Canadian Environmental Law Association
EQUITY. JUSTICE. HEALTH.

October 20, 2021

CELA Submission on Eliminating Lead from Ontario's Drinking Water

Lead in Ontario's drinking water is an ongoing and serious public health threat and a "drinking water health hazard" pursuant to the *Safe Drinking Water Act* ("*SDWA*"). There is no safe level of exposure to lead, especially for young children. The current piecemeal and incomplete approach to removing lead service lines and other lead reduction techniques, such as corrosion control, have not eliminated the problem. There is uneven and inequitable protection from the health impacts of lead across the province.

The purpose of the *SDWA* is to recognize that the people of Ontario are entitled to expect that their drinking water is safe and that Ontario's drinking water system will provide for the protection of human health and the prevention of drinking water health hazards. Those purposes are not being met. We strongly support the Ontario Ministry of the Environment, Conservation and Parks' commitment outlined in its two-year assessment of the Made-in-Ontario Environment Plan to update its current lead policies and to consult on further actions to reduce levels of lead in drinking water.[1] The time has come to eliminate lead in drinking water as a public health harm once and for all, and to ensure that human health is protected.

We would be pleased to meet to discuss these recommendations further.

A. BACKGROUND ON THE CANADIAN ENVIRONMENTAL LAW ASSOCIATION

The Canadian Environmental Law Association ("CELA") is a specialty legal aid clinic that works toward protecting public health and the environment by seeking justice for those harmed by pollution or poor decision-making and by changing policies to prevent environmental harms in the first place. CELA's primary focus is on assisting and empowering low-income persons and disadvantaged communities.

CELA has a long history of advocating for stringent and effective laws, regulations, and policies to protect drinking water in Ontario. CELA represented the Concerned Walkerton Citizens at the Walkerton Inquiry and was actively involved in the development of the *Safe Drinking Water Act, 2002*, the *Clean Water Act, 2006*, and regulations, policies, and guidelines thereunder. We are concerned about ensuring that all Walkerton Inquiry recommendations are fully implemented and that all Ontarians are provided with safe, clean drinking water.

[1] Made-in-Ontario Environment Plan, "Keeping Our Water Clean and Safe", updated August 17, 2021. Available online: <https://www.ontario.ca/page/made-in-ontario-environment-plan#section-2>

CELA published a report on legislative and policy changes required to remove lead from Ontario drinking water in 2019, which is posted on the CELA website: <https://cela.ca/lead-in-our-drinking-water/>.[2]

B. CELA'S RECOMMENDATIONS

i. Lowering the lead in drinking water standard to 5 micrograms per litre (µg/L)

CELA supports the Ontario government's proposal to reduce the provincial lead standard of 10 micrograms per litre (µg/L) to 5 micrograms per litre (µg/L) as an important first step. O. Reg. 169/03, schedule 2, which currently sets the drinking water standard for lead at 10 µg/L, should be amended.[3]

Health Canada has recently lowered the lead in drinking water guideline to a maximum acceptable concentration ("MAC") of 5 µg/L, with the recognition that efforts should be made to maintain lead levels in drinking water as low as reasonable achievable (or ALARA).[4] One of Health Canada's justifications for the amendment was that it would have a significant impact on the blood lead levels ("BLLs") of children, the most vulnerable population. Reducing the MAC from 10 µg/L to 5 µg/L would lower the geometric mean percentage of children with BLLs exceeding 5 µg/dL by 7.2 percentage points (from 9.4% to 2.2%).[5]

CELA made a submission to Health Canada supporting the reduction of its lead in drinking water guideline to 5 µg/L.[6] CELA remains supportive of this change and calls for its implementation in Ontario.

Lowering the lead standard is important but will not be enough on its own to address the lead-in-drinking water problem in Ontario. Even at exposure levels below 5 µg/L, exposed populations will suffer detrimental health impacts. Ontario's policy framework must be amended to eliminate remaining sources of lead exposure.

Recommendation 1 – O. Reg 169/03, Schedule 2 should be amended to decrease the provincial lead standard from 10 µg/L to 5 µg/L

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[2] Canadian Environmental Law Association, *Lead in Our Drinking Water*, November 4, 2019. Available online: <https://cela.ca/lead-in-our-drinking-water>

[3] O. Reg. 169/03, Ontario Drinking Water Quality Standards, sched. 2. Available online: <https://www.canlii.org/en/on/laws/regu/o-reg-169-03/latest/o-reg-169-03.html#Schedule_2_CHEMICAL_STANDARDS_3520>

[4] Health Canada, *Guidelines for Canadian Drinking Water Quality: Guideline Technical Document: Lead*, March 2019, at 1. Available online: <https://www.canada.ca/content/dam/hc-sc/documents/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-lead/guidance-document/guidance-document.pdf>. ("*Guidelines for Canadian Drinking Water Quality*")

[5] *Guidelines for Canadian Drinking Water Quality*, at 70

[6] Canadian Environmental Law Association, *Public Consultation: Guidelines for Canadian Drinking Water Quality – Guideline Technical Document on Lead: CELA's Recommendations*, March 15, 2017. Available online: <https://cela.ca/guidelines-for-canadian-drinking-water-quality-guideline-technical-document-on-lead/>

ii. Removal of Lead Service Lines

The *SDWA* should be amended to require that a minimum of 75% of lead service lines in every Ontario drinking water system be replaced by 2030 and that all lead service lines shall be removed by 2035.

The biggest remaining source of lead in drinking water in Ontario is lead service lines ("LSLs"). There has been slow and haphazard progress on removing lead service lines to date across the province. Clear legislative targets that apply to all drinking water systems are required, coupled with appropriate levels of provincial funding to enable swift action.

The *SDWA* should require that all remaining lead service lines are identified and mapped by 2025.

All remaining LSLs must be identified. Municipal officials, drinking water system operators and the public may not know where LSLs remain or that they are being exposed to lead. It is crucial to identify and map all LSLs by 2025.

In the United States, it has become clear that LSLs disproportionately impact low-income and vulnerable communities.[7] The United States Government Accountability Office found that data reflecting equity considerations, such as poverty rates, could help water system operators identify areas with vulnerable populations to focus LSL replacement efforts and meet environmental justice goals.[8] The report found that census tracts with higher rates of families living in poverty had a greater probability of having a lead service line even after accounting for the median age of the neighbourhood's housing stock.[9] We expect that LSLs and the corresponding lead exposures disproportionately impact low-income and vulnerable communities in Ontario, too.

All drinking water system operators should be required to develop a publicly accessible LSL inventory by 2025. Once a full inventory has been completed, the government will have a better idea of the scope of the problem within each drinking water system, will be able to notify all impacted residents, and will be able to ensure that those least likely to have the resources to remove LSLs are identified and prioritized.

CELA proposes the following new section to be included in the *SDWA* to address mandatory identification, mapping and removal of lead service lines:

Recommendation 2:

The *SDWA* should be amended to include the following section.

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[7] United States Government Accountability Office, *Drinking Water – EPA Could Use Available Data to Better Identify Neighbourhoods at Risk of Lead Exposure*, December 2020, at 12-18. Available online: <https://www.gao.gov/assets/gao-21-78.pdf>. ("*EPA Available Data Report"*)
[8] *EPA Available Data Report*, at 21.
[9] *EPA Available Data Report*, at 15-16.

Section X of the *SDWA*:

(a) The removal and replacement of 75% of all lead service lines in every municipal and non-municipal drinking water system shall be completed in Ontario by 2030.

(b) The removal and replacement of 100% of all lead service lines in every municipal and non-municipal drinking water system shall be completed in Ontario by 2035.

(c) The owner and operating authority of all municipal and non-municipal drinking water systems in Ontario shall conduct an inventory of all lead service lines in their drinking water systems by 2025.

(d) The owner and operating authority of all municipal and non-municipal drinking water systems in Ontario shall ensure that a map of all lead service lines in their drinking water systems is completed by 2025.

(e) The owner and operating authority of all municipal and non-municipal drinking water systems in Ontario shall update their inventories and maps of lead services lines in their drinking water systems every five years.

(f) All inventories and maps created pursuant to this section will be posted on a publicly available website and provided to the Chief Drinking Water Inspector.

Recommendation 3: Section 7 of the *SDWA* should be amended to require the Chief Drinking Water Inspector's Annual Report to the Minister to include all information related to lead service lines collected under the new section of the *SDWA*.

A further complication with LSL removal has been an understanding that part of the LSL is owned by the municipality and part of the LSL is owned by the private homeowner. Regardless of ownership, mixed service lines can cause more harm than leaving a LSL in place and should be avoided. Leaving half a LSL is also a missed opportunity to eliminate the lead-in-drinking water problem at that residence.

Montreal's city council passed a by-law requiring mandatory replacement of both the private and public lead service line at the same time. Article 58 of Montreal City By-Law 20-030 provides authority to the City to replace the private branch of the lead service line:

> Section X
>
> TRAVAUX SUR LA SECTION PRIVÉE D'UN BRANCHEMENT D'EAU PAR L'AUTORITÉ COMPÉTENTE
>
> 58. Lorsque le mur d'un bâtiment se trouve à 1,5 mètre ou moins du trottoir, l'autorité compétente procède à la reconstruction de la section privée du branchement d'eau jusqu'au robinet d'arrêt intérieur lorsque les conditions suivantes sont réunies :

> 1° des travaux sont planifiés par la Ville, excluant les travaux d'urgence et les réparations de bris;
>
> 2° la nature de ces travaux requiert le remplacement des branchements d'eau composés d'un matériau non conforme;
>
> 3° la section privée du branchement d'eau est composée d'un matériau non conforme.
>
> Aux fins du présent article, un branchement d'eau est composé d'un matériau non conforme lorsqu'il s'agit d'un branchement d'un diamètre de 50 millimètres ou moins composé d'un matériau autre que le cuivre.
>
> La distance entre le mur du bâtiment et le trottoir est mesurée à l'endroit où se trouve le branchement à remplacer. En cas d'absence d'un trottoir, la distance est mesurée à l'endroit où se trouve le branchement à remplacer du mur du bâtiment à la bordure de la rue.[10]

The Montreal bylaw also requires that the City notify the owner of the lead service line that it will be replaced[11], the owner must provide access to the LSL on the date that the work will be conducted[12], and the owner will be charged for the cost of the replacement.[13] The homeowner would then have the option of paying for the replacement in a lump sum or in installments over a maximum of 15 years.[14]

The provincial *Safe Drinking Water Act* should be amended to adopt a similar mandatory replacement approach. Current voluntary approaches have not worked.

A mandatory replacement requirement should be paired with financial assistance programs which are targeted at ensuring that low-income and vulnerable communities are not burdened with any additional expense that they cannot afford. It must also be clear that the mandatory requirement to move the LSL applies to all private homeowners including owners of rental properties.

Currently, financial assistance programs to assist homeowners with LSL removal vary across the province. A new province-wide financial assistance program should be created. It should be administered by the province and provide grants to low-income households. We recommend that the new program use the same income level used to determine eligibility for the Ontario Electricity Support Program.

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[10] Ville de Montréal Règlement 20-030, RÈGLEMENT SUR LES BRANCHEMENTS AUX RÉSEAUX D'AQUEDUC ET D'ÉGOUT PUBLICS ET SUR LA GESTION DES EAUX PLUVIALES, Art. 58. Available online: <https://ville.montreal.qc.ca/pls/portal/docs/page/eau_fr/media/documents/reglement_20-030.pdf>
[11] Ville de Montréal Règlement 20-030, Art 59
[12] Ville de Montréal Règlement 20-030, Art 60
[13] Ville de Montréal Règlement 20-030, Art 62
[14] Global News, "Is Montreal's lead problem worse than Flint, Michigan's?", November 14, 2019. Available online: <https://globalnews.ca/news/6113701/montreal-drinking-water-lead-flint-michigan/>

For any other homeowner or owner of a rental property that does not qualify for the financial assistance program, generous loans and re-payment options must be offered. There should be a clear prohibition on landlords passing along the cost of LSL replacement to tenants. Larger municipal water systems may fund these programs through their rate base. For smaller systems, a new provincial fund should be created.

Recommendation 4: The *Safe Drinking Water Act* should mandate LSL removal. The public and private portions of a LSL should be removed at the same time. If only a partial LSL remains, it should be identified and removed.

Recommendation 5: Low-income families should be provided with a grant to cover the cost of LSL replacement. All other homeowners must have access to generous loan and re-payment programs.

iii. Removing lead in fixtures and solder

CELA is concerned that some schools and daycare facilities continue to record high lead levels despite flushing and testing requirements in O. Reg 243/07:

- At the Beverley School in downtown Toronto, which serves students with developmental and physical disabilities, six of eight tests conducted in 2019-20 registered exceedances ranging from 6.4 ppb to 110 ppb. Exceedances have varied over the past few years, including one exceedance in 2018/2019, five in 2017/2018, and none in 2016/2017.

- At Rockland District High School in Clarence-Rockland, east of Ottawa, lead concentration in drinking fountain fixtures reached a very dangerous high of 1,170 ppb, which translates to more than 200 times the federal guideline. 88% of lead tests in 2019/2020 exceeded provincial lead levels.

- At Rockland Public School, test results registered 36 exceedances in 2019/2020.

- At Yes Kids Christian Childcare in Brantford, 70% of tests exceeded federal guidelines, with an average of 29 ppb, peaking at 272 ppb.[15]

These lead levels are particularly concerning because children drink the water at these facilities. The lead levels in drinking water in schools and daycares is not likely due to lead service lines. Rather it is likely lead fixtures and solder, which must be identified and removed.

Recommendation 6: All lead fixtures and lead solder must be removed from schools and daycares.

[15] Inori Roy, Robert Cribb and Andrew Bailey, "A third of Ontario schools still have dangerous levels of lead in drinking water – two years after the province pledged to fix it. Search our database to see the results", June 11, 2021. Available online: <https://www.thestar.com/news/investigations/2021/06/11/lead-water-ontario-schools-daycare-database.html>

iv. Improve Testing

The current sampling protocol in O. Reg 170/03, which tests at the tap for residential users and other non-school or daycare facilities, requires the tap to be run for 5 minutes and the sample to be taken 30-35 minutes later.[16] However, lead levels increase in water the longer it sits stagnant in pipes.[17] Residents who have a glass of water when they wake up in the morning or when they get home from work are exposed to considerably higher levels of lead than what would appear using the current sampling methodology.

O. Reg 243/07 uses a more precautionary testing approach in schools and daycares. It requires the first sample to be taken (1) after a period of six hours or more when the plumbing is not used, if practicable, (2) after the longest period when the plumbing is not used, and (3) before flushing the taps.[18]

CELA recommends updating the sampling protocol in O. Reg 170/03 to better capture peak lead levels. This can serve to inform the homeowner of the benefits of flushing, as well as provide more accurate results about the peak levels of exposure.

Recommendation 7: Schedule 15.1-7(1)(8) and (9) of O.Reg 170/03 should be amended to adopt the testing standard in Section 5(2)(7) of O. Reg 243/07, which requires the first sample to be taken after the water has been stagnant in the pipes for 6 hours or the longest period when plumbing is not used, and before any flushing of the taps.

O. Reg 243/07 provides for lead testing in schools and childcare centres. However, CELA is concerned that young children provided with care outside of licenced facilities are not protected by these regulations. Amendments should be made to O. Reg. 243/07 to ensure that any person caring for children on a regular basis who are not a part of their household must flush the taps and test for lead. The medical officer of health and local public health unit could provide assistance for lead testing in these more informal childcare settings.

Recommendation 8: Any person providing regular childcare for a child outside of their household should flush their taps daily and the water should be tested for lead pursuant to O. Reg 243/07.

v. Improve Reporting on Lead Exceedances

Reporting requirements are set based on the size of the populations served by the drinking water system. A public health and equity perspective requires consistent reporting for all populations

[16] O. Reg. 170/03, Schedule 15.1-7(1)(8) and (9)
[17] Health Canada, *Lead in Drinking Water*, March 15, 2017, at 4.2. Available online: <https://www.canada.ca/en/health-canada/programs/consultation-lead-drinking-water/document.html>
[18] O. Reg 243/07, s 5(2)(7)

regardless of whether you live in a small or large community. CELA therefore recommends that Schedule 15.1-5 be amended to remove all preconditions to reporting.

Recommendation 9: Schedule 15.1-4 and 1-5 of O.Reg 170/03 should be amended to eliminate all pre-conditions to reporting lead exceedances that relate to population size served by the drinking water system.

Section 11(10) of O. Reg. 170/03 requires annual reports to be made available to the public at no charge only for drinking water systems that serve more than 10,000 people. The reports are also only available for two years. Any member of the public should have access to free annual drinking water system reports for up to 20 years.

Recommendation 10: Section 11(10) of O. Reg 170/03 should be amended to provide annual reports to the public at no charge regardless of the size of the drinking water system.

Recommendation 11: Section 11(9) of O. Reg. 170/03 should be amended to provide the public with access to reports for up to 20 years free of charge.

vi. Improve Notice About Lead Exceedances

There is a serious public education deficit with respect to the ongoing problem of lead in drinking water in Ontario. Residents are unaware of ongoing elevated lead levels in their homes. Notice of the issue, coupled with straightforward and accurate education materials, will assist in Ontario's efforts to eliminate all lead from Ontario's drinking water.

Specific notice should be provided to residents about LSLs as the inventory and mapping of LSLs is completed by 2025. CELA recommends yearly notice to homeowners with LSLs, along with mandatory reporting of LSLs when there is a change in homeownership or tenancy.

We recommend other public education campaigns, including inserts in water bills, targeted leafletting in neighbourhoods with historic LSLs, and periodic public awareness campaigns.

Recommendation 12: The *SDWA* should be amended to require owners and operating authorities of drinking water systems to provide notice to residents with known lead service lines by 2025, every year after that until they are replaced, and when home ownership or tenancy changes.

Where drinking water sampling demonstrates water lead levels in exceedance of 5 µg/L, the drinking water system operator is required to provide a report to the occupant of the residence within 7 days. However, where there is a multi-unit residence, there is no requirement to provide a notice to all residents within the domicile. This is particularly concerning where low-income tenants are renting one unit of a residence.

Recommendation 13: Schedule 15.1-9(1) should be amended to require notice of a lead test result that exceeds 5 µg/L to at least one resident of every unit of a multi-unit residence.

Because public awareness of the health effects of lead are not well known, the notice provided after a high lead test result must include enough information to guide homeowners or tenants to have the problem addressed. Schedule 15.1-9(1) currently addresses notice after a high lead test result but should be more specific.

Recommendation 14: Schedule 15.1-9(1) should be amended to require notice after a lead test result exceeding 5 µg/L to include (1) information about the health effects of lead, (2) the potential sources of exposure, (3) the history of the property and whether there is a LSL that serves the property, (4) the financial programs available to assist the homeowner to replace the LSL, and (5) information about where to find the Chief Drinking Water Inspector's Annual Report and the LSL inventory and map.

vii. Foster Indigenous-Federal-Provincial Partnership to Address Lead in Drinking Water on Reserves

It is currently unclear whether lead in drinking water is a significant concern on reserves. CELA recommends that Ontario work with drinking water system operators on reserves and the federal government to determine the extent of the problem and ensure all LSLs are identified and mapped by 2025, 75% are removed by 2030, and all LSLs are removed by 2035.

Recommendation 15: Ontario should work with on-reserve drinking water system operators and the federal government to ensure that all LSLs are identified and mapped by 2025, 75% are removed by 2030, and all LSLs are removed by 2035.

C. Summary of Recommendations

In summary, CELA provides the following recommendations to amend the *SDWA* and associated regulations to eliminate lead in drinking water by 2035:

Recommendation 1 – O. Reg 169/03, Schedule 2 should be amended to decrease the provincial lead standard from 10 µg/L to 5 µg/L

Recommendation 2:

The *SDWA* should be amended to include the following section.

Section X of the *SDWA*:

(g) The removal and replacement of 75% of all lead service lines in every municipal and non-municipal drinking water system shall be completed in Ontario by 2030.

(h) The removal and replacement of 100% of all lead service lines in every municipal and non-municipal drinking water system shall be completed in Ontario by 2035.

(i) The owner and operating authority of all municipal and non-municipal drinking water systems in Ontario shall conduct an inventory of all lead service lines in their drinking water systems by 2025.

(j) The owner and operating authority of all municipal and non-municipal drinking water systems in Ontario shall ensure that a map of all lead service lines in their drinking water systems is completed by 2025.

(k) The owner and operating authority of all municipal and non-municipal drinking water systems in Ontario shall update their inventories and maps of lead services lines in their drinking water systems every five years.

(l) All inventories and maps created pursuant to this section will be posted on a publicly available website and provided to the Chief Drinking Water Inspector.

Recommendation 3: Section 7 of the *SDWA* should be amended to require the Chief Drinking Water Inspector's Annual Report to the Minister to include all information related to lead service lines collected under the new section of the *SDWA*.

Recommendation 4: The *Safe Drinking Water Act* should mandate LSL removal. The public and private portions of a LSL should be removed at the same time. If only a partial LSL remains, it should be identified and removed.

Recommendation 5: Low-income families should be provided with a grant to cover the cost of LSL replacement. All other homeowners must have access to generous loan and re-payment programs.

Recommendation 6: All lead fixtures and lead solder must be removed from schools and daycares.

Recommendation 7: Schedule 15.1-7(1)(8) and (9) of O.Reg 170/03 should be amended to adopt the testing standard in Section 5(2)(7) of O. Reg 243/07, which requires the first sample to be taken after the water has been stagnant in the pipes for 6 hours or the longest period when plumbing is not used, and before any flushing of the taps.

Recommendation 8: Any person providing regular childcare for a child outside of their household should flush their taps daily and the water should be tested for lead pursuant to O. Reg 243/07.

Recommendation 9: Schedule 15.1-4 and 1-5 of O.Reg 170/03 should be amended to eliminate all pre-conditions to reporting lead exceedances that relate to population size served by the drinking water system.

Recommendation 10: Section 11(10) of O. Reg 170/03 should be amended to provide annual reports to the public at no charge regardless of the size of the drinking water system.

Recommendation 11: Section 11(9) of O. Reg. 170/03 should be amended to provide the public with access to reports for up to 20 years free of charge.

Recommendation 12: The *SDWA* should be amended to require owners and operating authorities of drinking water systems to provide notice to residents with known lead service lines by 2025, every year after that until they are replaced, and when home ownership or tenancy changes.

Recommendation 13: Schedule 15.1-9(1) should be amended to require notice of a lead test result that exceeds 5 µg/L to at least one resident of every unit of a multi-unit residence.

Recommendation 14: Schedule 15.1-9(1) should be amended to require notice after a lead test result exceeding 5 µg/L to include (1) information about the health effects of lead, (2) the potential sources of exposure, (3) the history of the property and whether there is a LSL that serves the property, (4) the financial programs available to assist the homeowner to replace the LSL, and (5) information about where to find the Chief Drinking Water Inspector's Annual Report and the LSL inventory and map.

Recommendation 15: Ontario should work with on-reserve drinking water system operators and the federal government to ensure that all LSLs are identified and mapped by 2025, 75% are removed by 2030, and all LSLs are removed by 2035.

Thank you for your consideration.

Sincerely,

Theresa McClenaghan
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