Lead Status Unknowns (Continued)

- Use the following methods to collect missing information:
 - Use of self-identification survey to identify the water service line entering residential home through the basement or utility closet
 - Physical verification / excavation where potholing is needed
 - Water quality testing
 - Statistical modeling



Deadline for identification and removal

- Water supplies are **recommended to identify all lead status unknown service lines** as soon as possible
- All lead and GPCL service lines **must be identified and replaced by 2037**



3. Service Line Replacement (SLR)



Service Line Replacement in the City of Detroit

Proactive Compliance Strategy

- **Improves compliance for service line replacement** through implementation of a program that addresses Michigan Lead and Copper Rule reporting requirements.
- **Provides resources proactively and collaborates with water supplies to address common implementation challenges** that could become a rule violation.



Service Line Replacement (SLR) Implementation

- **Compliance for Lead and Copper Rule**
 - Protect public health
 - Quality drinking water
- **Water Supplies**
 - Mutual technical support
 - Sharing best practices and Lesson learned

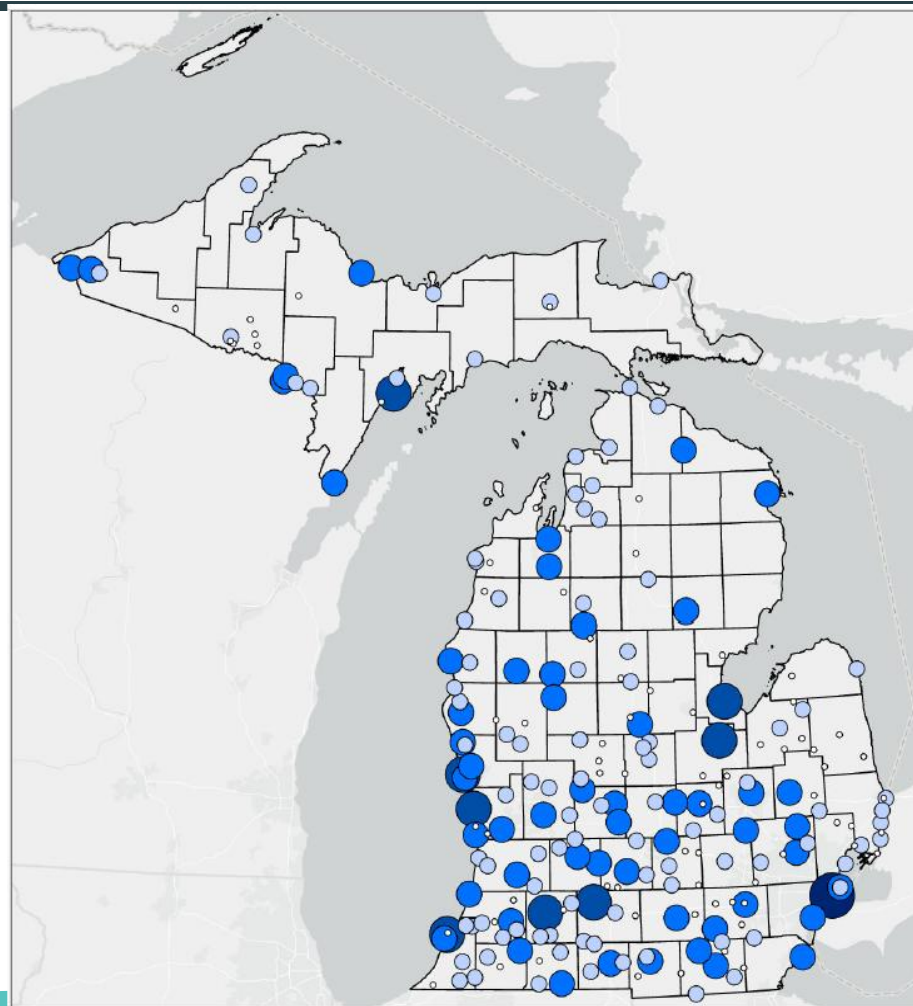
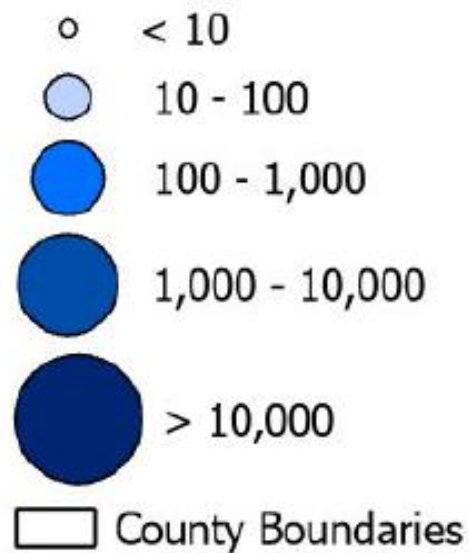


General Service Line Replacement Requirements

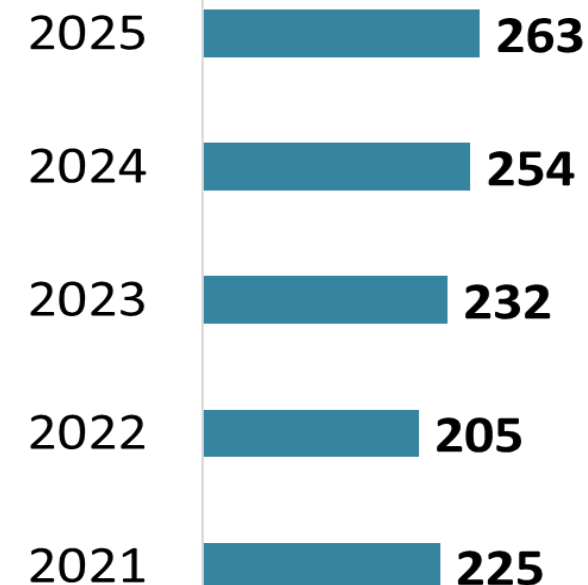
- Administrative rule R 325.10604f(6) requires:
 - A water supply shall replace **all lead service lines and galvanized previously connected to lead service lines** if the service line is or was **connected to lead**.
 - A water supply shall replace **the entire service line**.
- Lead or GPCL Service lines must be replaced **at the water supply's expense**, regardless of ownership.

Service Line Replacement (SLR) in Michigan

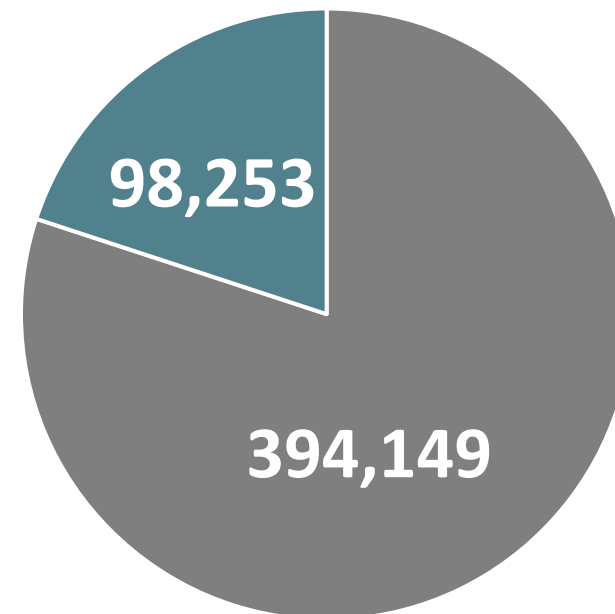
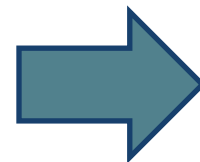
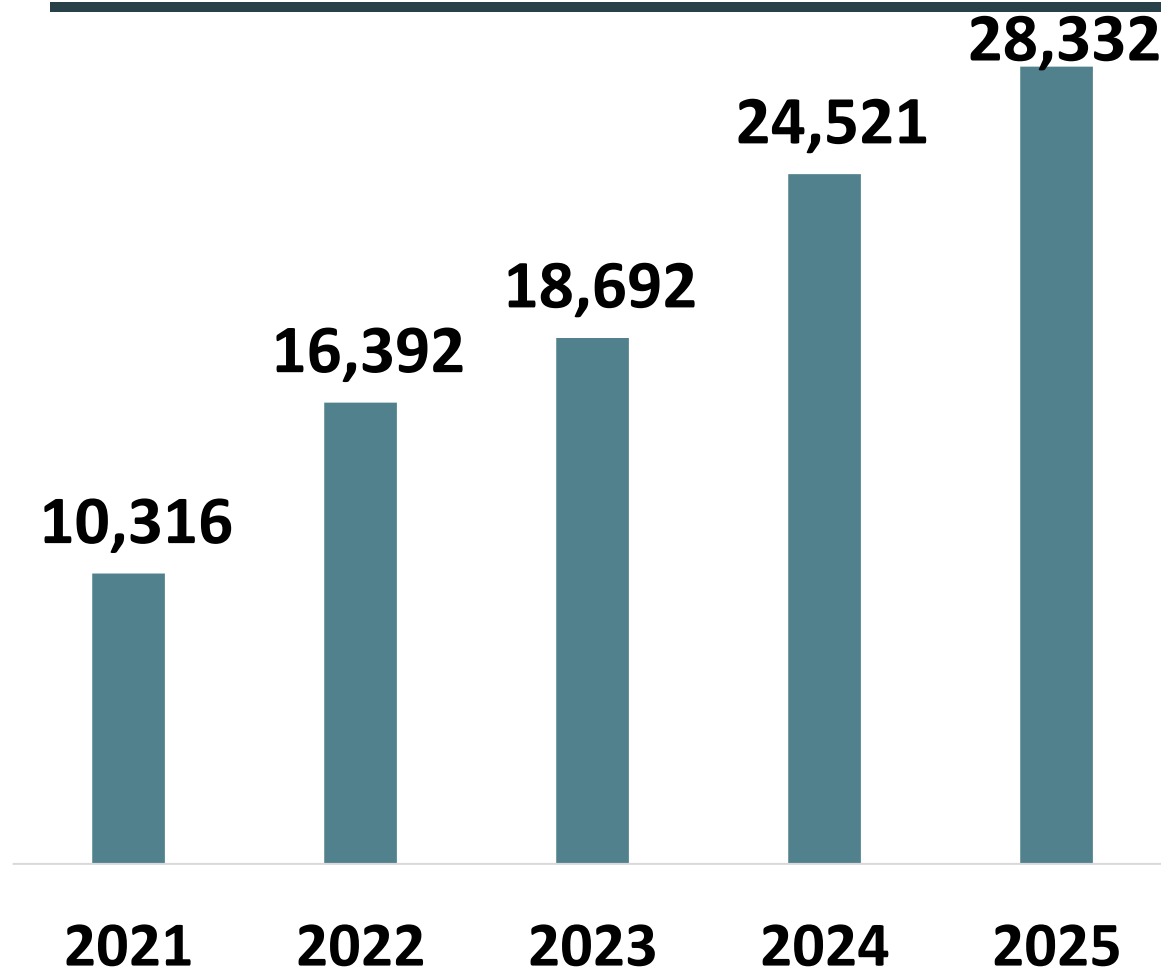
Total Service Lines Replaced (2021-2024)



Water Supplies Performing SLR in Michigan



Service Lines Replaced, 2021-2025



- Service lines to be replaced (lead, GPCL, 50% lead status unknown)
- Service lines replaced (2021-2025)

Planning for Service Line Replacement

- Identification of lead status unknown service lines
- Protocol to prioritize full SLR for emergency repair
- Management of customer-initiated SLR
- Develop an outreach policy & SLR prioritization strategy:
 - Disadvantaged consumers
 - Environmental justice
 - Sensitive populations
 - Schools and daycare facilities
 - Prevalence of Lead and GPCL service lines
- Funding strategy



City of Ferndale

Community Engagement Planning

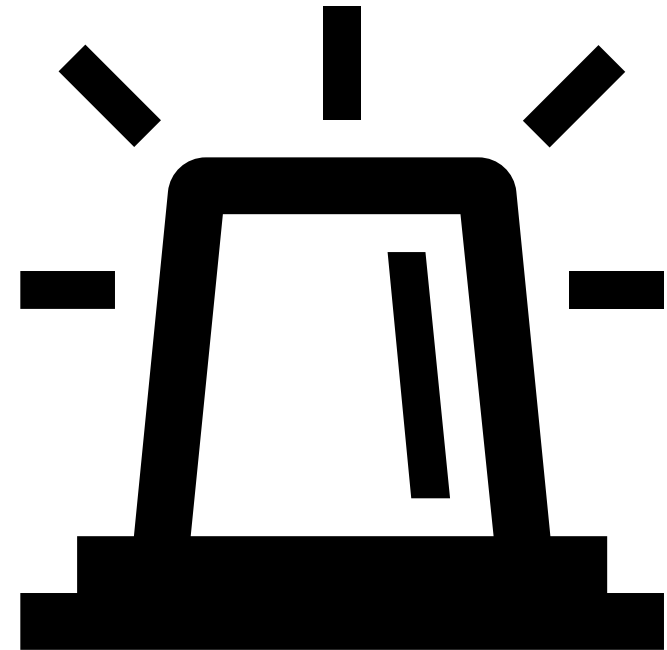
- Notifying residents about what to expect during SLR
- Ensure equitable services to the community, and build trust
- Earlier community engagement
- Develop a community engagement plan and activities informed by implementation steps of SLR Plan
- Involvement of community grassroots organizations



Communities with Examples of Service Line Replacement Plan, Policy, and Community Engagement

Water Supplies	Community Engagement Plan	Service Line Replacement Plan	Service Line Replacement Policy
Dowagiac	1	1	1
Ferndale	1	1	-
Muskegon Heights	1	-	1
Three Rivers	1	1	1
Ypsilanti (YCUA)	1	1	1

3.1 Emergency lead or GPCL service lines repair / Partial replacement



Emergency Lead or GPCL Service Line Repair

Under Michigan Safe Drinking Water Act, R 325.10604f(5) and (6), Act 1976 PA 399, as amended (Act 399), water supplies shall not **replace any portion** of a service line that contains lead or GPCL materials, **unless in conjunction with emergency repair.**

Partial Emergency Lead or GPCL Service Line Replacement

- **Partial lead or GPCL Service line replacements are banned**
- If the building owner **does not consent**, then the **water supply shall not replace any portion** of the service line. Continue engaging him.
- **Emergency repairs** that result in **partial lead or GPCL replacement are allowed** but with additional monitoring and notification requirements to mitigate risk.

Partial Emergency Lead or GPCL Service Line Replacement (Continued)

- Lead or GPCL service lines that undergo an **emergency partial replacement** must **remain on the inventory for full replacement**.
- Water supplies are encouraged to **build capacity to perform a full LSLR under emergency conditions** and reduce opportunities for repair or partial replacement.

When Can a Water Supply Conduct an Emergency Repair / Partial Replacement of Lead or GPCL?

A water supply can conduct an emergency repair if a **leak/break was identified on any portion of a lead or GPCL service line** from the corporation fitting to the building plumbing at the first shut off valve inside the building or 18 inches inside the building, whichever is shorter.



Emergency Repair / Partial Replacement During Planned Drinking Water Construction Projects

- Any emergency repair or partial replacement during **planned drinking water construction projects** is generally **prohibited**.
- Planned drinking water construction projects are not an emergency, **unless extenuating circumstances are demonstrated**, this may result in a violation.

Examples:

- scraping a service line during line verification,
- water main replacement,
- or any other planned drinking water construction activities.



SLR, Ferndale, MI

Emergency Repair of Lead or GPCL Service Line Form

(EQP1768)



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
DRINKING WATER AND ENVIRONMENTAL HEALTH DIVISION

EMERGENCY REPAIR OF LEAD OR GALVANIZED PREVIOUSLY CONNECTED TO LEAD (GPCL) SERVICE LINE FORM

Note: If no lead or GPCL remains in the service line after an emergency repair, the repair is not considered a partial lead/GPCL replacement, and this report is not required.

Water Supply: _____ PWSID MI00 _____

Table 1. Material of service line before and after the emergency repair and related actions required under R 325.10604f(5)(c) or (6)(iv):

Location

Before

After

Water
Samples

Reason

Address			
Connector (gooseneck) Material Before Repair			
Main-to-Curbstop Material Before Repair			
Curbstop-to-Building Material Before Repair			
Connector (gooseneck) Material After Repair			
Main-to-Curbstop Material After Repair			
Curbstop-to-Building Material After Repair			
Pb & Cu sample collection dates (within 72 hrs.)			
Result received dates			
Dates results were shared with residents/owners			
Reason for Repair			

Certification

I certify the information herein is accurate and complete to the best of my knowledge.

Certification

_____	_____
Print Name	Title
_____	_____
Signature	Date

Example 3: Completed Emergency Repair of Lead / GPCL Service Line Form

Table 1. Material of service line before and after the emergency repair or partial replacement, and related mandated follow up actions:

Address	23 Main Street	34 2 nd Avenue	12 Michigan Street
Connector (gooseneck) Material Before Repair	Lead	Lead	Previously Lead
Main-to-Curbstop Material Before Repair	Galvanized	Lead	Galvanized
Curbstop-to-Building Material Before Repair	Galvanized	Lead	Galvanized
Connector (gooseneck) Material After Repair	Copper	Copper	Previously Lead
Main-to-Curbstop Material After Repair	Galvanized	Copper	Galvanized
Curbstop-to-Building Material After Repair	Galvanized	Lead	Copper
Pb & Cu sample collection dates (within 72 hrs.)	05/23/2022	08/10/2023	07/05/2022
Result received dates	06/15/2022	08/20/2023	07/18/2022
Dates results were shared with residents/owners	06/16/2022	08/22/2023	07/19/2022
Comments	Leaking curbstop	Leaking service line main-to- curbstop	Leaking service line curbstop-to-building

Section of service line previously connected to lead gooseneck / pigtail

How to Upload the Emergency Repair/Partial Replacement of Lead or GPCL Form into MiEHDWIS

Activity Menu - Create Activity

1

Select Entity Type

Category
Lead and Copper

Select a Community Water Supply Activity Type

CORROSION CONTROL

Corrosion control plan or corrosion control study.

Water Quality Parameter (WQP) sample results related to corrosion control should be uploaded to the WQP activity type.

Select Corrosion Control

LEAD AND COPPER WQP MONITORING RESULTS

Supplies must report water quality parameter (WQP) monitoring within 10 days of the end of the monitoring period.

For ease of reporting, EGLE has created WQP Report forms. Use the form that best represents your water system's treatment:

- WQP with corrosion control report form
- WQP without corrosion control report form

Select Lead and Copper WQP Monitoring Results

2

Select Activity

Filter...

DISTRIBUTION SYSTEM MATERIALS INVENTORY

Supplies shall characterize, record, and maintain a comprehensive inventory of distribution system materials, including service line materials on both public and private property.

DSMI Summary, Distribution System Material Inventory, Service Line Material Notification and Certification files can be submitted through this activity. Visit [Michigan.gov/ICB](#) for additional guidance and forms related to DSMI.

Select Distribution System Materials Inventory

LEAD AND COPPER MONITORING RESULTS AND REPORT FORM

Lead and copper monitoring results and report forms must be submitted to EGLE. Report form and consumer notice of lead result certificate can be found at [Michigan.gov/ICB](#).

Select Lead and Copper Monitoring Results and Report Form

LEAD AND COPPER SAMPLING PLAN

Create or update a Lead and Copper Sampling Plan. All supplies must have a current plan on file.

Select Lead and Copper Sampling Plan

3

Select Entity

SERVICE LINE REPLACEMENT

The following file types may be uploaded to this activity:

- Annual Service Line Replacement Report Form - Supplies with lead or galvanized previously connected to lead (GPCL) service lines shall annually submit to EGLE a summary of service line repairs or replacements by **March 31st**.
- Emergency Repair/Partial Replacement Form

Select Service Line Replacement

File type

Activity

3.2 Best Practices for Emergency Repair of Lead or GPCL Service Line

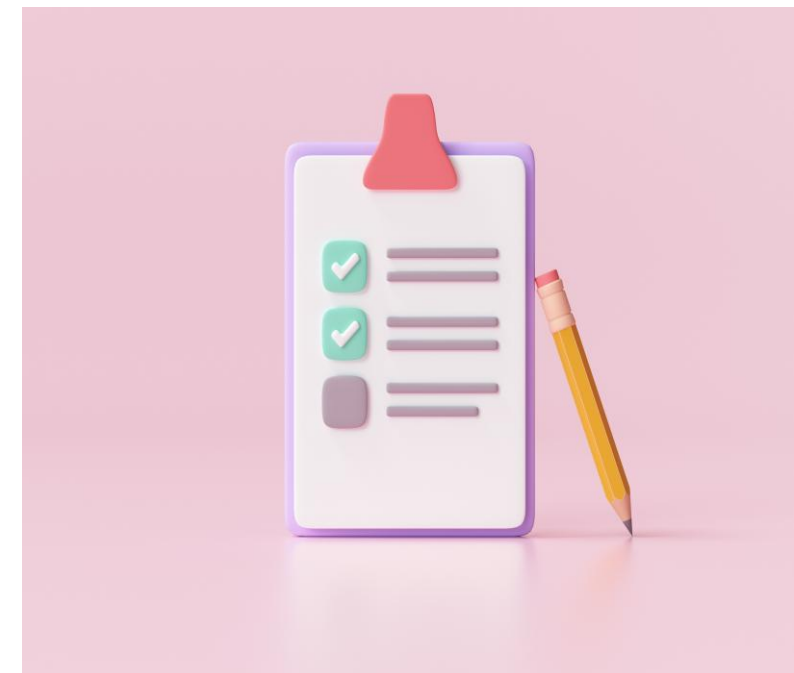


SLR, Detroit, MI

Check List for Emergency Repair / Partial Lead or GPCL Service Line Replacement

After Confirming that an emergency repair / partial replacement of lead or GPCL is needed (Call EGLE as needed):

- ☐ Inform residents of the home supplied by the lead or GPCL service line
- ☐ Evaluate possibility of performing a full-service line replacement (recommended) or proceeding with the repair or partial replacement
- ☐ Collect water samples (1st and 5th) and add the address in the LCR sampling plan (within 72 hours of performing emergency)



Check List for Emergency Repair / Partial Lead or GPCL Service Line Replacement (Continues)

- ❑ Once water samples results are received, shared them with the residents within 3 business days of receiving them and report them to EGLE
- ❑ Perform a whole house flushing, recommend residents to clear aerators on all taps in the home and to use a lead reducing filter (NSF/ANSI/CAN 42 & 53), and provide education material
- ❑ Complete form EQP1768, submit it to EGLE as instructed and keep the address on CDSMI until full-service line replacement is performed



Emergency Repair Associated with a Loss of Pressure in a Home with a GPCL Service Line

- Loss of pressure in home tap water due to pipe constriction / tuberculation and leads to lack of adequate water supply or lack of water supply or any situations that would pose danger to the health of people living in the supplied building.
- Loss of pressure in home tap water due to breaks/leaks of the GPCL service line.
- Water supplies are recommended to perform a full-service line replacement. Any emergency repair or partial replacement consideration should be communicated to EGLE



Mitigating Potential Emergency Repair / Partial Replacement for lead or GPCL Service Lines

- Water Supplies are Encourage to contact EGLE before implementation of SLR project changes / adjustments that may lead to emergency repair / partial replacement of lead or GPCL service lines

Examples of Projects:

- Drinking water infrastructure project that combines water main replacement and SLR using different contractors for water main and SLR
- Abrupt need to change SLR contractors during project implementation due to cost fluctuation
- Delayed project combination such as water main replacement, SLR, and road repair / resurfacing

4. Healthy Water Healthy Kids



Healthy Water Healthy Kids

- Voluntary Program (began in 2016)
- Focuses on schools and child cares where the risk of lead exposure is high
- Funding
 - Grants from U.S. Environmental Protection Agency for voluntary lead testing (\$6.2 million)
 - Focuses on school and child care buildings within Community Water Systems
 - Water testing, fixture & plumbing replacement, filters



Michigan Filter First Laws

- Required of **all** public and nonpublic K-12 schools and licensed child care centers
- Deadline to meet requirements
 - Child care centers: October 24, 2025
 - Schools: June 30, 2025
- Filter First-Healthy Hydration Grant (2024-2026)
 - \$50 million funds available
 - Filtered bottle-filling stations, faucet mounted filters, pitcher filters, replacement cartridges



Filter First School and Child Care Requirements

- Maintain a drinking water management plan
- Install and maintain fixtures and filters on all consumptive fixtures
 - NSF/ANSI standards 53 for lead reduction and 42 for particulate reduction
- Post signage
- Sample and test all filtered water for lead
- Provide notice and take action to reduce the risk as needed
- Annual school certification for Filter First requirements



Upcoming Deadline

Preparing for **November 1st, 2027** submissions:

- baseline Distribution System Materials Inventory,
- list of schools and child cares,
- service line replacement plan. Required only if you water supply still have lead, GRR, and lead status unknown service lines.

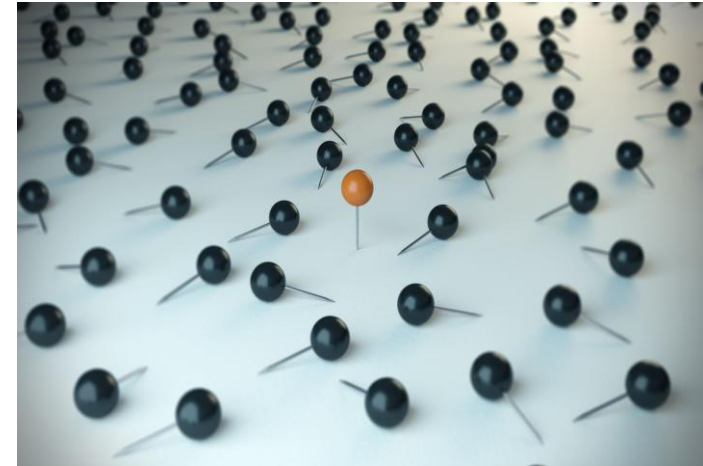


Recommended Recorded Webinars

- [Emergency Service Line Repair: Best Practices and Requirements](#) (Recorded 2/18/2026)
- [Emergency Lead Service Lines Repair and Updated Lead Service Line Replacement Form](#) (Recorded 2/19/2025)
- [Best Practices for Lead Service Line Replacement in Michigan](#) (8/15/25)
- [Overview of service line replacement and CDSMI-Minimum Service Line Material Verification requirements](#) (9/13/2022)

Take Home Message

1. New changes to the Michigan lead and copper rule are in effect **11/1/2027**
2. Water supplies performing SLR are:
 - encouraged to develop a **holistic SLR plan** that includes a community engagement and a funding strategy
 - Encouraged to foster **collaboration, knowledge sharing**, and participate in the **dissemination of best practices for SLR**
3. EGLE assists schools in Michigan in two ways: **Healthy Water Healthy Kids program** and **Filter First requirements**



What questions do you have?

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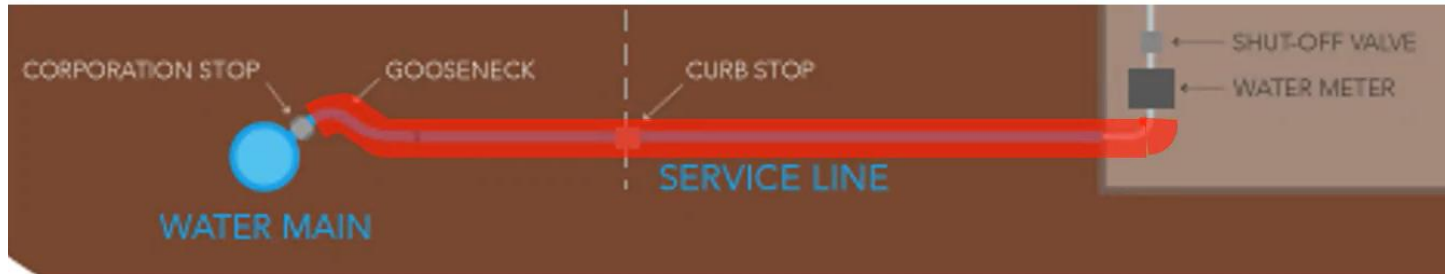


Lead Service Line

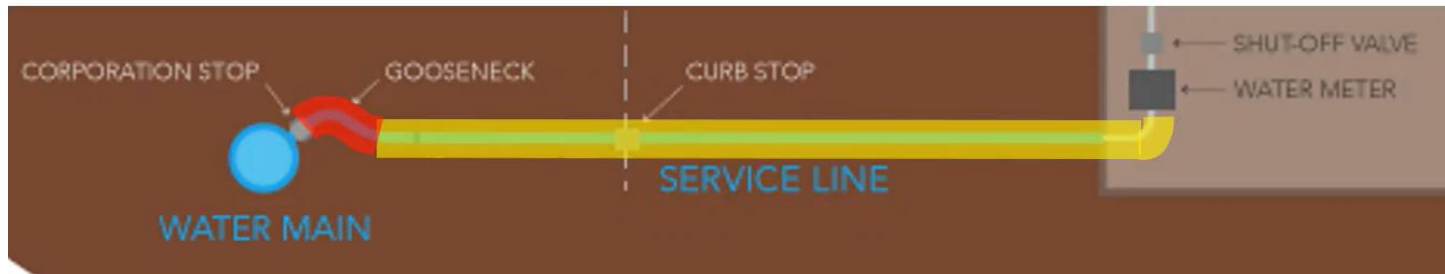
Lead

Galvanized

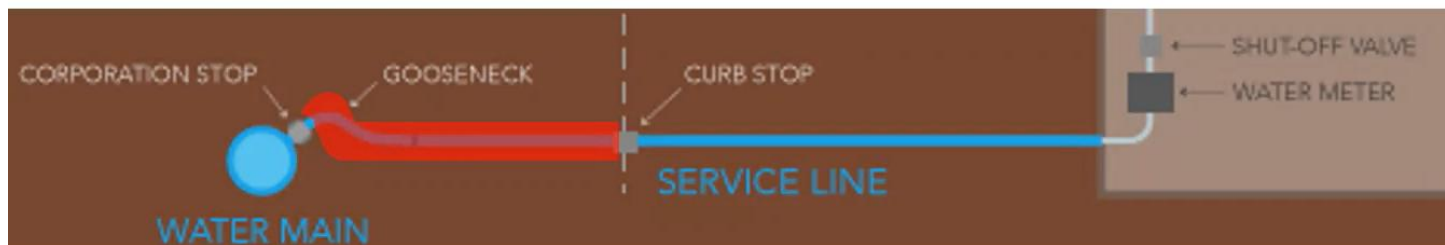
Copper or Plastic



Lead service line



Lead service line



Lead service line

Galvanized Previously Connected to Lead (GPCL)

Lead Galvanized
Copper or Plastic



Lead service line

Lead continued to the curb stop. Galvanized service line to home.



Lead service line

Lead continued to curb stop, but public side has been removed. Galvanized service line remains.



GPCL service line