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Time to Get the Lead Out of School Drinking Water

Prepared by:
Julie Mutis
Shawn-Patrick Stensil
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Canadian Environmental Law Association
T 416 960-2284 • 1-844-755-1420 • F 416 960-9392 • 55 University Avenue, Suite 1500 Toronto, Ontario M5J 2H7 • cela.ca

The Canadian Environmental Law Association (CELA) is calling on the Government of Ontario to remove lead from drinking water in schools across the province.

There is no safe level of exposure to lead and children are especially vulnerable to the harms of lead poisoning.[1] While prevention measures under *Ontario Regulation 243/07: Schools, Private Schools and Child Care Centres* (O. Reg. 243/07) have been addressing lead in drinking water in educational environments for nearly 20 years, the problem has not been eliminated.

This report draws on the most recent data about lead in Ontario public schools to illustrate the need for additional funding and a new approach that will prioritize the complete removal of lead from school water systems.

Impact of lead on children's health

Lead is a toxic heavy metal that was commonly used in pipes prior to 1975, and plumbing solder and fixtures until the 1990s.[2] Even at very low levels of exposure, lead can cause life-altering changes to children's developing brains, including:

- Decreased IQ
- Decreased Attention Span
- Motor skill weaknesses
- Behavioural problems[3]

This means that in too many of the institutions that are meant to equip the next generation with the knowledge and skills they need to succeed, Ontario's current laws and regulations allow children to drink water that could impair their ability to do so.

Lead in public schools

Ontarians should have timely, accessible, and accurate information about the risk of lead exposure in schools, but failure to adopt updated best practices around testing and reporting has left many communities in the dark.

When water tests reveal lead concentrations above the provincial limit of 10 parts-per-billion (ppb), schools are not required to alert community members.[4,5] In most cases, information about water quality is only available to be viewed in-person at the school, or by analyzing raw data posted by the province.

Furthermore, Ontario is one of only three provinces and territories that has not adopted the federal lead in drinking water concentration guidance of 5ppb.[6] Despite growing evidence that links the negative health outcomes of lead to lower exposure levels than previously understood, the province continues to only report and act on lead concentrations over 10ppb.[7]

There is no safe dose of lead in drinking water, making it even more critical that all lead testing information is easily accessible to concerned community members.[8]

The following list ranks the 15 public school boards with the highest number of lead tests that were over the provincial limit of 10ppb in the 2023/24 school year.[9] It also shows the total number of tests in the board that exceeded the federal guidance, which is not yet legally binding in Ontario.

This data illustrates that too many schools still have lead in their water and underlines the need for the province to introduce a new approach and the funding necessary to protect children's health.

SCHOOL BOARD RANKING BY # OF TESTS OVER 10ppb IN 2023/24

RANK*	SCHOOL BOARD	EXCEEDANCES**	
		Over 10ppb	Over 5ppb
1	Ottawa Carleton District School Board	**48**	80
2	Dufferin Peel Catholic District School Board	**46**	116
3	Toronto District School Board	**39**	95
4	Kawartha Pine Ridge District School Board	**29**	55
5	Ottawa Catholic School Board	**26**	52
6	Upper Canada District School Board	**18**	36
7	York Catholic District School Board	**16**	29
8	Thames Valley District School Board	**15**	38
9	Peel District School Board	**14**	49
10	Northwest Catholic District School Board	**13**	20
11	Conseil Scolaire de District Catholique des Aurores Boréales	**12**	27
12	York Region District School Board	**12**	17
13	Conseil Scolaire de District Catholique de L'est Ontarien	**11**	16
14	Conseil des École Catholique du Centre-Est	**9**	17
15	Halton District School Board	**8**	25

***Ranking inclusive of all public school boards, public school authorities, and the provincially-run Provincial and Demonstration Schools Branch, accounting for 83 individual boards/authorities. In places where the same number of tests over 10ppb were recorded, rank was determined based on the number of tests exceeding the federal guideline of 5ppb.**

****Total # exceedances may include multiple tests from the same tap and is inclusive of tests over, but not equal to, the respective limit as-per provincial testing methodology.**

CELA has also ranked the individual public schools with the highest number of lead test results over Ontario's 10ppb limit and included the total number of tests exceeding the federal guidance for reference.

Schools are required to take mitigation measures to reduce lead exposures when they are found, but the best way to protect water quality for current and future students is to find and remove sources of lead.

SCHOOL RANKING BY # OF TESTS OVER 10ppb IN 2023/24

RANK*	SCHOOL NAME	SCHOOL BOARD	EXCEEDANCES**	
			Over 10ppb	Over 5ppb
1	St. Joseph's School	Northwest Catholic District School Board	**11**	16
2	Zion Heights Junior High School	Toronto District School Board	**8**	8
3	École Publique Thunder Bay	Conseil Scolaire Public Grand Nord	**7**	12
4	Holy Spirit Elementary School	Ottawa Catholic School Board	**7**	11
5	Our Lady of Mercy	Dufferin Peel Catholic District School Board	**6**	9
6	St. Leonard Catholic Elementary School	Dufferin Peel Catholic District School Board	**6**	9
7	Éducation Permanente et Alternative	Conseil des Écoles Catholiques du Centre-Est	**6**	8
8	Manor Park	Ottawa Carleton District School Board	**6**	6
9	Hullett Central Public School	Avon Maitland District School Board	**5**	9
10	Fisher Park Public School	Ottawa Carleton District School Board	**5**	8
11	Warsaw Public School	Kawartha Pine Ridge District School Board	**5**	6
12	École Secondaire L'Escale	Conseil Scolaire de District Catholique de L'est Ontarien	**5**	6
13	Good Sheppard Elementary School	Ottawa Catholic District School Board	**5**	6
14	Robert E Wilson Public School	Ottawa Carleton District School Board	**5**	5
15	École Elementaire Chantal-benoit	Conseil Scolaire Viamonde	**5**	5

***Ranking inclusive of all public school boards and the provincially-run Provincial and Demonstration Schools Branch, accounting for approximately 4,838 schools. In places where the same number of tests over 10ppb were recorded, rank was determined based on severity factors, including: number of tests over the federal guidance of 5ppb, lead concentration and presence of lead in tests taken after flushing standing water from pipes.**

****Total # exceedances may include multiple tests from the same tap and is inclusive of tests over, but not equal to, the respective limit as-per provincial testing methodology.**

Ontario lead prevention: Time for a new provincial approach

This analysis shows that despite O. Reg. 243/07, which requires lead testing, reporting, and mitigation in schools and child care centres, some Ontario children are still being exposed to harmful levels of lead in drinking water at public schools.

Lead in drinking water remains a public health risk and is particularly harmful to children. Ontario needs a new approach to address remaining sources of lead in drinking water and prevent further harm. An updated approach should include:

1. **Prevention**: Ontario needs to prioritize and fund the removal of lead components from school plumbing infrastructure.
2. **Testing**: Ontario should end testing exemptions based on the outdated 10ppb standard to ensure that known sources of lead are monitored and addressed.
3. **Transparency**: Ontario should ensure that affected children and their caregivers are made aware of lead exposures and kept informed on measures taken to address the problem.

Prevention:

The current provincial approach to lead in drinking water in schools does not require lead infrastructure replacement and instead relies on insufficient mitigation practices.

This has left schools like St. Joseph's School in the Northwest Catholic District School Board without the resources they need to address lead in drinking water. The school has been aware of lead in the plumbing system since 2013 and regularly reports water tests that exceed the provincial limit on lead.[10] Despite meeting the requirements of O. Reg. 243/07 for the past 12 years, the school recorded 11 exceedances of Ontario's standard for lead in drinking water, the highest number of lead exceedances in the entire province in the 2023/24 school year.[11]

Removing all lead plumbing infrastructure is the best way to prevent lead exposure, but it will require planning and efficient resource allocation from the province. Ontario should adopt a system similar to that of Quebec.

Following the adoption of the new federal guidance in 2020, Quebec schools were required to test all drinking water sources and ensure they did not exceed 5ppb.[12] The Quebec government provided up-to-date guidance on how schools should respond to exceedances in both the short and long-term.

In contrast to O. Reg. 243/07, Quebec prioritizes replacement where feasible and installation of filters in cases where the lead source cannot be easily removed.[13] The province also

published regular reports about progress towards addressing taps and fountains that do not comply with the legal limit.[14]

In addition to striving for removal as the gold-standard for lead exposure prevention, Ontario should adopt updated best practices for mitigation in cases where removal is not immediately feasible.

Testing:

The testing requirement and exemption system for Ontario schools is not doing enough to monitor for dangerous levels of lead in water.

If a school is known to have lead in their drinking water, but only reports tests under 10ppb, they can be exempt from annual testing and only required to test one tap every three years.[15]

Ontario's exemption system does not take into account the fact that no dose of lead is safe and that lead concentration is not static. The concentration of lead in water can fluctuate based on a number of conditions, including increasing temperature, changes in water chemistry and breakdown of old plumbing infrastructure.[16]

In 2023/24, 23 schools in the Dufferin-Peel Catholic District School Board reported water tests that exceeded the federal guidance of 5ppb on lead, but not Ontario's 10ppb limit.[17] This means that those 23 schools have progressed towards or maintained their qualification for dramatically reduced testing despite evidence of lead in their water infrastructure.

CELA calls on the province to ensure that health risks are being monitored and that schools with known lead problems are not being exempt from testing requirements.

Transparency:

Ontario schools are not required to inform caregivers when students have been exposed to lead in drinking water.[18]

If community members want to learn about water quality at their local school, their only guaranteed access options are to request to review physical copies of the last two years of water testing documents at the school, or to navigate the raw test result data posted by the Government of Ontario.[19]

Some school boards have voluntarily begun making water testing data accessible online and CELA encourages other school boards to adopt this best practice.[20]

The province should make this a requirement of all schools and also require them to provide timely notice to caregivers of lead exceedances and information about what mitigation actions are being taken.

What school boards can do

Ontario's approach to lead in school drinking water is not sufficient to protect children from being exposed to lead.

Despite lacking adequate support from the province, there are steps that school boards can take to protect community members and advocate for change:

1. Call on the provincial government to take action on lead in school drinking water

School boards can take a public position in favour of protecting the health of their students and removing lead from school drinking water infrastructure. The province can be asked to provide the necessary financial support for removing lead sources.

2. Schools boards can adopt best practices to improve the health of their students

School boards can resume annual testing for schools that have previously been exempt, but have known lead plumbing components.

They can also adopt the most recent best practices on how to mitigate lead exposure, including filter installation, flushing taps and fountains with lead components before each use and pausing use of problematic water sources.[21]

3. Improve transparency policies

School boards should make water testing data available on their websites and notify caregivers when a tap in the school has exceeded lead in drinking water standards.

School boards can also post updates about the mitigation measures they have taken to address elevated lead levels.

Time to get the lead out of school drinking water

Nearly 20 years after introducing a plan to address lead in Ontario school drinking water, a widespread problem still persists.

The only way to ensure that all children in public schools are free from the potentially life-altering health effects of exposure to lead in drinking water is to get the lead out.

Education stakeholders can play an important role in protecting children's health by adopting best practices and advocating for better support from the province. Provincially, the Government of Ontario must allocate the necessary funding and resources to ensure that the future of education in Ontario is lead-free.

Canadian Environmental Law Association ("CELA") is a public interest law clinic dedicated to environmental equity, justice, and health. Founded in 1970, CELA is one of the oldest advocates for environmental protection in the country. With funding from Legal Aid Ontario (LAO), CELA provides free legal services relating to environmental justice in Ontario, including representing qualifying low-income and vulnerable or disadvantaged communities in litigation. CELA also works on environmental legal education and reform initiatives.

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[1] Health Canada. "Lead in Drinking Water." Canada.Ca, 11 Jan. 2017, www.canada.ca/en/health-canada/programs/consultation-lead-drinking-water/document.html#a9. Accessed: March 10, 2025

[2] Ibid

[3] Ibid

[4] *Schools, Private Schools and Child Care Centres, O. Reg. 243/07.* s.8.

[5] Parts-per-billion (ppb) is equivalent to micrograms-per-liter (Ug/L), which is the nomenclature most frequently used in policy and scientific documents.

[6] Cribb, Robert, et al. "Toxic Lead Showing up in Ontario School and Daycare Drinking Water as Evidence of Serious Health Dangers Grows." Investigative Journalism Bureau, 6 June 2024, https://ijb.utoronto.ca/news/toxic-lead-showing-up-in-ontario-school-and-daycare-drinking-water-as-evidence-of-serious-health-dangers-grows/. Accessed: March 10, 2025

[7] *Ontario Drinking Water Quality Standards, O. Reg. 169/03,* Schedule 2.

[8] World Health Organization. "Lead Poisoning." 27 Sept. 2024, https://www.who.int/news-room/fact-sheets/detail/lead-poisoning-and-health#:~:text=Lead%20can%20contaminate%20drinking%20water,of%20the%20central%20nervous%20system. Accessed: March 12, 2025

[9] Health Canada. "Drinking Water Quality and Enforcement." Ontario Data Catalogue, data.ontario.ca/dataset/drinking-water-quality-and-enforcement. Accessed: January 24, 2025

[10] Pinchin Environmental. "Hazardous building materials assessment St. Joseph's School." Northwest Catholic District School Board. June 26, 2013. https://www.tncdsb.on.ca/apps/pages/index.jsp?uREC_ID=1157186&type=d&pREC_ID=1390932. Accessed: March 10, 2025.

[11] See: "School Ranking by # of Tests Over 10ppb in 2023/24".

[12] Gouvernement du Québec. "Lead in the drinking water of educational institutions." https://www.quebec.ca/en/education/prescolaire-primaire-et-secondaire/titre-par-defaut/lead-drinking-water-educational-institutions. Accessed: March 10, 2025

[13] Gouvernement du Québec, "PROCÉDURE VISANT À MESURER LES CONCENTRATIONS DE PLOMB DANS L'EAU POTABLE DES ÉCOLES DU QUÉBEC." March, 2020. https://www.education.gouv.qc.ca/fileadmin/site_web/documents/education/reseau/boite-outils/Procedure-concentrations-plomb.pdf. Accessed: March 10, 2025

[14] Gouvernement du Québec,Bilan de l'opération de dépistage du plomb dans l'eau des écoles, MISE À JOUR : NOVEMBRE 2023, https://cdn-contenu.quebec.ca/cdn-contenu/adm/min/education/publications-adm/education/bilan-plomb-eau-ecoles.pdf. Accessed: March 10, 2025

[15] *Schools, Private Schools and Child Care Centres, O. Reg. 243/07.* s.5.2.1.

[16] Health Canada. "Drinking Water Quality and Enforcement."

[17] See: "School Board Ranking by # of Tests Over 5ppb in 2023/24".

[18] *Schools, Private Schools and Child Care Centres, O. Reg. 243/07.* s.8.

[19] Ibid

[20] E.g. Dufferin-Peel Catholic School Board, Ottawa Carleton District School Board, Kawartha Pine Ridge District School Board.

[21] Health Canada. "Drinking Water Quality and Enforcement."