Response to Health Canada Guidelines

Priorities Committee Presentation

June 18, 2019

LLS.13515404

STRATHCONA COUNTY

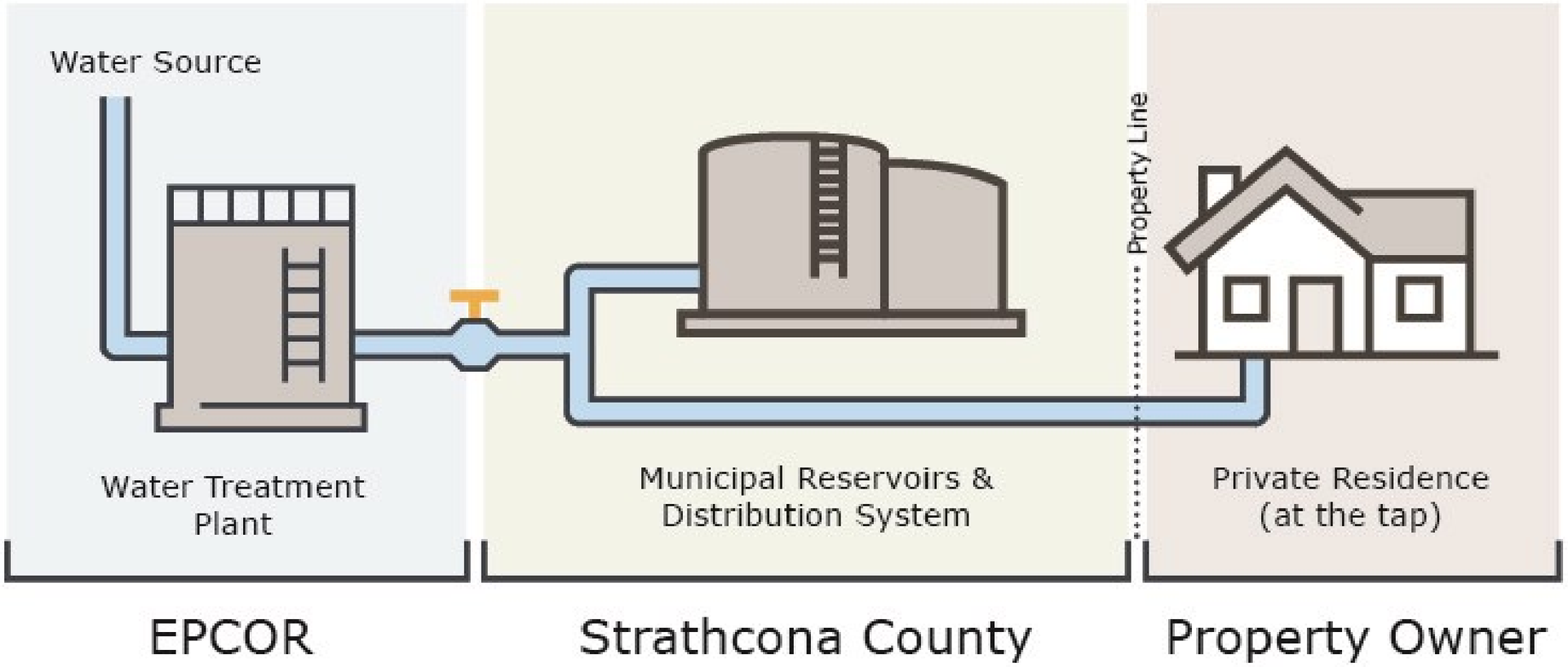
New guideline from Health Canada

- Health Canada now recognizes that science says there is a public health benefit to reducing lead exposure to levels that are as low as possible

- This has prompted the federal government to lower the recommended maximum allowable concentration of lead in drinking water from 10 to 5 micrograms per litre

- The new guideline also shifts the point of compliance from the municipal drinking water system to the tap in the customer's premises

Water distribution system



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Municipal water

- The water within Strathcona County's distribution system is safe and clean, and meets the new Health Canada guideline

- While Epcor Water Services Inc. (EWSI) will be replacing lead service lines in Edmonton, Strathcona County was mostly built when lead was no longer used in water distribution infrastructure

- Several excavations in Sherwood Heights (the oldest section of Sherwood Park) have confirmed no lead pipes

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Residential water

- The most likely source of lead in drinking water is from household plumbing and taps in a customer’s premise

- Lead piping was a common material used for water service lines for many years. In the Edmonton metropolitan region, homes built before 1960 often have lead water lines and service connections

- Lead can also be found in homes newer than 1960, as a result of household plumbing components such as old solder and brass plumbing fixtures

Public health

- While your drinking water hasn’t changed, the guideline has. It’s intended to minimize public health risk

- It’s important for property owners to identify potential sources of lead within their homes and to take measures to reduce their risk of lead exposure

- Health Canada’s standards are intended to apply to average concentrations in water consumed for extended periods of time. Short-term consumption of water containing lead at concentrations marginally above the maximum allowable concentration does not pose a health risk

Reducing risk

- Measures to reduce risk include:
  - Flush standing water in pipes each morning or after returning home at the end of the day—by flushing the toilet, washing your hands, or letting the water run cold. The flushing clears out any water that’s been sitting in the lead pipes. By doing this, you ensure the water is straight from the main service line
  - Use cold water for both drinking and cooking—hot water dissolves more lead from plumbing and boiling water doesn’t remove lead
  - Not all home water-treatment filters remove lead. Before purchasing a filter, check the model to ensure it meets lead reduction certification

Reducing risk

- Check if the water service line is lead
  - Check the colour of the pipe coming out of the ground and into the water meter in your home. You may have to lightly sand the surface of the pipe. If the pipe is:
    - **The colour of a Canadian penny:** it's copper
    - **Bright blue or black:** it's likely plastic tubing (polyethylene). Important: Don't attempt to test the hardness of your pipe if you suspect it's plastic
    - **Grey:** it's galvanized iron or lead
  - Check the hardness of the pipe. If you think it could be lead, try gently etching into the pipe. Lead is relatively soft metal and scratches easily

- Consider having tap water tested by an accredited lab

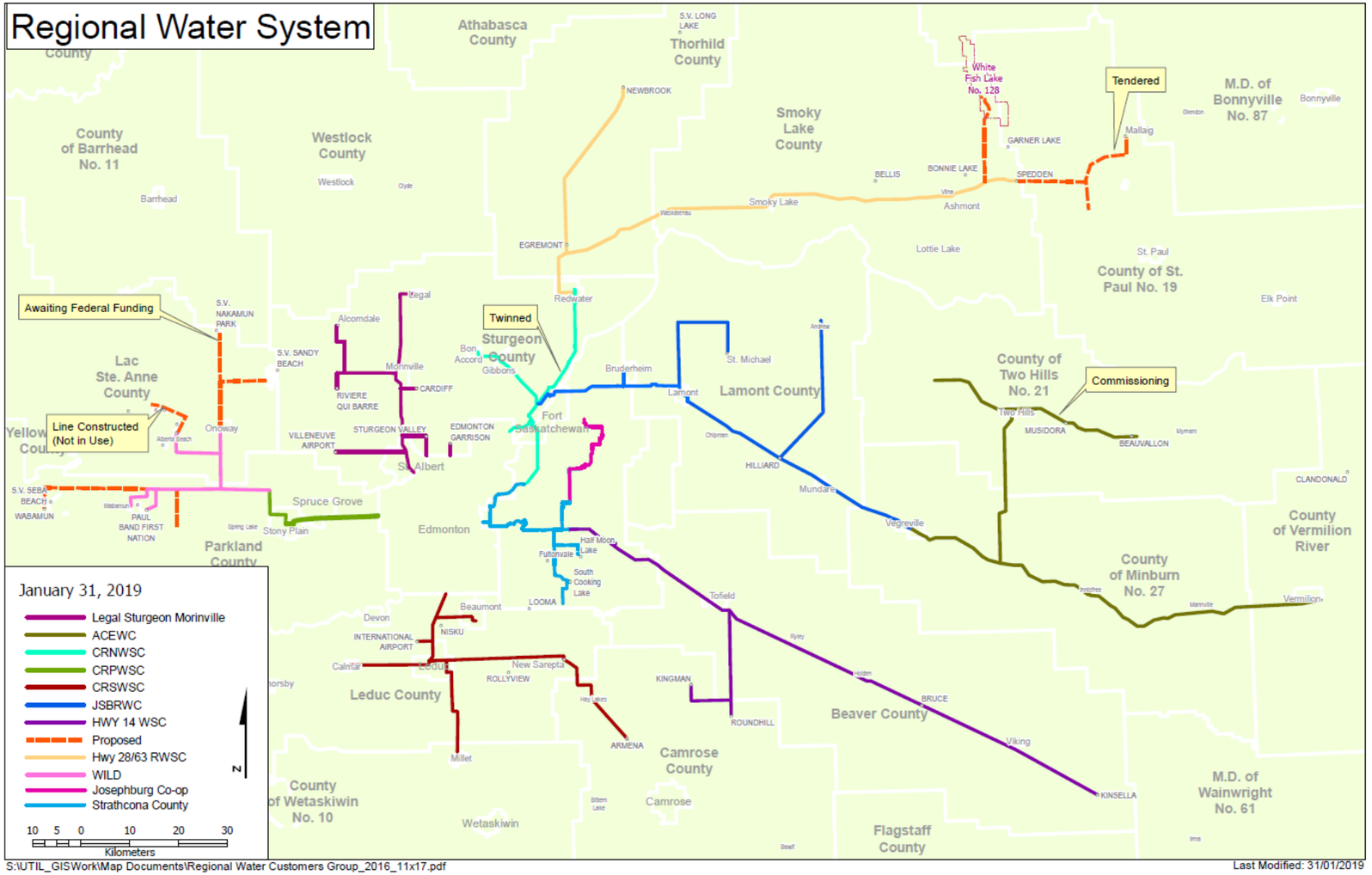
EWSI's mitigation strategy

- Starting in 2020, EWSI is proposing to add orthophosphate, a lead inhibitor, to the drinking water. EWSI supplies water to Edmonton and the surrounding region. Any changes they make to the drinking water will make its way to Strathcona County

- Orthophosphate creates a protective coating on the inside of pipes to prevent the leaching of lead into drinking water. It has been used successfully by numerous utilities in Canada, the US and the UK

- It is a safe and common additive to beverages and food

Regional water supply system



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Wastewater

- Excess phosphorous must be removed at the wastewater treatment facility

- 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

- The ACRWC is confident that it can manage the increase in phosphorous

Costs

- Costs associated with the addition of orthophosphate are anticipated to be minimal

- Wastewater costs will depend on infrastructure, equipment and chemicals required to meet wastewater discharge guidelines. These costs are also anticipated to be minimal

Questions?

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