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Management Plan for Lead-in-Water

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Buffalo-Hanover-Montrose Schools
Management Plan for Lead-in-Water

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1.0 Introduction

Buffalo-Hanover-Montrose Schools is committed to providing a safe working and learning environment for employees and students. This Management Plan for Lead-in-Water was developed to reduce the potential for exposure to lead in water and to comply with Minnesota Statute 121A.335, *Lead in School Drinking Water*. Lead is a metal that can enter drinking water through the distribution system, including pipes, solders, faucets, and valves. Exposure to lead is a significant health concern. While water is not typically the most prominent source of lead exposure for an individual, reducing lead in drinking water can help in lowering an individual's overall exposure.

Minnesota Statute 121A.335 requires public school buildings serving pre-kindergarten and kindergarten through grade 12 to establish a plan to test for lead accurately and efficiently in water in potable water sources (water for consumption) every five years. Additional testing is required for buildings that are classified as a Non-transient Non-community Public Water System (NTNC PWS), per federal Safe Drinking Water Act (SDWA) compliance.

2.0 Responsibilities

The program administrator, or designee, is responsible for the following:

- Maintaining a board-approved plan that meets Minnesota Statute 121A.335
- Ensuring routine maintenance is occurring on the water system
- Ensuring that fixtures are tested every five years
- Remediating fixtures and communicating with public water systems as necessary
- Communicating with parents/guardians and staff about the management plan and testing
- Completing reporting as required to the Commissioner of Health
- Communicating to applicable staff that cold water should always be used for food and beverage preparation, as hot water will dissolve lead more quickly and may contain increased lead levels

3.0 Water Management

3.1 Routine Maintenance

To ensure water systems are properly functioning, Buffalo-Hanover-Montrose Schools takes the following steps to reduce the presence of lead in the water supply of potable fixtures:

- Faucet aerators are cleaned on a quarterly basis, and more frequently if build up is observed.
- Only certified lead-free materials are used during all plumbing work.
- Manufacturer's recommendations are followed on district-owned water softeners to ensure an appropriate level of hardness is present.
- Fixtures that have disrupted water flow or low pressure are repaired, removed, or replaced. Fixtures that are no longer operational can cause areas of stagnant water allowing lead levels to rise and be pulled into neighboring fixtures.
- Any fixtures that are not dispensing the appropriate temperature water are investigated and repaired (hot water faucets should be hot to avoid buildup of bacteria).
- Standard maintenance practices on other water devices within the District will be followed, including boilers, recirculating systems, and/or hot water heaters.
- Any fixtures will be labeled that are not part of the sampling plan to identify their intended use.
- Water filters will be replaced at the manufacturer's recommended timeframe.
- No lead-containing water coolers or lead-lined potable water tanks will be in service.
- The facility will be evaluated for the presence of cross-connections (e.g., connections of non-potable water to potable sources) and any issues addressed.

3.2 Extended Closures

The longer water has been sitting in pipes, the more lead it may contain. “Flushing” involves opening valves and letting faucets run long enough to remove standing water in the interior pipes and/or the outlets. District buildings experience extended closures during breaks of one week or longer (i.e., winter break, spring break, and summer break). To prevent stagnant water within the building, the District follows all water management practices above and flushes potable fixtures, as outlined below:

1. The faucets furthest away from the service line on each wing and floor of the building are opened with running water for 10 minutes.
2. Valves on all drinking water fountains without refrigeration units are opened with running water for 30 seconds to one minute, until cold.
3. Refrigerated water fountains are flushed for 15 minutes.
4. Kitchen faucets, Family and Consumer Science Room faucets and any other locations where faucets are used for cooking or drinking are flushed for 30 seconds to one minute, until cold.

4.0 Sampling Program

Buffalo-Hanover-Montrose Schools utilized the following references to develop its sampling plan.

- Minnesota Department of Health (MDH), Minnesota Department of Human Services (DHS), and Minnesota Department of Education (MDE) *Reducing Lead in Drinking Water: A Technical Guidance and Model Plan for Minnesota’s Public Schools*
- United States Environmental Protection Agency (EPA) *3Ts Toolkit for Reducing Lead in Drinking Water in Schools and Child Care Facilities*
- United States Environmental Protection Agency (EPA) *Ensuring Drinking Water Quality in Schools During and After Extended Closures*

An inventory of potable water locations can be found in the District’s online recordkeeping system. Water outlets in restrooms, custodial closets, science labs, art rooms, and other general-purpose workrooms are not included in the sampling inventory and are clearly marked not for drinking or for their intended use.

4.1 Sampling Schedule

Identified potable water sources in District facilities are sampled during the school year at least once every five years. A sampling/testing schedule is outlined in Appendix B.

4.2 Initial Sampling

Water sampling is completed by a third-party:

- The day prior to sampling, normal water usage occurs within the building. Sampling does not take place on Mondays or after a school break. Sampled fixtures are not utilized for 18 hours prior to sampling.
- Aerators or attachments are not removed prior to sampling.
- Initial samples of 250 milliliters (ml) are collected utilizing a “first draw” procedure, meaning that the samples are collected before the fixture is used or flushed during the day.
- Cold water is used for sampling.
- Samples are collected starting at fixtures that are closest to where the water enters the building.
- Analysis is performed by an accredited testing laboratory, using EPA approved analytical methods and quality control procedures, (such as the ICP/MS EPA Method 200.8).

When lead content exceeds 5 ppb (parts per billion), fixtures are taken out of service until the lead content is reduced to below 5 ppb, per Minnesota Statute 121A.335. The area may be supplemented with bottled drinking water, if necessary. If bottled water is utilized, a copy of the manufacturer’s testing report is maintained to ensure it meets FDA and State Standards.

If a fixture exceeds the 5 ppb threshold, remediation efforts are completed within 30 days and verified by retesting. If not remediated within the time frame, parents/guardians and staff are notified, as required by Minnesota State Statute.

4.3 Follow-Up Sampling

When lead content exceeds 5 ppb, follow-up 30-second flush samples are collected to help determine the location of the lead content. This sample helps determine if the source of lead is the fixture or interior plumbing so that the appropriate remediation option can be taken.

4.4 Remediation

Remediation steps are taken for fixtures identified to have water over 5 ppb. Remediation options are selected based on the circumstances, fixture usage, and suspected location of the lead source.

The initial steps for remediation include one or more of the following options:

- The fixture is determined to be a non-potable water source and is marked as such.
- The fixture is removed from service.
- Aerators are inspected, cleaned, and replaced as necessary, then the fixture is retested to confirm a lower lead content.
- The fixture is replaced or other sources of lead (pipe, solder, brass components, etc.) are removed and the fixture is retested to confirm a lower lead content.

Following remediation, first-draw re-sampling occurs to verify the effectiveness of the action for a potable water source.

If the first remediation methods do not lower the lead levels to below 5 ppb, a regular flushing program may be established, or a point-of-use treatment device may be installed.

Implementation of a Flushing Program

If it is determined that a flushing program will be established as a remediation strategy, the intervals and procedures are confirmed utilizing specific sampling strategies. Sampling reports would include the flushing program and would be an amendment to the Lead-in-Water plan.

Treatment Systems

Treatment systems (including point-of-use and point-of-entry chemical treatment systems) are remediation options that may be necessary to reduce lead-in-water levels. Point-of-use treatment systems are required to meet National Sanitation Foundation (NSF) NSF/ANSI Standard 53, 42, and 58, or an equivalent, and may be subject to Department of Labor and Industry (DLI) or local administrative authority plan review and approval prior to installation. It is noted that point-of-entry system installations may classify the building as a public water system, which would prompt additional water quality requirements.

5.0 Communication and Reporting

The District publishes information regarding lead-in-water testing, remediation plans, information about how to find test results, and a description of remediation efforts, on the District website, which is updated annually. In addition, the District supplies parents/guardians and staff with an annual notification in the back-to-school handbook.

If a fixture exceeds 5 ppb and is not remediated within 30 days of receipt of results, parents/guardians and staff are notified, as required by Minnesota State Statute.

The District reports lead-in-water test results and remediation activities to the Commissioner of Health by July 1st annually.

5.1 Municipal Water Supply

If lead levels are found to be at or above 5 ppb through a building, the District may initiate communication with the local municipal water supplier for the building regarding the following:

- If there is a documented significant contribution to lead contamination in school drinking water and a plan has been requested from the public water system for reducing the lead contamination.
- If lead levels are found to be at or above 5 ppb due to the public water system's infrastructure, the District may defer its remediation activities until after the elevated lead level in the public water system's infrastructure is remediated, and post remediation testing does not detect an elevated lead level in the drinking water that passes through that infrastructure.
- The District may also defer its remediation activities if the public water supply exceeds the federal Safe Drinking Water Act lead action level or is in violation of the Safe Drinking Water Act Lead and Copper Rule.
- The District will coordinate any needed replacements of lead service lines with the local water supplier.

6.0 Recordkeeping

Lead-in-water testing reports are located and available for review through request of the District Office and on the District Website. Sample locations and results are available in the district's online recordkeeping system.

Buffalo-Hanover-Montrose Schools retains records of lead-in-water testing and remediation activities for a minimum of fifteen (15) years.

7.0 References

- Minnesota Department of Health (MDH), Minnesota Department of Human Services, (DHS), and Minnesota Department of Education (MDE) "Reducing Lead in Drinking Water: A Technical Guidance and Model Plan for Minnesota's Public Schools." *MDE/MDH, July 2023*.
- Minnesota Statute 121A.335: "Lead in School Drinking Water" and Minnesota Statute 145.9273: "Testing for Lead in Drinking Water in Child Care Settings." *Office of the Revisor of Statutes, 2023*.
- United States Environmental Protection Agency: "3Ts Toolkit for Reducing Lead in Drinking Water in Schools and Child Care Facilities." *EPA, 2018*.
- United States Environmental Protection Agency (EPA) "Ensuring Drinking Water Quality in Schools During and After Extended Closures." *EPA, March 2021*.

Appendix A

Communication Documentation

Appendix B

Testing Schedule

Buffalo-Hanover-Montrose Schools

Lead-in-Water Sampling Schedule

<u>School Year</u>	<u>Buildings to be Sampled</u>
2023-2024	<ul style="list-style-type: none">• Montrose Elementary• Montrose Education Center
2024-2025	<ul style="list-style-type: none">• Buffalo High School• Buffalo Community Middle School
2025-2026	<ul style="list-style-type: none">• Parkside Elementary• Phoenix Elementary
2026-2027	<ul style="list-style-type: none">• Hanover Elementary• Northwinds Elementary
2027-2028	<ul style="list-style-type: none">• Discovery Elementary• Tatanka Elementary