

MP Bob Bratina
Hamilton East – Stoney Creek

Rationale Backgrounder for M-69

Lead is often considered a problem of the past, and nothing Canadians should be concerned about. However, recently in Flint, Michigan, a state of emergency was declared when very high levels of lead were found in the drinking water. While Flint was an extreme case, children across the United States and Canada continue to be exposed to lead. There are an estimated 35,000 homes in Toronto with lead pipes, and water toxicity experts agree there are hundreds of thousands of households at risk of lead exposure across Canada.

The scope of the problem is difficult to estimate, as many cities are unaware of which households still have lead service lines. Houses constructed before 1960 are more likely to contain lead pipes, and most large cities across Canada were settled before 1950. The potential for lead exposure exists when water is able to reside in lead pipes for an extended period of time.

Experts recommend two solutions for reducing lead in water, which includes encouraging home and building owners to remove their lead lines and treating drinking water to make it as corrosion-free as possible. Many municipalities across Canada do not have both solutions in place.

In Ontario, the Safe Drinking Water Act sets parameters for allowable concentrations of chemicals in drinking water, which in the case of lead is 0.010 milligrams per litre. However, according to the World Health Organization and other experts, no amount of lead consumption is considered safe. Exposure to lead can have negative impacts on the brain, kidneys, and bones, with an increased risk of developing kidney disease, anemia and osteoporosis. In adults, lead exposure can also lead to high blood pressure and hypertension. However, children under the age of six and unborn babies incur the highest risks, as lead exposure can lead to lower IQ scores and behavioural issues.

Various provincial Acts set testing standards to measure chemicals in drinking water, and Ontario's legislation also makes it mandatory for older daycares and schools to be tested. Unfortunately, testing legislation is not the same in every province, and Prince Rupert, British Columbia recently found elevated levels of lead in four schools.

Some toxicity experts such as Bruce Lanphear, a professor of Health Sciences at Simon Fraser University, argue Canada is still far behind the United States when it comes to tracking lead levels and legislating safe conditions. He says the way in which Canada regulates toxins assumes there is a safe level, which fails to protect our children. Canada also needs to improve its communications strategies to ensure citizens understand the dangers of exposure to lead, and are aware of areas that may contain lead pipes and the importance of water testing and pipe replacement initiatives.

MP Bratina's motion seeks to start a dialogue at the federal level regarding the concerns of lead pipes and drinking water quality across Canada. His motion requests the Standing Committee on Transport, Infrastructure and Communities to undertake a study on the federal government's role

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in addressing the growing concerns of lead pipes and water quality in residences across Canada. The committee will study current metrics, replacement and treatment practices, and the federal government's role in working with its provincial, territorial and indigenous partners to establish solutions to these issues.

Links to Research

Chief Drinking Water Inspector Annual Report 2014-2015 - <https://www.ontario.ca/page/chief-drinking-water-inspector-annual-report-2014-2015>

“The 2013-2014 Chief Drinking Water Inspector's report provides detailed performance reviews of drinking water systems in Ontario, along with inspection results for those systems. This report also discusses the actions the Ministry of the Environment and others take to protect Ontario's drinking water.”

* See “Appendix 2: Status of corrosion control plans in 2013-14”

* The following cities and municipalities are undergoing corrosion control strategies to lower the lead content in their water: Gananoque, Hamilton, London, Red Lake, Sioux Lookout, Smith Falls, Terrace Bay, Thunder Bay, Windsor, Ear Falls, Toronto, Guelph, Lucan Biddulph, Owen Sound, Sarnia, Welland, Woolwich, Arnprior, Brantford, Sault Ste. Marie

Links to information about the strategies being used in a selection of cities to address the presence of lead in their drinking water:

Guelph – Replacement Program – Grants <http://guelph.ca/living/environment/water/drinking-water/drinking-water-and-lead/replacement-program/>

London - Lead Service Replacement Program – Loan Program
<https://www.london.ca/residents/Water/Water-System/Pages/Lead-Service-Replacement-Loan-Program.aspx>>

Toronto – Drinking Water – Lead Pipes

<http://www1.toronto.ca/wps/portal/contentonly?vqnextoid=35bcfe4eda8ae310VgnVCM10000071d60f89R CRD>>

* See: “Lead Mitigation Strategy Overview” which includes lead testing, corrosion control, and a priority lead water service replacement program.

Thunder Bay - Corrosion Control Plan

http://www.thunderbay.ca/Living/Environment/Drinking_Water/Lead_in_Drinking_Water.htm

Montreal's plan to replace lead pipes, explained <http://www.cbc.ca/news/canada/montreal/montreal-lead-pipes-1.3703585>

The Healthy Debate <http://healthydebate.ca/> website is sponsored by <http://healthydebate.ca/about-us/our-sponsors> the Ontario Hospital Association, the Canadian Institutes of Health Research, the University of Toronto Institute of Health Policy, Management and Evaluation and other respected organizations. Please consult the web page titled “Thousands of Canadians have lead in their drinking water. Do you?” <http://healthydebate.ca/2016/03/topic/lead-drinking-water>

Quote: “Statistics aren't available for the number of lead lines in each province, partially because some cities don't know which houses still have lead pipes. But in 2007, after the city of London, Ont., reported high lead levels in 25% of the older homes it tested, the Ontario Ministry

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of the Environment ordered municipalities across the province to test for lead in the water. Toronto did four rounds of testing between 2007 and 2009, and found that on average 20% of residential tests had lead water levels above 10 ug/L. (A Toronto Star investigation last year looked at only the 15,000 samples voluntarily taken by homeowners between 2008 and 2014, and found that 13% had high levels of lead.)

In 2014 to 2015, 95% of the residences tested across the province met the standard for lead. In Alberta, those percentages are lower, with lead estimated to affect 2% of Edmonton homes, and only 0.02% of those in Calgary.

The 2007 Ontario legislation also made it mandatory for older day cares and all schools to test their water, but that's not the case in other provinces. Just this month, Prince Rupert, B.C., found that 48% of the schools tested had elevated levels of lead in their drinking water.”

Lead found in Canadian pipes too, experts say <http://www.ctvnews.ca/health/lead-found-in-canadian-pipes-too-experts-say-1.2759009>

* The article talks about the research of Michele Prevost from the Canadian Water Network and the principal chair on drinking water with the National Science and Engineering Research Council

* The article states “Water toxicity experts estimate that at least 200,000 Canadian households are at risk of being exposed to lead through their drinking water...”

Ontario's Safe Drinking Water Act

<https://www.ontario.ca/laws/statute/02s32>
<https://www.ontario.ca/laws/regulation/030169>

Health Canada

Final Human Health State of the Science Report on Lead <http://www.hc-sc.gc.ca/ewh-semt/pubs/contaminants/dhhsr1-rpecscepsh/index-eng.php>, February 2013, Lead in Blood

Bruce Lanphear's Research

<https://www.sfu.ca/fhs/people/profiles/bruce-lanphear.html>
<http://www.straight.com/life/epidemiologist-bruce-lanphear-links-lead-levels-murder>
https://www.youtube.com/results?search_query=bruce+lanphear