

Flushing and Testing for Lead in Drinking Water

What are my responsibilities under
the Safe Drinking Water Act, 2002 and Ontario Regulation 243/07
(Schools, Private Schools and Day Nurseries)?

A guide for

**SCHOOLS, PRIVATE SCHOOLS
AND DAY NURSERIES**

about flushing, sampling and testing for lead in drinking water.

Updated with amendments to O. Reg. 243/07

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An online version of this guide can be found at www.ontario.ca/drinkingwater.

A: Introduction

This guide has been revised to reflect changes to the requirements for flushing and testing of drinking water taps in schools, private schools and day nurseries under Ontario Regulation 243/07 (Schools, Private Schools and Day Nurseries) made under the Safe Drinking Water Act, 2002. According to Health Canada, research shows that exposure to even small amounts of lead can be harmful to human health, especially for young children, infants and pregnant women. Long-term chronic exposure to lead may increase the risk of subtle impairments to intellectual development. The flushing of plumbing has been shown to reduce lead levels in water at the tap.

Ontario Regulation 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 day nurseries. This flushing has been shown to reduce lead levels in water at a tap or fountain. The regulation also requires testing to measure the potential presence of lead in drinking water against the provincial drinking water quality standard (see box below).

Flushing and sampling requirements are now aligned with a facility's lead test results history rather than being solely based on factors such as the age of the plumbing.

This guide provides information to help you to comply with this regulation and protect the health of Ontario's children.

Remember, this guide is only a summary, and should not be relied upon for compliance purposes.

To be clear about your specific requirements for flushing and testing in schools, private schools and day nurseries, you must refer to the text of Ontario Regulation 243/07 (Schools, Private Schools and Day Nurseries).

Note: If your facility operates its own drinking water system, you are subject to the requirements of Ontario Regulation 243/07 (Schools, Private Schools and Day Nurseries), Ontario Regulation 170/03 (Drinking Water Systems) and the Safe Drinking Water Act, 2002 (SDWA). To better understand your obligations under Ontario Regulation 170/03 (Drinking Water Systems) and the SDWA, you may wish to consult "*Providing Safe Drinking Water to the Public: A guide for owners and operators of non-residential and seasonal residential drinking water systems that serve designated facilities*" which can be found on the ministry's Drinking Water Ontario website under Guidance at www.ontario.ca/drinkingwater.

You can access the Safe Drinking Water Act, 2002 and its associated regulations at: www.e-laws.gov.on.ca or by calling our Public Information Centre at 1-800-565-4923.

If you have any legal questions about the application or interpretation of the regulations or legislation, you should consult a lawyer.

What is 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. This drinking water quality standard is set out in O. Reg. 169/03 (the Ontario Drinking Water Quality Standards) made under the Safe Drinking Water Act, 2002. It is based on a national guideline set by Health Canada and reflects a prudent, protective estimate that takes children's health into consideration.

Summary of requirements under O. Reg. 243/07

This chart gives a summary of the regulation's requirements.
The guide provides further details.

<p>Weekly or Daily Flushing</p>	<p>Schools, private schools and day nurseries must flush their plumbing at least weekly if their lead test results over the past 24 months (standing or flushed) meet or are below the drinking water quality standard. If any samples from the previous 24 months exceeded the standard, the facility's plumbing must be flushed daily. Daily flushing would still be required at any facility directed to do so by the Ministry of the Environment (the ministry).</p> <p>If a facility does not have test results from a full 24-month period, the flushing frequency is determined by the age of the plumbing: daily where any plumbing was installed before January 1, 1990, and weekly if all of the plumbing was installed on or after that date.</p> <p>All flushing must be completed in the morning before the facility opens for the day or the week. Where a building is open overnight (e.g., student residences with communal washrooms), flushing must be completed as early as possible.</p> <p>Flush cold water for at least five minutes from a tap at the end of each branch or run of pipe in plumbing that serves taps or drinking water fountains commonly used to provide water for consumption by children under 18 years of age.</p> <p>Follow this branch flushing with a 10 second flush of all taps and drinking water fountains that are likely to be used to provide water for consumption by children under 18 years of age.</p>
<p>Selection of Licensed Laboratory (if testing is required)</p>	<p>Drinking water samples must be sent to a laboratory licensed by the Ministry of the Environment for lead testing. Before sending your samples to a laboratory for the first time, you must contact a licensed laboratory to make proper arrangements including arranging for sampling instructions and containers. You must also submit a Registration and Laboratory Services Notification form specifically for schools, private schools and day nurseries to the ministry. This form identifies which licensed laboratory you have hired to perform your lead testing and needs to be updated everytime there is new information.</p>
<p>Lead Sampling and Testing</p>	<p>All schools, private schools and day nurseries are required to carry out annual sampling and testing for lead. Schools, private schools and day nurseries are required to sample between May 1 and October 31. The lead sampling frequency may be reduced from once a year to once every three years for any school, private school or day nursery if in the two most recent years of lead testing no results exceeded the standard, if drinking water from the taps used by children throughout the facility has been tested and if a notice is sent to the Ministry of the Environment. Annual sampling would need to resume if any test result exceeds the standard for lead or if your facility is directed to do so by the Ministry of the Environment.</p> <p>If more than one school, private school or day nursery is served by the same plumbing, the facilities are called co-located facilities and a single set of samples may be acceptable if specific rules are followed.</p>

<p>Reporting of Test Results and Corrective Action</p>	<p>The licensed laboratory conducting your sample analysis is required to report in writing test results that exceed any Ontario drinking water quality chemical standard, such as the lead standard. These test results must be reported to the operator of the school, private school or day nursery, the local Medical Officer of Health, and the ministry's Spills Action Centre within 24 hours.</p> <p>When a school, private school or day nursery operator receives an exceedance report from the licensed laboratory, the operator is required to complete their section and send a copy of the report to the local Medical Officer of Health, the ministry's Spills Action Centre, and, where applicable, the Ministry of Education or Ministry of Children and Youth Services, within 24 hours.</p> <p>The operator must also take any corrective action steps as directed by the local Medical Officer of Health. Once the corrective actions are taken, the operator must submit a completed Section C-2: Issue Resolution on the Notice of Lead Exceedance Test Results form within seven days after the issue is resolved summarizing the actions taken and results achieved to the local Medical Officer of Health, the ministry's Spills Action Centre and where applicable, the Ministries of Education or Children and Youth Services.</p> <p>In the case of co-located facilities, the operator who completes the Section C-2: Issue Resolution on the Notice of Lead Exceedance Test Results form must give a copy to the other operators who are relying on the same set of samples.</p> <p>Co-located facilities must then provide a copy of the report to their interested authorities (Ministry of Education for schools and Ministry of Children and Youth Services for day nurseries).</p>
<p>Information and Records</p>	<p>School, private school and day nursery operators must keep records on flushing and testing for six years. The records for the most recent two years of flushing and testing must be available at the site of the facility for inspection by any member of the public during business hours, free of charge.</p>

B: Which requirements apply to my facility?

You are required to flush and take samples as outlined in the following table.

<p>FLUSHING AND TESTING FOR LEAD IN DRINKING WATER</p>	
<p>DAILY FLUSHING</p>	<p>WEEKLY FLUSHING</p>
<p>Flush daily if:</p>	<p>Flush weekly if:</p>
<p>Lead test results in past 24 months were above the standard, OR</p>	<p>Samples from at least a full 24-month period were below the standard, OR</p>
<p>Any part of the plumbing was installed before January 1, 1990 and there was no sampling and testing for a full 24-month period, OR</p>	<p>All plumbing was installed after 1990</p>
<p>Required by the ministry</p>	
<p>ANNUAL SAMPLING AND TESTING</p>	<p>SAMPLING AND TESTING EVERY 3 YEARS</p>
<p>Sample and test annually if:</p>	<p>Sample and test once every 3 years if:</p>
<p>Lead test results in last 24 months were above the standard, OR</p>	<p>Samples from at least a 24-month period are below standard and water from taps used by children throughout the facility are tested, AND</p>
<p>Required by the ministry</p>	<p>Ministry receives a completed Notice of Reduced Lead Sampling form</p>

NOTES

- Schools, private schools and day nurseries must flush their plumbing at least weekly if their lead test results over the past 24 months don't exceed the drinking water quality standard. If any samples from the previous 24 months exceeded the standard, the facility's plumbing must be flushed daily. Daily flushing is also required at any facility if directed to do so by the Ministry of the Environment.
- With the following exceptions, the facilities subject to O. Reg. 243/07 are all facilities that meet the criteria of the definitions of "school" or "private school" under the Education Act, or the definition of "day nursery" under the Day Nurseries Act.

The exceptions for flushing are:

- A place of residence used by a teacher or other employee of the school or private school;
- Any part of a building with taps located in private student dormitories with their own washrooms and that are not used communally;
- If the tap or fountain is primarily intended for use by the general public (i.e., in a shopping mall); or
- Facilities that are served by a drinking water system that does not use electricity and does not serve any building or structure that uses electricity, where all drinking water fountains are rendered inoperative and warning notices are posted and regularly checked.

C: Five steps to complying with O. Reg. 243/07

Step 1: Weekly or daily flushing

The frequency of flushing depends on the age of your facility's plumbing and your lead test results.

Weekly flushing

If your school, private school or day nursery is located in a building where all parts of the plumbing serving the building (including the water service pipe) were installed in or after 1990, you are only required to flush weekly.

Daily flushing

If your school, private school or day nursery has not tested for lead for a full 24-month period and any part of the plumbing that serves the building (including the water service pipe) was installed before January 1, 1990, you are required to flush daily. You can reduce your daily flushing to weekly when you have 24 months of test results that do not exceed the standard for lead.

Daily flushing requirements may be re-instated by the Ministry of the Environment based on new information such as: a test result that exceeds the standard or chemistry changes where the water becomes more corrosive (causing more lead to leach out).

When you should flush

- For weekly flushing, flush on the first day that the school, private school or day nursery is open each week.
- For daily flushing, flush every day that the school, private school or day nursery is open.
- Complete the flushing before the facility opens for the day. Where a school or private school building is open for 24 hours on that day (e.g., a building housing student residences within the school property), flushing must be completed as early as possible.

NOTES

- 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 years of age.
- A day nursery 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

- 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 fountain or a tap that is commonly used to provide water for consumption by children under 18 years of age.
- Then, turn on the cold water for at least 10 seconds at every drinking water fountain and every tap that is commonly used to provide water for consumption by children under 18 years of age.
- Make a written record of the date and time of every required flushing and the name of the person who performed the flushing. If auto flushers are used, record the name of the person who verified that the automatic flushing took place. Your records for auto 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.

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- The intention of the minimum five-minute flushing of the plumbing is to run the water until water from the water main in the street or your well reaches the taps used for flushing. Depending on the length of the pipes through which the water has to travel and the size of the pipes, 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 tap or fountain in a part of your building that is not open during the entire week (if weekly flushing applies) or day (if daily flushing applies) as well as in private student residences or in a public washroom (i.e., in a shopping mall).
- If a tap or drinking water fountain has an aerator, do not remove the aerator when flushing.
- If a tap or drinking water fountain has an individual filter or other water treatment device, you should bypass the filter when flushing if this can be done easily. You are not required to bypass a filter or treatment device if it would require removing or dismantling the device to do so.
- An example of a suitable form you can use to record your flushing information can be found on the ministry's Drinking Water Ontario website under Lead and Drinking Water at www.ontario.ca/drinkingwater. You are not required to use this specific form; it is intended as an example only.
- You can also find an instructional video on flushing and a quick reference "At-A-Glance" poster on the ministry's Drinking Water Ontario website under Lead and Drinking Water at: www.ontario.ca/drinkingwater.

Questions and Answers About Flushing

What is an aerator?

An aerator is a screen unit that is screwed onto the end of a tap/faucet to control splashing and reduce water flow.

How do I know what is the last tap on a branch or run of pipe in the plumbing?

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 tap is often the one located furthest from the where the water pipe comes into the building.

Can a facility use an automatic flushing device?

Yes. If your facility uses an automatic flushing device for any of the taps that require flushing, a record of checks that the device is operating properly needs 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.

Step 2: Selection of a licensed laboratory

O. Reg. 243/07 requires that all schools, private schools and day nurseries must conduct sampling and testing for lead either once a year or every three years depending on past test results. Drinking water samples must be sent to a laboratory licensed by the Ministry of the Environment for lead testing.

Finding a licensed laboratory

- If you need help finding a licensed laboratory to conduct your lead testing, you can find information about licensed laboratories by visiting the ministry's Drinking Water Ontario website under Lead and Drinking Water at: www.ontario.ca/drinkingwater or by contacting the ministry's Public Information Centre at 1-800-565-4923.
- 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 collecting and submitting samples. The regulation requires that you follow the sample collection instructions that the licensed laboratory is required to provide you. Together with the instructions, the laboratory will also give you their sample submission chain-of-custody form. You must complete and include this form with the samples you submit for testing.

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 Registration and Laboratory Services Notification form, specific for schools, private schools and day nurseries, to the ministry. This form identifies the licensed laboratory that you have hired to perform your lead testing.
- A copy of the Registration and Laboratory Services Notification form can be found on the ministry's Drinking Water Ontario website under Forms at www.ontario.ca/drinkingwater
- Completed Registration and Laboratory Services Notification forms can be sent via e-mail to: reg170_formsubmission.moe@ontario.ca or by fax to 416-314-8716.

- Following receipt of your Registration and Laboratory Services Notification, the ministry will assign a unique reference number to your facility for the purposes of O. Reg. 243/07. You will be notified of this number directly by the ministry.

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- You are also required to submit an updated Registration and Laboratory Services Notification form to the ministry within 10 days of each time you change or hire a new laboratory to do your lead testing and/or when you change any information (e.g., name, address, email).

Special instructions to help you fill out your Registration and Laboratory Services Notification form

Who is the operator?

Section 2 of the Registration and Laboratory Services Notification requires you to complete School/Day Nursery Operator Information. 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)
- Day nursery operator – the person required to be licensed under s. 11 of the Day Nurseries Act to operate the day nursery (e.g., owner of ABC Child Care Centre).

Special instructions for operators with multiple facilities (e.g., school boards)

- If you are an operator with multiple facilities under your care, such as a school board, you can reduce the number of Registration and Laboratory Services Notification forms you have to submit

to the ministry if you are using the same licensed laboratory for more than one of your facilities.

- In such cases, you can submit one Registration and Laboratory Services Notification form with “Section 2: School/Day Nursery Operator Information” and “Section 4: Identification of Licensed Laboratory and Lead Testing” filled out once, and attach a list with information to support “Section 1: Schools, Private Schools and Day Nurseries Information.”
- If you are using this option, please ensure your attached list includes all information needed to complete all fields in Sections 1 and 3 for every facility listed.

Special instructions for facilities served by the same plumbing

If you are an operator and the plumbing of your facility is shared by more than one school, private school or day nursery, then the facilities are co-located. You are required to complete Section 3 of the Registration and Laboratory Services Notification form. Please ensure that your attached sheet includes all information needed to complete all fields in Section 3.

Special instructions for facilities served by their own drinking water system regulated under O. Reg. 170/03 as a drinking water system serving a “designated facility”

- Schools, private schools and day nurseries that have already registered with the Ministry of the Environment as a drinking water system serving a designated facility and have submitted a Registration and Laboratory Services Notification under O. Reg. 170/03, must also submit a separate Registration and Laboratory Services Notification form 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.

Step 3: Annual sampling and testing for lead

Who is required to sample

- All *schools, private schools and day nurseries* are required to carry out annual sampling and testing for lead.

What to sample and when

- For annual sampling, you must take two one-litre tap water samples and have these samples tested for lead by your selected licensed laboratory at least once every year.
- For all schools, private schools and day nurseries, the two required samples must be taken on any day between May 1 and October 31. As well, other samples taken outside of this window in accordance with the sampling requirements of the regulation must be reported.

When should a new facility sample and test for lead?

When a new facility opens, your first sampling and testing must be completed within 30 days. However, when a new facility commences its operations after March 31, sampling and testing must be done within 30 days, and no additional sample is required during the normal May to October sampling period for that calendar year.

Where to sample

- When you sample, both of the two required samples must be taken from the same tap.
- For schools and private schools, samples must be taken from a tap which is commonly used to provide drinking water or to prepare food or drink for children under 18 years of age. You may also use a drinking water fountain, but only where you can properly collect a sample.
- For day nurseries, samples must be taken from a kitchen or food tap. After that, you can use any tap that provides drinking water. You can

What is meant by lead plumbing or lead solder?

Lead plumbing means plumbing with lead content greater than 8 per cent; lead solder means solder with lead content greater than 0.2 per cent.

also use a drinking fountain, but only where you can properly collect a sample.

- Where there is more than one appropriate tap from which a sample could be taken and one of the taps is more likely to be served by lead plumbing or plumbing containing lead solder, the samples must be taken from that tap.

Instructions for sampling

1. Take the first of the two required one-litre samples after six hours or more have passed since the plumbing was last used. 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.
2. Using a tap that provides cold water and meets the above criteria outlined in “Where to sample,” take the sample using the instructions provided by the laboratory which you have contracted to conduct the testing of your samples (see “Step 2: Selection of a licensed 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 tap 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 container into which the sample is being collected; 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.

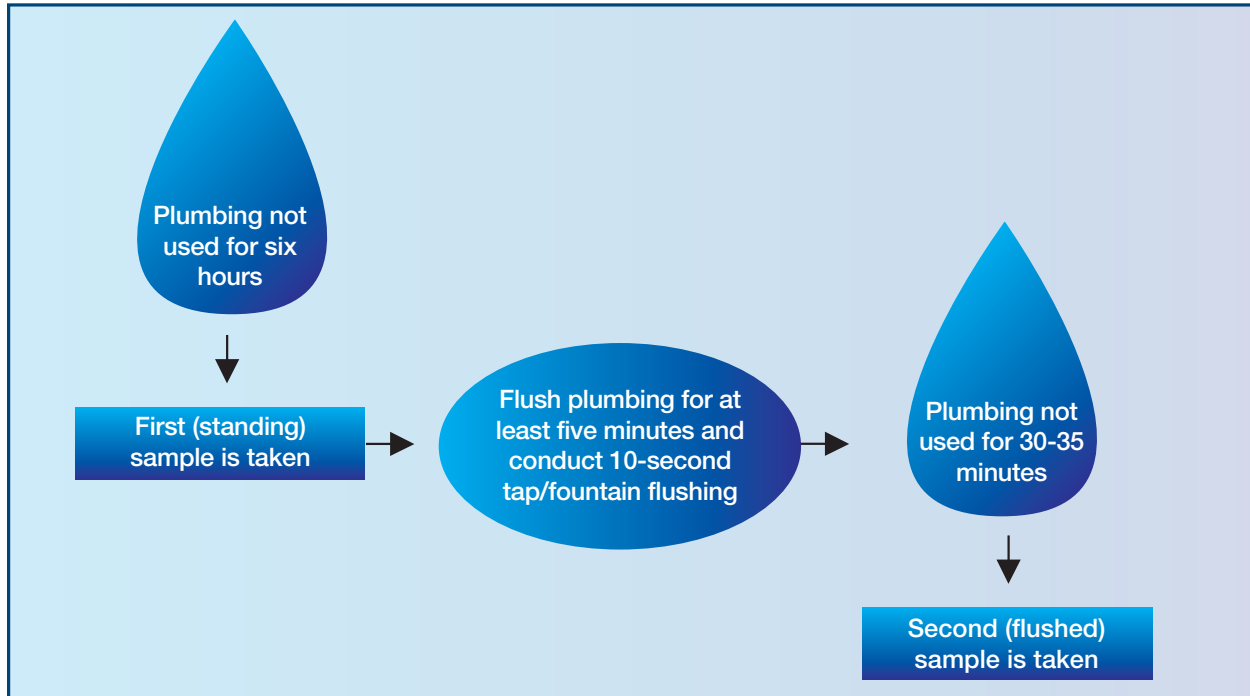
3. Immediately after taking the first one-litre sample, flush the tap with cold water for at least five minutes.
4. Following the flushing, turn the tap off and leave it unused for *at least 30 minutes and not more than 35 minutes*. If possible, leave all of the plumbing unused during this time period.
5. Immediately after the 30 to 35 minute time period, take the second one-litre sample of cold water from the same tap. Take the sample in accordance with the instructions and rules described above for the collection of the first sample.
6. Record the date and time each sample was taken, the estimated length of the period the plumbing was not being used prior to taking the first of the two required one-litre samples, the location in the school, private school or day nursery where the sample was taken and the name of the person who took the sample.
7. Deliver the samples to the licensed laboratory contracted to conduct the tests in accordance with the instructions provided by the laboratory.

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- If the tap from which the samples are to be taken has an aerator, the aerator must not be removed while the samples are being taken.
- If the tap from which the samples are to be taken has a filter or other water treatment device installed on or at the tap and it is possible to bypass the filter/water treatment device without removing it, the filter or other device must be bypassed while the samples are being taken.
- If the tap from which the samples are to be taken has a filter or other water treatment device installed on or at the tap and it is not possible to bypass the device without removing it, the filter/water treatment device must be removed. The device must be removed the day before the samples are to be taken and the tap flushed with cold water for at least five minutes prior to the start of the six-hour standing period.
- The intention of the minimum five-minute flushing of the sampling tap is to run the water until water from the water main in the street or your well reaches the sampling tap. Depending on the length of the pipes through which the water has to travel and the size of the pipes, it may take longer than five minutes for this to happen. In such cases, you may need to flush your sampling tap for a longer time. This will allow the sample taken after the subsequent 30 to 35 minutes of stagnation to represent water that was in contact with the plumbing for only that specific length of time.
- 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.

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, here is the sequence in which the steps for both requirements should be taken.



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- The day before you take the samples, you may want to practice getting the water flowing at a rate that approximates normal use and ensuring that water will not splash out of a container that is similar to, *but not the actual one*, in which the sample will be collected. These actions are important since your first sample must include the water that comes out of the tap immediately after the tap is turned on.
- You can find an example of a suitable form for recording your sampling information on the ministry's Drinking Water Ontario website under Lead and Drinking Water at www.ontario.ca/drinkingwater. You are not required to use this specific form; it is intended as an example only.
- You can also find an instructional video on sampling and a quick reference "At-A-Glance" poster on the ministry's Drinking Water Ontario website under Lead and Drinking Water at www.ontario.ca/drinkingwater.
- If you are sending the samples to a laboratory that is different from the laboratory that tested your samples the previous year, you must notify the ministry of the identity of the new laboratory prior to or immediately after sending the samples. This notification must take place before the newly contracted laboratory conducts the tests. Use the Registration and Laboratory Services Notification form (see "Step 2: Selection of licensed laboratory" section of this guide) to file the notification with the ministry.

Steps to Reduce Sampling Frequency

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 Ontario drinking water quality standard; if the drinking water from taps used by children throughout the facility has been tested; and if a notice is sent to the ministry.

To qualify, a facility will need to test:

- All taps used to prepare food or drink for consumption by children; and

- At least one tap from every washroom or change room where children are allowed to fill water bottles or containers.

You are then required to submit a Notice of Reduced Lead Sampling to the ministry indicating that all the sampling and testing is completed. After the form is accepted by the ministry, the reductions would then apply, but you must return to yearly testing if any result exceeds the standard or if directed to do so by the ministry. A copy of the Notice of Reduced Lead Sampling form can be found on the ministry's Drinking Water Ontario website under Forms at www.ontario.ca/drinkingwater.

Questions and Answers About Sampling and Flushing for Co-located Facilities

What are co-located facilities?

Facilities are co-located if more than one school, private school or day nursery share the same plumbing. In most cases, facilities that share a building can be considered co-located.

Can co-located facilities share flushing duties?

Yes, instead of each facility flushing its plumbing, one operator may conduct the flushing at multiple 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.

Can co-located facilities share annual sampling duties?

Co-located facility operators may share a single set of samples, provided that the sampling is being done properly.

What are primary and secondary facilities?

The operator who has agreed to flush and/or take samples for all facilities is referred to as the primary facility operator. For example, if a school and a day nursery are co-located, the school (primary facility) may take one set of samples to satisfy the sampling requirements of both the

school and the day nursery. The day nursery is referred to as the secondary facility.

How can I inform the ministry that samples will be shared between multiple facilities?

When the decision is made to share samples among multiple facilities, all participants should submit an updated Registration and Laboratory Services Notification form to the Ministry of the Environment.

What taps should the drinking water samples be taken from?

If samples are being shared among co-located facilities, the samples should be taken from a cold water tap that is used for food preparation or for drinking by children under the age of 18. You may also use a drinking fountain, but only where you can properly collect a sample. Samples from taps and fountains should be taken on a rotational basis from all facilities sharing the sample, with priority given to taps used in the preparation of food or drink in a day nursery. For example, if a school and a day nursery share the same plumbing, and have agreed to share drinking water samples to meet O. Reg. 243/07 requirements, the first set of samples must be taken from a kitchen or food tap in the day nursery, and the following testing year, samples can be taken from the school. As a result, facilities will alternate their sampling schedules.

This ensures that the samples are taken from both the day nursery and school who have agreed to share a single set of samples.

What happens if the shared sample exceeds the standard for lead?

If the test result for the shared sample exceeds the Drinking Water Quality Standard for lead, the primary facility operator will receive a Notice of Lead Exceedance Test Results (LEN) form from the laboratory. The primary operator has 24 hours to complete Section C-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 secondary operators, the Ministry of Environment's Spills Action Centre, the local Medical Officer of Health, and either the Ministry of Education or the Ministry of Children and Youth Services (whichever may be applicable).

Operators of any secondary facilities (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 either the Ministry of Education, or the Ministry of Children and Youth Services (whichever may be applicable).

Who has to keep the sampling records and test results?

Each facility is responsible for keeping all records related to the regulation and making the test results and records available to the public. The secondary facility shall request copies of the sampling records and test results from the primary facility, and keep them updated.

Step 4: Reporting of test results and corrective actions

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

- If the laboratory that tests the samples detects a lead exceedance (greater than 10 micrograms per litre), or an exceedance of any other drinking water quality chemical standard set out in O. Reg. 169/03, it 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 day nursery;
 - 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 (LEN), which is completed in part by the licensed laboratory and in part by the operator of the facility.
 - The operator of the school, private school or day nursery who receives a LEN form from the laboratory is required to complete Section C 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
 - the Ministry of Children and Youth Services, if a day nursery
 - every other co-located facility relying on the same set of samples.
 - If there is an exceedance in either a standing or flushed sample, the operator of the school, private school or day nursery is required to take any corrective action which is directed by the local Medical Officer of Health.
 - In cases where there is no exceedance of a provincial drinking water quality chemical standard, your licensed laboratory is still required to send you all test results within 28 days. Laboratories should also send all test results to the ministry within this timeframe.
 - Once corrective actions are taken, facility operators are required to submit a completed Section C-2: Issue Resolution on the Notice of Lead Exceedance Test Results form within seven days after the resolution summarizing the actions taken and the results achieved to:
 - the local Medical Officer of Health
 - the ministry's Spills Action Centre
 - Ministry of Education, if a school
 - Ministry of Children and Youth Services, if a day nursery
 - every other co-located facility relying on the same set of samples.

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

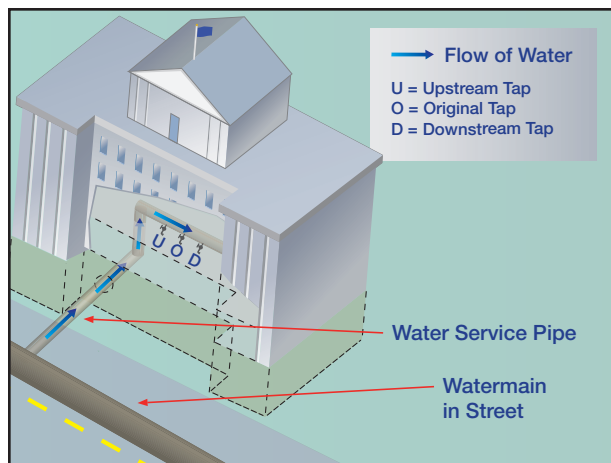
It is not unexpected that facilities may receive a test result that exceeds the provincial drinking water quality standard for lead in a sample of water that has been standing for six hours in a facility’s plumbing, particularly in cases where the plumbing is older. Generally, proper flushing of the plumbing will help alleviate the problem and reduce lead to below the provincial drinking water quality standard of 10 micrograms per litre. If, however, the “flushed” sample (i.e., the sample taken 30 to 35 minutes after you have flushed your plumbing for five minutes) shows an exceedance of the drinking water quality standard for lead, this may be an indication that additional steps are necessary to protect children who attend your facility from persistent lead in drinking water.

In cases where a “flushed” sample result shows an exceedance of the drinking water quality standard for lead of 10 micrograms per litre, the Chief Drinking Water Inspector, with the support of the Chief Medical Officer of Health, recommends the following steps be taken:

1. Continue to flush your facility’s plumbing daily.
2. Follow any directions you may have received from your local Medical Officer of Health. These directions will likely include a request for you to carry out additional re-sampling from the same tap where the initial sample was taken.
3. It is recommended that the operator:
 - Take two re-samples from the same tap where the initial sample was taken; one re-sample followed by second re-sample taken a minimum of seven days apart but within 30 days of the first one.
 - Prior to taking either of these two re-samples, 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 your initial test result showed an exceedance of lead above 30 micrograms per litre, additional precautionary steps may be necessary. Your local Medical Officer of Health will likely recommend that you carry out appropriate site-specific risk assessment activities. It is also recommended that you follow these additional re-sampling steps:
 - In addition to the two re-samples at the original tap noted above, on the first day of re-sampling, an additional sample should be taken at a drinking water tap 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 re-samples can be taken from taps that are “upstream”, or closer to the water service pipe.



Test Results and Corrective Actions

If your facility is notified about a lead test result above the Ontario drinking water standard, specific corrective actions that must be taken will be identified by the local Medical Officer of Health and may be different on a case-by-case basis. The end goal for all corrective actions is protection of health. (See box for more information about steps to take if you get a lead exceedance in a “flushed” sample).

Facility operators are required to submit a completed Section C-2: Issue Resolution on the Notice of Lead Exceedance Test Results form within seven days after the resolution, summarizing the actions taken and the results achieved, to:

- the local Medical Officer of Health
- the ministry’s Spills Action Centre
- Ministry of Education, if a school
- Ministry of Children and Youth Services, if a day nursery
- every other co-located facility relying on the same set of samples.

If the operator is a co-located facility operator who is sharing a single set of samples with another co-located facility or facilities, the form must be given to the other operators who are relying on the same set of samples.

Questions and Answers About Re-Sampling

If I have received a test result showing that my facility has an exceedance above the provincial standard of 10 micrograms per litre, when will the Ministry of the Environment be satisfied with my efforts to address high lead levels in my facility’s drinking water?

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 Drinking Water Inspector. This inspector is responsible for confirming that you have met your regulatory obligation for corrective actions under O. Reg. 243/07, which is to take all actions directed by the local Medical Officer of Health.

A local Medical Officer of Health may direct you to demonstrate that you have made satisfactory efforts to clear your facility’s drinking water of high lead levels. For example, in cases where a facility had an initial test result for lead above 10 micrograms per litre, but 30 micrograms per litre or less, you may be directed to:

- Complete two re-samples at the original sampling tap that have been taken a minimum of seven days apart but within 30 days of each other and to submit these re-samples for laboratory testing. These re-samples would be taken following a minimum five-minute flushing and after a 30-35 minute waiting period. The test results for both re-samples must be below the provincial standard of 10 micrograms per litre; and
- Continue to flush the facility’s plumbing on a daily basis in the manner described in O. Reg. 243/07.

In cases where a facility had an initial test result for lead over 30 micrograms per litre, in addition to the actions listed above, you may also be directed by the Medical Officer of Health to:

- Complete two re-samples taken a minimum of seven days apart but within 30 days of each other on any plumbing fixture from which a

previous sample showed an exceedance of over 10 micrograms per litre, and to submit these re-samples for laboratory testing. As above, these re-samples would be taken following a minimum five-minute flushing and after a 30-35 minute waiting period. The test results for each pair of re-samples done on every fixture must both be below the provincial standard of 10 micrograms per litre.

If, as part of the corrective action, you install lead removal filters on all taps and water fountains commonly used to provide water for consumption by children under 18, and the local Medical Officer of Health directs you to take re-samples for lead testing from a tap with a filter installed, the ministry will be satisfied that the test results for such re-samples represent the lead level in the drinking water within the facility.

What should I do if my facility's re-samples continue to show exceedances over the provincial drinking water quality standard for lead?

In cases where a facility continues to receive test results that show an exceedance of lead above the provincial standard, the operator must continue to carry out any corrective actions as directed by the local Medical Officer of Health, as required by O. Reg. 243/07.

In addition, it is recommended that the operator:

- Complete an assessment of the facility's plumbing to determine whether pipes, solder, fittings or 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 Drinking 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 Day Nurseries with Excess Lead in their Drinking Water* on the ministry's

Drinking Water Ontario website under Lead and Drinking Water at: www.ontario.ca/drinkingwater or by contacting the ministry's Public Information Centre at 1-800-565-4923 or picemail@moe.ontario.ca.

Where there is an exceedance in a re-sample test result, am I required to share this test result with the local Medical Officer of Health, the ministry's Spills Action Centre and, where applicable, the Ministry of Education or the Ministry of Children and Youth Services?

The local Medical Officer of Health will advise you on whether it is necessary to share re-sample test results with their offices or with other ministries or individuals. You are required under the regulation to take any corrective actions directed by the local Medical Officer of Health, which may include submitting re-sample test results.

If not directed by the local Medical Officer of Health, there is no requirement under the regulation for you to share a re-sampling test result showing an exceedance with the ministry's Spills Action Centre, the Ministry of Education or the Ministry of Children and Youth Services. This requirement is only applicable to your original annual sample test results should an exceedance occur. The Ministry of the Environment's Drinking Water Inspector and the local Medical Officer of Health will likely request copies of the re-sample 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 re-sample 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 six years (two years on site at the facility) and to make the test result available to a provincial officer, such as a Drinking Water Inspector, if requested. (See "Step 5: Information and retaining records" for more details.)

Step 5: Information and retaining records

Information to be available to the public on site

The operator of a school, private school or day nursery must ensure that the following information is available to the public during normal business hours without charge at the school, private school or day nursery:

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 as an annual sample under the regulation 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 Ontario Regulation 243/07 (Schools, Private Schools and Day Nurseries).

Records

The operator of a school, private school or day nursery 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.

D: 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 the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

You can also sign up for drinking water updates by email to drinking.water@ontario.ca and request that you be added to the mailing list.

Questions and Answers About Information and Retaining Records

What is an Order?

Under the Safe Drinking Water Act, 2002, a Provincial Officer may issue an Order 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 such as the specific provision of the Act or regulation that the Provincial Officer believes is being contravened and the actions the operator

must take to comply with the order within a specified timeframe.

When would an operator need to provide information records to the ministry?

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. If a Provincial Officer makes a request to see a document or record, the operator of the school, private school or day nursery must provide this document or record within a specified timeframe.

