

April 18, 2019

To: Members  
Public Works and Infrastructure Committee

Re: Lead Service Connection Management Program Update

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### RECOMMENDATION

That this report be received and filed.

### CONCLUSION

Administration will continue to enhance the Lead Service Connection Management Program (LSCMP) within the existing budget. This will include:

- Increased lead service connection replacement
- Continued improvement of our construction practices
- Improved record keeping for both the City of Regina (City) and privately-owned lead service connections
- Exploration of the feasibility and implications of corrosion control technologies
- Continued public education and communication

### BACKGROUND

Ninety-five per cent of City-owned water service connections (see Appendix A) today are lead-free. In the past, up to 7,000 City-owned lead service connections were present. City records show that less than 3,600 remain at the beginning of 2019.

On June 26, 2017 (CR17-74), City Council approved additional elements for the LSCMP including a filter and testing program for residents (see Appendix B).

On April 30, 2018 (CR18-27), City Council was provided with an update of 2017 and proposed 2018 program activities. Administration was also directed to provide a report to Public Works & Infrastructure (PWI) Committee annually on the progress of the LSCMP.

### DISCUSSION

#### **2018 Program Description**

A number of new industry standards relating to managing lead service connections are expected in the near future. Earlier this year, Health Canada released *Health Canada's Guidelines for Canadian Drinking Water Quality Guideline Technical Document Lead* that reduced the maximum acceptable concentration of lead in drinking water from 0.010 mg/L to 0.005 mg/L. In

preparation for these and other proposed changes, proactive data collection and education was the primary focus of the 2017 and 2018 LSCMP. Specific 2018 program activities included the following:

- **Replacement:**
  - The City currently replaces the City-owned side of lead service connections when they break or during planned major road upgrades. The City-owned portion of the lead service connection is replaced during re-development of an existing property with a lead service connection. The City also replaces a City-owned lead service connection when requested by a property owner, where the private portion of the service connection is not lead.
  - The City replaced 144 City-owned lead service connections through City construction programs in 2018. This 32 per cent increase is up from 109 City-owned lead service connections replaced in 2017. In 2018, the City received and accepted eight applications to replace a City-owned lead service connection from residents. These replacements are scheduled to take place in 2019.
  
- **Random Testing Study:**

This testing program collects data by testing tap water in 50 to 100 homes each year in order to evaluate corrosion.

  - Testing participants were recruited through a combination of random selection as well as residents who expressed an interest in the program.
  - Sampling was completed at 90 residential homes. The other participants were obtained by contacting residents where City work related to the service connection occurred, and by responding to public requests.
  - The City's results indicate that the City should continue to enhance the program, based on Health Canada's guidance.
  
- **In-Home Point of Use Testing:**
  - The second testing program offered by the City provides eligible property owners and residents an option for lead testing. Property owners collect and submit their own tap water sample and the City covers the analytical costs.
  - In 2018, the City received 84 requests for In-Home Point of Use Testing. Of those, 14 have followed through with the testing. In 2017, three residents expressed an interest in this testing.
  
- **Filters:**

Eligible residents (see Appendix B) have the option to receive either a City-provided filter with replacement cartridges that last for one year or a one-time rebate of up to \$100.00.

  - In 2017, this program cost \$1,375.00 and provided:
    - four rebates at a total cost of \$360.
    - 19 City-provided filters costing approximately \$50.00 each, plus tax, at a total cost of \$1,012.32.

- In 2018, this program cost just over \$27,000.00 and provided:
  - 21 rebates at a total cost of \$2,020.
  - 315 City-provided filters in total costing approximately \$25,000.00
- In 2018, the City offered eligible residents the tap-mounted filter used in previous years and a new pitcher-style filter for residents that have non-standard kitchen taps.
- **Public Information:**
  - Educational material is provided on Regina.ca and directly to sampling participants regarding actions residents and property owners can take to reduce their potential exposure to lead.
  - An annual notification letter is provided to residents and owners of properties serviced by a City-owned lead service connection.
  - In late 2018, the City mailed 4,468 letters to all owners and residents of properties where records indicate that a City-owned lead service line is present. The letters provided actions residents can take and offered a free filter. The City received 752 service requests in 2018 in response to the notification representing more than 675 locations. Residents continue to respond to this mail-out into 2019.
  - A notification letter is sent to property owners affected by construction, where the lead service connection could be disturbed, that advised them of the LSCMP and filter and testing options.

## **2019 Program Enhancements**

Response to the City's annual notification is better than expected, with a resident or owner from approximately one-third of the addresses affected contacting the City. As the test results from 2018 fall in the range where Health Canada recommends additional enhancements, the LSCMP will implement improvements in 2019. These improvements include:

- **Increase lead service connection replacement**
  - The City is targeting a 10 per cent increase (up to 160 total) of lead service connection replacements in 2019. To accomplish this, the City will develop activities to provide more options to replace City-owned lead service connections. This is to ensure that the City can be more responsive to residents. The rate of lead service connection replacements will continue to increase as residents become more aware of options. It also helps to ensure that replacements are done in a manner that will be effective in reducing lead concentrations in tap water. Increasing the rate of City-owned lead service connections without property owner participation is not effective in reducing lead concentrations.
- **Continue Improving Construction Practices**
  - The City will continue to review construction practices to ensure that lead service connection replacements occur whenever the opportunity is available.
  - The City will explore other technical solutions such as service connection relining.

- Improve record keeping for both City and privately-owned lead service connections
  - The City will collect information on private lead service connections in conjunction with other City programs, such as meter replacement. The collected information will improve record keeping and track progress towards replacing lead service connections regardless of their ownership.
- Explore feasibility and implications of corrosion control technologies
  - The City will continue to explore the addition of a corrosion control chemical to the water to reduce lead in tap water. Work is currently ongoing to analyze the technical requirements and understand their implications. Changes to water chemistry are complex and can have impacts on the wastewater treatment system.
- Public education and communication
  - Continue an already established communication strategy to raise awareness of the various drinking water programs, including LSCMP. The City will repeat the annual notification letter, encouraging residents to get a free water filter and to assist the City in conducting water testing at residents' taps. This will be supported by other tactics including brochures, videos and Regina.ca content. The program will be monitored for effectiveness and additional tactics will be added as needed.

The above improvements are based on best management practices to achieve the goal of reducing the risk of lead at the tap.

These improvements are focused actions the City can take; however, to be effective in reducing the potential for lead in tap water, residents will have to use the information and supports, such as the filters provided. These actions will ensure the City is effectively managing the program, which is intended to remove all lead service connections from the City's water distribution system, while ensuring customers have the information and means to reduce their risk of lead exposure.

## RECOMMENDATION IMPLICATIONS

### Financial Implications

Assuming work is evenly distributed until all lead service connections are replaced and costs to replace lead service connections remain at historical averages, the proposed activities can be managed within the existing long-term financial model for the Utility and by itself, will not result in a rate increase. Unit costs to replace a lead service connection will be monitored as some replacements in older neighbourhoods require significantly more work including, in some cases, replacing sections of water main piping. If unit costs rise, future year budget allocations may be required.

The LSCMP is funded through both capital and operating utility funds.

The 2019 Utility Capital Budget includes funding for water infrastructure renewal. Lead service connection replacements are a portion of the work funded from this budget. No additional funding is required in 2019 to address additional expected lead service connection replacements that may result from increased resident and business owner awareness. The capital budget includes \$4.5 million for service connection replacement. A portion of this work would be replacing lead service connections.

The 2019 Utility Operational Budget also includes funding for the LSCMP. The operational funding is for staffing, filters, the Random Testing Study, communication needs and in-home point of use testing. The operational budget for the LSCMP is \$235,000.

### Environmental Implications

None with respect to this report.

### Policy and/or Strategic Implications

Over the long term, the LSCMP is consistent with the City's *Design Regina: The Official Community Plan* (OCP) as follows:

- A revised program will meet industry best practices for managing lead service connections (OCP D4 Goal 1 - Safe and Efficient Infrastructure).
- Additional financial resources to replace City-owned lead infrastructure helps make the City's LSCMP affordable and accessible to all property owners of Regina (OCP D11 Goal 5 - Social Inclusion: 13.19).
- Providing filters or a rebate for a filter, demonstrates that Regina is a caring community for all property owners, including those who are vulnerable and marginalized and who may not be able to afford lead service connection replacement (OCP D11 Goal 4 - Vulnerable and Marginalized Populations).
- Future program activities will encourage the replacement of both the City-owned and privately-owned lead service connections, helping to improve the condition of existing housing stock (OCP D6 Goal 2 - Existing Housing Stock: 8.9).

### Other Implications

None with respect to this report.

### Accessibility Implications

None with respect to this report.

### COMMUNICATIONS

Information on the revised LSCMP is currently available on Regina.ca. Activities during 2019 will continue to focus on providing information to residents that may have a City-owned or privately-owned lead service connection. This information will include:

- Providing educational information to residents and property owners where partial lead service connections are replaced.
- Letters to property owners seeking volunteers to participate in water testing.
- Letters to property owners where a City-owned lead service connection is present, as well as information targeting property owners in areas where lead service connections may have been used on either side of the property line.
- Improved communication with residents whose service is impacted by a neighbouring lead service connection replacement.

DELEGATED AUTHORITY

The recommendation contained in this report is within the delegated authority of Public Works & Infrastructure Committee.

Respectfully submitted,



Pat Wilson, Director  
Water, Waste and Environmental Services

Respectfully submitted,



Kim Onrait, Executive Director  
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