



Making a difference...together

## WILDERNESS MOUNTAIN WATER SERVICE COMMISSION

Notice of Annual General Meeting on **Wednesday, November 27, 2019 at 6 p.m.**  
East Sooke Community Hall, 1397 Coppermine Road, East Sooke, B.C.

Rob Hancock (Chair)    Director Mike Hicks    Dale Tallyn    Chris Gilbert

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### AGENDA

1. Approval of Agenda  
**Recommendation:** *That the Wilderness Mountain Water Service Commission approve the agenda as circulated.*
2. Adoption of Minutes of the Annual General Meeting of November 28, 2018  
**Recommendation:** *That the Wilderness Mountain Water Service Commission adopt the November 28, 2018 minutes as circulated.*
3. Chairs Report
4. 2018 Annual Report  
**Recommendation:** *That the Wilderness Mountain Water Service Commission receive the report for information.*
5. Appointment of Commission Members
6. New Business
7. Adjournment

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



Making a difference...together

**Minutes of an Annual General Meeting of the Wilderness Mountain Water Service Commission, held November 28, 2018 at the East Sooke Community Hall, 1397 Coppermine Road, East Sooke, B.C.**

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**PRESENT: Committee Members:** R. Hancock (C), D. Tallyn, 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; S. Orr (recorder)

**Public:** 21

Chair Hancock called the meeting to order at 6:00 p.m.

**1. APPROVAL OF AGENDA**

**MOVED** by M. Hicks, **SECONDED** by D. Tallyn,  
That the agenda be approved.

**CARRIED**

**2. ADOPTION OF MINUTES OF THE ANNUAL GENERAL MEETING OF DECEMBER 14, 2017**

**MOVED** by M. Hicks, and **SECONDED** by C.Taylor,  
That the minutes of December 14, 2017 be adopted.

**CARRIED**

**3. CHAIRS REPORT**

Chair Hancock stated that the water service was on budget, there were no boil water advisories, and that water quality levels were met and exceeded.

**4. ELECTION OF COMMISSION MEMBERS**

Director Hicks noted that the terms for Chuck Taylor and Dale Tallyn will expire on December 31, 2018. He then called for nominations for the two-year term positions that will expire on December 31, 2020.

D. Tallyn was nominated and agreed to stand. Nominations were called for two more times, and hearing none, D. Tallyn was nominated by acclamation.

C. Gilbert was nominated and agreed to stand. Nominations were called for two more times, and hearing none, C. Gilbert was nominated by acclamation.

Their names will be forwarded to the CRD Board for appointment.

**CARRIED**

**5. 2017 ANNUAL REPORT**

I. Jesney spoke to the 2017 annual report and provided a brief summary of the report and invited questions from the public.

There were no questions.

**6. NEW BUSINESS**

T. Robbins provided a copy of the staff report 'Wilderness Mountain Service Water Supply Options and Feasibility Study' dated November 27, 2018 to the members of the public. He provided an explanation of the information provided in the report, the options presented from the consultant. He invited and answered questions from the public.

The Chair stated that notice of meetings will be posted to sandwich boards to advise the public of upcoming meetings.

The Chair thanked the public for attending. He thanked outgoing member C. Taylor and new member, C. Gilbert for their service to the commission.

**7. ADJOURNMENT**

The meeting was adjourned at 7:21 p.m.

**CARRIED**

\_\_\_\_\_  
Chair

\_\_\_\_\_  
Secretary

# Wilderness Mountain Water System

## 2018 Annual Report

**CRD | Drinking Water**

### Introduction

This report provides a summary of the Wilderness Mountain Water Service for the year 2018. 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 2018.

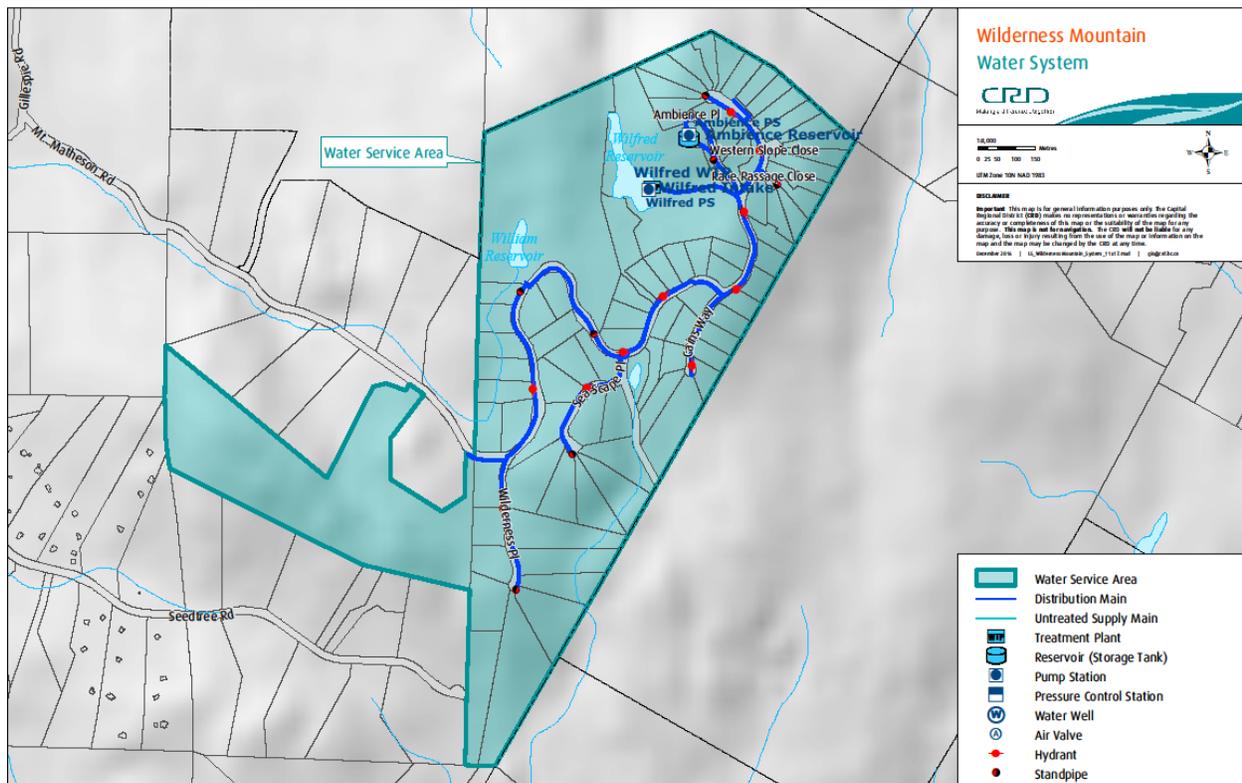


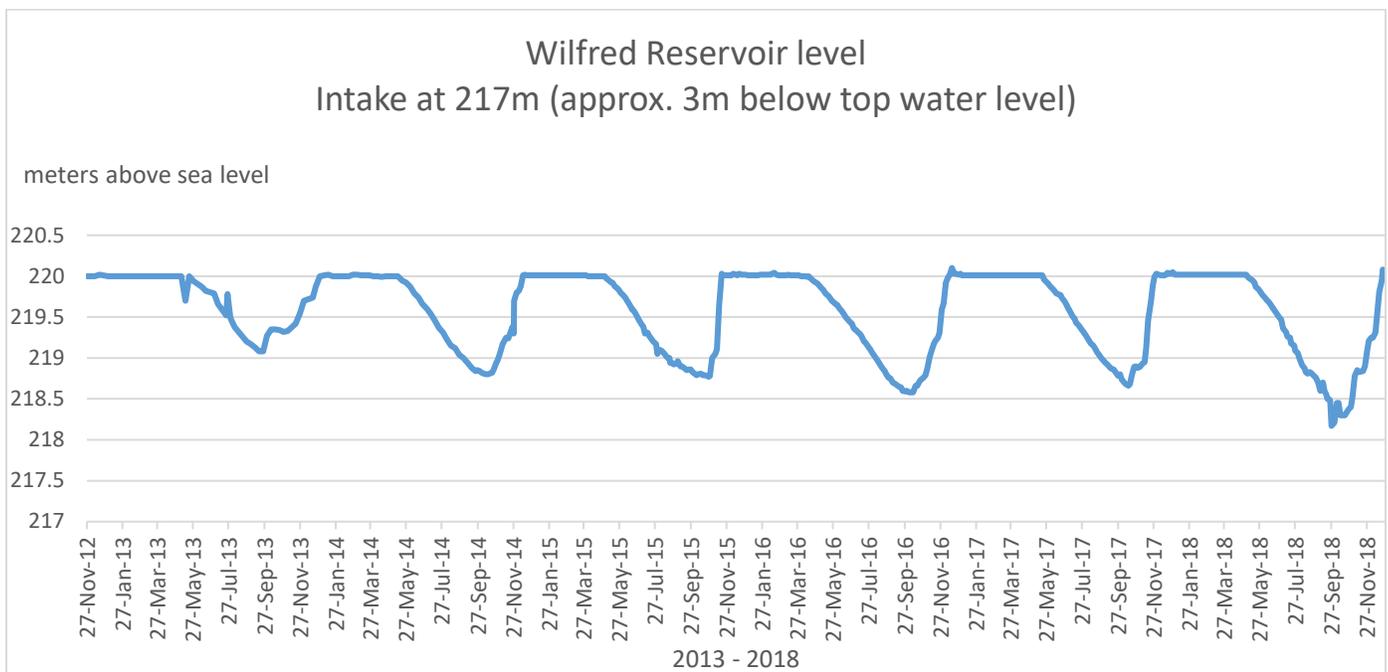
Figure 1: Map of the Wilderness Mountain Water Service Area.

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

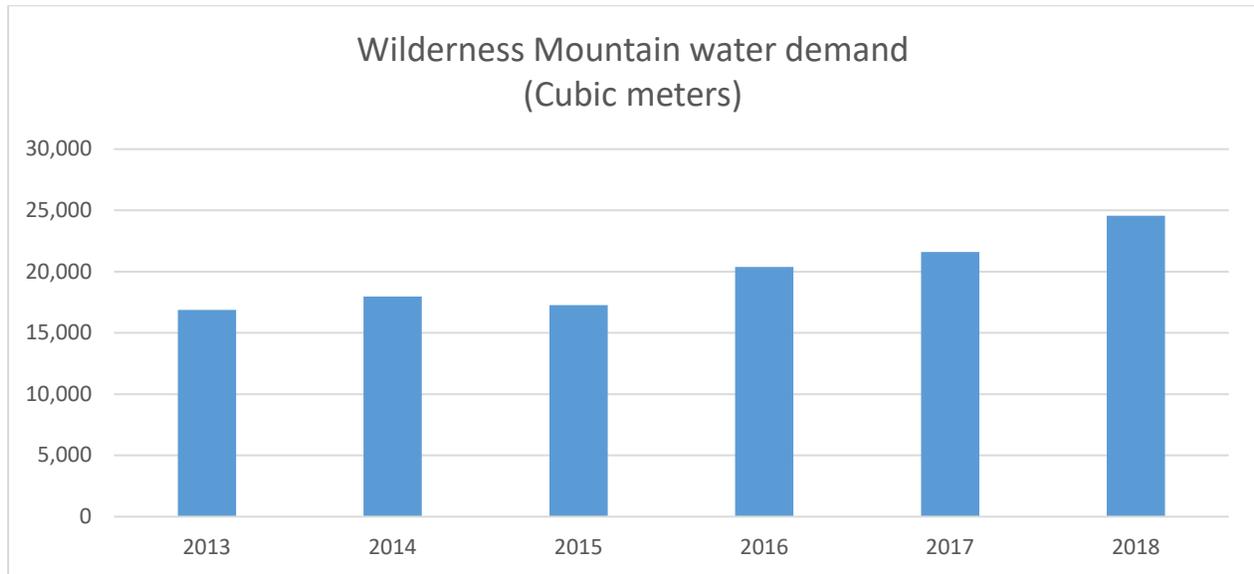
The raw water supply level in Wilfred Reservoir is shown in Figure 2. The lake level was at its lowest point in September and October due to the exceptionally dry weather experienced in the early fall of 2018. The reservoir reached full volume in late November.



**Figure 2: Wilfred Reservoir Water Level 2013-2018**

## Water Usage

The volume used by the community, or the water demand, is illustrated in Figure 3. The demand in 2018 was 13% higher than 2017 and 20% higher than the five year average. One additional point of demand in the system is an operational auto-flush at the end of Wilderness Place. This auto-flush was installed in 2017 in order to reduce the water age at the end of the system and ensure adequate disinfectant concentrations throughout the water distribution system in an effort to protect public health. This infrastructure was installed as a corrective action from the boil water advisory that occurred during the summer of 2016.



**Figure 3: Wilderness Mountain water demand 2013-2018**

## Drinking Water Quality

The Wilderness Mountain Water System supplied consistently safe water to its customers in 2018. 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. A new auto-flush installation at the end of Wilderness Place was able to mitigate the historic challenges with achieving an acceptable chloramine residual across the entire pipe network.

At the end of June and at the end of September, the treated water turbidity was consistently near the 1 NTU limit and regularly over this limit for short periods of time. The exceedances were a result of zooplankton and algal blooms in Wilfred Reservoir. The highest peaks during these short-term exceedances were usually below 3 NTU.

In 2018, Wilfred Reservoir did not experience the typical high iron and manganese concentrations in the fall as in previous years or the event was very short and was therefore maybe not captured with the applied sampling frequency.

The data below provides a summary of the water quality characteristics in 2018:

### Raw Water:

- Between May and September, the raw water exhibited medium concentrations of total coliform bacteria. Outside this timeframe, total coliform concentrations were very low.

- *E. coli* bacteria concentrations throughout the year were low with no exceedance of 20 CFU/100mL.
- *Cryptosporidium* and *Giardia* parasites were tested for twice in 2018 and neither was detected.
- The raw water only recorded slightly elevated concentrations of manganese in May 2018. No water discolouration was observed or reported by customers.
- The mean annual raw water turbidity was just above 1 NTU (1.05 NTU). The turbidity never exceeded 2.2 NTU (June). Raw water turbidity spikes often coincided with algal and/or zooplankton blooms in Wilfred Reservoir.
- The raw water was soft (median hardness 15.1 mg/L CaCO<sub>3</sub>).
- The pH was slightly acidic (median pH 6.8).
- The median total organic carbon (TOC) concentration was high at 4.9 mg/L.

#### Treated Water:

- The treated water was bacteriologically safe to drink. No *E. coli* and no total coliform bacteria were found in the treated water in 59 samples throughout the year.
- 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 several times at the end of June and at the end of September. The exceedances lasted only a few hours and the turbidity was typically below 3 NTU.
- The disinfection by-products THM and HAA were well below the *GCDWQ* limits.
- The annual median total chlorine residual in the system was 1.61 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>

### Operational Highlights

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

- February 2018 - Removed piping from William Brook Reservoir
- April 2018 - Flushed water mains – preventative maintenance
- May 2018 - Remove and replace the intake pump that failed
- June 2018 - Ambience Reservoir Square Tank - repair drain valve
- July 2018 - Calibrate the Chlorine Analyzers
- August 2018 - Flushing Mains due to adverse water conditions
- August 2018 - Repaired leak at 567 Wilderness Mountain Way
- September - Cleaned Reservoir tanks and flushed the water system
- November 2018 - Annual Hydrant maintenance

### Capital Project Updates

The Capital Projects that were in progress or completed in 2018 included:

Water Service Options Analysis – This project was completed with a report presented in the fall, resulting in a grant application for new works. The CRD anticipates the results of the grant application in fall of 2019.

## 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

Attachment: 2018 Financial Summary (Statement of Operations)

## CAPITAL REGIONAL DISTRICT

### WILDERNESS MOUNTAIN WATER Statement of Operations (Unaudited) For the Year Ended December 31, 2018

	2018	2017
<b>Revenue</b>		
Transfers from government	60,330	55,740
User Charges	61,392	53,151
Water Sales	17,340	17,040
Fees and Charges	418	106
Other revenue from own sources:		
Other revenue	73	64
Grant revenue	15,000	-
<b>Total revenue</b>	<u>154,553</u>	<u>126,101</u>
<b>Expenses</b>		
General government services	4,710	4,440
CRD Labour and Operating costs	64,454	66,701
Debt Servicing Costs	23,660	23,651
Other expenses	32,481	31,491
<b>Total expenses</b>	<u>125,305</u>	<u>126,284</u>
<b>Net revenue (expenses)</b>	29,248	(183)
Transfers to own funds:		
Capital Reserve Fund	9,933	-
Operating Reserve Fund	-	(234)
Water Capital Fund	15,000	-
<b>Annual surplus (deficit)</b>	4,316	51
Accumulated surplus/(deficit), beginning of year	(4,316)	(4,367)
<b>Accumulated deficit, end of year</b>	<u>\$ (0)</u>	<u>(4,316)</u>

**CAPITAL REGIONAL DISTRICT**

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**WILDERNESS MOUNTAIN WATER**  
**Statement of Reserve Balances (Unaudited)**  
**For the Year Ended December 31, 2018**

	<b>Capital Reserve</b>	
	<b>2018</b>	<b>2017</b>
<b>Beginning Balance</b>	41,711	96,877
Transfer from Operating Budget	9,933	-
Transfers from completed capital projects	2,404	32,928
Interest Income	770	775
Transfer to Capital Projects	(15,200)	(88,869)
<b>Ending Balance</b>	<u>39,617</u>	<u>41,711</u>