

APPENDIX C

Jurisdictional Comparison

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

| Program Element | Number of Municipalities that Offer this Element (Out of Six) |
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| Filter Rebate or Filter³ | Five – Saskatoon, Brandon, Edmonton, Calgary and Halifax |
| Random Testing Study | Five – Saskatoon, Moose Jaw, Edmonton, Calgary and Halifax |
| In-Home Point of Use Testing | Three – Brandon ¹ , Moose Jaw ¹ and Halifax |
| Annual Notification to Property Owners Served by a City-owned LSC | Four – Saskatoon, Brandon ² , Edmonton, and Calgary |
| No Cost Replacement of City-owned LSC Under Specific Conditions | Five – Saskatoon, Moose Jaw, Edmonton, Calgary and Halifax |

¹ Two of the three municipalities that offer a similar program charge residents for the lab costs.

² 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.

³ One of the five municipalities offers filters only after an LSC has been disturbed and is considered a temporary fix until the line is replaced.

Detailed Review

| Municipality | Public Portion of LSC | Private Portion LSC | Financing | Lead Exposure Mitigation | Lead Testing | Communications |
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| United States Environmental Protection Agency's National Drinking Water Advisory Council Recommendations | <ol style="list-style-type: none"> Set proactive replacement goals not related to lead levels in water. Both portions of all LSCs replaced by 2050. No credit for City-owned side replacement unless private-side is/has been replaced. | <p>The private-side of an LSC should be replaced at the same time as the City-owned side.</p> | <p>Municipalities should have creative financing options to ensure full LSC replacements.</p> | <p>Options for risk management for occupants with remaining partial LSCs (e.g. filters, sampling, dielectric to reduce galvanic corrosion, plastic piping, aggressive premise flushing) should be included.</p> | <p>Residential Testing - Provide for consumer testing at taps.</p> | <ol style="list-style-type: none"> More robust public education, update consumer confidence reports, add targeted outreach. Engage the public to ensure that private-side LSCs are replaced. |
| <p>The above United States Environmental Protection Agency's National Drinking Water Advisory Council Recommendations were made in 2015 and will influence further regulatory changes in the U.S.A. and Canada.</p> | | | | | | |
| Saskatoon (5,000 to 5,500 LSCs) | <p>The entire service connection (City-owned and private) is replaced by a contractor hired by the City, if one of three eligibility criteria are met:</p> <ol style="list-style-type: none"> Service connection failure (e.g. leak); Road reconstruction; or Neighbourhood program. <p>The program was recently changed to align with cast iron water main replacement.</p> | <p>Private portion must be replaced during City-owned side replacement. The City provides the licensed water and sewer contractor, who then completes the private and public portion replacement.</p> | <p>The homeowner is charged 40 per cent of the cost to replace the City-owned and private-side to a maximum of \$3,160.00 + GST (2017). This is believed to be the full cost of the private-side replacement.</p> <p>Homeowner can pay contractor directly or the City through their taxes over one, three, five, or ten years.</p> | <p>If an LSC is disturbed, the City will provide:</p> <ol style="list-style-type: none"> A lead-removal filter (e.g. repair); or Temporary water - the service connection is put on the list as emergency work. | <p>Lead Testing Program (approximately 50 sites).</p> | <p>Annual notice (LSC sites).</p> |

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| | | | <p>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.</p> | | | |
| <p>Moose Jaw (~2,000 to 2,200 LSCs)</p> <p>Program Details Under Review</p> | <p>The City-owned side of the service connection is replaced by the City at City expense if the following eligibility criteria is met:</p> <ol style="list-style-type: none"> 1. In conjunction with the Cast Iron Water Main Replacement program; 2. If there is a leak on the City-owned side; 3. During significant road reconstruction; or 4. If a homeowner replaces their side. | <p><u>Required Replacement</u></p> <ol style="list-style-type: none"> 1. If there is a leak on private-side of the service connection, lead replacement is required if completed by City crews (City crew or private contractor at homeowner's choice). 2. During Cast Iron Replacement Program. Work is coordinated and completed by the contractor. | <p>\$8,450.00 to \$9,530.00 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.</p> <p>The cost can be add to the property owners' tax account over seven years with interest through <i>The Local Improvement Act, 1993</i>.</p> | <p>No.</p> | <ol style="list-style-type: none"> 1. Lead Testing Program (approximately 30 sites) 2. Residential testing - private individuals are charged \$30.00. | <p>Case-by-case and information on their website.</p> |

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| | | <p><u>Recommended Replacement</u></p> <p>If there is a leak on City-owned side, the City recommends replacement of a private LSC by either a City crew or private contractor.</p> | | | | |
| <p>Brandon (~ 3,600 LSCs)</p> | <p>None noted. Under review.</p> | <p>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).</p> | <p>Homeowner pays private contractor as per their terms. City currently covers 50 per cent of the City-owned side. The costs are currently under review.</p> | <p>A one-time filter rebate of up to \$100.00 is provided for homeowners where:</p> <ol style="list-style-type: none"> 1. An LSC is confirmed; or 2. Test results show lead at levels higher than national drinking water guidelines. | <p>Residential Lead Testing - Private individuals are charged \$20.00 or \$45.00 (area dependent).</p> | <ol style="list-style-type: none"> 1) Initial notice was sent to 5,200 homes based on house age and LSC presence. 2) Website with age of home (based on taxation records) and a map showing the likelihood of LSCs. |

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| EPCOR - Edmonton (~4,000 LSCs) | The City-owned side of the service connection is replaced by the City at City expense if one of three eligibility criteria met: <ol style="list-style-type: none"> 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 for one time only. New tenants or homeowners also qualify for a free filter unit. | <ol style="list-style-type: none"> 1. Lead Testing Program (approximately 100 to 200 sites) 2. Plumbosolvency Program 3. Random city-wide testing | <ol style="list-style-type: none"> 1. Annual notice (LSC sites and suspected LSC sites). 2. Notice to new accounts (LSC sites and suspected LSC sites). 3. Test results and related information. 4. New communication with the change in proposed Health Canada limit. |
| Calgary (~630 LSCs) | The City-owned side of the service connection is replaced by the City at City expense if one of four eligibility criteria are met: <ol style="list-style-type: none"> 1. Significant service connection failure or significant road reconstruction; 2. Main replacement; 3. City-owned side replacement if resident replaces private-side; or | Residents are responsible to replace their own service connection. This is voluntary. | Under review. | A one-time rebate of up to \$100.00 for a 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 | <ol style="list-style-type: none"> 1. Annual notice (LSC sites and suspected LSC sites). 2. Test results and related information. |

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| | <p>4. High lead test results (> 10 ppb) on first flush sample or average of 4 consecutive 1-L samples.</p> | | | | | |
| <p>Halifax (~2,500 LSCs)</p> | <p>The City-owned side of the service connection is replaced by the City at City expense if one of three eligibility criteria are met:</p> <ol style="list-style-type: none"> 1. Service connection failure; 2. Water main replacement; or 3. After the private-side is replaced. <p>The 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.</p> | <p>Residents are responsible to hire a contractor.</p> | <p>A grant of 25 per cent, up to \$2500.00, is provided for private LSC renewal.</p> | <p>A free filter and replacement filters for up to one year are provided to a customer when:</p> <ol style="list-style-type: none"> 1. Halifax Water disturbs the connection (public portion replacement); or 2. If the customer replaces the private-side. | <ol style="list-style-type: none"> 1. Lead Testing Program (approximately 50 sites) 2. LSC Replacement Testing - After a partial or complete LSC replacement occurs, customers are offered testing until lead drops below 0.01 mg/L or the customer withdraws. | <ol style="list-style-type: none"> 1. Planned Construction Notification Letters (LSC sites and suspected LSC sites) 2. Emergency Construction Notification Letters (LSC sites and suspected LSC sites) 3. Test results and related information 4. Working to inform residents every 3 years until lead is removed from the system |

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| | | | | | <p>3. One-off Testing, as requested: Customers with a known LSC; a home built prior to 1960 with unknown service material or special circumstances, receive free testing.</p> | |
| <p>Regina (~3900 LSCs)</p> | <p>The City-owned side of the service connection is replaced by the City at City expense if any of these eligibility criteria are met:</p> <ol style="list-style-type: none"> 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. <p>No cost to replace if requested by homeowner. Some cost if requested as part of redevelopment.</p> | <p>Residents are responsible to replace their own LSC. This is voluntary; however, future program activities are being explored to encourage homeowners to replace.</p> | <p>None.</p> | <p>Residents that meet eligibility criteria can either:</p> <ol style="list-style-type: none"> 1. Obtain free filter from the City; or 2. Purchase their own qualifying filter and obtain a rebate. | <ol style="list-style-type: none"> 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. | <ol style="list-style-type: none"> 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. 4. General information letters (Properties where City-owned LSC is known to exist or |

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| | | | | | | private LSC may exist). |

*Information based on phone conversations with Administration officials in early 2016 and early 2018.