Michigan Lead in Drinking Water Metadata

Overview

The MDHHS Michigan Environmental Public Health Tracking Program (MiTracking) has created a dataset that includes information on lead concentrations in Michigan's Community Water Supplies (CWS).

- Geographic detail: CWS.
- When data were last updated: 4/19/2026.
- Data update frequency: annually.

For more lead in drinking water information, visit City/Community Residential Drinking Water.

Reported Measures

- 90th percentile Lead in Drinking Water by Community Water Supply.

Data Source

- MI Department of Environment, Great Lakes and Energy (EGLE) Safe Drinking Water Information System (SDWIS).

Identification

Includes samples collected at residential sites meeting regulatory site selection criteria, sampled in accordance with prescribed collection methodology and includes the highest result at each site. Lead action level exceedances were determined based on the Michigan Lead and Copper Rule. As of Jan. 1, 2025, the lead action level is 12 ppb for the state of Michigan. Any 90th percentiles calculated from samples collected before Jan. 1, 2025, were compared to the 15 ppb action level.

Calculations

Once all the targeted water samples have been collected, the lead 90th percentile value is calculated using the following steps:

1. Place the results in ascending order from lowest to highest lead concentration.
2. Assign each sample a number, 1 for lowest value.
3. Multiply the total number of samples by 0.9 to identify which sample will represent the 90th percentile.

a. Example: 20 samples multiplied by 0.9 = 18th sample. If the 90th percentile is not a whole number, interpolation is used. More information on calculations and interpolation is available in this webinar.

If the 90th percentile value is greater than the lead action level, the CWS has a lead action level exceedance (ALE). This is not a violation, but it does prompt required actions to minimize exposure to lead in drinking water. For more information, see Michigan Lead and Copper Rule.

Data Suppression: Data are not suppressed in this dataset.

Limitations of the Data

- Levels of lead in drinking water can be impacted by several factors including, but not limited to, water chemistry, contact with lead-containing service lines or interior plumbing, temperature and water use patterns. Testing schedules may not accurately represent short-term levels or even the maximum level that was ever in the water. For instance, samples taken during the warmest month may have levels higher than samples taken during the coldest month.
- The 90th percentile result for a CWS is not indicative of the level of lead in drinking water at any particular location within that CWS service area.
    - Drinking water within an individual home can exceed the lead action level even if the CWS 90th percentile value is at or below the lead action level.
    - Conversely, drinking water in a home may be below the lead action level even if the CWS 90th percentile is above the action level.
- These data do not tell us how much an individual person is exposed to lead in drinking water. This depends on the drinking water lead concentration specific to their home and the amount of tap water they drink.
- These data only provide information on a CWS, also known as a Type 1 water supply. A Type 1 water supply provides year-round service to at least 25 residents or at least 15 living units (e.g., cities, townships, apartments, mobile home parks) The data do not provide information on drinking water from other water system types.
- Comparing CWS 90th percentile results should be done with caution. CWSs have different site risks (i.e., lead pipes vs. other materials), different sample collection methods and different sampling schedules. CWSs test for lead more or less often depending on if testing has detected levels of lead above the action level in the past. Some CWSs will have results for every six-month period, while others will only have results once a year or once every three years.
- An elevated rate of a certain health condition in areas with potentially higher exposure to lead in drinking water does not mean that the lead caused that health outcome.
    - There is no way to know how much lead exposure occurred at the individual level and if a particular health outcome occurred after an individual had exposure to lead.
    - Factors other than lead in drinking water may be causing the adverse health outcome.

  Additional investigation would be needed to identify the reasons for the health outcome.

Access Constraints

There are no access constraints for data available through the MiTracking Data Portal. Where applicable, restricted data will only be released to users after a written request detailing the purpose of the request, intended use for the data and specifics on the security and privacy measures to be taken to safeguard patient privacy and prevent unauthorized access to or use of the data. Such requests are reviewed and approved by the Department of Environment, Great Lakes and Energy (EGLE). Please contact MiTracking at MDHHS-MiTracking@Michigan.gov for more information.

Use Constraints

All users are recommended to read and fully comprehend the metadata prior to data use. Efforts have been made to ensure the accuracy of the data. These data are supplied by EGLE to MDHHS for submission to the Tracking Program at the Centers for Disease Control and Prevention (CDC). The data are also used by MiTracking to compile, integrate and disseminate environmental hazard, exposure and health effects data pursuant to criteria and requirements set forth by the CDC.

Data users are prohibited from attempting to learn the identity of any person included in the data and from linking these data with any other data for the purpose of matching records to identify individuals or entities (e.g., hospitals).

Security Handling Description

If data are distributed, the use constraints specified in this metadata apply to all recipients of the data.

Distribution Liability

The MiTracking program is maintained, managed and operated by the Environmental Health Bureau within MDHHS. In preparation of these data, every effort has been made to provide the most current, correct, complete and clearly expressed information possible. Nevertheless, some errors in the data may exist. It is strongly recommended that careful attention be paid to the contents of the metadata file associated with these data to evaluate dataset limitations, restrictions or intended use(s). If errors or otherwise inappropriate information is brought to our attention, a reasonable effort will be made to fix or remove it. Such concerns should be addressed to the MiTracking program.

Questions?

For questions or inquiries about the data, contact MiTracking at MDHHS-MiTracking@Michigan.gov.

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