La Crescent Montessori & STEM School

POLICY 803: ENVIRONMENTAL HEALTH AND SAFETY POLICY

Proposed – 12/18/2024
Adopted – 12/18/2024

Purpose:

To ensure safe and healthy environments for all students, staff, guests, and visitors at La Crescent Montessori & STEM School, the district is committed to implementing a comprehensive health and safety program. This program will include specific plans and procedures to safeguard the well-being of employees, students, volunteers, and visitors while on district property and grounds.

The Director of Operations, in collaboration with the Head of School, will be responsible for preparing and overseeing the program. This program will include plans for identifying, assessing, and managing potential hazards. It will address any identified issues within the district's budgetary constraints.

Health and safety (issues may include, but are not limited to):

- Accident and Injury Reduction
- Emergency Preparedness
- Fire and Life Safety
- First Aid, Cardiopulmonary Resuscitation (CPR), Automated External Defibrillator (AED) training and availability
- Elevator, Hoist and Lift Safety
- Ladder Safety
- Personal Protection Equipment (PPE)
- Playground Safety
- Respiratory Protection

Environmental Conditions

- Indoor Air Quality
- Integrated Pest Management
- Lead in Water
- Radon
- Water Quality

Hazardous Materials

- Asbestos – Awareness and Abatement
- Bloodborne Pathogens in Waste

- Combustible and Hazardous Material Storage
- Infectious Waste
- Laboratory Safety, Chemical Hygiene
- Mold Cleanup and Abatement

Systems Safety

- Electrical Safety
- Lighting
- Mechanical Ventilation
- Structural Safety
- Employee Right to Know
- Employee Safety Training

LEAD IN WATER TESTING PLAN FOR LA CRESCENT MONTESSORI & STEM SCHOOL

With guidance provided by:

DEPARTMENT OF EDUCATION

DEPARTMENT OF HEALTH

Lead in Drinking Water: by the Numbers

Guidance Value: ppb (parts per billion)	Description
0 ppb	EPA has set a maximum contaminate level goal (MCLG) of zero for lead in water. *Note: analytical tests can only measure down to their detection limits; it is not possible to actually measure down to 0 ppb.*
1 ppb	The American Academy of Pediatrics recommends this level be used as a standard for school drinking water taps. *Note: The minimum repeatable detection limits achieved by laboratories today are typically between 0.5 and 2.0 ppb.*
5 ppb	Illinois, Michigan and Washington DC use this value as a trigger for schools to implement lead hazard reduction or provide notification. Health Canada has proposed this value as their new Maximum Allowable Concentration. See Health Canada (https://www.canada.ca/en/health-canada/programs/consultation-lead- drinking-water/document.html#a1) Is the International Bottled Water Association (IBWA) Bottled Water Code of Practice finished water quality product standard.
15 ppb	Public water systems sample for lead following the EPA Lead and Copper Rule. No more than 10 percent of a water system's samples are allowed to be above this level. However, this is not a health-based value. It is applied as a statistical calculation to determine when a public water system must explore corrosion control treatment options to reduce lead in the water based on the laboratory detection limit available at the time of the rule making. This action level has not been updated since 1991. Several states have adopted this value in their school guidance in order to match the Lead and Copper Rule value.
20 ppb	This is the trigger value used in EPA's Lead in Drinking Water in Schools and Nonresidential Buildings (1994), now the 3Ts (2005). This value has not been updated since the publication of these documents and is not a health-based value.

Model Plan for Lead Testing

Required Components of a Model Plan

The model plan includes three required steps:

Step 1. Sampling Program Development

Step 2. Conduct First Draw Tap Monitoring

Step 3. Communicate Results

Step 1- Sampling Program Development:

A program to assess and sample for lead in drinking water must incorporate, at a minimum, the following actions:

➔ **Inventory drinking water taps used for consumption (i.e., drinking water and food preparation):**

o A drinking water faucet or tap is the point of access for people to obtain water for drinking or food preparation. A faucet/tap can be a fixture, faucet, drinking fountain or water cooler. Drinking water taps typically do not include bathroom taps, hose bibbs, laboratory faucets/sinks or custodial closet sinks; these should be clearly marked not for drinking.

o Taps used for human consumption should only be cold water taps.

o Hot water taps should never be used to obtain water for drinking water or food preparation.

o An inventory of fixtures can be found at 120Water.

➔ **Check all drinking fountains to ensure EPA has not identified them as having a lead lined tank under the LCCA.** This list can be found at:
Lead in Drinking Water Coolers (http://tinyurl.com/kr8kppf) ;

o Drinking fountains have been checked and have passed the lead tank test.

➔ **Determine a schedule for sampling:**

o All taps used for drinking water or food preparation must be tested at a minimum of once every five years.

o All LMSS taps identified on the inventory list were last tested in March, 2024.

➔ **Determine logistics for sampling:**

o LMSS will utilize 120Water.com to conduct laboratory testing, and analyze the results. 120Water provides the supplies needed to ensure quality control and accurate results.

➔ **Analysis by an Accredited Laboratory:**

- 120Water utilizes Minnesota Department of Health Public Health Laboratory and is an accredited lab.They send instructions for sampling, sample bottles, and a chain-of-custody form to document time and date collected, collector name and sample location.
- Limitations:
  - May have a cost based on current grant funding
- Benefits
  - District and/or consultant will not need to maintain instrument calibration records;
  - Uses a Chain-of-Custody to ensure integrity of sample analysis process;
  - Analysis done by third-party may provide more independent review/transparency;
  - Accredited labs use EPA approved methods and have met industry standards for analysis; and
  - Analysts are certified and trained. A listing of accredited laboratories may be found at:

Step 2- Conduct First Draw Tap Monitoring:

Once the plan from Step 1 is set, water sampling must be conducted according to the established schedule and priority. Water from taps used for drinking or food preparation must be tested for lead using “first draw” samples. First draw means that the samples are collected before the fixture is used or flushed during the day. Use only cold water for collecting lead samples. It is necessary to consider the order in which tap samples are collected to avoid the potential of accidentally flushing a tap. Always start at taps closest to where the water enters the building.

Sample site preparation and sample collection must be performed consistent with the following conditions:

- Note that it may be necessary to collect samples over a number of days to ensure only first draw samples were collected;
- The day before sampling - normal usage of the sampling tap should occur;
- The night before sampling - secure the fixture from being used (e.g., hang a “Do Not Use” sign);
- Do not use sampling taps for a minimum of six hours. MDH recommends not exceeding 18 hours;
- Do not remove aerators or attachments;
- Collect the first draw sample using a 250 mL bottle. Be sure to start sampling at taps closest to where the water enters the building so that no accidental flushing occurs;
- Complete all scheduled sampling for that sampling period; and
- Have samples analyzed by sending to a laboratory or conduct analysis using field analyzers. Be sure to follow all instructions from the lab or field analyzer manufacturer.

Step 3- Communicate Results:

Minnesota Statutes section 121A.335, subdivision 5 creates a reporting requirement for schools as follows - “A school district that has tested its buildings for the presence of lead shall make the results of the testing available to the public for review and must notify parents of the availability of the information.”

School administration should:

- Notify affected individuals about the availability of the testing and results within a reasonable time. School employees, students, and parents should be informed and involved in the communication process. Results of initial and any follow-up testing should be easily accessible along with documentation of lead hazard reduction options. Posting the information on a website is preferred, and including the information in the annual student handbook.

- Identify and share specific activities pursued to correct any lead problems. Local health officials can assist in understanding potential health risks, technical assistance and communication strategies.

MDE and MDH have developed an Education and Communication Toolkit to aid schools in implementing this Plan.

Step 4- Interpret Sample Results:

Once a school receives its sample results, it should verify that all results are expressed in parts per billion (ppb). For water samples, this will sometimes be stated as micrograms per liter (µg/L), which is equivalent to ppb.

Table 3 presents possible lead hazard reduction options for various lead levels. The intention of presenting the information is to provide perspective on possible actions in response to increasing lead concentrations in water. The concentration ranges represent increasing levels of lead and should not be used as strict thresholds. More comprehensive actions may be necessary to address health threats from higher concentrations. As there is no safe level of lead, it is important to incorporate lead hazard reduction options and communicate at all levels of lead in order to raise awareness and reduce exposure.

Table 3: Recommended Lead Hazard Reduction Options

Lead Level At The Tap	Lead Hazard Reduction Options
2 ppb or Non- Detected	· Lead was not detected. Tap may be used as normal; · Record result and test again in 5 years; and · Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request.
2 ppb to 20 ppb*	The tap may be used for cooking and drinking water while steps are taken to reduce overall exposure. A higher number of taps with elevated results increases the urgency to implement hazard reduction. Options include: · Retest the sample tap and attempt to more accurately determine the source of the lead; consider monitoring tap more frequently until the source of lead is found and removed; · Consider the feasibility of flushing or other steps to minimize lead exposure, including limiting softened water supplies to hot water taps only, taking into account other actions that the school may already have in place; · Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request.
>20 ppb*	Action should be taken to reduce exposure. The specific action(s) taken will be dependent on individual school conditions. Options include: · Remove tap from service until problem is demonstrably corrected by replacement, a flushing program, filtration, or treatment; · Do *not* use tap for cooking or drinking water; · Retest the tap and attempt to determine the source of the lead; If the tap is not replaced, consider monitoring tap more frequently, such as annually, until the source of lead is found and removed; · Implement a flushing protocol or other lead hazard reduction option; sampling should be used to evaluate effectiveness; · Make all test results and lead education materials accessible to the community, such as on a website, or annual report, and available upon request; and · Provide targeted communication and education to individuals, parents, and staff members that routinely use that tap.

Glossary of Terms and Abbreviations

Aerator - An aerator is found at the tip of the faucet. Aerators are screwed onto the faucet head, creating a non-splashing stream and delivering a mixture of water and air
Corrosion - A dissolving and wearing-away of metal caused by a chemical reaction between water and plumbing materials in contact with the water
Detection Level (DL) - The lowest concentration of lead that can be analyzed with a certainty of precision. Results below this level are often expressed as “non-detected,” “nd,” or “<DL.” For the purposes of this document, 2 ppb is the maximum detection level recommended for lead analysis
Detected: An amount of lead above the detection level. A concentration of lead analyzed with a certainty of precision to be at or above the detected level
Drinking Water Faucet/Tap - Point of access for people to obtain water for drinking or food preparation. A faucet/tap can be a fixture, faucet, drinking fountain or water cooler. Drinking water taps typically **do not** include bathroom taps, hose bibs, laboratory faucets/sinks or custodial closet sinks when clearly marked
Field Analyzer - Instrument suitable for water quality analysis in the field and will provide results without the use of a laboratory
First Draw Sample - The first water drawn from a faucet/tap after the water has sat undisturbed in the plumbing system for at least six hours
Fittings - Plumbing components used to join sections of pipe or to join pipe to fixtures
Fixture - Exchangeable device connected for the distribution and use of water in a building. Examples: fountain, sinks, shower, tub, toilet, hydrant
Flush(ing) - Running the water at a faucet/tap or combination of faucets/taps to clear standing water from the plumbing system
Flush Sample - A water sample that has been collected following the flushing of a drinking water tap
Flux - A substance applied during soldering to facilitate the flow of solder. Flux used prior to 1986 contains lead and can itself be a source of lead contamination in water
LCCA – Lead Contamination Control Act, July 1989
LCR – Lead and Copper Rule, June 1991
Lead Free - Weighted average of not more than 0.25% in wetted surface material for pipe, pipe and plumbing fittings and fixtures and 0.2% for solder and flux. More information is available from the EPA website at the following link:

· Basic Information about Lead in Drinking Water (https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water)

Limit of Detection (LOD) – The lowest quantity of a substance that can be distinguished from the absence of the substance due to the instrument’s analytical process. It is usually lower than the detection level
MDE – Minnesota Department of Education
MDH – Minnesota Department of Health
Model Plan - The plan developed by the commissioners of health and education to accurately and efficiently test for the presence of lead in drinking water in public school buildings, as required under Minnesota Statutes 121A.335
Non-Detect: A lead result below the limit of detection, often expressed as “non-detected,” “nd,” or “<DL.”
pH - A logarithmic measure of acidity and alkalinity between 0 (highly acidic) and 14 (highly basic); 7 is neutral
Parts per Billion (ppb) - A standard unit of measurement commonly used to describe the concentration of lead in drinking water. Also expressed as micrograms/liter (µg/L)
Point of Entry (POE) - A water treatment device installed to treat all water entering a single school, building, facility or home. Example: water softener
Point of Use (POU) - A water treatment device intended to treat water for direct consumption, typically at a single tap or a limited number of taps. Example: faucet mount cartridge filter

Primary Prevention - aims to prevent disease or injury before it ever occurs. It is done by preventing exposures to hazards that cause disease or injury, altering unhealthy or unsafe behaviors that can lead to disease or injury, and increasing resistance to disease or injury should exposure occur
Public Water System (PWS) - A system that has at least 15 service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year/
Community Public Water System (CPWS) - A PWS which serves at least 15 service connections used by year round residents or regularly serves at least 25 year round residents. Examples: municipalities, manufactured mobile home parks
Nontransient Noncommunity (NTNC) Public Water System - A PWS that is not a CPWS and that regularly serves at least 25 of the same persons over 6 months per year
- Examples: schools, childcare centers, factories

Schools - Minnesota's public and charter schools serving students in pre-kindergarten through grade 12
SDWA – Federal Safe Drinking Water Act
Service Connection - The pipe that carries tap water from the public water main to a building
Solder - A metallic compound used to seal the joints between pipes. Until 1988, solder containing up to 50% lead was legally used in potable water plumbing. Lead free solders, which can contain up to 0.2% lead, often contain one or more of the following metals: antimony, tin, copper or silver
United States Environmental Protection Agency (EPA) - Federal agency with a mission to protect human health and the environment; oversees implementation of the SDWA