May 21st, 2025

Trustee's Report

Robson-Raspberry Improvement District
2025 Annual General Meeting

1. INTRODUCTION

This report describes selected RRID activities which have occurred since the last annual general meeting (AGM), last held on May 15th, 2024.

The RRID held 12 monthly Board meetings in 2024.

In order to better address the operation and maintenance (O&M) issues arising within our complex and aging utility, weekly O&M meetings between select Trustees and our Operators commenced in the summer of 2024. In total, 28 special O&M Meetings were held.

Public turnout at board meetings was rare.

2. PERSONNEL

a. Staff

The following individuals are currently employed or contracted by the RRID, have made significant impacts on our water system within the last year, and deserve recognition for their services to our community:

- Tracey Smith, Administrator
  - Contributing since 2024
  - Replaced Sheena Lee
  - Part time regular
- Jesse Reel, Chief Operator
  - Contributing since 2023
  - 30 + years' experience
  - Recommissioned water treatment plant in 2024
  - Part time regular, on call
- Luke Magnall, Operator in Training
  - Contributing since 2024
  - Winner of the 2024 BCWWA Young Professionals Summit Award
  - Part time regular, on call

- Ben Gordon, General Maintenance
  - Ongoing contribution
  - Part time irregular, on call
- Exact Earnings, Bookkeeping
  - Contributing since 2024
  - Part time regular
- James Lindsey, GIS Cartographer
  - Contributing since 2024
  - Mapped distribution system using geographic information systems (GIS)
  - Part time irregular
- Xenon Cyber Dynamics, Instrumentation & Controls
  - Contributing since 2022
  - Part time irregular

b. Board of Trustees

Five trustees, including chair, comprise the RRID Board. Trustees are elected to serve for a 3 year term. If a Trustee leaves the position early, a replacement is voted in to fulfill the remainder of that term. This year, there are two open trustee positions which must be filled. Voting will take place during this AGM. The positions up for election are:

- Jordan Durkin's Trustee Position
  - Elected in 2024.
  - Jordan filled the final year of an early resignation from outgoing trustee Troy Voros.
  - Position is for the standard 3 years.
- Jarrod Whitehead's Trustee Position
  - Jarrod served two previous terms with the Board.
  - Re-elected in 2024.
  - Early resignation after serving 1 year of the 3 year term.
  - This position is for the remaining 2 years of the current term.

The incumbent trustees are:

- Wes Greep (Chair), term ending in year 2026.
- Jenn Holt (Treasurer), term ending in year 2027.
- Paul Markin Jr., term ending in year 2026.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

c. Volunteers

The RRID has volunteer positions available on a task-by-task basis. Supervision is minimal. To qualify for a volunteer task, please provide your resume to the RRID or consider attending the monthly Board meetings. Volunteers which contributed in 2024 and deserve recognition include:

- Ken Wyllie
  - Attended October 2024 watershed inspection with Atco Wood Products and provided a summary report of logging activities to the Board.
- Dan Markin
  - Provided graphic design services for the 2025 RRID Educational Pamphlet.

3. WATERSHED

a. Vehicles in Norns Creek

Roughly 6 vehicles slid into or rolled off of Pass Creek Road into Norns creek upstream of the Water Treatment Plant (WTP) intake in 2024. No major fuel or oil leaks were observed or detected. Hydrocarbons risk causing irreversible damage to the ultrafiltration membranes. Excessive silt is also a risk.

b. Logging

Atco performed salvage harvesting of two burned out areas in the very top headwaters of Norns Creek in Nov/Dec 2024 (cut-block #30 and #32). A new 2-3 km temporary skidder road was constructed to access the blocks, which totaled roughly 25 hectares. Rehabilitation was performed in lower cut-blocks #26 & #27, which were previously harvested. The impacts to water quality and quantity from logging in the upper watershed are currently unknown.

c. Drought Flow

A hydrometric spot measurement of creek flow was performed in the lower reaches of Norns Creek on October 18th, 2024 during the latter period of the atypical regional drought last fall. Flow was measured at 0.4 m^3/s using swoffer equipment. This coincided with a fish kill event, potentially related to drought stranding. Prior records of creek flow date back to the late 1940's. The RRID estimates less than 5% of creek flow was being diverted by the irrigation district at that time. To meet provincial guidelines, pursuit of grant funds for a continuous in-creek hydrometric station should be considered to assess ongoing hydrological

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

changes in Norns Creek, and potential quantity risks for potable water supply and ecosystem health.

d. Signage

No signage exists in our watershed. The team has held preliminary discussions with The Association of West Kootenay Rock Climbers, who steward the Ladybird Rec Site, and the Castlegar Snowmobile Association. Recreational use and camping in the watershed are steadily increasing.

4. NOTICES AND ADVISORIES

a. Boil Water Notices and Do Not Consume Orders

There were no boil water notices (BWN) or do not consume orders (DNCO) issued since the last AGM.

b. Water Quality Advisories

Three WQA were issued in since the last AGM.

- May 11th, 2024 to May 28th, 2024.
  - Low filtered water UV transmittance (UVT) during spring freshet.
- November 28th 2024 to January 7th, 2025
  - UV equipment failure
  - Low filtered water UVT during mild weather
- March 14th, 2025 to April 29th, 2025
  - Low filtered water UVT during freshet

5. WATER TREATMENT PLANT

The RRID operates and maintains a Level 3 WTP according to the Interior Health Authority's 4-3-2-1-0 standards.

a. Water Quality Testing

Sampling campaigns during the last year included the following:

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

- Ongoing: Bacteriological and chlorine residual testing are performed bimonthly within the distribution system. No concerns identified.
- May 26th, 2024: Special sampling and testing of raw and treated water for a full suite of parameters. Performed during the tail end of freshet to obtain challenging treatment performance data. Purpose was to determine contaminant loads to assist with equipment renewal. No major concerns observed.
- Spring, 2025 (pending): Special sampling of raw water, filtered-chlorinated water, and coagulated-filtered-chlorinated water will be performed during spring freshet. The presence of harmful disinfection byproducts will be investigated and their concentrations evaluated following different modes of WTP operation.

b. Raw Water Pond

The lined RWP was drained and pressure cleaned for sediment removal in October 2024.

The remote-activated intake valve requires replacement of its actuator and is currently non-functioning. As a result, the valve can only be manually operated. The item is costly and the team continues to evaluate its options.

c. Raw Water Pump Station

The variable speed pumps were reprogrammed for slower ramp time in late 2024, which helps reduce wear and tear of downstream equipment.

d. Coagulation System

Coagulation using a variety of water treatment coagulants was assessed in April 2025 for their impact on removal of UV inhibiting dissolved organic matter. Testing indicated that aluminum chlorohydrate (ACH) was able to increase UV transmittance of filtered water by over 10%, which is a substantial improvement, and is expected to reduce duration of annual spring water quality advisories. Further pilot testing in early May has yielded positive results.

e. Self-Cleaning Strainers

The 3 automatic mechanical strainers underwent a major overhaul during the winter of 2024/2025, including replacement of various seals, wear parts, and shafts. The strainers were recommissioned and are working well. Cost savings were achieved by locally manufacturing and machining the centering ring at roughly 40% the original OEM price.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

f. Ultrafiltration Skids and Supporting Processes

The existing duty-standby piston air compressors were performing poorly as they require periodic rebuilding. Rather than rebuild again, the team purchased, installed and commissioned a new wet-screw compressor, which is working well. The standby piston compressor will be rebuilt.

A new specialty air regulator was purchased and installed, which required recalibration of all 6 pressure transducers in the UF skids.

A valve survey was conducted by Summit Valve. Three 6" pneumatic modulating butterfly control valves were replaced and commissioned.

The 0.03 micron hollow fiber membrane modules are past their nominal lifespan of 12 years, and will require replacement in the next 2 – 5 years, which is a major undertaking. We are currently performing daily membrane integrity testing (MITs), and we do not detect any damage to our membranes at this time.

g. Ultraviolet Disinfection Skid and Supporting Processes

Investigation of UV performance during mild winter and spring weather indicates our UV system cannot provide the regulated UV dose when filtered water UV transmittance falls below 85%, due to UV absorbing non-filterable dissolved organic matter.

The UV reactors were manufactured in Europe and are no longer manufactured, with little to no spare parts certified for use in Canada. Unfortunately, the UV system is showing signs of wear, which includes failed ballasts and control breakers. The team will continue to keep the reactors going for as long as possible, however it is estimated that the entire UV system may need replacement within the next 5 years, which would be a major undertaking.

h. Chlorination

The WTP doses liquid sodium hypochlorite (chlorine) into the treated water per IHA requirements. The team has decided the hypochlorite generation skid, which uses salt and electricity to create chlorine on site, is prohibitively complex to maintain and should be removed. This is a common outcome across small utilities. Instead, drums of chlorine are currently trucked to the WTP. To save on chlorine drum costs, the team is considering investing in an alternate chlorine system that uses solid calcium hypochlorite pucks. cost savings are expected to pay for this potential upgrade in less than 5 years.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

Using the continuous chlorine monitoring sensor, the team has implemented a dose-paced feedback loop for fine-tuned control of the chlorine dosing system.

A bug in the WTP programming resulted in higher than normal chlorine levels in the distribution system in December 2024. The team has identified the issue and implemented failsafe programming to ensure this does not happen again.

i. Instrumentation and Local Control Room

The RRID received quotation for complete reprogramming of the WTP at a cost of roughly $150,000. This work will not be pursued at this time given the success of dealing with plant programming issues on a case by case basis. The team continues to make gains in this area.

A new turbidity analyzer was purchased, installed and commissioned in April 2025.

A new 8" magnetic flow meter was purchased, installed and commissioned in April 2025. This will provide flow data with far greater accuracy than the filter skid mounted flow meters, which do not account for turbulence or backwash.

The local control room computer has performed well since heat pump installation in 2024, which ensures the room will not overheat the equipment during summer heat waves.

j. Treated Water Tank

The above grade treated water reservoir system has performed well over with no leaks in or level sensing issues in the past year. Observations of tank level indicate steady decrease in tank water levels overnight. High overnight use could mean there are undetected leaks in the downstream distribution system.

6. DISTRIBUTION SYSTEM

a. GIS Mapping

The existing distribution map is half a century old and is outdated. Operators waste time in the field searching for buried valves, some of which have structures erected overtop. To improve efficiency, the team has so far mapped roughly 90% of all in-ground valves, including curb stop valves, using modern technology. This will allow current and future operators to efficiently locate buried valves in the system. The updated map will also provide a scaffold for asset tracking and management.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

b. Distribution Mains

No significant above ground leaks were observed in the asbestos-cement (AC) distribution mains since the last AGM. Typically, significant leaks arise from the smaller plastic sub-mains and not the AC main itself. The AC mains however are nearing the end of their nominal lifespan of 50-70 years and will require replacement in the next 10-30 years. This will be a major undertaking.

c. Fire Hydrants

The 16 fire hydrants underwent typical spring and autumn inspections.

d. Flushing Ports

The flushing ports require updating to modern standards of practice to avoid contamination of freshwater with chlorine, which has ecological and regulatory consequences.

e. Universal Metering

During the last AGM, a question was asked on how the average resident can help with their water system. The best answer was, and still is, conservation.

In this spirit, the team has applied for, and been awarded, a sizeable grant from the Province of BC to implement universal water metering at each utility connection. The multi-year project is fully funded by the Province to an upset limit, and will include installation of advanced metering infrastructure (AMI) at in-ground metering pits for each water service connection.

The effects of household water metering on utility management is well studied, with both industry and local experience showing that consumption-based water billing substantially lowers demand on water treatment infrastructure.

Construction will take place between summer 2025 and autumn 2027. Once the meter installations are completed in year 2027, a monitoring period will be held that will assess metered usage rates in the community, which will inform an appropriate billing rate for water consumption. Under the new unit rate for billing, each consumer will pay for the actual cubic meters of water used during the billing period, instead of a fixed toll. (Remember that taxes are separate, and will remain.) The result will be greater billing accountability for each user, with some bills decreasing according to usage, and others

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

increasing. The team anticipates water consumption based billing to be implemented within the 2029 billing period. Potential impacts of universal metering include:

- Conservation of treated water
- Deferral of WTP expansion (i.e. 4th water treatment train)
- Distribution system leak detection
- Equitable user rates
- Usage accountability
- Data driven strategic planning

The grant is part of a pilot program by the Province of BC, which plans on accessing anonymized consumption data. The Province will use the data for researching the costs and benefits of metering, for up to 6 years after implementation.

7. STRATEGIC PLANNING

The RRID has obtained grant funding for a strategic asset renewal study from the Community Works Fund. The initial request for proposals (RFP) yielded no interested local engineering consultants. Through updates to the project scope and discussions with other firms, the RRID has hired Xenon Cyber Dynamics to perform the work. Xenon is the RRID's process integrator/programmer, and plans on completing the study with help from its partner, Urban Systems Engineering.

8. TAXES AND TOLLS

a. Historical Rates

Taxes and tolls underwent a 56% increase upon completion of the WTP in 2012, followed by a ten year rate freeze as shown in Table 1. The rates have doubled (100% increase) between 2010 and 2025 for a 2 acre single family property.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

Table 1: Historical User Rates

Year	Tax, Group 1 ($)	Tax, Add'l Acre ($)	Toll, Single Family ($)	Annual Total ($)[1]	Percent Change
2010	300	70	330	700	
2011	300	70	330	700	0%
2012	530	90	470	1090	56%
2013	530	90	470	1090	0%
2014	530	90	470	1090	0%
2015	530	90	470	1090	0%
2016	530	90	470	1090	0%
2017	530	90	470	1090	0%
2018	530	90	470	1090	0%
2019	530	90	470	1090	0%
2020	530	90	470	1090	0%
2021	530	90	470	1090	0%
2022	530	90	470	1090	0%
2023	585	100	515	1200	10%
2024	673	115	592	1380	15%
2025[2]	704	75	622	1401	2%
Total					**100%**

Notes:
1) Annual Rate assumes single family home on 2 acres.
2) Additional Acre tax decreased in 2025.

b. Current Rates for Year 2025

Taxes and tolls were not raised for 10 years following construction of the WTP. Unfortunately, inflation increased the cost of consumer and industrial goods during that time. Covid-19 and the 2025 trade war with the USA have ballooned inflation rates. The RRID must therefore increase its taxes and tolls periodically for two reasons:

1) to keep pace with inflation, and
2) to prepare for major asset renewal undertakings, such as
    a. aging distribution mains (~ $5,000,000)
    b. aging ultrafiltration membranes (~ $600,000)
    c. aging ultraviolet reactors (~ $500,000)

The 2025 taxes and tolls were updated as shown below. Note that only a fraction of additional acres were actually being taxed, due to undocumented verbal agreements with

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

the prior administration. In 2025, the RRID applied the additional acre tax fairly to *all* acres in the District. This update stops low-use residents from subsidizing larger properties. To ease the financial impact on the large property owners, the RRID decreased the rate on additional acres from $115 per extra acre to $75 per extra acre (a 35% tax decrease). The basic 2025 rate changes include:

- Tax on first acre: 5% increase to $704.
- Tax on subsequent acres: 35% *decrease* to $75
- Toll on single family residence: 5% increase to $622

For more information, please visit our website, where all tax bylaws are stored.

Table 2 below compares rate increases for a 2 acre single family home, to two different measures of inflation (Industrial and Consumer Price Indices). Although the RRID has increased its rates over the years to save for asset replacement and renewal, it is clear that half of all rate increases over the last 15 years have been absorbed by inflation alone.

Table 2: Rate Increases Vs Inflation

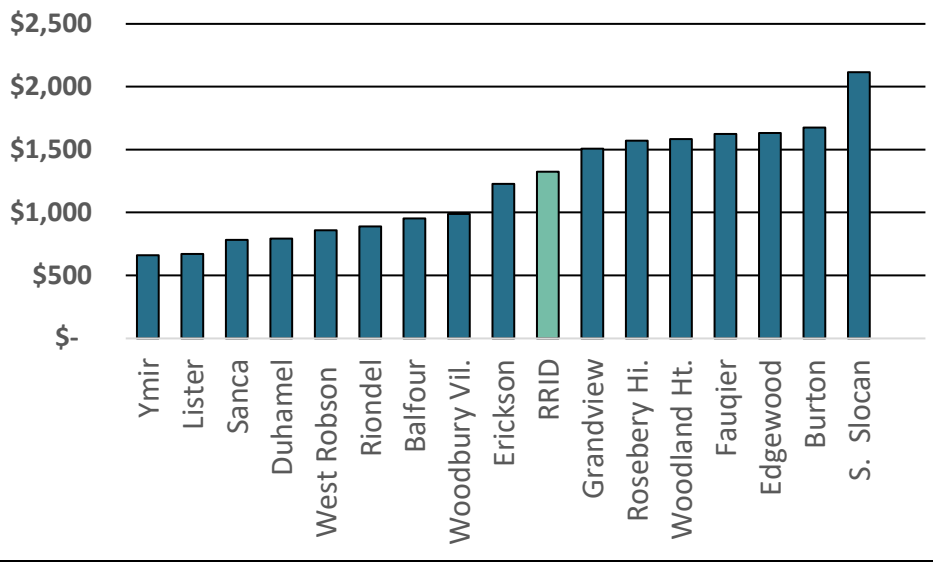
Year	Industrial Product Price Index	Consumer Product Price Index	RRID Rate
2010, Jan.	84	116	$ 700
2025, Mar.	132	162	$ 1,401
Increase	**57%**	**40%**	**100%**

Notes:

1) RRID annual rate assumes single family home on 2 acres.

The 2025 RRID rate for a single family 1 acre property is compared against RDCK water systems in Figure 1. The RRID rate is within 10% of the average local rate (even though it possesses one of the more sophisticated treatment systems). The chart is for information only, as a water system's rate depends heavily on quality of source water, type of treatment (if any), as well as the material, age and length of piping in the ground. Strategic long-term effort on financial savings can also affect water system rates.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0



Notes:
1) RRID rate for single family 1 acre property compared against other local systems administered by the RDCK

Figure 1: RDCK Water System Rates Compared to RRID

c. Budget for Year 2025

A paper copy of the 2025 budget is available for review, and is summarized in Table 3.

Table 3: 2025 Budget Summary

Description	**Anticipated Values**
Annual Revenue	$780,845
Annual Expenses	-$697,750
Depreciation (Replacement) Savings Expense	-$260,000
Financial Position at Year End	**-$176,905**

The RRID increased the depreciation expense (major asset replacement savings expense) from $149,395 to $260,000 in 2025. The increase was based on a rough assessment and requires professional review, which will be provided in the forthcoming strategic asset study report (See Section 7). This represents the annual cash which the RRID must set aside as savings in order to pay for major renewal milestones within the next 5-30 years.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

Some of the more costly renewal expenses include but are not limited to:

- Ultrafiltration Renewal: $600,000 rough estimate, 10-15 year recurrence.
- Ultraviolet Renewal: $500,000 rough estimate, 15-20 year recurrence.
- Distribution Main Renewal: $5,000,000 rough estimate based on West Robson's lineal costs, 50-70 year recurrence.

Given the deficit of -$176,905 in 2025, the RRID is likely underfunded for the next 5-30 years, and has not been saving enough money to cover the long term costs of the utility. The Board nonetheless recognizes the uncertainty of the estimates presented herein. Rather than issue an overnight rate hike similar to 2012, the RRID will use the forthcoming asset management study results, as well as a potential questionnaire, to help guide strategic decision making, which will impact the fate of our utility for the next generation.

The community of Raspberry-Robson will need to make difficult decisions in the next 5 years to resolve the funding deficit which has been identified.

9. OTHER

a. Financial Audit

The Local Government Act requires all improvement districts to undergo annual financial auditing. The RRID passed its 2024 financial audit, which was performed by a local accounting firm.

b. Lawsuit

The Mountain Ridge Road and bridge, which cross Pass Creek, were built on RRID property without RRID nor Ministry of Highway's consent. The road and bridge are positioned just upstream of the RRID WTP intake.

The Mountain Ridge Road Users Cooperative Association (MRRUCA) leased a road access easement through RRID property. The revenue from the lease has been used to cover liability insurance for the RRID WTP, which is vulnerable to silt and hydrocarbons from snowplowing and vehicle activity upstream. The terms of the lease expired in 2019. A new agreement was provided, which was rejected by the MMURCA when they filed a lawsuit against the RRID in 2022.

The Supreme Court of BC oversaw the trial, which concluded in mid-2024. The Court's judgement is expected to be issued sometime in 2025.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0

c. Educational Pamphlet

The RRID produced an educational pamphlet describing our water system to help consumers learn about, and get involved in, their improvement district.

d. Transition to Electronic System

The RRID has until now been largely administered using antiquated paper systems. Our organization is currently transitioning to more efficient electronic systems, which includes cloud storage for redundancy.

10. CLOSING

This Trustee's Report represents a special summary of recent activity and strategic planning for year 2025. Depending on Board availability, and on willingness to engage outside consulting firms, future reports may not include the same level of detail.

250 – 365 – 3404
rrid@telus.net
https://robsonraspberry.myruralwater.com
2619 Broadwater Road, Robson BC, V0G 1X0