



The Municipality of the
VILLAGE OF BURK'S FALLS

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Report: Follow up August 2019 to Council: on Manganese in municipal system

Drinking water is a critical infrastructure that the Village takes serious. There are annual third party inspections on the system and the operations. The weekly water samples are sent to an accredited laboratory to ensure it remains safe to drink. There have been very few boil water advisories and most are related to water leaks and an overabundance of caution. All inspections and reports indicate the water is safe to drink.

The water does have manganese in it. Manganese, when in standing water, such as hot water tanks and toilet will appear to be grayish/black. Manganese is a naturally occurring chemical element similar to iron. There are no regulations for drinking water systems for manganese. However, it is becoming more common in many water systems across Ontario. There are no health concerns or testing requirements as a result of manganese. However, the Province of Ontario has an Aesthetic Objective which is less than or equal to 0.05/mg/L. The aesthetic objective is a visual component. Concentrations higher than the objective may cause plumbing fixtures or laundry staining.

It was first detected within the Village in 2017 at one location, then another in 2019. Both were resolved with no further concerns. The water tower came into service in 2017 with a new mixer system. It is noted that sediment at the bottom of the water tower is similar to the sedimentation that occurs in hot water tanks. A third complaint came in 2019. With this complaint the Public Works Department started asking more questions on why and how. This prompted several consultations and a report to Council.

The Village has made several changes in operations to investigate these questions. Hydrant flushing occurs more often, Geotech soil samples have been taken surrounding the groundwater well with no alarming results. Monthly testing of manganese levels since 2019 have been conducted to determine if there is a particular season where it is more concentrated. This also allows for benchmarking numbers to determine if the chemical results are higher / lower in particular areas of the Village. There have been no consistent results to allow for tracking trends. A consultant was on site to assist with resolution of the investigation. They have tested the water and note that the numbers are common. However, the staff continue to work with the MOE, OCWA and specialists to mitigate the effects of manganese.