



REGIONAL DISTRICT OF CENTRAL KOOTENAY

Burton Water System – Water Quality Action Plan

Background:

The Burton Water System was constructed in 1966 and was operated by BC Hydro until it was transferred to the Regional District of Central Kootenay in 2011. Since 1998, the water source for Burton has been two groundwater wells on Lower McCormick Road. Water is delivered to the distribution system and the water storage reservoir without treatment.

Burton water customers have been subject to a number of Water Quality Advisories and Boil Water Notices due to the occasional re-occurring presence of total coliform bacteria and low levels of Escherichia coli bacteria in water sample test results. System upgrades and operational changes in recent years have resulted in less frequent and severe adverse sample results but staff has not definitively identified the potential source of the bacteria.

Water samples were taken from the distribution system more frequently than from the wells in the past. All adverse samples have been from the distribution system and none from the wells. Adverse sample results trigger immediate system disinfection and flushing therefore follow up sampling does not help identify the potential source of bacteria. Staff have since increased the sampling frequency and locations, and the wells are now sampled at the same time as the distribution system.

The Regional District hosted a community meeting in Burton on March 28, 2017, where background information on water quality was provided and disinfection options were presented. It was clear to staff that any option involving chlorine disinfection would not be supported by the community.

Regional District staff feels that the potential health risk warrants implementation of permanent chlorine disinfection in Burton, however; the staff recommends a water quality plan that represents a compromise between mitigating potential health risks, compliance with existing regulations and standards, and potential customer concerns about chlorination.

Water Quality Action Plan:

The recommended water quality action plan for Burton is as follows:

- 1) Issue a long term Water Quality Advisory for Burton that can be eventually removed if there is a satisfactory history of good water sampling results.
- 2) Public facilities such as the campground, school, community center, food and beverage establishments, and the future senior's facility will be encouraged to install their own onsite water disinfection systems.
- 3) The water system will be flushed more frequently in areas where water consumption might be low.
- 4) The school and campground will be encouraged to flush and disinfect their water systems when not used for extended periods of time.
- 5) Continue with more frequent bacteriological water sampling. The Regional District is currently sampling from the wells, two distribution locations and the water storage reservoir on a weekly basis.

- 6) Consumption level chlorination will be added to the Burton water system for a minimum two week period, twice annually.

It is hoped that chlorination twice a year will help clean and disinfect the distribution system. Ultraviolet (UV) disinfection was considered at the wells; however, UV does not provide disinfection downstream of the UV reactors and would only be effective if the source of bacteria was from the ground water wells. UV might be considered in the future if there are any future adverse water sample results from the wells.

Regional District staff do not feel that two short periods of consumptive level chlorination a year is unreasonable. Notice will be provided and any customers with an aversion to chlorine can drink bottled water or provide their own carbon filters to remove the chlorine. If we do not implement a plan of action or if ongoing water sampling in Burton does not comply with Schedule A of the Drinking Water Protection Regulation, the Regional District and Interior Health might ultimately require the issuance of a Boil Water Notice until permanent disinfection is implemented. Issuance of a Boil Water Notice could impact business and development. The proposed Water Quality Advisory does not impact potential development or business to the extent of a Boil Water Notice.

In addition to the action plan, the Regional District will be conducting a GARP (Ground Water at Risk of Containing Pathogens) review for the Burton Water System wells, as requested by Interior Health.

Permanent signage will be placed in the Burton community indicating the long-term water quality advisory. Notice will be provided in advance of chlorination periods by mail-out and postings in the community.