

# Public Works and Infrastructure Committee

Thursday, June 8, 2017 4:00 PM

Henry Baker Hall, Main Floor, City Hall



#### OFFICE OF THE CITY CLERK

# Public Agenda Public Works and Infrastructure Committee Thursday, June 8, 2017

#### **Approval of Public Agenda**

# **Adoption of Minutes**

Minutes of the meeting held on May 11, 2017

# **Administration Reports**

PWI17-11 Request for Proposal (RFP) - Engineering Services for Detailed Design and Construction of Creeks Wastewater Pumping Station Expansion

# **Recommendation**

- 1. That City Council Approve issuance of a Request for Proposal (RFP) to initiate the engagement of professional engineering services for the design and construction supervision of the Creeks Wastewater Pumping Station Expansion.
- 2. That City Council delegate authority to the Executive Director, City Planning & Development to award the RFP, provided the fee for engineering services is less than the project budget including contingency.
- 3. This report be forward to the June 26, 2017 meeting of City Council for approval.

# PWI17-12 Lead Service Connection Management Program

#### Recommendation

- 1. That City Council approve the additional elements to the Lead Service Connection Management Program. These elements are:
  - (a) a water filter program (See Appendix A) that provides eligible residents and property owners with either:
    - (i) a lead-removal filter that is certified to remove lead with sufficient replacement inserts to last for 12 months; or



# OFFICE OF THE CITY CLERK

- (ii) a rebate of up to \$100 per location for the purchase of a filter certified to remove lead; and
- (b) free annual water testing (In-Home Point of Use Testing) for lead for eligible homeowners and property owners (See Appendix A).
- 2. That Administration be directed to provide a report to City Council prior to April 30, 2018 outlining enhancements to the Lead Service Connection Management Program.
- 3. That this report be forwarded to the June 26, 2017 meeting of City Council for approval.

# Adjournment

# AT REGINA, SASKATCHEWAN, THURSDAY, MAY 11, 2017

# AT A MEETING OF PUBLIC WORKS AND INFRASTRUCTURE COMMITTEE HELD IN PUBLIC SESSION

#### AT 4:00 PM

These are considered a draft rendering of the official minutes. Official minutes can be obtained through the Office of the City Clerk once approved.

Present: Councillor Sharron Bryce, in the Chair

Councillor Lori Bresciani Councillor John Findura Councillor Jason Mancinelli Councillor Barbara Young

Also in Council Officer, Elaine Gohlke Attendance: Legal Counsel, Jayne Krueger

Executive Director, City Planning & Development, Diana Hawryluk

Director, Planning, Shauna Bzdel

Manager, Infrastructure Planning, Geoff Brown

Manager, Business Development - Transit, Nathan Luhning Manager, Roadways Preservation, Nigora Yulyakshieva

Senior Engineer, Traffic, Carolyn Kalim

### APPROVAL OF PUBLIC AGENDA

Councillor Young moved, AND IT WAS RESOLVED, that the agenda for this meeting be approved, as submitted, and that the delegations be heard in the order they are called by the Chairperson

#### ADOPTION OF MINUTES

Councillor Bresciani moved, AND IT WAS RESOLVED, that the minutes for the meeting held on March 9, 2017 be adopted, as circulated.

#### ADMINISTRATION REPORTS

PWI17-10 Transportation Master Plan

#### Recommendation

1. That City Council approve the attached Transportation Master Plan and authorize the use of the Transportation Master Plan as a guide for future transportation related decisions and actions.

- 2. That Administration be directed to provide a progress report regarding implementation of the Transportation Master Plan to the Public Works and Infrastructure Committee by Q4 2018.
- 3. That this report be forwarded to the May 29, 2017 meeting of City Council for approval.

Secretary

Chairperson

June 8, 2017

To: Members

Public Works and Infrastructure Committee

Re: Request for Proposal (RFP) - Engineering Services for Detailed Design and Construction of Creeks Wastewater Pumping Station Expansion

# RECOMMENDATION

- 1. That City Council Approve issuance of a Request for Proposal (RFP) to initiate the engagement of professional engineering services for the design and construction supervision of the Creeks Wastewater Pumping Station Expansion.
- 2. That City Council delegate authority to the Executive Director, City Planning & Development to award the RFP, provided the fee for engineering services is less than the project budget including contingency.
- 3. This report be forward to the June 26, 2017 meeting of City Council for approval.

# **CONCLUSION**

Based on the recommendations presented in the *Southeast Lands: Wastewater Serviceability Concept Report* (Stantec, August 30, 2016) and the *Predesign Report for the Creeks Wastewater Pumping Station Expansion* (Associated Engineering, August, 2016), the existing Creeks Wastewater Pumping Station needs to be expanded to provide service to the remaining phases of development in the Greens on Gardiner, The Creeks and The Towns neighbourhoods.

To achieve the above recommendations, the current pumping capacity requires to be expanded. This will be achieved by the installation of a second force main and completing upgrades to the existing lift station.

# **BACKGROUND**

The Creeks Wastewater Pumping Station was designed to accommodate short term development within The Creeks and The Greens on Gardiner subdivisions, with provisions for future upgrades to increase pumping, storage and force main capacity. With continued development in Regina's southeast including the continuing development of The Creeks and The Greens on Gardiner subdivisions and the new development of The Towns and Eastbrook subdivisions, expansion of the pumping station is now required. This work is aligned with the Southeast Regina Neighbourhood Plan and *Design Regina: The Official Community Plan Bylaw No. 2013-48* (OCP) with respect to addressing the infrastructure requirement to growth accommodation.

The estimated total cost for professional engineering services is approximately \$1,200,000. The process of acquisition of these services shall be in alignment with *The Regina Administration Bylaw 2003-69* for Consulting and Professional Service Contracts valued greater than \$500,000.

# **DISCUSSION**

The Southeast Lands: Wastewater Serviceability Concept Report (Stantec, August 30, 2016) recommends that the Creeks Pumping Station be expanded to service a catchment area consisting of The Creeks and The Greens on Gardiner subdivisions, and the Towns and Eastbrook subdivisions, as shown in Figure 1 in Appendix A-1.

Based on wastewater collection system modelling, the report recommends specific criteria for total pumping capacity and storage. The addition of this capacity and storage will accommodate the wastewater capacity requirements of the development areas.

The major scope of work of the Creeks Wastewater Pumping Station Expansion includes design and construction of the following:

- A new cast in place concrete off-line storage tank
- Two additional pumps to increase lift station capacity
- Twinning the existing force main with a second force main
- New clean out (swab launches) on the existing and new force mains
- Perimeter access road and fencing
- Surface drainage improvements
- Landscaping
- Other related work

It is the Administration's intent to proceed with the following timeline subsequent to the approval of this report:

- August 2017 Public RFP to be issued
- September 2017 Award RFP
- October 2017 to March 2018 Design

Depending on the design, it is the Administration's intent to deliver on the recommendations with respect to construction in 2018 and 2019.

# **RECOMMENDATION IMPLICATIONS**

# **Financial Implications**

The value of the engineering services estimated in the *Predesign Report for the Creeks Wastewater Pumping Station Expansion* (Associated Engineering, August, 2016) is \$1,200,000, including design and construction supervision and contingency. The funding for this work was approved by Council in CR15-138 in December 14, 2015, and is funded from Servicing Agreement Fees. The expenditure was previously contemplated by Council in CR15-14

Servicing Agreement Fee (SAF) and Development Levy (DL) Policy Review and Final Phasing and Financing Project where the growth-related capital projects list was reviewed and updated. Funding is approved and allocated for this project to proceed.

# **Environmental Implications**

There is currently a risk for wastewater to discharge into the Chuka Creek at the location of the pumping station. The expansion will remedy this by reducing the risk of wastewater overflowing to Chuka Creek. Approval from the Water Security Agency is required through this process and in advance of the construction. This application will be part of the professional engineering services.

# Policy and/or Strategic Implications

The OCP provides the City with direction on the phasing and staging of new development and identifies the municipal services needed to accommodate this growth. These services to support growth are aligned with the City policy in the OCP the direct growth and associated infrastructure requirements.

With continued development in Regina's southeast, the expansion of The Creeks Wastewater Pumping Station will service a much broader area as shown in Figure 1 of Appendix A-1 and as indicated in Section 7.3.2 of the Southeast Neighbourhood Plan, which was approved by Council in CR16-107 on September 26, 2016. The capacity and storage upgrades are required to achieve the development of these identified areas.

#### Other Implications

This report aligns with the recommendations of the Stantec report, *Southeast Lands: Wastewater Serviceability Concept Report* (Stantec, August 30, 2016).

The report is also consistent with the recommendations presented in the Associated Engineering's *Predesign Report – Creeks Wastewater Pumping Station Expansion* dated November 2016.

#### **Accessibility Implications**

None with respect to this report.

#### COMMUNICATIONS

The public notification process will be followed as outlined in Part V of Schedule D of *The Regina Administration Bylaw 2003-69*, Sections 51 through 65. Generally, this requires the Administration to advertise for these services nationally. In addition to the typical procurement communication, the Water Security Agency and Saskatchewan Ministry of the Environment will be notified of this project as part of the design process. The Administration will have a communication strategy in place to respond to public inquiries on the project and public service announcements as required.

# **DELEGATED AUTHORITY**

The recommendations contained within this report require City Council approval.

Respectfully submitted,

Fred Searle, A/Director Development Services

Respectfully submitted,

Diana Hawryluk, Executive Director City Planning and Development

# **Appendix A-1**

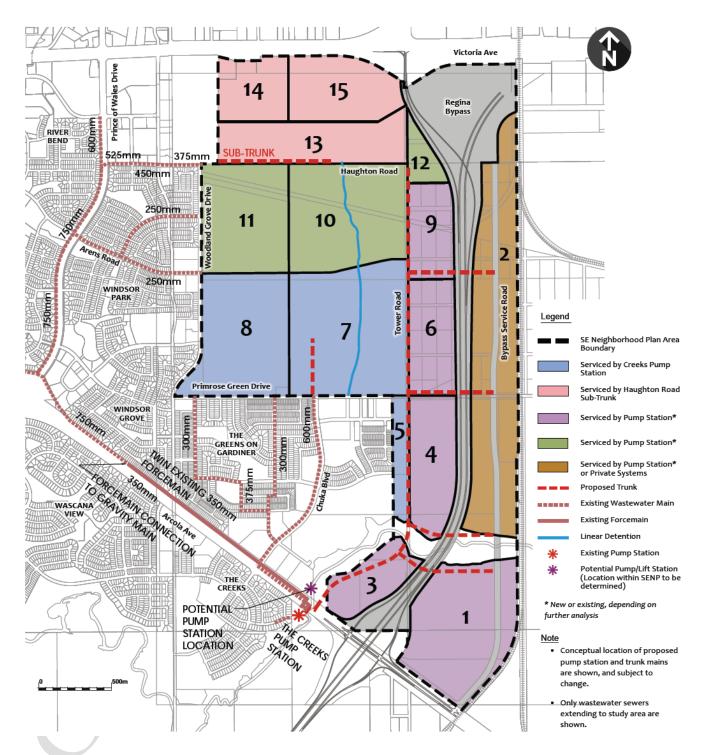


Figure 1 – Upgraded Creeks Lift Station Servicing Area (From Southeast Neighbourhood Plan)

June 8, 2017

To: Members

Public Works and Infrastructure Committee

Re: Lead Service Connection Management Program

#### RECOMMENDATION

1. That City Council approve the additional elements to the Lead Service Connection Management Program. These elements are:

- (a) a water filter program (See Appendix A) that provides eligible residents and property owners with either:
  - (i) a lead-removal filter that is certified to remove lead with sufficient replacement inserts to last for 12 months; or
  - (ii) a rebate of up to \$100 per location for the purchase of a filter certified to remove lead; and
- (b) free annual water testing (In-Home Point of Use Testing) for lead for eligible homeowners and property owners (See Appendix A).
- 2. That Administration be directed to provide a report to City Council prior to April 30, 2018 outlining enhancements to the Lead Service Connection Management Program.
- 3. That this report be forwarded to the June 26, 2017 meeting of City Council for approval.

#### **CONCLUSION**

The Administration recommends enhancing the City of Regina's (City) current Lead Service Connection Management Program to include:

- providing a device for filtering lead (Filter Rebate and Filter Provision activities) or a rebate for such a device for residents and property owners or businesses, where a defined set of criteria is met (See Appendix A); and
- providing property owners and residents an option for free lead testing (In-Home Point of Use Testing), where the property meets the criteria set out in Appendix A to this report, which will also serve to broaden the City's sample results.

Following the completion of the 2017 water sampling program, Administration will review the data and may recommend updates to the Lead Service Connection Management Program in early 2018.

#### **BACKGROUND**

The water received from the Buffalo Pound Water Treatment Plant and in the City's water mains is free of lead, meeting the City's regulatory obligations. As with all water provided by any municipality, if the water touches materials containing lead, lead can enter the water. Lead materials can be found in approximately five per cent of City-owned service connections in Regina, which connect the water mains to individual buildings, and in plumbing inside some buildings. Several factors determine whether traces of lead is present in tap water, including water chemistry, the condition of a lead service connection, and whether lead-containing materials are present in the building's plumbing.

The City is responsible for the City-owned portion of the service connection from the water main to the property line. The property owner is responsible for the privately-owned portion of the service connection from the property line into the home, as well as in-house plumbing (See Appendix B).

Between 1900 and the 1930s, lead was a common plumbing material used in service connections, but also in some home plumbing, solder and brass. In the 1950s, the City stopped installing lead service connections. In 2009, the City completed testing following federal government recommendations. In the early 2010s, the City stopped repairing leaks on Cityowned lead service connections and instead began replacing them. In 2014, the City began actively replacing City-owned lead service connections before major roadways work, and recently, the City construction standards were changed to adopt low-lead brass fittings and devices.

# **Current Lead Service Connection Management Program**

The City has been actively managing City-owned lead service connections for some time. Currently, the City replaces the City-owned side of lead service connections when they break or during planned major road upgrades. During re-development of an existing property with a lead service connection, the City-owned portion of the lead service connection is also required to be replaced.

Ninety-five per cent of City-owned water service connections today are lead-free. There were originally about 7,000 City-owned lead service connections and City records show that approximately 3,900 remain.

Information regarding Lead Service Connection Management Programs in other municipalities is contained in Appendix C.

#### **DISCUSSION**

#### **Program description**

New industry standards relating to managing lead service connections are expected in the near future. In preparation of these expected changes, proactive data collection and education is the focus of the 2017 Lead Service Connection Management Program. This year's program activities will include:

- performing a Random Testing Study that includes proactively collecting data through a tap water testing study with about 50-100 residents, which will provide more precise information to develop the final phase of a Lead Service Connection Management Program;
- providing educational material to the public including locations of known lead service connections, health risk information, and actions residents and property owners can take; and
- increasing the number of replacements of City-owned lead service connections through existing construction projects.

Knowledge of the impacts and best practices on the management of lead materials has improved over time. The following two new initiatives are recommended for City Council approval to enhance the City's management of lead services connections:

- providing a device for filtering lead (Filter Rebate and Filter Provision activities) or a rebate for such a device for residents and property owners or businesses, where a defined set of criteria is met (See Appendix A); and
- providing property owners and residents an option for free lead testing (In-Home Point of Use Testing), where the property meets the criteria set out in Appendix A to this report. Property owners will be able to collect and submit their own sample and this will serve to broaden the City's sample results.

The following is a timeline of proposed activities:

Activities	Implementation		
	Timeline		
Random Testing Study	July 2017		
Filter Rebate*	August 2017		
In-Home Point of Use Testing*	August 2017		
Filter Provision (through City procured filters)*	September 2017		
Additional Educational Material	September 2017		
Council Report for further program activities	April 2018		

<sup>\*</sup> Pending City Council approval

The following are the advantages and risks associated to the recommendations in this report: Advantages:

- Educates the public about their risk from lead service connections.
- Assists the City to achieve the goals contained in the Official Community Plan (OCP).
- Allows the City's program to be consistent with best practices and practices in a number of other Canadian municipalities.
- Provides enhanced public assistance (e.g. filters) to address the risks associated with a lead source whether they are from a City-owned lead service connection, privately owned lead pipe or other plumbing materials that may contain lead.

• In-home point of use testing provides residents with information about their own home and enables the City to have a wider set of data.

#### Risks:

- The City will incur additional costs for testing, filter rebates and filters to remove lead from tap water. The 2017 Utility Budget submission requested an allocation of \$235,000 to fund a filter rebate program and testing.
- May increase demands from property owners for City-owned lead service connection replacements, which could require future year budget allocations.

Following the completion of the 2017 sampling program, Administration will review the data and may recommend updates to the Lead Service Connection Management Program in early 2018. Future recommendations may include:

- increasing the rate of replacing lead service connections;
- impacts to road renewal programs;
- assistance for replacing the private side of a lead service connection;
- additional centralized treatment; and
- other strategies to reduce the risk of lead exposure.

This will ensure the City is best managing the program that is ultimately aimed at removing all lead connections from the City's water distribution system.

#### RECOMMENDATION IMPLICATIONS

# **Financial Implications**

Assuming work is evenly distributed until all lead service connections are replaced, 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. Based on the recommendations, the following financial implications will result:

Proposed Item	30 yr Whole Life Cycle Cost	<b>Annual Budget</b>
In-Home Point of Use Testing <sup>1</sup>	\$1,000,000	\$71,000
Random Testing Study	\$150,000	\$10,000
Filters Program <sup>2</sup>	\$1,920,000	\$123,000
Total	\$3,070,000	\$204,000

<sup>&</sup>lt;sup>1</sup> Assumes 25 per cent of eligible property owners complete testing annually. Actual numbers expected to be significantly lower, based on results of similar programs in other cities.

The funding is sufficient for the anticipated uptake based on similar programs in comparable municipalities. However, the above values could vary substantially as they are based on demand.

<sup>&</sup>lt;sup>2</sup> Assumes 10 per cent uptake of filters program per year with a cost of \$100 per household. Assumed program uptake is based on results of similar programs in other cities.

If the use of the program is much higher than anticipated, the amount transferred to the General Utility Reserve at year end would be reduced. This can be managed within the long term utility financial model.

The 2017 Utility Capital Budget includes \$570,000 for the Lead Service Connection Management Program. This amount is intended to address additional service replacements by City crews that may result from increase resident and business owner awareness and testing results.

The 2017 Utility Operational Budget also includes \$235,000 for the Lead Service Connection Management Program. This operational funding is intended for the first partial year of the new Filter Program, the Random Testing Study and In-Home Point of Use Testing. The table above shows a full-year estimate of \$204,000 for these three elements. Future budget requests will be modified based upon the demand for services. This will be reviewed in the proposed 2018 City Council Report.

# **Environmental Implications**

None with respect to this report.

# Policy and/or Strategic Implications

Over the long term, the Lead Service Connection Management Program is consistent with the City's 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 Lead Service Connection Management Program 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 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 Lead Service Connection Management Program will be available to the public after City Council approves the program. Activities during 2017 will focus on offering public assistance through a filter program and In-home Point of Use Testing, if approved, and collecting further information to influence future program activities.

Additional communications to the public will be completed. This information will include providing educational information to residents and property owners where partial lead service connections are replaced, letters to impacted property owners seeking volunteers to participate in water testing, as well as ensuring updated information is available on Regina.ca.

# DELEGATED AUTHORITY

The recommendations contained in this report require City Council approval.

Respectfully submitted,

Respectfully submitted,

Pat Wilson, Director Water Works Karen Gasmo, Executive Director Transportation & Utilities

Report prepared by:

 $Christopher\ Seeley,\ A/Manager-Environmental\ Engineering,\ Water\ Works$ 

#### APPENDIX A

# **Proposed Program Activities**

# A. Testing

Two types of testing are proposed. Together, they will provide information for evaluating and refining, if necessary, the Lead Service Connection Management Program. Testing tap water for lead serves many valuable purposes including:

- determining amount of lead corrosion;
- evaluating potential exposure;
- helping the City set priorities;
- engaging consumers in understanding the issue; and
- determining adherence to government recommendations.

Tap water sampling can identify homes with lead levels which suggest that further sampling and investigation should be done. However, water testing alone, particularly a single water test, cannot reliably determine if a property has a lead service connection.

# 1. Random Testing Study

The City will complete detailed annual sampling at 50 to 100 sites, following industry guidelines recommended by Health Canada. The testing will include 11 or more samples taken during a number of different conditions to simulate water use scenarios. Test locations will be selected from volunteers living in private residences.

This testing will provide in-depth information about lead including potential sources of lead and effectiveness of flushing. This testing program will:

- 1) demonstrate adherence to industry lead testing best practices;
- 2) provide information to determine the corrective measures to undertake if elevated lead concentrations occur; and
- 3) provide information to determine the level of future monitoring.

# 2. In-Home Point of Use Testing

The second monitoring approach will provide free testing for interested residents and property owners. On request, City staff will arrange free water testing for eligible residents and property owners (~12,000 buildings). The test procedures will follow the applicable Health Canada recommendations.

This voluntary tap water sampling program will:

- inform and empower individual households to take action to reduce risk; and
- provide the City with ongoing information to assess amount of lead corrosion occurring in the system.

A single test does not reflect the actual risks posed by a lead service connection. As long as a lead service connection is present, periodic testing is advisable and the connection should eventually be replaced.

All residents and property owners within the City are eligible to participate in free lead testing where any of the following is true:

- the building was constructed prior to 1960 and is in a neighbourhood where other lead service connections are present;
- records indicate that the building is served by a known City-owned lead service connection:
- the City-owned lead service connection was replaced in the last five years; or
- there are incomplete historical records for the City-owned service connection material (i.e. material unknown), and the building is in a neighbourhood that has lead service connections present.

This testing will provide geographically wide lead results that will assist in determining potential for City-wide variations or impacts.

The Administration will work with an accredited laboratory to arrange the details of the program to minimize staffing required to manage sampling and testing procedures. City staff will only administer the residential testing (e.g. paying invoices, managing test results, providing sample forms and directions) and not conduct the actual sample collection and delivery to the laboratory.

#### **B.** Filters (Rebate or Provision)

Eligible residents and property owners will be able to either receive: (i) a City-purchased and selected filter, certified to NSF International Standard 53 for lead removal; or, (ii) a rebate of up to \$100 for the purchase of a NSF 53 filter certified for lead removal. NSF 53 is a standard published by NSF International that sets minimum requirements for the certification of an in-home filtration system to remove drinking water contaminants, such as lead.

A water filter or water filter rebate will be offered to residents and property owners who meet the following criteria:

- Records indicate that the building is served by a City-owned lead service connection.
- The building is confirmed to be served by a private lead service connection.
- Water in the building has been tested for lead and exceeds Health Canada Guidelines.
- Where a partial lead service connection replacement has occurred.

Rebates will be provided for invoices dated January 1, 2016 or later.

# APPENDIX B

# Water Service Connection Responsibility



**Note:** While the water meter is inside the home, it is City-owned and maintained by the City.

Credit: City of London

# APPENDIX C

# **Jurisdictional Comparison**

Saskatoon, Moose Jaw, Brandon, Edmonton, Calgary and Halifax were surveyed to determine their approach for lead service connections.

Program Element	Number of Municipalities that offer this Element (out of 6)		
Filter Rebate or Filter	5 – Saskatoon, Brandon, Edmonton,		
	Calgary and Halifax		
Random Testing Study	5 – Saskatoon, Moose Jaw,		
	Edmonton, Calgary and Halifax		
In-Home Point of Use Testing	3 – Brandon <sup>1</sup> , Moose Jaw <sup>1</sup> and		
	Halifax		
Annual Notification to property owners served by a City-	4 – Saskatoon, Brandon <sup>2</sup> , Edmonton,		
owned LSC connections	and Calgary		
No cost replacement of City-owned LSC under specific	5 – Saskatoon, Moose Jaw,		
conditions	Edmonton, Calgary and Halifax		

<sup>&</sup>lt;sup>1</sup> Two of the four municipalities that offer a similar program charge residents for the lab costs.

<sup>&</sup>lt;sup>2</sup> One of the four municipalities has recently completed a one-time mail out to affected property owners and it is not certain if the notifications will continue.

# **Detailed Review**

Municipality	Public Portion of Lead Service Connection (LSC)	Private Portion LSC	Financing	Lead Exposure Mitigation	Lead Testing	Communications
United States Environmental Protection Agency's National Drinking Water Advisory Council Recommendations	<ol> <li>Set proactive replacement goals not related to lead levels in water (Both portions of all lead service connections replaced by 2050).</li> <li>No credit for city-owned side replacement unless private-side is/has been replaced.</li> </ol>	The private-side of a lead service connection should be replaced at the same time as city-owned side.	Municipalities should have creative financing options to ensure full lead service connection replacements.	Options for risk management for occupants with remaining partial lead service connections (e.g. filters, sampling, dielectric to reduce galvanic corrosion, plastic piping, aggressive premise flushing) should be included.	Residential Testing - Provide for consumer testing at taps.	<ol> <li>More robust public education, update consumer confidence reports, add targeted outreach.</li> <li>Engage the public to ensure that private-side lead service connections are replaced.</li> </ol>
The above United St Canada.	ates Environmental Protection Agency's N	lational Drinking Water Advi	sory Council Recommendations	s were made in 2015 and will	influence further regulator	y changes in the U.S.A. and
Saskatoon (5,000 to 5,500 LSC*)	The entire service connection (Cityowned and private) is replaced by a contractor hired by the City, if one of three eligibility criteria are met:  1. Service connection failure (e.g. leak);  2. Road reconstruction; or  3. Neighbourhood program (new).  Program was recently changed to align with cast iron water main replacement	Private portion must be replaced during City-owned side replacement. City provides the licensed water and sewer contractor, who completes the private and public portion replacement.	The homeowner is charged 40 percent of the cost to replace the City-owned and private-side to a maximum of \$2,975 + GST (2016). This is believed to be the full cost of the private-side replacement.  Homeowner can pay contractor directly or the City through tax system.	If a lead service connection is disturbed, the City will provide:  1. a lead-removal filter (e.g. repair); or  2. temporary water - the service connection is put on the list as emergency work.	Lead Testing Program (approx. 50 sites)	Annual notice (LSC sites)
*Lead service connections			If homeowner doesn't agree to pay, the city-owned side will be replaced and the service shut off until the homeowner can demonstrate that the private lead service has been replaced.			

Municipality	Public Portion of Lead Service Connection (LSC)	Private Portion LSC	Financing	Lead Exposure Mitigation	Lead Testing	Communications
Moose Jaw (~2,000 to 2,200 LSC) Program details under review	The City-owned side of the service connection is replaced by the City at City expense, if eligibility criteria is met:  1. if there is a leak on the private or City-owned side; or  2. if a homeowner replaces their side.  The Cast Iron Water Main Replacement Program was proposed to be one of the criteria. This program is currently being redeveloped by the city.	Required Replacement  1. If there is a leak on private-side of the service connection, lead replacement is required (City crew or private contractor at homeowner's choice).  2. During Cast Iron Replacement Program, it was previously proposed that replacing lead service connections would be mandatory; however, the program is being reworked.  Recommended Replacement  1. If there is a leak on Cityowned side, the City recommends replacement of private lead service connection (City crew or private contractor).	\$8,450 to \$9,530 is charged to the homeowner for replacing the private portion of a lead service and the entire sewer service. Replacement of the City-owned portion of water service is free for the property owner.  The cost can be put on taxes over 7 years with interest through <i>The Local Improvement Act, 1993</i> The previously proposed Cast Iron Main Replacement Program included replacing lead service connection at no extra cost; however, this program is being reworked.	No	<ol> <li>Lead Testing Program         (approximately 30         sites)</li> <li>Residential Testing -         Private individuals are         charged \$30</li> </ol>	Case-by-case

Municipality	Public Portion of Lead Service Connection (LSC)	Private Portion LSC	Financing	Lead Exposure Mitigation	Lead Testing	Communications
Brandon (~ 3,600 LSC)	None noted. Under review	Brandon will provide coordination and cost-sharing for the replacement of lead water services. Homeowner is responsible for private-side. A private contractor completes the work (public and private side).	Homeowner pays private contractor as per their terms. City currently covers 50 percent of the City-owned side. The costs are currently under review.	A one-time filter rebate of up to \$100 is provided for homeowners where:  1. a lead service connection is confirmed; or  2. test results show lead at levels higher than national drinking water guidelines.	Residential Lead Testing - Private individuals are charged \$20 or \$40 (area dependent).	Initial notice was sent to 5,200 homes based on house age and lead service connection presence. Website with age of home (based on taxation records) and a map showing the likelihood of lead service connections.
EPCOR - Edmonton (~4,000 LSC)	The City-owned side of the service connection is replaced by the City at City expense if one of three eligibility criteria met:  1. service connection failure;  2. road reconstruction; or  3. Lead Service Replacement Program (within 60 – 90 days if resident replaces private-side).	Residents are responsible to replace their own service connection. This is voluntary.	None	A free filter unit is provided to lead service locations (one time only). New tenants or homeowners also qualify for a free filter unit.	Lead Testing Program     (approximately 100 to 200 sites)      Plumbosolvency Program      Random city wide testing	<ol> <li>Annual notice (LSC sites and suspected LSC sites)</li> <li>Notice to new account's (LSC sites and suspected LSC sites)</li> <li>Test results and related information</li> </ol>
Calgary (~630 LSC)	The City-owned side of the service connection is replaced by the City at City expense if one of four eligibility criteria are met:  1. significant service connection failure or significant road reconstruction;  2. main replacement;  3. City-owned side replacement if resident replaces private-side; or  4. high lead test results (> 10 ppb) on first flush sample or average of 4 consecutive 1-L samples.	Residents are responsible to replace their own service connection. This is voluntary.	None	A one-time rebate of up to \$100 for NSF certified filter for any household, where lead may be present on the City-owned side, private- side or home plumbing.  New residents or owners would qualify for another filter rebate.	Lead Testing Program (approximately 100 sites) - Free	Annual notice (LSC sites and suspected LSC sites)     Test results and related information

Municipality	Public Portion of Lead Service Connection (LSC)	Private Portion LSC	Financing	Lead Exposure Mitigation	Lead Testing	Communications
Halifax (~2,500 LSC)	The City-owned side of the service connection is replaced by the City at City expense if one of three eligibility criteria are met:  1. service connection failure;  2. water main replacement; or  3. after the private-side is replaced.  City tries to avoid partial service connection replacement (i.e. no replacement during major road work) due to local studies that showed prolonged increased lead concentrations after partial replacements.	Residents are responsible to replace their own service connection. This is voluntary.	None	A free filter and replacement filters for up to one year are provided to a customer when:  1. Halifax Water disturbs the connection (public portion replacement); or  2. if the customer replaces the privateside.	1. Lead Testing Program (approx. 50 sites).  2. Lead Service Connection Replacement Testing - After a partial or complete lead service connections replacement occurs, customers are offered testing until lead drops below 0.01 mg/L or the customer withdraws.  3. One-off Testing, as requested - Customers with a known lead service connection; a home built prior to 1960 with unknown service material or special circumstances, receive free testing.	Planned Construction     Notification Letters     (LSC sites and suspected LSC sites)      Emergency     Construction     Notification Letters     (LSC sites and suspected LSC sites)      Test results and related information
City of Regina  (~3900 LSC)  RECOMMENDED	The City-owned side of the service connection is replaced by the City at City expense if any of these eligibility criteria are met:  1. service connection failure;  2. road reconstruction;  3. main replacement;  4. further coordination with other capital projects; or  5. City-owned side replacement if resident replaces private-side.  No cost to replace if requested by homeowner. Some cost if requested as part of redevelopment.	Residents are responsible to replace their own lead service connection. This is voluntary. However, future program activities will be developed to encourage homeowners to replace (as identified under financing).	None	Residents that meet eligibility criteria can:  1. obtain free filter from the City; or  2. purchase their own qualifying filter and obtain a rebate.	1.Random Testing Study     (50-100 sites per year)     2.In-Home Point of Use     Testing available for     residents and businesses     that meet eligibility     criteria	1. Planned Construction     Notification Letters     (LSC sites and     suspected LSC sites)     2. Emergency Construction     Notification Letters     (LSC sites and     suspected LSC sites)     3. Test site solicitation,     results and related     information

<sup>\*</sup>Information based on phone conversations with Administration officials in early 2016.