Approved: 6/28/18

# Lead Plan Policy

## 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

All schools must complete these steps or formulate a plan that addresses the core concepts of a sampling plan, testing, and communicating results. An alternative plan must accurately and efficiently test for the presence of lead in water in school buildings serving pre-kindergarten students and students in kindergarten through grade 12.

Recommendations for interpreting results and possible hazard reduction steps, which must be tailored to meet specific local needs and conditions, are presented later in this document. The recommendations are presented as guidance and are not a required part of Minnesota Statute 121A.335

## MDE Support for Lead Reduction Activities

MDE administers the Long-Term Facilities Maintenance Revenue program under Minnesota Statutes, section 123B.595. This program may be utilized to reimburse costs associated with lead testing and remediation. Funding does not cover staff time used to perform daily flushing or water use utility cost associated with flushing procedures. Memorandums from MDE, program guidance documents, spreadsheets and forms used to obtain approval to receive revenue are available at this link:

- Long-Term Facilities Maintenance (http://education.state.mn.us/MDE/dse/schfin/fac/ltfm/)

## 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.

**• 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 If a drinking fountain within the school is found on this list, it should be removed from use immediately.

**• 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 If budget or resources do not allow all taps to be tested in the first year, it is suggested that taps be prioritized, with all high priority taps tested the first year, medium priority the second, and low priority the third. The fourth year should be used as a "make up" year, if needed.

o Recommended priority levels are:

- High priority: taps used by children under the age of six years of age or pregnant women (e.g., drinking fountains, nurse's office sinks, classrooms used for early childhood education and kitchen sinks);
- Medium priority: other taps regularly used to obtain water for drinking or cooking (e.g., Family and Consumer Science sinks, classroom sinks, and teacher's lounges); and
- Low priority: other taps that could reasonably be used to obtain water for drinking but are not typically used for that purpose

**• Determine logistics for sampling:**

o Water testing should be done consistent with the established schedule. Prior to testing it must be determined if school staff or a contractor will conduct the Testing.

o If the school will be doing the testing itself, it will need to contact a laboratory or purchase field testing equipment.

o Schools will also need to decide if they will use field analyzers or laboratories to analyze results. Either method is acceptable with appropriate quality control and experience.

**• Analysis by an Accredited Laboratory:**

o Laboratory analysis typically involves a school district or consultant contracting with an accredited lab to obtain sample bottles. The laboratory will send instructions for sampling, sample bottles, and a chain-of-custody form to document time and date collected, collector name, and sample location.

o Limitations:

- Analytical costs. These vary from lab to lab. Currently, typical per sample costs for lead and copper analysis may range from $20 - $50, depending on a variety of factors;
- May take longer to get results than using a field analyzer;
- and Typically requires shipping.

o 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:

• Accredited Laboratories (http://www.health.state.mn.us/labsearch)

Figure 1 presents a screen shot from the MDH website on search terms for finding an accredited lab using a customized search.

**Program =** Safe Drinking Water Program
**Analyte =** Lead
**Matrix =** Drinking Water

• Analysis Using Field Analyzers:

A Field Analyzer can be a great tool for quickly and efficiently testing for lead in drinking water. If you or your consultant uses a field analyzer, it is important that you understand its limitations and proper use.

o Limitations:

- Some analyzers may not measure all forms of lead in drinking water. It is important that the instrument you use measures total lead (particulate and dissolved). If the instrument does not measure all types of lead in drinking water, your result could be biased low;
- Staff using an instrument need to ensure that the instrument is properly calibrated and maintained according to manufacturer's specifications, and that records of calibration and maintenance are kept;
  Instruments may require chemicals which will need to be stored and that can expire;
- Field instruments may not have limits of detection that are as low as an accredited laboratory. Be sure that the method you use can identify concentrations as low as 1 ppb; and
- Some instruments may have interferences with other contaminants and, therefore, under or overestimate the lead level. This may require that additional tests for iron, manganese, hardness, alkalinity or other contaminants be done prior to use to ensure that the instrument will be operated as designed.

o Benefits:

- Get results faster;
- Useful when doing large numbers of samples or investigative sampling where many samples might be taken from one tap;
- Can be done on-site (no shipping needed); and

- Can be more cost efficient depending on frequency of use.

**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.

Schools with active flushing programs or considering a flushing program may also want to collect a flushed sample in order to verify flushing effectiveness.

**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.”

In addition to testing for lead and meeting the reporting requirements, a lead hazard reduction program should include a comprehensive communication plan. The purpose of a communication plan is to provide a process for school employees, students and parents to address questions, report results and provide ongoing, up-to-date information regarding sampling efforts.

School management should:

• Assign a designated person to be the contact;

• 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, but the information should also be available to those without easily accessible internet access. Examples of other information venues are: meetings, open houses, and public notices; and
• 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 Model Plan.

Minnesota Statute 121A.335