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WILDERNESS MOUNTAIN WATER SERVICE COMMISSION

Notice of Annual General Meeting on **Wednesday, November 28, 2018 at 6 p.m.**
East Sooke Community Hall, 1397 Coppermine Road, East Sooke, B.C.

Rob Hancock (Chair)

Director Mike Hicks

Dale Tallyn

Chuck Taylor

AGENDA

1. Approval of Agenda
2. Adoption of Minutes of the Annual General Meeting of December 14, 2017
3. Chairs Report
4. Election of Commission Members
5. 2017 Annual Report
6. New Business
7. Adjournment

To ensure quorum, advise Sharon Orr if you are unable to attend: sorr@crd.bc.ca or 250-474-9622



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Agenda Item #2

Minutes of the Annual General Meeting of the Wilderness Mountain Water Service Commission

Held Thursday, December 14, 2017 at the Old East Sooke Fire Hall, 1397 Coppermine Road, East Sooke, BC

PRESENT: **Committee Members:** R. Hancock (C), C. Taylor, Director M. Hicks
Staff: T. Robbins, General Manager, Integrated Water Services, I. Jesney, Senior Manager, Infrastructure Engineering, M. McCrank, Senior Manager, Infrastructure Operations, C. Moch, Manager, Water Quality, L. Siemens (recorder)
12 Members of the Public

The meeting was called to order at 6:07 p.m.

1. Approval of Agenda

MOVED by Director Hicks, **SECONDED** by C. Taylor
That the agenda be approved as distributed.

CARRIED

2. Adoption of Minutes of the Annual General Meeting of November 10, 2016

MOVED by Director Hicks, **SECONDED** by R. Hancock,
That the minutes of the Annual General Meeting of November 10, 2016 be adopted as previously circulated.

CARRIED

3. Chair's Report

Chair Hancock noted the following:

- New filters were installed
- There were no boil water advisories
- There was one water main break and one leak
- Repairs were made to the pump building

4. 2016 Annual Report

I. Jesney noted that the annual report is attached to the agenda and is posted on the CRD website. A question and answer period followed.

5. Election of Commission Members

Director Hicks noted that the term for Rob Hancock will expire on December 31, 2017 and there remains one vacancy for a term expiring on December 31, 2018. He then called for nominations for a two-year term position that will expire on December 31, 2019.

R. Hancock was nominated and agreed to stand. Nominations were called for two more times, and hearing none, Rob Hancock was elected by acclamation.

Nominations were then called for a position with an expiry date of December 31, 2018. Dale Tallyn was nominated and agreed to stand. Nominations were called for two more times, and hearing none, Dale Tallyn was elected by acclamation. Their names will be forwarded to the CRD Board for appointment.

6. New Business

T. Robbins provided an update on Island Health's concerns regarding water treatment and that an options analysis was to be carried out in 2018 to deal with the concerns.

A question and answer period followed.

7. Adjournment

MOVED by Director Hicks, **SECONDED** by C. Taylor,
That the meeting be adjourned at 6:50 p.m.

CARRIED



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WILDERNESS MOUNTAIN WATER LOCAL SERVICE 2017 ANNUAL REPORT

Introduction

This report provides a summary of the Wilderness Mountain Water Service for the year 2017. This report includes a description of the service, summary of the water supply, demand and production, drinking water quality, operations highlights, capital project updates and financial report.

Service Description

The community of Wilderness Mountain is a rural residential development located on Mount Matheson in the Juan de Fuca Electoral Area which was originally serviced by a private water utility from about 1983 and in 2008 the service converted to the Capital Regional District (CRD). The Wilderness Mountain water service is made up of 82 parcels encompassing a total area of approximately 124 hectares. Of the 82 parcels, 71 were customers to the water system in 2017.

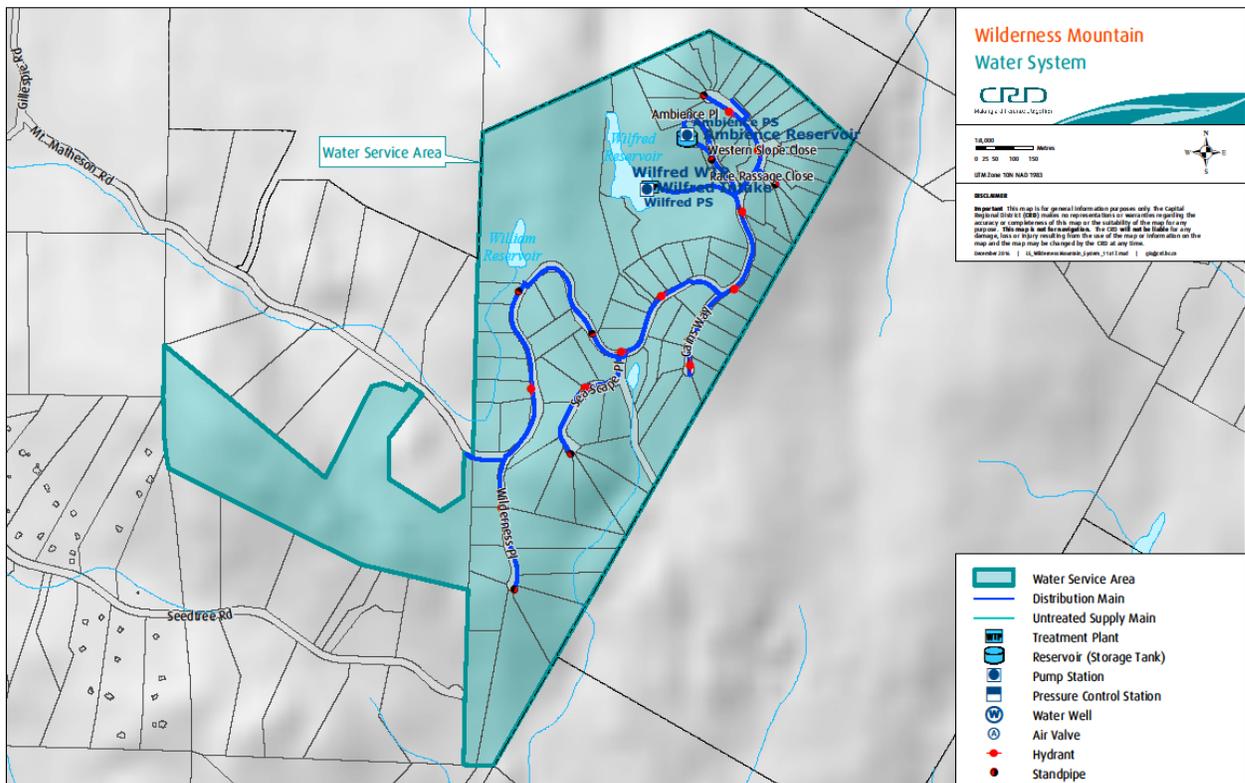


Figure 1: Map of the Wilderness Mountain Water Service Area.

The Wilderness Mountain water system is primarily comprised of:

- Raw water is obtained from Wilfred Reservoir, a small surface water body which lies within a protected watershed and was created by the construction of two dams.
- Water from Wilfred Reservoir is pumped to the treatment plant which consists of coarse cartridge filtration, ultraviolet disinfection and chloramine disinfection.
- The chloraminated water is then pumped to two distribution system storage tanks (combined capacity of 250 cubic metres or 66,000 USg) and the distribution system.
- Distribution system (3,750 metre network of 150 mm (6") and 100 mm (4") PVC watermains).
- Other water system assets: 71 service connections, 10 hydrants, 6 standpipes, 21 gate valves and a SCADA system.
- Although the water system also includes the William Brook Dam and related water reservoir, this reservoir is no longer utilized for water supply.

Water Supply

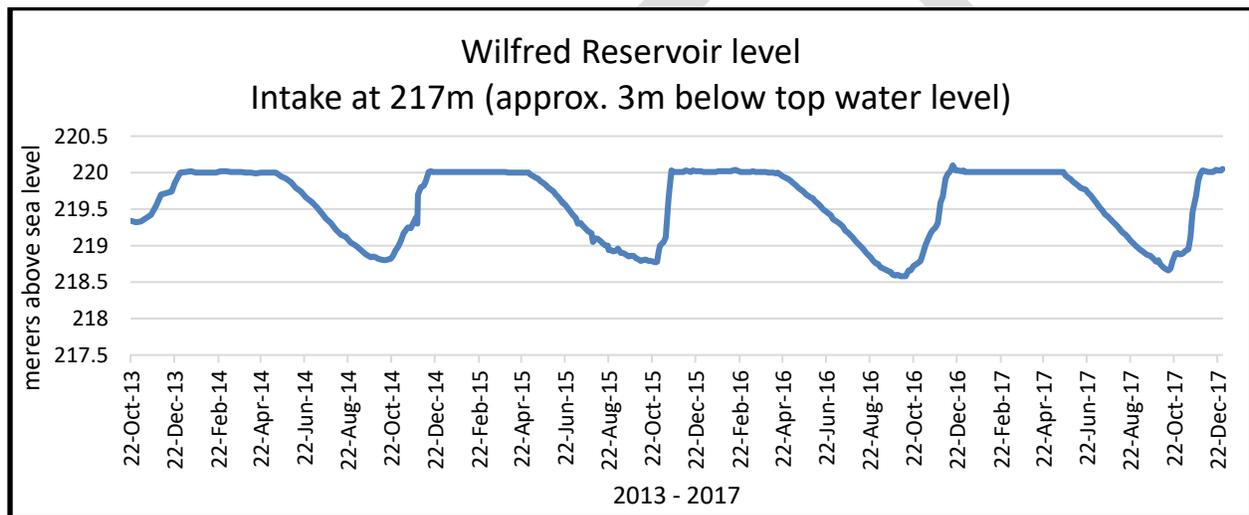


Figure 2: Wilfred Reservoir Water Level 2013-2017

Water Usage

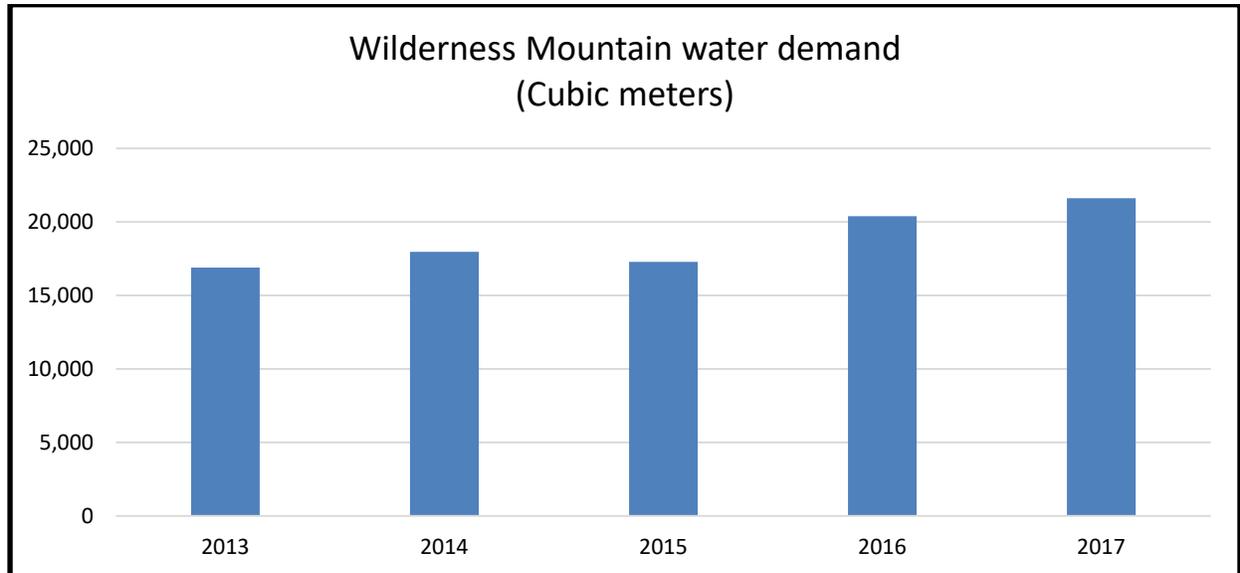


Figure 3: Wilderness Mountain water demand 2013-2017.

Note that higher demand exhibited during 2017 is primarily due to increased flushing and maintenance activities including the addition of the auto-flush fixture on the extreme end of Wilderness Place.

Drinking Water Quality

The Wilderness Mountain Water System supplied consistently safe water to its customers in 2017. The water quality was relatively good and improved in comparison to previous years. The new pre-filters that CRD staff installed in the spring of 2017 were able to reduce much of the turbidity spikes in the raw water over the summer period so that the disinfection was not critically compromised. Some challenges with achieving a consistent chloramine residual across the entire pipe network within an acceptable range remain. Two consecutive positive total coliform test results in one cell of the storage reservoir between September 21 and 23 necessitated the isolation of this tank and a subsequent cleaning procedure to remove potentially contaminated water and sediment from the tank. Samples post-cleaning and refilling were free on any indicator bacteria.

During the fall season, the raw water from Wilfred Reservoir exhibited high iron and manganese concentrations, as in previous years. While not a health issue, this can lead to undesired water discoloration.

The data below provides a summary of the water quality characteristics in 2017:

Raw Water:

- Between April and September, the raw water exhibited medium concentrations of total coliform bacteria. Outside this timeframe, total coliform concentrations were very low.
- *E. coli* bacteria were only detected during two months in the summer and concentrations were low with no exceedance of 20 CFU/100mL.
- *Cryptosporidium* and *Giardia* parasites were tested for once in 2017 and neither was detected.
- The raw water had a naturally elevated concentrations of iron and manganese. Especially during the fall season the iron and manganese concentrations had the potential for noticeable discolouration at the customers' taps.
- The mean annual raw water turbidity was below 1 NTU (0.92 NTU). The turbidity slightly exceeded 1 NTU for some time in the summer and fall but never exceeded 2.1 NTU (June and August). Raw water turbidity spikes often coincided with algal and/or zooplankton blooms in Wilfred Reservoir.
- The raw water was soft (median hardness 16.6 mg/L CaCO₃).
- The pH was slightly acidic (median pH 6.65).
- The median total organic carbon (TOC) concentration was elevated at 4.3 mg/L.

Treated Water:

- The treated water was bacteriologically safe to drink. No *E. coli* was found in the treated water, however two consecutive samples from one of the two storage reservoir cells tested positive for total coliform bacteria in September. A subsequent reservoir cleaning removed any potentially contaminated water and sediments.
- The treated water turbidity (cloudiness) was usually under the *Guidelines for Canadian Drinking Water Quality (GCDWQ)* turbidity limit of 1.0 NTU but slightly exceeded the limit on June 23 and August 24 (1.13 and 1.2 NTU respectively). The newly installed pre-filters were instrumental in achieving these improved results.
- The disinfection by-products THM and HAA were well below the *GCDWQ* limits.
- The annual median total chlorine residual in the system was 1.47 mg/L.

Water quality data collected from this drinking water system can be reviewed on the CRD website:

<https://www.crd.bc.ca/about/data/drinking-water-quality-reports/juan-de-fuca-water-quality-reports/wilderness-mountain-water-quality-reports>

Operational Highlights

The following is a summary of the major operational issues that were addressed by CRD Integrated Water Services staff:

- February 2017 – Installed Ladder Ambiance Reservoir Square Tank
- April 2017 – Drain Clean and Inspect Tanks
- August 2017 – Install New Valve on Ambiance Reservoir Drain
- August 2017 – Valve Exercising
- August 2017 – Hydrant Inspections
- August 2017 – Flushing Mains due to adverse water conditions

- September 2017 – Filter Building (WTP) Roof Repair
- December 2017 – Shut down auto flush

Capital Project Updates

The Capital Projects that were in progress or completed in 2017 included:

1. Water Treatment Process Upgrade – Pre-Filtration was installed in the form of commercially available large diameter cartridge filters to reduce the amount of material entering the treatment system.
2. Water System End of Line Flush – an end of line flush was installed at 563 Wilderness Place to improve turnover in the water system and improve chlorine residuals.
3. Tank Safety Improvements – a safety platform was installed to facilitate safe access on the existing water storage tank.
4. Wilfred Reservoir Dam Improvements – hand rails on dam crest, access improvements, and upgrades to lower level outlet valve.
5. Filter Building Roof Upgrades – Upgrades to replace electrical power mast and section of the roof material.

Financial Report

Please refer to the attached [Statement of Operations](#). Revenue includes parcel taxes (*Transfers from Government*), fixed user fees (*User Charges*), interest on savings (*Interest Earnings*), a transfer from the maintenance reserve account, and miscellaneous revenue such as late payment charges (*Other Revenue*).

Expenses includes all costs of providing the service. General Government Services includes budget preparation, financial management, utility billing and risk management services. CRD Labour and Operating Costs includes CRD staff time as well as the costs of equipment, tools and vehicles. Debt servicing costs are interest and principal payments on long term debt. Other Expenses includes all other costs to administer and operate the water system, including insurance, supplies, water testing and electricity.

The difference between Revenue and Expenses is reported as Net Revenue (expenses). Any transfers to or from capital or reserve accounts for the service (Transfers to Own Funds) are deducted from this amount and it is then added to any surplus or deficit carry forward from the prior year, yielding an Accumulated Surplus (or deficit) that is carried forward to the following year.

Submitted by:	Matt McCrank, M.Sc., P.Eng., Senior Manager, Infrastructure Operations Ian Jesney, P.Eng., Senior Manager, Infrastructure Engineering Glenn Harris, Ph.D., R.P.Bio., Senior Manager, Environmental Protection Rianna Lachance, BCom, CPA, CA, Senior Manager, Financial Services
Concurrence	Ted Robbins, BSc, C.Tech, General Manager, Integrated Water Services