Capital Regional District

625 Fisgard St.,
Victoria, BC V8W 1R7

Notice of Meeting and Meeting Agenda
Wilderness Mountain Water Service Commission

Tuesday, June 24, 2025 | **9:30 AM** | **Goldstream Conference Room, 479 Island Hwy, Victoria BC V9B 1H7**

Members of the public can view the live meeting via MS Teams link: **Click here**
Alternatively, to hear the meeting via telephone:
Call: 1-877-567-6843 and enter the Participant Code 791 909 091#

D. Pepino (Chair), P. Twamley (Vice Chair), A. Wickheim (EA Director), J. Wilson

The Capital Regional District strives to be a place where inclusion is paramount and all people are treated with dignity. We pledge to make our meetings a place where all feel welcome and respected.

1. Territorial Acknowledgement

2. Approval of Agenda

3. Adoption of Minutes

3.1. 25-0723 Minutes of the Wilderness Mountain Water Service Commission meeting of February 18, 2025

Recommendation: That the minutes of the Wilderness Mountain Water Service Commission meeting of February 18, 2025 be approved as circulated.

Attachments: Minutes - February 18, 2025

4. Chair's Remarks

5. Presentations/Delegations

The public are welcome to attend CRD meetings in-person.

Delegations will have the option to participate electronically. Please complete the online application at www.crd.ca/address no later than 4:30 pm two days before the meeting and staff will respond with details.

Alternatively, you may email your comments on an agenda item to the Commission at legserv@crd.bc.ca.

6. Commission Business

6.1. 25-0650 Senior Manager's Verbal Update

Recommendation: There is no recommendation. This verbal update is for information only.

6.2. 25-0674 2024 Annual Report

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: 2024 Annual Report - Cover Report
Appendix A: 2024 Annual Report
Appendix B: Statement of Operations and Reserve Balances

6.3. 25-0670 Capital Projects and Operational Update - June 2025

Recommendation: There is no recommendation. This report is for information only.

Attachments: Staff Report: Capital Projects and Operational Update - June 2025

7. Notice(s) of Motion

8. New Business

9. Motion to Close the Meeting

9.1. 25-0770 Motion to Close the Meeting

Recommendation: 1. That the meeting be closed for Land Acquisition/Disposition in accordance with Section 90(1)(e) of the Community Charter. [1 item]
2. That such disclosures could reasonably be expected to harm the interests of the Regional District. [1 Item]

10. Adjournment

The next meeting is Tuesday October 28, 2025 at 9:30 am.

To ensure quorum, please advise Megan MacDonald (mmmacdonald@crd.bc.ca) if you or your alternate cannot attend.

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625 Fisgard St.,
Victoria, BC V8W 1R7

Capital Regional District

Meeting Minutes

Wilderness Mountain Water Service Commission

Tuesday, February 18, 2025 | **9:30 AM** | **Goldstream Conference Room, 479 Island Hwy, Victoria BC V9B 1H7**

PRESENT:
D. Pepino, P. Twamley, A. Wickheim (EA Director), J. Wilson

Staff: S. Irg, Senior Manager, Water Infrastructure Operations; S. Mason, Manager, Water Supply Engineering and Planning; C. Moch, Manager, Water Quality; D. Dionne, Manager, Business Support Services; M. Lagoa, Manager, Legislative Services and Deputy Corporate Officer; M. MacDonald, Legislative Services Coordinator (Recorder)

The meeting was called to order at 9:30 am.

1. Territorial Acknowledgement

S. Irg provided a Territorial Acknowledgement.

2. Election of Chair

S. Irg called for nominations for the position of Chair of the Wilderness Mountain Water Service Commission for 2025.

A. Wickheim nominated J. Wilson. J. WIlson declined the nomination.

A. Wickheim nominated D. Pepino. D. Pepino accepted the nomination.

S. Irg called for nominations a second and third time.

Hearing no further nominations, S. Irg declared Doug Pepino the Chair of the Wilderness Mountain Water Service Commission for 2025 by acclamation.

3. Election of Vice Chair

Chair Pepino called for nominations for the position of Vice Chair of the Wilderness Mountain Water Service Commission for 2025.

A. Wickheim nominated P. Twamley. P. Twamley accepted the nomination.

Chair Pepino called for nominations a second and third time.

Hearing no further nominations, Chair Pepino declared Paula Twamley the Vice Chair of the Wilderness Mountain Water Service Commission for 2025 by acclamation.

4. Approval of Agenda

MOVED by A. Wickheim, SECONDED by J. Wilson,
That the agenda of the Wilderness Mountain Water Service Commission meeting of February 18, 2025 be approved.
CARRIED

5. Adoption of Minutes

5.1. 25-0128 Minutes of the Wilderness Mountain Water Service Commission Meeting of November 1, 2024

MOVED by A. Wickheim, SECONDED by P. Twamley,
That the minutes of the Wilderness Mountain Water Service Commission of November 1, 2024 be adopted as circulated.
CARRIED

6. Chair's Remarks

I would like to thank the WMWS Commission for the opportunity to act once again as Chair for 2025.

My involvement in the WMWS Commission started with a deep dive into the history of Mt. Matheson Estates, a multi-decade development from the 1970's, through to, and including, today's meeting.

We moved to Mt. Matheson Estates in 2016, and our new life began here. As time progressed, my wife Carol and I uncovered documented details that underpinned much of my response, since 2020, to actions being recommended by CRD staff. Those details, unknown by most previous Commissioners, may have been the foundation for the "unreasonable" reputation I have been told I generated at the CRD.

I want to take a moment and again reiterate that over my career in the private sector, I steadfastly focussed on looking for solutions to complex challenges containing a myriad of seemingly unconnected data points. That approach resulted in numerous firsts in the Canadian Telecom industry in which I worked.

Sometimes breakthroughs just take more persistence than many are willing to generate. I now think 7 years is the limit.

That said, I would like to inform everyone that I intend to make this my last year on the WMWS Commission. I want to make way for other individuals in the community that seek to direct the CRD towards the best interests of our small water system.

Thank you for the opportunity to attempt to communicate our questions and concerns since 2018.

7. Presentations/Delegations

There were no presentations or delegations.

8. Commission Business

8.1. 25-0165 Senior Manager's Verbal Update

S. Irg provided a verbal update, the following was noted:
- a boil water advisory was issued and rescinded due to manganese levels
- water quality reports are available on the CRD website

Discussion ensued regarding:
- manganese levels, filtration and water quality impacts
- consideration of relocating the water intake

8.2. 25-0122 Capital Projects and Operational Update - February 2025

S. Irg presented Item 8.2. for information.

Discussion ensued regarding:
- progress on the construction of the new dock
- local emergency response and power outage procedures

8.3. 25-0126 Dam and Water License Update

S. Irg presented Item 8.3. for information.

Discussion ensued regarding:
- liability and costs associated with the unusable lower reservoir
- potential future options for the lower reservoir
- value of the lower reservoir, including environmental benefits
- necessity for ensuring future maintenance and insurance coverage

MOVED by J. Wilson, SECONDED by P. Twamley,
That this report be referred back to staff for additional information.

Discussion ensured regarding:
- potential recovery of previously paid operating costs
- liability coverage and dam safety requirements
- potential for a purchase offer for the dam
- fire department operational standards
- request for more details to provide clarity on the potential sale

The question was called:

That this report be referred back to staff for additional information.
CARRIED

9. Notice(s) of Motion

There were no notice(s) of motion.

10. New Business

10.1. Filtration System Options

Chair Pepino noted that additional filtration is necessary to ensure water quality.

Discussion ensued regarding:
- potential for cost effective secondary filtration on each individual home
- regulatory requirements which prevent individual filtration systems
- frequency of water quality monitoring
- prohibitive costs to fix the primary water system

S. Irg stated that it is a legislated requirement for the CRD to provide potable water to system users. It is imperative to invest in the necessary water system upgrades to address filtration issues. Installing secondary filtration on individual homes is not an option.

11. Adjournment

MOVED by J. Wilson, SECONDED by P. Twamley,
That the WIlderness Mountain Water Service Commission meeting of February 18, 2025 be adjourned at 11:00 am.
CARRIED

_____
Chair

_____
Recorder

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REPORT TO WILDERNESS MOUNTAIN WATER SERVICE COMMISSION
MEETING OF TUESDAY, JUNE 24, 2025

SUBJECT **2024 Annual Report - Cover Report**

ISSUE SUMMARY

Per the *Drinking Water Protection Act*, a water supplier must prepare and make public, within 6 months of the end of the calendar year, an annual report. The Annual Report provides a summary of the Wilderness Mountain Water Service for 2024.

BACKGROUND

The Wilderness Mountain Water System is located near the top of Mount Matheson in East Sooke. This system provides drinking water to approximately 74 service connections. Capital Regional District (CRD) is responsible for the operation and maintenance of the system and the overall quality of the drinking water provided to customers in the Wilderness Mountain Water System.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Shayne Irg, P. Eng., Senior Manager, Water Infrastructure Operations
Submitted by:	Joseph Marr, P. Eng., Senior Manager, Infrastructure Engineering & Planning
Submitted by:	Varinia Somosan, CPA, CGA, Senior Manager, Financial Services / Deputy CFO
Concurrence:	Glenn Harris, Ph.D., R.P.Bio., Acting General Manager, Parks, Recreation and Environmental Services
Concurrence:	Alicia Fraser, P. Eng., General Manager, Infrastructure and Water Services

ATTACHMENT(S)

Appendix A: 2024 Annual Report
Appendix B: 2024 Statement of Operations and Reserve Balances

Wilderness Mountain Water System

2024 Annual Report

CRD | Drinking Water

Introduction

This report provides a summary of the Wilderness Mountain Water Service for 2024 and 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. The area 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, 74 were customers to the water system in 2024.

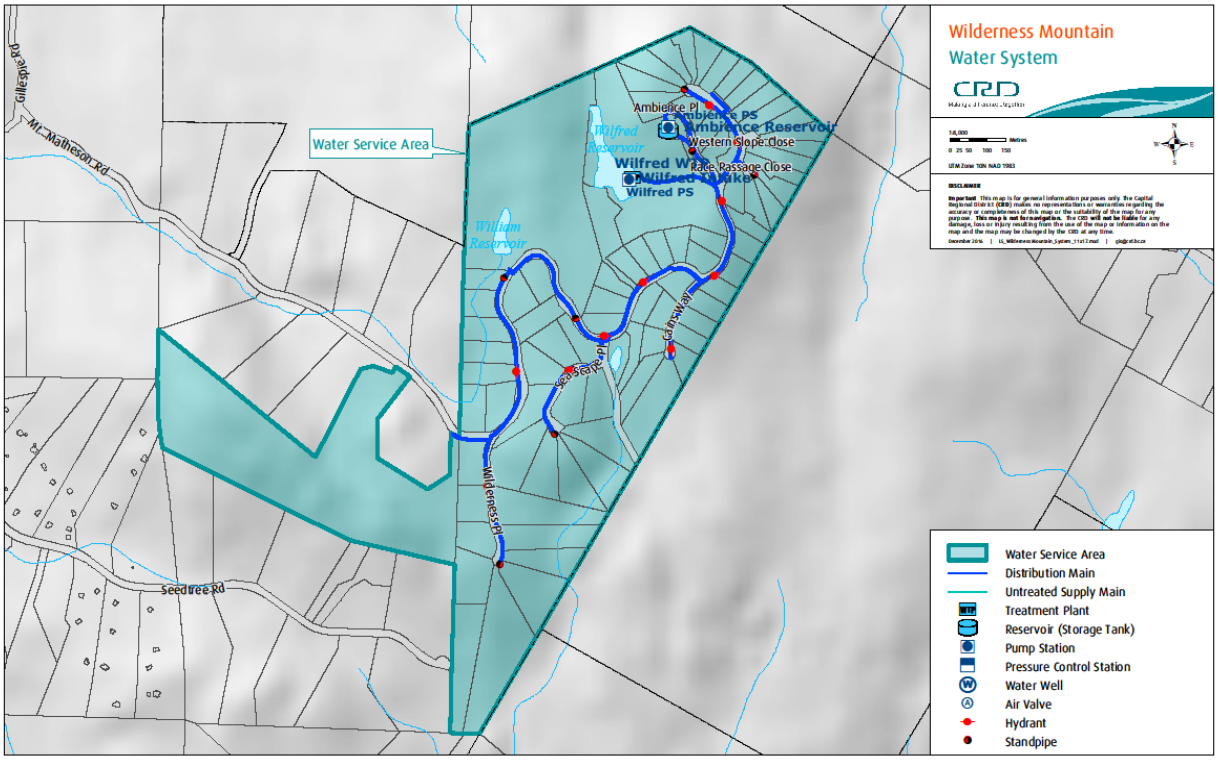

Figure 1: Map of the Wilderness Mountain Water Service Area

The Wilderness Mountain water system is primarily comprised of:

- Raw water 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 US gallons) and the distribution system.
- Distribution system. 3,750 meter network of 150 millimeter (6 inch) and 100 mm (4 inch) polyvinyl chloride (PVC) water mains.
- Other water system assets: 74 service connections, 10 hydrants, six standpipes, 21 gate valves and a Supervisory Control and Data Acquisition (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 October. The reservoir reached full volume in January 2024.

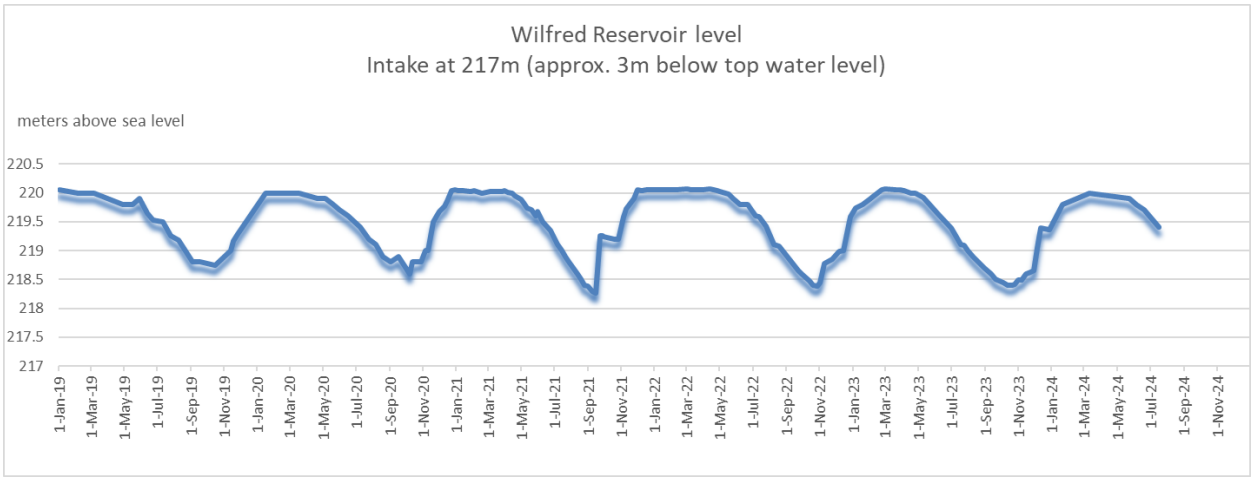

Figure 2: Wilfred Reservoir Water Level 2019-2024

Water Usage

The volume used by the community, or the water demand, is illustrated in Figure 3. The demand in 2024 was 10% lower than in 2023.

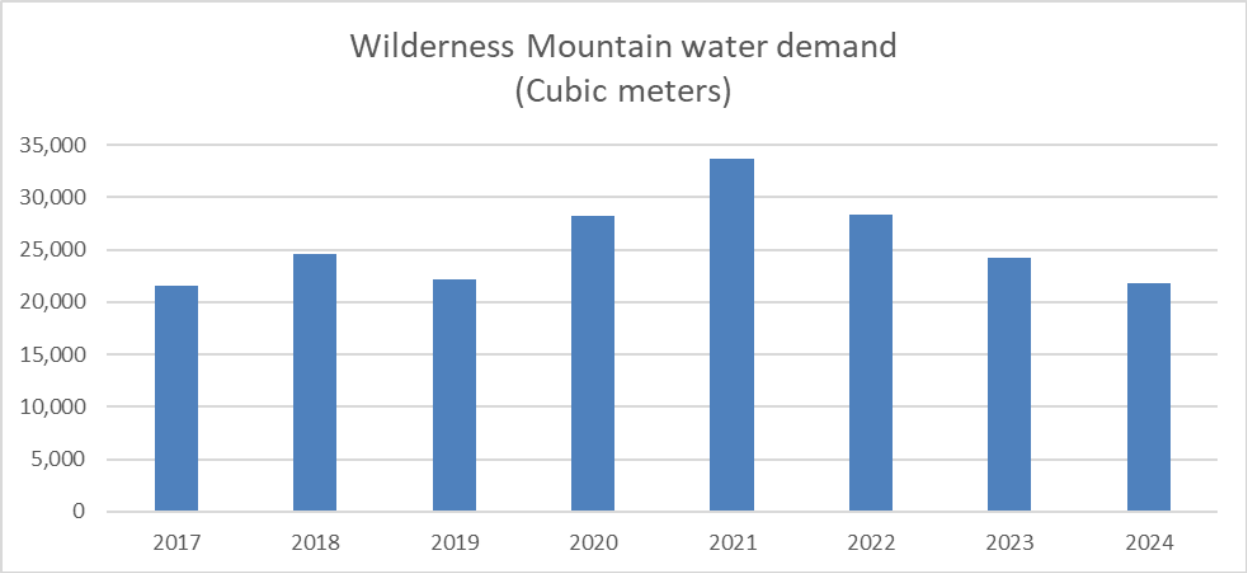

Figure 3: Wilderness Mountain Water Demand (cubic meters) 2017-2024

Drinking Water Quality

The Wilderness Mountain Water System was on two boil water advisories (BWA), in total for 56 days in 2024, due to elevated turbidity in the treated water. High algal activity and the inability of the existing filtration system to filter out very small algae species in bloom were the main factors for these BWAs for this system. Upgrades to the treatment process or a new water source are needed to meet the provincial requirement.

Wilfred Reservoir raw water exhibited elevated iron and manganese concentrations throughout the entire year, but the highest concentrations were recorded during November and December. Lake turnover and rain-driven runoff events were the main causes. Without designated treatment in place to remove these metals from the raw water, the aesthetic objectives for iron and manganese, as per Guidelines for Canadian Drinking Water Quality (GCDWQ), were regularly exceeded in the treated water. In samples from November 13, the manganese concentrations in the treated water even exceeded the maximum acceptable concentration (MAC), the health-related limit stipulated by the GCDWQ. Concentrations beyond the aesthetic limit can lead to water discolourations, while exceedances of the MAC can become a health issue with chronic exposure. Additional treatment is required to mitigate this ongoing issue. The water had a high colour rating throughout the year.

The data below provides a summary of the water quality characteristics in 2024:

Raw Water:

- From May to August, the raw water recorded extremely high total coliform bacteria concentrations. While summer total coliform spikes are common, the magnitude of this event was unprecedented. Outside this period, total coliform concentrations were relatively low.
- *E. coli* bacteria concentrations were mostly low with higher concentrations in the fall following the first post-summer rainfall and runoff event.
- *Cryptosporidium* and *Giardia* parasites were tested twice in 2024, and neither were detected.

- The raw water was tested monthly for metals for a more granular analysis compared to the past. The results indicate that both iron and manganese concentrations are particularly high during November and December. Cause for this is likely a combination of the lake turnover and runoff from rainfall events. However, the source water exhibited also high iron and manganese concentration in June.
- The median annual raw water turbidity was 0.90 Nephelometric Turbidity Unit (NTU) and therefore similar to 2023. The turbidity was typically over 1 NTU during the wet season and during early summer. The maximum turbidity was 2.4 NTU (October 25). Most raw water turbidity spikes coincided with algal and/or zooplankton blooms in Wilfred Reservoir. Runoff and lake turnover events can also have an adverse effect on turbidity.
- The raw water was soft (median hardness 17.75 mg/L $CaCO_3$).
- The pH was slightly acidic (median pH 6.9).
- The median total organic carbon (TOC) concentration was moderately high at 4.60 mg/L, which is in line with historic results.

Treated Water:

- The treated water was safe to drink outside the 56-day BWAs (January 1-24, and October 25 to November 25, 2024). No *E. coli* or total coliform bacteria were found in the treated water throughout the entire year.
- The treated water turbidity was above the GCDWQ turbidity limit of 1.0 NTU in January, October and November. This led to the two periods with a BWA.
- Manganese concentrations exceeded the aesthetic objective in the treated water during most parts of the year. August and September seem to be two months with lower iron and manganese in the treated water. Treated water samples from November 13 were above the MAC in the GCDWQ. Iron concentrations were in exceedance of the recently lowered aesthetic objective for most parts of the year. The water had a high colour rating for the entire year, likely because of high iron and manganese concentrations.
- The disinfection by-products Trihalomethanes (TTHM) and Haloacetic Acids (HAA) were well below the GCDWQ limits.
- The annual median total chlorine residual in the system was 1.70 mg/L.

Table 1 and 2 below provide a summary of the 2024 raw and treated water test results.

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 operational issues that were addressed by CRD Integrated Water Services staff:

- Hypo pump replacement,
- Booster pump replacement,
- Log/Debris removal from Wilfred Reservoir

Capital Project Updates – 2024

The Capital Projects that were in progress or completed in 2024 include:

- Wooden Intake Platform Replacement – Contract executed, and preliminary work progressed on wooden intake platform repairs. A portion of the scope for a floating landing deferred until Q2 of 2025 to align with budget approval timelines.

Financial Report

Please refer to the attached 2024 Statement of Operations and Reserve Balances.

Revenue includes parcel taxes (Transfers from Government), fixed user fees (User Charges), water sales and interest on savings (Interest earnings), and miscellaneous revenue such as late payment charges (Other revenue).

Expenses include all costs of providing the service. General Government Services include budget preparation, financial management, utility billing and risk management services. CRD Labour and Operating Costs include 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 include 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 funds 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). In alignment with Local Government Act Section 374 (11), any deficit must be carried forward and included in next year's financial plan.

For questions related to this Annual Report please email IWSAdministration@crd.bc.ca

Table 1

Table 1: 2024 Summary of Raw Water Test Results, Wilderness Mountain Water System

PARAMETER		2024 ANALYTICAL RESULTS				CANADIAN GUIDELINES	2014 - 2023 ANALYTICAL RESULTS			
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum	Range Maximum	≤ = Less than or equal to	Median	Samples Analyzed	Range Minimum	Range Maximum
mg/L = parts per million ug/L = parts per billion										
Physical Parameters (ND means Not Detected by analytical method used)										
Carbon, Dissolved Organic	mg/L as C	4.05	2	3.7	4.4		3.9	21	1.91	5.4
Carbon,Total Organic	mg/L as C	4.6	5	4.1	4.8	Guideline Archived	4	29	2.96	8.8
Colour, True	TCU	**22.5**	6	18.4	31	≤15 AO	14	53	7	28
Hardness as $CaCO_3$	mg/L	**17.75**	12	15.9	19.1	No Guideline Required	15.7	34	11.1	18.6
pH	pH units	**6.91**	17	6.32	7.18	7.0 - 10.5 AO	6.9	77	6.14	8.1
Total Suspended Solids	mg/L	**1.8**	2	1.6	2		<2	13	0.4	7.2
Total Solids	mg/L	64	2	54	74		48.7	13	42	88
Turbidity, lab tests	NTU	**0.9**	38	0.5	2.4		0.94	382	0.35	5.8
Ultraviolet Transmittance	%	**79.3**	4	73.2	80.1		76.8	37	69.9	82.1
Water Temperature	degrees C	**13.3**	29	4.8	21.3	≤15 AO	11.75	310	3.5	21.2
Non-Metallic Inorganic Chemicals (ND means Not Detected by analytical method used)										
Ammonia, Total	ug/L as N	**< 15**	2	< 15	<15		30	18	<0.61	71
Bromide	ug/L as Br	**0.0435**	2	0.042	0.045		35	14	< 0.7	50
Chloride	mg/L as Cl	**15**	2	15	15	≤ 250 AO	11	10	10	14
Cyanide	mg/L as Cn	**0.00075**	2	0.00057	0.00092	0.2 MAC	< 0.0005	10	< 0.0005	< 0.006
Fluoride	mg/L as F	**< 0.05**	2	< 0.05	< 0.05	1.5 MAC	< 0.021	5	0.016	0.024
Nitrogen, Nitrate	ug/L as N	**67.5**	2	< 20	115		< 20	18	< 0.45	37
Nitrogen, Nitrite	ug/L as N	**< 5**	2	< 5	<5		< 5	18	<0.005	< 5
Nitrogen, Total	ug/L as N	**359**	2	250	468		211.5	18	84	267
Phosphate,Total	ug/L as P	< 10	3	9	13		6.45	18	< 1	71
Silica	mg/L as SiO_2	**3.4**	2	3.3	3.5		4.65	4	2.1	5
Silicon	mg/L as Si	**1110**	12	675	1990		1540	31	380	2920
Sulphate	mg/L as SO_4	**3.6**	4	3.4	4.2	≤ 500 AO	5.8	21	4	19
Sulphide	mg/L as H_2S	**< 0.0018**	2	< 0.0018	<0.0018	≤ 0.05 AO	< 0.0018	3	< 0.0018	0.0037
Sulphur	mg/L as S	**< 3**	12	< 3	<3		< 3	32	< 3	5.94
Metals (ND means Not Detected by analytical method used)										
Aluminum	ug/L as Al	**20**	12	5.9	36.6	2900 MAC / 100 OG	25.4	31	7.8	81.5
Antimony	ug/L as Sb	**< 0.5**	12	< 0.5	< 0.5	6 MAC	< 0.5	31	< 0.5	< 0.5
Arsenic	ug/L as As	**0.11**	12	< 0.1	0.14	10 MAC	< 0.1	31	< 0.1	0.15
Barium	ug/L as Ba	**2.5**	12	1.8	2.8	1000 MAC	2.1	31	< 1	2.7
Beryllium	ug/L as Be	**< 0.1**	12	< 0.1	< 0.1		< 0.1	31	< 0.1	< 0.1
Bismuth	ug/L as Bi	**< 1**	12	< 1	< 1		< 1	31	< 1	< 1
Boron	ug/L as B	**< 50**	12	< 50	< 50	5000 MAC	< 50	31	< 50	< 50
Cadmium	ug/L as Cd	**< 0.01**	12	< 0.01	0.046	7 MAC	< 0.01	31	< 0.01	0.013
Calcium	mg/L as Ca	**3.785**	12	3.4	4.06	No Guideline Required	3.36	31	2.9	4.14
Chromium	ug/L as Cr	**< 1**	12	< 1	12.4	50 MAC	< 1	31	< 1	< 1
Cobalt	ug/L as Co	**< 0.2**	12	< 0.2	0.26		< 0.2	31	< 0.2	0.5
Copper	ug/L as Cu	**7.17**	12	1.86	28.5	2000 MAC / ≤ 1000 AO	3.18	31	1.95	28.5
Iron	ug/L as Fe	**173.5**	12	89	489	≤ 100 AO	182	31	90.5	902
Lead	ug/L as Pb	**0.6**	12	< 0.2	2.68	5 MAC	0.27	31	< 0.2	1.01
Lithium	ug/L as Li	**< 2**	12	< 2	<2		< 2	22	< 2	5
Magnesium	mg/L as Mg	**1.99**	12	1.8	2.21	No Guideline Required	1.76	31	1.48	2.03
Manganese	ug/L as Mn	**59.2**	12	23.9	182	120 MAC / ≤ 20 AO	54.7	31	19.7	364
Mercury	ug/L as Hg	**< 0.0019**	5	< 0.0019	<0.03		< 0.0019	28	< 0.0019	< 0.05
Molybdenum	ug/L as Mo	**< 1**	12	< 1	<1		< 1	31	< 1	< 1
Nickel	ug/L as Ni	**< 1**	12	< 1	<1		< 1	31	< 1	5.2
Potassium	mg/L as K	**0.398**	12	0.312	0.454		0.325	31	0.249	0.423
Selenium	ug/L as Se	**< 0.1**	12	< 0.1	<0.1	50 MAC	< 0.1	31	< 0.1	< 0.1
Silver	ug/L as Ag	**< 0.02**	12	< 0.02	<0.02	No Guideline Required	< 0.02	31	< 0.02	< 0.02
Sodium	mg/L as Na	**7.25**	12	6.46	7.85	≤ 200 AO	6.79	31	6.18	10.9
Strontium	ug/L as Sr	**15.55**	12	14.3	17.8	7000 MAC	14.3	31	12.2	17.2
Thallium	ug/L as Tl	**< 0.01**	12	< 0.01	<0.01		< 0.01	31	< 0.01	< 0.05
Tin	ug/L as Sn	**< 5**	12	< 5	<5		< 5	31	< 5	< 5
Titanium	ug/L as Ti	**< 5**	12	< 5	<5		< 5	31	< 5	< 5
Uranium	ug/L as U	**< 0.1**	12	< 0.1	<0.1	20 MAC	< 0.1	31	< 0.1	< 0.1
Vanadium	ug/L as V	**< 5**	12	< 5	<5		< 5	31	< 5	< 5
Zinc	ug/L as Zn	**9**	12	< 5	42.3	≤ 5000 AO	< 5	31	< 5	21.3
Zirconium	ug/L as Zr	**< 0.1**	12	< 0.1	< 0.1		< 0.1	31	< 0.1	< 0.5
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	Coliforms/100 mL	**165**	20	< 1	190000		150	199	<1	53000
E. coli	E.coli/100 mL	**< 1**	20	< 1	15		< 1	208	<1	29
Hetero. Plate Count, 28C (7 day)	CFU/1 mL	Last analyzed in 2014				No Guideline Required	780	9	470	1340
Chlorophyll										
Chlorophyll A	ug/L	**3.74**	16	1.24	13.2		3.68	135	0.295	10.7
Parasites						No MAC Established				
Cryptosporidium , Total oocysts	oocysts/100 L	**< 0.1**	2	< 0.1	<0.1	Zero detection desirable	**0.55**	13	< 0.1	< 1
Giardia , Total cysts	cysts/100 L	**< 0.1**	2	< 0.1	< 0.1	Zero detection desirable	**< 1**	9	< 0.1	< 1

Table 2

Table 2: 2024 Summary of Treated Water Test Results, Wilderness Mountain Water System										
PARAMETER		**2024 ANALYTICAL RESULTS**				**CANADIAN GUIDELINES**	**2014-2023 ANALYTICAL RESULTS**			
Parameter Name	Units of Measure	Annual Median	Samples Analyzed	Range Minimum	Range Maximum	≤ = Less than or equal to	Median	Samples Analyzed	Range Minimum	Range Maximum
mg/L = parts per million ug/L = parts per billion										
Physical Parameters										
Colour, True	TCU	**18**	4	12	23	≤ 15 AO	11	49	5	24
Hardness as CaCO3	mg/L	**18.1**	39	15.8	20		16.1	25	13.6	18.1
pH	pH units	**7.14**	17	6.5	7.92	7.0 - 10.5 AO	7	79	6.45	9.1
Total Organic Carbon	mg/L	4.55	6	3.8	5.8		3.95	16	2.5	8.7
Turbidity, lab tests	NTU	**0.7**	27	0.5	1.4	1 MAC and ≤ 5 AO	0.69	304	0.17	3.3
Water Temperature	degrees C	**10.7**	215	3	21.5	≤ 15 AO	11.1	1971	1.8	21.1
Microbial Parameters										
Indicator Bacteria										
Coliform, Total	CFU/100 mL	**< 1**	98	< 1	< 1	0 MAC	< 1	846	<1	330
E. coli	CFU/100 mL	**< 1**	98	< 1	< 1	0 MAC	< 1	846	<1	40
Hetero. Plate Count, 28C (7 day)	CFU/1 mL	**21000**	1	21000	21000	No Guideline Required	4600	76	60	22000
Disinfectants										
Disinfectants										
Chlorine, Total Residual	mg/L as Cl_2	**1.7**	140	0.05	3.29	No Guideline Required	1.4	1188	0	5.2
Monochloramine, Field - 1 Station	mg/L	**2.475**	18	0.98	3.1		2.3	85	0.17	3.45
Disinfection By-Products (ND means Not Detected by analytical method used)										
Trihalomethanes (THMs)										
Bromodichloromethane (BDCM)	ug/L	**< 1**	5	< 1	< 1		< 1	52	<0.2	26
Bromoform (BRFM)	ug/L	**< 1**	5	< 1	< 1		< 1	52	< 0.1	< 2
Chloroform (CHLF)	ug/L	**2.8**	5	2.3	3.8		2.45	52	<1	130
Chlorodibromomethane (DBCM)	ug/L	**< 1**	5	< 1	< 1		< 1	52	<0.1	3.1
Total Trihalomethanes (TTHM)	ug/L	**2.8**	5	2.3	3.8	100 MAC	2.4	52	< 1	160
Haloacetic Acids (HAAs)										
Haloacetic Acids (*5 Total, HAA5)	ug/L	**8**	1	8	8	80 MAC	11.5	44	0.75	88
Metals (ND means Not Detected by analytical method used)										
Aluminum	ug/L as Al	**14.3**	39	3.7	36.2	2900 MAC / 100 OG	19.3	25	4.5	62.1
Antimony	ug/L as Sb	**< 0.5**	39	< 0.5	< 0.5	6 MAC	< 0.5	25	< 0.5	< 0.5
Arsenic	ug/L as As	**< 0.1**	39	< 0.1	0.13	10 MAC	< 0.1	25	< 0.1	0.14
Barium	ug/L as Ba	**2.5**	39	1.3	3.3	1000 MAC	2	25	< 1	2.6
Beryllium	ug/L as Be	**< 0.1**	39	< 0.1	< 0.1		< 0.1	25	< 0.1	< 0.1
Bismuth	ug/L as Bi	**< 1**	39	< 1	< 1		< 1	25	< 1	< 1
Boron	ug/L as B	**< 50**	39	< 50	< 50	5000 MAC	< 50	25	< 50	< 50
Cadmium	ug/L as Cd	**< 0.01**	39	< 0.01	0.057	5 MAC	< 0.01	25	< 0.01	< 0.01
Calcium	mg/L as Ca	**4.02**	39	3.45	4.48	No Guideline Required	3.49	25	2.93	3.93
Chromium	ug/L as Cr	**< 1**	39	< 1	< 1	50 MAC	< 1	25	< 1	< 1
Cobalt	ug/L as Co	**< 0.2**	39	< 0.2	0.34		< 0.2	25	< 0.2	< 0.5
Copper	ug/L as Cu	**14**	39	6.18	136	2000 MAC / ≤ 1000 AO	10.2	25	3.57	92.7
Iron	ug/L as Fe	**161**	39	60.7	371	≤ 100 AO	176	25	49.7	573
Lead	ug/L as Pb	**0.37**	39	< 0.2	2.2	5 MAC	0.4	25	0.2	0.99
Lithium	ug/L as Li	**< 2**	39	< 2	< 2		< 2	21	< 2	< 5
Magnesium	mg/L as Mg	**1.98**	39	1.73	2.17	No Guideline Required	1.79	25	1.52	2.07
Manganese	ug/L as Mn	**51.9**	39	9.2	159	120 MAC / ≤ 20 AO	37.7	25	8	208
Mercury	ug/L as Hg	**< 0.0019**	5	< 0.0019	< 0.03		< 0.0019	19	< 0.0019	0.0032
Molybdenum	ug/L as Mo	**< 1**	39	< 1	< 1		< 1	25	< 1	< 1
Nickel	ug/L as Ni	**< 1**	39	< 1	< 1		< 1	25	< 1	< 1
Potassium	mg/L as K	**0.394**	39	0.303	0.459		0.342	25	0.241	0.397
Selenium	ug/L as Se	**< 0.1**	39	< 0.1	< 0.1	50 MAC	< 0.1	25	< 0.1	< 0.1
Silicon	mg/L as Si	**1170**	39	695	1930		1540	25	408	2860
Silver	ug/L as Ag	**< 0.02**	39	< 0.02	< 0.02	No Guideline Required	< 0.02	25	< 0.02	< 0.02
Sodium	mg/L as Na	**10.2**	39	8.61	12.1	≤ 200 AO	9.57	25	7.22	11.4
Strontium	ug/L as Sr	**16.4**	39	14.6	18.5	7000 MAC	14.4	25	12.3	16.4
Sulfur	mg/L as S	**< 3**	39	< 3	< 3		< 3	25	< 3	4.6
Thallium	ug/L as Tl	**< 0.01**	39	< 0.01	< 0.01		< 0.01	25	< 0.01	< 0.05
Tin	ug/L as Sn	**< 5**	39	< 5	< 5		< 5	25	< 5	< 5
Titanium	ug/L as Ti	**< 5**	39	< 5	< 5		< 5	25	< 5	< 5
Uranium	ug/L as U	**< 0.1**	39	< 0.1	< 0.1	20 MAC	< 0.1	25	< 0.1	< 0.1
Vanadium	ug/L as V	**< 5**	39	< 5	< 5		< 5	25	< 5	< 5
Zinc	ug/L as Zn	**< 5**	39	< 5	101	≤ 5000 AO	< 5	25	< 5	18.6
Zirconium	ug/L as Zr	**< 0.1**	39	< 0.1	< 0.1		< 0.1	25	< 0.1	< 0.5

CAPITAL REGIONAL DISTRICT

WILDERNESS MOUNTAIN WATER
Statement of Operations (Unaudited)
For the Year Ended December 31, 2024

		2024	2023
Revenue			
Transfers from government		67,495	61,900
User Charges		80,106	73,467
Water Sales		19,358	17,760
Fees and Charges		322	241
Other revenue from own sources:			
Interest earnings		-	40
Transfer from Operating Reserve Fund		4,301	6,460
Other revenue		134	115
Total Revenue		171,716	159,983
Expenses			
General government services		6,659	6,683
Contract for services		4,807	11,912
CRD Labour and Operating costs		76,636	79,179
Debt Servicing Costs		25,796	25,779
Supplies		41,589	20,951
Other expenses		22,229	18,479
Total Expenses		177,716	162,983
Net revenue (expenses)		(6,000)	(3,000)
Transfers to own funds:			
Capital Reserve Fund		-	-
Operating Reserve Fund		6,000	-
Annual surplus/(deficit)		(12,000)	(3,000)
Accumulated surplus/(deficit), beginning of year		(3,000)	-
Accumulated surplus/(deficit), end of year	$	(15,000)	(3,000)

CAPITAL REGIONAL DISTRICT

WILDERNESS MOUNTAIN WATER
Statement of Reserve Balances (Unaudited)
For the Year Ended December 31, 2024

	Capital Reserve	
	2024	**2023**
Beginning Balance	46,513	43,553
Transfer from Operating Budget	-	-
Transfer from Completed Capital Projects	-	1,859
Transfer to Capital Projects	(5,000)	(998)
Interest Income	1,981	2,099
Ending Balance	43,494	46,513

	Operating Reserve	
	2024	**2023**
Beginning Balance	53	6,277
Transfer from Operating Budget	6,000	-
Transfer to Operating Budget	(4,301)	(6,460)
Interest Income	43	236
Ending Balance	1,795	53

Making a difference...together

REPORT TO WILDERNESS MOUNTAIN WATER SERVCE COMMISSION
MEETING OF TUESDAY, JUNE 24, 2025

SUBJECT **Capital Projects and Operational Update - June 2025**

ISSUE SUMMARY

To provide the Wilderness Mountain Water Service Commission with capital project status reports and operational updates.

BACKGROUND

The Wilderness Mountain Water System is located near the top of Mount Matheson in East Sooke on Vancouver Island in the Juan de Fuca Electoral Area and provides drinking water to approximately 74 customers. Capital Regional District (CRD) Infrastructure and Water Services is responsible for the overall operation of the water system with day-to-day operation, maintenance, design and construction of water system facilities provided by the CRD Infrastructure, Planning and Engineering and Infrastructure Operations divisions. The quality of drinking water provided to customers in the Wilderness Mountain Water System is overseen by the CRD Water Quality division.

Capital Project Update

24-01 | Wooden Intake Platform Replacement

Project Description: Replacement of the existing water intake platform.

Project Rationale: The existing intake platform is deteriorating and considered a hazard. Replacement is required for continued safe operation and maintenance activities.

Project Update and Milestones:

- After dismantling of decking on intake platform was completed to allow detailed structural assessment, it was determined that the supporting structure was in a significantly deteriorated state and would not be able to be relied upon for the replacement structure. CRD worked with a contractor and engineer to determine an alternate replacement option that could be done for the limited budget.
- Pier and pipe support rebuild completed in late 2024.
- Floating intake platform and gangway required 2025 funding, which became available in March 2025. Design is complete and work has been issued to contractor to begin construction in June 2025 (off site initially).

Milestone	Completion Date
Floating Platform Construction	Q2/Q3 2025
Pier and pipe support rebuilt	Dec 20, 2024
Revised scope and budget contemplated for review	Q4 2024
Initial Demo and Investigation Completed	Q3 2024
Construction Contract Awarded	July 2024
Invitation to Quote	Q2 2024
Site Visits with Contractors	Q2 2024
Budget Approval	March 2024

Operational Update

The following provides a summary of operational activities completed since February 2025.

- February 14: Monthly site safety inspections.
- February 18: Monthly dam inspections.
- March 17: Callout, additional filter change.
- March 18: Monthly dam and site safety inspections.
- March 18: Boil water advisory.
- March 24: Boil water advisory rescinded.
- April 4: Replace UV sensor.
- April 15: Monthly dam and site safety inspections.
- April 17: Replace chlorine probe.
- April 25: Boil water advisory.
- April 29: Replace intake pump.
- May 2: Boil water advisory rescinded.

RECOMMENDATION

There is no recommendation. This report is for information only.

Submitted by:	Jared Kelly, P.Eng., Manager, Capital Projects
Concurrence:	Shayne Irg, P.Eng., Senior Manager, Water Infrastructure Operations
Concurrence:	Joseph Marr, P.Eng., Senior Manager, Infrastructure Planning and Engineering
Concurrence:	Alicia Fraser, P.Eng., General Manager, Infrastructure and Water Services