

**3. LEAD PIPE REPLACEMENT PROGRAM UPDATE**

**ACTUALISATION DU PROGRAMME DE REMPLACEMENT DES  
CONDUITES DE BRANCHEMENT EN PLOMB**

**COMMITTEE RECOMMENDATIONS**

**That Council:**

- 1. Approve the proposed changes to the Lead Pipe Replacement Program as outlined in this report;**
- 2. Delegate authority to the General Manager, Public Works & Environmental Services, to make further updates to the Lead Pipe Replacement Program within the approved budget, as required.**

**RECOMMANDATIONS DU COMITÉ**

**Que le Conseil :**

- 1. Approuve les changements proposés au Programme de remplacement des conduites de branchement en plomb comme le précise le présent rapport;**
- 2. Délègue au directeur général de la Direction générale des travaux publics et de l'environnements le pouvoir d'actualiser le Programme de remplacement des conduites de branchement en plomb conformément au budget approuvé, s'il y a lieu.**

DOCUMENTATION / DOCUMENTATION

1. General Manager's Report, Public Works and Environmental Services Department dated 6 September 2019 (ACS2019-PWE-GEN-0013).

Rapport du Directeur général, Direction générale des travaux publics et de l'environnement, daté le 6 septembre 2019 (ACS2019-PWE-GEN-0013).

2. Extract of Draft Minute, 17 September 2019.

**Note:** This item was considered in conjunction with EPWWM Council Report 5, Item No. 4, *2018 Drinking Water Quality Management System Annual Management Review Report and Operational Plan* (ACS2019-PWE-WTS-0018).

Extrait de l'ébauche du procès-verbal, le 17 septembre 2019.

**Nota :** Ce point est examiné parallèlement au point n° 4 du rapport au Conseil du PEEGD n° 5, « *Rapport annuel de l'examen par la direction et plan d'exploitation en vertu de la norme de gestion de la qualité de l'eau potable de 2018* » (ACS2019-PWE-WTS-0018).

**STANDING COMMITTEE ON  
ENVIRONMENTAL PROTECTION,  
WATER AND WASTE MANAGEMENT**

**30**

**COMITÉ PERMANENT DE LA  
PROTECTION DE  
L'ENVIRONNEMENT, DE L'EAU ET  
DE LA GESTION DES DÉCHETS  
RAPPORT 5  
LE 25 SEPTEMBRE 2019**

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**Report to  
Rapport au:**

**Standing Committee on Environmental Protection, Water and Waste  
Management  
Comité permanent de la protection de l'environnement, de l'eau et de la  
gestion des déchets  
17 Sep 2019 / le 17 sept. 2019**

**and Council  
et au Conseil  
9/25/19 10:00 AM / 9/25/19 10:00 AM**

**Submitted on September 6, 2019  
Soumis le 6 septembre 2019**

**Submitted by  
Soumis par:  
Kevin Wylie, General Manager, Public Works and Environmental Services  
Department / Directeur général, Travaux publics et services  
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**Ward: CITY WIDE / À L'ÉCHELLE DE LA VILLE      File Number: ACS2019-PWE-GEN-0013**

**SUBJECT:   Lead Pipe Replacement Program Update**

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**OBJET: Actualisation du Programme de remplacement des conduites de  
branchement en plomb**

## **REPORT RECOMMENDATIONS**

**That the Standing Committee on Environmental Protection, Water and Waste Management recommend that Council:**

- 1. Approve the proposed changes to the Lead Pipe Replacement Program as outlined in this report;**
- 2. Delegate authority to the General Manager, Public Works & Environmental Services, to make further updates to the Lead Pipe Replacement Program within the approved budget, as required.**

## **RECOMMANDATIONS DU RAPPORT**

**Que le Comité permanent de la protection de l'environnement, de l'eau et de la gestion des déchets recommande au Conseil :**

- 1. D'approuver les changements proposés au Programme de remplacement des conduites de branchement en plomb comme le précise le présent rapport;**
- 2. De déléguer au directeur général de la Direction générale des travaux publics et de l'environnements le pouvoir d'actualiser le Programme de remplacement des conduites de branchement en plomb conformément au budget approuvé, s'il y a lieu.**

## **BACKGROUND**

The Lead Pipe Replacement Program (LPRP), formerly the Proactive Lead Service Replacement Program, was approved by Council in 2006 ([ACS2006-PWS-UTL-0013](#)) as a pilot project to protect public health by replacing lead water pipes. The program assists homeowners with the replacement of lead service pipes by hiring and managing the contractor and reducing the financial impact of the replacement by offering deferred payment options on the property tax bill. The program has a \$1-million annual budget.

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Lead water service lines are a shared responsibility between the City and the property owner. The City is responsible for the portion from the watermain to the property line, while the property owner is responsible for the portion from the property line into the home. The City does not have accurate records of the number and location of private lead water services; however, these services are limited by property type and construction date. Lead service lines were used to supply water to residential properties up until the mid-1950's. In Ottawa, there are an estimated 30,000 homes built prior to 1955, representing approximately 15% of Ottawa homes. Today, copper or cross-linked polyethylene tubing is used to connect homes to the water main.

Since the 1960s, exposure to lead in Canada has drastically declined, however some residents continue to be exposed to small amounts of lead that can dissolve into tap water through contact with lead service lines and plumbing fixtures. In 2008, the continuance of the program was approved by Council ([ACS2008-PWS-WWS-0001](#)), giving priority to homes with children six years of age and under and expectant mothers.

Under the current program, property owners are eligible if:

- Both the private and public portions are lead,
- The City is planning capital rehabilitation work on the public portion; or
- The City replaced the public portion less than two years from the date the property owner will complete the work.

When both the private and public portions are to be replaced, the City and the homeowner hire the same bonded contractor to address work in the Right of Way and Ministry of Labour requirements. Additionally, the City addresses permit requirements and manages the contractor.

Once the work is complete, the property owner pays the contractor directly through a one-time payment or reimburses the City for the cost of the private portion, along with any applicable overages, through a one-time payment or a 10-year interest-bearing loan on the property tax bill.

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The main benefit to the program is that property owners benefit from the price negotiated by the City for the work, which is typically lower than what could be negotiated for work on the private portion only. When only the private portion is replaced and within the two year window, the homeowner hires the contractor, manages the work, pays the contractor, and may apply for a loan under the Lead Pipe Replacement Program.

Since the LPRP began in 2006, less than 5% or approximately 1,070 of the estimated 30,000 private services have been replaced. The program is historically underspent and currently distributes approximately 50% of the available funds each year. Some factors contributing to low participation include:

- Property owners are not aware they have lead services;
- Property owners are not aware of the potential health impacts of lead in drinking water;
- The cost of replacement is too high; and/or
- The impact of the construction work is unwanted.

On March 8, 2019, Health Canada announced a lower maximum acceptable concentration (MAC) for lead in drinking water reducing the previous limit set in 1992 from 10 parts per billion (ppb) to 5 ppb. The Health Canada standard is a guideline since water quality standards are provincial jurisdiction. However, the Province may adopt the 5 ppb MAC as a new [Ontario Drinking Water Quality Standard](#). In order to proactively address this potential change and implement best practices, a lead level mitigation strategy is being proposed in the Drinking Water Quality Management System (ACS2019-PWE-WTS-0018) report being tabled concurrently with this report. To support that strategy, enhancements to the LPRP are being proposed in this report to improve participation and program delivery and support the City's efforts to reduce resident's exposure to lead through drinking water.

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## DISCUSSION

To address potential changes to the [Ontario Drinking Water Quality Standards](#) and increase participation in the LPRP so more residents can access support to replace lead service lines, a program review was conducted. The program review included an evaluation of programs offered by eleven other municipalities and an analysis of the program barriers specific to the City of Ottawa's program.

The program review revealed the eligibility criteria was likely a key contributor to low participation. A key demographic was excluded from the program, specifically property owners with a private lead service only. This demographic represents approximately 30 per cent of applications received under the current program during the past five years. The recommended enhancements to the program will help address this barrier and as a result, make the program more accessible.

Based on the program review, the following enhancements to the LPRP are recommended:

- **Recommendation 1:** Create a new stop-gap measure by offering impacted residents a filter kit consisting of NSF-53 certified water filters and pitcher to remove lead from the drinking water at no cost to the resident;
- **Recommendation 2:** Create a new rebate option for property owners with only private lead service;
- **Recommendation 3:** Continue the current loan option for property owners with both public and private lead services, but limit the loan repayment period.

The program enhancements recommended above will make the program more accessible, support the replacement of lead infrastructure and align our program with the new Health Canada guidelines on lead levels in drinking water. In addition, limiting the loan repayment period will improve the City's ability to plan future work, since funds will be repaid within a predictable timeframe and be automatically reinvested in the program. Finally, providing a stop-gap measure will protect public health by giving residents an option to implement promptly to reduce their exposure to lead in drinking water.

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**Recommendation 1: Filters as a stop-gap measure**

In order to promptly help protect residents from the potential impacts of lead in drinking water, a temporary measure of offering filter kits is recommended. Residents will be eligible for a filter kit including a pitcher and six filters (approximately a years' worth) if:

- City water tests confirm lead levels exceed new Health Canada guideline; or
- The property owner has applied to the Lead Pipe Replacement Program for either the rebate or loan option.

If this option is approved, the City would purchase filter kits for distribution to qualified residents. The estimated annual cost for the filters is \$50,000 and will be provided through the existing LPRP budget. This option would also assist in identifying properties with lead services and should provide sufficient time to replace a lead service while avoiding winter construction issues.

The number of kits distributed would be limited to one per municipal address to discourage reliance on filters and encourage participation in either the rebate or loan options. Kits would be distributed to qualified residents by Technology, Innovation and Engineering Support Services (TIESS) staff. Exceptions to the one-time distribution may be considered for properties with high levels of lead (greater than 5 ppb flowing test) and children under six years of age or expectant mothers.

**Recommendation 2: Create a new rebate option**

Creating a new rebate option for property owners with only private lead services will open eligibility to a key demographic currently not eligible for the program. The proposed rebate of up to \$1,000 can be applied to trenching and replacement costs only. In the [Lead in Drinking Water report](#) tabled in the House of Commons in 2017, the Federation of Canadian Municipalities estimated that it typically costs \$5,000 to replace the private portion of a lead service line. Applications for the rebate option will require, at a minimum:

- A copy of the building permit/final inspection report for the work; and
- An itemized invoice.



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A study prepared for the City of Guelph found that significantly higher levels of residential lead service line replacements took place when a grant, as opposed to a loan was available. The grant program uptake was between 6 per cent to 9 per cent compared with 0.2 per cent to 1.5 per cent uptake for municipalities with loan programs.<sup>1</sup> The changes proposed in this report recommend offering both a rebate and loan option to increase participation and make the program more accessible.

In addition to supporting increased participation, this option assists the City in collecting information on lead services city-wide by identifying properties with private lead services currently not captured. Property owners can participate in either the rebate or loan option but are not eligible for both options. Property owners participating in either the rebate or the loan option are both eligible for the filter option.

**Recommendation 3: Limit the loan repayment period**

Based on the program review, minor updates are recommended to the loan option for property owners with both public and private lead pipes. Under the current program, the City provides financial assistance to eligible property owners for the replacement of the private portion of the lead water service in the form of a 10-year loan. Since 2007, 206 loans with a total dollar value of almost \$600,000 have been processed by the City. All loan repayments are used to fund future work under the program.

Loan applications require, at a minimum, an application form and an itemized invoice from the completed work. The Loan Option provides similar value to the Rebate Option as the property owner benefits from economies of scale for trenching work and receives City assistance in addressing permit requirements and managing the contractor. Minor updates to the loan repayment period are recommended, specifically limiting the loan repayment period to:

- 5 years for loans less than or equal to \$5,000; and
- 10 years for loans greater than \$5,000.

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<sup>1</sup> *Private Lead Service Lines Pilot Program Review*. BMA Management Consulting Inc., Guelph, ON 2009.

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This update is expected to improve the City's ability to complete future work more quickly, as program funds will become available sooner and reinvested in a shorter timeframe. Limiting the loan repayment period may also reduce costs to the property owner, since the loan is interest bearing.

**Operational Readiness**

The recommended program changes are expected to begin in Q1 2020. To prepare for increased participation in the LPRP, an online intake process will be developed to improve the convenience of the application process, which was previously done through 3-1-1. Currently, the loan [Eligibility Assessment Form](#) is available online.

The Water Quality Unit will continue to conduct on-site testing of drinking water for residents if they have concerns about lead levels in their tap water. Residents should contact 3-1-1 to arrange for an appointment. If there is a significant increase in requests to have on-site water testing, Water Services staff will be temporarily re-assigned to the Water Quality Branch to conduct testing within a reasonable timeframe. The Water Quality Branch will also explore other options for expediting the sampling process if needed, such as dropping-off sample kits for residents to collect tap water samples for submission to the laboratory.

Staff are not recommending an increase to the \$1 million Lead Pipe Replacement Program budget. Participation rates will continue to be monitored, and if rates drastically increase - households with children age six and under and expectant mothers would be prioritized. This report is also seeking delegated authority for the General Manager of Public Works and Environmental Services to make program changes within the budget authority. Future changes to the program may be required based on program participation and changes to the [Ontario Drinking Water Quality Standard](#).

**Next Steps**

Communication and outreach to residents to inform them of the existing LPRP is currently taking place. Given that property owners eligible for the program are those in homes built prior to 1955 with a full or partial lead service, a distribution method specific to the target audience includes:

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- Information on [Ottawa.ca](http://Ottawa.ca);
- Water Quality staff distribute materials as part of the water sampling program;
- Infrastructure Services staff distributes materials as part of their information package to property owners prior to water main capital rehabilitation work;
- Linear Rehabilitation and Grants staff distribute materials when encountering a home with a lead water service pipe or as part of follow up on property owner inquiries;
- Water Distribution staff distribute materials when conducting maintenance work in an area believed to have lead water service pipes; and,
- Ottawa Public Health distributes materials as part of the standard hand-outs for pregnancy classes.

Communication materials for the LPRP will be updated to reflect the program changes. In addition to the communications outlined above, a targeted campaign to homes built before 1955 will begin when the program changes launch in Q2 2020 and will include:

- The 'Keep your Tap Water Lead-Free" brochure will be sent to the approximately 30,000 homes built before 1955;
- A notification will be added to the water bills of those approximately 30,000 households, referring them to the updated Lead Pipe Replacement Program page on [Ottawa.ca](http://Ottawa.ca);
- Ottawa Public Health will distribute materials as part of the standard hand-outs for parenting classes in addition to pregnancy classes to target families with young children.

Communication strategies will be evaluated and adjusted as needed.

**RURAL IMPLICATIONS**

There are no rural implications to the recommendations of this report.

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**CONSULTATION**

There was no consultation for this report.

**COMMENTS BY THE WARD COUNCILLOR(S)**

The report is city wide.

**ADVISORY COMMITTEE(S) COMMENTS**

There was no advisory committee consultation as part of this report.

**LEGAL IMPLICATIONS**

There are no legal impediments to Committee and Council's approval of the recommendations of this Report.

**RISK MANAGEMENT IMPLICATIONS**

The City is responsible for the quality of water at the tap. Research shows that even low concentrations of lead can have adverse health impacts, including neurological, cognitive, behavioural and cardiovascular effects. As detailed in the Drinking Water Quality Management System (DWQMS) report (ACS2019-PWE-WTS-0018), tabled concurrently with this report, staff are recommending Orthophosphate be introduced to the drinking water system to mitigate the impacts of lead in drinking water. Changes proposed to the Lead Pipe Replacement program serve to complement the mitigation measure of introducing Orthophosphate to the drinking water system.

**ASSET MANAGEMENT IMPLICATIONS**

The implementation of the CAM program results in timely decisions that minimize lifecycle costs and ensure the long-term affordability of assets.

To fulfill its obligation to deliver quality services to the community, the City must ensure that assets supporting City services are managed in a way that balances service levels, risk and affordability. The Lead Pipe Replacement Program provides for solutions to upgrade aging infrastructure in a timely fashion in order to continue to be far better than the Ontario Drinking Water Quality Standards. The Program considers asset

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management system elements that help inform decision making processes necessary to protect Ottawa's drinking water system and reduce public health risks.

**FINANCIAL IMPLICATIONS**

There are no financial implications to Committee and Council's approval of the recommendations of this Report.

**ACCESSIBILITY IMPACTS**

There are no accessibility impacts resulting from the recommended program changes in this report.

**ENVIRONMENTAL IMPLICATIONS**

There are no environmental implications to approving the recommendations of this report.

**TECHNOLOGY IMPLICATIONS**

There are no technology implications to the recommendations of this report.

**TERM OF COUNCIL PRIORITIES**

The program changes described in this report support the Service Excellence strategic priority.

**DISPOSITION**

That Council direct staff to implement the program changes outlined in the report and delegate authority to the General Manager, Public Works and Environmental Services to make future changes to the program, within the approved budget.