

Managing the Risk of Lead in Private Lead Water Services

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Recommended by:	General Manager of Growth and Infrastructure

Report Summary

This presentation and report provides a recommendation regarding two solutions to assist with reducing the risk of lead exposure from private lead water services.

Resolution

THAT the City of Greater Sudbury directs staff to prepare a business case for the purpose of the private lead service programs inclusion in the 2022 municipal budget process, as recommended in the report entitled “Managing the Risk of Lead in Private Lead Water Services”, from the General Manager of Growth and Infrastructure presented at the Operations Committee meeting on September 20, 2021.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report supports the objectives “Asset Management and Service Excellence”, and “Create a Healthier Community” as laid out in the City of Greater Sudbury’s Strategic Plan for 2019-2027. More specifically, these initiatives show how the City continues to put programs in place to ensure that water services can continue to be delivered to citizens in a safe and reliable way. These programs will help retire old private infrastructure and improve the health of those occupying these higher risk locations.

Financial Implications

If approved, a business case will be prepared for the 2022 budget.

Purpose

The City has observed that many owners do not replace their lead water services on the private side once the public side is replaced. When the City replaces the public side, and the private side is not replaced, the dissimilar metals and new hydraulic properties of the new pipe against the old pipe can increase the lead risk to the household. The City would like to remove the financial barriers that some owners face in updating their lead water service pipe to a safer material to improve the health in our community, as well as provide owners

with other risk reduction tools such as filters until such time as they can replace the private portion of their water service.

Background

There is no safe level for lead in drinking water. Health Canada claims that 75% of all dissolved lead in drinking water comes from lead water services. There is not a good record of where there are lead water services in Sudbury or their distribution, and it is known that they are only a small fraction of services in the City. It has been a long standing practice for the City to replace the City portion of the lead water service when it is discovered, and it is also common that private owners do not replace the private portion of their service.

Until 1975, lead was an acceptable material in pipes, based on the National Plumbing Code of Canada, and it was an acceptable material in solder until 1990 so it is found in many older homes today¹. The health effects of lead include both findings for probability for carcinogenic to humans, but the cancer effects are not the primary concern in humans. The effects of primary concern from toxicity of lead include reduced cognition, increased blood pressure and renal dysfunction in adults, as well as neurodevelopmental and behavioral effects in children including reductions in intelligence quotient (IQ) scores. The threshold which lead is no longer associated with adverse neurodevelopment effects cannot be identified, meaning there is no safe lead levels².

In 2019, Health Canada updated the drinking water guideline Regulations and Guidelines to reduce the maximum acceptable concentration from 10ppm to 5ppm. . O.Reg 169/03 states a standard for drinking water to contain less than 10ppm. The concentration of lead in the City's water is 0.1ppm.

Other communities have moved to offering the recommended incentives around the province, as shown in the table below:

Municipality	Thunder Bay	Sault Ste Marie	London	Welland	Ottawa	Hamilton	Toronto	Brantford	Durham	Guelph	Halifax
Water filter	x	x			x		x	x	x		
Grant/Rebate	\$3,000			\$2,000	\$1,000					\$2,000	\$2,500
Loan	x	x	x		x	\$2,000					
Repayment terms	5&10 year		10 years		5&10 year	10 year					

Analysis

The City uses a multi-barrier approach in dealing with lead which includes the following elements:

- Water sampling program that analyzes for lead
- Corrosion control program, which reduces the amount of lead that can dissolve in water
- City-side lead water service replacement, once identified
- Public reporting

The proposed enhancements provide additional protection to those most at risk, and may be impacted by private infrastructure on their premises by adding these elements to the multi-barrier approach:

- Private side water service replacement incentives: subsidy and loan
- Distribution of Water Filters for lead removal
- Program referrals from partners at Public Health Sudbury & Districts and clients accessing other programs in Social Services

Program description

1. Private lead water service replacement subsidy and loan program:
 - a. by providing a grant of up to \$3000 for private service replacement
 - b. by providing an interest-free loan of up to \$10,000 repayable over 10 years repayable under normal accounts receivable processes
 - c. offering options a & b together
 - d. The typical cost of replacement for the private portion of a lead water service is \$3000-\$5000, plus the cost of restoration.

2. Water filter for lead removal:

For homes built 1960 and prior or home with a confirmed lead water service The City provide NSF-053 certified water filters to remove lead (i.e. water pitcher style filter) until such time as the water service can be replaced where those who are at highest risk of lead exposure (children 6 and under, pregnant, and breastfeeding mothers) are present. For owners, this will require collecting water samples for participation in the lead testing program, which is mandated by the province, O.Reg 170/03. To ensure tenants are protected, participation in the lead testing program will not be mandatory if the owner refuses to participate. This cost is covered by the City. Should the water samples contain less than 5ppm lead¹, participation in the program will terminate.

Accompanying these programs, new education and outreach materials are under development. This will include information about how to access the program as well as other information such as:

1. Importance of flushing your water after an extended absence:

Return home from work or school, or when returning home from a multi-day holiday. Re-use water where possible (i.e. watering plants) or take a shower, wash some laundry before consuming water where possible.

2. How to identify if you have lead plumbing:

Dull gray color, soft surface which can be easily scratched with a house key

Enhanced communications to customers who are identified as having private lead water services, including health related information from our partners at PHSD.

Next steps

If the Business case is approved, staff will keep council, the community, and other stakeholders updated on the uptake of the program in the annual water report

Resources Cited

1. Health Canada sets new Guideline for Lead in Drinking Water, Health Canada, <https://www.canada.ca/en/health-canada/news/2019/03/health-canada-sets-new-guideline-for-lead-in-drinking-water-latest-in-series-of-government-actions-to-protect-canadians-from-exposure-to-lead.html>
2. Lead in Water, Government of Canada <https://www.canada.ca/en/health-canada/programs/consultation-lead-drinking-water/document.html#purpose>