# EGLE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY Michigan Department of Health & Human Services

# Lead is an Invisible Threat

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# Lead is an invisible threat



# What is lead?

Why is it a concern?



# Where can lead be found?



















# Household Items & Imported Goods









# Jobs & Hobbies



# Drinking Water



### How does lead get into drinking water? https://youtu.be/6usRvbG0IWo





### Galvanized Iron Pipe as a Source of Lead in Drinking Water



Galvanized iron pipe is another type of service line or indoor plumbing material that can be a source of lead.

- Lead in the coating
- Tuberculation inside the pipe can trap particulate lead and release it later





# Purpose of the Lead and Copper Rule



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





How the Lead and Copper Rule works



### Identify high-risk locations for sampling

 Based on lead-containing service line and plumbing materials

<u>Sample</u> for lead and copper at taps used for consumption

- Community water supplies
- Non-transient, Non-community water supplies

### <u>Sample</u> for water quality parameters

Supplies that treat their water for corrosion control

<u>Calculate</u> the 90<sup>th</sup> percentile of the lead and copper results

<u>Compare</u> with Action Levels to determine if additional actions are necessary







How the Lead and Copper Rule works Long-term regulatory efforts to reduce exposure to lead in drinking water state-wide

Increased focus on lead in sampling protocols

Complete service line inventories are due 1/1/2025

Educational notifications to residents/owners within 30 days if found to be served by a lead service line

Replacement of all LSL/GPCL lines by 2041

Creation of a state-wide Drinking Water Advisory Council

Lead Action Level lowers to 12 parts per billion in 2025





Upcoming Lead and Copper Rule Changes There are several efforts at the Federal and State Level to improve the Lead and Copper Rule

Michigan Lead and Copper Rule revisions in 2018

Federal Lead and Copper Rule Revisions (LCRR) – effective 12/16/2021

 Michigan will need to adopt any portion of the LCRR where we are not as stringent as the LCRR

• First compliance deadline is 10/16/2024

Federal Lead and Copper Rule Improvements (LCRI) Michigan Executive Directive 2021-9



# Action Level Exceedance (ALE)

### 90<sup>TH</sup> PERCENTILE EXCEEDS THE ACTION LEVEL



# What is an Action Level Exceedance (ALE)

A statistical calculation is done with all results to find the "90th percentile" value

- The 90th is compared to the Action Levels (ALs) to determine if treatment technique actions are needed
- If the values are below the ALs, it indicates that 90% of distribution system sites are in compliance with the LCR
- If the values are above the ALs, it indicates that more than 10% of all samples are over the ALs

### ALs are not based on health standards, they determine if treatment changes are needed

*90<sup>th</sup> Percentile Calculations* >15 ug/L (0.015 mg/L) Lead >1300 ug/L (1.3 mg/L) Copper

**Action Level Exceedance** 



## Action Levels (AL)

Maximum Contaminant Level Goal (MCLG)

### **Action Level**

- Corrosion based standard
- 90<sup>th</sup> percentile of all results
  - Lead Action Level = 15 parts per billion (ppb)
  - Copper Action Level = 1.3 parts per million (ppm)

### **Maximum Contaminant Level Goal**

- Health based standard
- Individual results
  - Lead Action Level = 0 parts per billion (ppb)
  - Copper Action Level = 1.3 parts per million (ppm)



# 90<sup>th</sup> Percentile Calculation





# Maximum Contaminant Level Goals and Potential Health Effects

### Lead 90<sup>th</sup> percentile is 13 ppb

1	2	3	4	5	6	7	8	9	10
0	0	5	5	5	5	5	8	13	20

### Locations above the MCLG

Lead 90<sup>th</sup> percentile is 17 ppb

1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	12	15	15	17	20



# Public Notification

90<sup>th</sup> percentile <u>below</u> Action Level

- Consumer Notice of Lead and Copper Results
- Consumer Confidence Report

90<sup>th</sup> percentile <u>above</u> Action Level

- Consumer Notice of Lead and Copper Results
- Consumer Confidence Report
- Action Level Exceedance
  - Public Advisory
  - Public Education
  - Increased health effects information in CCR



Important information about drinking water and lead



### EGLE Action Level Exceedance **Regulatory Response**

### Public Advisory

Requirement to notify water customers of a lead Action Level exceedance within three business days

- Inform the residents of the Action Level exceedance
- Provide steps to reduce exposure to lead in drinking water
- Opportunity to provide information about filter distribution or other public events

### Lead in Water Advisory: City of Clare Urges **Residents to Follow Specific Instructions**

September 26, 2019 by 9and10news Site Staff

Dangerous levels of lead have been found in the city of Clare's public drinking water supply.



Anyone hooked to the water supply is advised to flush their water for at least five minutes before using. The Central Michigan District Health Department also recommends that homeowners buy a NSF/ANSI Standard 42 water filter.

Boiling water is not advised, as it will concentrate the lead in

Departments - Mayor & City Council - Boards & Commissions

Important Information for Hamtramck Water Customers by Ashley Fallon | Oct 20, 2021 | Latest News, Public Notices

#### Hamtramck Public Announcement (pdf version of the letter below)

Dear Hamtramck Neighbor:

Each year the City of Hamtramck conducts testing of tap water in homes for lead and copper. As required by the Department of Environment, Great Lakes, and Energy (EGLE), lead and copper samples are collected from homes that have lead service lines. We recently collected samples from 42 homes



For Immediate Release: February 25, 2021 Contact the City Manager's Office at (517) 589-8236

### Lead Action Level Exceedance

In 2018, the Michigan Safe Drinking Water Act (MSDWA) was changed to include more stringent procedures for testing and analysis for lead and copper. The new regulations are intended to have a more proactive approach in monitoring each community's lead and copper levels.

Since 1992, the City of Leslie, which has approximately 790 total water customers, including roughly 190 houses with lead service lines (or about 24%) that connect to the city's water main, has regularly tested for lead and copper. The MSDWA changed the sampling methodology to test the first and fifth liter, which effectively targets the water in the service line that connects the home to the water main at the





## Lead Education and Coordination Goals

Don't just educate people when there's a problem!

Use interagency coordination to

- Provide a consistent message
- Promote transparency
- Reach as many customers as possible
- Reach vulnerable subpopulations
- Rule-required & health-based information



# ALE Multiagency Coordination

Acronyms:

EGLE – Michigan Department of Environment, Great Lakes, and Energy Water System – a community or non-community, non-transient system MDHHS – Michigan Department of Health and Human Services LHD – Local Health Department



# ALE Multiagency Awareness

Use EGLE and MDHHS developed materials to communicate to their program participants

**Tribal** 

Liaison

**MSHDA** 

Communit

Leaders

**MDARD** 

EGLE

**CWPA** 

EGLE

**EJPA** 

Acronyms: MSHDA – Michigan State Housing Development Authority MDARD – Michigan Department of Agriculture & Rural Development EGLE CWPA – Office of the Clean Water Public Advocate (Kris Donaldson) EGLE EJPA – Office of the Environmental Justice Public Advocate (Regina Strong)

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## Other ALE Requirements for Water Systems

### **Public Education**

- Comprehensive document about lead sources and how to reduce risks
- Required language per Safe Drinking Water Act

Increased lead and copper sampling (frequency and locations)

Water quality parameter monitoring

Source water assessment

Corrosion control treatment steps

Increased service line replacement



Continued Health Risks with Lead Service Lines

### <u>Regardless of an ALE</u>:

Anyone with a LSL or GPCL should continue proactive measures to reduce lead until all lead service lines are replaced

### After the Public Advisory and Public Education:

Education should not stop. It should transition to longer-term public health activities; community engagement









## MDHHS Public Health Response

Public Water Supply Lead Action Level Exceedance

Presented by:

DHHS

Michigan Department oF Health & Human Services



# Notification Process





State Leve	l Response	Local Level Response		
Michigan Department of Environment, Great Lakes, and Energy (EGLE)	Michigan Department of Health and Human Services (MDHHS)	Local Health Department	Public Water Supply	
<ul> <li>Regulatory authority for water supplies</li> <li>Collaborates with others at state and local level</li> </ul>	<ul> <li>No regulatory authority</li> <li>Duty to protect the health of Michigan residents</li> <li>Provide public health assistance</li> <li>Provide outreach and education</li> <li>Provide drinking water testing</li> <li>Collaborates with others at state and local level</li> </ul>	<ul> <li>No regulatory authority</li> <li>Duty to protect the health of residents in their jurisdictions</li> <li>Organize, coordinate, and deliver services and programs</li> <li>Collaborates with others at state and local level</li> </ul>	<ul> <li>Follow EGLE regulatory authority</li> <li>Collaborates with others at state and local level</li> </ul>	



# MDHHS Lead-ALE Response



Recommendations

Public Health Assistance

Outreach and Education Drinking Water Assessment



## Ways to Protect Yourself from Lead

Flushing	Run cold water before using it.		
Do not use hot water	Do not cook with or drink water from the hot water tap.		
Clean Aerator	Cleaning the faucet aerator will remove any small pieces of lead that may be trapped in the mesh screen (aerator).		
Check Plumbing	Learn if your home plumbing contains lead by completing an at-home lead plumbing checklist that can help you know if you're at risk. Work with a licensed plumber to complete a full inspection.		
Use a filter	Look for filters that are tested and certified to NSF/ANSI Standard 53 for lead reduction.		



## Filter Recommendations

### When a public water supply exceeds the action level for lead

 All households should use a filter certified to reduce lead in water. Continue to use a certified filter until MDHHS says it's no longer needed.

### **Need-based Free Filter Service**

 Children and fetuses are most at risk of harm to their health from lead. Households with a child younger than age 18 or a pregnant person, can receive a lead reducing filter.



### Need-based Free Filter Service

### **Requirement One: Must meet both**

- Household receives water from water supply with a lead action level exceedance
- Residents in the household have NOT received a water filter from water supply, local health department, or the Michigan Department of Health and Human Services

### **Requirement Two: Must meet at least one**

- A child under 18 lives at the address
- A child under age 18 spends a few hours a day and several days a week at the address for at least 3 months of the year. Note: For-profit day care centers are not eligible.
- A pregnant person lives at the address

### **Requirement Three: Must meet at least one**

- A person receiving WIC benefits or Medicaid insurance lives at this address
- The person can't afford a filter and replacement cartridges (filters cost about \$35 and replacement cartridges cost about \$15)



Drinking.

*111* co

Cooking.



**Rinsing foods.** 



Making baby formula.



Brushing teeth.

# When to Use Filtered Water





Showering or bathing (avoid swallowing water).



Washing hands.



Washing dishes.



Laundry.



Cleaning.

# When to Use Tap Water



# Outreach and Education



### Awareness

MDHHS goal is to make sure information about lead is in the community and all residents have awareness of and access to it.

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### **Recommendations**

MDHHS will ensure that residents are informed about the department's health recommendations.



### Accessibility

MDHHS will be present within the community to address concerns and answer residents' questions. Staff will be able to educate residents on filter use, and tell them how they can protect their health from lead in their drinking water and lead in the home.



# MDHHS Support to Local Health Departments

### **Education and Outreach**

• Lead Action Level Exceedance in Drinking Water Education and Outreach Planning Guide



### **Residential Filter Distribution**

- Lead Action Level Exceedance Residential Filter Distribution Planning Guide
- MDHHS in-person support Filter Distribution Day 1



Sanitarian Training



**Child Blood Lead Data Surveillance Reports** 



# More Information

# Michigan.gov/MiLeadSafe



# Contacts



Michigan Department of Health and Human Services Drinking Water Hotline: 844-934-1315



Michigan Department of Environment, Great Lakes, and Energy

**Environmental Assistance Center: 800-662-9278** 

