

## ADMINISTRATIVE PROCEDURES

### **SUBJECT: Sampling and Testing for Lead in Drinking Water in Schools**

Ontario Ministry of Environment, Conservation & Parks (MOEC&P) Regulation 243/07 *Schools, Private Schools and Child Care Centres*, made under the Safe Drinking Water Act 2002, is intended to reduce children's exposure to lead in drinking water. The local Medical Officer of Health gives direction for corrective actions whenever a test result shows a concentration of lead in the water that is above the provincial drinking water quality standard for lead of ten (10) micrograms per litre.

This procedure outlines requirements and responsibilities for sampling & testing, reporting of lead exceedance test results & implementation of corrective actions, records retention & communications, use of lead reducing filters for drinking water fixtures, management of water fixture inventories, and identification & control of excess lead in drinking water in schools.

Samples must be taken from drinking water fountains and cold-water taps that are used in the preparation of food or drink or to provide water for consumption by children under 18 years of age. This procedure refers to these fountains and taps as "drinking fixtures."

#### **Drinking Water Sampling & Testing:**

1. **Health and Safety Officer:** plans and coordinates sampling and testing and shares sample plans with the Supervisors of Building Services prior to the sampling taking place.  
(Note: The LKDSB contracts an environmental consultant to provide the service of conducting the sampling and testing requirements).
  - i. all drinking fixtures in existing facilities must be sampled at least once within the prescribed timelines. Samples must be taken at least once in every calendar year during the period beginning on May 1 and ending on October 31.
  - ii. new drinking fixtures must be sampled after installation and before use. These are not required to be sampled within the May to October window.
  - iii. for a newly opened school, at least one set of samples must be taken from a drinking water fixture and the samples must be tested for lead within 30 days of opening the school.
  - iv. for a newly opened school with a primary division, at least 1/3 of the drinking fixtures must be sampled every year during the May to October sampling window so that all drinking fixtures are sampled within three years of the date the facility opened.
  - v. drinking fixtures sampled prior to 2017 and for which there is a sample record that indicates the location of the fixture can be counted as having been sampled.

- vi. there is not a requirement to sample water from water fixtures designated by the LKDSB as not used for drinking water or to prepare food or drink.
- vii. after all drinking fixtures in a school have been sampled at least once, the requirement reverts back to sampling one drinking fixture per year; fixtures should be selected on a rotational basis and with those having gone the longest time without a testing or those where lead issues have been previously identified taking priority.
- viii. for schools with co-located childcare operators, once all the drinking fixtures in both the school areas and the co-located child care areas of a facility have been tested, the LKDSB may offer to resume sharing testing with the child care operators as was the practice before 2017. This decision should be made by the Manager of Facility Maintenance and Capital *and* Manager of Facility Operations. If testing is shared, the *Lab Services Notification* should be updated to reflect the change. The Drinking Water Information System (DWIS) number on the chain of custody must match the facility from which the sample was collected.
- ix. current MOEC&P registration and *Lab Services Notification* is maintained for each school. Each school is assigned a unique Drinking Water Information System number (DWIS).
- x. arrangements are made by the LKDSB's consultant for shipment of sampling containers and instructions prior to conducting sampling. The consultant collects samples from drinking fixtures as outlined in the MOEC&P guidance document included on the last page of this procedure.

Note: The regulation allows for reduced sampling (every three years) if:

- The two most recent years of test results for lead, from both standing and flushed samples, do not exceed the drinking water standard for lead.
- All the drinking fixtures throughout the facility have been sampled at least once since June 7, 2007; and,
- A *Notice of Reduced Sampling* has been submitted to the MOEC&P.

2. **Supervisors of Building Services:** support the sampling program:
  - i. review the sample plans provided by the Health and Safety Officer to ensure fixtures to be sampled are in use and not within closed rooms etc.
  - ii. notify their custodians of when the sampling will take place and instruct them on the need to request repairs for any leaking fixtures and for flushing requirements prior to the sampling date.
3. **Supervisor of Maintenance:** prioritize repairs of any leaking fixtures in schools to complete repairs before water sampling is conducted.
4. **Custodians:** ensure water fixtures are adequately flushed prior to the scheduled sample date; this includes extra flushing of drinking fixtures that are bagged out of use pending test results; promptly submit work requests for any leaking fixtures.
5. **School Principals:** ensure all parties are informed of the requirement to refrain from coming to the school on the day of sampling until after sampling has been completed; this is due the requirement for the collection of "standing" water samples. The standing water sample is the first cold water draw from a fixture when the plumbing has not been used for a minimum of six hours.

## **Reporting of Lead Exceedance Test Results & Implementing Corrective Actions:**

1. **Health and Safety Officer:** In the event a test result shows an exceedance to the standard, the lab sends *Notice of Lead Exceedance Test Result* to the Health and Safety Officer; and Health and Safety Officer:
  - i. seeks direction from the local Medical Officer of Health and notifies the Supervisor of Building Services of any immediate actions needed such as bagging the fixture out of service or increasing flushing frequency.
  - ii. completes section D1, *Exceedance Notification/Corrective Actions*, and sends a copy by fax or email within 24 hours to the local Medical Officer of Health, the MOEC&P Spills Action Centre, Ministry of Education, and co-located facility relying on the same set of samples, if applicable.
  - iii. completes section D2, *Notice of Issue Resolution*, within 7 days of the issue being deemed resolved in accordance with the regulation and/or as directed by the local Medical Officer of Health, and sends the document to the same parties as noted above.
2. **Supervisors of Building Services:** when notified by the Health and Safety Officer of immediate action required as a result of an adverse test result, instruct custodial staff to bag the drinking fixture(s) out of service and conduct additional flushing.
3. **Custodial Staff:** when instructed by Supervisor of Building Services, bag a drinking fixture out of service and flush as instructed; keep the fixture bagged out of service until their supervisor or the Health and Safety Officer gives notification that the fixture can be allowed into use.
4. **Coordinators of Sites & Design / Supervisor of Maintenance:** coordinate together as needed to complete corrective actions as directed by local Medical Officer of Health and MOEC&P official as communicated by the Health and Safety Officer.

Note: Corrective actions depend on each individual circumstance. Typical corrective actions include increased flushing, installation of an NSF filter, replacement of a fixture, etc.

## **Records Retention and Communications**

1. **Health and Safety Officer:** maintain the following original documents for a minimum of six years, provide copies to the School Principal and Joint Health & Safety Committee and Site Health & Safety Reps and post the documents in the school H&S *Water* folder on the staff web:
  - i. every record made in relation to sample collection.
  - ii. every test result for samples taken under the regulation, including Notice of Reduced Lead Sampling, or an Order; and,
  - iii. every test result from a sample under the regulation indicating an exceedance of an Ontario Drinking Water Quality Standard.
  - iv. a copy of every Director's direction given under O. Reg 243/07 section 4, subsection 5 (2.2) and sections 5.1.

- iv. provide instruction and any resource material developed by the MOEC&P to the Principal for communication with the school community when an exceedance to the standard occurs.
  - v. provide copies of the *Notice of Lead Exceedance* and *Notice of Issue Resolution* to the school principal, Joint Health & Safety Committee, and Site Health & Safety Reps.; also, co-located childcare operator if applicable;
2. **Supervisor of Maintenance:** maintain every record related to filter installation and replacement including manufactures' instructions.
  3. **Custodial Staff:** maintain for a minimum of six years, every flushing record. Although custodians maintain flushing logs online in eBASE, there have been periods of time when logs were recorded on paper.
  4. **Principals:**
    - i. maintain water testing records and corrective action records as provided by the Health and Safety Officer and any communications made by the Principal with the school community. The most recent 6 (six) years of flushing logs must be maintained. Testing records are posted on the Board's staff web under "Health & Safety" in the individual school folders.
    - ii. in addition to maintaining records for the 6 (six) most recent years, records for the most recent 2 (two) years of flushing/testing and a copy of Regulation 243/07 must be available for inspection by any member of the public during business hours, free of charge. If any member of the public (other than a MOEC&P inspector) requests copies of any of these records, the Principal must refer the person to the Board's Public Relations Officer (Note: a link to the regulation is included on the Health & Safety page of the staff web in the *Resources/Links/Information* link under "Other Links.")
    - iii. in a timely manner, make parents and guardians aware of all situations where a lead exceedance has been detected in the drinking water and how the exceedance will be/has been addressed. The Health and Safety Officer provides the Principal with instructions for this communication.
    - iv. at the beginning of each school year, share resources developed by the MOEC&P, with parents and the broader school community.

### **NSF/ANSI Lead Reducing Filters**

1. **Supervisor of Maintenance:** where filters or other plumbing devices are installed:
  - i. install only NSF/ANSI standard 53, 58, or 62 with lead listed on the device or packaging as a contaminant that will be reduced.
  - ii. implement a process for filters to be replaced according to manufactures instructions.
  - iii. maintain a record of all filter changes.
  - iv. maintain a copy of the manufacturer's instructions and a record of the recommended cartridge change schedule.

- v. complete all installations; replacements; removals under a work order

Note: NSF International is an independent, third-party organization that developed voluntary industry standards in cooperation with Canada, the United States, and the plumbing industry to minimize the amounts of lead leached from products. It cooperates with the American National Standards Institute (ANSI) standards.

2. **Coordinator of Sites and Design:** notify H&S Officer of all water filter installations/replacements/removals completed under capital projects.
3. **Work Order Help Desk Clerk:** Tag Health and Safety Officer in all plumbing related work orders and provide a marked fixture plan showing exact fixture(s) affected and manufacturers product information; check to ensure plumber or contractor includes the following information when completing the work order: exact date the filter was installed/removed and the reason.
4. **Health and Safety Officer:** document status of filters in the fixture assets in eBase; include work order number.

### **Water Fixture Inventories:**

A full inventory of water fixtures in each school is maintained in the Assets module of eBASE. Each water fixture, including each fixture in co-located childcare areas, has a unique identification number.

Guidelines to Identify Non-Drinking Water Fixtures:

- Washroom taps
- Science lab taps
- Technology shop taps
- Art Classrooms
- Classroom taps (except kindergarten and special purpose classrooms such as special education etc.)
- Mechanical or custodian room taps
- Eyewash stations
- Exterior taps

Note: Individual School Water Fixture Plans diagrams showing the location and identification numbers of both drinking and non-drinking fixtures are available to custodians within the eBASE Flushing Logs module. Copies can also be requested through the Supervisor of Building Services or the Health and Safety Officer.

1. **Coordinators of Sites and Design / Supervisor of Maintenance:**
  - i. include Board approved specification in tenders and requests for quotes for any work involving solder, fluxes, pipe and pipefitting, fixtures, valves, meters, and other domestic water system components; and ensure Board and Contracted Services plumbers also adhere to the same specifications.
  - ii. inform Health and Safety Officer of upgrades to school plumbing systems and water fixtures.

- iii. provide written notification with marked fixture plan whenever a water fixture is added/removed/replaced; ensure plumber has verified end of line fixtures when needed.
  - iv. ensure new drinking fixtures are flushed then bagged out of service immediately after being installed pending water testing for lead.
  - v. coordinate with Health and Safety Officer to have drinking fixtures tested.
2. **Coordinator of Sites and Design (Fixture Inventory):** update Fixture Plans and Flush Points diagrams as needed; convert diagrams to PDF format, include date of revision in the title of the document, archive all previous files, and send the diagrams to the Health and Safety Officer and the Supervisor of Building Services.
  3. **Health and Safety Officer:** update fixture assets and uploads Fixture and Flush diagrams to eBASE.
  4. **Custodian:** notify Supervisor of any changes needed to the Fixture and Flush diagrams.
  5. **Manager of Facility Operations:** maintain up to date “closed classroom” list/diagrams on the share drive and notify the Health and Safety Officer and Coordinator of Sites and Design (Fixture Inventory) of any changes that would affect the fixture inventory.

**Identification and Control of Excess Lead in Drinking Water in Schools:**

1. **Health and Safety Officer:** annually provide a summary of test results and corresponding correction actions to the Manager of Facility Maintenance and Capital.
2. **The Manager of Facility Maintenance and Capital:** include a review of test results and existing corrective actions for the current and past years of water testing at schools when engaged in capital planning; depending on the extent and severity of a lead problem, consider whether an investigation should be completed to locate sources of excess lead in a school’s drinking water with the purpose of permanently reducing or eliminating the source(s) of lead. Notify the Health and Safety Officer prior to any water testing to be completed as part of a plumbing study or any other reason.
3. **Health and Safety Officer, Coordinators of Sites & Design, and Supervisor of Maintenance:** assist with the process of completing an investigation to locate sources of excess lead in drinking water in schools as prioritized by the Manager of Facility Maintenance and Capital for investigation.

Implementation Date: April 6, 2010  
 Revised: April 4, 2022

Reference: Ontario Regulation 243/07 *Schools, Private Schools and Child Care Centres*  
 MOEC&P Guide for Schools, Private Schools and Child Care Centres



# SAMPLING FOR LEAD

AT-A-GLANCE GUIDE FOR SCHOOLS, PRIVATE SCHOOLS AND CHILD CARE CENTRES

## WHO MUST SAMPLE FOR LEAD?

All schools, private schools and child care centres

## WHAT GETS SAMPLED?

Every drinking water fountain and any tap that provides drinking water or is used to prepare food or drink for children under 18

## WHEN ARE SAMPLES TAKEN?

Between May 1 - October 31

## BY WHEN?

### Schools With A Primary Division And Child Care Centres

- At least 1/3 of drinking water fountains and taps must be sampled in each of 2017, 2018 and 2019
- All drinking water fountains and taps must be sampled by January 1, 2020

### Other Schools

- By January 1, 2022

## ANNUAL AND REDUCED SAMPLING

After all drinking water fountains and taps have been sampled at least once, sample at least one such tap or fountain from your inventory (preferably on a rotational basis) once annually between May 1-October 31 or at least once every three years where requirements for reduced sampling have been met, unless directed otherwise

## HOW TO SAMPLE FOR LEAD

### BEFORE YOU SAMPLE



1. **CONTACT A LICENSED LABORATORY** for sampling instructions and containers, and complete a Registration and Laboratory Services Notification form to submit to the Ministry of the Environment and Climate Change if you have not already done so.



2. **DO AN INVENTORY** of your drinking water taps and fountains, and taps used to provide food or drink to children under 18 years old.

### ON THE DAY YOU SAMPLE



3. **WAIT SIX HOURS** or more since the plumbing was last used or, if six hours is impractical, start sampling after the longest period of non-use as is practical.



4. **PREPARE TO TAKE TWO ONE-LITRE SAMPLES** using instructions provided by the laboratory and as follows:
  - each sample must include the first water out of the fountain or tap;
  - the water must flow at a rate that approximates normal use.



5. **TAKE THE FIRST SAMPLE.** This is referred to as the "standing sample." If taking multiple samples in the same day, collect all standing samples throughout the facility before any flushing occurs (step 6).



6. **DO A 5 MINUTE FLUSH** of the fountain or tap. Flush by turning on the cold water and letting it flow at full volume.



7. **WAIT 30 MINUTES.** Do not use fountain or tap and if possible leave entire plumbing unused. Do not wait longer than 35 minutes before taking the second sample (step 8).



8. **TAKE THE SECOND SAMPLE.** This is known as the "flushed sample" because it is taken after flushing is completed.



9. **RECORD:**
  - date and time when each sample was taken;
  - amount of time the plumbing was not used prior to sampling;
  - location of the fixture in the facility;
  - name of the person who took the sample.



10. **SEND SAMPLES** to licensed laboratory according to the instructions provided.

### ADDITIONAL NOTES

- Do not remove the aerator when sampling.
- If your sample shows high lead levels you may be asked by the Medical Officer of Health to take additional steps. In this case you should follow all directions provided by the Medical Officer of Health.
- In the case where two facilities are co-located in one building, each facility must submit all required drinking water fountain and tap samples for their individual facility by the applicable deadline before samples can be shared between facilities for ongoing annual sampling.
- Facilities that begin operating on or after July 1, 2017 must collect at least one set of samples and have them tested for lead within 30 days of opening, and sample all drinking water fountains and taps within three years (for child care centres and schools with a primary division) or five years (for other schools).

For more information about flushing and sampling for lead, visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater)

Disclaimer: This is a guide only and should not be relied on for compliance purposes. To be clear about your specific legal requirements refer to the text of Ontario Regulation 243/07 (Schools, Private Schools and Child Care Centres) and the Safe Drinking Water Act, 2002. Schools, private schools and child care centres that operate their own drinking water systems are also regulated under Ontario Regulation 170/03 (Drinking Water Systems) and have additional legal requirements.