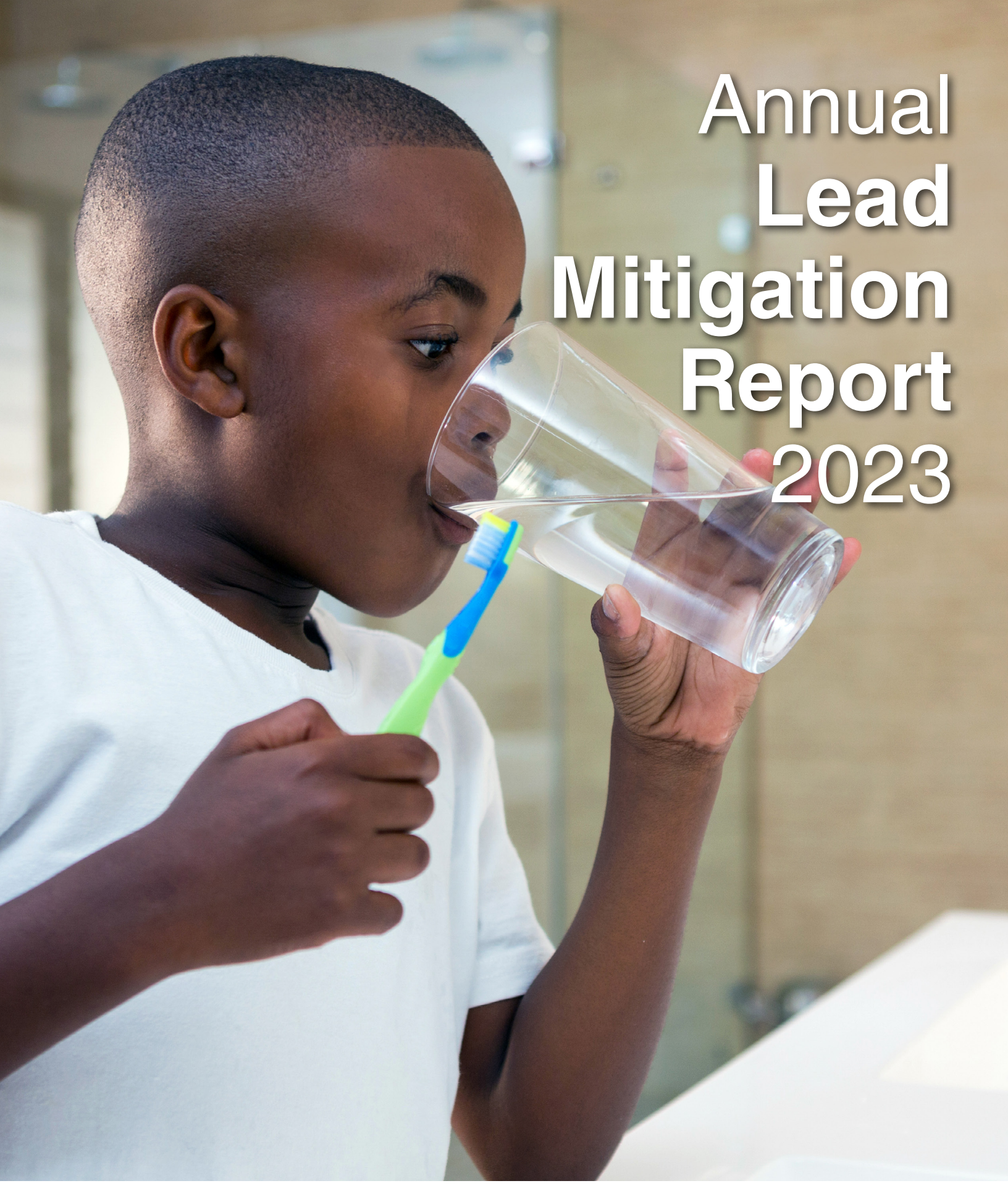

Annual Lead Mitigation Report 2023

TORONTO

Annual Report - Lead in Drinking Water Mitigation Strategy

In 2011, Toronto City Council approved the Lead in Drinking Water Mitigation Strategy, a comprehensive strategy comprised of corrosion control, replacement of lead water services, lead testing, a faucet filter program and public education to reduce lead in drinking water. Water produced at the City's drinking water treatment plants does not contain lead. Lead can be found in water service pipes in homes built before the mid-1950s; solder used to join pipes together before 1990 and leaded-brass fixtures, such as faucets and valves. As these items corrode and breakdown, lead can enter drinking water. This report is an annual update on the City's Lead in Drinking Water Mitigation Strategy.

Toronto's Corrosion Control Plan

Corrosion control is mandated and regulated by the Ministry of the Environment, Conservation and Parks (MECP). This treatment involves the addition of phosphate to the drinking water process. Phosphate forms a protective coating inside all pipes and household plumbing fixtures, which helps to reduce the potential for lead to enter tap water. It is a cost-effective strategy available to water utilities to address concerns related to lead entering drinking water. Endorsed as a lead reduction measure by authorities such as Health Canada and the United States Environmental Protection Agency, corrosion control was implemented in Toronto in December 2014 at all four water treatment plants by adding phosphate to the drinking water treatment process.

Regulated Testing

During the implementation of corrosion control, Toronto Water (TW) estimated that it could take up to two (2) years for a protective coating to form inside all pipes and as a result, the MECP provided relief from both regulated residential and non-residential lead sampling program. In March 2017, the MECP Drinking Water Licence was amended to include the completion of corrosion control implementation and to reinstate the regulated lead sampling program. The amended licence requires the annual collection of 10 distribution system samples and 55 tap water samples from homes and businesses with known or suspected lead water services. Public reporting of these results continues on an annual basis and can be found on the City website at: https://www.toronto.ca/services-payments/water-environment/tap-water-in-toronto/lead-drinking-water/ontario-regulated-lead-testing-program/

The 2023 regulated tap water test results show significantly lower lead levels compared with the lead levels measured prior to initiating corrosion control treatment. Of the 55 homes and businesses tested, none of the samples exceeded 10 parts per billion (ppb). Of the 17 distribution system samples tested, none exceeded 10 ppb. This contrasts with 2008 when 100 homes and businesses were tested, and 52 percent of the samples exceeded 10 ppb.

In Ontario, a drinking water system is in compliance with the lead regulations when no

more than 10 percent of the samples exceed the limit of 10 ppb.

In 2019, Health Canada lowered the Canadian Drinking Water Guideline limit for lead in drinking water to 5 ppb. The MECP is considering adopting this lower lead limit for Ontario. Based on the 2023 regulated test results, no distribution, residential or non-residential samples exceeded 5 ppb. Based on previous years' regulated sampling data, if the current allowance of no more than 10 percent of the samples exceeding the new proposed limit of 5 ppb applies, compliance with the proposed reduced limit will be achieved without any additional treatment requirements at the water treatment facilities.

Non-Regulated Testing Program

Non-regulated drinking water testing for lead continues to be provided at no cost, so residents and property owners can submit a lead tap water sample for analysis.

Prior to the mid-1950s, lead was commonly used to build pipes that deliver water from the street into residential homes. Lead pipes were not used in apartment and other buildings with more than six units, regardless of age. TW continues to distribute information packages to all residents whose lead test results indicate any level of lead to encourage residents to take action when measured lead levels are above the laboratory method detection limit.

Lower lead results have been observed in the non-regulated water samples since the implementation of corrosion control.

Lead Service Replacement

The City's Lead in Drinking Water Mitigation Strategy targets the replacement (planned and unscheduled) of substandard water service connections through three separate programs listed below:

- Priority Lead Water Service Replacement Program: Residents who commit to replacing the private portion of a lead water service can apply to have the City replace its side on a priority basis.
- Capital Water Service Replacement Program: The City replaces substandard drinking water pipes (including replacing lead pipes with copper) during capital works and infrastructure renewal programs such as watermain replacement, watermain structural lining, road reconstruction and sewer replacement.
- Emergency replacement: This occurs when the pipe that supplies water to a home is broken or has low flow which is under seven litres per minute.

Toronto Public Health (TPH) advises that it is desirable to remove as much lead from the water infrastructure as possible due to adverse health impacts and that both the public and private sides of the lead water service should be replaced at the same time wherever possible. Toronto has approximately 437,000 residential water service connections. In 2007, approximately 65,000 City-owned services were estimated to be lead. In 2014, a reassessment of the data records available provided an updated estimate of 38,000 public lead water services. At the end of 2023, the number of public lead water services remaining was estimated to be approximately 19,400.

Table 1: Lead Service Replacements

Program Name	Activities	2023	2022	2021	2020	2019	2018
Planned (Capital Project) Water Service Replacement*	Watermain replacement, Structural relining, Road reconstruction	0**	230	603	912	1098	483
Unplanned Water Service Replacement	Priority Lead Program	553	499	645	667	584	779
	Emergency Replacement	116	152	205	132	92	194
Total		669	881	1453	1711	1774	1456

*Service cards are received in batches. The numbers reflect service cards incorporated to date (February 15, 2024).

**City-side lead service replacements completed as part of planned capital watermain construction projects continued in 2023, however due to service card submission delays, the number of lead service replacements completed is still under review and will be confirmed in the 2024 annual report.

Faucet Filter Program

TW provides free NSF-053 certified faucet-filters for lead removal in the following instances to qualified homeowners:

- to all homes immediately after replacing the City-owned section of the lead pipe that supplies water to the home;
- when water meter staff have to cut into a lead water service on private property to install a new automated water meter.

As of February 1, 2015, a faucet filter is mailed out to residents once their application to the Priority Lead Water Service Replacement Program is accepted into the program. An annual $100 rebate for the purchase of a NSF-053 certified faucet-mounted filter is available to low income residents.

Public Education and Communication

Since 2007, TW and TPH have worked jointly on the preparation and dissemination of public education materials to residents about lead in drinking water. A wide range of communications resources, methods and channels are used to share information in support of this public education effort, including: social media, postcards, media releases, utility bills, City newsletters, health fact sheets with construction notices, program applications, free lead testing kits, social media, letters to residents with lead test results, direct mail (200,000 cards) to older homes where lead pipes are suspected, the HTO To Go Water Trailers at events, and faucet-filter distribution packages. In addition, non-regulated lead test sample results are posted on the City's Open Data website (2011-present), and regulated lead test sample data is publicly posted on the City's website.

On request, City staff will organize public meetings in areas with a significant number of homes that may have lead service. At these meetings, City staff from Engineering & Construction Services (ECS), TW and TPH will present information and answer questions about capital works projects in the area, lead and drinking water, and the City's programs and services to reduce lead exposure, including the implementation of corrosion control and distribution of faucet-filter kits. Free lead testing kits are distributed to residents at these events. There were no meeting requests were received in 2023.

City of Toronto Reports on Lead and Drinking Water

Previous staff reports and updates on lead in drinking water can be found on the City's website, as follows:

Annual Lead Mitigation Report 2022
https://www.toronto.ca/wp-content/uploads/2023/05/9087-FinalTW-Annual-Lead-Mitigation-Report-2022-AODA.pdf

Annual Lead Mitigation Report 2021
https://www.toronto.ca/wp-content/uploads/2022/07/982c-Annual-Lead-Report-2021-Final-AODA.pdf

Annual Lead Mitigation Report 2020
https://www.toronto.ca/wp-content/uploads/2021/05/8f43-TW-Annual-Lead-Mitigation-Report-2020-FINAL-AODA-.pdf

Annual Lead Mitigation Report 2019
https://www.toronto.ca/wp-content/uploads/2020/10/8e42-TW-Annual-Lead-Mitigation-Report-2019-FINAL.pdf

Ensuring the Quality of Toronto's Drinking Water – Update 2019
https://www.toronto.ca/legdocs/mmis/2019/ie/bgrd/backgroundfile-140502.pdf

Annual Lead Mitigation Report 2018
https://www.toronto.ca/wp-content/uploads/2019/06/96ce-TW-Annual-Lead-Mitigation-Report-2018-Final-a.pdf

Annual Report - Lead in Drinking Water Mitigation Strategy 2018
https://www.toronto.ca/legdocs/mmis/2018/pw/bgrd/backgroundfile-117624.pdf

Annual Report - Lead in Drinking Water Mitigation Strategy 2017
https://www.toronto.ca/legdocs/mmis/2017/pw/bgrd/backgroundfile-106572.pdf

Annual Report - Lead in Drinking Water Mitigation Strategy 2016
https://www.toronto.ca/legdocs/mmis/2016/pw/bgrd/backgroundfile-96257.pdf

Annual Report - Lead in Drinking Water Mitigation Strategy 2015
https://www.toronto.ca/legdocs/mmis/2015/pw/bgrd/backgroundfile-81085.pdf

Lead in Drinking Water Mitigation Strategy – Update 2014
https://www.toronto.ca/legdocs/mmis/2014/pw/bgrd/backgroundfile-72320.pdf

Appendix A: Corrosion Control Plan:
https://www.toronto.ca/legdocs/mmis/2014/pw/bgrd/backgroundfile-72321.pdf

Appendix B: Priority Lead Service Replacement Program - Work Order Process Flow
https://www.toronto.ca/legdocs/mmis/2014/pw/bgrd/backgroundfile-72322.pdf

Lead in Drinking Water Mitigation Strategy – Response to Request for Information and Contract Award/Reallocation of Funding for Corrosion Control 2013
https://www.toronto.ca/legdocs/mmis/2013/ex/bgrd/backgroundfile-57360.pdf

Appendix A: City of Toronto Water/Sewer Service Card
https://www.toronto.ca/legdocs/mmis/2013/ex/bgrd/backgroundfile-57361.pdf

Appendix B: The Potential Health Impacts of Partial Lead Service Line Replacement: A Summary of the Evidence.
https://www.toronto.ca/legdocs/mmis/2013/ex/bgrd/backgroundfile-57362.pdf

Corrosion Control Plan for Mitigating Lead in Drinking Water 2011
https://www.toronto.ca/legdocs/mmis/2011/pw/bgrd/backgroundfile-40685.pdf

Lead in Drinking Water Mitigation Strategy 2011
http://www.toronto.ca/legdocs/mmis/2011/bu/bgrd/backgroundfile-34876.pdf

Decision History

The decision history below represents staff reports to Council on programs for consideration to help homeowners fund the replacement of lead pipes on the private side of the water service connection:

1. July 09, 2020: Infrastructure and Environment Committee adopted item IE14.9 regarding the "Options Analysis for the Replacement of Residential Private Side Lead Water Service Pipes". This report provides a review of options for financial assistance with replacing private lead services including assistance through the Home Renovation Program, grants, loans as well as adding the cost of changing lead pipes to the home owner's mortgage. This report is available at:
http://www.toronto.ca/legdocs/mmis/2020/ie/bgrd/backgroundfile-148107.pdf
2. December 05, 2019: Infrastructure and Environment Committee adopted item IE10.8 " Ensuring the Quality of Toronto's Drinking Water - Update", as amended, and in doing so, requested the Chief Financial Officer and Treasurer to report back to the Infrastructure and Environment Committee (i) on the monthly amount a home owner would pay if they applied the cost of changing their lead pipes by adding the costs to their mortgage, applying current rates of a 5 year/25 year mortgage and (ii) with an analysis of ways the City can assist residents looking to replace private-side lead water service pipes and to also give consideration to the following: assistance through the Home Renovate Program; grants; and loans or working with financial institutions. This Council decision can be viewed at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.IE10.1
3. June 20, 2017: Public Works and Infrastructure Committee adopted item PW14.12 regarding the "Feasibility of Using Toronto Renovates Funds to Replace Residential Private-Side Lead Water Service Pipes". This report stated that the Affordable Housing Office will continue to consider residential private-side lead water pipe replacement as part of the Toronto Renovates home repair program, on a case by case basis. This would be subject to an individual homeowner's eligibility for Toronto Renovates and the specific repairs/modifications submitted for funding approval, recognizing that the scope of repair and modification work is determined at the homeowner's discretion. This report is available at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.PW14.12

4. November 3 and 4, 2015: City Council adopted item PW7.20 "Loan Program for Replacement of Residential Private-Side Lead Water Pipes", as amended, and in doing so, directed the Director of Affordable Housing Office, in consultation with other appropriate City staff, to report back to the Public Works and Infrastructure Committee in the first quarter of 2016, on the feasibility of Toronto Renovates funds to be used for replacement of private lead water pipes. This Council decision can be viewed at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2015.PW7.20
5. August 25, 2014: City Council adopted item PW33.16 "Feasibility of Introducing a Residential Private-Side Lead Water Service Connection Replacement Funding Program", and directed the General Manager, Toronto Water, and the Deputy City Manager & Chief Financial Officer to develop a self-funded loan program for property owners wishing to replace lead water service connections situated on their properties, and to report back by the second quarter of 2015 on the details of such program. This Council decision can be viewed at: http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.PW33.16