



Annual Water Report

2020

Water System Description

The Alto Utilities Ltd. water system provides water for approximately 430 domestic unmetered connections, 1 school and 1 metered church (approximately 1000 people).

Untreated groundwater is drawn from two deep wells located on Lodge Road. These wells replenish three concrete reservoirs with a total capacity of over 1,700m³. The reservoirs are situated above the subdivision where gravity feeds the system through a series of mains, 29 fire hydrants, and two pressure reducing valve stations (PRVs).

Alto Utilities operates as required, and in accordance with the following programs:

- Capital Plan – Alto is currently working with an engineering firm to develop both near and long-term plans for source, treatment, and distribution infrastructure upgrades.
- Water Quality Monitoring Plan – In addition to the regular daily and weekly monitoring, Alto is nearing completion of its source water assessment. The results will help Alto develop a well protection plan that will continue to ensure safe drinking water for its customers on into the future.
- Emergency/Drought/Wildfire Response Plans – Each year Alto reviews its Emergency Response Plan to ensure that it is prepared for any kind of emergency. This includes keeping emergency contact information current, as well as developing strategies for drought and wildfire situations.
- Cross Connection Control Program – The cross-connection program was updated this year and we will provide suggestions in future correspondence about ways that you can help protect your drinking water from cross connection dangers.
- Environmental Operators Certification - Alto continues to provide a Level II Operator oversight as well as a Level 1 Operator In Training.



Lodge Road Pump House



Inside the Lodge Road Pump House

System Improvements & Maintenance

The distribution system was originally constructed in 1970 and has seen various upgrades over the years. This year we updated the analog system that relied upon buried wiring to communicate between the reservoirs, the Darlene PRV, and the main pumphouse on Lodge Road. The new cellular telemetry system addresses communication issues that occurred during wet conditions and improves the reliability of monitoring all system components including the Darlene reservoir, Velda reservoir, and the Darlene PRV.

Last year we installed transducers to monitor and record well level data. This year our hydrogeologists have been able to use this information in the source water assessment to determine the condition of the well, improve our understanding of the aquifer and its relationship to surface water, and ultimately to help determine the safety security of the aquifer that provides Alto's customers with their drinking water. We expect to receive the final report sometime during the summer of 2021. This report will help to complete long term Capital Plan for source, treatment, and distribution infrastructure upgrades.

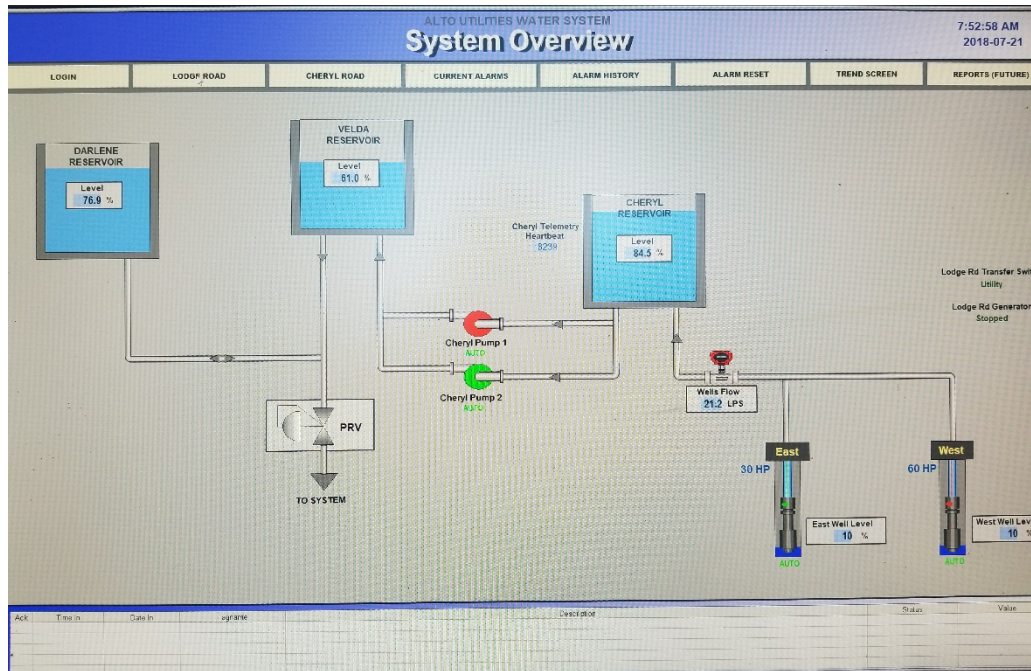
In December we installed turbidity meters in both the pumphouse and Cheryl Reservoir as a means of monitoring water quality. These devices will provide baseline information that will help ensure safe drinking water for the future.

Alto Utilities performs annual inspections of all hydrants on the system, and reports findings to the local fire department. In 2020 all hydrants were pressure tested in accordance with our biannual program that alternates between pressure testing hydrants and tear down inspection of hydrants.

The entire system is flushed semi-annually in to ensure water is refreshed and minor sediment within the pipes is removed. Monthly flushing is also performed on all ends of the system.



Billing continues to be streamlined with the introduction of an electronic billing system and would encourage all of Alto's customers to help us reduce costs and use less paper.



Radio Telemetry System Overview

Alto Utilities Ltd. is a privately-owned, public regulated water utility.

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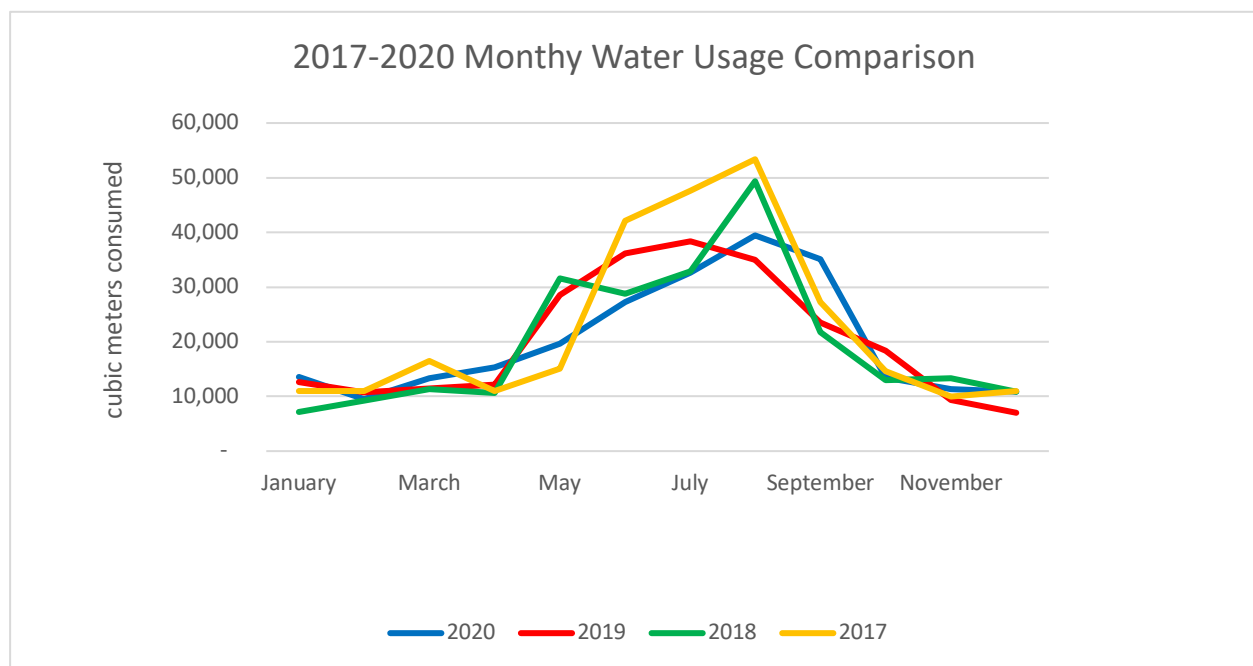


Water Consumption

Annual consumption for the last four years in cubic meters has been quite stable with the exception of 2017. Usage generally reflects weather patterns with highest usage occurring during the summer months.

2020	2019	2018	2017
241,517	243,474	239,944	270,544

The graph below shows the monthly water usage over the last four years. In 2020 we had a cooler June and July and the water usage reflects the seasonal temperature trends.



Water Sampling & Quality Monitoring

Every utility that supplies water to Canadians is governed and regulated by the *Guidelines for Canadian Drinking Water Quality*. These guidelines set both water quality parameters and priorities. As these guidelines state, "the highest priority guidelines are those dealing with microbiological contaminants", and in this regard Alto Utilities continues to meet the Canada guidelines for drinking water as it has done for the last 45 years without any water treatment.

Water samples are collected on a weekly basis Alto Utilities and analyzed for indicator pathogens. In addition to this, every Spring and Fall a comprehensive water analysis is performed to track water quality factors that change with seasonal conditions and to establish a baseline for the chemical parameters. Alto then submits monthly reports to Interior Health. We have four distribution points from which we collect and one source point; these are tested by an accredited laboratory. Of the 62 samples collected for bacteriological analysis in 2020 all met the standards set out in the *B.C Drinking water Protection Regulation*.

It is true that in 45 years, Alto Utilities has never had to issue a Boil Water Advisory and has met all of the requirements found in the *Guidelines for Canadian Drinking Water Quality*. However, the regulations are evolving and reflect the most recent water quality and health research. In the past year, new guidelines have been set for several parameters in the *Guidelines*. While Alto continues to meet these *Guidelines*, one of Alto's wells slightly exceeds the limits for Manganese. Since Alto uses two wells to supply water to its customers the combined



average is below the parameters found in the *Guidelines for Canadian Drinking Water Quality*. This is an issue that Alto takes seriously and is monitoring. One of the goals of the source water assessment is to determine the best course of action to continue provide safe drinking water to Alto's customers and to this end Alto is considering all options including some form of treatment to meet the Canadian Drinking water guidelines. This assessment will be completed in 2021 and from this information Alto will work with its hydrogeologists, engineers, and Interior Health to develop a strategy to continue to provide safe drinking water to its customers on into the future.

Alto Water System	Total # of samples in 2020	E. Coli	Total Coliform
Source	15	0	0
Distribution	48	0	0-1

- No Total Coliform detected on resample

Sample Locations

- Woodsdale Road Test Station
- Darlene Road Test Station
- Velda Road Test Station
- Peter Greer Elementary School
- Main Pump House, Lodge Road

In addition, a complete chemical analysis of each well source is completed by an accredited laboratory in the spring and fall; the most recent one was completed in the fall of 2020.

If you are interested in the Comprehensive Analysis these are available on Alto's website.