Lead and manganese
In drinking water

Changes to federal and provincial drinking water guidelines

New guidelines for lead and manganese in drinking water

Health Canada is lowering the federal guideline level for acceptable lead (Pb) concentrations in drinking water at the customer's tap from 10 µg/L (micrograms per litre) to 5 µg/L. This change is the outcome of a scientific review and public consultation undertaken in 2017. Starting in April 2019, the federal guidelines will also have a new maximum acceptable concentration for manganese in drinking water.

What the drinking water guideline changes mean for Albertans

Alberta Environment and Parks (AEP) sets the drinking water objectives in Alberta, and these limits are based on following the federal Guidelines for Canadian Drinking Water Quality. To review the Guidelines, visit the Health Canada website at:

- Canadian Drinking Water Guidelines
  https://www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/drinking-water/canadian-drinking-water-guidelines.html

Water quality guidance documents

AEP will work with water utility owners/operators in Alberta and provide them with guidance documents to support their implementation of these more stringent water quality requirements. Municipal drinking water systems will have five (5) years to develop and implement their water quality monitoring plans and (if needed) mitigation action plans to meet these lower limits for lead (at the tap) and manganese (in the distribution system). AEP will provide this guidance in conjunction with information from Alberta Health and Alberta Health Services.

Lead in drinking water

Lead is a metal that can have adverse effects on human health and can leach into a drinking water supply from building service lines and indoor plumbing fittings. Lead leaching can occur more often in older homes as changes to building codes in the 1970s removed much of the risk. While exposure to lead has been significantly reduced in these last few decades, the latest scientific knowledge supports the approach that we reduce lead levels as much as possible. The last revision to the federal guidelines for lead was in 1992.

Review Alberta's drinking water legislation: https://www.alberta.ca/drinking-water-legislation.aspx

Alberta

Health Canada has provided an infographic overview of lead in drinking water, available on the Health Canada website at:.

- Drinking water: what about lead? https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/what-about-lead.html

How Alberta regulates drinking water systems for lead and other compounds

In Alberta, municipal drinking water providers are required to monitor their systems regularly for a wide suite of parameters including lead and manganese. This includes collecting water samples from their distribution system at different points. One important change coming to the existing requirements is that lead monitoring and compliance will now be based on the concentration at the customer's tap.

Manganese in drinking water

Manganese is an element found in minerals and is typically present in groundwater-based drinking water. Manganese in small doses can be beneficial to human health; however, in higher concentrations it can pose adverse effects in infants and children. Manganese can also affect the taste and appearance of drinking water. Similar to lead, new information on effects of manganese on human health have prompted the new federal guideline for manganese in drinking water of 0.12 mg/L (milligrams per litre).

Guidance documents on lead and manganese monitoring

For more information on testing for lead in drinking water systems and at customer's taps, the provincial government will be publishing a guidance document on lead monitoring. This guidance document is expected to be available on the Alberta government website in April. Similarly, a guidance document will be available for the monitoring of manganese in drinking water systems (for source water and the distribution system).

These guidance documents are intended to support water utilities in developing their own monitoring programs for lead and manganese. These monitoring programs will enable water providers to determine if they need to develop and implement mitigation actions to meet the new drinking water quality limits.