

Flushing and sampling for lead

Rules for schools, private schools and child care centres to flush plumbing and test drinking water for lead.

About lead

Children up to six years old are more sensitive to the effects of lead because they are still developing and their small bodies can absorb it more easily than adults. Even small amounts of lead can be harmful to young children, infants and pregnant women.

The law

By law, if you own or operate a school, private school or child care centre, you must:

- flush your plumbing regularly
- sample your water to test for lead

Source law

You will find a complete set of provincial rules relating to this activity at:

- *Safe Drinking Water Act*
- *Ontario Regulation 243/07* – new amendments to this regulation come into effect July 1, 2017

Guide for schools, private schools and child care centres on flushing and testing for lead

Introduction

This guide provides information to help you comply with [Ontario Regulation 243/07, Schools, Private Schools and Child Care Centres](https://www.ontario.ca/laws/regulation/070243?search=Reg+243%2F07) (<https://www.ontario.ca/laws/regulation/070243?search=Reg+243%2F07>) (*O. Reg.* 243/07) made under the [Safe Drinking Water Act, 2002](https://www.ontario.ca/laws/statute/02s32?search=Reg+243%2F07) (<https://www.ontario.ca/laws/statute/02s32?search=Reg+243%2F07>) (SDWA). *O. Reg.* 243/07 is intended to reduce children's exposure to lead in drinking water. The regulation requires the flushing of plumbing in schools, private schools and child care centres. Flushing has been shown to reduce lead levels in water at drinking water fixtures. The regulation also requires sampling and testing to measure the concentration of lead in drinking water against the provincial drinking water quality standard for lead.

In this guide, you will see the term “drinking water fixture”. For the purposes of this guide, this term means all drinking water fountains and every tap that provides drinking water or is used to prepare food or drink for children under the age of 18.

Remember, this guide is only a summary, and should not be relied upon for compliance purposes. You must refer to the text of *O.Reg. 243/07* to be clear about your specific requirements for flushing, sampling and testing drinking water for lead in Ontario schools, private schools and child care centres.

Facilities subject to *O.Reg. 243/07*

Subject to very limited exceptions, all schools and private schools as defined in the *Education Act* (<https://www.ontario.ca/laws/statute/90e02?search=Education+act>) and child care centres as defined in the *Child Care and Early Years Act, 2014* (<https://www.ontario.ca/laws/statute/14c11?search=child+care+and+early+years+act>) are subject to *O.Reg. 243/07*.

Important to Know

Schools, private schools and child care centres with their own drinking water source (i.e., a groundwater well, a surface water system or cistern) that do not receive drinking water from a municipal drinking water distribution system are considered a "designated facility" and subject to both *O.Reg. 243/07* and *Ontario Regulation 170/03, Drinking Water Systems* (<https://www.ontario.ca/laws/regulation/030170?search=170%2F03>) (*O.Reg. 170/03*) under the *SDWA*. Consult the *SDWA*, *O.Reg. 170/03* and "[Providing safe drinking water to the public: A guide for operators of seasonal and non-residential drinking water systems](https://www.ontario.ca/page/providing-safe-drinking-water-public-guide-owners-and-operators-non-residential-and-seasonal)" (<https://www.ontario.ca/page/providing-safe-drinking-water-public-guide-owners-and-operators-non-residential-and-seasonal>) for more information about your obligations if your school or child care centre is a designated facility.

An "operator" in this case means:

- School operator - the school board to which the school belongs (e.g., ABC District School Board);
- Private school operator - the person required to notify the Ministry of Education under s. 16 of the *Education Act* of the existence and operation of the school (e.g., owner of ABC Private School);
- Child care centre operator - the person required to be licensed under s. 6 of the *Child Care and Early Years Act, 2014* to operate the child care centre (e.g., owner of ABC Child Care Centre).

Ontario's drinking water quality standard for lead

The Ontario drinking water quality standard for lead is 10 micrograms per litre. You may also see this standard written as 10 µg/L, or as 0.010 milligrams per litre. The lead standard is found in *Ontario Regulation 169/03* (<https://www.ontario.ca/laws/regulation/030169?search=169%2F03>), Ontario Drinking Water Quality Standards, made under the *SDWA*.

Complying with *O.Reg. 243/07*

Weekly or daily flushing

Schools, private schools and child care centres are required to flush their plumbing in accordance with *O.Reg. 243/07*. The frequency of flushing depends on several factors including:

- the age of the plumbing in the building; older buildings are more likely to have lead plumbing;
- lead test results from previous drinking water sampling;
- the location and use of drinking water fixtures;
- if there is an NSF certified filter installed on a drinking water fixture.

The following table provides guidance on how frequently you should flush.

Table 1: Criteria for flushing frequency

Criteria	Frequency	When
<p>Any part of your plumbing was installed prior to 1990 and you have fewer than two consecutive years of lead test results; or</p> <p>There has been an exceedance of the standard for lead in the past 24 months; or</p> <p>Your facility has been directed to flush daily.</p>	<p>Flush daily</p>	<p>Flush every day that the school, private school or child care centre is open.</p> <p>Complete the flushing before the facility opens for the day.</p> <p>If the facility is open 24 hours then flush as early as practical in the day.</p>
<p>Any part of your plumbing was installed prior to 1990, you have at least two consecutive years of lead test results and there has been no exceedance of the standard for lead in the past 24 months; or</p> <p>No plumbing was installed prior to 1990 and there has been no exceedance of the standard for lead in the past 24 months.</p>	<p>Flush weekly</p>	<p>Flush on the first day that the school, private school or child care centre is open each week.</p> <p>Complete the flushing before the facility opens for the day. If the facility is open 24 hours then flush as early as practical in the day.</p>
<p>Applicable to all fixtures, except for “end of branch” taps.</p> <p>Flushing is not required for:</p> <ul style="list-style-type: none"> • fountains and taps where the most recent standing sample was at or below 1 µg/L, including with an NSF filter; • taps that do not provide drinking water or are not used to prepare food or drink for children under 18. 	<p>No flushing required</p>	<p>N/A</p>

A school or private school is considered to be open only on days when the facility is holding its programs, or providing its services for children under 18.

A child care centre is considered to be open when, at any time during the day, any of the children cared for are present in the facility.

Where and how to flush

1. First, turn on the cold water for at least five minutes at the last tap on each branch or each run of pipe in the plumbing that serves a drinking water fixture.
2. Then, turn on the cold water for at least 10 seconds at every drinking water fixture that requires flushing (see [Table 1](#)).
3. Make a written record of the date, time and location of every required flushing and the name of the person who performed the flushing. Adding the location to your flushing records is a new requirement effective July 1, 2017. Flushing records should be maintained in a log book and/or by using templates available

from the Ministry of the Environment and Climate Change by calling the Registration Help Desk at 1-866-793-2588.

4. If automatic flushers are used, record the name of the person who verified that the automatic flushing took place. Your records for automatic flushers need to be completed based on the frequency set out in the manufacturer's instructions or at least once a month if no instructions are available.

End of branch taps

For most schools, the school operator will have building plans which indicate each branch of plumbing and where these branches end. For other facilities, you should contact the owner of the building to see if building plans are available. If your facility is located in a small building, the last end of branch tap or run of pipe is often the one located furthest from the where the water pipe comes into the building.

Important to know

- The intention of the minimum five-minute flushing of the plumbing is to have water from the water main in the street or your well reach the drinking water fixtures used for flushing. Depending on the length and size of the pipes through which the water has to travel, it may take longer than five minutes for this to happen. In such cases, you may need to flush your plumbing for a longer time.
- You are not required to flush any drinking water fixtures in a part of your building that is not open during the entire week (if weekly flushing applies) or day (if daily flushing applies) or in a part of the building used for private student residences.
- If you are required to flush your facility daily due to exceedances or a lack of sampling history, then it is recommended as a best practice that the operators of the camps or community programs conduct flushing in your facility on the weekend.
- Flushing is not required for fixtures in parts of a building that are primarily intended for use by the general public.
- If a drinking water fixture has an aerator, do not remove the aerator when flushing. An aerator is a screen unit that is threaded onto the end of a tap/faucet to control splashing and reduce water flow.
- If the most recent standing sample for a drinking water fixture is at or below $1 \mu\text{g/L}$, no flushing of that drinking water fixture is required. The exception to this rule is for “end of branch” taps which will still need to be flushed.
- For facilities flushing weekly, you are no longer required to revert back to daily flushing of all plumbing in your facility if you get a test result above the standard for lead in a standing sample. You are required to flush daily at the specific fixture from which the [standing sample](#) was taken and any other fixtures that have not yet been sampled. You are required to flush all of the plumbing in your facility daily for 24 months if you get an exceedance in a [flushed sample](#) as it may indicate a more widespread lead problem in your plumbing.
- The Ministry of the Environment and Climate Change or your local health unit may require daily flushing at your facility based on new information, such as a test result that exceeds the standard for lead, or if the chemistry of the water supplied to the building (e.g., from the municipality) changes and has the potential to cause more lead to leach out of plumbing.
- You may be able to reduce flushing by:
 - Installing a filter that is certified for lead reduction – if you get a standing sample at or below $1 \mu\text{g/L}$ after the filter is installed, the fixture to which the filter is attached would be exempt from flushing unless it is an end of branch tap still required for flushing;
 - Installing a lead-free fixture – if you are getting high lead test results, it may be because of lead in the fixture itself;
 - Installing an auto flusher – auto flushers are exact and will typically result in less water loss than occurs during manual flushing. They can flush for the exact amount of time required (e.g., 10 seconds or for five minutes).

More information on flushing

- A quick reference "[µg/L. \(https://files.ontario.ca/new_flushing_poster_2017_print_m23a.pdf\)](https://files.ontario.ca/new_flushing_poster_2017_print_m23a.pdf)
- If a standing sample result at or below 1 µg/L is achieved, no flushing of that fixture is required. If the standing sample result of at or below 1 µg/L is not achieved, then the fixture must be flushed like a drinking water fixture with no filter.

All facilities that opt to use filters must meet specific conditions to help ensure the filters are working properly. These conditions are:

- A filter or other device that treats water is considered certified if it is NSF standard 53, 58, or 62 and if lead is listed on the device or the packaging as one of the contaminants that will be reduced.
- Filter cartridges installed on drinking water fixtures must be replaced according to the manufacturer's instructions and records documenting this maintenance must be kept. Call the Registration Help Desk at 1-866-793-2588 to obtain a template to help you track filter replacement.
- The manufacturer's instructions and recommended cartridge replacement schedule must be retained with all other records.

Selection of a licensed laboratory

Drinking water samples must be sent to a laboratory licensed by the Ministry of the Environment and Climate Change for lead testing.

Finding a licensed laboratory

- If you need help finding a licensed laboratory, see the [list of laboratories licensed to test for lead \(https://www.ontario.ca/page/laboratories-licensed-test-lead\)](https://www.ontario.ca/page/laboratories-licensed-test-lead).
- It is important to contact a licensed laboratory to arrange for testing and to obtain sampling containers and instructions for the collection and delivery of samples prior to sampling.
- You must follow the sample collection instructions that the licensed laboratory will provide to you.

The laboratory will also give you a sample submission "chain of custody" form. You must record the required information on this form and submit it along with your samples for testing. Call the laboratory or the Ministry of the Environment and Climate Change Registration Help Desk at 1-866-793-2588 before submitting your samples if you have questions about completing the form.

Completing chain of custody forms

- If all the samples are associated with the same drinking water system facility with the same Drinking Water System number, then all samples can be submitted on a single chain of custody form. Ensure that each sample location is uniquely identified when completing the sample location/description on the chain of custody form.
- You should begin by making an inventory of all drinking water fixtures in your facility and giving each fixture its own unique identifier, e.g., "T001" for tap number one. This identifier should be used on the sample bottle, chain of custody form, and in any templates you use for tracking inventory, flushing, sampling and filter use. You may also want to create a map of your facility that uses the unique identifier to show where each fixture is in the building or plumbing plan.
- When completing the chain of custody form, include the unique identifier in the form's description or location field, and whether the fixture is a tap or fountain, if a filter is used, and the location. E.g., T001-tap-filter-kitchen, or F002-fountain-2nd floor/northwest wing.

Informing the ministry of your selected laboratory

- After making the testing arrangements but before sending your samples to a licensed laboratory for the first time, you must submit a [form](#)

[http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/\\$File/2001E.pdf](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/$File/2001E.pdf)), specific for schools, private schools and child care centres, to the ministry.

This form identifies the licensed laboratory that you have hired to perform your lead testing. The relevant form can be found on the “[Flushing and Sampling for Lead \(https://www.ontario.ca/page/flushing-and-sampling-lead\)](https://www.ontario.ca/page/flushing-and-sampling-lead)” page on Ontario.ca.

- Following receipt of your registration form, the ministry will assign a unique reference number to your facility for the purposes of *O.Reg. 243/07*, called a Drinking Water Information System (D.W.I.S.) Number.
- You will be notified of your D.W.I.S. Number directly by the ministry. You will use this D.W.I.S. Number when submitting samples to the laboratory you have hired to do your lead testing and when interacting with the ministry.
- You are required to submit an updated form to the ministry within 10 days each time you:
 - change or hire a new laboratory to do your lead testing, and/or
 - change the contact information for your facility (e.g., name, address, email).

Special instructions to help you fill out your registration form

Operators with multiple facilities (e.g., school boards)

- If you are an operator of a school, private school or child care centre with multiple facilities under your care (such as a school board), you can reduce the number of forms you have to submit to the ministry if you are using the same licensed laboratory for multiple facilities.
- In such cases, you can submit one form and attach a list with supporting information.
- If you are using this option, please ensure your attached list includes information needed to complete all fields for every facility listed.

Facilities served by the same plumbing

- If you are a school, private school or child care centre operator and the plumbing of your facility is shared by more than one school, private school or child care centre, then the facilities are considered “co-located”.
- One operator may conduct the flushing at co-located facilities as long as there is an agreement between all the operators that ensures that the plumbing in each facility is being properly flushed.
- You are required to complete the section of the registration form specific to co-located facilities.

Facilities served by their own drinking water system serving a "designated facility" (as defined in *O.Reg. 170/03*).

- Schools, private schools and child care centres that have already registered with the Ministry of the Environment and Climate Change as the owner of a drinking water system serving a designated facility and submitted a Profile Registration under *O.Reg. 170/03*, must also submit a separate registration [form \(http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/\\$File/2001E.pdf\)](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/$File/2001E.pdf) for lead sampling as required by *O.Reg. 243/07*.
- This is true even in cases where the same licensed laboratory will be doing the testing required under both regulations.

Sampling and testing for lead

Schools, private schools and child care centres are required to sample their plumbing for lead in accordance with *O.Reg. 243/07* per prescribed timelines.

When to take samples

Samples must be taken on any day beginning on May 1 and ending on October 31. Lead is more soluble at higher temperatures so during warmer months, a water supply may be more vulnerable to exceedances.

For existing facilities

All drinking water fixtures in existing facilities must be sampled at least once by the following timelines:

Table 2: Timelines

Child care centres	By January 1, 2020	At least 1/3 of drinking water fixtures must be sampled in each of 2017, 2018 and 2019.
Schools with a primary division	By January 1, 2020	At least 1/3 of drinking water fixtures must be sampled in each of 2017, 2018 and 2019.
Other schools	By January 1, 2022	Any time before January 1, 2022.

Drinking water fixtures that do not need to be sampled by the timelines in Table 2 are:

- Any drinking water fixtures that have already been sampled since June 7, 2007. You must have a sampling record that indicates the location of the fixture for this exception to apply.
- Fixtures, such as those found in change rooms, bathrooms and/or classrooms not used for drinking water or to prepare food/drink.

Child care centres and schools with a primary division (i.e., grade three and under) must sample at least one-third of their drinking water fixtures in each of 2017, 2018 and 2019, with all drinking water fixtures sampled by January 1, 2020.

Each school and child care centre must sample on an individual basis. Therefore, each school with a primary division must sample one third of its drinking water fixtures that do not have existing sampling records per the timelines.

For example, if a child care centre or school with a primary division has a total of 12 drinking water fixtures that require sampling, a minimum of four drinking water fixtures must be sampled by the end of the sampling period in 2017, at least four different drinking water fixtures must be sampled by the end of the sampling period in 2018, and the remaining drinking water fixtures must be sampled by the end of the sampling period in 2019.

Schools without a primary division can choose to sample the drinking water fixtures in their facilities any time before January 1, 2022. As a best practice, it is recommended that facilities sample all their drinking water fixtures as soon as is practical in order to address any lead issues.

Once you have documentation that all of the drinking water fixtures in your facility have been sampled at least once since June 7, 2007, you can return to either an annual or reduced sampling schedule (once every three years), if applicable.

You must obtain a single standing sample before use of any new drinking water fixture you install in order to confirm that the water from the fixture meets the drinking water quality standard for lead. You do not need to wait until the May to October sampling window to complete this post-installation sample. This post-installation sample is the only one you need to do in order to meet the timelines.

When a new facility should start sampling

- Newly opened schools and child care facilities must collect at least one set of samples from a drinking water fixture and have them tested for lead within 30 days of opening.
- After the initial 30 day set of samples has been collected, new facilities must also sample at least once annually during the subsequent May 1 to October 31 sampling period.
- Child care centres and schools with a primary division must sample at least a third of their drinking water fixtures every year during the May – October sampling window so that all drinking water fixtures are sampled within three years of the date the facility opens.
- Other schools must sample all their drinking water fixtures within five years from the date the facility opens, during the May – October sampling window.

Where to sample

To meet requirements for sampling all drinking water fixtures

- You should start the sample location selection process by making a full inventory of the drinking water fixtures in your facility. An editable template to help you track your fixture inventory is available from the Ministry of the Environment and Climate Change by calling the Registration Help Desk at 1-866-793-2588.
 - Note: if a drinking water fountain also has a filling station, you would need to submit two sets of samples for this fixture. You must also sample each part of the fixture on a different day, e.g., sample the fountain on one day and the filling station another day.
- Once all the drinking water fixtures in your facility have been recorded, identify fixtures on your inventory that have not been sampled since June 7, 2007 and sample these by the required timelines.

After all drinking water fixtures have been sampled at least once

- You are required to sample one drinking water fixture on an annual basis unless your facility is eligible for reduced sampling.
- Each year going forward, it is recommended that you rotate where you take your sample from and select the fixture that has gone the longest period of time without being sampled or a fixture where lead issues have been identified previously.

How much to sample

- For each set of *Q...Reg. 243/07* samples, you must collect the equivalent of two one-litre samples from each drinking water fixture.
- Your laboratory will provide you with appropriate sample bottles. The size of the bottles provided may vary. They may be one-litre or multiple smaller bottles that add up to the one-litre needed for your sample.

Instructions for sampling

1. You must collect the first of the two required one-litre samples after six hours or more have passed since the plumbing was last used. This sample is your “standing sample”. If it is not practical to leave the plumbing unused for six hours or more, the sample should be taken immediately after the longest practical time period with no usage of the plumbing.
2. Using a drinking water fixture that meets the criteria outlined in "Where to sample," take the sample using the instructions provided by the laboratory and follow these rules:
 - Each one-litre sample must be of cold water taken during a single continuous period and must include the first water that comes out of the drinking water fixture after it is turned on;

- Each one-litre sample must be taken with water flowing at a rate that approximates normal use and does not allow water to splash out of the sample container as best as possible; and
 - Unless your laboratory directs otherwise, more than one container may be used to take each of the required one-litre samples as long as the time taken to switch from one container to the next is minimized.
3. Immediately after taking the first one-litre sample, flush the drinking water fixture for at least five minutes.
 4. Following this five minute flushing, turn the drinking water fixture off and leave it unused for at least 30 minutes and not more than 35 minutes. If possible, leave all of the plumbing unused during this time period.
 5. Immediately after the 30 to 35 minutes of the plumbing not being used, take the second one-litre sample of cold water from the same drinking water fixture. Take the sample in accordance with the instructions and rules described above for the collection of the first sample. This sample is called your “flushed sample.”
 6. Record the date, time and location of each sample taken, the estimated length of the period that the plumbing was not being used prior to taking the first of the two required one-litre samples, the location in the building where the sample was taken and the name of the person who took the sample. The Ministry of the Environment and Climate Change can provide you with an editable template to help you track sampling, or you may use a log book. To obtain a template call the Registration Help Desk at 1-866-793-2588.
 7. Deliver the samples in accordance with the instructions of the laboratory that you have contracted with to conduct the lead testing.

Important to know

- If the drinking water fixture has an aerator, the aerator must not be removed while the samples are being taken.
- If the drinking water fixture has a filter, the filter must not be removed while the samples are being taken.
- When sending the two samples to the licensed laboratory, it is important to clearly identify the samples as follows:
 - Standing. The first sample taken after six or more hours when the plumbing is not used.
 - Flushed. The second sample taken after flushing the plumbing for a minimum of five minutes followed by 30-35 minutes when the plumbing is not used.
- The cost to test water for lead varies widely across the province. You may want to look into contacting laboratories that can provide lead testing services at a lower cost. See the [list of laboratories that are licensed to test for lead \(https://www.ontario.ca/page/laboratories-licensed-test-lead\)](https://www.ontario.ca/page/laboratories-licensed-test-lead).

Sampling for co-located facilities

- If your facility is co-located with another facility and sampling responsibilities are shared or performed on your behalf, you are still responsible to ensure the sampling is undertaken correctly.
- If you are sampling for a co-located facility, make sure the DWIS number on the chain of custody form matches the facility the sample was taken from. For instance, use the child care centre’s own DWIS number for its samples.
- Co-located facilities will be able to share a single set of samples after all drinking water fixtures in both of the facilities have been sampled at least once since June 7, 2007.
- When the decision is made to share samples among multiple facilities, all participants should submit an updated [form \(http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/\\$File/2001E.pdf\)](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/$File/2001E.pdf) to the Ministry of the Environment and Climate Change.
- If the test result for the shared sample exceeds the Drinking Water Quality Standard for lead, the facility operator that submitted the samples will receive a Notice of Lead Exceedance Test Results (LEN) form from the laboratory. This operator has 24 hours to complete Section D-1: Exceedance Notification on the LEN form (including adding the co-located facilities names and Drinking Water Information System

numbers) and provide the LEN form to the co-located facility operators, the ministry's Spills Action Centre, the local Medical Officer of Health, and to the Ministry of Education if applicable.

- The co-located operators (who are sharing the sample), are required to confirm their information is correct on the LEN form, and submit a copy of this form to the Ministry of Education if applicable.

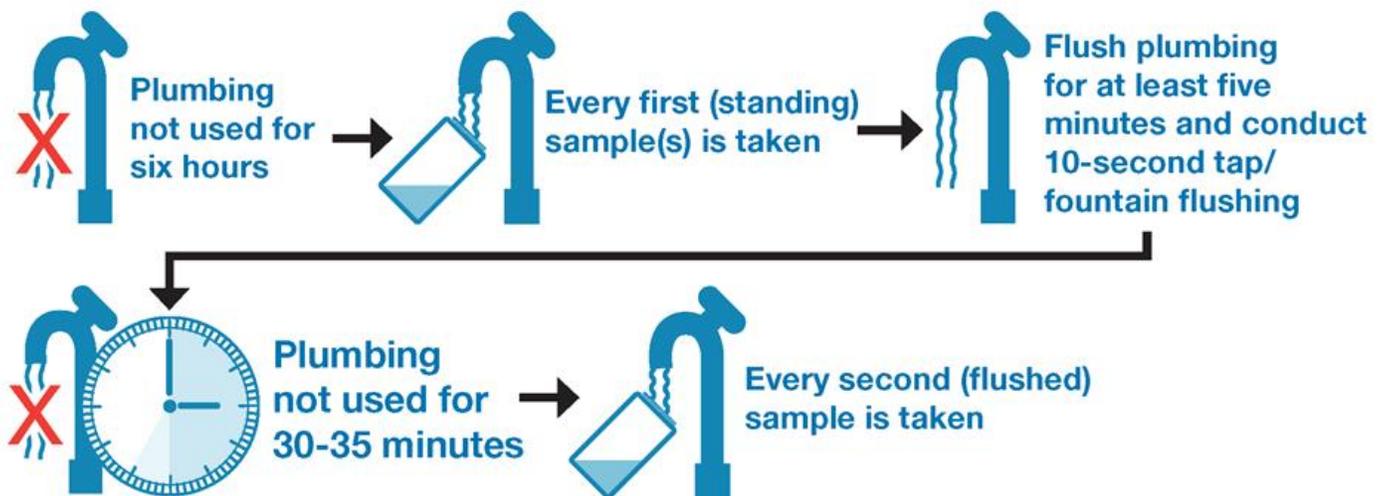
Taking multiple samples in a single day

You can take multiple samples in the same facility on the same day. To ensure accurate results, it is important that you collect all standing samples before any flushing takes place. Drinking water fixtures being sampled on the same day should not be too close to one another to ensure all samples collected are from water that has been standing in the plumbing. The following can help you determine whether two sampling locations are too close: 1 litre of water is contained in approximately 26 feet of ½ inch copper pipe or 12 feet of ¾ inch copper pipe.

Steps if sampling is done on a day when daily or weekly flushing is required

If you are both flushing your facility's plumbing and taking your lead samples on the same day, Figure 1 shows the sequence in which the steps for both requirements should be taken.

Figure 1



Reduced sampling

You can reduce your annual lead sampling frequency to once every three years if:

- your 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 of the drinking water fixtures throughout the facility have been sampled at least once since June 7, 2007; and
- a [Notice of Reduced Lead Sampling](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-7350E~1/$File/PIBS_7350E.pdf) ([http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-7350E~1/\\$File/PIBS_7350E.pdf](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-7350E~1/$File/PIBS_7350E.pdf)) has been submitted to the ministry.

If you are currently on a reduced sampling schedule and have already sampled all of your facility's drinking water fixtures then the reduced sampling schedule remains valid.

More information on sampling

- A quick reference "[At-A-Glance \(https://files.ontario.ca/new_sampling_poster_2017_-_m23a.pdf\)](https://files.ontario.ca/new_sampling_poster_2017_-_m23a.pdf)" poster on sampling.

Reporting of test results and corrective actions

O. Reg. 243/07 sets out when and with whom laboratory test results must be shared.

- Your licensed laboratory is required to send you all test results within 10 days. Laboratories will also send all test results to the ministry within this timeframe.
- If the test results are above the standard for lead or any other drinking water quality chemical standard set out in [Ontario Regulation 169/03 \(https://www.ontario.ca/laws/regulation/030169\)](https://www.ontario.ca/laws/regulation/030169) (Ontario Drinking Water Quality Standards), the laboratory must provide a written report on the exceedance within 24 hours of the laboratory's internal approval of the test result by personal delivery, fax or e-mail to:
 - the operator of the school, private school or child care centre;
 - the ministry's Spills Action Centre; and,
 - the local Medical Officer of Health.
- This written report will be sent in a form called a Notice of Lead Exceedance Test Results (**LLEN**), which is completed in part by the licensed laboratory and in part by the operator of the facility.
- The operator of a facility who receives a **LLEN** form from the laboratory is required to complete Section D-1 of the form as directed and to give a copy of it by personal delivery, fax or e-mail within 24 hours to:
 - the local Medical Officer of Health;
 - the ministry's Spills Action Centre;
 - the Ministry of Education, if a school or child care centre, and
 - every other co-located facility relying on the same set of samples.
- The operator must also take immediate corrective actions until the issue is resolved in accordance with the requirements of *O. Reg. 243/07* and/or as directed by the local Medical Officer of Health. Once corrective actions are taken and the issue is resolved, the operator of the facility is required to submit a completed Section D-2: Issue Resolution on the **LLEN** form within seven days after the resolution to:
 - the local Medical Officer of Health;
 - the ministry's Spills Action Centre;
 - Ministry of Education, if a school or child care centre; and
 - every other co-located facility relying on the same set of samples.

If you have an exceedance of the drinking water quality standard for lead, you can expect to be contacted by a Ministry of the Environment and Climate Change Water Inspector. This inspector will review whether you have met your regulatory obligation for corrective actions under *O. Reg. 243/07* including any actions directed by the local Medical Officer of Health if applicable.

Figure 3 can help you understand what actions you should take depending on your lead testing sample results.

What to do if you get a lead exceedance in a “standing” sample

- Follow the directions above for reporting the exceedance and take any action as directed by the local Medical Officer of Health.
- The most common response to an exceedance of a standing sample is to flush your plumbing daily for an appropriate length of time. Flushing the plumbing for a longer period of time will often help to reduce the lead in your drinking water to below the provincial drinking water quality standard for lead.
- Other options to address a lead exceedance include installing a filter or replacing the fixture.

What to do if you get a lead exceedance in a "flushed" sample

In cases where a "flushed" sample test result is above the standard for lead, the Chief Drinking Water Inspector, with the support of the Chief Medical Officer of Health, recommends the following steps be taken:

1. Render the drinking water fixture inoperable until the issue is resolved.
2. Follow any directions you may have received from your local Medical Officer of Health. These directions may include a request for you to carry out additional sampling from the same drinking water fixture where the initial sample was taken if you choose not to replace the fixture or install filters.
3. It is recommended that the operator:
 - Take two sets of resamples from the same drinking water fixture where the initial sample was taken a minimum of seven days apart from each other but within 30 days of the initial sample.
 - Prior to taking either of these two resamples, the operator should flush the facility's plumbing for a minimum of five minutes and then leave the plumbing unused for 30 minutes but not more than 35 minutes.
4. If multiple test results show exceedances of lead your local Medical Officer of Health may recommend that you carry out site-specific risk assessment activities. If that is the case, you may be asked to follow these additional resampling steps:
 - In addition to the two resamples at the original drinking water fixture noted above, on the first day of resampling, an additional sample should be taken at a drinking water fixture that is "upstream" of the original tap (i.e., a tap which is closer to the water service pipe entering the building) and one sample should be taken "downstream" of the original tap (i.e., a tap which is further away from the water service pipe entering the building). This will help locate where in your plumbing there may be a problem with exposure to lead sources.
 - If the original sample was taken at the end of a line of plumbing, these two additional resamples can be taken from taps that are "upstream", or closer to the water service pipe.

Exceedances in resamples

In cases where a facility continues to receive test results that show an exceedance of the standard for lead, the operator must continue to carry out corrective actions until the issue is considered to be resolved under *O. Reg. 243/07*, including any actions directed by the local Medical Officer of Health.

In addition, it is recommended that the operator:

- Complete an assessment of the facility's plumbing to determine whether pipes, solder, fittings or drinking water fixtures could be the source of lead in drinking water. Parts of the drinking water plumbing system may need replacement; and
- Develop a longer-term remediation action plan under the advice of the local Medical Officer of Health that can be shared with a Ministry of the Environment and Climate Change Water Inspector if requested.

If you need help on how to locate the source and remedy the problem, you can find information in a resource guide called [A Manual for Operators of Schools, Private Schools and Child Care Centres with Excess Lead in their Drinking Water](https://www.ontario.ca/document/manual-operators-schools-private-schools-and-day-nurseries-excess-lead-their-drinking-water). (<https://www.ontario.ca/document/manual-operators-schools-private-schools-and-day-nurseries-excess-lead-their-drinking-water>)

Sharing resampling test results

The local Medical Officer of Health will advise you on whether to share resample test results with their offices or with others. You are required to take any corrective actions that the local Medical Officer of Health may direct, which may include submitting resample test results.

If not directed by the local Medical Officer of Health, there is no requirement under the regulation for you to share a resample test result showing an exceedance with the ministry's Spills Action Centre, or the Ministry of Education. This requirement is only applicable to your original sample test results should an exceedance occur. The Ministry of the Environment and Climate Change Water Inspector and the local Medical Officer of Health will likely request copies of the resample test results from you to confirm that your facility's drinking water samples meet the provincial drinking water quality standard for lead.

If you are required to conduct a resample as a result of a Provincial Order, you are obligated by section 9 of *O. Reg. 243/07* to keep a record of the test result for at least six years (two years on site at the facility) and to make the test result available to a provincial officer, such as a Water Inspector, if requested.

Figure 2 provides you with a layout of which taps would be considered upstream, original, or downstream based on their proximity to the water service pipe.

Figure 2

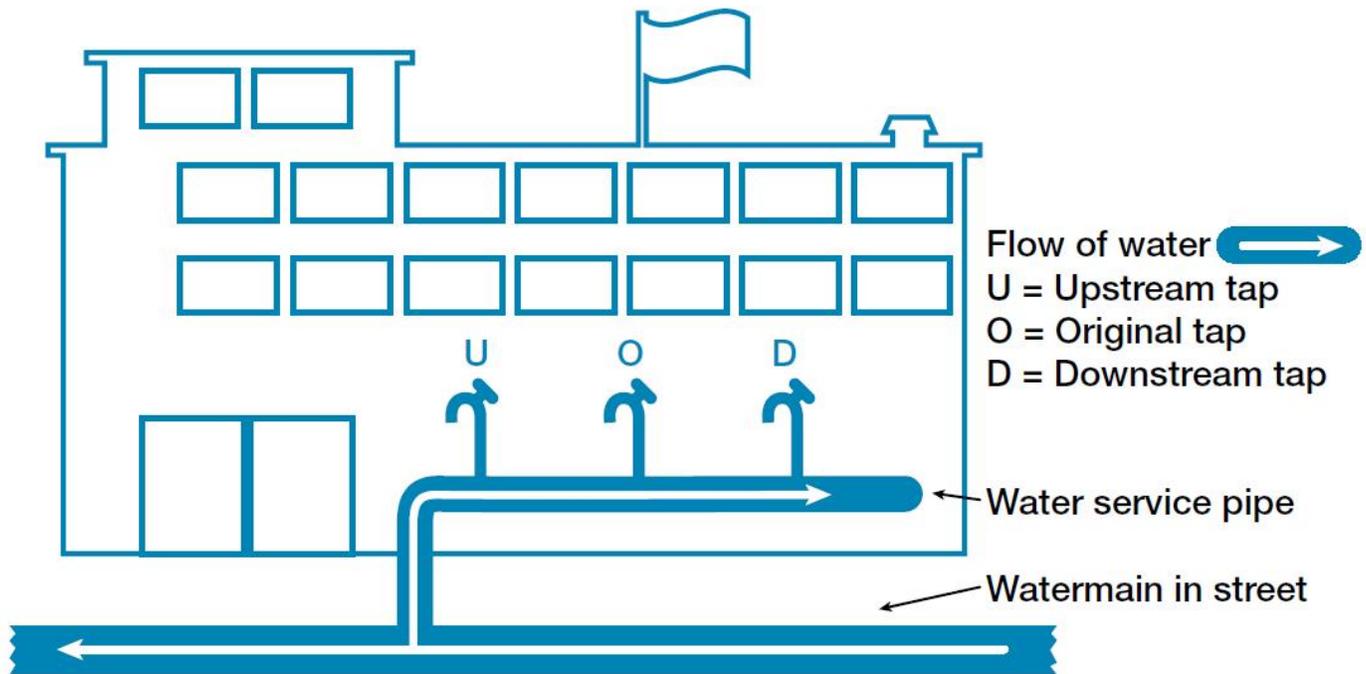
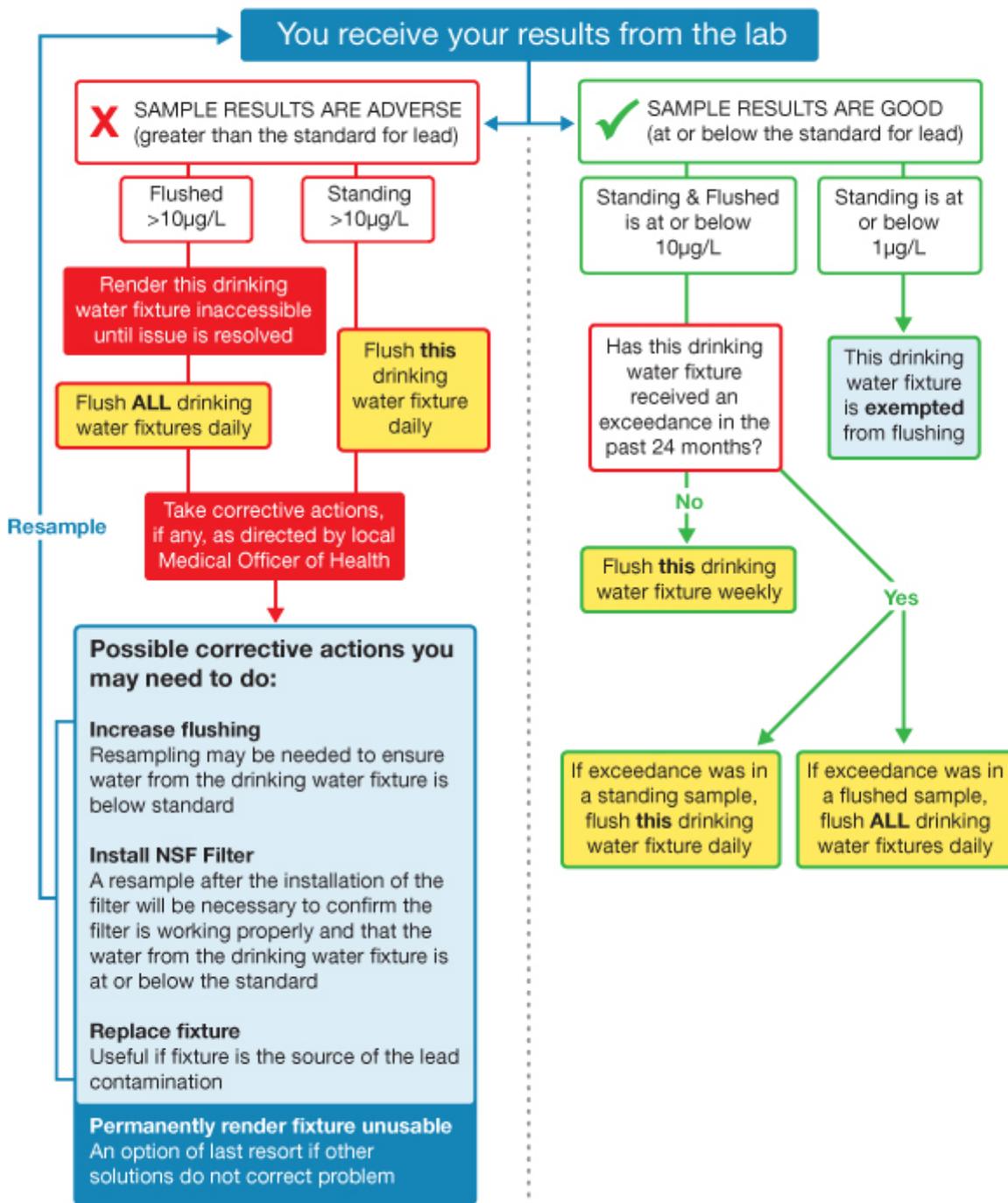


Figure 3

I got my lead test results back from the lab. Now what?

The following decision tree will help you know what actions you should take depending on the results of your lead testing sample results.



Information and retaining records

Information to be available to the public on site

The operator of a school, private school or child care centre must ensure that the following information is available to the public during normal business hours at the facility and without charge:

1. A copy of every record made within the past two years in relation to flushing and sample collection;

2. A copy of every test result for samples taken to complete testing of all fountains and drinking water taps and for any annual or [reduced sampling](#) conducted to comply with *O. Reg. 243/07* or an Order over the past two years;
3. A copy of every test result from a sample under the regulation indicating an exceedance of any standard prescribed by Schedule 2 of the Ontario Drinking Water Quality Standards (*O. Reg. 169/03* made under the *Safe Drinking Water Act, 2002*) over the past two years; and
4. A copy of *O. Reg. 243/07* (Schools, Private Schools and Child Care Centres).

Orders

Under the *Safe Drinking Water Act, 2002*, a Provincial Officer, such as a Ministry of the Environment and Climate Change Water Inspector, may issue Orders under various circumstances, including preventative measures orders or orders to anyone that the Provincial Officer may reasonably believe is contravening or has contravened a provision of the Act or its related regulations (e.g., *O. Reg. 243/07*). The order would include information about the specific provision of the Act or regulation that the Provincial Officer believes is being contravened or is relying on for legal authority and would outline the actions the operator must take to comply with the order within a specified timeframe.

Records

The operator of a school, private school or child care centre must also ensure that the following original documents and other records are kept for at least six years:

1. Every record made in relation to flushing and sample collection;
2. Every test result for samples taken under the regulation, including Notice of Reduced Lead Sampling, or an Order; and
3. Every test result from a sample under the regulation indicating an exceedance of an Ontario Drinking Water Quality Standard;
4. Every record related to filter maintenance or replacement including the manufacturer's instructions;
5. A copy of every Director's direction given under *O. Reg. 243/07* section 4, subsection 5 (2.2) and section 5.1.

Each facility is responsible for keeping all records related to the regulation and making the test results and records available to the public. Facilities that rely on other operators to conduct required sampling must request copies of all sampling records and test results and keep records updated.

A Provincial Officer may, at any time, request a copy of a document or record required to be prepared and kept under *O. Reg. 243/07*. This may be done in person, by phone or by email during an inspection. If a Provincial Officer makes a request to see a document or record, the operator of the school, private school or child care centre must provide this document or record within a specified timeframe.

Who to contact for more information

If you have additional questions or would like further information about drinking water, please contact the ministry's Public Information Centre at: 1-800-565-4923 or visit [our information on drinking water \(https://www.ontario.ca/drinkingwater\)](https://www.ontario.ca/drinkingwater).

You can also sign up for drinking water updates by emailing [drinking_water@ontario.ca \(mailto:drinking_water@ontario.ca\)](mailto:drinking_water@ontario.ca) and requesting that you be added to the mailing list.

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Related

[Labs licensed to test for lead \(https://www.ontario.ca/document/laboratories-licensed-test-lead\)](https://www.ontario.ca/document/laboratories-licensed-test-lead)

["At-A-Glance" poster on flushing \(https://files.ontario.ca/new_flushing_poster_2017_print_m23a.pdf\)](https://files.ontario.ca/new_flushing_poster_2017_print_m23a.pdf)

[" \(https://files.ontario.ca/new_sampling_poster_2017_-_m23a.pdf\) At-A-Glance \(https://files.ontario.ca/new_sampling_poster_2017_-_m23a.pdf\) " poster on sampling \(https://files.ontario.ca/new_sampling_poster_2017_-_m23a.pdf\)](https://files.ontario.ca/new_sampling_poster_2017_-_m23a.pdf)

[Registration and Laboratory Services Notification \(http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/\\$File/2001E.pdf\)](http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/GetFileAttach/012-2001E~1/$File/2001E.pdf)