

City of Williams Lake

2013 Drinking Water Quality Annual Report



Final report
November 2014



Executive Summary

This report summarizes the City of Williams Lake Water Quality Program in 2013, and is a requirement of the local Health Authority to receive an annual operating permit. All work has been carried out in accordance with the Local Health Authority and the British Columbia Drinking Water Guidelines.

The City of Williams Lake operates a water distribution system to distribute potable water to the residents and businesses that lie within its boundaries. Water is supplied from five deep wells located at the west end of Williams Lake and distributed through several kilometres of water pipe of various types. For a more detailed description of where the water comes from and how it gets to the final user, the reader is requested to refer to the City of Williams Lake's Water System Overview booklet.

Raw well water is tested for various parameters such as Fecal Coliform, heavy metals, turbidity, hardness and several other minerals. Bacteriological testing has never been positive for Giardia, Cryptosporidium or Fecal Coliform. Similarly, the water distribution system has the same aforementioned tests performed on it in several different locations throughout the system with the same results. Fecal Coliform and Ecoli tests are performed every working day by City staff as well as an independent lab which conducts the same test once a week to confirm the City's results.

The City has recently developed, and the Local Health Authority has accepted, an Emergency Response Plan that details procedures to follow should an unexpected situation arise which could put the City's water system in jeopardy. The plan also dictates the procedure that must be followed to rectify the aforementioned situation.

The City has developed a five year plan that is included in this report that will assist with future budgeting requirements to maintain and expand the water system to the meet current and future needs of the community.

General Description

The City of Williams Lake operates a water supply and distribution system consisting of a network of deep wells, chlorination injection systems, reservoirs, pressure reducing stations (PRV), booster pumps and piping. The system is required to properly receive, store and transport potable water to all users in the City's boundaries. Key facilities are connected by a telemetry system (SCADA) to a central computer that monitors the entire system, identifies faults and can send alarms to key personnel 24 hours a day. Annual budgets provide for the operation and maintenance of the system as well as capital projects to improve the quality, quantity, and security of the water supplied to residents.

Statistics of the City's water supply and distribution system are summarized in the following table.

Service population (2006 census estimate)	12,250
Number of residential services	2,625
Number of commercial/institutional services	1,500
Length of water mains (kms)	118.5
Number of reservoirs	10
Number of water pump stations	10
Number of fire hydrants	523
Number of water meters read	250
Water supplied by all deep wells (Imperial Gallons)	831 million
Percentage of system flushed per year	25%

Conclusions

The residents of Williams Lake enjoy a high quality of water, starting with a good source. The water is treated with Sodium HypoChlorite before it is delivered to the tap. The City is aware of challenges, such as maintaining chlorine residuals and preventing bacterial re-growth in the furthest reaches of the system. By continuing to adhere to best management practises, the municipality strives to continue to deliver good clean and plentiful potable water now and in years to come.

In closing, it is noted the Municipality appreciates the good working relationship with the Local Health Authority and acknowledges the same as a partner in maintaining the high quality of the City's drinking water.

Appendixes:

1. City of Williams Lake Water Emergency Plan
2. City of Williams Lake Well Head Protection Plan
3. Long Term Water Capital Plan
4. Monthly Water Reports and Annual Summary
5. Test Results for Ecoli/Coliform
6. Raw Well Water Sample Results from City Owned Deep Wells