

**Priorities Committee Meeting\_Jun18\_2019**

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**STRATEGIC INITIATIVE AND UPDATE****Response to Health Canada Guidelines****Report Purpose**

To provide Priorities Committee with information regarding Health Canada reducing the maximum acceptable concentration (MAC) guideline of lead in drinking water (as of March 8, 2019) and how these changes impact Strathcona County.

**Our Prioritized Strategic Goals**

Goal 8 - Foster an environment for safe communities

Goal 5 - Foster collaboration through regional, community and governmental partnerships

**Report**

Health Canada and drinking water providers have recognized new information on the long-term health effects of consuming lead, have identified improved detection mechanisms and are sharing information with consumers on how to remove lead at the tap, resulting in overall improved health benefits.

Health Canada has updated guidelines for lead content in drinking water. It has reduced the maximum acceptable concentration (MAC) for lead in drinking water from 10 to 5 micrograms per litre. Strathcona County's drinking water system (the reservoir and water mains) meets these guidelines.

These new guidelines also shift the point of compliance from the municipal drinking water system, to now include the water flowing through the plumbing and taps in a customer's premise (at the tap). The most common sources of lead in drinking water are found at the tap - in private lead service lines or household plumbing such as solder and brass plumbing fixtures.

Historical records and inspections have not identified any private lead service lines within the County. Residents are more likely to have a lead service line if their home was built before 1960.

While water quality has not changed, the community should be aware of the new guidelines which are intended to minimize public health risk from lead content in drinking water.

Strathcona County wants to ensure it is ready to support the new guidelines when they come into effect. Utilities is working with our local health authority to further minimize the risk of lead exposure through drinking water at the tap. This approach is founded on a communication program rooted in education and identification. We will be working closely with the regional water supplier, Epcor Water Services Inc. (EWSI), as it rolls out its communications plan.

Recent sampling results in the reservoirs located in Sherwood Park, Ardrossan and Josephburg have indicated that there are no measurable levels of lead or very minimum (below the MAC guideline) levels of lead in the public water distribution systems.

The most likely source of lead in drinking water is at the tap - through the plumbing and taps in a customer's premise. Utilities has also been sampling private distribution lines for

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lead content to maintain water quality and meet or exceed regulatory approval requirements. The results are shared with Alberta Health and Alberta Environment. Recent sampling results of standing water (six hours or more) in both private and public buildings in Josephburg have indicated lead levels above the new MAC Health Canada lead guidelines. Samples collected in the same locations after ten minutes of flushing the tap showed levels within the acceptable MAC guideline limits.

Utilities will be working with Facility Services to communicate lead reduction recommendations in order to improve water quality at affected public facilities (Moyer Recreation Centre, Josephburg Homestead Place and Transportation & Agriculture Services - Josephburg Shop); including flushing the water lines for a minimum of three minutes, or until the water turns cold, before use.

### **Ways to reduce the risk**

Health Canada suggests the following immediate measures to reduce the risk such as:

- Check if the water service line is lead and consider having tap water tested by an accredited lab.
- Consume water from the cold tap instead of the hot tap; then heat it up if needed.
- Run the cold water tap for at least three minutes - or until it runs cold - if the taps haven't been used for six or more hours.
- Purchase an in-home water filter that is "NSF-53 Certified for lead reduction in drinking water".

Contact Health Link for health information on lead exposure toll free at 1-866-408-5465 (LINK).

### **Regional water supplier's lead mitigation strategy**

Strathcona County's water supplier has a plan to minimize risk of lead exposure through drinking water at the tap. This plan is supported by Alberta Health and Alberta Environment.

EWSI, as the producer of potable water for the region, has been taking measures to identify and reduce lead levels. EWSI's proposed Lead Mitigation Strategy includes adding a lead inhibitor (orthophosphate) to drinking water at EWSI's two water treatment plants by the end of 2020, replacing the privately-owned portion of lead service lines whenever the utility portion is replaced, and accelerating the replacement of high priority lead service lines within the City of Edmonton.

Starting in 2020, EWSI is proposing to add orthophosphate, a lead inhibitor, to drinking water; it creates a protective coating on the inside of pipes to prevent the leaching of lead into drinking water. EWSI has indicated that this has been used successfully by numerous utilities in Canada, the United States and United Kingdom. Orthophosphate has no impact on the taste or odour of drinking water, is naturally present in food and is a common additive to beverages.

### **Wastewater and environment**

The orthophosphate added to drinking water will be subsequently collected and conveyed to wastewater treatment plants and will need to be removed before the water is returned to the environment.

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Many of the communities served by the regional system discharge their wastewater to either the Alberta Capital Region Wastewater Commission (ACRWC) or to local wastewater treatment lagoons.

Lagoons in Alberta do not have total phosphorus limits.

EWSI has informed ACRWC about the intent to dose orthophosphate. A similar engineering analysis as the one done for the Gold Bar Wastewater Treatment Plan (WWTP) was carried out by the ACRWC for their wastewater treatment plant. The conclusion of the ACRWC analysis was similar to the Gold Bar WWTP analysis. The plant will be able to manage the 12% increase in phosphorus loading in the influent wastewater primarily by addition of alum to chemically precipitate the addition phosphorus. The additional costs incurred will include alum costs and trucking and disposal of additional biosolids.

**Costs**

It is still unknown what the cost to Strathcona County might be, for both the addition of orthophosphate to the drinking water and the removal from wastewater. Costs are anticipated to be minimal.

Wastewater costs will depend on treatment costs arising from the infrastructure, equipment and chemicals required to meet wastewater discharge guidelines to return the treated effluent back to the river.

**Other Impacts**

**Policy:** n/a

**Legislative/Legal:** n/a

**Interdepartmental:** Facility Services; Transportation & Agriculture Services; Utilities

**Master Plan/Framework:** n/a

**Communication Plan**

Utilities is developing a communications campaign in coordination with EWSI to communicate with residents and the public impacted due to these guideline changes.

**Enclosure**

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Response to Health Canada Guidelines presentation