



Making a difference...together

Integrated Water Services
479 Island Highway
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July 12, 2021

RE: WATER QUALITY ADVISORY FOR CEDAR LANE WATER SYSTEM

This advisory is in effect until further notice

You are receiving this notice because your property is served by the Cedar Lane drinking water service. The Cedar Lane drinking water service is experiencing elevated concentrations of manganese. Manganese is a naturally occurring element that is present throughout the environment and can normally be found in many water sources and in particular in groundwater from certain geological formations. Manganese is an essential nutrient and consuming a small amount of manganese is necessary to maintain your overall health. Until recently, elevated levels of manganese in drinking water were not considered a health risk but rather only an aesthetic concern. The latest science now associates high manganese concentrations in drinking water with health issues in infants. High levels of manganese can make water appear brown, purple or black at concentrations less than what Health Canada considers the Maximum Acceptable Concentration (MAC) in drinking water.

Health Canada has set a MAC for manganese at 120 parts per billion (ppb) and an aesthetic objective of 20 ppb. The current levels in the Cedar Lane water distribution system range from 23.6 - 200 ppb. Therefore, infants should not consume the tap water and formula made with tap water. As a precaution, it is recommended that you avoid drinking discoloured water, or using it to prepare food or infant formula. Children and adults are less sensitive to manganese than infants, and Health Canada suggests that the health risk from manganese concentrations of less than 300 ppb is insignificant to these parts of the population. A list of Frequently Asked Questions regarding manganese is included with this letter.

Manganese can be reduced to acceptable levels through specific water treatment. The Capital Regional District (CRD) is working on strategies to reduce the concentration of manganese that enters the distribution system following treatment of the well water. A short-term strategy includes cleaning the storage tank to remove manganese accumulation. Monthly manganese sampling will be occurring for a minimum of six months. Longer term strategies are being developed in consultation with Island Health. The CRD anticipates that additional water treatment to address the manganese issue will be in place by the end of 2023. The CRD will continue to provide information directly to residents as the issue is addressed, and updated information will be available on the CRD website at www.crd.bc.ca/service/drinking-water/systems/cedar-lane-water-system.

If you have any immediate concerns or questions, please contact Jason Dales at 250.940.7402 or jdales@crd.bc.ca Island Health at gateway_office@viha.ca.

Sincerely,
Ted Robbins
General Manager, Integrated Water Services





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Frequently Asked Questions

How does Health Canada determine the Maximum Acceptable Concentration (MAC) for manganese?

The MAC is based on animal studies and includes safety factors to ensure even sensitive individuals are protected. Concentrations approaching, but remaining less than, the MAC are not associated with increased health risks in individuals. Health Canada calculated the MAC assuming that people would be constantly exposed to elevated levels of manganese for long periods of time. Occasionally consuming water with manganese concentrations slightly greater than the MAC is unlikely to cause any health issues. Health Canada has adopted a precautionary approach due to the limitations on the available information. Manganese concentrations greater than the guideline are only representative of a potential risk to health, but do not represent measurable health impacts.

What are the health effects of manganese?

People who are exposed to high levels of manganese can develop manganese toxicity. The primary target of manganese toxicity is the central nervous system, followed by the reproductive system. There is no evidence to conclude that detectable differences in health will be present at concentrations less than the MAC, the available evidence does suggest that measurable neurological impacts may be possible when infants and children are chronically exposed to manganese concentrations greater than the MAC. New evidence has shown that consuming drinking water with high levels of manganese may impact the memory, attention, motor function, and the overall intellectual development of infants and young children. The high degree of uncertainty and limitations of available information, the guideline of 120 ppb should be interpreted as being protective of ongoing exposure to all infants relying solely on formula made with tap water. Health impacts in other human groups with decreased exposure or sensitivity might not be significant until drinking water concentrations are much higher.

Can I be exposed to manganese through skin contact?

No. Exposure through skin contact is not harmful. Exposure through hand washing, showering, or bathing from water with manganese is unlikely to be significant. Inhalation of manganese aerosols during showering has not been directly evaluated but it is not expected to pose any risk to human health.

Can I boil the water to remove the manganese?

No. Boiling water is not an effective form of treatment of manganese reduction. Boiling water can increase the concentration of dissolved, and therefore absorbable, manganese in drinking water.

What can I do to reduce my exposure to manganese?

There are several ways you can lower the manganese in the drinking water at home:

- Infants need to be supplied an alternate drinking water source such as bottled water.
- Switching your drinking water to an alternate source such as bottled water.
- Tap filters suitable for manganese removal.
- Point of Entry treatment for the home.

For more information, visit the Health Canada website at www.canada.ca/en/health-canada.html