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July 17, 2025 Sent Via Email

Secretary to the Comptroller
PO Box 9340 Stn Prov Govt
Victoria, B.C. V8W 9M1
Via Email: Chris.Mcmillan@gov.bc.ca

Attention: **Ms. Elena Oliphant, CPA, CMA**
Chief Financial Advisor

Mr. Chris McMillan
Program Coordinator

Dear Sirs/Mesdames:

Re: Additional Information & Clarifications
Rate Increase & Tariff Update – Submission #3
Big White Water Utility Ltd.

Big White Water Utility Ltd., (BWWU), submits this Additional Information and Clarifications memo in response to the request of June 25, 2025 regarding our requested Rate Increase & Tariff Update. Of the 29 items identified, we have comprehensive responses for all, and provide substantiating documentation appended below.

We recognize that the Deputy Comptroller has decided to continue with the written hearing process. We note that our utility is incurring significant losses every month. Further to our pre-application discussions in August 2024, and submissions of September 2024 and February 2025, we implore the Comptroller to allow an interim rate in order to prevent further losses and risk insolvency of our Utility. Please advise if this may be considered for implementation on July 31.

1. Reference: Section I: Relief Sought, Schedule B & C, pg. 4

1.1. The detailed calculations are that our current Tariff is $555/Service Factor, and the budget requires an 80% increase to $999. Utilizing the 125% adjustment to convert Service Factors to Bed Units, highlighting that there are less bed units than service factors, requires that the converted equivalency is $1,249/Bed Unit.

BWWU's approved tariffs use Service Factors as a billing determinant. The Water Branch requires planning be done on the basis of Bed Units. As we have discussed with the Water Branch, there is no ready means of converting between these units of measure. That is, there is no objective relationship between them, since Service Factors are largely the product of water-consuming devices in the property, while Bed Units reflects population variables.

At the same time, there is no way to amend our tariff to use Bed Units as the billing determinant without creating transition effects that will advantage some customers and disadvantage others in ways that would be difficult to defend using typical ratemaking tests for just and reasonable rates.

Our current customer base, measured in Service Factors as of January 2, 2025, had customers with 11,400 Service Factors. At the same time, Big White's CPCN Bed Unit tracker indicates 11,178 bed units allocated, however, only 8,758 Bed units are constructed, and a further 278 are commercial customers. This means a correlation between 1.02 and 1.34 is justified. We selected 1.25 however this rate is only utilized in comparison/conversion, it is not the billing determinant.

1.2. Our approach to establishing CIACs/DCCs is based on the Capital Plan and investment requirements from 2025 to 2052, when growth is projected to achieve 20,600 Bed Units as per the Master Plan. This plan would project repayment by 2029. However, while appealing to increasing the charge to speed up repayment, the risk of slowing or stalling growth is impactful. Further, growth is currently lagging behind projections. At this time, the proposed 80% increase in CIAC/DCC rates will be sufficient to meet our financial needs.

1.3. There is currently no financial impact of distinguishing between residential or commercial customers with more than four units. The rates for both classes are the same. However, practically it is an important distinction as the design criteria for single-family residential customers vs. multi-family strata and traditional commercial customers require different approaches with regards metering and backflow prevention, location and function.

1.4. Secondary Suites being identified as a distinct new Customer is important to ensure fairness and consistency in billing. This is no different than a major renovation whereby new fixtures and bedrooms would trigger CIAC/DCC payment. It would be the Owner, making application for Building Permit, whereby the referral from the Regional District would allow the Utility to charge for these additional Service Factors/Bed Units.

This is specifically to prevent a secondary suite from being created, which clearly has an impact on the water utility, without identification nor payment.

2. Reference: Section II: Capital Plan, pg. 6-7

2.1. We append a copy of our 2020 Water Master Plan for your consideration. **Appendix A.** Please note that the KWL Future Systems Memo undertook updated modelling and analysis in 2023, and our Asset Management and Capital Plan is regularly updated. **Appendix B.**

2.2. The approach used is based on the Asset Management Plan, March 2019, by Agua Consulting Ltd, which outlines all the assets, applies a useful live, hence depreciation cost. It follows the same approach and theory as the Depreciation Schedule in Schedule A, yet allows for better identification and management of different classes of assets with different in service dates. We would ask for permission to continue to utilize our Asset Management Plan. **Appendix C.**

Respecting the directive, we submit a Depreciation Schedule, verified, using Schedule A from the CPCN Guide. We fundamentally disagree with the results as the depreciation rates are not reflective of our utility and systems. **Appendix D.**

3. Reference Section III: Revenue Requirements for the Test Period, pg. 8-13

3.1. Table 3.1 updated with 2025 Actuals.

	Actual				PROPOSED				
	2022	2023	2024	2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030
Bad Debts	150	108	-	-	-	-	-	-	-
Bank Charges	325	442	657	678	698	719	741	741	763
Chemicals	5,362	9,888	10,721	14,032	14,453	14,886	15,333	15,333	15,793
Dues, Subscriptions & Licenses	7,059	2,918	3,926	2,670	2,751	2,833	2,918	2,918	3,006
Entertainment - 50%	735	857	1,651	2,668	2,748	2,830	2,915	2,915	3,003
Equipment Rental & Lease	-	-	-	-	-	-	-	-	-
Fees & Penalties (non-deductible)	17	-	-	45	-	-	-	-	-
Freight	38	27	-	310	319	329	339	339	349
Fuel & Lube	4,029	4,768	4,023	5,098	5,251	5,409	5,571	5,571	5,738
Housing on Mtn	19,998	-	-	-	-	-	-	-	-
Insurance	99,978	33,335	12,134	15,640	16,110	16,593	17,091	17,091	17,603
Legal	1,291	20,295	9,132	7,181	7,396	7,618	7,847	7,847	8,082
Management Fees	33,408	33,408	30,000	30,000	30,000	30,000	30,000	30,000	30,900
Office Supplies & Stationery	1,247	239	163	145	149	153	158	158	163
Parts & Materials	7,245	2,303	2,887	400	412	424	437	437	450
Passenger Vehicles	20,007	24,259	20,285	25,661	26,431	27,224	28,041	28,041	28,882
Postage	241	136	169	144	148	152	157	157	162
Professional/Consulting Fees	38,527	58,140	74,992	66,955	68,964	71,033	73,164	73,164	75,359
Property Taxes	46	40	39	41	42	43	45	45	46
R & M - Hydrants	4,368	3,113	290	23,408	8,900	9,167	9,442	9,442	9,725
R & M - Equipment	21,880	20,298	44,389	48,971	50,440	51,953	53,512	53,512	55,117
R & M - Software	1,096	6,421	5,082	17,100	17,613	18,141	18,686	18,686	19,246
Rent & Lease	7,136	8,560	9,360	10,960	11,289	11,627	11,976	11,976	12,336
Sampling and Analysis	20,086	22,966	23,575	24,861	25,606	26,375	27,166	27,166	27,981
Snow Management	12,000	12,000	12,000	12,000	12,360	12,731	13,113	13,113	13,506
Snow Removal	13,000	13,000	13,000	13,000	13,390	13,792	14,205	14,205	14,632
Supplies - Operating	2,410	2,173	2,662	2,027	2,088	2,151	2,215	2,215	2,282
Telephone	2,097	2,031	2,493	2,174	2,239	2,306	2,375	2,375	2,446
Training & Recruitment	3,606	679	2,658	1,649	1,699	1,750	1,802	1,802	1,856
Travel	639	382	426	434	447	460	474	474	488
Utilities - Electricity	12,909	13,035	15,060	16,175	16,658	17,158	17,673	17,673	18,203
Wages	284,499	301,054	353,531	389,336	401,016	413,047	425,438	425,438	438,201
Interest Payable to BWSR				83,101	80,000	90,000	100,000	120,000	123,600
Contribution to RRTF				175,991	253,889	261,505	269,351	277,431	285,754
Total Revenue Requirement	$ 513,428	$ 596,875	$ 655,204	$ 992,802	$ 1,073,506	$ 1,112,411	$ 1,152,180	$ 1,180,264	$ 1,213,671

3.2. The Bank of Canada's business outlook survey shows that almost all firms believe that the rate of inflation will be either within the Bank of Canada's 2 to 3 per cent target, or above 3 per cent. In the most recent figures, no firms expect the rate to be below 2 per cent. Moreover, the climate of tariff and geopolitical uncertainty since the most recent numbers all point to a higher inflation risk, not a lower one. We believe three per cent to be a likely or conservative number and that inflation below 2 per cent is highly unlikely.

Much higher inflation (above 3 per cent) is a far stronger possibility.
https://www.bankofcanada.ca/rates/indicators/capacity-and-inflation-pressures/expectations/

3.3. Legal Fees over the last three years included a variety of needed advice, including the claim by Monashee Ridge over the provision of water service, the evaluation and establishment of Statutory Right-of-Ways over Grizzly Ridge, review of our Annual Report, a response to a request to release the DCC Mortgage on Grizzly Ridge, and advice around a proposed water bottling/brewery customer. Details are provided as **Appendix E**.

3.4. Management Fee – Explanation and Allocation. The Management Fee is paid to Big White Ski Resort Ltd. (BWSR) and is a fixed annual amount, allocated monthly, to cover centralized administrative and overhead services that support the ongoing operations of Big White Water Utility Ltd. These services include:

- Payroll and benefits administration
- General administrative and clerical support
- Accounting and financial reporting
- Office space and furnishings
- Information technology services and support
- Shared utility costs (electricity, internet, telephone, water, sewer, gas)

The Water Utility, Wastewater Utility, and Gas Utility each pay an annual management fee to BWSR, based on the administrative complexity and support requirements of each utility:

- Big White Wastewater Utility Ltd. – $144,000 annually
- Big White Gas Utility Ltd. – $12,000 annually
- This structure ensures that the costs of shared corporate resources are distributed equitably across all three utility companies.

Distinction from General Manager Wages and Consulting Fees

- The Management Fee covers only shared administrative services provided by BWSR. It does not include salaries or wages of employees directly engaged in utility operations or management.
- James Kay, the General Manager of the utility companies, is a dedicated employee responsible for direct utility management. His responsibilities include:
  - Regulatory compliance and reporting
  - Strategic planning
  - Engagement with the BC Water Branch and BCUC
  - Oversight of rate applications and CPCN amendments
  - Day-to-day utility governance and decision-making
- The consulting fee paid to Keppel Gate Consulting Ltd. reflects the high-level executive oversight provided by Cameron Lusztig, who serves as President of the

utility companies. Mr. Lusztig's role is focused on corporate leadership and governance at the board and ownership level, including strategic direction and executive decision-making. His services are distinct from both the administrative functions covered by the Management Fee and the operational management performed by the General Manager.

3.5. Professional/Consulting Fees have been summarized into the three general areas as requested: accounting, engineering and specialist. Ecora's work was focussed initially on the design and construction inspection of the treated water reservoir. They have been engaged to assess our water pressures. They will be engaged in the pre-design of the future Powder Reservoir.

As major capital projects involve years of planning in order to understand the need for land, negotiate with the Crown for tenure, evaluate archaeological, environmental, geotechnical and other impacts, design, apply, permit and approve, these consultants are integral to the evaluation and advancement of both our upcoming capital projects, as well as some of our rehabilitation and replacement projects. **Appendix F**.

3.6. The increase in the Repairs & Maintenance – Hydrants expense from $290 in fiscal 2024 to $23,408 in fiscal 2025 is due to the completion of a full-system hydrant maintenance program that had been deferred in the prior year.

In fiscal 2024, routine hydrant servicing was largely postponed due to limited staff availability and competing operational priorities. As a result, only minimal maintenance was performed, which explains the unusually low expense of $290 that year.

In fiscal 2025 (June 2024 to May 2025), the Utility engaged Teale's Water Utility Services to complete a comprehensive inspection and servicing of the entire fire hydrant network. This one-time, catch-up work included:

- Full mechanical inspections
- Operation and lubrication of valves
- Flow testing and pressure checks
- Painting, tagging, and condition reporting
- Repairs and part replacements where needed

The total cost of this work was $23,408, reflecting the scope and scale of the overdue maintenance.

Moving forward, the Utility plans to resume annual hydrant maintenance using internal operations staff. This will ensure continued compliance with fire protection standards and allow for regular upkeep at a lower annual cost. Future budgets will reflect a return to normal levels for ongoing hydrant servicing.

3.7. R&M Equipment is a critical component of BWWU operations that includes Centrix programming of our control systems, Xylem for our UV Treatment, contractors and plumbers for our rehabilitation and repairs, as well as tool rentals and equipment purchase outlined as attached. The increase is in part due to the commissioning and operating of our second water treatment plant, reconditioning of our chlorine vault, and preventative maintenance to our reservoirs and PRVs. **Appendix G**.

BWWU Operators prepare an annual repair and maintenance schedule to schedule reservoir inspections, intake inspections, pressure tests, generator testing, valve exercising, hydrant maintenance, flushing, GPS, cleaning, and associated maintenance, included as **Appendix H.**

3.8. R&M – Software is a critical growth area for the command, control and reporting of BWWU. From the Office and Adobe softwares, Centrix SCADA and Diamond Maps subscriptions, the software is an investment in the reliability and optimal operation of our Utility. **Appendix I**.

Further, there are valuable opportunities in the areas of Asset Management and Financial Forecasting that are being explored. Solutions such as Waterworth forecasting and rate setting is a desired addition to our systems.

3.9. Snow Management vs. Snow Removal can be explained as BWWU incurs both Snow Management and Snow Removal costs because they serve distinct purposes and occur in different locations, using different equipment and crews.

Snow Management refers to the relocation and shaping of snow around remote utility infrastructure located on the mountain, outside the vehicle-accessible road network. This includes key facilities such as the Rhonda Lake chlorine vault and the water treatment plant, Powder Basin water treatment plant and other sub-surface vaults all of which require winter access and operational clearance.

- This work is performed using tracked vehicles, such as snow cats, operated by staff with mountain operations experience.
- The Utility pays for this service under a fixed annual contract of $12,000, allocated across the winter months (November to April).
- These areas are inaccessible to conventional snow clearing equipment, hence the specialized approach.

Snow Removal, by contrast, involves the clearing of snow from paved and accessible surfaces — including access routes to fire hydrants, meter vaults, and surface-level utility infrastructure along the road network.

- This work is carried out by Big White Ski Resort Ltd. (BWSR) using its conventional snow clearing fleet, including a front-end loader, grader, and skid steer.
- Snow Removal is also billed under a fixed annual contract of $13,000, similarly

allocated over the winter months.

Both services are essential for uninterrupted utility operations and regulatory compliance during the snow season. The distinction lies in the type of access, location, and equipment required for each.

3.10. Big White Utilities, collectively, relies upon 10 people, with a FTE of 8.75. BWWU is allocated 40% of the total, so 3.5 FTE. This is a very lean operation, which is illustrated by the need to outsource operations such as hydrant maintenance or certain installation work. Ideally BWWU would have a full compliment FTE of 5.0.

Wage growth has several key factors: inflation and general increases in compensation; reconsideration of our On Call policies and compensation for overtime; advancement of Operators achieving higher levels of certification; re-establishing pay scales to compete with adjacent Utilities & Municipalities, up-skilling/up-hiring to bring in skills not previously in house, and additional time and effort invested by Staff on BWWU. **Appendix J.**

3.11. Interest payable to BWSR is the loan for the initial funding of the village reservoir project. BWSR advanced $1,825,000 to the Water Utility between June – September 2023 during construction. The remainder of the funds provided by BWSR relating to the project remains interest-free, as an intercompany loan.

The loan is interest-only, charged at Prime + 1.75%, accrued monthly on outstanding balance. There are no repayment terms. The balance is repayable with excess funds from the Water Utility. To date, $871,338 has been repaid. This was outlined within the Financing Plan as part of the reservoir review and approvals. **Appendix K.**

3.12. BCUC's allowed return on equity for Thermal Energy Systems is 10.40 per cent on a default 49 per cent equity slice. The low-risk utility rate is 9.65 per cent on a 45 per cent equity component. However, BWWU is not aware of any useful way to compare an allowed return on equity to an allowed return on operating costs. BWWU selected the 10 per cent rate on the advice of the Water Branch, and is aware of no independent way to validate this against other utilities regulated in this manner. BWWU's interest here is to ensure that it earns enough return to cover negative variances in its revenues and costs over the period that rates are set. The 10 per cent return seemed reasonable in this respect and BWWU worries that lower returns would expose the Utility to losses under a variety of normal operating circumstances.

Interest payable to BWSR in the Revenue Requirement is an estimation based on capital project requirements anticipated. With no cash, and several capital projects in initial stages, loans will need to be secured, either externally or from BWSRL. These are only reflecting situations where capital is front-ended, this does not include operating costs.

4. Reference: Section IV: Treatment of Costs Arising from the Powder Basin Reservoir System

4.1. BWWU's Water Asset Management & Capital Plans, Water DCTF Cash Flow Projections, projects this amount owing to be recovered by 2029. However, as growth, hence DCCs, are highly variable, there is uncertainty in this projection.

4.2. Allocations between existing customers and future customers has been outlined in the Financial Plan, and essentially reflects the existing 8,758 Bed Units compared to the ultimate 20,600 in our projections, Capital Plan and Master Plan. While this equates to 42.5%, the analysis was initiated several years ago, where 40% was representative.

The Engineering analysis is that much of the program is rectifying previous deficiencies in treated water storage, adding redundancy that serves all customers, and resiliency critical to all future operations.

However, with regards to how this is recovered through customer rates, this allocation drives both the DCTF and RRTF allocations, establishing the funding requirements. It is reflected in the DCC and Replacement Reserve rates, however, is not otherwise impacting rates.

4.3. BWWU's Water Asset Management & Capital Plans, Water RRTF Cash Flow Projections, projects that, once authorized, these funds could be withdrawn from the RRTF immediately as it has a current balance of $1.97m. Despite the planned replacement of hydrants and Rhonda WTP filters, these investments can all be balanced and repaid by 2028. **Appendix B.**

4.4. The remaining cost of the Powder Basin Reservoir would be recovered jointly through DCTF and RRTF, as above, with only interest charges reflected in the Revenue Required.

4.5. The expansion of the water system is not "clearly for the expansion of the resort" as the question says. It was motivated by fire flow requirements for the entire system as required by the Water Branch, and that is its primary purpose. But for that requirement, the new reservoir would not have been built, and on that basis the costs properly flow to existing customers.

As with most utility investments, it makes sense to size them somewhat ahead of need, as incremental capacity is cheaper to add at the time of initial construction, and sizing new treated water storage to each increment of load growth is simply not practical.

Under BWWU's tariffs, as new customers use that capacity, they will pay for a reasonable share of it through DCCs and their rates generally. These new customers are generally developers who may or may not have an affiliation with the Resort, but in any event all developers are treated this way.

A small increment of capacity was added at the Resort's request over the capacity required for the existing number of approved bed units, on the assumption that a new Master Plan may allow for some incremental bed units. The cost of this increment was paid for by the Resort and is not included in the proposed rates.

It is simply wrong to suggest that the new reservoir was built for new customers, or that those customers are necessarily the Resort.

5. Reference: Section V: Load Forecast, Billing Determinants, and Rate Design

5.1. Table 5.3 Update

	Actual		PROPOSED				
	2024	2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030
Revenue Requirement	655,304	992,852	1,073,506	1,112,411	1,152,183	1,180,264	1,215,671
Fixed Charge Revenue	206,379	324,332	718,105	743,475	770,009	797,766	826,811
Variable Charge Revenue	162,452	233,565	443,788	470,815	499,488	529,906	562,178
Total Revenue	$ 368,831	$ 557,897	$ 1,161,893	$ 1,214,290	$ 1,269,496	$ 1,327,673	$ 1,388,988
Gross Profit	$ (286,474)	$ (434,955)	$ 88,388	$ 101,879	$ 117,313	$ 147,409	$ 173,317
Income Tax		(121,787)	24,749	28,526	32,848	41,275	48,529
(Loss) / Retained Earnings		**(313,167)**	**63,639**	**73,353**	**84,466**	**106,135**	**124,788**

5.2. Fixed & Variable Charge Revenue expanded to show detailed calculations including service factors and consumption. **Appendix L.**

6. Reference: Appendix 1: Sample Bill Impacts

6.1. Sample Bill impacts expanded to illustrate low and high season, confirming a $8.99-17.99/month increase in summer, and $16.37-33.99/month increase in the winter. **Appendix M**.

7. Reference: 2024 Financial Statements

7.1. The increase in amount owing to BWSRL is due to the completion of the treated water reservoir in October 2023. With approval of this memo, it is anticipated that some of this would be released from the RRTF, and when the DCTF has sufficient funds, another release request will be submitted. However, BWSRL will not request or require payment unless or until BWWU is able to pay.

7.2. Developer Contributions are BWSRL's front-ending of capital costs that are eligible for reimbursement including: Powder Reservoir & WTP, Chlorinator, New Treated Water Reservoir, and Chlorine Vault Rehabilitation.

BWWU is proud of the water utility we operate, delivering quality and reliable service as efficiently as possible. We are pleased to provide any clarifications or additional information as requested. Ultimately it is critical that Big White Water Utility be permitted to revise the rates and fees charged to its customers. The utility must return to financial sustainability. Please advise if this may be considered for implementation on July 31.

Sincerely,

James Kay

James Kay
General Manager
Big White Water Utility Ltd.

Cc: Cameron Lusztig

Agua Consulting Inc.
"Engineered Water Solutions"
Agua file: 070-02

APPENDIX A

December, 2020

Big White Water Utility
PO Box 2434 Stn R
Kelowna, BC
V1X 4K5

Attention: Mr. Maurice Valcourt, Vice President

RE: WATER MASTER PLAN – 2020 UPDATE

Dear Maurice:

We are pleased to present our update of the Big White Water Utility "Water Master Plan". This plan is an update to the 2018 Water Master Plan for the water utility. This report updates the information provided within that report. All of the important hydrological and hydrometric information such as recorded water demand, water quality, meteorological data, etc. have been updated as has the projects and project costs. The report includes the following specific items:

- A summary of source water capacity and reliability;
- Recorded water use and water quality data;
- A summary of drinking water risks;
- An estimate of future development and the water demands expected for the development;
- Design sheets for probable projects in the next 10 years;
- A staged plan for the integration of the Powder Basin water source into the main water distribution system;
- A summary of Fire flow capacity throughout the village;
- Integration of the Service Factor revenue work done by Big White's financial consultant;
- Recommendation for funding infrastructure renewal;

Please contact us with any questions or comments you may have regarding this plan.

Yours truly,

Agua Consulting Inc.

Bob Hrasko, P.Eng.
Principal
RJH/rh

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"Engineered Water Solutions"
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CONTENTS

1. INTRODUCTION

1.1 GENERAL

This document is an update to the 2008 & 2018 Water Master Plans prepared by Agua Consulting Inc. for Big White Water Utility. This document with enclosed drawings, outlines the existing water supply system and proposed upgrades/expansion as the resort community continues to grow into a year-round destination. This work comes at the request of the Big White Water Utility in meeting the requirements of their regulators.

This report provides a staged approach to water supply improvements and distribution system expansion to match development growth and increasing water demand. It provides staged options for upgraded water treatment for the utility utilizing available water sources and a staged approach to Water Treatment.

Big White Ski Resort is located 65 km east of Kelowna, BC in the Monashee mountain range. The village centre is located at an elevation of approximately 1750 m with residential and commercial properties contained within the Comprehensive Resort Area (CRA). The entire ski resort encompasses over 2,975 ha. (7,355 acres). An illustration of the existing ski hill and present surrounding area is illustrated on Figure 1.1. Water for the resort is collected in two surface water reservoirs, Rhonda Lake Reservoir and Powder Basin Reservoir as shown below.

Figure 1.1 - Aerial Image – Big White Ski Resort – Village and Watershed

1.2 SCOPE OF WORK

The scope of work for the master plan is as follows:

- Provide comment with regard to climate change impacts on the source water capacity;
- Provide feedback on the recently updated Water Sustainability Act (Water Act) and its impact on Big White water operations;
- Review the existing water distribution system capacity with respect to current operations, ability to provide current fire flow to residential, commercial and industrial areas (works yard);
- Update and trend the historic water quality data that has been collect since and prior to 2008. Compare this data to the regulatory levels set by Interior Health / Health Canada for the varying water quality parameters;
- Provide comment on the Watershed Risk Assessments that are being prepared separately for the Powder Basin raw water source and the Rhonda Lake watershed assessment;
- Summarize the recent industry technology improvements and the direction for future water treatment;
- Provide recommendations for water system upgrades including costs;
- Prepare a 10-year capital plan;
- Ensure that the plan is in conformance with other planning documents;
- Summarize our conclusions and recommendations in the Summary section of this report.

1.3 DEFINITIONS

Definitions of key terms utilized in this report are summarized in this section.

- **Pillow Unit:** Considered to be half a double bed, a single bed, or sleeping unit for a single person;
- **Bed Unit:** Considered to be a double bed sufficient for two persons. 1 Bed unit = 2 Pillow units. Dwelling units are assessed bed units based on their area, number of rooms and living characteristics;
- **Service Factor:** This term is used to describe overnight accommodation capacity on the mountain. Every room that can accommodate 2 adults is assigned a Service Factor of 1.0. The service factor definition is utilized within the Financial Section of this document. Service factors are equivalent to Bed Units;
- **Maximum Day Demand (MDD):** The highest daily water use is defined as the maximum daily demand. Typically the date aligns with the days of highest activity at the resort, usually Christmas Day, New Years Eve or New Years Day;
- **Hydraulic Grade Line (HGL):** Line of service pressure gradient that provides the basis for how the water system is pressurized and positive pressure is maintained throughout the water distribution system;
- **Controlled Recreation Area (CRA):** Defined area as assigned by the Provincial Government to private business for recreational purposes;
- **Megalitre (ML)** Term for measuring large volumes of water.
  1 mega-litre = 1,000 m^3 or 1,000,000 litres;
- **Point of Diversion (POD):** Point at which water is withdrawn from the natural environment and diverted for use by man.
- **Waterworks Local Authority (WWLA):** Water licensing for domestic purposes;
- **Storage (STO):** Water licensing for storing water for either domestic or irrigation purposes;

1.4 SPECIFIC ISSUES FOR 2020 UPDATE

Key issues to be addressed within this report include the following items:

- Big White is a world class resort destination with visitors from all over the world. A safe, clean and aesthetically pleasing water is to be supplied at all times. The issues of taste and clarity of water cannot be compromised at any time throughout the year;
- The utility must maintain high quality water supply which meets all of the requirements of the regulator, Interior Health;
- Update and summarize the existing watershed capacities. Review them in comparison with the projected long-term water demands forecasted for the resort. Provide an indication of the drought frequency for the region;
- Water supply redundancy should be improved over time to reduce the risk of any negative impacts due to flood, drought or forest fire;
- Integration of the Powder Basin Water Supply system is to be provided within this document;
- Address how to deal with water quality variations in the late winter seasons when turbidity could rise to above 1.0 NTU for brief periods of time;
- Optimize existing water treatment processes (filtration and disinfection);
- Provision of water distribution system upgrades to meet the development domestic supply and fire flow requirements for the short and long term;
- Attaining sufficient chlorine contact time for *Giardia* and *Cryptosporidium* removal or inactivation within the reservoirs and before the first point of contact;
- Document CT calculations for chlorine and UV disinfection effectiveness for both the Rhonda Lake and Powder Basin water supplies;
- Provision of a document that will support

2. CRITERIA

2.1 INTRODUCTION

Criteria utilized in this report are generally consistent with criteria used in the development of water services at Big White. Water demand criteria is specific to mountain resort communities and is based on the provision of water for fire protection and for domestic purposes.

Changes in overall drinking water requirements since 2008 are listed in this section. Comments on Federal and International regulatory trends regarding water storage, disinfection and filtration are provided.

2.2 PROVINCIAL REGULATIONS

The current Water Act, now referred to as the Water Sustainability Act (WSA), was enacted on February 29, 2016. The WSA is the principal law that sets out rules for managing water resources in the Province of BC. The new WSA is intended to modernize the Province of BC's approach to managing our water resources. Key changes under the WSA include

- Licensing groundwater for non-domestic use
- New fees and rentals for water use
- Stronger protection for aquatic ecosystems
- Expanding protection of groundwater related to well construction and maintenance
- Increasing dam safety and awareness

Other changes brought in by the WSA include:

- *Fish Protection Act* repealed and provisions brought into the WSA or the *Riparian Areas Protection Act*
- *Water Act* (Part 3) renamed the *Water Users' Community Act*

The WSA impacts on the Big White operation will be mainly on dam safety and the annual rental rates. If a groundwater source is developed, licensing application will be required.

2.3 APPROVAL AGENCIES

There are several approval agencies that will be involved during the design and construction of the water supply system and water treatment facilities. A summary of the agencies and their involvement is set in Table 2.1.

Table 2.1 Approving Agencies

Interior Health	Water Approval is required from the Public Health Engineer for all new domestic water supply works. The review by IH focuses on potability of water and public health. Two sets of sealed engineering drawings are to be submitted to the Penticton Regional Health Office prior to any water system construction taking place.
RDKB	The Regional District of Kootenay Boundary has jurisdictional authority over Big White resort with respect to review of building designs as part of the BC Building Code review process. Their approval is needed for new building structures reviews are somewhat limited as Big White Water Utility would be retaining professional engineering advice for that portion of the designs requiring engineering input. In addition, the RDKB will also review any reservoir or building construction as part of the Building Code review of requirements. Ultimately the system will become part of the RDKB water system.
MFLNROs	Ministry of Forests, Lands and Natural Resource Operations is the agency that reviews water licensing, withdrawals and source water issues. Approval is required for any changes in water licensing applications for storage facilities or water for distribution. Dam safety also falls within their jurisdiction The other arm of this Ministry is the Utility Regulation section that oversees private utilities throughout the province. The Utility Regulation section is the Provincial authority that oversees Big White Water Utility.

2.4 WATER DEMAND & HYDRAULIC CRITERIA

Water demand criteria for mountain resorts differ substantially from typical residential development. The criterion is based solely on indoor water demands and fire protection. As a result, the water demand numbers are significantly lower than that of other bylaw criteria in the Okanagan. The water quantity criteria used for this report is summarized below.

Water Demand Criteria

The design water demands were developed from flow records from Silver Star Resort and Big White Ski Resort and in accordance with good engineering practice and is as follows:

Water demand per Pillow Unit	50 Imperial gallons / PU / day
Water demand per Bed Unit	100 Imp. Gallons / BU / day
Max Day Demand (MDD)	Jan. 1, 2012 553,000 Imp. Gallons (2,513 m^3) 29.1 L/s
Peak Hour Demand	Est. at 1.5 x MDD rate 577 Igpm 43.7 L/s
Total Water Demand for 2013	270 ML (trended average for current year)
Average Daily Demand	739 m3 / day
UFW (unaccounted for water)	4% of ADD Est.
Existing No. of PU on mountain	20,000 PU as of Dec. 31, 2017

Pillow Unit Equivalents for Various Housing forms

17 PU /Duplex Lot (both units)
12 PU / SF dwelling unit (chalet)
9 PU / Ground floor townhouse
7 PU / 3 Bedroom condo
6 PU / 2 Bedroom condo
5 PU / 1 Bedroom condo
4 PU / Hotel room
3 PU / hostel housing unit
1 PU / 5 seats, pub, restaurant
1 PU / 500 sq. m Retail store

Hydraulic criteria used for the engineering analysis is as follows:

Roughness Coefficient "C" for PVC	130
Maximum Allowable Velocity under FF	4.0 m/s
Maximum Allowable Velocity under PHD	2.0 m/s
Minimum Fire Flow (FF)	As per FUS guidelines
Minimum Residual Pressure under MDD plus FF	14.1m (20 psi)

Reservoir size is to be the sum of A + B + C where

A = Balancing storage equal to 6 hours of MDD
B = Fire storage of the critical fire flow for the appropriate duration
C = Emergency storage of 25% of (A+B)

Based on similar building construction within the City of Kelowna, the maximum fire flow and duration that can be supplied by the resort is to be in the range of 200 L/s flow rate for a duration of 2.5 hours.

The water distribution modeling program EPANET was used to analyze the water supply facilities and to determine watermain sizes to convey the required fire flow.

2.5 WATER QUALITY CRITERIA

Drinking water quality in BC falls under the control of the Provincial Government under the Ministry of Health. The BC Drinking Water Protection Act, passed in 2001, forms the basis for legislation for water quality in BC. The act sets out the general policy for the supply of drinking water to the people of BC. The act has not changed since then.

The BC Drinking Water Protection Regulation 200/2003, including BC Regulation 352/2005 and including amendments to Dec 9th, 2005 is the current regulation that sets out the specific requirements for the protection of drinking water in the province. This regulation has not changed since the previous 2008 Big White Master Plan. The regulation is interpreted by the Chief Medical Health Officer of each Health Authority region in the province and the details of what must be met by local water utilities are set at this level. For this region, Interior Health is the local regulator.

In November, 2012 the Province of BC released their Drinking Water Treatment Objectives (Ver. 1.1) which sets out the microbiological drinking water treatment objectives for surface water supplies in BC. The objectives are based on the Guidelines for Canadian Drinking Water Quality (GCDWQ). The GCDWQ is continuously being updated with best available information. The most recent release for the GCDWQ is the summary table issued February, 2018. That document provides information on specific drinking water parameters including microbiological limits, chemical parameters and aesthetic objectives for treated water.

Water Treatment Criteria (IH)

The IH is currently following the "43210" Water Quality treatment objective, in accordance with the parameters in the GCDWQ. This objective is to be met for all new and existing water systems:

4	4 log (99.99 %) reduction or inactivation of viruses and bacteria;
3	3 log (99.9%) reduction and inactivation of protozoa (including *Giardia* and *Cryptosporidium;*
2	2 water treatment processes for surface water (which can include UV disinfection);
1	Less than or equal to 1.0 NTU turbidity units at all times;
0	No detectable *E.Coli*, Fecal Coliforms or Total Coliforms.

The 43210 Objective was first introduced by Interior Health around 2004, has been modified slightly since then and is accepted by the water industry as a good design standard. Since 2008, Interior Health has also recognized the need for greater emphasis on the need for watershed protection and a Multi-barrier approach to safe drinking water.

2.6 FILTRATION EXCLUSION

Filtration Exclusion is an option for Big White Water Utility as the source water quality is very high for both the Rhonda Lake and Powder Basin catchment areas.

The requirement for filtration is based on the premise that it is necessary to ensure high clarity of water so that the important disinfection process is not compromised. Source water that is clear and uncontaminated poses a lower risk of causing waterborne disease outbreaks than water which may be contaminated. A water utility must do what it can within its controls to keep the raw source water in a state of high natural quality. Provided the raw water quality meets the parameters within the GCDWQ, and all of the known risks can be managed through enhanced disinfection and water treatment processes, the requirements to treat may therefore be reduced to the point where filtration may not be necessary. For high quality raw water in protected watersheds, Filtration Exclusion is an option available to utilities to reduce the capital cost and long-term operating costs in supplying treated water.

Excerpt from the Nov. 2012 Drinking Water Treatment Objectives (Microbiological) prepared by the Ministry of Health (BC)

A water supply system may be permitted to operate without filtration if the following conditions for exclusion of filtration are met, or a timetable to implement filtration has been agreed to by the drinking water officer:

1. *Overall inactivation is met using a minimum of two disinfections, providing 4-log reduction of viruses and 3-log reduction of Cryptosporidium and Giardia.*
2. *The number of E. coli in raw water does not exceed 20/100 mL (or if E. coli data are not available less than 100/100 mL of total coliform) in at least 90% of the weekly samples from the previous six months. The treatment target for all water systems is to contain no detectable E. coli or fecal coliform per 100 ml. Total coliform objectives are also zero based on one sample in a 30-day period. For more than one sample in a 30-day period, at least 90% of the samples should have no detectable total coliform bacteria per 100 ml and no sample should have more than 10 total coliform bacteria per 100 ml.*
3. *Average daily turbidity levels measured at equal intervals (at least every four hours) immediately before the disinfectant is applied are around 1 NTU, but do not exceed 5 NTU for more than two days in a 12-month period.*
4. *A watershed control program is maintained that minimizes the potential for fecal contamination in the source water. (Health Canada, 2003)*

Applying the exclusion of filtration criteria does not mean filtration will never be needed in the future. A consistent supply of good source water quality is critical to the approach, but source quality can change. Therefore, the exclusion of filtration must be supported by continuous assessment of water supply conditions. Changing source water quality can occur with changes in watershed conditions. Increased threats identified through ongoing assessment and monitoring may necessitate filtration. Maintaining the exclusion condition relies on known current and historic source water conditions, and provides some level of assurance to water suppliers that a filtration system may not be necessary unless the risk of adverse source water quality increases. It is recommended that dual water treatment should be applied to all surface water.

The cost to protect source water is typically a fraction of that for operating standard water treatment processes. The revenue stream to protect Crown Land water sources does not formally exist within our current regulatory regime. A solid principle for sustainability is to have the most committed stakeholder assume a lead role in monitoring and protecting their water source. The final decision on filtration deferral rests with the regulator.

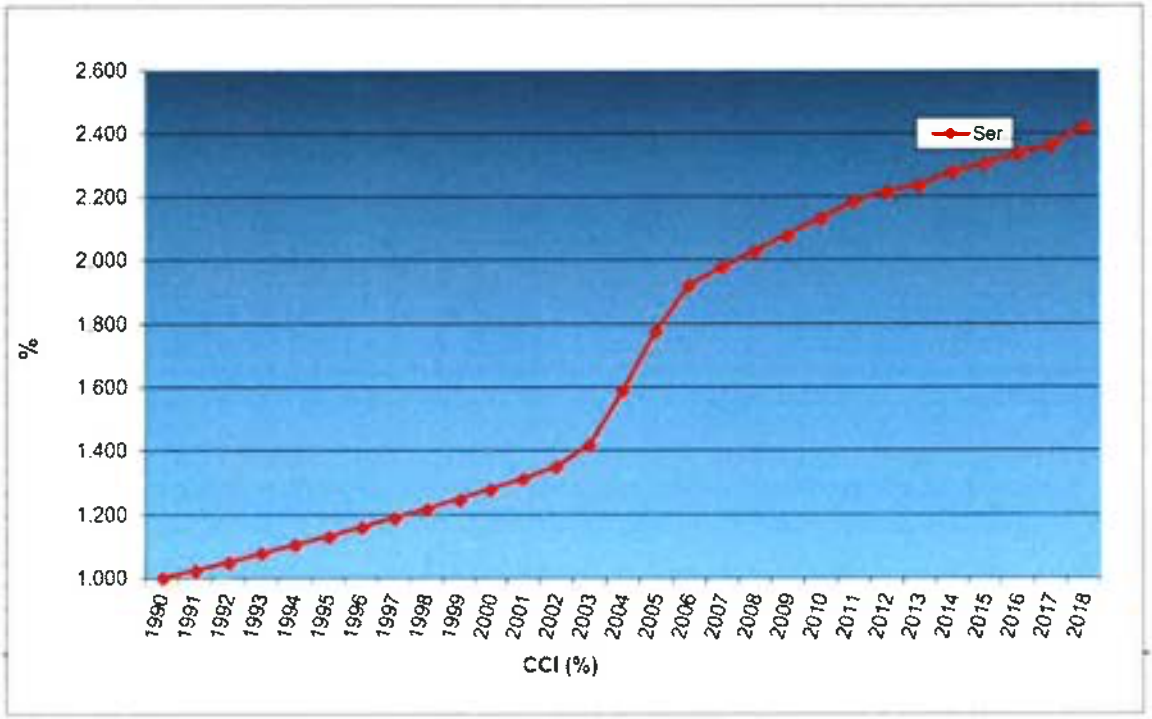
2.7 COST ESTIMATE CRITERIA

Cost estimates are provided in year 2018 dollars and include a 10% allowance for engineering and a 15% allowance for project contingency. Since the 2008 report there has been an estimated 16.5 % escalation in the costs which is equivalent to a 1.71% average annual increase. In the past year, the cost escalation was greater than 2.0%.

It is recognized that due to the rock and remote location, pricing at Big White is higher than comparable work within the City of Kelowna. A pricing surcharge of 20% is projected when working at this location.

An estimate of the construction cost for the Okanagan region is presented on Figure 2.1. Taxes are not included in these cost estimates.

Figure 2.1 - Construction Cost Indices



3. EXISTING SYSTEM REVIEW

3.1 INTRODUCTION

Section 3 of this report presents a summary of existing water licenses, water source capacity, water demand, and water distribution system components. The distribution system is reviewed including reservoir storage, water distribution system capacity, hydrant coverage, pressure reducing station capacity, and pumping capacity.

3.2 WATER LICENSE SUMMARY

A summary of water licenses held by Big White is listed in Table 3.1. Big White holds 847 ML of domestic waterworks licenses on the Trapping Creek/Rhonda Lake and Hallam Creek/Powder Basin water systems. There are 352 ML of licenses held on the Rhonda Lake water source and 494 ML held on the Powder Basin water source.

Table 3.1 - Existing Water Licenses

Licence No	WR Map/ Point Code	Stream Name	Purpose	Quantity	Units	WWLA ML	Enterprise ML	Snow Making ML	Storage ML	Licence Status	Process Status	Priority Date	Issue Date
C103242	82E/10W(e) Q (PD55974)	Trapping Creek	Stream Storage, Non Power	259030 8	MY				259.03	Current	N/A	19810306	19920901
"	"	Trapping Creek	Waterworks Local Provider	217155 581	MY	217.16				Current	N/A	19810306	19920901
C106250	82E/10W(e) R (PD55964)	Stang Brook	Waterworks Local Provider	49779 686	MY	49.78				Current	N/A	19840421	19930702
C112013	82E/15W(d) (PD72937)	Westridge Creek	Stream Storage, Non Power	22 73	MD		8.30			Current	N/A	19970130	19981221
C114970	82E/10W(e) Q (PD55974)	Trapping Creek	Stream Storage, Non Power	91277 52	MY				91.28	Current	N/A	20000105	20030529
"	"	Trapping Creek	Waterworks Local Provider	81929 62	GY	81.93				Current	N/A	20000105	20030529
C118120	82E/10W(e) Q (PD55974)	Trapping Creek	Ice & Snowmaking Snow	3700 44	MY			3.70		Current	N/A	20000105	20030529
C118739	82E/10W(e) (PD74205)	Hallam Creek	Stream Storage, Non Power	246696	MY				246.70	Current	N/A	20030815	20050520
"	"	Hallam Creek	Waterworks (Other)	1363 827	MD	497.80				Current	N/A	20030815	20050520
Sum of Existing Licenses in Megalitres (1000 cubic metres)						846.66	8.30	3.70	597.00				

As summarized in Table 3.1, only a small portion is for snow making and that is held on the Rhonda Lake water source.

Table 3.2 - Proposed Water License Applications

PROPOSED LICENSE APPLICATIONS													
Licence No	WR Map/ Point Code	Stream Name	Purpose	Quantity	Units	WWLA ML	Enterprise ML	Snow Making ML	Storage ML	Licence Status	Process Status	Priority Date	Issue Date
Z123084	82E/10W(e) (PD74205)	Hallam Creek	Ice & Snowmaking Snow	616740	MY			616.74		Active Appl	Applic-Cleared	20070720	0
"	"	Hallam Creek	Stream Storage, Non Power	1110132	MY				1110.13	Active Appl	Applic-Cleared	20070720	0
"	"	Hallam Creek	Waterworks (Other Than Lp	2335.326	MD	852.39				Active Appl	Applic-Cleared	20070720	0
Z123086	82E/11E(a) (PD80998)	West Kettle River	Ice & Snow Making Snow	1110132	MY			1110.13		Active Appl	Applic-Cleared	20070720	0
"	"	West Kettle River	Lwn, Fairway & Grdn Wate	616740	MY		616.74			Active Appl	Applic-Cleared	20070720	0
"	"	West Kettle River	Waterworks (Other Than Lp	2335.326	MD	852.39				Active Appl	Applic-Cleared	20070720	0
"	82E/11E(a) (PD80999)	Trapping Creek	Ice & Snow Making Snow	1110132	MY			same		Active Appl	Applic-Cleared	20070720	0
"	"	Trapping Creek	Lwn, Fairway & Grdn Wate	616740	MY		same			Active Appl	Applic-Cleared	20070720	0
"	"	Trapping Creek	Waterworks (Other Than Lp	2335.326	MD	same				Active Appl	Applic-Cleared	20070720	0
Z123091	82E/11E(a) (PD80998)	West Kettle River	Stream Storage, Non Power	1110132	MY				1110.13	Active Appl	Applic-Cleared	20070720	0
"	82E/11E(a) (PD80999)	Trapping Creek	Stream Storage, Non Power	1110132	MY				same	Active Appl	Applic-Cleared	20070720	0
Sum of Proposed Licenses in Megalitres (1000 cubic metres)						1705	617	1727	2220				

Big White currently has three active applications for water licenses for snow making, irrigation watering, waterworks and associated storage. The license applications are for access at lower elevations on Trapping Creek, Whiteman Creek and Hallam Creek.

The applications have been received by the Ministry of Forests Lands and Natural Resource Operations, but the applications are not active. The applications have a priority date which is valid and will give the resort earlier water rights on these sources, however there will have to be a demonstrated need for the water prior to the Province issuing the water license.

3.3 AVAILABLE SOURCE WATER CAPACITY

In 2017, the climate data and water source information were reviewed as part of one of the development applications for the utility. The watershed capacity estimates were updated and are integrated into this report as Section 3.2.

To estimate the water source capacity, the following items were assessed:

1. Available precipitation was determined with estimates for total water determined on a monthly basis. This included snowfall and precipitation from best available records;
2. Evapotranspiration estimates were made based on temperature, precipitation and elevation for the southern interior region. From this, resulting surface water runoff was estimated;
3. Reservoir storage capacity is summarized to define their characteristics;
4. A frequency analysis is provided estimating return periods to a 1:25 year, 1:50 year and 1:100 year drought.

3.3.1 PRECIPITATION – SNOW FALL

Our water supply summary first assesses available precipitation. This is documented on a monthly basis as the combined water equivalency of snow and rainfall. The seasonal timing of snowfall/rainfall dictates when and how much water may be available. In the form of snow, the water may be available for months into the future but cannot be used until it melts and runs off.

Several sources of weather information were reviewed to develop an estimate for the annual precipitation at Big White Ski village. The monthly data in Table 3.3 is described below.

Rhonda Lake Reservoir Dam: Weather Station:
The closest and most reliable is the data from the Big White weather station located at a location immediately below Rhonda Lake Dam. The elevation of this site is at 2050 metres. This station has been tracking summer precipitation only for the past year and snowfall data since 2012. Because the sample size is relatively short, other sources were reviewed to come up with a better average estimate for available water.

Stonebridge Snow Gauge:
The Stonebridge snowfall site, which has the longest period of record, is located at elevation 1750m, however it does not collect summer precipitation data. The data shows on average 655 cm of snowfall annually. When summer precipitation estimates are added the annual amount of precipitate equates to 855mm.

Regional Moisture Information
Data from www.worldweatheronline.com was summarized and compared to the local data to understand regional trends. The data appears to be computer generated from global climate models and as such, is used only as reference information.

Table 3.3 - Annual Monthly Precipitation (mm)

BIG WHITE WEATHER - SNOWFALL / PRECIPITATION SUMMARY

Yr./Mo.	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2012											88	172.7	260.7
2013	148.7	100.2	122	111.5							133	133	748.4
2014	125	73	151	-2							95	145.4	587.4
2015	103.3	91.2	89.3	13.3							158.2	230.4	685.7
2016	176.8	160	186.5	9		123.5	91	47.2	74	117	72	108	1165
2017	94	0	0	0							0	0	94
AVERAGE (snow-cm, rain-mm)	129.56	106.10	137.20	32.95	40.00	123.50	91.00	47.20	74.00	117.00	109.24	157.90	
Moisture in mm	129.56	106.10	137.20	32.95							109.24	157.90	
Rhonda Lake Weather Stn.	**130**	**106**	**137**	**33**	**40**	**124**	**91**	**47**	**74**	**117**	**109**	**158**	**1166**
percentage	11.1%	9.1%	11.8%	2.8%	3.4%	10.6%	7.8%	4.0%	6.3%	10.0%	9.4%	13.5%	100%
Stonebridge 31 yr snow data	**143**	**92**	**108**	**51**						**46**	**83**	**132**	**655**
Stonebridge Elev. Adjusted	***164***	***106***	***124***	***59***	***86***	***75***	***35***	***35***	***35***	***53***	***95***	***152***	**1017.8**
Regional Moisture	109	59	74	70	77	60	28	22	28	54	89	66	737
percentage	14.78%	8.07%	10.03%	9.53%	10.49%	8.20%	3.82%	2.92%	3.76%	7.36%	12.09%	8.94%	100.00%
Adjusted Percentage	15.00%	11.00%	12.50%	7.50%	7.50%	7.50%	6.00%	2.50%	3.00%	6.50%	11.00%	12.00%	100.00%
Adjust. Moisture (rain precip)	**150**	**100**	**125**	**60**	**75**	**75**	**60**	**50**	**50**	**75**	**100**	**150**	**1070**

The local total precipitation data from 2016 may be higher total due to the higher than average precipitation experienced regional during June, October and November. The data from Big White weather station was correlated with longer term data from the web-based data from other weather sites to come up with a best estimate for monthly precipitation (including snow and rainfall).

The bottom line in Table 3.3 provides the monthly average precipitation for Big White at Rhonda Lake weather station. As a longer record of data is collected at the local Big White weather station, the numbers of total precipitation can be updated.

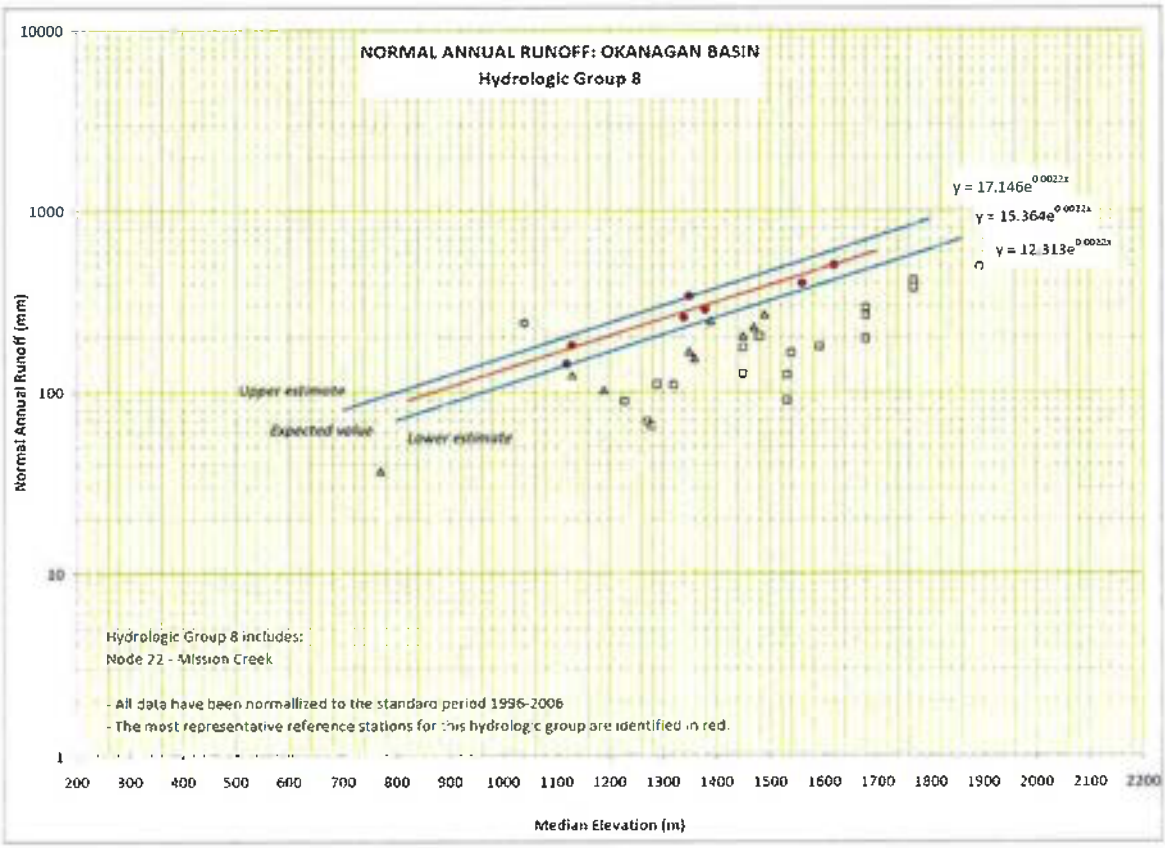
At the elevation of Rhonda Lake Reservoir, the annual runoff is expected to be about 80% of the total annual precipitation.

3.3.2 EVAPOTRANSPIRATION AND RUNOFF ESTIMATES

The water can leave the watershed in a number of ways including surface runoff, groundwater flow or evaporation/evapotranspiration. The evapotranspiration includes both evaporation and transpiration through vegetation. The amount of runoff increases with elevation as there is less evaporation and higher annual precipitation, resulting in greater runoff flow.

The graph in Figure 3.1 was developed as part of the Okanagan Water Supply and Demand Study for the Okanagan Basin Water Board. The graph is specifically for the upper Mission Creek hydrological zone within the Okanagan Basin. That zone has very similar hydrology to that of Big White and is located approximately 16 kilometers north of Big White at similar elevation. The runoff curve in Figure 3.1 considers elevation, precipitation, and evapotranspiration. A net runoff curve tied to elevation was developed, however it does not extend to elevations above 1800 metres.

Figure 3.1 - Annual Runoff Graph - Elevation vs. Runoff



Source- Summit Consultants 2009 - State of the Basin Hydrology Report - OWSD Study

For the Rhonda Lake Reservoir catchment area, which has an average elevation of 2150 m, the annual runoff is estimated to be in the range of 1,000mm depth. The Powder Basin Reservoir catchment area has a lower average elevation of 2100 m and would also have an estimated runoff depth in the range of 950 mm. The estimates are conservative and should be safe to utilize until more accurate runoff readings are taken over time from the reservoir spillways.

3.4 EXISTING SURFACE WATER SOURCES

Rhonda Lake Reservoir is the current source of water supply for Big White Water Utility. Big White Water Utility is in the process for developing a second source of drinking water which is Powder Basin Reservoir. Groundwater is not presently utilized or being considered as a supplemental source of drinking water at this time. The primary stream courses are identified in Figure 3.2.

Total Raw Water Storage

Big White Water utility currently has an estimate of 328 ML of surface water available to them in an average annual year from Rhonda Lake Reservoir. With the addition of Powder Basin Reservoir, there is expected to be an additional 922 ML available annually. Storage volumes are summarized below.

Reservoir	Supply	Storage
Rhonda Lake Reservoir	328 ML	350 ML
Powder Basin Reservoir (not yet connected)	922 ML	215 ML
Total	**1,250 ML**	**565 ML**

Ice Cover Impact on Raw Water Storage

Of the total volume available within Rhonda Lake Reservoir, approximately 25% of the stored volume is not useable in the winter and spring months due to ice and snow build-up. Rhonda Lake is located at elevation 2,040 metres and is in an alpine zone. There is a cycle of freezing and settling that takes place on this reservoir over the course of a ski season. Each year the reservoir freezes and snow pack forms above the frozen layer. As the snow load increases, the hydrostatic pressure increases below the surface ice layer and water under pressure is relieved by leaking above the surface ice layer. This leaking and layering of the reservoir can occur three to four times during the winter. The result is a total storage volume of 350 ML is reduced to a useable volume in the late winter of approximately 260 ML.

Drought Considerations

The catchment areas for Rhonda Lake Reservoir of 41 ha and Powder Basin Reservoir of 123 ha are illustrated in Figure 3.2. The total average annual runoff from the catchment areas is summarized in Table 3.4.

Table 3.4 - Drought Frequency Table (Available water during drought)

	Mean Year	1:10 yr. Drought	1:25 yr. Drought	1:50 yr. Drought	1:100 yr. Drought	1:200 yr. Drought
% of Mean	100%	59%	49%	43%	39%	34%
Rhonda Lake	328 ML	193	161	141	128	111
Powder Basin	922 ML	544	452	396	360	313
TOTAL	**1250**	**737**	**613**	**537**	**488**	**424**

As presented in the Table, during an extreme drought cycle, the annual volume of available water is expected to be only 34% of that in an average year. With a drought, it would be expected that skier visits may be lower and the water usage would decrease. The drought cycles highlight the need for expanding the diversion ditches to the reservoirs to catch all surface water in the region.

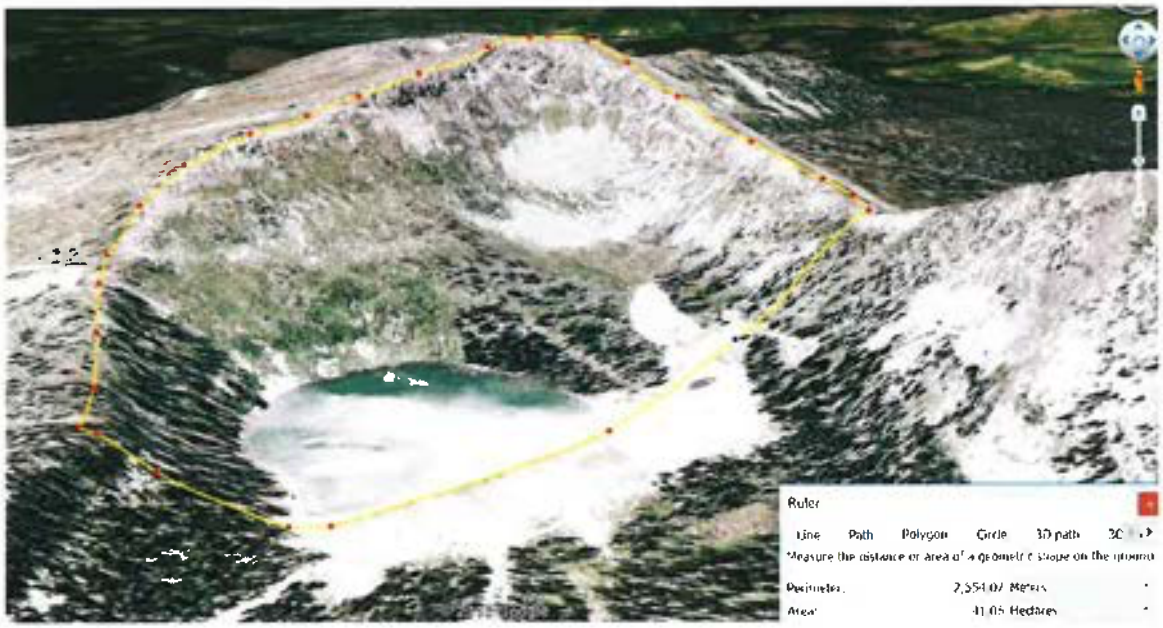
3.4.1 RHONDA LAKE STORAGE RESERVOIR

Big White has two storage reservoirs Rhonda Lake Reservoir and Powder Basin Reservoir. Characteristics of these two reservoirs are summarized below. The catchment area for the Rhonda Lake Reservoir is illustrated in Figure 3.3.

Rhonda Lake Reservoir

Total Live Storage	350 ML
Watershed sub-catchment Area	41 ha.
Reservoir Surface Area	58,400 m^2
Average sub-catchment Elevation	2,150 m
Elevation of High Water Level	2,040 m
Effective Live Storage (Ice deduction)	263 ML
Ave. Depth	5.99 m
Average Runoff Depth (est.)	0.80 m
Average Annual Runoff (est.)	328 ML

Figure 3.3 - Rhonda Lake Reservoir Catchment Area



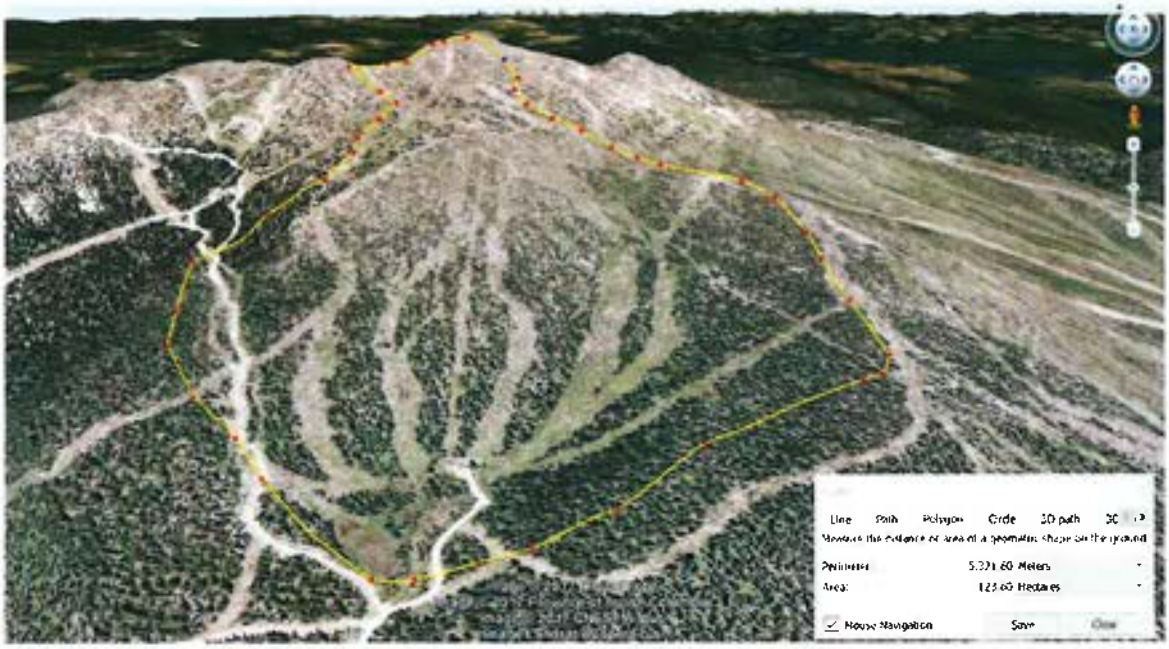
Options for increasing the watershed capacity include the installation of a diversion ditch to the northeast along the northeast ridge. It is estimated that an additional 7.0 ha. of watershed could be diverted if the diversion was licensed. This would amount to a 17% increase in capacity. Timing of when water would be available could affect the viability of a diversion. To confirm the runoff estimates a data collector is recommended to collect reservoir levels during times when water is flowing over the spillway. Available water to this source includes the existing demand plus the volumes that are spilled each spring and through the summer.

3.4.2 POWDER BASIN STORAGE RESERVOIR

The catchment area for the Powder Basin Reservoir is illustrated below in Figure 3.4.

Total Live Storage	215 ML
Watershed sub-catchment Area	123 ha.
Reservoir Surface Area	24,700 m²
Average sub-catchment Elevation	2,100 m
Elevation of High Water Level	1,854 m
Effective Live Storage (Ice deduction)	161 ML
Ave. Depth	8.70 m
Average Runoff Depth (est.)	0.75 m
Average Annual Runoff	922 ML

Figure 3.4 - Powder Basin Reservoir Catchment Area



The watershed for Powder Basin Reservoir is situated with a southern exposure and is subjected to higher temperatures and higher evapotranspiration rates. The watershed also is approximately three times the size of the Rhonda Lake Reservoir watershed and produces more runoff on an annual basis.

A pressure transducer is recommended for installation within the reservoirs. The water level and flow over the spillway can be tracked using this device and the total runoff from the catchment area can be estimated. Diversion ditches to collect the Powder Bowl runoff could increase the catchment area by as much as 50%.

3.5 GROUNDWATER

Big White does not utilize ground sources for drinking water or other purposes. Currently there is sufficient high-quality surface water available such that groundwater has not been required. Investigations have been completed in the past and there are aquifers in the area.

Areas to consider for groundwater wells would be along Trapping Creek to the east and lower down at the base of the Ridge Chair and Chalet. At the base of the Ridge, the valley collecting water is directly below the village. If there are spills or influences of man, the risk of contamination is greater than a natural undisturbed catchment area. Any groundwater sources developed near the Ridge Chair location would have to be located hydraulically above the wastewater treatment holding ponds.

If groundwater is to be considered, the natural area to the east along Trapping Creek may be the best option. Trapping Creek is approximately 600m east of the new Black Forest Day Lodge. The pipe required from a groundwater well would not be large, 200mm diameter or smaller, however the well would require a power supply to the site. Both water main and for electricity would have to be extended to the site. The site could be located relatively high so it pumps directly into the higher pressure zone. Figure 3.5 shows the yellow line where utilities could be extended to an aquifer below the creek.

Figure 3.5 - Trapping Creek Groundwater Site

When Big White moves to secure groundwater, a qualified hydrogeologist should be retained. The development of a well has been included as one of the Utility's projects in Appendix A.

3.6 WATER DEMAND ASSESSMENT

Water demands for the water system are summarized in this section. The operators have measured flows for the Big White Water Utility. Daily readings have been taken and recorded since 1991. These readings have been summarized monthly within Table 3.5. The monthly readings provide an indication of the annual timing of water demands. The highest water use day was December 31, 2017 when 2,513 m^3 of water was used. The year 2017 was also the highest year for water use with 296 ML being used.

Table 3.5 - Monthly Water Demand Summary (ML)

Year	JAN.	FEB.	MARCH	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	TOTAL
1996	16.53	14.79	16.48	8.48	3.03	3.69	5.63	5.13	5.74	5.74	8.98	19.13	113.32
1997	18.45	20.55	21.99	12.43	8.82	4.23	5.77	6.70	5.37	1.68	6.66	16.12	128.78
1998	18.53	20.92	22.06	13.70	5.51	3.37	5.12	5.62	4.55	4.36	7.38	19.10	130.22
1999	20.43	20.37	23.40	15.60	9.74	6.22	5.03	5.56	7.39	6.36	22.22	20.94	163.25
2000	23.29	24.47	28.01	13.99	8.30	5.80	6.85	7.79	6.17	6.53	8.63	21.42	161.26
2001	25.46	31.99	26.98	12.42	6.55	7.26	8.87	8.02	6.27	6.43	9.80	68.38	218.43
2002	27.97	27.82	33.10	16.84	5.85	7.13	8.29	8.12	5.58	6.50	10.00	11.25	168.44
2003	30.56	12.26	30.00	16.00	6.00	7.00	8.00	8.00	6.00	7.50	11.00	11.25	153.57
2004	33.68	30.66	25.82	15.91	6.62	5.97	7.54	8.03	7.04	8.42	12.26	27.33	189.28
2005	33.31	33.43	33.89	14.57	8.15	7.98	9.72	11.81	7.95	6.15	13.54	29.26	209.77
2006	35.09	31.57	31.77	20.39	5.18	5.95	6.90	6.56	6.34	7.27	11.91	28.60	197.52
2007	37.79	32.85	34.06	15.52	6.03	5.39	6.70	9.31	11.53	9.32	19.21	37.26	224.95
2008	38.90	34.18	34.69	12.84	8.16	9.23	10.92	11.63	10.25	11.44	16.86	35.49	235.60
2009	42.93	34.57	35.86	20.86	9.87	9.21	8.65	8.43	7.07	9.01	16.66	33.00	236.12
2010	37.47	33.90	32.64	16.52	6.34	6.24	6.30	8.05	7.11	8.93	15.31	34.85	213.66
2011	38.25	34.80	36.91	19.67	11.02	10.03	17.52	10.41	8.41	9.90	15.65	31.28	243.85
2012	39.24	32.21	35.83	22.81	13.04	11.67	7.24	8.76	9.48	9.29	15.43	34.88	239.86
2013	46.93	35.85	39.75	20.02	10.10	9.90	10.77	11.73	13.78	13.62	18.44	36.78	267.67
2014	39.66	37.42	38.75	20.37	10.18	11.26	11.46	11.71	10.95	11.43	19.73	36.52	259.43
2015	42.16	38.52	37.55	19.00	9.82	10.79	11.02	10.80	10.44	10.00	9.50	27.06	236.66
2016	31.31	29.09	36.42	17.50	5.64	6.88	6.38	8.02	9.60	10.94	17.57	37.69	217.03
2017	38.94	35.97	37.02	20.60	9.08	17.11	14.09	11.13	13.85	22.48	28.87	47.79	296.92
2018	48.90	38.71	36.88	16.98	11.50	12.85	14.63	14.08	8.39	9.01	16.42	34.53	262.88
2019	38.77	33.79	36.68	21.94	10.10	10.62	11.32	11.13	8.33	10.04	15.34	32.70	240.76
2020	34.83	32.69	25.92	15.27	10.48	11.19	14.44	14.19	12.58	13.67	15.27	20.49	221.02
2021													
2022													
2023													
AVERAGE	m3 per Month												
2010-19	40.16	35.03	36.84	19.54	9.68	10.73	11.07	10.58	10.03	11.56	17.22	35.41	247.87

August 2018, 2.3 L/s Leak found in distribution system

The bottom line shows the average usage for the last 10 years.

It is noted that a significant leak was found in the water distribution system in August of 2018. This leak was in the range of 2.3 L/s (35 USgpm). It amounted to reduced production of 6 ML/month or 36 ML/year.

Leakage or Unaccounted for Water (UFW)

During the previous 2008 Water Master Plan, the lowest water use days for the mountain were found to be in the month of June when only 90 and 98 m^3 of water was used over a 24 hour period. Of these totals, it is estimated that 25% of these totals were unaccounted for water (leakage and bleeders). A rate of 25 m^3/day works out to approximately 9.1 ML/year.

It is noted that during the low flow summer months, May-Sept., that flushing is implemented to maintain higher chlorine residuals in the water distribution system. Mains are flushed once per week to introduce fresh water.

The recent years 2018 & 2019 water use data was reviewed to determine low flow periods. The mountain now has more year-round residency and activities. The lowest use dates were in the range of 110 m^3 /day. The SCADA system was also reviewed to determine the lowest recorded water demand throughout the year. This was found to be 1.37 L/s. This extends out over an entire year to be a volume of 43.2 ML. With approximately 50% of this estimated to be leakage, the 21.6 ML/year is estimated to be 8.6% system leakage and/or unaccounted for water.

Water Demand Estimates

Table 3.6 that follows provides a breakdown of the key demand conditions for low, average and high water demand conditions for the utility. The peak hour demand numbers are based domestic water demands with no external water demand requirements.

Table 3.6 - Water Demand Estimates – Various Conditions

Condition	Demand Condition	Flow (L/s)	Daily Demand (m3)	Monthly Demand (ML)	Annual Demand (ML)
	Low Month Flow (May 2016)	2.11	182	5.640	
	Lowest recorded flow (SCADA)	1.37	118.4	3.600	43.204
	Leakage / UFW at 50% of flow	0.69	59.2	1.800	21.602
Low flow	Flow that is not Leakage or UFW	1.42	122.75	3.84	
ADD	Average Annual Demand	7.93	684.93	20.83	250.00
	High Month (Jan. 2018)	18.26	1,577	48.90	
MDD	Maximum Day Demand (Dec. 31, 2019)	29.1	2,513		
PHD	Peak Hour Demand Est (1.52 x MDD)	44.01	Dec. 31, 2019		

Maximum Day Demands

The maximum daily demand flow rate is used to size the water system treatment, pumping and water storage components. The highest daily water demand recorded was 2,513 cubic metres of water used on December 31, 2017. This works out to a MDD flow rate of 29.10 L/s. A breakdown of water use under the MDD condition is presented in Table 3.7. Assumptions made in the generation of the criteria listed in Table 3.7 are as follows;

- The total number of skiers differs from the number of "day skiers". Day skiers are those who travel to the mountain from elsewhere and do not have on-hill accommodation. The day skiers normally only require water for drinking and use of bathroom facilities;
- It was considered that the portion of the day skiers staying on the hill to be approximately 67% of the number of design PU. Even at the busiest times through the Christmas holiday season, although there may be rooms with more than their allotment of skiers within the rooms, the majority of bed units are not at full capacity;
- For design criteria purposes, it is considered that the mountain is utilized to full capacity;
- The use of 226 Litres (50 Imperial gallons)/PU/day is considered to be conservative as 100% occupancy will be used to estimate the water demand for the future PUs;
- Water demand for day skiers (i.e. who do not stay overnight) is calculated as 1,900 vehicles (2.5 passengers per vehicle) plus 20 buses of 40 passengers each equalling 5,550 day skiers. The day skiers are considered to be "locals" and their number would only increase slightly (compared with the number of pillow units). This is due to the fact that although the local population is growing, a portion of the local skiers would also buy units on the hill.

Table 3.7 - Maximum Daily Demand Estimate

			Best Estimate		Design Criteria	
Demand Category	**No.**	**lgpd**	**m^3/day**	**L/s**	**m^3/day**	**L/s**
Unaccounted for Water (UFW)						
Portion of ADD (685 m^3)			59.2	0.69	59.2	0.69
Day Skiers						
Actual (best estimate)	5550	10	252	2.92		
Design Criteria	5550	15			378	4.37
Pillow Units (PU)						
Actual 70% full capacity	14154	34.3	2203	25.50		
Design 100% full capacity	20220	50			4590	53.12
TOTAL ACTUAL MAX DAY DEMAND			**2,514**	**29.10**		
TOTAL DESIGN MAX DAY DEMAND					**5,027**	**58.18**

The maximum day water use is 29.10 L/s. The resort continues to grow. By January 1, 2017, it was estimated that there are 10,110 Service Factor units existing on the hill or the equivalent of 20,220 pillow units (PUs). Based on actual recorded water use, and 70% occupancy, the estimated water demand per person is in the range of 34.3 Imperial gallons per day (155 L/day).

Figure 3.6 - Annual Water Demand (with trend line)

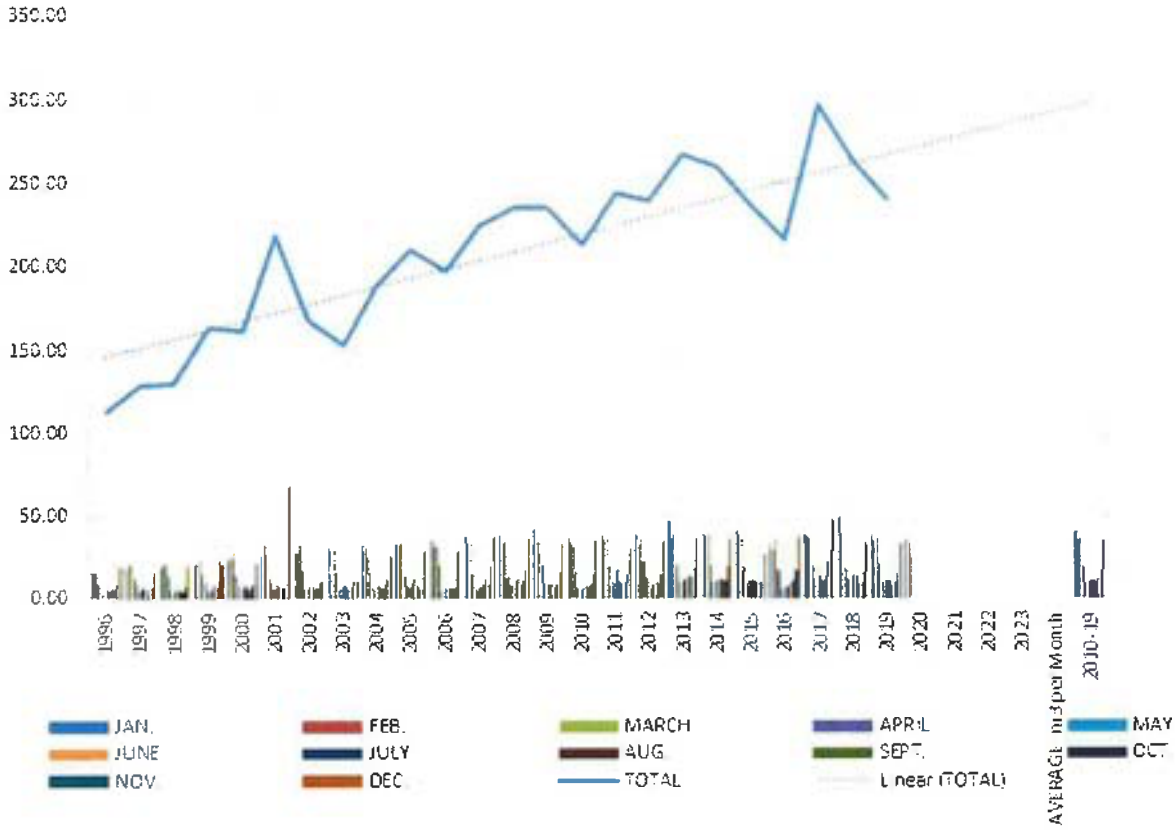


Figure 3.6 shows the annual water demand for Big White water utility trended over the past 22 years. the increase in water demand has approximately doubled over that period of time with a growth rate of approximately 3.0% per year.

A trend line was added to average out or normalize issues such as growth, weather and skier visits, from year to year. Although the average water demand over the past 10 years is 250 ML/year, the estimated "normalized" value for annual water demand is slightly higher at 260 ML. If the current trend continues, in 10 years the utility may have an annual water demand in the range of 300 ML / year.

3.7 EXISTING WATER SUPPLY SYSTEM

The present water supply and treatment system for the mountain is summarized in this section.

Raw water for the water distribution system is collected in Rhonda Lake located in the Cliff area of the ski hill. Snowmelt and rainfall is collected in the spring and summer months and stored in Rhonda Lake Reservoir at elevation 2040 metres. At the point of release, water is chlorinated by means of a hydraulic chlorinator (no electrical power) that injects sodium hypochlorite into the transmission main. Water then flows via a 300mm diameter water transmission main by gravity to the village. Just prior to the Water Treatment Plant building, the water is pressure reduced through two PRV valves from a pressure of approximately 290 psi to 90 psi.

Water flows to the water treatment building where it is first filtered through the Next-Sand pressure filters, then disinfected with UV light followed up with sodium hypochlorite (chlorine). Water is then directed to the primary holding reservoir located at elevation 1875 metres. High water level for the reservoir is 1,879.39 metres.

Table 3.8 provides a summary of the key water infrastructure. Table 3.8 corresponds to Figure 3.6 which is a map identifying the location of the key features. The map provides a location plan for raw water and treated water storage reservoirs, PRV stations and the water treatment building.

Table 3.8 Key Water Infrastructure

I.D.	Location	Description / Information				
Surface Water Sources						
S-1	Rhonda Lake Reservoir	Open surface earth berm reservoir that collects surface runoff and groundwater springs HWL = 2,040 m Volume = 350 ML Useable Volume = 260 ML				
S-2	Powder Basin Reservoir	Collects surface runoff during spring freshet in an earth berm reservoir HWL = 1855 m Total Volume = 207 ML Useable Volume = 155 ML				
Reservoir Storage		(Volume, comment and High water level)				
R-1	Upper Village Res.	1,363 m³ concrete tank HWL 1879.39 m, Variable storage level = 4.39m				
R-2	Powder Basin Res.	Proposed (initial size estimated at 800 m3)				
Pressure Reducing Stations		**Elev.**	**Upstm Press.**	**Dwnstm Press.**	**Main Valve Dia.**	**Bypass Dia.**
PRV-1a	Above WTP	1,835 m	290 psi	190 psi	200mm	75mm
PRV-1b	Above WTP	1,835 m	190 psi	110 psi	200mm	75mm
PRV-2	Plaza Chair PRV	1,737 m	195 psi	70 psi	200mm	75mm
PRV-3	Stonegate PRV	1,750.5m	177 psi	77 psi	200mm	100mm
PRV-4	Forest PRV	1750 m	147 psi	56 psi	200mm	50 mm

3.8 PRESSURE ZONES AND PRVS

Big White Water Utility operates very efficiently by gravity, utilizing water sources that are above the water distribution system. There is a very large elevation differential between the highest source water reservoir at 2040 metres elevation and the lowest point of the water distribution system at an elevation of 1660 metres at the Ridge Day Lodge. The difference in elevation is 380 metres.

Big White Water Utility utilizes pressure reducing stations and pressure zones to manage the operating pressures in the water distribution system. There are two water service pressure zones operating. The higher zone, PZ 1875, has a hydraulic grade line varying between 1879.4m and 1875 metres. This higher zone services housing at elevation 1845 metres and higher. The lower pressure zone, PZ 1795, services all lands below elevation 1845m. Pressure zones are illustrated on Figure 3.7.

PRV Station Capacity Limitations

PRV station capacity is limited by the size of the valves through the stations. For the existing PRV stations, all fire flow must get from the Upper Village Reservoir through two PRVs to the lower pressure zone. PRV capacity is based on a maximum velocity of 5.0 m/s through both the main PRV and the bypass PRV.

PRV 1 (Rhonda Lake)	200mm main and 75mm bypass valve	157 L/s + 22 L/s = 179 L/s
PRV 1(b) above WTP	200mm main and 75mm bypass valve	157 L/s + 22 L/s = 179 L/s
PRV 2 (Plaza)	200mm main and 75mm bypass valve	157 L/s + 22 L/s = 179 L/s
PRV 3 (Stonegate)	200mm main and 100mm bypass valve	157 L/s + 39 L/s = 196 L/s

To service the lower pressure zone, the capacity of the two stations will allow for instantaneous velocities in the range of the planned maximum rate of 200 L/s. The existing stations have sufficient capacity to service the demands for typical fire protection and maximum day water use for the immediate future.

To provide flows to the lower zone above 175 L/s, the Powder Basin source must be on-line or the lower pressure zone must be interconnected to allow flow to be provided through both PRV stations at both the Stoneridge and Plaza PRV stations.

3.9 TREATED WATER STORAGE

Treated reservoir storage is defined as covered reservoir storage that contains disinfected potable water. The storage provides several functions for the water supply system.

Balancing storage is required to make up the shortfall in domestic water supply that occurs during variable demands of a typical day. The maximum daily demand is estimated to be 29.1 L/s. Peak hour demands are provided by the reservoir. Having reservoir storage allows the water treatment equipment to be sized smaller to match the average maximum daily flow rate.

At the Rhonda Lake WTP, the water treatment process equipment has 12 filters with a rated capacity of 3.78 L/s (50 Igpm) per filter. Under high flow operating conditions, the balancing storage is supplied by gravity with 12 filters or an inflow rate of 45.35 L/s. These filters do not require power and are reliable and on a gravity supply feed. As a result, they are available to supply water during the peak hour times and do factor into the water storage calculation. Recorded peak hour demand is currently measured to be 44.01 L/s. The WTP capacity flow is 45.35 L/s so the plant can meet the current Peak Hour Demand without balancing storage.

In 2015, two UV reactors were installed in the WTP. The reactors have a flow capacity, based on meeting 3 log Cryptosporidium inactivation, rated at 72 L/s. Under a fire flow situation, there is the ability to bypass the water filters and run the water directly through the UV system. With each reactor having a flow through capacity of 72 L/s, two reactors are rated at 144 L/s. If this flow rate is factored into the calculation, the storage volume required for fire flow also drops.

The recommended criteria for reservoir storage size is the sum of A + B + C as set out below.

	Parameter			Existing	Ex. With Credits
☐	*A = Balancing Storage*	*6 hours at 29.1 L/s*		*628 m³*	
☐	*Spare WTP capacity*	*6 hours at 16.2 L/s*			*278 m3*
☐	*B = Fire Storage*	*200 L/s for 2.5 hours*		*1,800 m³*	
☐	*Credit 2 reactors*	*56 L/s for 2.5 hours*			*504 m³*
☐	*C = Emergency Storage*	*(25% of A + B)*	=	*607 m³*	*196 m³*
	TOTAL			***3,035 m³***	***977 m³***
	Existing			*1,363 m³*	*1,363 m³*
	Shortfall			***(-1,672 m³)***	***385 m³***

5

As shown in the above calculation, with the filters on-line or in the event of a fire flow, there are means in which to operate the system to meet the water demands. The response by the water system to an event such as a fire is not an automatic process and therefore it is recommended that additional reservoir storage be planned for.

Without automatic UV response during a fire flow, there is a storage deficiency estimated to be the amount of 1,672 m³. A fire flow of 144 L/s can be provided through the reactors with the remainder of the flow being provided from the water reservoir. Future Treated Water Reservoir siting is planned above the Powder Basin Reservoir at the same elevation as the existing Village Reservoir. Interconnection of these pressure zones is recommended. In the long term, an additional 1,500 m³ of additional storage should be considered for the Rhonda System and an additional 800 m³ should be constructed for the Powder Basin system, the total storage would equal 3,663 m³.

3.10 COMPUTER WATER MODEL

Agua continues to utilize an EPANET computer water distribution model to analyze system hydraulics. The model has all watermains, sizes, water demands and water system data included in its database. A spatially correct background map was developed and is part of the model input files.

Figure 3.9 - EPANET Model - Water Main Sizes

Figure 3.9 provides a snapshot of the data available from the model. The model operates with links (pipes) and nodes (pipe junctions). There are two operating pressure zones for the system, one fed directly from the Village Reservoir with a high water level of 1875 metres, and a second fed from the upper zone through two pressure reducing stations to operate at a hydraulic grade line of 1,795m.

The model requires updating to include all pipes and development demands. The data for input should also consider including the age of the pipes for assessing the asset value of the utility. Outputs from the model can include exported tables that can be sorted by pipe length, pipe diameter and age.

Pipe Legend

Black 300 mm
Blue 250 mm
Green 200 mm
Brown 150 mm
Red 100 mm

3.11 FIRE PROTECTION

Water for fire protection must be of sufficient flow, sufficient coverage with appropriate hydrant spacing, and with good policies to follow for all future building construction. It is recommended that Big White Water Utility continue using the Fire Underwriters Survey (FUS) standards for community water systems.

It is understood that all new multi-family and commercial construction is sprinkler protected. This report supports this policy. Table 3.9, the hydrant radius for 200 L/s is 118m diameter.

Table 3.9 Hydrant Coverage and Fire Storage Requirements

Flow (L/s)	Flow (L/min)	Std Hydrant Coverage (m2)	Req'd Hydrant Radius (m)	Hydrant Diameter	Duration (hr)	FF Storage Vol + 25% emerg. (m3)	Flow	No. of Hydrants
60	3600	15200	69.6	139.1	1.400	378		
75	4500	14750	68.5	137.0	1.670	564	80 L/s	1 hydrant
90	5400	14300	67.5	134.9	1.870	757	150 L/s	2 hydrants
125	7500	13250	64.9	129.9	2.000	1125	225 L/s	3 hydrants
150	9000	12500	63.1	126.2	2.000	1350	280 L/s	4 hydrant
175	10500	11750	61.2	122.3	2.130	1677		
200	12000	11000	59.2	118.3	2.500	2250		
225	13500	10375	57.5	114.9	2.875	2911		
250	15000	9750	55.7	111.4	3.250	3656		
275	16500	9375	54.6	109.3	3.625	4486		
300	18000	9000	53.5	107.0	4.000	5400		
325	19500	8625	52.4	104.8	4.375	6398		
350	21000	8250	51.2	102.5	4.750	7481		

For existing building fire flows, due to the density and size of the structures, a maximum fire flow of 200 L/s should be planned for. For all new building construction, the following procedure is recommended so that developers understand their requirements in dealing with fire protection.

1. The developer must provide a plan of the proposed building including floor area, fire sprinkler design flows and pressures and an engineer's sealed FUS fire estimate calculation of the buildings fire demand;
2. The developer will provide their consultant's building code review and sign off;
3. Developer to provide plan of fire hydrant coverage to the building taking into account the fire flow rate required and recommended coverage and number of hydrants as per Table 3.9;
4. Should the flow be in a new area, a fire flow estimate report should be provided by the Engineer for the utility. This will confirm what the distribution system will be able to provide.

4. WATER QUALITY AND TREATMENT REVIEW

4.1 INTRODUCTION

Big White is a world class ski destination with vacationers from all over the world coming to the mountain. The quality of the water supplied by the resort must be of very high quality. Within Section 4, a review of the existing raw and treated water quality is provided. Since the 2008 Master Plan, a significant amount of water quality data has been collected and is summarized within this section. Full parameters data for the two primary water sources are reviewed within this section. Regulatory trends and issues related to water quality are provided.

The proposed staged water treatment process for the Powder Basin water source is presented in this section. Comments are provided regarding drinking water risks and methods in which to provide multiple barrier protection in providing a safe water from the watersheds.

4.2 EXISTING WATER QUALITY

Microbiological Testing

Microbiological sampling of water is required as per the GCDWQ. For a population of 10,000 persons the recommended frequency for sampling is to be 10 tests per month. Big White Water Utility tests for Total Coliforms and *E.Coli* within the treated water system at approximately 5 sites each week. Testing is also conducted for Coliforms at the raw water sites weekly to obtain a track record of Total Coliforms and E.Coli for the raw water. This data shows a historical record of low microbiological contamination in the watershed. An example of current sampling frequency and locations is provided in Table 4.1. A full listing of the results is provided in Appendix B.

Table 4.1 – Microbiological Tracking – Nov 2016-March 2017

	Bk Forest Daylodge		Village Center Mall		Happy Valley		Forrest #115		West Ridge (Gem)		Shop Cooler		RHONDA - RAW			POWDER - RAW		
	Total	E Coli	Total	E.Coli	Total	E Coli	Total	E Coli	Total	E Coli	Total	E.Coli	Total	Bkgrd	E Coli	Total	Bkgrd	E Coli
Date	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml	Col/100ml
Aug 20 2020	0	0	0	0	0	0	0	0					2910		0	4		1
Sept 03 2020	0	0	0	0	0	0	0	0			0	0	24		0	16		0
Sept 17 2020	0	0	0	0	0	0	0	0			0	0	48		0	9		0
Sept 28 2020																		
Sept 30 2020							0	0										
Oct 02 2020	0	0	0	0	0	0	0	0			0	0	23		0	6		0
Oct 15 2020	0	0	0	0	0	0	0	0			0	0	57		0	3		0
Oct 30 2020													387		0	517		0
Nov 16 2020	0	0	0	0	0	0	0	0			0	0	177		0	435		0
Nov 18 2020																		
Nov 24 2020	0	0	0	0	0	0	0	0	0	0	0	0						
Dec 1 2020	0	0	0	0	0	0					0	0						
Dec 09 2020	0	0	0	0	0	0					0	0	172		0	8		0
Dec 15 2020	0	0	0	0	0	0	0	0	0	0	0	0						
Dec 22 2020	0	0	0	0	0	0	0	0					46		0	22		0
Dec 29 2020	0	0	0	0	0	0	0	0										
Jan 5 2021	0	0	0	0	0	0	0	0	0	0	0	0	613		0	7		0
Jan 12 2021	0	0	0	0	0	0	0	0	0	0								

Physical and Chemical Parameter Testing

Big White also carries out a full drinking water parameter tests on each of the different source water they utilize at a frequency of approximately twice per year. A summary of the full parameter tests and locations is provided in Appendix B of this report.

UVT and THM Testing

Big White was requested in 2015 to provide additional testing of UVT and THM data. In 2016, the UV units were installed in the Rhonda Lake source WTP and there is continual on-line tracking of the UVT of the raw water. Tracking of the UVT from the Powder Basin source was also requested at that time and Big White has collected data on Hallam Creek and that data is included in Appendix B of this report. THM data after chlorination within the village area is provided in Appendix B of this report.

Recommended Sampling Program

Maintaining the current testing protocol and frequency is recommended. Tests for THMs should not be necessary as the prior tests have shown very low levels of Trihalomethane formation. THMs should only be considered if the components of the full parameters testing changes over time. With no changes in any of the other parameters or in the chlorine dosing practices, there would be no reason for the levels of THMs to change.

4.3 WATER TREATMENT – RHONDA LAKE SOURCE

Source Water – Rhonda Lake Reservoir

The source water from Rhonda Lake Reservoir has not significantly changed since the 2008 Water Master Plan. The water for this source originates from rainfall and snowmelt that falls into the reservoir catchment area. The catchment area is relatively small, but is at a high alpine elevation, averaging above 2100 metres. The organic content of the water is very low, the water is low in hardness and in pH. This is due to the high content of direct precipitation and lack of groundwater contribution.

Ultra-Violet Disinfection @ Village WTP

In late 2015, Big White installed two Wedeco (Xylem) Spektron-250E Low pressure high output UV reactors to provide an additional barrier from protozoa.

UV disinfection takes place at the WTP where water first travels through multi-media pressure filters prior to being disinfected with UV light. There are two process trains of UV reactors. The reactors are a Xylem Spektron 250e model and have a factory rating of 35 L/s each at UVT. Based on Figure 5.17 in the validation report, the 35 L/s is flow rating at a UVT of 70%. This is sufficient to meet the MDD. At normal raw water UVT levels of 92%, the reactors have a much higher capacity, > 90 L/s each.

The UV treatment system was designed to handle 35 L/s for UVT levels as low as 75%. In fact, the actual levels are typically in the range of 92% and higher. As a result, the reactors run at 50% power for the majority of their operation. They also overdose with UV intensity levels of 80 mj/cm^2 and higher. The overall power cost is minimal though for the level of protection provided.

The reactors are located immediately after the pressure filters located in the Water Treatment Building at Big White.

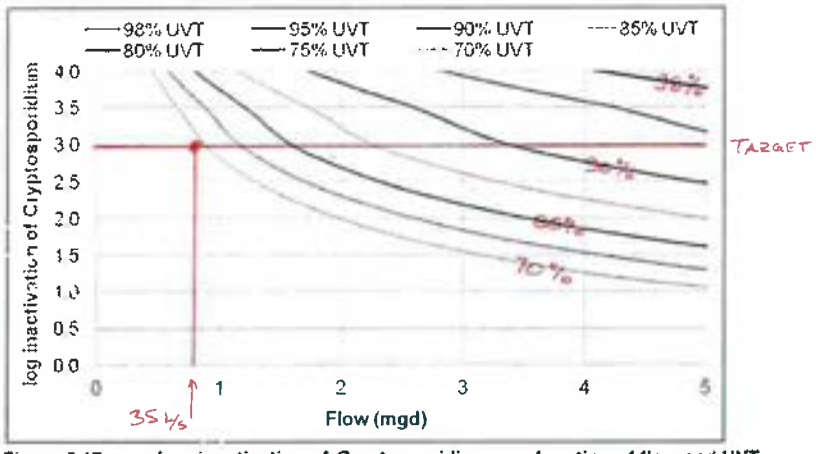


Figure 5.17 Log inactivation of *Cryptosporidium* as a function of flow and UVT for a combined lamp aging and fouling factor of 0.87

In the fall of 2017, Big White also added low flow UV disinfection to the Powder Basin water source. Three Hallett 30 USgpm rated units were installed along with piping to accommodate three larger Xylem Spektron 250e UV disinfection units. The building structure withstood major snow loads in the winter of 2017-18 and the system was set up to accept larger UV reactors to allow greater flow to the lower village pressure zone without pumping.

Chlorination Disinfection @ Village WTP

Water is disinfected from Rhonda Lake Reservoir through chlorination and by means of Ultraviolet light. As the water leaves the dam site, the water is chlorinated by means of hydraulic injection. The disinfection system consists of four (4) H.E. Anderson chlorinators. These chlorinators a critical part of the water disinfection system and are regularly maintained.

Because of the UV disinfection ability to deal with the protozoa Cryptosporidium and Giardia, the chlorine contact times are reduced substantially with the CT required lowering from 155 mg/L-min to in the range of 20 mg/L-minutes.

Big White does not receive any disinfection or treatment credits for the pressure filters, but the filters do aid the process by lowing turbidity prior to the disinfection processes.

Filtration @ Village WTP

Filtration is provided at the Rhonda Lake Water Treatment Plant building which is located on the lower floor of the operators' residence. The filtration provides a barrier for larger sand and sediment particles in the raw water. The filters are have an automatic backwash cycle and can handle most deviations in water quality. They provide a polishing step prior to disinfection by UV light and secondary disinfection when required.

The water treatment plant consists of the following components:

- Twelve (12) pressure filters filled with Next Sand filter media. The filters are approximately 900mm in diameter and are 1.8m in height as shown in the adjacent photograph;
- The filters reduce turbidity from 1.0 to 2.0 NTU down to 0.20 -0.40 NTU;
- Filter capacity is 50 Imperial gallons per minute per filter. At least one filter can be off at any one time for backwashing of media. Filter capacity with one filter off-line (11 filters on-line) = 550 Igpm (41.6 L/s)

Rhonda Lake Source - Chlorine CT Contact Time Calculation

The chlorine Contact Time is provided at the entry to the WTP and at the outlet of the Reservoir. With UV disinfection on-line, chlorination must deal with the viruses:

- Raw Water pH = 6.0
- Water temperature Temp = 2 ° Celsius
- Pipeline Volume = 1890m of 300mm dia. main Vol. = 133.6 m^3
- Flow rate Q = 29.1 L/s
- Travel time at TT = 76.5 minutes
- Chlorine residual level entering WTP $Cl_{2\ Res}$ = 1.3 mg/L
- CT at Entry to WTP 78 minutes x 1.3 mg/L CT = 101 mg/L-minutes
- Contact Volume in Village Res. (est. 20% of 1363m^3 reservoir) V_{eff} = 272 m^3
- Effective residence Time = 133.6 m^3 + 272 m^3 = 405 m^3 Divide by 0.0291 m^3/s = 232 minutes
- 232 minutes @ 0.70 mg/L residual CT = 163 mg/L-min leaving Res.

To provide 4 log inactivation of *viruses*, a CT value of 12 mg/L-minutes is required. CT values are a means of measuring the disinfection effectiveness. It is defined as the disinfection concentration multiplied by the contact time of the disinfectant in minutes.

Actual CT 163 mg/L – min > Required CT 12 mg/L- min

It is noted that the risk of contamination of protozoa for this watershed is extremely low. In conjunction with the extended settling times in Rhonda Lake Reservoir, and ice cover on the reservoir much of the year, the risk is very low. The addition of UV disinfection lowers the risk even more.

4.4 WATER TREATMENT – POWDER BASIN RESERVOIR SOURCE

Source Water – Powder Basin Reservoir

The source water from Powder Basin Reservoir is of very high quality most of the year with deviations occurring usually only during spring freshet. The water for this source originates from rainfall and snowmelt that falls into the reservoir catchment area which is the largest available water source for Big White. The catchment area is at an alpine elevation of 1855m or higher. The organic content of the water is very low, the water is low in hardness and in pH. This is due to the high content of direct precipitation and lack of groundwater contribution.

Data on the source water is collected and summarized in Appendix B of this report

Ultra-Violet Disinfection @ Powder Basin WTP

In 2017, Big White constructed the Powder Basin WTP building and installed three Hallett – 30 reactors. Each reactor can provide 29 USgpm (1.83 L/s). The Hallett reactors have been commissioned and are functioning as per design.

UV disinfection is followed by chlorination with sodium hypochlorite.

There are two Wedeco (Xylem) Spektron-250E low pressure high output UV reactors installed in the Powder Basin WTP. These reactors have not yet been fully commissioned; however, they will provide an additional barrier from protozoa. These reactors are the same reactor as installed at the Village WTP.

Powder Basin Water Source - Chlorine CT Contact Time Calculation

The chlorine Contact Time is provided at the first user at Snowpines subdivision. The CT value to be achieved is to be sufficient to inactivate bacteria and viruses. The required dosage is 12 mg/L-minutes for 4 log inactivation of viruses.

- Raw Water — pH = 6.0
- Water temperature — Temp = 2 ° Celsius
- Pipeline Volume = 190m of 300mm dia. main — Vol. = 13.43 m^3
  1185m of 200mm dia main — Vol. = 37.23 m^3
  Total Volume = 49.66 m^3
- Flow rate — Q = 30 L/s
- Travel time at — TT = 27.59 minutes
- 27.59 min @ 0.70 mg/L residual at first user — CT = 19.3 mg/L - minutes

To provide 4 log inactivation of *viruses*, a CT value of 12 mg/L-minutes is required. CT values are a means of measuring the disinfection effectiveness. It is defined as the disinfection concentration multiplied by the contact time of the disinfectant in minutes.

Actual CT 19.3 mg/L – min > Required CT 12 mg/L- min

4.5 IH (REGULATOR) COMPLIANCE STATUS

Interior Health provides each utility with Conditions on Permit (CoP). The CoPs summarize the regulators requirements for how the utility is to provide safe drinking water. The most recent CoP for Big White was issued in January 2016 with nine items listed:

CURRENT CONDITIONS ON PERMIT

1. **Provide a Comprehensive Source Protection Plan for Each Water Source**
   IH Status "In Progress"
   Big White has submitted three versions of the report in 2011, 2012 and 2015. They are awaiting clarification from Interior Health on the remaining work. The watershed is a closed system with access permitted to skiers and hikers.
2. **Provide a Certified Operator to Operate the System**
   IH Status - "In Compliance"
   The EOCP water system classification is a WD-II
3. **Operate According to your Drinking Water Quality Monitoring Program**
   H Status "In Progress"
   Minor changes were required to monitor UV Transmissivity monthly prior to the installation of UV disinfection units at Rhonda Lake Water Treatment Plant. This was done with monthly results for UVT available. IH Status - "In Progress" - Note: should now be revised to In compliance
4. **Operate According to your Cross-Connection-Control Program**
   IH Status - "In Progress"
   Big White maintains the water system to the service connection shut off. Beyond the shut off the bylaws of the Regional District of Kootenay Boundary come into effect. For the CCC program, Big White water utility can require the proof of the devices being tested and if this is not produced disconnection can occur. Clear understanding of responsibility and action should be better defined between IH, RDKB and Big White utility in this regard.
5. **Provide a Turbidity Monitoring Pgm – include continuous on-line turbidity monitoring**
   IH Status - "In Compliance"
   On-line monitoring is in place for Rhonda Lake and is being designed for Powder Basin.
6. **Provide Continuous On-line Monitoring of the Water Disinfection Process**
   IH Status - "In Compliance"
   The SCADA system was upgraded and chlorine residual levels are continuously monitored at the Rhonda Lake Water Treatment Plant.
7. **Provide Long-Term Plans for Source, Treatment and Distribution System Improvements Taking into Account the Goal of Drinking Water Treatment Objective for Surface Water Supplies in BC**
   IH Status - "In Progress"
   This updated Water Master Plan is designed to address both IH requirements and those of the Ministry of Community Development for small water systems. Completion and submission of this report should change the status from In-Progress to In-Compliance.
8. **Review and Update the Emergency Response Plan Annually**
   IH Status - "In Progress"
   Items listed within the IH review identified minor items to be corrected. Resubmission of the current ERP is required. This should be an annual submission with priority placed on it when procedures, or staff, or Operators change.
9. **Provide Monthly Reports and an Annual Summary**
   IH Status - "In Progress"
   Monthly reports on usage and water quality are issued by Big White water utility. The format and information required by IH is stated in the CoP. There is a communication breakdown with the reporting and feedback between IH and the water utility.

4.6 COMPREHENSIVE SOURCE PLAN FOR EACH SOURCE

As part of the Drinking Water Protection Act, a Water System Assessment Plan must be developed for each water supplier. The purpose of an assessment is to identify, inventory and assess:

(a) The drinking water source for the water supply system, including land use and other activities and conditions that may affect that source,

(b) The water supply system, including treatment and operation,

(c) Monitoring requirements for the drinking water source and water supply system, and

(d) Threats to drinking water that is provided by the system

Big White has developed such plans for both the Rhonda Lake Reservoir watershed and for the Powder Basin Reservoir watershed and draft versions of these plans have been submitted to IH with comments and adjustments required.

Big White has retained Agua Consulting Inc. to finalize the draft Source Protection Plans once the Water Master Plan is completed. In conjunction with the Source Protection planning, Big White is also intending to apply for filtration exclusion for both raw water sources. With the high elevation and very good raw water quality, it appears that filtration exclusion may be viable.

Table 4.4 - Big White - Water Supply Risk Summary Table

No.	DRINKING WATER RISK / COMMENTS	IDENTIFICATION METHOI	RISK LEVEL
1.1	**Human Activity** Organic waste is possible in watershed. Risk exists if both high E.Coli levels are found in combination with inadequate treatment/disinfection. There is no source of human sewage located above the existing water sources. WWTP ponds are located well below water sources	Total/*E.Coli* monitoring of raw water is necessary to determine if this is a valid threat. E.Coli will identify if threat is from mammals.	Low
1.2	**Wildlife** High elevation, lower than average wildlife populations	Visible sitings of wildlife	Low
1.3	**Cattle and Range Activities** Noted by Big White staff that cattle from local lower range lessees occasionally stray up to the higher elevations. Cattle are not allowed within watershed. They are removed immediately when noted	Sitings of cattle at low reaches of ski hill.	Low
1.4	**Chemical Spills** All fuel spills or chemical spills would be below the drinking water sources.	Call-in by public or notification by road officials. Phone call.	Low
1.5	**Algae Blooms in Reservoirs** Risk exists but is low due to low nutrient levels, cold water and low biological activity in the raw water reservoirs. Risk in the Powder Basin Reservoir is higher than the Rhonda Lake Reservoir. TOC, nitrogen and phosphorus to be monitored to determine organic loading in the raw water.	Source water monitoring. Visible to the eye. Biological monitoring and testing required.	Low
1.6	**Water Distribution System Regrowth** Flushing and if necessary, pigging will help to alleviate regrowth issues. Fresh and low nutrient level waters are key to maintaining low regrowth. Chlorine residual monitors required at limits of system to reduce this risk and raise operator awareness.	Customer complaints. Low chlorine residual levels.	Low to moderate
1.7	**Cross Connections** An assessment of connections is that there aren't many severe applications of risk on the mountain. Cross-connection-control is policy for all new construction. Premise isolation and backflow is in place. The number of commercial and high hazard installations on the mountain is low. Program needs to be written into bylaw and development policy	Measurable loss in Cl_2 residual level.	Low to moderate
1.8	**Water Main Breaks** Same as for any utility	Spike in flow meter readings on the SCADA system	Low but continuous
1.9	**Electrical Power Failure** Higher risk here than for some utilities due to remote location. Generator would reduce this risk.	Alarms that Generators activated	Low
1.10	**Wildfire** A major forest fire could occur in the region. Rhonda Lake is mostly above the tree line so there is low fuel loading in that watershed. For the Powder Basin, there is fuel within that basin and below. Having the ski runs on the mountain creates fire barriers and some protection. Having two sources a distance apart provides alternate available sources in the event of a major fire.	Forest Service	Low

The Risk Rating denotes risk of occurrence. Risk of occurrence is the assessment of whether or not the risk is present. If there is a risk of occurrence, then a risk of waterborne disease outbreak is possible.

4.7 WATERSHED CONTROL PROGRAM

The IH may require that a *Watershed Control Program* be conducted for the Big White Water Utility sources. The control program must encompass the contributing watershed areas and recharge areas of the groundwater aquifers for the wells. The program must be set up with the following components:

- Defined raw and treated water monitoring;
- Watershed and groundwater recharge area surveillance and proof of such;
- Procedures for water monitoring, recording and reporting;
- Deviation reporting and actions to be taken to ensure that the source water quality feeding reservoirs and aquifers is not compromised during the year;
- Auditable report for easy review and inspection by the regulator (IH);
- Reporting and corrective actions when several regulatory agencies are involved in a conflict that compromises drinking water;
- Annual plan for source water quality monitoring and source water improvements.

Following is criteria for water treatment exceptions such as the exclusion of filtration

Treatment Exceptions

Exceptions to the disinfection and/or other treatment requirements will be considered upon application from the water supply system, based on information regarding that water system's source water characteristics. The application must demonstrate that the source is adequately protected from contamination and that the bacteriological and/or physical and chemical water quality of the source consistently meets the Drinking Water Protection Act, the Drinking Water Protection Regulation and the Guidelines for Canadian Drinking Water Quality. Exceptions are conditional upon continuance of the requirements and that provision is made for the installation and operation of disinfection and/or other treatment facilities should they be required at a later date. Note that the Guidelines indicate that secure confined aquifers should disinfect to achieve 4 log virus removal or inactivation.

A water supply system may be permitted to operate without filtration if the following conditions for exclusion of filtration are met, or a timetable to implement filtration has been agreed to by the drinking water officer:

1. *Overall inactivation is met using a minimum of two disinfections, providing 4-log reduction of viruses and 3-log reduction of Cryptosporidium and Giardia.*
2. *The number of E. coli in raw water does not exceed 20/100 mL (or if E. coli data are not available less than 100/100 mL of total coliform) in at least 90% of the weekly samples from the previous six months. The treatment target for all water systems is to contain no detectable E. coli or fecal coliform per 100 ml. Total coliform objectives are also zero based on one sample in a 30-day period. For more than one sample in a 30-day period, at least 90% of the samples should have no detectable total coliform bacteria per 100 ml and no sample should have more than 10 total coliform bacteria per 100 ml.*

3. *Average daily turbidity levels measured at equal intervals (at least every four hours) immediately before the disinfectant is applied are around 1 NTU, but do not exceed 5 NTU for more than two days in a 12-month period.*
4. *A watershed control program is maintained that minimizes the potential for fecal contamination in the source water. (Health Canada, 2003)*

Applying the exclusion of filtration criteria does not mean filtration will never be needed in the future. A consistent supply of good source water quality is critical to the approach, but source quality can change. Therefore, the exclusion of filtration must be supported by continuous assessment of water supply conditions. Changing source water quality can occur with changes in watershed conditions. Increased threats identified through ongoing assessment and monitoring may necessitate filtration. Maintaining the exclusion condition relies on known current and historic source water conditions, and provides some level of assurance to water suppliers that a filtration system may not be necessary unless the risk of adverse source water quality increases. It is recommended that dual water treatment should be applied to all surface water.

4.8 LONG TERM WATER QUALITY RISKS AND RECOMMENDATION

In the view of the possible short and long-term risks that may face Big White Water Utility, the water is being obtained from a limited access area with low impact human activity of downhill and cross country skiers, and summertime hikers. The impacts of mining, agriculture, livestock, forestry, wastewater processes and other contamination generating activities does not exist within the upper watersheds. The chances of drifting of pesticides or groundwater movement of contamination are also non-existent.

With new technology and higher capacity to identify emerging contaminants, the new identification and new treatment processes will continue to be developed and will dictate the direction for future water treatment.

For Big White Water Utility source water, all of the criteria for filtration exclusion appear to be achievable as the raw water quality of the sources is very high. The water quality monitoring results from recent data meet the GCDWQ.

To meet further IH requirements a Watershed Control Program must be developed. This will set out the basis for the application of a filtration exclusion application.

5. FUTURE WATER SYSTEM

5.1 INTRODUCTION

Section 5 presents the expected development at Big White Resort and the resulting water system improvements that will be required to service the development. Included is a summary of the development expansion areas, the estimated increase in water demands, a discussion on system redundancy, water treatment and water distribution projects proposed, and hydrological information for the proposed water license applications.

Future Objectives

As an overall approach to the development of the water system, the plan developed should work to achieve the following objectives:

- High quality raw water sources must be maintained so that the treatment costs are manageable and that the drinking water risks are minimized;
- Develop a reliable water supply system that has the ability to withstand drought, flood and forest fire conditions and the water quantity and quality deviations that may result;
- Plan the work over time so that the costs and water rates are stable and do not vary greatly;

Water System Development Steps

The steps in which to achieve the objectives are as follows:

1. Increase data tracking on the water hydrometric information and weather /snowfall/precipitation information as this will lead to better understanding of the source capacity and variability over time;
2. Increase the catchment area capacity above Rhonda Lake Reservoir and Powder Basin Reservoir as the supply by gravity is very cost effective and provides very safe and high quality raw water. The expansion of ditches is a very low cost for a very significant increase in source capacity;
3. In the longer term, consider groundwater wells nearer to the bottom of the resort as groundwater provides a source that can be isolated from forest fires and surface water risks. Groundwater is also, in the shorter term, more drought resistant;
4. Improve the interconnection between Rhonda Lake WTP and Powder Basin WTP. The interconnection of having either source supply the entire resort for most conditions is a goal for this plan;
5. Construct the required system expansion projects on a schedule just ahead of when development growth progresses.

5.2 FUTURE DEVELOPMENT EXPANSION AREAS

Table 5.1 corresponds with Figure 5.1 and provides a summary of the long-term development for Big White Ski Resort. The numbers show an ultimate projected housing build-out of 37,158 service factor units (18,579 bed units).

Table 5.1 – Future Development Units

ID	Condition	Existing	Foreseeable Future	Ultimate	Timeline
	Existing Service Factor Units	10110			
	Future Water Demand				
1	High Forest *		285	285	
2	Black Forest Ph 1 *		264	264	
3	Black Forest Ph 2			945	10 -15 yrs
4	Black forest Ph 3			1644	15 - 20 yrs
5	Back Country (Southridge)			1635	20 - 25 yrs
6	Happy Valley		369	369	
7	Existing Village lots		860	860	
8	improved lots		160	160	
9	Chateau Blanc (removed)				
10	Stone gate II		80	80	
11	8 commercial lots		64	64	10 - 15 yrs
12	East Peaks Phase 1			> 20 yrs	
13	East Peaks Phase 2			> 20 yrs	
14	East Peaks Phase 3			> 20 yrs	
15	Westridge			> 20 yrs	
16	Gem West			> 20 yrs	
	Total	10110	2082	6306	
	Cumulative Total (Serv Factor Units)	**10110**	**12192**	**16416**	
	Annual Water Demand Estimate (ML)	**270**	**326**	**438**	
	Maximum Daily Demand Estimate (L/s)	**29.1**	**35.1**	**47.3**	

Existing and future water demands for the identified development areas illustrated in Figure 5.1 are provided at the bottom of Table 5.1. The forecasted estimates are based on a ratio of existing demands projected for the future expected Service Factor units.

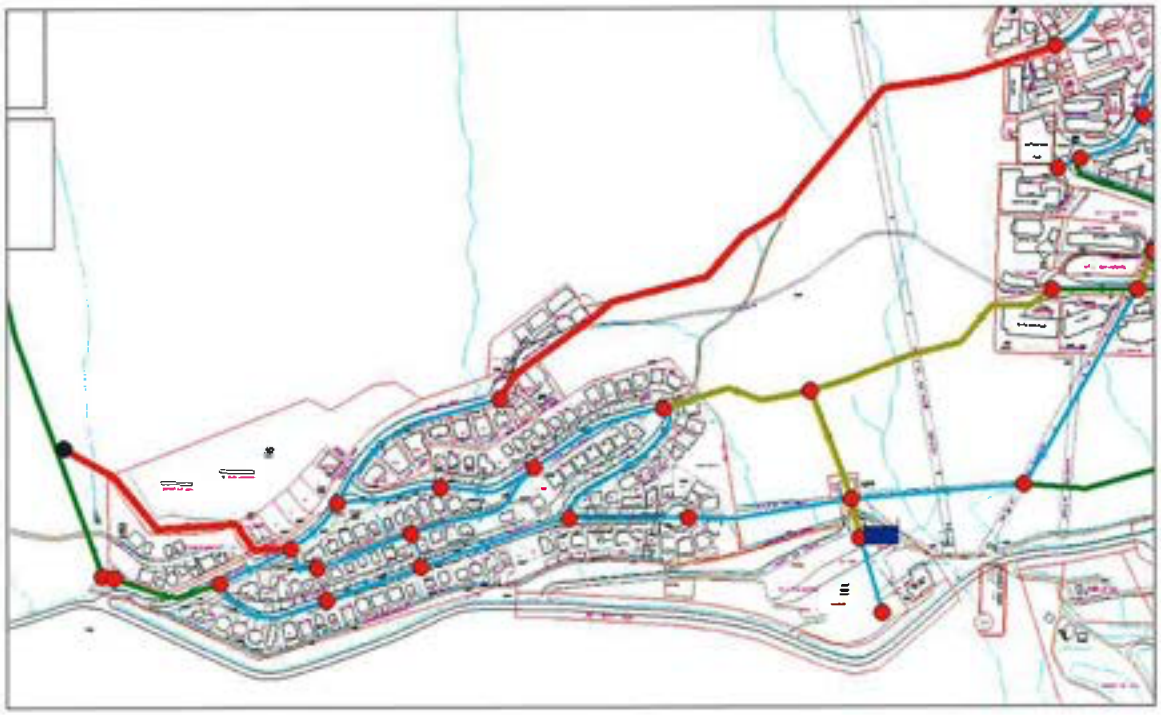
5.3 WATER SUPPLY REDUNDANCY

The water infrastructure should be developed with the ability to supply the entire mountain with water from more than one source. This type of contingency planning is beneficial not only for emergencies, but also for allowing the utility to always provide the best quality of water possible, should any deviations in water quality occur to either source.

In the short term, some redundancy can be accomplished by means of bringing on Powder Basin Reservoir and then installing a pump to lift water from the lower pressure zone across the PRV stations up to the Village Reservoir. This is an interim step that would allow the transfer of water over time as the pumping and line sizes would not be able to meet the peak demands.

In the longer term, once Powder Basin is fully on-line, that source should be interconnected through a direct watermain connection with no PRVs or pump stations required to the Village Reservoir pressure zone. The lengths are illustrated in red and are estimated to be 330m for the west main which is already partially installed and another 840m for the main across the ski run.

Figure 5.2 - Powder Basin Interconnection to Village Reservoir Pressure Zone (PZ 1875)



The primary benefits of this interconnection include:

1. Shared fire storage and two feeds to all major fires;
2. System redundancy in the event of a supply or water quality emergency;
3. System redundancy of reservoir capacity through use of either source;

A small pump is required for the Powder Basin water to raise the Hydraulic grade line by 20m from 1855 reservoir elevation to the 1875 system zone elevation. The annual pumping electrical charge to lift the entire 207 ML volume of the Powder Basin Reservoir is estimated to be in the range of only $1,500 at current electrical charge rates.

5.4 FUTURE WATER DISTRIBUTION SYSTEM ISSUES

Recommended water distribution system projects are listed in this section. Details and cost estimates for each project are provided in Appendix A. There are several critical design issues to be addressed for the water distribution system.

1. Determine interim pumping capacity required to move water from the existing lower pressure zone (PZ 1795) above to the Village Reservoir pressure zone (PZ 1875);
2. Estimate how much water will be available from the Powder Basin Reservoir through the 200mm main;
3. Provide direction on project staging. Consider future development areas in this regard.

Analysis of the above identified issues was carried out utilizing the computer water model. The existing pipelines and proposed alignments were discussed with Big White Staff and the results are presented within this report.

INTERIM PUMPING SYSTEM

The proposed pumping system would be situated within one of the existing PRV stations, either the Plaza PRV or the Stonegate PRV stations, or in a new vault adjacent to these stations. The advantage of installing a smaller pump is that it may be possible to fit it within the existing PRV vault.

Table 5.2 provides a range of water volumes that could be pumped per day with varying sized pumps. The estimates are made based on pumping efficiencies of 0.75, head of 80m, and the pump running steadily. If the pump size is larger than 5 hp, three phase power will be required.

Table 5.2 – Zone Pump Capacities

Pump Size	Head	Flow	m^3 pumped /day	USgpm
3 hp	80 m	2.14 L/s	185	34
5 hp	80 m	3.56 L/s	308	57
10 hp	80 m	7.13 L/s	615	113
15 hp	80 m	10.68 L/s	923	170

Based on the demands built into the water model from previous unit counts, 55% of the total water demand is provided for above the PRV stations with the remaining water being provided below. This works out to flows set out below for MDD conditions.

	SERVICE AREA	MDD FLOW	PERCENT	Normal Winter Demand
☐	Uphill (PZ 1875)	16.0 L/s	55%	8.0 L/s
☐	Below PRV (PZ 1795)	13.1 L/s	45%	6.5 L/s
	TOTAL	29.1 L/s	100.00%	14.5 L/s

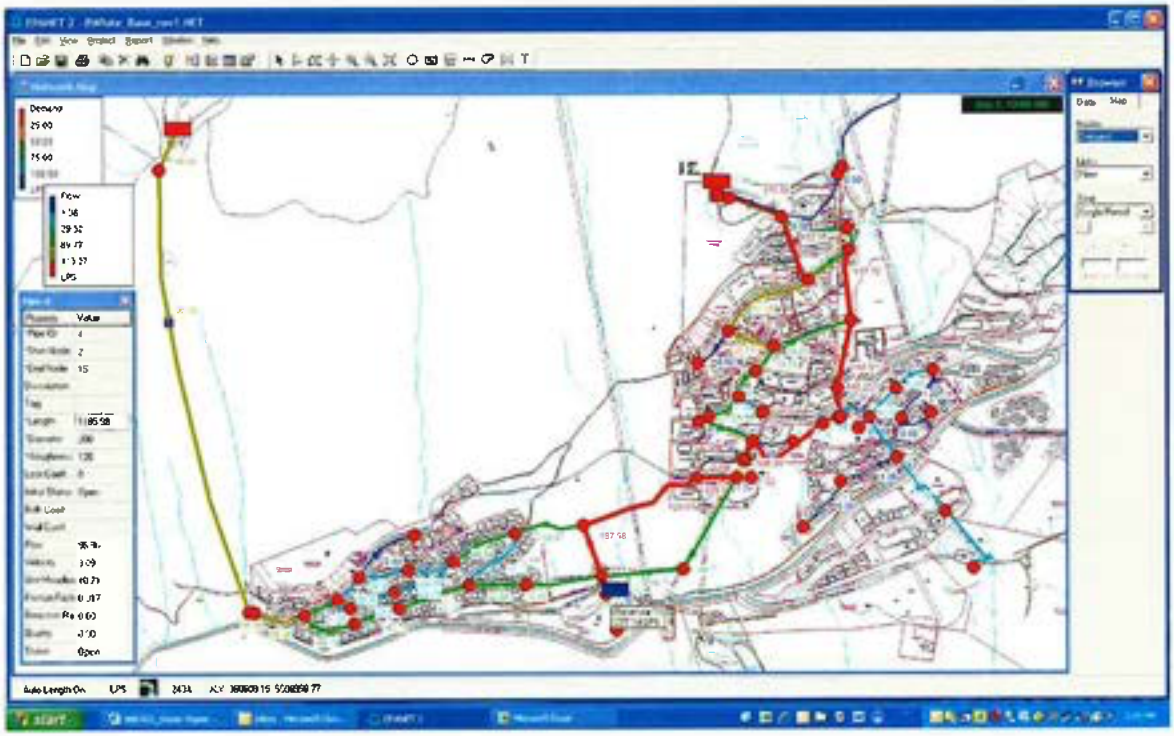
A 10 horsepower pump would allow supply to meet the majority of water demands from the Powder Basin source to the upper Village Reservoir. The issues with a 10 hp pump are that 3 phase voltage may be needed and the pump may be too large for much of the lower flows. A VFD drive on the pump also could be considered as that would allow variation in flow rates to meet water demands. With the longer term projects including a connection the pressure zones, a 5 hp pump is recommended for the initial installation.

The 5 horsepower pump option is recommended as this size pump may fit within the existing PRV chamber below the Plaza Chair. Metal brackets, bracing and support from the floor will be required to mount the pump against one of the chamber walls above the existing piping.

POWDER BASIN DISTRIBUTION SYSTEM CAPACITY

The water distribution mains from the Powder Basin were reviewed. A 200mm line was installed from the Basin to the west end of the Snow Pines area. A model run was carried out to determine the maximum flow that could be brought through the existing 200mm main.

Figure 5.3 – Powder Basin Watermain Flow (L/s)



Based on maximum velocities of 4.0 m/s under a fire flow condition, the 200mm main can convey a flow of 125 L/s to the Snow Pines area. The model run illustrated in Figure 5.2 shows the flow to the Hotel site at the base of the Ridge Chair. The maximum flow through the 200mm main under this scenario is estimated to be 96 L/s with the remainder of fire flow coming from the Village Reservoir.

Sizing of treatment and storage should consider maximum flows from the Powder Basin to be in the range of 125 L/s.

HOTEL FIRE CAPACITY

A major hotel is planned at the base of the Ridge Rocket Chairlift. The flows to this site were tested utilizing the computer water model. The following scenarios were estimated to provide fire flow to the hotel site.

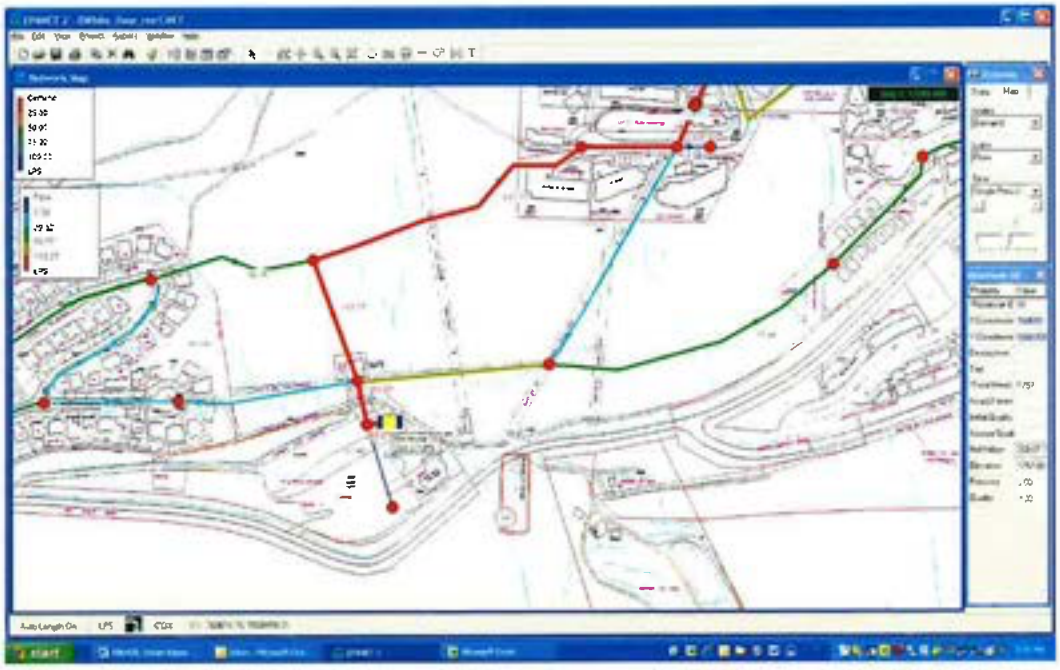
- **Scenario 1 – Existing Condition**
  Elevation = 1670m, HGL = 1730 m, Residual Pressure = 60m (85 psi)
  Est. Flow = 151 L/s
  Comments: Flow limited by low pressure at top of Snow Pines

- **Scenario 2 – Upgraded Condition**
  Add 250mm main from main above Ski Patrol building (shown as red main)
  Elevation = 1670m, HGL = 1757 m, Residual Pressure = 87m (123 psi)
  Est. Flow = 180 L/s
  Comments: Flow limited by low pressure at top of Snow Pines

- **Scenario 3 – Upgraded Condition**
  Scenario 2 plus 200mm main interconnected from the North (shown as green main)
  Elevation = 1670m, HGL = 1730 m, Residual Pressure = 60m (85 psi)
  Est. Flow = 206 L/s
  Comments: Flow limited by low pressure at top of Snow Pines

- **Scenario 4 – Upgraded Condition**
  Scenario 3 plus Powder Basin Connected
  Elevation = 1670m, HGL = 1730 m, Residual Pressure = 60m (85 psi)
  Est. Flow = 269 L/s (69 L/s comes from Powder Basin)
  Comments: Flow limited by high velocities in watermains (> 4.0 m/s)

Figure 5.4 – Scenario 4 - Flows to Hotel Site



Generally, the approach for the water distribution system projects is presented as follows:

1. Bring the Powder Basin Reservoir on-line through means of treatment with UV disinfection followed by chlorination;
2. Interconnect the Powder Basin water system and the Village Reservoir pressure zone by means of a small 5 horsepower pump to be installed within the existing Plaza PRV station. This is an interim measure until a permanent connection is installed between the upper pressure zones;
3. Interconnection of a watermain across the ski run as shown on Figure 5.2 should take place in time with the installation of a new concrete covered reservoir storage tank located above Powder Reservoir at elevation 1875 metres. The size of this new storage should be 800 cubic metres in two 400 cubic metre cells;
4. The hotel should be required to pay for additional fire storage beyond what obligations the existing development has at this time. In addition, the hotel would be required to install the 250mm line from the Ski Patrol building south to the hotel site as that main is required and solely for the benefit of that development site;
5. In the longer term, to service the outlying areas, particularly those greater than two kilometres from the existing village, a 300mm watermain should be considered to be the minimum size to provide water for daily demands and fire flow to the multi-family structures. A 250mm main could be considered if the housing type is single family type chalets.
6. Engineering sizing and estimates for each of the service areas identified in Table 5.1 should be provided for by means of an engineering water report. The most appropriate time for planning each of these development areas should be in the months prior to detailed design and construction.

5.5 RECOMMENDED WATER PROJECTS

There are numerous upgrade projects for the water supply system. In addition to the water distribution system upgrades that will occur over time, there are other source development and water treatment projects that will also be required. A listing of all projects and cost estimates is included in Appendix A of this report. The projects are listed in Table 5.3 below.

Table 5.3 – Recommended Water Projects

#	Priority	PROJECT NAME	TOTAL
1a	C	POWDER BASIN RESERVOIR (completed)	$ 3,807,088
1b	C	POWDER BASIN - WATER TREATMENT PLANT (completed)	$ 639,027
1c	C	EMERGENCY GENERATOR AT WTP	$ 4,500
2a	M	POWDER BASIN - 800m3 CONCRETE RESERVOIR	$ 850,437
2b	M	POWDER BASIN - PIPING TO RESERVOIR	$ 230,000
3a	M	SCADA UPGRADES	$ 88,000
3b	M	POWDER BASIN - RAW WATER SUPPLY PUMPS	$ 173,855
4a	L	300 mm SOUTHRIDGE WATER MAIN	$ 340,000
4b	L	SOUTHRIDGE - ADD 400m3 STORAGE	$ 260,383
5	L	SOUTHRIDGE - PRV	$ 46,000
6	H	LOWER PRESSURE ZONE INTERCONNECTION	$ 90,000
7	H	PRESSURE ZONE TRANSFER PUMP	$ 47,438
8	M	WATER RESERVOIR - LEVEL SENSORS	$ 34,155
9	M	1875m PRESSURE ZONE INTERCONNECTION MAIN	$ 266,789
10a	L	RHONDA LAKE RESERVOIR - DIVERSION DITCH	$ 84,348
10b	L	POWDER BASIN DIVERSION DITCH	$ 263,436
11	L	RHONDA RESERVOIR - WATER BALANCE REPORT	$ 25,000
12	L	POWDER BASIN - WATER BALANCE REPORT	$ 25,000
13	L	POWDER BASIN - FILTERS	$ 820,000
R1	RRTF	HYDRANT REPLACEMENT (6 UNITS)	$ 28,000
R2	RRTF	RHONDA LAKE CHLORINE VAULT IMPROVEMENTS	$ 64,230
R3	RRTF	AUTO FILTER BYPASS FOR FF AT RHONDA WTP	$ 15,700
R4	RRTF	RHONDA WTP - FILTER REPLACEMENT	$ 60,000
R5	RRTF	RECONDITION - EX CONCRETE RESERVOIRS	$ 86,000
R6	RRTF	PRV RECONDITIONING - 3 STATIONS	$ 120,000
R7	RRTF	RHONDA LAKE RESERVOIR - RECONDITIONING DAM	$ 1,900,000
R8	RRTF	WATER MAIN REPLACEMENTS / UPGRADES	$ 900,000
		TOTALS	**$ 3,644,841**
	RRTF	Renewal Fund projects - not included in TOTALS	
	C	Denotes completed projects - not included in TOTALS	

5.6 LONG TERM WATER SOURCES

There are several options for longer term water source development. In the prior Water Master Plans, there were three watershed options presented and license applications were made by the resort. The background information on those sources is included in Appendix C of this report.

6. FINANCIAL CONSIDERATIONS

6.1 INTRODUCTION

A brief summary of current water charges is presented in this section. The project list summarized in Section 5.5 is assessed and the projects that are required as a result of new development are identified. The timing for projects and development is assessed based on the addition of 100 Service Factor units per year.

6.2 DEVELOPMENT CHARGE FEES

New development at Big White is assessed on the basis of the development's "Service Factor". Depending on the type of development, an assessment of service is charged as per Table 6.1. The Service Factor charge is $555.00 for each equivalent *Bed Unit* installed or $277.50 per *Pillow Unit*. All types of development are converted to an equivalent *Bed Unit* or *Pillow Unit* charge. One (1) *Bed Unit* = 2 *Pillow Units*.

Table 6.1 – Service Factor Charges

Housing Designation	Bed Units		Cost
Rate per Bed Unit	*1*	*$*	*277.50*
Pub, Restaurant (5 seats)	1	$	277.50
Retail, Commercial (500 ft^2)	1	$	277.50
Service Factor (2 bed units)	2	$	555.00
Hostel Housing Unit	3	$	832.50
Hotel Room	4	$	1,110.00
1 Bedroom Condo	5	$	1,387.50
2 Bedroom Condo	6	$	1,665.00
3 Bedroom Condo	7	$	1,942.50
Ground Floor Townhouse	9	$	2,497.50
Single Family Dwelling Unit (chalet)	12	$	3,330.00
Duplex Dwelling Unit (both sides)	17	$	4,717.50

The Service Factor charge is the only mechanism for assessing charges to new development. The monies collected are to be used to fund core infrastructure that will decrease the eroding of supply capacity caused by new development.

There is approximately $3,645,000 in capital projects identified of which the majority are required to meet capacity requirements. There are an additional eight (8) projects identified for renewal of the system as it ages.

Table 6.2 – Service Factor Funded Projects

2a	M	POWDER BASIN - 800m3 CONCRETE RESERVOIR	$	850,437
2b	M	POWDER BASIN - PIPING TO RESERVOIR	$	230,000
3a	M	SCADA UPGRADES	$	88,000
3b	M	POWDER BASIN - RAW WATER SUPPLY PUMPS	$	173,855
4a	L	300 mm SOUTHRIDGE WATER MAIN	$	340,000
4b	L	SOUTHRIDGE - ADD 400m3 STORAGE	$	260,383
5	L	SOUTHRIDGE - PRV	$	46,000
6	H	LOWER PRESSURE ZONE INTERCONNECTION	$	90,000
7	H	PRESSURE ZONE TRANSFER PUMP	$	47,438
8	M	WATER RESERVOIR - LEVEL SENSORS	$	34,155
9	M	1875m PRESSURE ZONE INTERCONNECTION MAIN	$	266,789
10a	L	RHONDA LAKE RESERVOIR - DIVERSION DITCH	$	84,348
10b	L	POWDER BASIN DIVERSION DITCH	$	263,436
11	L	RHONDA RESERVOIR - WATER BALANCE REPORT	$	25,000
12	L	POWDER BASIN - WATER BALANCE REPORT	$	25,000
13	L	POWDER BASIN - FILTERS	$	820,000
		TOTALS	**$**	**3,644,841**

As noted in Table 5.4, Project 1a, 1b & 1c – Powder Basin Reservoir, Building, UV disinfection installation & Genset are completed and their costs are not included in the TOTALS line in the amount of $3,644,841.

For the funding of $3,644,841 of capital projects, the number of Service Factor units that would have to be developed is 6,567. At a high rate of 300 Service factor units being developed per year, the timeline would be approximately 22 years.

Based on 300 Service Factor units per year being developed, the High Priority projects would require 2.3 years of development.

As per Table 5.1, the build-out for the resort is estimated to be 6,306 service factor units. The service factor rate to be collected over time to cover the identified costs, without interest or inflation factors is $577.00 which is just above the current service factor rate of $555.00. We would recommend updating the number to generate sufficient revenue with a 20% buffer. For the 6,306 Service Factor units to generate $3,644,841 + 20%, the Service Factor rate would have to increase to $693.60. Consideration should be given to adjusting the service factor rate upwards to provide some buffer in funding the required projects.

6.3 OPERATIONAL CHARGES

Housing on the mountain is charged a base rate to cover base operational costs and a consumption charge to cover increases due to times of higher water usage.

The base rate is $10.50 / month for a chalet which is 6 Service Factor Units. This works out to $ 1.75/SFU/month. In addition to the base rate is a consumption charge of $0.84 per cubic metre of water used. The average chalet uses in the range of 19 cubic metres per month through the ski season and much less in the off-season. The winter average monthly volumetric charge works out to $16.00 per chalet.

In addition to the monthly base charge and volumetric charge, $0.88 is collected per Service Factor unit for the Replacement Reserve Trust Fund and another $0.87 per Service Factor Unit for the Residential Operating Costs.

It is noted that the volumetric charge has not increased since 2008 and remains at $0.84/$m^3$. Big White should consider increasing these at a minimum rate that is at least matches inflation. The construction cost indices estimate for the past 10 years as presented in Appendix A is 1.53%.

The assessment of costs and debt financing is not included in the scope of this assignment. The scope of this plan does not address the details of renewal costs, however the minimal investment in renewal should be in the range of 2 to 3 % of the overall annual water revenues. This money should be placed in a reserve fund for emergency repairs and on-going renewal of water system infrastructure.

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7. SUMMARY

7.1 INTRODUCTION

General conclusions and recommendations made within the report are summarized in this section.

7.2 CONCLUSIONS

Based on our review, we conclude the following.

C-1 Currently there are approximately 10,110 Service Factor Units (SFUs) constructed at Big White Ski Resort. The long-term planning horizon proposes an additional 6,306 SFUs for a build-out of 16,416 SFUs;

C-2 The location of the future SFUs is presented in Table 5.1 and illustrated on Figure 5.1 of this report;

C-3 In the past 10 years the number of SFUs has increased from 8,000 to 10,110 or an annual growth rate of 2.37%;

C-4 Current water demand at the resort averages 250 ML per year or 684 m^3/day. The maximum daily demand, recorded on December 31, 2017, was 2,513 m^3 (29.1 L/s);

C-5 As illustrated in Figure 3.5, growth in annual water demands is steadily increasing at a rate of 3.03 % over the past 22 years. This rate is greater than the rate of housing increase and can be due to factors such higher occupancy levels and durations;

C-6 For planning future water demands, a conservative design criterion of 50 Imperial Gallons per person per day should be considered. The unknown factor is the assessment of water demands is the percentage of occupancy during the peak days of occupancy;

C-7 The current annual water demand based on the trend line in Figure 3.5, which takes into account seasonal changes, is estimated to be 250 ML/yr.;

C-8 The total potential raw water storage at Rhonda Lake is estimated at 350 ML, which storage within the Powder Basin Reservoir is estimated to be 217 ML. Big White has a total of 567 ML of storage in their raw water reservoirs;

C-9 Based on the demand calculations, there is sufficient water within the two raw water reservoirs to service Big White Resort for the near future;

C-10 Due to the low risk of waterborne disease from the watershed and the relatively high raw water quality, there is the possibility that filtration of the raw water will not be required. Raw water data collected over the past 10 years would support the filtration exclusion application. Big White Utility must put in place the Watershed Control Program and apply for Filtration Exclusion from Interior Health. Obtaining filtration exclusion does not preclude that filtration may be required at some time in the future;

7.3 RECOMMENDATIONS

R-1 There are 16 capital projects recommended for Big White Water Utility. The project description, project cost, and priority is presented in detail in Appendix A;

R-2 Continued tracking of water quality data is recommended to support a filtration exclusion application to the water regulator;

R-3 Increased tracking of weather and hydrometric (water flow) data is recommended at the dam spillways to verify watershed capacities and variability;

R-4 Improved linkage between the Village Reservoir and the Powder Basin water source is recommended to provide two fully interconnected drinking water sources for the resort. A staged approach to improved interconnection is provided in Section 5.3 of this report;

R-5 Covered concrete reservoir storage in the amount of 800 cubic metres is recommended at elevation 1854m above the Powder Basin WTP. Interconnection between the Powder Basin and the Village Reservoirs delays the need for additional reservoir construction at the Village Reservoir as the fire storage requirement would not be required to be duplicated;

R-6 The maximum available fire flow at the resort should be set at 200 L/s or the capacity of flow available within the local water distribution system, whichever is lower. The FUS form included in Appendix C of this report, should be submitted with Engineer's seal. If the new development exceeds 200 L/s fire flow, then the developer would have options to achieve the fire flow through either installing fire walls and reducing the fire demand, or upgrading reservoir storage and upgrading water mains to the site;

R-7 Groundwater should be considered as a backup water source. If there were a forest fire or extended damaging spring runoff, an appropriately sized groundwater well could provide water in the event of an emergency;

R-8 Continued testing of full drinking water quality parameters on the water sources in June and December each year should be continued;

R-9 Installation of the larger full sized UV units at Powder Basin has been completed. The reactors proposed are the same as the two within the Village WTP. The units would allow the Powder Basin water source to provide significantly more water to the lower Village water pressure zone;

R-10 Expansion of the watershed collection area is recommended to increase source capacity and help to provide additional water in times of a drought;

R-11 Some additional work should be done to tie skier visits, persons staying on the hill / accommodation and water demand together. Although the water use records are accurate and reliable, the supporting information on number of skiers on the hill is not accurate. Better ties for these numbers would help to provide better confidence in the water use estimates;

R-12 Development of a fire hydrant coverage map is recommended. A fire radius map will show where there are deficient coverage areas and a program to ensure full coverage is recommended;

R-13 The overall system map and computer model should be updated to include all pipes and changes in the last 10 years. The additional items that should be input to the computer model include identifying pipe materials, and date of installation. These can be added to the computer model so that the data can be extracted and sorted in order to assess infrastructure renewal costs and timing.

APPENDIX A - CAPITAL PROJECT SUMMARY

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APPENDIX B - WATER QUALITY TEST DATA

Water Quality Test data is provided in Appendix B.

The data includes full parameters tests on both raw and treated water.

Bacteriological test results along with THM data and UVT data is included in this section.

Table 4.1 – Microbiological Tracking – Nov 2016-March 2017

Date	Bk Forest Daylodge		Village Center Mall		Happy Valley		Forrest #115		West Ridge (Gem)		Shop Cooler		RHONDA - RAW			POWDER - RAW		
	Total Col/100ml	E Coli Col/100ml	Total Col/100ml	E Coli Col/100ml	Total Col/100ml	E Coli Col/100ml	Total Col/100ml	E Coli Col/100ml	Total Col/100ml	E Coli Col/100ml	Total Col/100ml	E Coli Col/100ml	Total Col/100ml	Bkgrd Col/100ml	E Coli Col/100ml	Total Col/100ml	Bkgrd Col/100ml	E Coli Col/100ml
Nov-17-2016			0	0	0	0	0	0					60	>200	0			
Dec-5-2016	0	0	0	0	0	0	0	0	0	0	0	0	47	>200	0			
Dec-15 2016	0	0	0	0	0	0	0	0	0	0	0	0	47	>200	0			
Dec-21-2016	0	0	0	0	0	0	0	0										
Dec-30-2016	0	0	0	0	0	0	0	0			0	0	27	>200	0			
Jan-05-2017	0	0	0	0	0	0	0	0										
Jan-12 2017	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0
Jan-19-2017	0	0	0	0	0	0	0	0	0	0								
Jan-26-2017	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0
Feb-3-2017	0	0	0	0	0	0	0	0										
Feb-10-2017	0	0	0	0	0	0	0	0	0	0	0	0	31	>200	0	<2	0	0
Feb-16-2017	0	0	950	>200	0	0	0	0										
Feb-20-2017			0	0	Additional	Globe	0	0	Raw water									
Feb-20-2017						Bullwheel	0	0	17	0								
Feb-22-2017	0	0	0	0	0	0	0	0	Additional Ptarmigan									
March-2-2017	0	0	0	0	0	0	0	0	0	0								
March-9-2017	0	0	0	0	0	0	0	0	0	0	0	0	14	>200	0	0	0	0
March-16-2017	0	0	0	0	0	0	0	0										
March-23-2017	0	0	0	0	0	0	0	0	3	0	0	0	64	>200	0	0	0	0
March-29-2017	0	0	0	0	0	0	0	0										

Table 4.1 – Continued (April 2017 – Dec 2018)

Date	9k Forest Daylodge		Village Center Mall		Happy Valley		Forrest 9115		West Ridge (Gem)		Shop Cooler		RHONDA - RAW			POWDER - RAW		
	Total Col./100ml	E Coli Col./100ml	Total Col./100ml	E Coli Col./100ml	Total Col./100ml	E Coli Col./100ml	Total Col./100ml	E Coli Col./100ml	Total Col./100ml	E Coli Col./100ml	Total Col./100ml	E Coli Col./100ml	Total Col./100ml	Bkgrd Col./100ml	E Coli Col./100ml	Total Col./100ml	Bkgrd Col./100ml	E Coli Col./100ml
April-05-2017	0	0	0	0	0	0	0	0	0	0	0	0	62	>200	0	4	0	0
April 13-2017	0	0	0	0	0	0	0	0										
April-20-2017											0	0	110	>200	0	4	>200	0
May-05-2017	0	0	0	0			0	0					99	0	0			
June-21-2017	0	0	0	0	0	0	0	0										
July 12 2017	0	0	0	0	0	0	0	0			0	0	11	0	0	68	>200	0
July 28 2017	0	0	0	0	0	0	0	0			0	0	26	>200	0	35	>200	0
Aug 10 2017	0	0	0	0	0	0	0	0			0	0	60	>200	0	52	>200	0
Aug 25 2017			0	0	0	0	0	0			0	0	34	>200	0	1800	>200	0
Sept 07 2017	0	0	0	0	0	0	0	0			0	0	140	>200	0			
Sept 22 2017	0	0	0	0	0	0	0	0			0	0	30	>200	0	490	>200	0
Oct 06 2017	0	0	0	0	0	0	0	0					11	0	0	120	>200	0
Oct 20 2017	0	0	0	0	0	0	0	0			0	0	15	0	0	200	>200	17
Nov 02 2017	0	0	0	0	0	0	0	0			0	0	23	>200	0	21	>200	0
Nov 16 2017	0	0	0	0	0	0	0	0			0	0	58	>200	0	26	>200	0
Dec 1 2017	0	0	0	0	0	0	0	0	0	0			22	0	0	11	>200	0
Dec 8 2017	0	0	0	0	0	0	0	0	0	0								
Dec 15 2017	0	0	0	0	0	0	0	0	19	0	0	0	53		0	2		0
Dec 19 2017									0	0								
Dec 20 2017	0	0	0	0	0	0	0	0	0	0								
Dec 27 2017	0	0	0	0	0	0	0	0	0	0	0	0	28		0	4		1
Jan 03 2018	0	0	0	0	0	0	0	0	0	0								
Jan 11 2018	0	0	0	0	0	0	0	0	0	0	0	0	0	>200	0	0	>200	0
Jan 17 2018	0	0			0	0	0	0										
Jan 29 2018									0	0								
Feb 01 2018	0	0	0	0	0	0	0	0	0	0								
Feb 08 2018	0	0	0	0	0	0	0	0	0	0	0	0	0	>200	0	0	>200	0
Feb 15 2018	0	0	0	0	0	0	0	0	0	0								
Feb 22 2018	0	0	0	0	0	0	0	0			0	0	66	>200	0	6	>200	0
March 01 2018	0	0	0	0	0	0	0	0	0	0								
March 07 2018	0	0	0	0	0	0	0	0	0	0	Shop Tap	3samples	2	>200	0	0		3
March 12 2018											0	0						
March 15 2018	0	0	0	0	0	0	0	0	0	0	0	0				2		0
March 21 2018																1		0
March 22 2018	0	0	0	0	0	0	0	0					26	>200	0	1		0
March 29 2018	0	0	0	0	0	0	0	0	0	0								
April 05 2018	0	0	0	0	0	0	0	0	0	0			0	>200	0	0		0
April 19 2018	0	0	0	0	0	0	0	0					43	>200	0	3	>200	0
May 4 2018	0	0	0	0	0	0	0	0			0	0	0	>200	0	0	>200	0
May 18 2018	0	0	0	0	0	0	0	0					69	>200	0	4	>200	0
June 1 2018	0	0	0	0	0	0	0	0			0	0	0		0	0	>200	0
June 14 2018	0	0	0	0	0	0	0	0	Tamarack		0	0	3		1	0		0
June 21 2018									0	0								
June 28 2018	0	0	0	0	0	0	0	0			0	0	15		0	0		0
July 12 2018	0	0	0	0	0	0	0	0					≥1	>200	0	0		0
July 27 2018	0	0	0	0	0	0	0	0					16	>200	0	82	>200	2
Aug 10 2018	0	0	0	0	0	0	0	0					37	>200	0	3		0
Aug 24 2018	0	0	0	0	0	0	0	0					60	>200	0	6	>200	0
Sept 7 2018	0	0	0	0	0	0	0	0			0	0	22	>200	0	10		0
Sept 21 2018																3		0
Oct 5 2018	0	0	0	0	0	0	0	0					1	>200	0	3	>200	0
Oct 18 2018	0	0	0	0	0	0	0	0					3	>200	0	7	>200	0
Nov 2 2018	0	0	0	0	0	0	0	0			0	0	0	>200	0			
Nov 5 2018																13	>200	0
Nov 16 2018	0	0	0	0	0	0	0	0			0	0	56	>200	0	38	>200	0
Nov 29 2018	0	0	0	0	0	0	0	0			0	0	0	>200	0	0	>200	0
Dec 4 2018									0	0								
Dec 6 2018	0	0	0	0	0	0	0	0										
Dec 13 2018	0	0	0	0	0	0	0	0	0	0			20	>200	0	0	>200	0
Dec 20 2018	0	0	0	0	0	0	0	0										
Dec 28 2018	0	0	0	0	0	0	0	0	0	0	0	0	0	>200	0	9	>200	0
							Hydrant 15 1											

Date	Bk Forest Daylodge Total Coli/100ml	Bk Forest Daylodge E Coli Coli/100ml	Village Center Mall Total Coli/100ml	Village Center Mall E Coli Coli/100ml	Happy Valley Total Coli/100ml	Happy Valley E Coli Coli/100ml	Forest #115 Total Coli/100ml	Forest #115 E Coli Coli/100ml	West Ridge (Gem) Total Coli/100ml	West Ridge (Gem) E Coli Coli/100ml	Shop Cooler Total Coli/100ml	Shop Cooler E Coli Coli/100ml	RHONDA - RAW Total Coli/100ml	RHONDA - RAW Bkgrd Coli/100ml	RHONDA - RAW E Coli Coli/100ml	POWDER - RAW Total Coli/100ml	POWDER - RAW Bkgrd Coli/100ml	POWDER - RAW E Coli Coli/100ml
Jan 3 2019	0	0	0	0	0	0	0	0										
Jan 10 2019	0	0	0	0	0	0			0	0	0	0	>8	>200	0	20	>200	0
Jan 18 2019	0	0	0	0	0	0	0	0										
Jan 24 2019	0	0	0	0	0	0	0	0	0	0	0	0	0	>200	0	15	>200	0
Jan 31 2019	0	0			0	0	0	0										
Feb 7 2019	0	0	0	0	0	0			0	0	0	0	7	>200	0	5		0
Feb 14 2019	0	0	0	0	0	0												
Feb 28 2019	0	0	0	0	0	0												
March 07 2019	0	0	0	0	0	0			0	0			130	>200	0	24	>200	0
March 14 2019	0	0	0	0	0	0												
March 21 2019	0	0	0	0	0	0			0	0	0	0	13	>200	0	1	>200	0
April 18 2019	0	0	0	0	0	0	0	0					23	>200	0	9	>200	0
May 17 2019	0	0	0	0	0	0	0	0								10	>200	0
May 30 2019													9		0	10		0
June 19 2019	0	0	0	0	0	0	0	0			0	0	52	>200	0	4	>200	0
June 28 2019	0	0	0	0	0	0	0	0			0	0	190	>200	0	9	>200	1
July 11 2019	0	0	0	0	0	0	0	0			0	0	110	>200	0	61	>200	0
July 25 2019													7	>200	0	10	>200	0
Aug 23 2019	0	0	0	0	0	0	0	0					26	>200	0	5	>200	0
Sept 6 2019	0	0	0	0	0	0	0	0			0	0	21	>200	0	2		0
Sept 19 2019	0	0	0	0	0	0	0	0					9	>200	0	4		0
Oct 4 2019	0	0	0	0	0	0	0	0			0	0	18		0	17		0
Oct 22 2019	0	0	0	0	0	0	0	0										
Nov 01 2019	0	0	0	0	0	0	0	0					161		0	359		0
Nov 15 2019	0	0	0	0	0	0	0	0					228		0	687		0
Dec 05 2019	0	0	0	0	0	0	0	0										
Dec 12 2019	0	0	0	0	0	0	0	0	45	0			185		0	457		0
Dec 16 2019									0	0								
Dec 27 2019	0	0	0	0	0	0	0	0	0	0	0	0	326		0	41		0
Jan 10 2020	0	0	0	0	0	0	0	0	0	0	0	0	291		0	246		0
Jan 16 2020	0	0	0	0	0	0	0	0	0	0			140		0	156		0
Jan 23 2020	0	0	0	0	0	0	0	0	0	0	0	0	197		0	132		0
Jan 30 2020	0	0	0	0	0	0	0	0										
Feb 6 2020	0	0	0	0	0	0	0	0	8	0			272		0	1		0
Feb 14 2020	0	0	0	0	0	0	0	0										
Feb 20 2020	0	0	0	0	0	0	0	0	0	0	0	0	236		0	63		0
Feb 27 2020	0	0	0	0	0	0	0	0										
March 4 2020	0	0	0	0	0	0	0	0	0	0	0	0	397		0	2		0
March 12 2020	0	0	0	0	0	0	0	0										
March 19 2020	0	0	0	0	0	0	0	0			0	0	261		0	109		0
April 02 2020	0	0	0	0	0	0	0	0					345		0	84		0
April 30 2020	0	0	0	0	0	0	0	0					147		0	31		0
May 13 2020	0	0	0	0	0	0	0	0					276		0	63		0
May 29 2020	0	0	0	0	0	0	0	0					548		0	226		0
June 11 2020	0	0	0	0	0	0	0	0					179		0	422		0
June 25 2020	0	0	0	0	0	0	0	0					259		0	146		0
July 9 2020	0	0	0	0	0	0	0	0							1	131		0
July 24 2020	0	0	0	0	0	0	0	0			0	0	613		0	313		0
Aug 06 2020	0	0	0	0	0	0	0	0					2420		0	33		0
Aug 20 2020	0	0	0	0	0	0	0	0					2910		0	4		1
Sept 03 2020	0	0	0	0	0	0	0	0			0	0	24		0	16		0
Sept 17 2020	0	0	0	0	0	0	0	0			0	0	48		0	9		0
Sept 28 2020																		
Sept 30 2020							0	0										
Oct 02 2020	0	0	0	0	0	0	0	0			0	0	23		0	6		0
Oct 15 2020	0	0	0	0	0	0	0	0			0	0	57		0	3		0
Oct 30 2020													387		0	517		0
Nov 18 2020	0	0	0	0	0	0	0	0			0	0	177		0	435		0
Nov 18 2020																		
Nov 24 2020	0	0	0	0	0	0	0	0	0	0	0	0						
Dec 1 2020	0	0	0	0	0	0					0	0						
Dec 09 2020	0	0	0	0	0	0					0	0	172		0	8		0
Dec 15 2020	0	0	0	0	0	0	0	0	0	0	0	0						
Dec 22 2020	0	0	0	0	0	0	0	0					46		0	22		0
Dec 29 2020	0	0	0	0	0	0	0	0										
Jan 5 2021	0	0	0	0	0	0	0	0	0	0	0	0	613		0	7		0
Jan 12 2021	0	0	0	0	0	0	0	0	0	0								

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APPENDIX C - SUPPLEMENTARY INFORMATION

Supplementary information referred to within this report is provided in this section. Disinfection tables for chlorine inactivation of protozoa, bacteria and viruses is provided as well as inactivation of viruses with UV disinfection.

Also provided is the calculation sheet required of all new development buildings to assess fire demands of the building.

Water diversion information for Trapping Creek, Hallam Creek and Whitefoot Creek are included.

C.1 USEPA – GIARDIA AND VIRUS INACTIVATION TABLES

Table B.1 CT Values for 3-Log Inactivation of Giardia by Free Chlorine (source USEPA)

Chlorine Concentration (mg/L)	Temperature <=0.5°C							Temperature =5°C						
	pH							pH						
	<=6.0	6.5	7.0	7.5	8.0	8.5	9.0	<=6.0	6.5	7.0	7.5	8.0	8.5	9.0
<=0.4	137	163	195	237	277	329	390	97	117	139	166	198	236	279
0.6	141	168	200	239	286	342	407	100	120	143	171	204	244	291
0.8	145	172	205	246	295	354	422	103	122	146	175	210	252	301
1.0	148	176	210	253	304	365	437	105	125	149	179	216	260	312
1.2	152	180	215	259	313	376	451	107	127	152	183	221	267	320
1.4	155	184	221	266	321	387	464	109	130	155	187	227	274	329
1.6	157	189	226	273	329	397	477	111	132	158	192	232	281	337
1.8	162	193	231	279	338	407	489	114	135	162	196	238	287	345
2.0	165	197	236	286	346	417	500	116	138	165	200	243	294	353
2.2	169	201	242	297	353	426	511	118	140	169	204	248	300	361
2.4	172	205	247	298	361	435	522	120	143	172	209	253	306	368
2.6	175	209	252	304	368	444	533	122	146	175	213	258	312	375
2.8	178	213	257	310	375	452	543	124	148	178	217	263	318	382
3.0	181	217	261	316	382	460	552	126	151	182	221	268	324	389

Table C.2 CT Values for 4 Log Inactivation of Bacteria / Viruses by Free Chlorine

	pH	
Temperature (°C)	6-9	10
0.5	12	90
5	8	60
10	6	45
15	4	30
20	3	22
25	2	15

*Although units did not appear in the original tables, units are min-mg/L.

Table C.3 Virus Inactivation through UV disinfection

		UV Dose (mJ/cm^2) Needed For a Given Log Reduction Log Reduction						
Virus	Host	1	2	3	4	5	6	
Adenovirus type 15	A549 cell line (ATCC CCL-185)	40	80	122	165	210		Thompson et al. 2003
Adenovirus type 2	A549 cell line	20	45	80	110			Shin et al. 2005
Adenovirus type 2	Human lung cell line	35	55	75	100			Ballester and Malley 2004
Adenovirus type 2	PLC / PRF / 5 cell line	40	78	119	160	195	235	Gerba et al. 2002
Adenovirus type 40	PLC / PRF / 5 cell line	55	105	155				Jean-Enriquez et al. 2003
Adenovirus type 41	PLC / PRF / 5 cell line	23.6	ND	ND	111.8			Meng and Gerba 1996
B40-8 (Phage)	B. Fragilis	11	17	23	29	35	41	Sommer et al. 2001
Bacteriophage - E. Coli	N/A	2.6	6.6					Light Sources Inc. 2014
Calicivirus canine	MDCK cell line	7	15	22	30	36		Husman et al. 2004
Calicivirus feline	CRFK cell line	5	15	23	30	39		Jean-Enriquez et al. 2003
Coxsackievirus B3	BGM cell line	8	16	24.5	32.5			Gerba et al. 2002
Coxsackievirus B5	Buffalo Green Monkey cell line	6.9	13.7	20.6				Battigelli et al. 1993
Coxsackievirus B5	BGM cell line	9.5	18	27	36			Gerba et al. 2002
Echovirus 1	BGM cell line	8	16.5	25	33			Gerba et al. 2002
Echovirus 11	BGM cell line	7	14	20.5	28			Gerba et al. 2002
Hepatitis A	HAV/HFS/GBM	5.5	9.8	15	21			Wiedenmann et al
Hepatitis A HM175	FRhK-4 cell	5.1	13.7	22	29.6			Wilson et al. 1992
Hepatitis A HM175	FRhK-4 cell	4.1	8.2	12.3	16.4			Battigelli et al. 1993
Infectious Hepatitis	N/A	5.8	8.0					Light Sources Inc. 2014
Influenza	N/A	3.4	6.6					Light Sources Inc. 2014
MS2 (Phage)	Salmonella typhimurium WG49	16.3	35	57	83	114	152	Nieuwstad and Havelaar
MS2 (Phage)	*E. coli* ATCC 15597	20	42	70	98	133		Lazarova and Savoye 2004
MS2 (Phage)	*E. coli* HS(pFamp)R		45	75	100	125	155	Thompson et al. 2003
MS2 ATCC 15977-B1 (Phage)	*E. coli* ATCC 15977-B1	15.9	34	52	71	90	109	Wilson et al. 1992
MS2 DSM 5694 (Phage)	*E. coli* NCIB 9481	4	16	38	68	110		Wiedenmann et al. 1993
MS2 NCIM8 (0108 (Phage)	*Salmonella typhimurium* WG49	12.1	30.1					Tree et al. 1997
PHI X 174 (Phage)	*E. coli* C3000	2.1	4.2	6.4	8.5	10.6	12.7	Battigelli et al. 1993
PHI X 174 (Phage)	*E. coli* WG 5	5	5	7.5	10	12.5	15	Sommer et al. 2001
Poliovirus - Poliomyelitis	N/A	3.15	6.6					Light Sources Inc. 2014
Poliovirus 1	BGM cell line	5	11	18	27			Tree et al. 2005
Poliovirus 1	CaCo2 cell-line (ATCC HTB37)	7	17	28	37			Thompson et al. 2003
Poliovirus Type Mahoney	Monkey kidney cell line Vero	3	7	14	40			Sommer et al. 1989
Poliovirus Type 1 (Sc2ab ())	MA104 cell	5.6	11	16.5	21.5			Chang et al. 1985
Poliovirus Type 1 LSc2ab	BGM cell	5.7	11	17.6	23.3	32	41	Wilson et al. 1992
PRD-1 (Phage)	S. typhimurium LT2	9.9	17.2	23.5	30.1			Meng and Gerba 1996
Reovirus Type 1 Lang strain	N/A	16	36					Harm et al. 1987
Reovirus-3	Mouse L-60	11.2	22.4					Rauth 1965
Rotavirus	MA104 cells	20	80	140	200			Caballero et al. 2004
Rotavirus SA-11	MA-104 cell line	9.1	19	26	36	48		Wilson et al. 1992

FUS calculation table for new development - Must be sealed by developer's engineer

FUS CALCULATION
WATER SYSTEM STANDARDS

PROJECT _____ Date: _____

Utility Big White Water Utility File: _____

Designer _____

1	Type of Construction				
	Coefficient (C) based on type of construction =			0.0	
	Total Floor Area:	0 ft^2	0 m^2		(See Notes)
	Fire Flow From Formula ($F = 220\ C\ A^{0.5}$):		(rounded)	0	L/min (a)
2.	Type of Occupancy:		Hazard		
	Hazard Allowance:	0%	x (a) =	0	L/min
			Sub-Total	0	L/min (b)
3.	Automatic Sprinklers:	No			
	Sprinkler Allowance:	50%	x (b) =	0	L/min (c)
4.	Exposures:	m	Exposure		
	1. North	>45	none	0%	
	2. South	>45	none	0%	
	3. East	10-20	across str	20%	
	4. West	0	clear	0%	
	Exposure Allowance:	20%	x (b) =	0	L/min. (d)
	TOTAL FIRE FLOW REQUIRED*		(rounded)	0	L/min (b-c+d)
	TOTAL FIRE FLOW REQUIRED:			0	L/s

Notes:

Construction Coefficient

C=1.5 Wood Frame

C=1.0 Ordinary (brick or other masonary walls, combustible floor and interior)

C=0.8 Non-Combustible (unprotected metal structural components, masonry or metal walls)

C=0.6 Fire-Resistive (fully protected frame, floors, roof)

Floor Area includes all storeys excluding basements at least 50% below grade

	(1) Separation	(2) Max. Charge
Hazard Allowance		
-25% dwellings, apartments	3.1 to 10 m	20%
-20% hospitals, elem. schools	10.1 to 20 m	15%
-15% high schools	20.1 to 30 m	10%
(*) Values rounded to nearest 1000 L/min	30.1 to 45 m	5%

Whitefoot Creek Diversion

Whitefoot Creek flows from the northeast limits of Big White in a north-north-east direction away from the ski hill. Figure 5.5 shows the proposed point of diversion and the estimated catchment area above the proposed point of diversion. The estimated area is 1284 ha. The total annual average volume of runoff is estimated to be 8,346 ML. The point of diversion at the bottom of the catchment is at an elevation 517m below the upper location. It is recommended that the diversions first be utilized before extending power service down to this remote location.

Figure 5.5 - Whitefoot Diversion Watershed Area

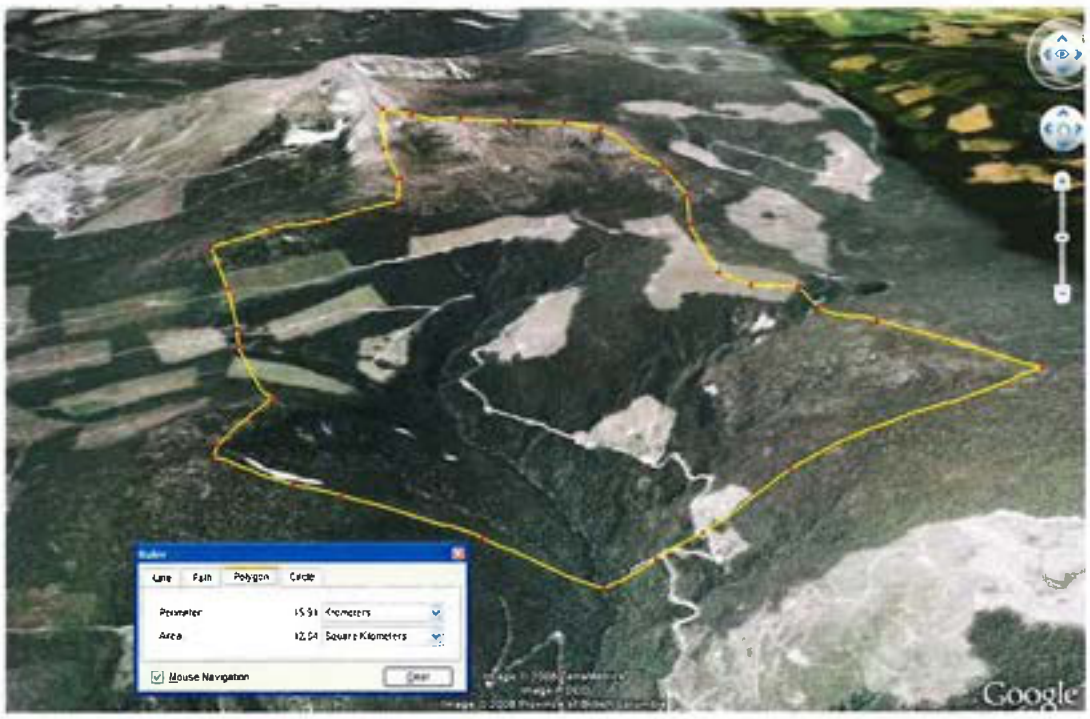


Table 5.4 - Whitefoot Creek Diversion Watershed Data

Parameter	No.	Units			
Area	12.84	km 2			
Highest Elevation	2240	m	Pump Head	1715 - 1315	m
Lowest Elevation (Point of Diversion)	1317	m		400m of head	
Mean Elevation	1800	m			
Approximate Annual Runoff Depth	0.65	m			
Total Runoff Volume	8346	ML			

Reliability	1:10 Wet	Ave. Year	1:10 Drought	1:25 Drought	1:50 Drought	1:100 Drought	1:200 Drought
Annual Runoff Variation (ML)	12018	8346	4924	4090	3589	3255	2838

Trapping Creek Diversion

Trapping Creek flows from Cliff area in Big White southeast from the site. The catchment area is relatively large as the point of diversion is located at a relatively low elevation. Figure 5.6 shows the proposed point of diversion and the estimated catchment area above the proposed point of diversion. The estimated area is 288 ha. The total annual average volume of runoff is estimated to be 1584 ML.

Figure 5.6 - Lower Trapping Creek Watershed

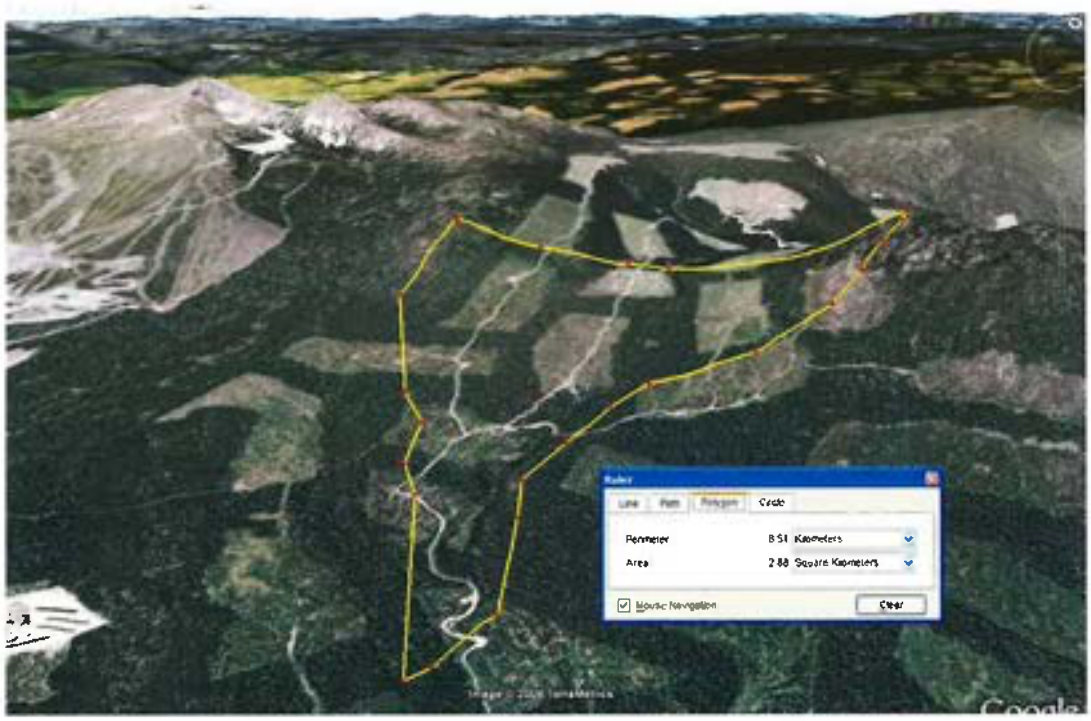


Table 5.5 - Lower Trapping Creek Diversion Watershed Data

Parameter	No.	Units			
Area	2.88	km 2			
Highest Elevation	2240	m	Pump Head	1715 - 1510	m
Lowest Elevation (Point of Diversion)	1510	m		205 m of head	
Mean Elevation	1650	m			
Approximate Annual Runoff Depth	0.55	m			
Total Runoff Volume	1584	ML			

Reliability	1:10 Wet	Ave. Year	1:10 Drought	1:25 Drought	1:50 Drought	1:100 Drought	1:200 Drought
Annual Runoff Variation (ML)	2281	1584	935	776	681	618	539

An objective in diverting Trapping Creek would be to collect the water through diversion ditches at the highest possible elevation to avoid pumping and high long term operational costs.

Hallam Creek Diversion

Hallam Creek flows from west side of the Big White ski area westwards towards the Kettle River. The catchment area is relatively large as the point of diversion is located at a relatively low elevation of 1430 metres. Figure 5.7 shows the proposed point of diversion and the estimated catchment area above the proposed point of diversion. The estimated area is 1639 ha. The total annual average volume of runoff is estimated to be 9834 ML.

Figure 5.7 - Hallam Creek Diversion Watershed Area

Table 5.6 - Hallam Creek Diversion Watershed Data

Parameter	No.	Units			
Area	16.39	km 2			
Highest Elevation	2308	m	Pump Head	1602 - 1430	m
Lowest Elevation (Point of Diversion)	1430	m		172 m of head	
Mean Elevation	1750	m			
Approximate Annual Runoff Depth	0.60	m			
Total Runoff Volume	9834	ML			

Reliability	1:10 Wet	Ave. Year	1:10 Drought	1:25 Drought	1:50 Drought	1:100 Drought	1:200 Drought
Annual Runoff Variation (ML)	14161	9834	5802	4819	4229	3835	3344

The hydrology information presented is for the purposes of developing a reasonable estimate of the water available. With diversions for the proposed areas, sufficient storage must also be developed in order to be able to utilize the proposed volume of water.

APPENDIX D - REFERENCES

Reference documentation utilized in the preparation of this report includes:

- Agua Consulting Inc., Black Forest Development, Big White, Water System, May, 2018;
- Agua Consulting Inc.: Big White Water Utility, 2008 & 2018 Water Master Plans;
- Agua Consulting Inc. Assessment of Available Water Supply Capacity, March 2, 2017;
- Brent Harley and Associates, Proposed Development Areas, Plan drawing & table, June, 2018;
- Caro Environmental Services Ltd. , Water Analysis, 1994 to present;
- Fire Underwriters Survey, Water Supply for Fire Protection, 1999;
- Health Canada, GCDWQ, Supporting Documentation, Turbidity, December, 2012;
- Health Canada, Guidelines for Canadian Drinking Water Quality (GCDWQ), Sixth Edition, 1996;
- Interior Health, Conditions on Permit, January, 2016;
- Keppel Gate Consulting, Big White Water Utility – Utility Capital Plan and Rate Application, August 2020;
- Master Municipal Specifications:
- Province of BC, Drinking Water Protection Act, current to Dec 9, 2005;
- Province of BC, Drinking Water Protection Regulation 200/2003 including BC Regulation 352/2005 including amendments December 9th, 2005;
- Province of BC, Water Sustainability Act, Enacted Feb 29, 2016;
- Ridge Base Hotel; Preliminary Concept Plan;
- USEPA, LT1ESWTR Disinfection Profiling and Benchmarking, Technical Guidance Manual, May, 2003;
- USEPA, Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface Water Treatment Rule, November, 2006;
- www.bigwhite.com

APPENDIX A - CAPITAL PROJECTS

#	Priority	PROJECT NAME		TOTAL
1a	C	POWDER BASIN RESERVOIR (completed)	$	3,807,088
1b	C	POWDER BASIN - WATER TREATMENT PLANT (completed)	$	639,027
1c	C	EMERGENCY GENERATOR AT WTP	$	4,500
2a	H	POWDER BASIN - 800m3 CONCRETE RESERVOIR	$	850,437
2b	H	POWDER BASIN - PIPING TO RESERVOIR	$	230,000
3a	M	SCADA UPGRADES	$	88,000
3b	M	POWDER BASIN - RAW WATER SUPPLY PUMPS	$	173,855
4a	L	300 mm SOUTHRIDGE WATER MAIN	$	340,000
4b	L	SOUTHRIDGE - ADD 400m3 STORAGE	$	260,383
5	L	SOUTHRIDGE - PRV	$	46,000
6	H	LOWER PRESSURE ZONE INTERCONNECTION	$	90,000
7	H	PRESSURE ZONE TRANSFER PUMP	$	47,438
8	M	WATER RESERVOIR SPILLWAY LEVEL SENSORS	$	34,155
9	M	1875m PRESSURE ZONE INTERCONNECTION MAIN	$	266,789
10a	L	RHONDA LAKE RESERVOIR - DIVERSION DITCH	$	84,348
10b	L	POWDER BASIN DIVERSION DITCH	$	263,436
11	L	RHONDA RESERVOIR - WATER BALANCE REPORT	$	25,000
12	L	POWDER BASIN - WATER BALANCE REPORT	$	25,000
13	L	POWDER BASIN - FILTERS	$	820,000
R1	RRTF	HYDRANT REPLACEMENT (6 UNITS)	$	28,000
R2	RRTF	RHONDA LAKE CHLORINE VAULT IMPROVEMENTS	$	64,230
R3	RRTF	AUTO FILTER BYPASS FOR FF AT RHONDA WTP	$	15,700
R4	RRTF	RHONDA WTP - FILTER REPLACEMENT	$	60,000
R5	RRTF	RECONDITION - EX CONCRETE RESERVOIRS	$	86,000
R6	RRTF	PRV RECONDITIONING - 3 STATIONS	$	120,000
R7	RRTF	RHONDA LAKE RESERVOIR - RECONDITIONING DAM	$	1,900,000
R8	RRTF	WATER MAIN REPLACEMENTS / UPGRADES	$	900,000
		TOTALS	**$**	**3,644,841**

RRTF Renewal Fund projects - not included in TOTALS

C Denotes completed projects - not included in TOTALS

PROJECT No. 1a

POWDER BASIN RESERVOIR (completed)

Project Description

Project consists of the construction of a raw water reservoir on Hallam Creek.
Project was constructed in 2008 with minor modifications to intake in subsequent years.
Data for the capacity and reliability of this water source is listed in section 3 of this report.

Capital Cost Summary	No.	Unit		Unit Price		Extension
Summary	1	LS	$	3,807,088	$	3,807,088

	$	-
Subtotal , Construction Cost Estimate	**$**	**3,807,088**
Engineering Allowance (10%)		
Base Capital Cost		
Contingency Allowance (5%)		
CAPITAL COST ESTIMATE	**$**	**3,807,088**

PROJECT No. 1b

POWDER BASIN - WATER TREATMENT PLANT (completed)

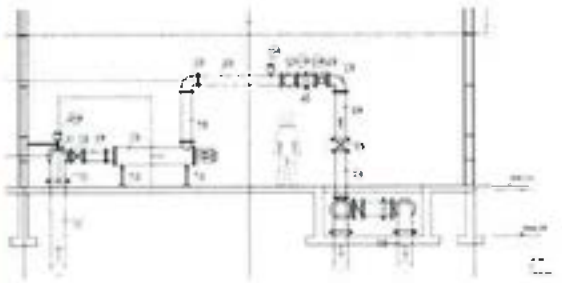
Agua Project No. 070.02

December, 2020

Project Description

This project includes the development of a water treatment system to treat the water from Powder Basin Reservoir.
The project includes the following components:

1. Building structure to house filters, Small UV low flow disinfection equipment, chlorination equipment, process piping
2. Watermain from existing transmission main to WTP building
3. Buried Electrical service extension from Powder Basin Reservoir to WTP building
4. Rock excavation and building preparation as required
5. Building structure size of 9 m x 14 m - Reinforced Steel pre-manufactured building, 3.0m min ceiling height
6. Building electrical demands including Small and Large UV reactors, chlorination, lights, SCADA/alarms



Work for the building was carried out during the summer of 2017. Steel building foundation, frame and structure was completed.
Building process piping and small UV reactors were installed over the winter of 2017-2018.
Building is steel with insulated inside, wood walls around interior perimeter.

Summary Estimate of Capital Expenditures	No.	Unit		Unit Price		Extension
General Requirements, commissioning, set up	1	LS	$	14,000	$	14,000
Site Grading, Rock Excavation for foundation, drainage	1	LS	$	20,000	$	20,000
Building Concrete to House Treatment System (13 m x 7.5 m) includes building doors, liner, insulation, steel erection	1	LS	$	175,000	$	175,000
Building wood liner, walls and ceiling	1	LS	$	7,500	$	7,500
Off Site electrical extension to site (distance of approx 95m)	95	lineal metre	$	300	$	28,500
Building Electrical	1	LS	$	25,000	$	25,000
Building Heating and Ventilation	1	LS	$	15,000	$	15,000
Building Instrumentation, Radio, alarms, connection to SCADA	1	LS	$	15,000	$	15,000
Process Mechanical, small dia. fittings, valves, etc.	1	LS	$	75,000	$	75,000
Process Mechanical, large dia. fittings, valves, etc.	0	LS	$	40,000	$	-
Flow meters	0	ea	$	5,000	$	-
UV disinfection system (63 L/s reactors)	2	ea	$	75,000	$	150,000
UV disinfection install / commission	0	LS	$	15,000	$	-
UV low flow disinfection equipment, 3 - UV Promax (2 L/s each)	3	LS	$	5,000	$	15,000
UV Solenoid Control Valve	0	ea	$	15,000	$	-
Chlorination system (hypo dosing system) + resid. Analyzer	1	LS	$	20,000	$	20,000
Genset for fire pump and disinfection (50 kw)	0	LS	$	40,000	$	-
					$	-
Subtotal , Construction Cost Estimate					**$**	**560,000**
Engineering Estimate (10%)					$	20,934
Base Capital Cost					$	580,934
Contingency Allowance (10%)					$	58,093
CAPITAL COST ESTIMATE					**$**	**639,027**

PROJECT No. 1c

GENERATOR - RHONDA LAKE WTP

Agua Project No. 070.02
December, 2020

Project Description

This project is to supply and install an emergency generator that will power all lights, heat, monitoring equipment, chlorination and UV lamps at the Rhonda Lake WTP in the event of an extended power loss from the grid.
Generator should be housed in a location that is protected from snow load and within an area where it will be accessible year round

100 kw genset shown - example

Generator	No.	Unit		Unit Price		Extension
Diesel generator, supply, install 20 kw genset	1	LS	$	4,500	$	4,500
Site preparation, pad, enclosure and overhead snow protection		LS	$	7,500	$	-
Electrical modifications, transfer switch		LS	$	5,000	$	-
Miscellaneous, site preparation, etc.		LS	$	2,500	$	-
Subtotal , Construction Cost Estimate					**$**	**4,500**
Engineering Allowance (10%)						
Base Capital Cost					$	4,500
Contingency Allowance (15%)						
CAPITAL COST ESTIMATE					**$**	**4,500**

PROJECT NO. 2a

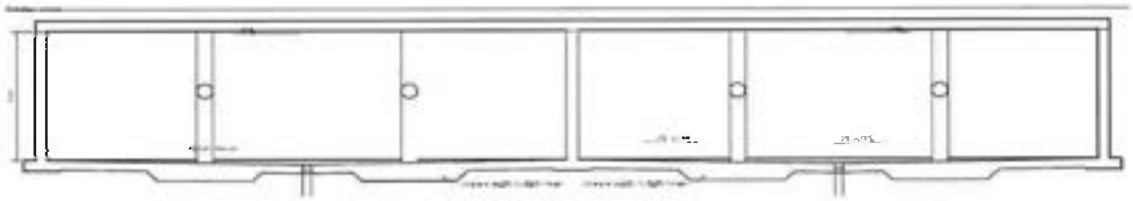
POWDER BASIN - 800m3 CONCRETE RESERVOIR

Agua Project No. 070.02

December, 2020

Project Description

This project involves the construction of 800 m3 concrete reservoir above and east of the Powder Basin reservoir
The reservoir would consist of two reservoir cells 400 m3 each. Dimensions would be 13 x 9 m per cell
Columns within the reservoir would be required as part of the roof support system due to high snow loads.
Location is on the ridge to the east of the Powder Basin open reservoir.



A control vault is required at the concrete reservoir on the south (low) side for chamber isolation.
A mixing system of nozzles would be added to the inlet piping (Sched 80 PVC) to stir the reservoir upon filling
Rock foundation is desired as it will provide a solid foundation. Rock drilling and blasting is expected.

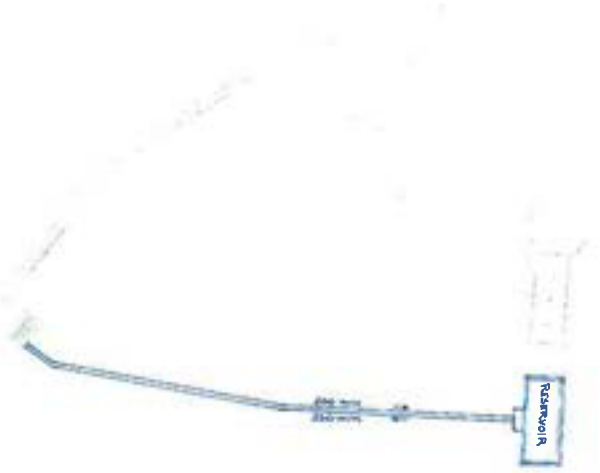
Capital Cost Estimate	No.	Unit		Unit Price		Extension
Reservoir circulation piping	1	LS	$	10,000	$	10,000
Site Preparation and road access	1	LS	$	10,000	$	10,000
Rock drilling and blasting (33m x 15m x 3m)	850	m3	$	75	$	63,750
Rock excavation and disposal (33m x 15m x 3m) x 1.70 expansion	1768.8	m3	$	15	$	26,532
200mm Watermain to Reservoir (excludes trenching)	0	m	$	200	$	-
250mm Watermain from Reservoir (includes rock blasting, excav.)	0	m	$	350	$	-
2- 50mm conduit Elect. and Instrum. to Res. (excludes trenching)	0	m	$	30	$	-
Electrical Tec cable to reservoir for Single phase power	0	m	$	110	$	-
250mm Drain line to drywell	0	m	$	150	$	-
Drywell	0	ea	$	12,500	$	-
Valve chamber at Reservoir (process pipeworks)	1	LS	$	50,000	$	50,000
Reservoir Storage, Concrete cells and valve chamber structure	800	m3	$	615	$	492,000
Roof hatches, stand pipes miscellaneous	2	LS	$	10,000	$	20,000
Subtotal , Construction Cost Estimate					**$**	**672,282**
Engineering Allowance (10%)					$	67,228
Base Capital Cost					$	739,510
Contingency Allowance (15%)					$	110,927
CAPITAL COST ESTIMATE					**$**	**850,437**

PROJECT NO. 2b

POWDER BASIN - PIPING TO RESERVOIR

Project Description

Piping location is from WTP building up to the Proposed reservoir site at elevation 1875m.



Reservoir will have a membrane on top of the concrete roof covered with a 65mm thick topping mix and 0.30m of topsoil
Soil cover will be 0.30m above the reservoir to insulate the reservoir from summer heating and winter freezing.

Cost est. per m3 of storage $ 287.50 / m3 of constructed storage

Alt price check - 286 m3 of formed concrete $ 804.20 / m3 of poured concrete

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Reservoir circulation piping	0	LS	$	10,000	$	-
Site Preparation and road access	1	LS	$	10,000	$	10,000
Rock drilling and blasting (33m x 15m x 3m)	650	m3	$	75	$	48,750
Rock excavation and disposal (33m x 15m x 3m) x 1.70 expansion	831.2	m3	$	15	$	12,468
200mm Watermain to Reservoir (excludes trenching)	140	m	$	200	$	28,000
250mm Watermain from Reservoir (includes rock blasting, excav.)	140	m	$	350	$	49,000
2- 50mm conduit Elect. and Instrum. to Res. (excludes trenching)	140	m	$	30	$	4,200
Electrical Tec cable to reservoir for Single phase power	140	m	$	110	$	15,400
250mm Drain line to drywell	10	m	$	150	$	1,500
Drywell	1	ea	$	12,500	$	12,500
Valve chamber at Reservoir (process pipeworks)		LS	$	50,000	$	-
Reservoir Storage, Concrete cells and valve chamber structure		m3	$	615	$	-
Roof hatches, stand pipes miscellaneous		LS	$	10,000	$	-
Subtotal , Construction Cost Estimate					**$**	**181,818**
Engineering Allowance (10%)					$	18,182
Base Capital Cost					$	200,000
Contingency Allowance (15%)					$	30,000
CAPITAL COST ESTIMATE					**$**	**230,000**

PROJECT NO. 3a

SCADA UPGRADES

Agua Project No. 070.02

December, 2020

Project Description

This project involves upgrading the existing SCADA (Supervisory Control and Data Acquisition) system.
This project can easily be staged with components added over time as required

The SCADA system upgrade would allow the operators to monitor and control additional operations in the water system
Work on the SCADA system is continual as facilities are brought onto the water system. The addition of SCADA components allows the water system to grow with the labour requirement not increasing at a much slower rate.

SCADA upgrades listed below are in addition to those recently completed at Big White:

1. Radio radio transmitter/receiver at the critical sites including the Shop, Powder Basin and the WTP (existing) and Village Reservoir
   Radio transmitters/receivers are required at these stations
2. Monitoring equipment and controls including residual chlorine analyzers, flow meter data, reservoir levels, system pressures, etc.
   Flow data where water leaves the treatment areas, pressure information at the upstream side of the PRVs, reservoir levels, and water quality data that is collected on-line would be inputs to the SCADA system
3. Remote sites where data can be collected in datalog equipment, downloaded and then transferred to the main SCADA computer.

Please note that the works can be staged over time with the most critical components being completed first.

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Remote Radio Connections to System (additional sites)	3	each	$	7,500	$	22,500
Chlorine Residual monitors, supply and install	2	each	$	7,500	$	15,000
Flow meters	2	each	$	6,000	$	12,000
Security Alarms	4	each	$	1,500	$	6,000
Pressure Transducers at PRVs	2	sites	$	2,500	$	5,000
Programming/labour	1	LS	$	27,500	$	27,500
					$	-
					$	-
Subtotal , Construction Cost Estimate					$	**88,000**
Engineering Allowance (included above)						
Base Capital Cost					$	88,000
Contingency Allowance						
CAPITAL COST ESTIMATE					$	**88,000**

PROJECT No. 3b

POWDER BASIN - RAW WATER SUPPLY PUMPS

Agua Project No. 070.02

December, 2020

Project Description

This project includes the development of a pumping capacity to lift water from the Powder Basin (between HWL and LWL) up to elevation 1875 metres, which would be sufficient to fill the proposed concrete reservoir above the UV Water Treatment Facility.

The project includes the following components:

1. Submersible Lift pumps from Powder Basin outlet manhole to reservoir 125 L/s each @ 23m TDH (50 hp pumps) with Variable Freq. Drives
2. Electrical control panel c/w Variable Frequency Drives for the pumps to adjust for reservoir height and rate of flow;
3. Electrical service extension from existing service to concrete vault;
4. A small building on back side of dam is proposed to house the control equipment, electrical panels and VFDs for the pumps.
5. Access and site grading work is required for the small building

The submersible pumps will require screens, similar to a well pump to keep debris and small aquatic life
Building should be sited off of the dam face so that there are no issues with Dam Safety with having a structure on the dam.
Pumps will require in the range of a 600V - 200amp service to run one or two pumps.

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Contract Administration	1	LS	$	5,500	$	5,500
50 hp Pump Purchase and installation including rails and enclosure	1	each	$	45,000	$	45,000
VFD's for pump control, supply and install	2	each	$	10,000	$	20,000
Dam Safety approvals - work on dam	1	LS	$	4,000	$	4,000
Construction of berm around Manhole to facilitate vehicle access	1	LS	$	5,000	$	5,000
Building to House Electrical Panels (3 m x 4 m) - wood structure	12	m2	$	2,500	$	30,000
Building Electrical including power extension from disconnect	15.9	lineal metre	$	500	$	7,935
Pump process equipment, valving	1	LS	$	10,000	$	10,000
Instrumentation, Level transducer, Radio, alarms, conn. to SCADA	1	LS	$	-	$	-
Process piping, vertical sections and supports	2	each	$	5,000	$	10,000
					$	-
Subtotal , Construction Cost Estimate					$	137,435
Engineering Allowance (10%)					$	13,744
Base Capital Cost					$	151,179
Contingency Allowance (15%)					$	22,677
CAPITAL COST ESTIMATE					**$**	**173,855**

PROJECT NO. 4

300 mm SOUTHRIDGE WATER MAIN

Project Description

Project involves the extension of watermain to provide domestic water and water for fire protection to the Southridge Development area
A 300mm watermain would be installed. Its route would be from the 250mm water main near the Works Yard to the Garbage transfer site.
The route would be located on the road passing the Big White works yard.
See image below for route

photo credit - Google Earth DigitalGlobs

Capital Cost Estimate	No.	Unit		Unit Price		Extension
300 mm diameter Watermain, Supply, Installation, incl. rock exc.	980.6	lineal metre	$	250	$	245,150
Connections to Existing	1	each	$	5,125	$	5,125
Hydrants - supply and install	2	each	$	9,250	$	18,500
South Ridge Storage Addition 400m3	1		$	260,383		
South Ridge PRV	1		$	46,000		
Subtotal , Construction Cost Estimate					**$**	**268,775**
Engineering Allowance (10%)					$	26,878
Base Capital Cost					$	295,653
Contingency Allowance (15%)					$	44,348
CAPITAL COST ESTIMATE					**$**	**340,000**

PROJECT NO. 06

LOWER PRESSURE ZONE INTERCONNECTION

Project Description

This project is to allow interconnection between the Powder Basin and the Village Reservoir lower pressure zones
The project allows for moderate capacity supply redundancy by letting the lower half of the village access either source
A 200mm diameter main is required to interconnect the lower zone.

It is part of a staged improvement that will allow fire storage from both the Powder Basin and Village to the lower zone.
One 295m section of water main is required that will cross below the Plaza Chair

Capital Cost Estimate	No.	Unit	Unit Price	Extension
200mm water main Pipe 23 above (red)	295	m	$ 200	$ 59,000
Interconnect at each end	2	ea	$ 6,073	$ 12,146
				$ -
Subtotal , Construction Cost Estimate				**$ 71,146**
Engineering Allowance (10%)				$ 7,115
Base Capital Cost				$ 78,261
Contingency Allowance (15%)				$ 11,739
CAPITAL COST ESTIMATE				**$ 90,000**

PROJECT NO. 7

PRESSURE ZONE TRANSFER PUMP

Agua Project No. 070.02

December, 2020

Project Description

This project will be implemented next after the Powder Basin UV Disinfection building is commissioned and is on-line.
The intent of this project is to move water from Powder Basin into the Village pressure zone and, if necessary up to the concrete reservoir
This project is a cost effective step which defers having to construct additional storage at the 1875m elevation Village Reservoir
The pump is sized to match the low flow UV unit flow capacity of 60 Usgpm (3.78 L/s)
Use of this pump over time would lessen the raw water demand on Rhonda Lake which is the smaller of the two watersheds

The pump would be installed within the Plaza PRV chamber. It is estimated that the total head will be 80 metres.
A 5.0 or 7.5 hp pump will be required to pump 3.78 L/s (60 Usgpm) to the higher pressure zone.

Over time the volume (ML) of water that could be pumped is as follows:	24 hrs	1 week	1 month
	0.326	2.282	68.46

The restricting factors are room within the station, size of pump and size of power supply.
It is recommended that a single phase 125 amp panel be installed with pump controls above ground in an at-ground kiosk
A 50mm connection is required for connection into the existing fittings to pump up across the pressure zone.

Plaza PRV Chamber

Capital Cost Estimate	No.	Unit		Unit Price		Extension
5 horsepower pump, vertical in-line style, supply - install	1	LS	$	7,725	$	7,725
Metal work, supports, for wall mounted installation	1	LS	$	2,575	$	2,575
Buffing/recoating existing piping	1	LS	$	5,000	$	5,000
Electrical service to PRV chamber, panel and kiosk above ground	1	LS	$	15,500	$	15,500
Process pipe modifications	1	each	$	6,700	$	6,700
					$	-
Subtotal , Construction Cost Estimate					**$**	**37,500**
Engineering Allowance (10%)					$	3,750
Base Capital Cost					$	41,250
Contingency Allowance (15%)					$	6,188
CAPITAL COST ESTIMATE					**$**	**47,438**

PROJECT No. 08

WATER RESERVOIR SPILLWAY LEVEL SENSORS

Project Description

This project supersedes the "Watershed Weir" recommended within the 2008 report.
A pressure transducer is recommended to be set in the reservoir in a standpipe at depth
the transducer would be able to measure the water level within Powder Basin reservoir or within Rhonda Lake
Rhonda Lake will require a data logger.
Powder Basin will have a SCADA conduit close by at the submersible pump vault.
By monitoring the water level, when reaching full pool and then over topping the overflow weir, a volume of the annual spilled water can be collected each year. The total watershed capacity above the spillway can be determined over time. Knowing this improves the reliability of supply from the watersheds and what water is actually available.

Rhonda Lake pressure transducer would be mounted within the water reservoir or at the upstream side of the release gate where the is constant and even pressure.
Powder Basin pressure transducer can be mounted within a standpipe near the pump vault.
Care would be taken to have a stable environment and reduce the possibility of eroneous results due to the turbulence.

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Supply/Install Pressure Transducer, buried SCADA connection (Powder Basin)	1	LS	$	12,000	$	12,000
Installation of Pressure transducer and data logger (Rhonda Lake)	1	LS	$	15,000	$	15,000
Subtotal , Construction Cost Estimate					**$**	**27,000**
Engineering Allowance (10%)					$	2,700
Base Capital Cost					$	29,700
Contingency Allowance (15%)					$	4,455
TOTAL CAPITAL COST ESTIMATE					**$**	**34,155**

PROJECT NO. 09

1875m PRESSURE ZONE INTERCONNECTION MAIN

Project Description

This project is to allow interconnection between the new 1875m Powder Basin Reservoir and the Village Reservoir
The project allows for large capacity supply redundancy from either of the primary water sources.
A dedicated 300mm diameter main is required above the Snow Pines development to make this work.
This project would be necessary as more development is realized on the mountain.
It allows for sharing of the fire storage from both the Powder Basin and Village concrete storage reservoirs
Two sections of watermain are required.
The shorter section is being installed as part of development. It is funded by development.
The longer section crosses the Ridge ski run as shown by the red main below.

Capital Cost Estimate	No.	Unit	Unit Price	Extension
250mm Watermain, North (right red pipe)	840	m	$ 240	$ 201,600
Connections at each end	2	ea	$ 4,650	$ 9,300
				$ -
Subtotal , Construction Cost Estimate				**$ 210,900**
Engineering Allowance (10%)				$ 21,090
Base Capital Cost				$ 231,990
Contingency Allowance (15%)				$ 34,799
CAPITAL COST ESTIMATE				**$ 266,789**

PROJECT No. 10a

RHONDA LAKE RESERVOIR - DIVERSION DITCH

Project Description

This project consists of the excavation of a diversion ditch to collect additional surface runoff from the areas east and west of Rhonda Lake Reservoir. This ditch is of low cost to construct and increases the reliability of the source water.

The catchment area would expand by 9 ha. from 41 ha. to 50 ha. Additional catchment shown below
The annual average runoff would increase from 328 ML to an estimated 400 ML.
Ditch size would be approximately 4.0 m wide with 1.0m base. Ditch would be flat grade and would run only to where topography would limit it.
Approvals would be required and would have to be set to the existing water licenses for Rhonda Lake Reservoir

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Approvals - MFLNROs - Front Counter BC	1	LS	$	15,000	$	15,000
Ditch excavation and grading works	220	m	$	150	$	33,000
Rock Lining of ditch - Rip Rap (steep sections)	50	m	$	75	$	3,750
SCADA controls on diversion flow water quality (turbiditimeter)	1	LS	$	15,000	$	15,000
Diversion gate and controls including ditch bypass around PB reserv	0	LS	$	20,000	$	-
Turn-out gates (to allow water back to normal water course route)	0	LS	$	15,000	$	-
Subtotal , Construction Cost Estimate					**$**	**66,750**
Engineering Allowance (10%)					$	6,675
Base Capital Cost					$	73,425
Contingency Allowance (15%)					$	11,014
TOTAL CAPITAL COST ESTIMATE					**$**	**84,439**

PROJECT No. 10b

POWDER BASIN DIVERSION DITCH

Project Description

This project consists of the excavation of a diversion ditch to collect additional surface runoff from the areas to the south of the Powder Basin Reservoir. This ditch is of low cost to construct and increases the reliability of the source water.
The ditch would allow the diversion of the Powder Bowl runoff towards the Powder Basin open surface reservoir.
The catchment area would expand by 66 ha. from 123 ha. to 189 ha. Additional catchment shown below
The annual average runoff would increase from 922 ML to an estimated 1416 ML.
Ditch size would be approximately 4m wide with 1.0m base with rock lining to reduce erosion in the steep sections
Approvals would be required and would have to be set to the existing water licenses for Powder Basin.

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Approvals - MFLNROs - Front Counter BC	1	LS	$	15,000	$	15,000
Ditch excavation and grading works	1440	m	$	50	$	72,000
Rock Lining of ditch - Rip Rap (steep sections)	750	m	$	75	$	56,250
SCADA controls on diversion flow water quality (turbiditimeter)	1	LS	$	15,000	$	15,000
Diversion gate and controls including ditch bypass around PB reservoir	1	LS	$	20,000	$	20,000
Turn-out gates (to allow water back to normal water course route)	2	LS	$	15,000	$	30,000
Subtotal , Construction Cost Estimate					**$**	**208,250**
Engineering Allowance (10%)					$	20,825
Base Capital Cost					$	229,075
Contingency Allowance (15%)					$	34,361
TOTAL CAPITAL COST ESTIMATE					**$**	**263,436**

PROJECT NO. 11

1875m VILLAGE RESERVOIR EXPANSION

Project Description

The size of existing reservoir storage above the upper village is 300,000 Imperial Gallons = 1,363 m^3

To service future development, an additional 2,000 m^3 of water storage is recommended at Village Reservoir

The reservoir would be operated with less volume in the reservoir during the low water demand periods of the yr.

A recirculation system will be required to maintain chlorine residuals leaving the reservoir

An additional 2,000 cubic metres will provide 200 L/s fireflow for 2.5 hrs plus an additional 10,000 bed units.
An additional 1,500 cubic metres will provide 200 L/s fireflow for 2.5 hrs plus an additional 3,100 bed units
Storage can be sited at Village Reservoir or can be sited at Powder Basin Reservoir if interconnection is installed.
Long term reservoir storage at the Powder Basin is ultimately recommended to sized at 2,000 m3.

Cost est. per m3 of storage	$ 957.12 / m3 of constructed storage
Alt price check - 620 m3 of formed concrete	$ 3,087.50 / m3 of poured concrete

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Reservoir circulation piping	1	LS	$	10,000	$	10,000
Site Preparation and road access	1	LS	$	10,000	$	10,000
Rock drilling and blasting (36m x 15m x 4m)	2160	m3	$	70	$	151,200
Rock excavation and disposal (36 x 15 x 2) x 1.70 expansion	1836	m3	$	15	$	27,540
2- 50mm conduit Elect. and Instrum. to new cells	1	LS	$	3,000	$	3,000
250mm Drain lines to drywell / overflow routes	10	m	$	150	$	1,500
Valve chamber at Reservoir (process pipeworks)	1	LS	$	60,000	$	60,000
Reservoir Storage, Concrete cells and valve chamber structure	2000	m3	$	615	$	1,230,000
Roof hatches, stand pipes miscellaneous	2	LS	$	10,000	$	20,000
Subtotal , Construction Cost Estimate					**$**	**1,513,240**
Engineering Allowance (10%)					$	151,324
Base Capital Cost					**$**	1,664,564
Contingency Allowance (15%)					$	249,685
CAPITAL COST ESTIMATE					**$**	**1,914,249**

PROJECT No. 12

GROUNDWATER DEVELOPMENT

Project Description

This project consists of development of a new high capacity groundwater well in lower Trapping Creek
Long term potential water supply project. Budget numbers provided are those for typical well construction costs
Flow is to supplement surface water flows and provide emergency water supply into lower pressure zone.
Flow desired is in the range of 25 L/s from the well (400 USgpm).

A smaller test well is recommended prior to drilling a larger capacity well. The test well would help to prove out capacity and raw water quality.

A qualified hydro-geologist should be retained to confirm location for drilling and to assess pump testing and aquifer capacity.

For the purpose of cost estimates, the estimated distance from Black Forest Day Lodge to well site is 600 m.

Capital Cost Estimate	No.	Unit		Unit Price		Extension
Test Well construction 4" diameter casing	1	LS	$	25,000	$	25,000
Large Production well 10" diameter casing	1	LS	$	50,000	$	50,000
Building to house well head, pump controls and electrical equipment	1	LS	$	40,000	$	40,000
Submersible Well Pump and panels - supply and install	1	LS	$	35,000	$	35,000
Electrical Service extension (Overhead pole allowance)	600	m	$	60	$	36,000
Water main tie-in to existing distribution system	1	LS	$	7,500	$	7,500
Sodium hypochlorite disinfection system	1	LS	$	15,000	$	15,000
150mm watermain extension	600	m	$	150	$	90,000
Subtotal , Construction Cost Estimate					**$**	**298,500**
Engineering Allowance (10%)					$	29,850
Base Capital Cost					$	328,350
Contingency Allowance (15%)					$	49,253
TOTAL CAPITAL COST ESTIMATE					**$**	**377,603**

Construction Cost Indicies Estimate - Worksheet

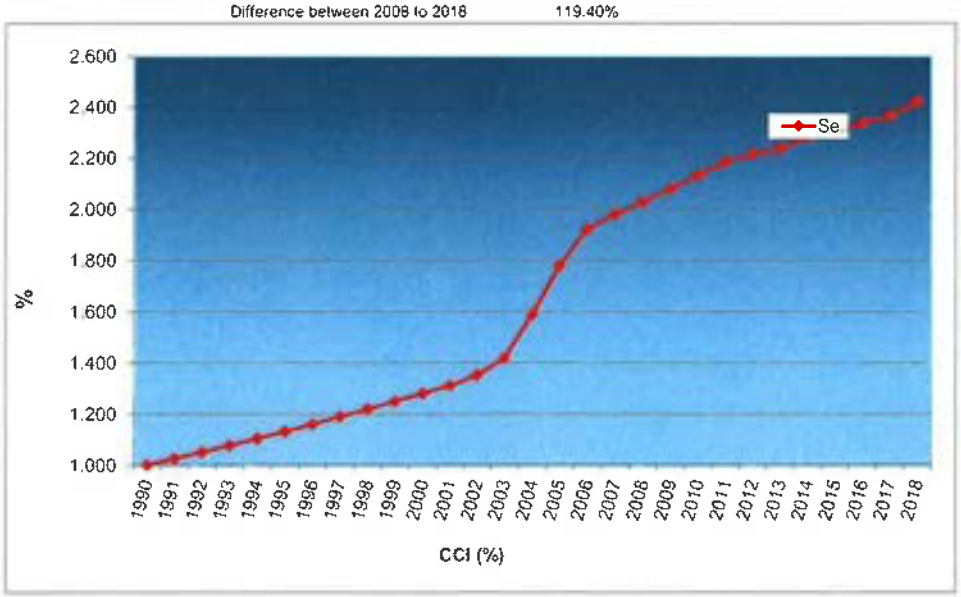
Year	CPI	Calc. %	CPI	CCI Est. %	CCI	Can. CPI
1990	92.4		1.000		1.000	
1991	97.4	5.13%	1.027	2.50%	1.025	
1992	100	2.60%	1.082	2.50%	1.051	
1993	103.5	3.38%	1.120	2.50%	1.077	
1994	105.5	1.90%	1.142	2.50%	1.104	
1995	107.9	2.22%	1.168	2.50%	1.131	
1996	108.9	0.92%	1.179	2.50%	1.160	88.9
1997	109.7	0.73%	1.187	2.50%	1.189	90.4
1998	110	0.27%	1.190	2.50%	1.218	91.3
1999	111.2	1.08%	1.203	2.50%	1.249	92.9
2000	113.3	1.85%	1.226	2.50%	1.280	95.4
2001	115.2	1.65%	1.247	2.50%	1.312	97.8
2002	117.8	2.21%	1.275	3.00%	1.351	100
2003	121.1	2.72%	1.311	5.00%	1.419	102.8
2004	123.3	1.81%	1.335	12.00%	1.588	104.7
2005	126.0	2.15%	1.364	12.00%	1.780	107
2006	128.5	1.92%	1.391	8.00%	1.922	109.1
2007	131.3	2.15%	1.422	3.00%	1.980	111.5
2008	134.4	2.28%	1.455	2.50%	2.030	114.1
2009	134.8	0.26%	1.458	2.50%	2.080	114.4
2010	137.2	1.80%	1.485	2.50%	2.132	116.5
2011	141.2	2.84%	1.529	2.50%	2.186	119.9
2012	143.4	1.48%	1.552	1.48%	2.218	121.7
2013	144.7	0.90%	1.566	0.90%	2.238	122.8
2014	147.5	1.92%	1.596	1.92%	2.281	125.2
2015	149.1	1.11%	1.614	1.11%	2.306	126.6
2016	151.3	1.40%	1.637	1.40%	2.338	128.4
2017	153.0	1.14%	1.656	1.14%	2.365	129.875
2018	156.9	2.47%	1.698	2.47%	2.423	129.875

Difference between 2008 to 2018 119.40%

CONSUMER PRICE INDEX (1992 = 100) - ANNUAL

Year	CANADA All Items Index	CANADA Annual Percent	B.C. All Items Index	B.C. Annual Percent	VANCOUVER All Items Index	VANCOUVER Annual Percent	VICTORIA All Items Index	VICTORIA Annual Percent
1960	[illegible]	[illegible]						
1961	[illegible]	[illegible]						
1962	[illegible]	[illegible]						
1963	[illegible]	[illegible]						
1964	[illegible]	[illegible]						
1965	[illegible]	[illegible]						
1966	[illegible]	[illegible]						
1967	[illegible]	[illegible]						
1968	[illegible]	[illegible]						
1969	[illegible]	[illegible]						
1970	[illegible]	[illegible]						
1971	[illegible]	[illegible]			25.4			
1972	[illegible]	[illegible]			26.6	5.1		
1973	[illegible]	[illegible]			28.7	7.1		
1974	[illegible]	[illegible]			32.1	11.2		
1975	[illegible]	[illegible]			35.6	13.6		
1976	[illegible]	[illegible]			39.0	9.6		
1977	[illegible]	[illegible]			41.9	7.2		
1978	[illegible]	[illegible]			45.1	7.6		
1979	[illegible]	[illegible]	45.9		48.6	7.8		
1980	[illegible]	[illegible]	53.5	8.9	53.1	9.3		
1981	[illegible]	[illegible]	61.1	14.2	60.7	14.3		
1982	[illegible]	[illegible]	67.5	10.5	67.1	10.5		
1983	[illegible]	[illegible]	71.0	5.2	70.6	5.1		
1984	[illegible]	[illegible]	74.0	3.9	73.7	4.4		
1985	[illegible]	[illegible]	76.4	3.2	76.0	3.1	77.7	
1986	[illegible]	[illegible]	78.5	2.9	78.5	3.3	79.1	1.8
1987	[illegible]	[illegible]	81.2	3.1	80.9	3.1	81.1	2.5
1988	[illegible]	[illegible]	83.9	3.6	83.6	3.3	84.2	3.8
1989	[illegible]	[illegible]	87.7	4.5	87.5	4.6	88.0	4.5
1990	[illegible]	[illegible]	92.4	5.4	92.3	5.5	92.7	5.3
1991	[illegible]	[illegible]	97.4	5.4	97.1	5.1	98.0	5.7
1992	[illegible]	[illegible]	100.0	2.7	100.0	3.0	100.0	2.0
1993	[illegible]	[illegible]	103.5	3.5	103.6	3.6	103.0	3.0
1994	[illegible]	[illegible]	105.5	1.9	105.7	2.0	105.1	2.0
1995	[illegible]	[illegible]	107.9	2.3	108.4	2.6	107.3	2.0
1996	[illegible]	[illegible]	108.9	0.9	109.2	0.7	108.2	0.9
1997	[illegible]	[illegible]	109.7	0.7	109.6	0.5	109.2	0.9
1998	[illegible]	[illegible]	110.5	0.8	110.4	0.8	110.0	0.8
1999	[illegible]	[illegible]	111.2	0.7	111.4	0.9	111.1	1.0
2000	[illegible]	[illegible]	113.3	1.9	113.6	2.0	113.0	1.7
2001	[illegible]	[illegible]	115.2	1.7	116.0	2.1	114.9	1.7

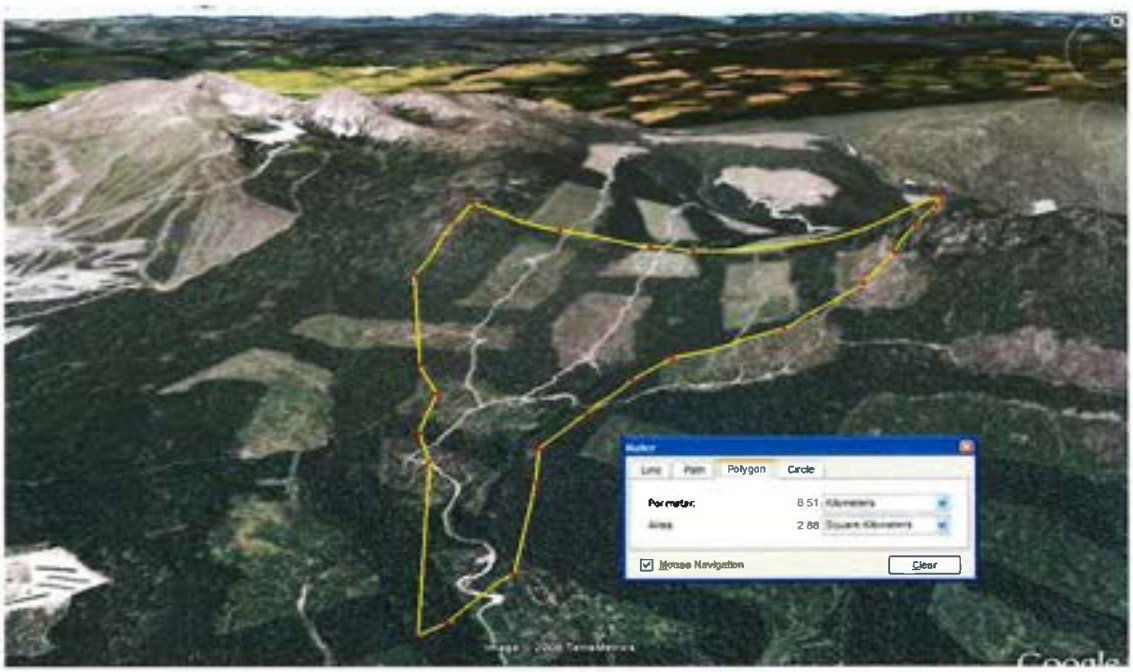
Prepared by: BCSTATS
Source: Statistics Canada



PROJECT No. 16

TRAPPING CREEK DIVERSION AND STORAGE

Project Description



Project involves the diversion of water from lower Trapping Creek back up. Water use could potentially be to supplement domestic flows and to provide water for snowmaking and possibly irrigation during the summer season.

Watershed area = 2.82 square kilometres (282 ha.)

Total estimated annual average runoff based on 0.50m depth for entire area 1410

Total estimated runoff in a 1:50 year drought condition

Trapping Diversion (coarse estimate)	**No.**	**Unit**		**Unit Price**		**Extension**
Dam and Reservoir Storage						
Cost of reservoir is covered off in Whitefoot Project						
Pump Station and Pipeline Diversion from Below						
Pump Station	1	LS	$	450,000	$	450,000
Three phase power extension, poles	2.1	LS	$	100,000.00	$	210,000
Transmission main to flow water back	2600	m	$	150.00	$	390,000
diversion structure in creek	1	LS	$	25,000.00	$	25,000
Road access to site	2100	m	$	100.00	$	210,000
Subtotal , Construction Cost Estimate, Lake Intake & P.Stn					**$**	**1,285,000**
Engineering Allowance (10%)					$	128,500
Base Capital Cost					$	1,413,500
Contingency Allowance (15%)					$	212,025
TOTAL CAPITAL COST ESTIMATE					**$**	**1,625,525**

PROJECT No. 17

HALLAM CREEK DIVERSION AND STORAGE

Project Description

Project involves the diversion of water from lower Hallam Creek and pumping it back to a reservoir located .
Water use could potentially be to supplement domestic flows and to provide water for snowmaking and possibly irrigation during the summer season.
Watershed area = 17.25 square kilometres (1725 ha.)
Total estimated annual average runoff based on 0.50m depth for entire area 8625
Total estimated runoff in a 1:50 year drought condition

Project involves the diversion of water from Hallam Creek back to a holding reservoir. Water use could potentially be to supplement domestic flows and to provide water for snowmaking and possibly irrigation during the summer season.

Watershed area = 17.25 square kilometres (1,725 ha.)

Total estimated annual average runoff based on 0.50m depth for entire area 8625 ML
Total estimated runoff in a 1:50 year drought condition
Pricing is based on a 1500 ML storage reservoir (1,500,000 cubic metres) 1500 ML
Depth of reservoir based on 10 m depth
Size = 390 x 390 m

Whitefoot Diversion (coarse estimate)	**No.**	**Unit**		**Unit Price**		**Extension**
Dam and Reservoir Storage						
Clearing and Grubbing	16	ha.	$	3,500	$	56,000
Strip and stockpile organic material 0.5m depth	80000	m3	$	5.00	$	400,000
Road Contruction to site	1000	m	$	220	$	220,000
Embankment	220000	m3	$	5.00	$	1,100,000
Spillway	60	m	$	1,000.00	$	60,000
Diversion Ditches						
To divert maximum local area into reservoir	1500	m	$	100.00	$	150,000
Pump Station and Pipeline Diversion from Below						
Pump Station	1	LS	$	500,000	$	500,000
Three phase power extension, poles	1	LS	$	100,000.00	$	100,000
Transmission main to flow water back	4500	m	$	150.00	$	675,000
Diversion structure in creek	1	LS	$	25,000.00	$	25,000
Road access to site	250	m	$	100.00	$	25,000
Subtotal , Construction Cost Estimate, Lake Intake & P.Stn					**$**	**3,311,000**
Engineering Allowance (10%)					$	331,100
Base Capital Cost					**$**	**3,642,100**
Contingency Allowance (15%)					$	546,315
TOTAL CAPITAL COST ESTIMATE					**$**	**4,188,415**
Price per ML of storage	**$**	**2,792**				

PROJECT No. 18

WHITEFOOT CREEK DIVERSION AND STORAGE

Project Description

Project involves the diversion of water from Whitefoot Ck into Trapping Ck. Water use could supplement domestic flows and to provide water for snowmaking and possibly irrigation during the summer season.

Watershed area = 12.2 square kilometres (1,216 ha.)

Total estimated annual average runoff based on 0.50m depth for enti 6080

Total estimated runoff in a 1:50 year drought condition

Pricing is based on a 1500 ML storage reservoir (1,500,000 cubic metre 1500

Depth of reservoir based on 10 m depth

Size = 390 x 390 m

Whitefoot Diversion (coarse estimate)	No.	Unit	Unit Price	Extension
Dam and Reservoir Storage				
Clearing and Grubbing	16	ha.	$ 3,500	$ 56,000
Strip and stockpile organic material 0.5m depth	80000	m3	$ 5.00	$ 400,000
Road Contruction to site	1000	m	$ 220	$ 220,000
Embankment	220000	m3	$ 5.00	$ 1,100,000
Spillway	60	m	$ 1,000.00	$ 60,000
Diversion Ditches				
To divert maximum local area into reservoir	1500	m	$ 100.00	$ 150,000
Pump Station and Pipeline Diversion from Below				
Pump Station	1	LS	$ 450,000	$ 450,000
Three phase power extension, poles	3	LS	$ 100,000.00	$ 300,000
Transmission main to flow water back	2650	m	$ 150.00	$ 397,500
diversion structure in creek	1	LS	$ 25,000.00	$ 25,000
Road access to site	3500	m	$ 100.00	$ 350,000
Subtotal , Construction Cost Estimate, Lake Intake & P.Stn				**$ 3,508,500**
Engineering Allowance (10%)				$ 350,850
Base Capital Cost				$ 3,859,350
Contingency Allowance (15%)				$ 578,903
TOTAL CAPITAL COST ESTIMATE				**$ 4,438,253**
Price per ML of storage	**$ 2,959**			

APPENDIX B

PROJECT: WATER CAPITAL PROGRAM
COMPANY: BIG WHITE WATER UTILITY LTD.
DATE: FEBRUARY 2025

BigWhite Inventory-Land Assets **Current Year** **2025**
Tangible Capital Assets• Linear-Assets_Water Infrastructure **Construction Cost Inflation** **3.0%**

Project ID	Description	Priority	2020 Value	Year Scheduled	Updated Cost Estimate	Notes	
1a	POWDER BASIN RESERVOIR (completed)	C	$ 3,807,088	2009	$ 652,819	60%, Net DCTF Rls (3),	
1a	POWDER BASIN - WATER TREATMENT PLANT (completed)	C	$ 639,027	2023	$ 383,416	60% DCTF/40% RRTF	
1d	EMERGENCY GENERATOR AT POWDER WTP (completed)	C	$ 65,135	2023	$ 65,135		
1b	VILLAGE RESERVOIR EXPANSION (completed)	H	$ 1,914,249	2023	$ 33,095	60% DCTF/40% RRTF	
21	GRIZZLY RIDGE PRESSURE REDUCING VALVE	H	$ 250,000	2025	$ 250,000		
20	LAND APPLICATIONS FOR SRWs (2) & POWDER RESERVOIR	M	$ 50,000	2025	$ 50,000	Mid-July Hike, Validation	
3b	POWDER BASIN - RAW WATER SUPPLY PUMPS	M	$ 173,855	2025	$ 201,546		0
7	PRESSURE ZONE TRANSFER PUMP	M	$ 47,438	2029	$ 61,896	**Sapphire Lift/Lodge 2025	4
9	1875m PRESSURE ZONE INTERCONNECTION MAIN	H	$ 1,005,040	2032	$ 1,432,947	Redundancy Benefit	7
2c	POWDER BASIN - WATER PLANT EXPANSION & LAND LEASE	M	$ 150,000	2036	$ 240,706		11
2a	POWDER BASIN - 1,000m3 CONCRETE RESERVOIR	M	$ 1,063,046	2036	$ 1,705,877	**Monashee Ridge II/Chateau	11
2b	POWDER BASIN - PIPING TO RESERVOIR	M	$ 230,000	2037	$ 380,155		12
6	LOWER PRESSURE ZONE INTERCONNECTION	H	$ 90,000	2037	$ 148,756	**Chateau Blanc, >90L/s in Pow	12
22	UTILITIES MAINTENANCE FACILITY		$ 1,050,000	2040	$ 1,896,417		15
11	RHONDA RESERVOIR -WATER BALANCE REPORT	L	$ 25,000	2043	$ 49,340		18
12	POWDER BASIN -WATER BALANCE REPORT	L	$ 25,000	2043	$ 49,340		18
13	POWDER BASIN - FILTERS	L	$ 820,000	2044	$ 1,666,891		19
12	GROUNDWATER DEVELOPMENT	M	$ 500,000	2045	$ 1,046,889		20
10a	RHONDA LAKE RESERVOIR - DIVERSION DITCH	L	$ 84,238	2046	$ 181,667		21
10b	POWDER BASIN DIVERSION DITCH	L	$ 263,436	2046	$ 568,124		21
5	SOUTHRIDGE - PRV (By Developer)	L	$ 300,000	2050	$ 728,179		25
4a	300 mm SOUTHRIDGE WATER MAIN (By Developer)	L	$ 500,000	2050	$ 1,213,631		25
4b	SOUTHRIDGE - ADD 400m3 STORAGE (By Developer)	L	$ 500,000	2050	$ 1,213,631		25
18	WHITEFOOT CREEK DIVERSION AND STORAGE		$ 4,438,253	2052	$ 11,428,869		27
17	HALLAM CREEK DIVERSION AND STORAGE		$ 4,188,415	2070	$ 18,361,618		45
16	TRAPPING CREEK DIVERSION AND STORAGE		$ 1,625,525	2090	$ 12,870,617		65
	CAPITAL PLAN TO 1999 MASTER PLAN (2038)	13800	$ 10,584,878		$ 7,601,443		
	CAPITAL PLAN TO 2020 MASTER PLAN (2052)	20600	$ 7,405,927		$ 18,047,881		
	COMBINED CAPITAL PLANS TO 20,600		**$ 17,990,805**		**$ 25,649,324**		

PROJECT: WATER REVENUE PROJECTIONS
COMPANY: BIG WHITE WATER UTILITY LTD.
DATE: FEBRUARY 2025

	Current Year	2025			
BigWhite Inventory-Land Assets	Annual Growth	3.0%	Tariff Increase	80.0%	
Tangible Capital Assets• Linear-Assets_Water Infrastructure	Service Factors/BU	125%	Tariff Inflation	3.00%	

Year	Description	Total BU Count Annual Growth	Incremental BU Growth	Service Factors	Tariff /SF	Tariff /BU	Revenue
2025	Bed Units	9400	280	350	$ 999	$ 1,248.75	$ 349,650
2026	Bed Units	9690	290	363	$ 1,029	$ 1,286.25	$ 373,013
2027	Bed Units	9990	300	375	$ 1,060	$ 1,325.00	$ 397,500
2028	Bed Units	10290	300	375	$ 1,092	$ 1,365.00	$ 409,500
2029	Bed Units	10600	310	388	$ 1,125	$ 1,406.25	$ 435,938
2030	Bed Units	10920	320	400	$ 1,159	$ 1,448.75	$ 463,600
2031	Bed Units	11250	330	413	$ 1,194	$ 1,492.50	$ 492,525
2032	Bed Units	11590	340	425	$ 1,230	$ 1,537.50	$ 522,750
2033	Bed Units	11940	350	438	$ 1,267	$ 1,583.75	$ 554,313
2034	Bed Units	12300	360	450	$ 1,306	$ 1,632.50	$ 587,700
2035	Bed Units	12670	370	463	$ 1,346	$ 1,682.50	$ 622,525
2036	Bed Units	13060	390	488	$ 1,387	$ 1,733.75	$ 676,163
2037	Bed Units	13460	400	500	$ 1,429	$ 1,786.25	$ 714,500
2038	**Bed Units**	**13870**	410	**513**	**$ 1,472**	**$ 1,840.00**	**$ 754,400**
2039	Bed Units	14290	420	525	$ 1,517	$ 1,896.25	$ 796,425
2040	Bed Units	14720	430	538	$ 1,563	$ 1,953.75	$ 840,113
2041	Bed Units	15170	450	563	$ 1,610	$ 2,012.50	$ 905,625
2042	Bed Units	15630	460	575	$ 1,659	$ 2,073.75	$ 953,925
2043	Bed Units	16100	470	588	$ 1,709	$ 2,136.25	$ 1,004,038
2044	Bed Units	16590	490	613	$ 1,761	$ 2,201.25	$ 1,078,613
2045	Bed Units	17090	500	625	$ 1,814	$ 2,267.50	$ 1,133,750
2046	Bed Units	17610	520	650	$ 1,869	$ 2,336.25	$ 1,214,850
2047	Bed Units	18140	530	663	$ 1,926	$ 2,407.50	$ 1,275,975
2048	Bed Units	18690	550	688	$ 1,984	$ 2,480.00	$ 1,364,000
2049	Bed Units	19260	570	713	$ 2,044	$ 2,555.00	$ 1,456,350
2050	Bed Units	19840	580	725	$ 2,106	$ 2,632.50	$ 1,526,850
2051	Bed Units	20440	600	750	$ 2,170	$ 2,712.50	$ 1,627,500
2052	**Bed Units**	**20600**	160	**200**	**$ 2,236**	**$ 2,795.00**	**$ 447,200**

PROJECT: WATER DCTF CASH FLOW PROJECTIONS
COMPANY: BIG WHITE WATER UTILITY LTD.
DATE: FEBRUARY 2025

BigWhite Inventory-Land Assets

Tangible Capital Assets• Linear-Assets_Water Infrastructure

Year	Description	Revenue	Capital Expenses	Cash Position	Interest 6.75%	DCTF Balance
2024	Opening Balance & AR	**$ 83,957**	$ 1,134,464.56	-$ 1,050,508	-$ 70,909	-$ 1,121,417
2025	PRV, Powder Pumps, Land	$ 349,650	$ 501,546	-$ 1,273,313	-$ 85,949	-$ 1,359,261
2026		$ 373,013		-$ 986,249	-$ 66,572	-$ 1,052,820
2027		$ 397,500		-$ 655,320	-$ 44,234	-$ 699,555
2028		$ 409,500		-$ 290,055	-$ 19,579	-$ 309,633
2029	Pressure Zone Transfer Pump	$ 435,938	$ 61,896	$ 64,408	$ 4,348	$ 68,756
2030		$ 463,600		$ 532,356		$ 532,356
2031		$ 492,525		$ 1,024,881		$ 1,024,881
2032	High Pressure Interconnect	$ 522,750	$ 1,432,947	$ 114,684	$ 7,741	$ 122,426
2033		$ 554,313		$ 676,738		$ 676,738
2034		$ 587,700		$ 1,264,438		$ 1,264,438
2035		$ 622,525		$ 1,886,963		$ 1,886,963
2036	Powder Reservoir - 50%	$ 676,163	$ 1,946,583	$ 616,542		$ 616,542
2037	Powder Reservoir - 50% & L.P. Interconnect	$ 714,500	$ 528,911.24	$ 802,131		$ 802,131
2038		$ 754,400		$ 1,556,531		$ 1,556,531
2039		$ 796,425		$ 2,352,956		$ 2,352,956
2040	Utilities Maintenance Facility	$ 840,113	$ 1,896,416.80	$ 1,296,652		$ 1,296,652
2041		$ 905,625		$ 2,202,277		$ 2,202,277
2042		$ 953,925		$ 3,156,202		$ 3,156,202
2043	Balance Reports	$ 1,004,038	$ 98,679	$ 4,061,560		$ 4,061,560
2044	Powder Basin - Filters	$ 1,078,613	$ 1,666,891	$ 3,473,281		$ 3,473,281
2045	Groundwater Development	$ 1,133,750	$ 1,046,889	$ 3,560,142		$ 3,560,142
2046	Rhonda & Powder Diversion Ditchs	$ 1,214,850	$ 749,791	$ 4,025,202		$ 4,025,202
2047		$ 1,275,975		$ 5,301,177		$ 5,301,177
2048		$ 1,364,000		$ 6,665,177		$ 6,665,177
2049		$ 1,456,350		$ 8,121,527		$ 8,121,527
2050		$ 1,526,850		$ 9,648,377		$ 9,648,377
2051		$ 1,627,500		$ 11,275,877		$ 11,275,877
2052	Whitefoot Creek Reservoir	$ 447,200	$ 11,428,869	**$ 294,208**		$ 294,208

PROJECT: WATER ASSET MANAGEMENT PROGRAM
COMPANY: BIG WHITE WATER UTILITY LTD.
DATE: FEBRUARY 2025

BigWhite Inventory-Land Assets | **Current Year** | **2025**
Tangible Capital Assets• Linear-Assets_Water Infrastructure | **Average Inflation** | **3%**

Asset ID	Description	Enter Water System Asset	Water System Asset	Length (m) or units	Enter In-Service Date if Known	Useful Life	% of Useful Life Remaining	Useful Life Remaining in Years	Estimate of Out-Service Date	2025 Value	2025 Amortization
W017	Hydrants 1970-79	10	Hydrants	10	1975	50	0%	0	2025	$119,405.23	$2,388.10
W030	100-150mm Domestic Services 1980-89	13	MF Services 100-150mm dia	4	1985	60	33%	20	2045	$47,762.09	$796.03
W022	25-50mm Domestic Services 1980-89	11	Domestic Services - short	6	1985	60	33%	20	2045	$28,657.26	$477.62
W026	50-100mm Domestic Services 1980-89	12	Domestic Services - long	6	1985	60	33%	20	2045	$53,732.35	$895.54
W019	Hydrants 1990-99	10	Hydrants	23	1995	50	40%	20	2045	$274,632.03	$5,492.64
W035	PRV - Large Station	15	PRV - Large Station	2	1975	75	33%	25	2050	$358,215.69	$4,776.21
W031	100-150mm Domestic Services 1990-99	13	MF Services 100-150mm dia	6	1995	60	50%	30	2055	$71,643.14	$1,194.05
W034	Blow-offs - Air Release Valves	14	Blow-offs/ ARVs	10	1995	60	50%	30	2055	$89,553.92	$1,492.57
W023	25-50mm Domestic Services 1990-99	11	Domestic Services - short	11	1995	60	50%	30	2055	$52,538.30	$875.64
W027	50-100mm Domestic Services 1990-99	12	Domestic Services - long	11	1995	60	50%	30	2055	$98,509.31	$1,641.82
W020	Hydrants 2000-09	10	Hydrants	50	2005	50	60%	30	2055	$597,026.15	$11,940.52
V005	Rhonda Lake WTP Facility Piping			1	2006	50	62%	31	2056	$1,253,754.91	$25,075.10
W005	150mm DI Watermain 1980-89	5	150mm DI	957	1984	75	45%	34	2059	$194,260.37	$2,590.14
L001	Works Yard			1	1960	100	35%	35	2060	$895,539.22	$8,955.39
W036	PRV - Small Station	16	PRV - Small vault	3	1985	75	47%	35	2060	$358,215.69	$4,776.21
V007	Powder Basin WTP Piping			1	2015	50	80%	40	2065	$597,026.15	$11,940.52
W021	Hydrants 2010-19	10	Hydrants	2	2015	50	80%	40	2065	$23,881.05	$477.62
W032	100-150mm Domestic Services 2000-09	13	MF Services 100-150mm dia	18	2005	60	67%	40	2065	$214,929.41	$3,582.16
W024	25-50mm Domestic Services 2000-09	11	Domestic Services - short	29	2005	60	67%	40	2065	$138,510.07	$2,308.50
W028	50-100mm Domestic Services 2000-09	12	Domestic Services - long	29	2005	60	67%	40	2065	$259,706.37	$4,328.44
W004	100mm DI Watermain 1990-2000	4	100mm DI	5	1991	75	55%	41	2066	$746.28	$9.95
W015	300mm DI Watermain 1990-99	8	300mm DI	170	1995	75	60%	45	2070	$71,046.11	$947.28
W006	150mm DI Watermain 1990-99	5	150mm DI	697	1995	75	60%	45	2070	$141,483.26	$1,886.44
W009	200mm DI Watermain 1990-99	6	200mm DI	839	1995	75	60%	45	2070	$210,380.07	$2,805.07
W012	250mm DI Watermain 1990-99	7	250mm DI	1,314	1995	75	60%	45	2070	$415,780.95	$5,543.75
V002	Small Conc. Reservoir - 446 m3 size			1	1975	100	50%	50	2075	$479,292.59	$4,792.93
W033	100-150mm Domestic Services 2010-19	13	MF Services 100-150mm dia	2	2015	60	83%	50	2075	$23,881.05	$398.02
W025	25-50mm Domestic Services 2010-19	11	Domestic Services - short	4	2015	60	83%	50	2075	$19,104.84	$318.41
W029	50-100mm Domestic Services 2010-19	12	Domestic Services - long	4	2015	60	83%	50	2075	$35,821.57	$597.03
W016	300mm DI Watermain 2000-09	8	300mm DI	1,989	2002	75	69%	52	2077	$831,239.51	$11,083.19
W007	150mm DI Watermain 2000-09	5	150mm DI	1,208	2005	75	73%	55	2080	$245,210.58	$3,269.47
W013	250mm DI Watermain 2000-09	7	250mm DI	1,960	2005	75	73%	55	2080	$620,190.76	$8,269.21
W010	200mm DI Watermain 2000-09	6	200mm DI	2,729	2005	75	73%	55	2080	$684,299.43	$9,123.99
W001	150mm PVC Watermain 1980-89	1	150mm PVC	156	1982	100	57%	57	2082	$31,605.37	$316.05
W003	300mm PVC Watermain 1980-82	3	300mm PVC	186	1982	100	57%	57	2082	$77,732.80	$777.33
W002	250mm PVC Watermain 1980-89	2	250mm PVC	276	1982	100	57%	57	2082	$87,332.98	$873.33
W014	250mm DI Watermain 2010-19	7	250mm DI	220	2015	75	87%	65	2090	$69,613.25	$928.18
W011	200mm DI Watermain 2010-19	6	200mm DI	783	2015	75	87%	65	2090	$196,338.02	$2,617.84
W008	150mm DI Watermain 2010-19	5	150mm DI		2015	75	87%	65	2090	$512,623.37	$6,834.98
L002	Water Treatment Plant site - Rhonda Lake WTP			1	1995	100	70%	70	2095	$597,026.15	$5,970.26
V001	Large Conc. Reservoir - 892 m3 size			1	1995	100	70%	70	2095	$958,585.18	$9,585.85
V006	Rhonda Lake WTP Facility Building			1	2006	100	81%	81	2106	$537,323.53	$5,373.24
L003	Water Treatment Plant site - Powder Basin WTP			1	2015	100	90%	90	2115	$358,215.69	$3,582.16
V008	Powder Basin WTP Building			1	2015	100	90%	90	2115	$639,027.00	$6,390.27
V003	Rhonda Lake Reservoir Dam and vault			1	1998	150	82%	123	2148	$2,985,130.74	$19,900.87
V004	Powder Basin Reservoir Dam and vault			1	2006	150	87%	131	2156	$3,807,088.00	$25,380.59
V005	Rhonda Lake Conc. Reservoir - 2,859m3			1	2023	100	98%	98	2123	$2,030,826.76	$20,308.27
										$22,394,444.56	**$253,888.78**

PROJECT: WATER ASSET MANAGEMENT PROGRAM
COMPANY: BIG WHITE WATER UTILITY LTD.
DATE: FEBRUARY 2025

BigWhite Inventory-Land Assets **Current Year** **2025**
Tangible Capital Assets• Linear-Assets_Water Infrastructure

Project ID	Description	Priority	2020 Value	Year Scheduled	Updated Cost Estimate		Notes
	Powder Reservior & WTP	RRTF		2023	$ 1,577,565.77		40% Allocation of Reservoir to Existing Customers ($4.4m), Net $201k
	Rhonda/Village Treated Water Res'r	RRTF		2023	$ 765,699.60		40% Allocation of Reservoir to Existing Customers ($1.91m)
R1	HYDRANT REPLACEMENT (6 UNITS)	RRTF	$ 110,381	2026	$ 131,801	1	
R4	RHONDA WTP - FILTER REPLACEMENT	RRTF	$ 60,000	2027	$ 250,000	2	BIPure - $160k Filters, Plus
R5	RECONDITION - EX CONCRETE RESERVOIRS	RRTF	$ 86,000	2028	$ 108,942	3	
R6	PRV RECONDITIONING - 3 STATIONS	RRTF	$ 120,000	2029	$ 156,573	4	
R8	WATER MAIN REPLACEMENTS/ UPGRADES	RRTF	$ 900,000	2036	$ 1,444,236	11	
R2	RHONDA LAKE CHLORINE VAULT RECONDITION	RRTF	$ 64,230	2038	$ 109,347	13	
	TREATED WATER STORAGE RECONDITION	RRTF		2044	$ 500,000	19	
R1b	HYDRANT & MAIN REPLACEMENTs (6 UNITS)	RRTF	$ 374,193	2045	$ 783,476	20	
	PRV - LARGE STATION	RRTF	$ 331,144	2050	$ 803,773	25	
	RESERVOIR DREDGING/IMPROVEMENTS	RRTF		2051	$ 1,500,000	26	
R7	RHONDA LAKE RESERVOIR - RECONDITIONING DAM	RRTF	$ 1,900,000	2070	$ 8,329,421	45	
					$ 14,117,569		

Year	Description	Revenue 3.00%	Capital Expenses	Difference	Total Plus Interest 6.75%	
2025	Opening Balance			$ 1,874,063.82		
	Powder/Rhonda Water Payable		$ 2,343,265.37			
2025	Ex. RRTF & Chlor.Vault & BWSLR Powder Reservoir AP	$ 253,889		-$ 215,313	-$ 229,846	
2026	HYDRANT REPLACEMENT (6 UNITS)	$ 261,505	$ 131,801	$ 129,705	-$ 106,901	
2027	RHONDA WTP - FILTER REPLACEMENT	$ 269,351	$ 250,000	$ 19,351	-$ 93,460	
2028	RECONDITION - EX CONCRETE RESERVOIRS	$ 277,431	$ 108,942	$ 168,489	$ 75,029	
2029	WATER MAIN REPLACEMENTS/ UPGRADES	$ 285,754	$ 156,573	$ 129,181	$ 204,210	
2030		$ 294,327		$ 294,327	$ 498,537	
2031		$ 303,156		$ 303,156	$ 801,693	
2032		$ 312,251		$ 312,251	$ 1,113,944	
2033		$ 321,619		$ 321,619	$ 1,435,563	
2034		$ 331,267		$ 331,267	$ 1,766,830	
2035		$ 341,205		$ 341,205	$ 2,108,036	
2036	WATER MAIN REPLACEMENTS/ UPGRADES	$ 351,441	$ 1,444,236	-$ 1,092,794	$ 1,015,241	
2037		$ 361,985		$ 361,985	$ 1,377,226	
2038	RHONDA LAKE CHLORINE VAULT RECONDITION	$ 372,844	$ 109,347	$ 263,497	$ 1,640,723	
2039		$ 384,030		$ 384,030	$ 2,024,752	
2040		$ 395,550		$ 395,550	$ 2,420,303	
2041		$ 407,417		$ 407,417	$ 2,827,720	
2042		$ 419,639		$ 419,639	$ 3,247,359	
2043		$ 432,229		$ 432,229	$ 3,679,588	
2044	TREATED WATER STORAGE RECONDITION	$ 445,196	$ 500,000	-$ 54,804	$ 3,624,783	
2045	HYDRANT & MAIN REPLACEMENTs (6 UNITS)	$ 458,551	$ 783,476	-$ 324,925	$ 3,299,859	
2046		$ 472,308		$ 472,308	$ 3,772,167	
2047		$ 486,477		$ 486,477	$ 4,258,644	
2048		$ 501,071		$ 501,071	$ 4,759,715	
2049		$ 516,104		$ 516,104	$ 5,275,819	
2050	PRV - LARGE STATION	$ 531,587	$ 803,773	-$ 272,186	$ 5,003,633	
2051	RESERVOIR DREDGING/IMPROVEMENTS	$ 547,534	$ 1,500,000	-$ 952,466	$ 4,051,167	
2052		$ 563,960		$ 563,960	$ 4,615,127	

APPENDIX C

Big White Water Utility

Asset Management Plan

March 2019

Agua Consulting Inc.
"Engineered Water Solutions"

TABLE OF CONTENTS

1.0 INTRODUCTION

Big White Water Utility supplies water to Big White Ski Resort located 57 km southeast of Kelowna, B.C. During the winter months, the utility services a population of 16,000 people on a peak day and an average population of 8,000 persons mid-week. The water utility's ability to operate, service and improve its infrastructure is a major consideration in determining growth capacity and financial sustainability. Responsible asset management forms a critical part of the utility's service condition and financial capacity for long term sustainable operations. The asset management plan is to be reviewed on an annual basis by the Big White Water Utility's management and operational staff.

In 2008, the BC Government required that all municipal governments follow the Public Accounting Standards Board rules for reporting Tangible Capital Assets (TCAs) in their annual reports. The benefits of reporting TCAs is designed to increased knowledge and more sustainable financial management of public assets. Since 2008, the province has been requiring TCA information on the larger utilities and has been increasing the requirement for asset reporting for the smaller utilities.

Although Big White Water Utility is not a part of local government, they are a service provider. This report was carried out using the same principles that would be done for a municipal water system or water improvement district. This report summarizes the assets of the Big White Water Utility and provides a long-term plan for asset renewal. The outcome of asset tables should be suitable for reporting as part of the annual water utility financial audit.

Big White Water Utility has requested that this detailed assessment of Tangible Capital Assets be carried out. This report is to inform the utility on infrastructure condition and replacement and allow the Utility to make decisions regarding building financial capacity to maintain, operate and renew the existing water infrastructure.

In preparation of this document, the following information was reviewed:

- Guide to the Amortization of Tangible Capital Assets, Local Government Infrastructure and Finance Division, May, 2008;
- Tangible Capital Asset Easy Calculator Tool, Overview and Users Guide, January, 2009;
- 2018 Water Master Plan – Big White Water Utility as prepared by Agua Consulting Inc.;
- Big White Ski Resort – Master Plan – as prepared by Brent Harley & Associates;
- Hydrant and water main information as provided by Big White Water Utility;
- Mapping of water mains and hydrants as provided by Denby Land Surveyors, Feb. 2019;
- Data received from Big White related to age, material type and condition of water main assets.

In early 2019, Big White Water Utility completed an assessment of its current assets. The critical information was provided to Agua Consulting Inc., who correlated this data and input the data into a geographical data base that also is part of the district water distribution model. The distribution pipe material types, condition of mains, age of mains and lengths and diameters were input and then exported from the computer model to an EXCEL file for sorting and financial assessment of the water system infrastructure.

The data was then entered into the TCA EXCEL Spreadsheet so that an assessment of the remaining lifespan for infrastructure could be determined along with projected long-term renewal costs. Full-service life and

remaining service life are identified for system components within the spreadsheet tables that are include in Appendix A. Utilizing the lifespan and cost information from the TCA spreadsheet, the amount of capital required to fund future replacement works was extracted in 10-year increments. The plan is intended to inform the water utility of the long-term funding requirements. The system renewal costs should be reassessed every 10 years with the best available data.

Asset Management Defined

For the case of a water utility, asset management refers to systematic approach to the management of the assets of the utility, with respect to condition, operations, maintenance, renewal and funding. Consideration in management of the utility occurs over the whole life cycle of the assets. Although it can apply both to tangible assets, (physical objects such as buildings or equipment) and to intangible assets, (such as human capital, intellectual property, and/or goodwill) for this assessment, we are summarizing the tangible capital assets. Asset management is a systematic process of developing, operating, maintaining, upgrading, and disposing of assets in the most cost-effective manner (including all costs, risks and performance attributes).

In conjunction with good asset management is the objective of sustainable service delivery by a water utility. Sustainable water service delivery is the delivery of community service in a social, economic, and environmentally responsible manner that does not compromise the ability of future generations to meet their own needs.

Figure 1 - Cycle of Sustainable Infrastructure

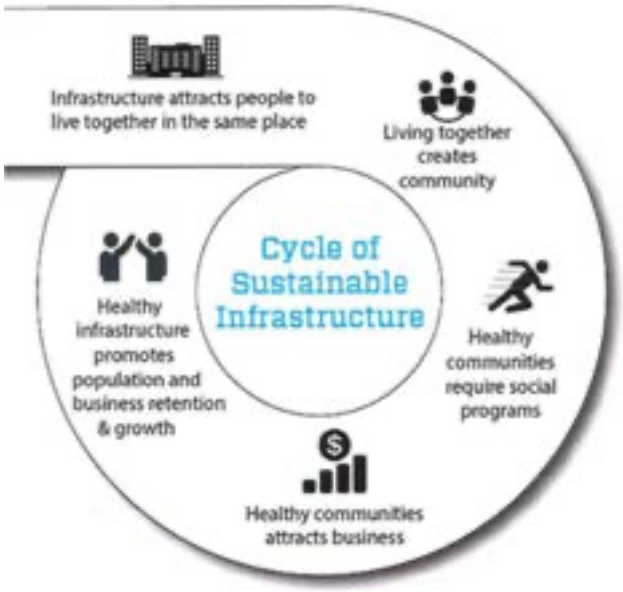


Figure 2 - Sustainable Service Delivery Process

The process of sustainable service delivery is one of continuous awareness of the financial and physical condition of a utility. There is an on-going process of assessing, monitoring and reinvesting in the water system. It requires understanding of, and attention to detail of the factors that can influence the lifecycle of a water utility. The age, condition, materials types, expected remaining lifespan, and financial capacity of the water utility all fit into places within the graph shown in Figure 2.

2.0 DATA COLLECTION PROCESS

Agua Consulting Inc. was retained by Big White Water Utility to review and update to the inventory of capital assets for the water utility. The project was conducted in three (3) phases:

Phase 1: Inventory Details and Condition Review

- This included the review of the existing data and identification of any missing information.

During the course of this phase of work, the actual lengths of watermain were verified and mapped. The pipe materials for the system were reviewed and documented and the age of the pipes and infrastructure in the system were documented. Our staff reviewed this information and confirmed some of the assumptions with Big White Water Utility operations staff.

It is noted that almost all of the water distribution pipe is ductile iron with the exception of a few sections of main that are PVC. From the mapping and data, the computer water model was updated and the raw data was entered as fields in the computer model. Age, material type, pipe length and diameter are all fields that are within the computer water distribution model for the system. From the model, the data can be exported to EXCEL and sorted for the purposes of analysis of the data.

As part of the conditions review, useful service life for life-cycle cost estimation has been based on information gathered from the following locations:

- Asset Management BC;
- National Guide to Sustainable Municipal Infrastructure;
- Infra Guide;
- Guide to the Amortization of Tangible Capital Assets, BC Province, Local Government Infrastructure and Finance Division (May 2008);
- Ministry of Community, Sport and Cultural Development (Useful Lives of Water Infrastructure);
- Condition and performance of similar pipe materials within the Okanagan;
- Best available engineering information on pipe materials lifespan.

Phase 2: Needs and Remaining Service Life Estimate

- The projected and remaining service life of the assets was estimated using industry best practice methods and best available information. Some of the pipe materials is assessed a longer service life based on the assessment of the existing conditions.
- The pipe assets are assigned lifespans, depending on pipe material and date of installation. The renewal date is triggered when the pipe lifespan is reached. The lifespan renewal costs are grouped into 10 year increments so that an estimate of future renewal funding can be made. The age of infrastructure lifespan was made for the listing of materials as presented in Table A-2 in Appendix A.
- The completion of this phase identified the remaining service life and infrastructure replacement costs with an expenditure estimate for 10-year increments.

Phase 3: Program Investment

- The outcome of this exercise is to set out a cash flow required to address renewal of the water utility over the next 50 years with greater focus on specific improvements for the first 10 years;
- With the number of connections and current utility revenue, an investment plan for a fund such as a "Renewal Replacement Reserve" is set out in this section. The fund would be used as a financial resource that would be drawn down as and when required. The objective of the fund is to help even out water rates over time. It is not necessary that the full value of the future renewal be saved, however a substantial amount of the capital required to carry out the works should be available. This is to minimize the potential for borrowing funds to complete emergency renewal works;
- The utility replacements and costs can be completed through a phased replacement plan with Phase I being the renewal works required for the first 10 years, and the longer-term investment and expenditures identified in 10-year segments to a 50-year horizon.

The assessment of the water system data is based on the drawings and watermain age information provided by the Big White Water Utility. From that data, mapping was compiled and analyzed by WSP.

The asset renewal date or useful life was created using the best linear and non-linear asset data available based on industry standards and existing conditions. The watermain or linear assets are considered to be the assets that have consistent value over time and devalue in a linear progression. They include the items that are listed in units such as meters of watermain, number of domestic services, number of hydrants, etc. The vertical or non-linear assets are those that are item specific such as buildings or well sites, or equipment within pump stations.

Where data was missing, best estimates were made to provide reasonable values and estimates so that a reasonable allowance of funds could be set aside for future renewal. Big White drawing information was the primary source used for the majority of the asset inventory.

3.0 ASSET ASSESSMENT

The utility assets were broken down into two main categories, further subcategorized, and as summarized below with expected replacement costs in 2019 dollars. Details can be found in the EXCEL spreadsheet file tables in Appendix A, and Figures 1 and 2 in Appendix B.

Table 3.1 provides a summary of the historic cost of the asset categories, the current replacement cost estimate, and the estimated net book value of the asset to the end of the current year.

Table 3.1 - Summary of Asset Values

Item	Current Reproduction Cost	Calculated Historical Cost	Amortization for the year 2019	Accumulated Amortization to end of 2019	Net Book Value to end of 2019
Land Value (based on Assmt)	$ 1,550,000	$ 703,881			$ 703,881
Building Assets	$ -	$ -	$ -	$ -	$ -
Water Mains	$ 5,647,144	$ 4,027,880	$ 58,881	$ 1,127,429	$ 2,900,451
Vertical Assets (Miscell)	$ 6,504,200	$ 4,745,259	$ 50,731	$ 803,020	$ 3,942,239
TOTALS	**$ 13,701,344**	**$ 9,477,020**	**$ 109,612**	**$ 1,930,449**	**$ 7,546,571**

As noted in Table 3.1, the land values are an asset, but they do not appreciate or depreciate over time.

Big White Water Utility does not own or maintain the roadways but must allow for the cost to replace the road structure and asphalt when it is damaged during water main renewal works. As the majority of water mains are not beneath the paved section of the roads, for this assessment, the value of roadway renewal is included within the water main unit length values.

For the major asset categories, the building assets are listed, but are included in the Vertical Assets for the utility.

4.0 RESULTS AND REPLACEMENT TIMING

The asset replacement strategy assumes that a sufficient operations and maintenance (O&M) budget is in place to optimize the asset service life. Inadequate O&M budgets generally reduces the service life of an asset.

The tables below do not address any regulatory upgrade requirements, expansions or upgrades due to growth, which should be self-funded, or general safety improvements. The *2018 Water Master Plan Report* completed by Agua Consulting Inc. in 2018 addressed growth scenarios and required rates to fund the impacts of growth.

Table 3.1 - Summary of Forecasted Renewal Costs

Funding Segment - By 10 yr increments	10 Yr COST	Cost $ / Yr
2020 - 2029	$ 109,062	$ 10,906
2030 - 2049 cost divided by 20 yrs	$ 523,070	$ 26,154
2050 - 2059	$ 3,478,777	$ 347,878
2060 - 2069	$ 4,489,667	$ 448,967
2070 - 2079	$ 6,878,498	$ 687,850
2080 - 2089	$ 1,233,112	$ 123,311
2090 - 2119 cost divided by 30 yrs	$ 8,506,018	$ 283,534
2120 - 2150 cost divided by 30 yrs	$ 28,820,802	$ 960,693

Table 3.1 is the summary of renewal works for the Big White Utility summarized in 10-year increments except where noted. The values presented show the inflated value for the asset at the time of renewal. The inflated value is based on a CPI increase of 1.75% per year which is the historic value for the last 20 years.

The costs summarized in Table 3.1 are provided in detail in Table A-8 in Appendix A.

Table A-8 lists the renewal plan for Big White assets in chronological order. Table 3.1 above shows that the renewal investment requirements are fairly small until the 10-year segment during 2050-2059 when costs start to rise due to a higher expected effort required for renewal. At that time there are three major expenditures facing Big White which include a number of hydrants, a PRV station and a significant length of 150mm diameter DI water main. With proper maintenance and the use of best-available technologies, it may be possible to extend the life of the concrete reservoirs to much longer than their estimated lifespan.

To provide funding for the forecasted renewal works, the Utility must consider what the impact will be on existing water rates. As there is a great deal of time over the next few decades, we would recommend that the utility consider building up a renewal reserve fund so that the expenditures for system renewal do not have to be financed.

On the following page in Tables 3.2 and 3.3, the assets to be replaced in the 0-10 year and 11-20-year horizons are listed.

Table 3.2 - Asset Items to be replaced within 0-40 years (2020-2059)

Asset ID	Buildings, Water Main Linear Assets, Vertical Assets	Useful Life Remaining	Yr for Replacement	Current Value	Value at Replacement Date	10 Yr Sum	Cost / Year	Time Frame
W017	Hydrants 1970-79	5	2024	100,000	$ 109,061.66	$ 109,062	**$10,906.17**	10 yrs
W018	Hydrants 1980-89	15	2034	-	$ -			
W019	Hydrants 1990-99	25	2044	230,000	$ 354,885.52			
W022	25-50mm Domestic Services 1980-89	25	2044	24,000	$ 37,031.53			
W026	25-50mm Domestic Services 1980-89	25	2044	45,000	$ 69,434.12		2030-2049	
W030	100-150mm Domestic Services 1980-89	25	2044	40,000	$ 61,719.22	$ 523,070	**$26,153.52**	20 yrs
W020	Hydrants 2000-09	35	2054	500,000	$ 917,644.85			
W023	25-50mm Domestic Services 1990-99	35	2054	44,000	$ 80,752.75			
W027	25-50mm Domestic Services 1990-99	35	2054	82,500	$ 151,411.40			
W031	100-150mm Domestic Services 1990-99	35	2054	60,000	$ 110,117.38			
W034	Blow-offs - Air Release Valves	35	2054	75,000	$ 137,646.73			
V005	Rhonda Lake WTP Piping	36	2055	621,549	$ 1,160,685.79			
W005	150mm DI Watermain 1980-89	39	2058	162,690	$ 320,039.19		2050-2059	
W035	PRV - Large Station	40	2059	300,000	$ 600,479.20	$ 3,478,777	**$347,877.73**	10 yrs
W021	Hydrants 2010-19	45	2064	20,000	$ 43,659.50			
W024	25-50mm Domestic Services 2000-09	45	2064	116,000	$ 253,225.13			
W028	25-50mm Domestic Services 2000-09	45	2064	217,500	$ 474,797.11			
W032	100-150mm Domestic Services 2000-09	45	2064	180,000	$ 392,935.54			
V008	Powder Basin WTP Piping	45	2064	429,314	$ 937,182.35			
W004	100mm DI Watermain 1990-2000	46	2065	625	$ 1,388.24			
W006	150mm DI Watermain 1990-99	50	2069	118,490	$ 282,099.68			
W009	200mm DI Watermain 1990-99	50	2069	176,190	$ 419,471.20			
W012	250mm DI Watermain 1990-99	50	2069	348,210	$ 829,014.51			
W015	300mm DI Watermain 1990-99	50	2069	59,500	$ 141,656.94		2060-2069	
W036	PRV - Small Station	50	2069	300,000	$ 714,236.68	$ 4,489,667	**$448,966.69**	10 yrs

Table 3.3 - Asset Items to be replaced >40 years (2060 and beyond)

Asset ID	Buildings, Water Main Linear Assets, Vertical Assets	Useful Life Remaining	Yr for Replacement	Current Value	Value at Replacement Date	10 Yr Sum	Cost / Year	Time Frame
W025	25-50mm Domestic Services 2010-19	55	2074	16,000	$ 41,544.45			
W029	25-50mm Domestic Services 2010-19	55	2074	30,000	$ 77,895.84			
W033	100-150mm Domestic Services 2010-19	55	2074	20,000	$ 51,930.56			
V002	Small Conc. Reservoir - 446 m3 size	56	2075	401,400	$ 1,060,485.59			
W007	150mm DI Watermain 2000-09	60	2079	205,360	$ 581,541.79			
W008	150mm DI Watermain 2010-19	60	2079	-	$ -			
W010	200mm DI Watermain 2000-09	60	2079	573,090	$ 1,622,885.59			
W013	250mm DI Watermain 2000-09	60	2079	519,400	$ 1,470,845.37		2070-2079	
W016	300mm DI Watermain 2000-09	60	2079	696,150	$ 1,971,368.90	$ 6,878,498	**$687,849.81**	10 yrs
W001	150mm PVC Watermain 1980-89	62	2081	26,469	$ 77,601.74			
W002	250mm PVC Watermain 1980-89	62	2081	73,140	$ 214,431.64			
W003	300mm PVC Watermain 1980-82	62	2081	65,100	$ 190,859.99			
W011	200mm DI Watermain 2010-19	70	2089	164,430	$ 553,847.64		2080 - 2089	
W014	250mm DI Watermain 2010-19	70	2089	58,300	$ 196,371.21	$ 1,233,112	**$123,311.22**	10 yrs
V006	Powder Basin WTP Facility	71	2090	850,000	$ 2,913,148.32			
V001	Large Conc. Reservoir - 892 m3 size	76	2095	802,800	$ 3,000,703.77			
V006	Rhonda Lake WTP Building	86	2105	318,174	$ 1,414,570.94		2090 - 2119	
V008	Powder Basin WTP Building	95	2114	226,583	$ 1,177,595.39	$ 8,506,018	**$283,533.95**	30 yrs
V003	Rhonda Lake Reservoir Dam and vault	129	2148	2,500,000	$ 23,435,807.25		2120 - 2149	
V004	Powder Basin Reservoir Dam and vault	137	2156	500,000	$ 5,384,994.40	$ 28,820,802	**$960,693.39**	30 yrs

In general, the Big White water utility assets appear to be in good condition, and are reasonably well maintained. A high level of maintenance will help to extend the infrastructure age and provide good service and value to the rate payers.

We recommend that during annual budget preparation Big White consider setting aside an amount of funding for asset replacement. This amount should be set annually and any funds collected and not used in that fiscal year should be placed in a reserve account.

For the first 10 years the amount of funds needed for renewal works averages $11,000 per year. For the subsequent 10 years, this amount increases to approximately $26,000 per year. It may be prudent to build up the reserve fund so that substantial rate increases can be reduced in subsequent years.

DISCUSSION ON RENEWAL INVESTMENT

Years 2020 - 2039

As listed in Table 3.2, for the first 10 years no major renewals are forecasted except for the replacement of some of the older hydrants. For the 10 to 20-year period, the largest cost will be for hydrant renewal and service connections. As services repairs are relatively easy to monitor and track repairs, it is very likely that the services will need to be replaced at varying times. The services have been assigned a 60-year lifespan so the only service connection work may be repairs. Individual hydrants and service renewal can be done independently over time and do not need to be part of a major renewal that affects an entire block such as replacement of a water main.

The fortunate thing with deferred repairs is that it provides the utility with the opportunity to build up their renewal reserve funds over time and lessen the requirement for financial assistance and borrowing which is always more costly than having the funds readily available.

Over the next 30 years, we would recommend that Big White Water Utility build up a reserve fund of $2,000,000. With a projected 3.00% return-on-investment from the Provincial Bond market, the contribution per year to reach $2,000,000 over that time frame would be $102,000 per year.

Also, Big White water utility could consider setting aside $15,000 per year for increased system maintenance. This money could go into labour to carry out works that would extend the lifespan of the existing utility assets. This may facilitate the hiring of a summer student to assist the Utility operator in exercising valves and services, servicing hydrants, carrying out a flushing program, and replacing old services when required. There is at times government funding available for summer student job placement programs from Okanagan College from their Environmental Operator's course that may lessen the overall cost to the Utility. The added maintenance defers the major capital expenditures and allows the Reserve Funds to accrue.

After Year 2050

Major expenditures are expected after 2050 with the renewal of watermains and major infrastructure required. The cost per year at that time is forecast to be $232,000 per year in the 2050s and $356,000 per year in the 2060s. Although this is many decades away, understanding the timing for renewal allows the Utility to adjust for renewal works.

5.0 MAXIMIZING SERVICE LIFE

The infrastructure service life has been conservatively estimated. For all water infrastructure assets, the service life can be increased / maximized with a good maintenance program. This may defer the timing for replacement of the asset and allow the renewal cost to be spread out over a greater lifecycle period. Extending the lifespan of the utility reduces the required cost to be paid per year.

Preventative maintenance does not increase the service life potential of the asset or keep it in its original condition; but it can slow down the rate of deterioration. With good tracking and documentation of asset condition and maintenance records, the lifespan of the asset could be reviewed and possibly extended. With the collection of records over a number of years, and the collection of water main condition when there are breaks, better lifespan estimates could be made. With any pipe breaks, we would recommend that Big White water utility obtain pipe coupons (cored pipe samples at the break) to document the condition of the existing DI and/or PVC pipe. Also, at the time of the break, a photo of the inside pipe wall condition, and documented recorded maintenance notes should be collected at each break. A trending of pipe performance can be built up over time. Table 5.1 below provides a recommended maintenance plan for water infrastructure with the intent of maximizing service life.

Table 5.1 - Water Service Plan

Pipe inspection	Monitor and understand and document system leakage as indication of pipe and water service integrity; Underground main (obtain pipe coupons when breaks occur); Above ground main (check annually for visual leakage); Monitor breaks and record location, frequency and soils information; Flush mains of debris and biofilm growth annually.
Valve	Exercise large valves 300 mm diameter and larger every year (min). Check and maintain Air valves every 6 months Exercise system line valves every 2 years (min.) Exercise service line curb stops every 2 years (min.)
Hydrant	Exercise valve flow hydrant annually. Do complete tear down on average every five years or when problems such as stiff hydrant valve operation is encountered
Meters	Review annually. Maintain records of meter install date and service.
Backflow preventive device	Check and document annually as per CSA standard
Flushing	Depends on service levels, deterioration of water quality, or other operational issues Flush water system mains at least once per year
Swabbing, air scouring or pigging	Only required if problems are noted during annual flushing operation
Reservoirs and Concrete structures	Flush/clean at least once every two years. Drain and inspect for cracks. Patch with Xypex or similar crack sealing agent to maintain interior integrity of reservoir concrete.
Buildings	Annual maintenance is required, in particular to the exterior waterproofing for roof and walls so that the structural integrity is maintained indefinitely.

6.0 SUMMARY

This section provides a summary of the conclusions and recommendations developed in the preparation of this report.

Conclusions

- **Land Assets:** Land assets are listed in Table A-4 in Appendix A. The value of the land assets are estimated based on typical land values and the footprint of the water facility. The book value is estimated to be the value at the time of inception, and as within a Tangible Capital Asset analysis, land does not appreciate or depreciate. As land is considered a permanent asset, its value does not factor into the renewal or funding calculations;
- **Asset Depreciation:** For a Tangible Capital Asset assessment, all assets are valued at their book value (originally installed value) and depreciated at a linear rate over their estimated lifespan;
- **Building Assets:** Building assets are built into the water main vertical assets. The value is split between building cost and process equipment cost. The greater cost is the water process equipment cost which has a shorter lifespan the structure itself;
- **Water Main Assets:** These assets are listed by category and year of installation within Table A-6 of Appendix A. They represent the largest assets of the utility. Current year reproduction value is estimated to be $5,647,144. The Ductile Iron (DI) mains are expected to last for a significant period of time, possibly as many as 100 years, but for the purposes of this exercise a lifespan of 75 years was used. With the distant horizon on that water main material type, the area of focus should be on understanding and extending the lifespan of the DI mains which will require renewal at some date. Service lines also will require earlier replacement and a focus on their condition and timing for renewal will also occur at an earlier date;
- **Vertical Assets:** Vertical assets are listed in Table A-7 in Appendix A. The reproduction value of these assets in current year dollars is estimated at $6,454,200 with the largest items being the two dams and then the two concrete reservoirs, and the WTP buildings. With good maintenance it is possible to defer the replacement costs.

RECOMMENDATIONS

- **Renewal Funding:** Based on our analysis, Big White Water Utility should set aside a minimum of $50,000 per year on system renewal works so that a reserve fund can be built-up over time. This amount includes the existing funds that Big White Water utilty would require for their capital works projects;
- **Deferral of Expenditures:** The renewal expenditures can be deferred with additional system maintenance. By spending additional funds for labour through summer student programs, there is the option of carrying out increased system maintenance programs to extend the life of the existing infrastructure. By expending $15,000 per year, the Big White could retain assistance / labour to assist in the maintenance programs;
- **Table A-8** Utilize Table A-8 within Appendix A as a guideline for planning for infrastructure renewal. The table lists all assets with expected dates for renewal. As the asset approaches the date of renewal, closer review of the asset and its performance could be applied.

BC Municipality	User Defined
Full Name	Big White
Regional District	0
Date of Incorporation	1984
Current Year used to calculate the Historical Cost	2019
Local Government Contact Name	Maurice Valcourt
Local Government Mailing Address	5315 Big White Road, Kelowna BC
Local Government Address	
Local Government Contact Phone Number	(250) 470-2355
Local Government Contact email address	mvalcourt@bigwhite.com
Customer Number	A2B10038
Date of Purchase	April 16, 2009
Product ID	A2BTEC10038

TABLE A-1 SUMMARY OF ASSET VALUE

Item	Current Reproduction Cost	Calculated Historical Cost	Amortization for the year 2019	Accumulated Amortization to end of 2019	Net Book Value to end of 2019
Land Value (based on Assmt)	$ 1,550,000	$ 703,881			$ 703,881
Building Assets	$ -	$ -	$ -	$ -	$ -
Water Mains	$ 5,647,144	$ 4,027,880	$ 58,881	$ 1,127,429	$ 2,900,451
Vertical Assets (Miscell)	$ 6,454,200	$ 4,697,557	$ 53,275	$ 815,741	$ 3,881,817
TOTALS	**$ 13,651,344**	**$ 9,429,319**	**$ 112,156**	**$ 1,943,170**	**$ 7,486,149**

TABLE A-2 Asset Lifespan and Unit Value

Lookup value	Water System Asset	$ per Unit	Useful Life (years)	Unit
1	150mm PVC	170.00	100	lineal metre
2	250mm PVC	265.00	100	lineal metre
3	300mm PVC	350.00	100	lineal metre
4	100mm DI	125.00	75	lineal metre
5	150mm DI	170.00	75	lineal metre
6	200mm DI	210.00	75	lineal metre
7	250mm DI	265.00	75	lineal metre
8	300mm DI	350.00	75	lineal metre
9	Small dia (< 100mm)	105.00	75	lineal metre
10	Hydrants	10,000.00	50	each
11	Domestic Services - short	4,000.00	60	each
12	Domestic Services - long	7,500.00	60	each
13	MF Services 100-150mm dia	10,000.00	60	each
14	Blow-offs / ARVs	7,500.00	60	each
15	PRV - Large Station	150,000.00	75	each
16	PRV - Small vault	100,000.00	75	each
17	Water Meters	2,000	25	lump sum
18	Test Stations	1,500.00	25	each
19	Reservoir Storage	750.00	100	cubic metre
20	Rhonda UV Facility	1,500,000	75	each
21	Powder Basin UV Facility	750,000	75	each

Table A-3 Consumer Price Index 1950-Current

CPI Index Web site = http://www40.statcan.ca/l01/cst01/econ46e.htm
Base year of the index 2002 = 100
Index starts in 1914, any year prior to 1914 is assumed to be same value as 1914

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	AVG	
1950													12.50	
1951													13.80	
1952													14.20	
1953													14.00	
1954													14.10	
1955													14.10	
1956													14.30	
1957													14.80	
1958													15.20	
1959													15.30	
1960													15.50	
1961													15.70	
1962													15.90	
1963													16.10	
1964													16.40	
1965													16.80	
1966													17.50	
1967													18.10	
1968													18.80	
1969													19.70	
1970													20.30	
1971													20.90	
1972													21.90	
1973													23.60	
1974													26.20	
1975													29.00	
1976													31.10	
1977													33.60	
1978													36.60	
1979													40.00	
1980													44.00	
1981													49.50	
1982													54.90	
1983													58.10	
1984													60.60	
1985													63.00	
1986													65.60	
1987													68.50	
1988													71.20	
1989													74.80	
1990													78.40	
1991													82.80	
1992													84.00	
1993													85.60	
1994													85.70	
1995													87.60	
1996													88.90	
1997													90.40	
1998													91.30	
1999													92.90	
2000													95.40	
2001													97.80	
2002													100.00	
2003													102.80	
2004													104.70	
2005													107.00	
2006													109.10	
2007													111.50	
2008													114.10	
2009													114.40	
2010													116.50	
2011													119.90	
2012													121.70	
2013													122.80	
2014													125.20	
2015													126.60	
2016													128.40	
2017													130.40	
2018													131.40	Est.
2019													132.70	Est.
2020													134.30	Est.

Table A-4 Tangible Capital Assets - Land

Asset ID	Description ie Parcel #	Address	Enter In Service Date	Enter Historical Cost If Known	Enter Current Appraisal Cost	Choose Index ENR = 1 CPI = 2 Default = 2	Calculated Historical Cost	Asset Index Value	Current Year Index Value	User Defined Field	User Defined Field
L001		Works Yard	1960	-	750,000	2	87,604	15.5	132.7		
L002		Water Treatment Plant site - Rhonda Lake WTP	1995	-	500,000	2	330,068	87.6	132.7		
L003		Water Treatment Plant site - Powder Basin WTP	2015	-	300,000	2	286,209	126.6	132.7		
						2					
				-	**1,550,000**		**703,881**				

Table A-5 Tangible Capital Assets - Linear-Assets_Watermains

Asset ID	Description	Enter Water System Asset	Water System Asset	Length (m) or units	Enter Historical Cost If Known	Enter Salvage Value	Choose Index ENR = 1 CPI = 2 Default = 1	Enter In-Service Date if Known	Useful Life	% of Useful Life Remaining	Useful Life Remaining in Years	Estimate of In-Service Date	Current Reproduction Cost	Calculated Historical Cost	Amortization for the year 2019	Accumulated Amortization to end of 2019	Net Book Value to end of 2019	Asset Index Value	Current Year Index Value
W001	150mm PVC Watermain 1980-89	1	150mm PVC	156			2	1982	100	62%	62	1982	26,469	10,951	110	4,161	6,789	54.9	132.7
W002	250mm PVC Watermain 1980-89	2	250mm PVC	276			2	1982	100	62%	62	1982	73,140	30,259	303	11,498	18,761	54.9	132.7
W003	300mm PVC Watermain 1980-82	3	300mm PVC	186			2	1982	100	62%	62	1982	65,100	26,933	269	10,234	16,698	54.9	132.7
W004	100mm DI Watermain 1990-2000	4	100mm DI	5			2	1991	75	61%	46	1991	625	390	5	151	239	82.8	132.7
W005	150mm DI Watermain 1980-89	5	150mm DI	957			2	1984	75	52%	39	1984	162,690	74,296	991	35,662	38,634	60.6	132.7
W006	150mm DI Watermain 1990-99	5	150mm DI	697			2	1995	75	67%	50	1995	118,490	78,219	1,043	26,073	52,146	87.6	132.7
W007	150mm DI Watermain 2000-09	5	150mm DI	1,208			2	2005	75	80%	60	2005	205,360	165,588	2,208	33,118	132,470	107	132.7
W008	150mm DI Watermain 2010-19	5	150mm DI	-			2	2015	75	93%	70	2015	-	0	0	-	-	126.6	132.7
W009	200mm DI Watermain 1990-99	6	200mm DI	839			2	1995	75	67%	50	1995	176,190	116,309	1,551	38,770	77,540	87.6	132.7
W010	200mm DI Watermain 2000-09	6	200mm DI	2,729			2	2005	75	80%	60	2005	573,090	462,100	6,161	92,420	369,680	107	132.7
W011	200mm DI Watermain 2010-19	6	200mm DI	783			2	2015	75	93%	70	2015	164,430	156,871	2,092	10,458	146,413	126.6	132.7
W012	250mm DI Watermain 1990-99	7	250mm DI	1,314			2	1995	75	67%	50	1995	348,210	229,866	3,065	76,622	153,244	87.6	132.7
W013	250mm DI Watermain 2000-09	7	250mm DI	1,960			2	2005	75	80%	60	2005	519,400	418,808	5,584	83,762	335,046	107	132.7
W014	250mm DI Watermain 2010-19	7	250mm DI	220			2	2015	75	93%	70	2015	58,300	55,620	742	3,708	51,912	126.6	132.7
W015	300mm DI Watermain 1990-99	8	300mm DI	170			2	1995	75	67%	50	1995	59,500	39,278	524	13,093	26,185	87.6	132.7
W016	300mm DI Watermain 2000-09	8	300mm DI	1,989			2	2002	75	76%	57	2002	696,150	524,604	6,995	125,905	398,699	100	132.7
W017	Hydrants 1970-79	10	Hydrants	10			2	1975	50	10%	5	1975	100,000	21,854	437	19,668	2,185	29	132.7
W018	Hydrants 1980-89	10	Hydrants	-			2	1985	50	30%	15	1985	-	0	0	-	-	63	132.7
W019	Hydrants 1990-99	10	Hydrants	23			2	1995	50	50%	25	1995	230,000	151,831	3,037	75,916	75,916	87.6	132.7
W020	Hydrants 2000-09	10	Hydrants	50			2	2005	50	70%	35	2005	500,000	403,165	8,063	120,950	282,216	107	132.7
W021	Hydrants 2010-19	10	Hydrants	2			2	2015	50	90%	45	2015	20,000	19,081	382	1,908	17,173	126.6	132.7
W022	25-50mm Domestic Services 1980-89	11	Domestic Services - short	6			2	1985	60	42%	25	1985	24,000	11,394	190	6,647	4,748	63	132.7
W023	25-50mm Domestic Services 1990-99	11	Domestic Services - short	11			2	1995	60	58%	35	1995	44,000	29,046	484	12,102	16,943	87.6	132.7
W024	25-50mm Domestic Services 2000-09	11	Domestic Services - short	29			2	2005	60	75%	45	2005	116,000	93,534	1,559	23,384	70,151	107	132.7
W025	25-50mm Domestic Services 2010-19	11	Domestic Services - short	4			2	2015	60	92%	55	2015	16,000	15,265	254	1,272	13,992	126.6	132.7
W026	25-50mm Domestic Services 1980-89	12	Domestic Services - long	6			2	1985	60	42%	25	1985	45,000	21,364	356	12,462	8,902	63	132.7
W027	25-50mm Domestic Services 1990-99	12	Domestic Services - long	11			2	1995	60	58%	35	1995	82,500	54,461	0	22,692	31,769	87.6	132.7
W028	25-50mm Domestic Services 2000-09	12	Domestic Services - long	29			2	2005	60	75%	45	2005	217,500	175,377	2,923	43,844	131,533	107	132.7
W029	25-50mm Domestic Services 2010-19	12	Domestic Services - long	4			2	2015	60	92%	55	2015	30,000	28,621	477	2,385	26,236	126.6	132.7
W030	100-150mm Domestic Services 1980-89	13	MF Services 100-150mm dia	4			2	1985	60	42%	25	1985	40,000	18,990	317	11,078	7,913	63	132.7
W031	100-150mm Domestic Services 1990-99	13	MF Services 100-150mm dia	6			2	1995	60	58%	35	1995	60,000	39,608	660	16,503	23,105	87.6	132.7
W032	100-150mm Domestic Services 2000-09	13	MF Services 100-150mm dia	18			2	2005	60	75%	45	2005	180,000	145,139	2,419	36,285	108,855	107	132.7
W033	100-150mm Domestic Services 2010-19	13	MF Services 100-150mm dia	2			2	2015	60	92%	55	2015	20,000	19,081	318	1,590	17,491	126.6	132.7
W034	Blow-offs - Air Release Valves	14	Blow-offs / ARVs	10			2	1995	60	58%	35	1995	75,000	49,510	825	20,629	28,881	87.6	132.7
W035	PRV - Large Station	15	PRV - Large Station	2			2	1975	75	53%	40	1985	300,000	142,427	1,899	66,466	75,961	63	132.7
W036	PRV - Small Station	16	PRV - Small vault	3			2	1985	75	67%	50	1995	300,000	198,041	2,641	66,014	132,027	87.6	132.7
					-	-							**5,647,144**	**4,027,880**	**58,881**	**1,127,429**	**2,900,451**		

Table A-6 Tangible Capital Assets - Vertical Assets using no lookups

Asset ID	Asset Description	Unit of Measurement	# of Units of Measure	Year Asset Was In Service	Location	Enter Actual Historical Cost If Known	Estimated Salvage Value	Choose Index ENR = 1 CPI = 2 Default = 1	Current Reproduction Cost	Useful Life	Useful Life Remaining in Years	Calculated Historical Cost	Amortization for the year 2019	Accumulated Amortization to end of 2019	Net Book Value to end of 2019	Asset Index Value	Current Year Index Value	User Defined Field	User Defined Field
V001	Large Conc. Reservoir - 892 m3 size	1.00	1	1995				2	802,800	100	75	529,957	5,300	132,489	397,468	87.6	132.7		
V002	Small Conc. Reservoir - 446 m3 size	1.00	1	1975				2	401,400	100	55	87,721	877	39,475	48,247	29.0	132.7		
V003	Rhonda Lake Reservoir Dam and vault	1.00	1	1998				2	2,500,000	150	128	1,720,045	11,467	252,273	1,467,772	91.3	132.7		
V004	Powder Basin Reservoir Dam and vault	1.00	1	2006				2	500,000	150	136	411,078	2,741	38,367	372,710	109.1	132.7		
V005	Rhonda Lake WTP Facility Piping	1.00	1	2006				2	1,050,000	50	36	863,263	17,265	241,714	621,549	109.1	132.7		
V006	Rhonda Lake WTP Facility Building	1.00	1	2006				2	450,000	100	86	369,970	3,700	51,796	318,174	109.1	132.7		
V007	Powder Basin WTP Piping	1.00	1	2015				2	500,000	50	45	477,016	9,540	47,702	429,314	126.6	132.7		
V008	Powder Basin WTP Building	1.00	1	2015				2	250,000	100	95	238,508	2,385	11,925	226,583	126.6	132.7		
						-			**6,454,200**			**4,697,557**	**53,275**	**815,741**	**3,881,817**				

Table A-7 SCHEDULE FOR ASSET REPLACEMENT

d

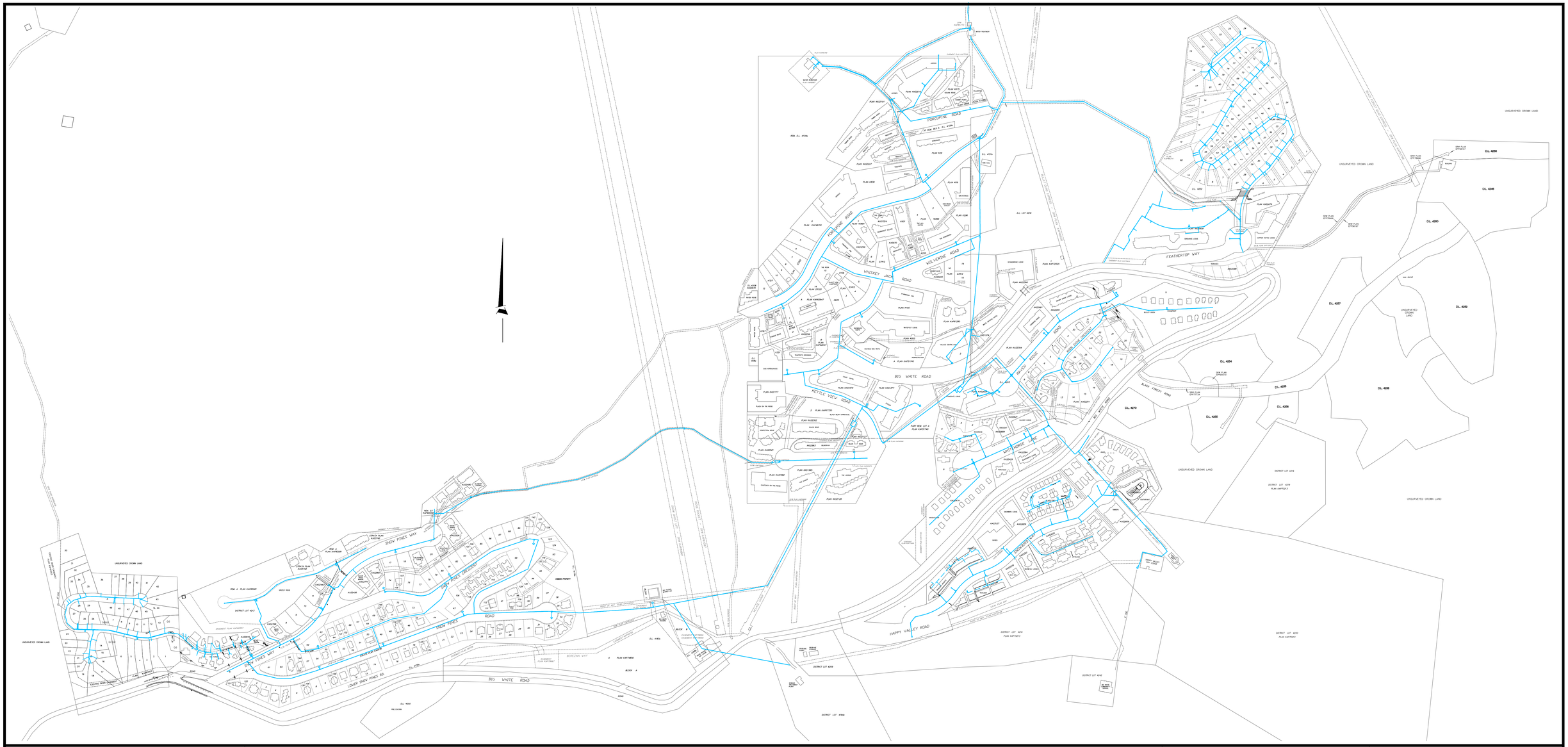
INPUTS

Enter Current Year	**2019**
Analysis for Yr Ending	**2019**
Forecasted CPI Rate	**1.75%**
Investment Interest Rate	**1.00%**

Funding Segment - By 10 yr increments		10 Yr COST	Cost $ / Yr
2020 - 2029		$ 109,062	$ 10,906
2030 - 2049	cost divided by 20 yrs	$ 523,070	$ 26,154
2050 - 2059		$ 3,478,777	$ 347,878
2060 - 2069		$ 4,489,667	$ 448,967
2070 - 2079		$ 6,878,498	$ 687,850
2080 - 2089		$ 1,233,112	$ 123,311
2090 - 2119	cost divided by 30 yrs	$ 8,506,018	$ 283,534
2120 - 2150	cost divided by 30 yrs	$ 28,820,802	$ 960,693

Renewal Cost - Sorted By Year and By Asset

Asset ID	Buildings, Water Main Linear Assets, Vertical Assets	Useful Life Remaining	Yr for Replacement	Current Value	Value at Replacement Date	10 Yr Sum	Cost / Year	Time Frame
W017	Hydrants 1970-79	5	2024	100,000	$ 109,061.66	$ 109,062	**$10,906.17**	10 yrs
W018	Hydrants 1980-89	15	2034	-	$ -			
W019	Hydrants 1990-99	25	2044	230,000	$ 354,885.52			
W022	25-50mm Domestic Services 1980-89	25	2044	24,000	$ 37,031.53			
W026	25-50mm Domestic Services 1980-89	25	2044	45,000	$ 69,434.12		2030-2049	
W030	100-150mm Domestic Services 1980-89	25	2044	40,000	$ 61,719.22	$ 523,070	**$26,153.52**	20 yrs
W020	Hydrants 2000-09	35	2054	500,000	$ 917,644.85			
W023	25-50mm Domestic Services 1990-99	35	2054	44,000	$ 80,752.75			
W027	25-50mm Domestic Services 1990-99	35	2054	82,500	$ 151,411.40			
W031	100-150mm Domestic Services 1990-99	35	2054	60,000	$ 110,117.38			
W034	Blow-offs - Air Release Valves	35	2054	75,000	$ 137,646.73			
V005	Rhonda Lake WTP Piping	36	2055	621,549	$ 1,160,685.79			
W005	150mm DI Watermain 1980-89	39	2058	162,690	$ 320,039.19		2050-2059	
W035	PRV - Large Station	40	2059	300,000	$ 600,479.20	$ 3,478,777	**$347,877.73**	10 yrs
W021	Hydrants 2010-19	45	2064	20,000	$ 43,659.50			
W024	25-50mm Domestic Services 2000-09	45	2064	116,000	$ 253,225.13			
W028	25-50mm Domestic Services 2000-09	45	2064	217,500	$ 474,797.11			
W032	100-150mm Domestic Services 2000-09	45	2064	180,000	$ 392,935.54			
V008	Powder Basin WTP Piping	45	2064	429,314	$ 937,182.35			
W004	100mm DI Watermain 1990-2000	46	2065	625	$ 1,388.24			
W006	150mm DI Watermain 1990-99	50	2069	118,490	$ 282,099.68			
W009	200mm DI Watermain 1990-99	50	2069	176,190	$ 419,471.20			
W012	250mm DI Watermain 1990-99	50	2069	348,210	$ 829,014.51			
W015	300mm DI Watermain 1990-99	50	2069	59,500	$ 141,656.94		2060-2069	
W036	PRV - Small Station	50	2069	300,000	$ 714,236.68	$ 4,489,667	**$448,966.69**	10 yrs
W025	25-50mm Domestic Services 2010-19	55	2074	16,000	$ 41,544.45			
W029	25-50mm Domestic Services 2010-19	55	2074	30,000	$ 77,895.84			
W033	100-150mm Domestic Services 2010-19	55	2074	20,000	$ 51,930.56			
V002	Small Conc. Reservoir - 446 m3 size	56	2075	401,400	$ 1,060,485.59			
W007	150mm DI Watermain 2000-09	60	2079	205,360	$ 581,541.79			
W008	150mm DI Watermain 2010-19	60	2079	-	$ -			
W010	200mm DI Watermain 2000-09	60	2079	573,090	$ 1,622,885.59			
W013	250mm DI Watermain 2000-09	60	2079	519,400	$ 1,470,845.37		2070-2079	
W016	300mm DI Watermain 2000-09	60	2079	696,150	$ 1,971,368.90	$ 6,878,498	**$687,849.81**	10 yrs
W001	150mm PVC Watermain 1980-89	62	2081	26,469	$ 77,601.74			
W002	250mm PVC Watermain 1980-89	62	2081	73,140	$ 214,431.64			
W003	300mm PVC Watermain 1980-82	62	2081	65,100	$ 190,859.99			
W011	200mm DI Watermain 2010-19	70	2089	164,430	$ 553,847.64		2080 - 2089	
W014	250mm DI Watermain 2010-19	70	2089	58,300	$ 196,371.21	$ 1,233,112	**$123,311.22**	10 yrs
V006	Powder Basin WTP Facility	71	2090	850,000	$ 2,913,148.32			
V001	Large Conc. Reservoir - 892 m3 size	76	2095	802,800	$ 3,000,703.77			
V006	Rhonda Lake WTP Building	86	2105	318,174	$ 1,414,570.94		2090 - 2119	
V008	Powder Basin WTP Building	95	2114	226,583	$ 1,177,595.39	$ 8,506,018	**$283,533.95**	30 yrs
V003	Rhonda Lake Reservoir Dam and vault	129	2148	2,500,000	$ 23,435,807.25		2120 - 2149	
V004	Powder Basin Reservoir Dam and vault	137	2156	500,000	$ 5,384,994.40	$ 28,820,802	**$960,693.39**	30 yrs



LEGEND:

TITLE:

BIG WHITE MOUNTAIN

WATER SYSTEM

DRAWN BY:

RUNNALLS DENBY

british columbia land surveyors

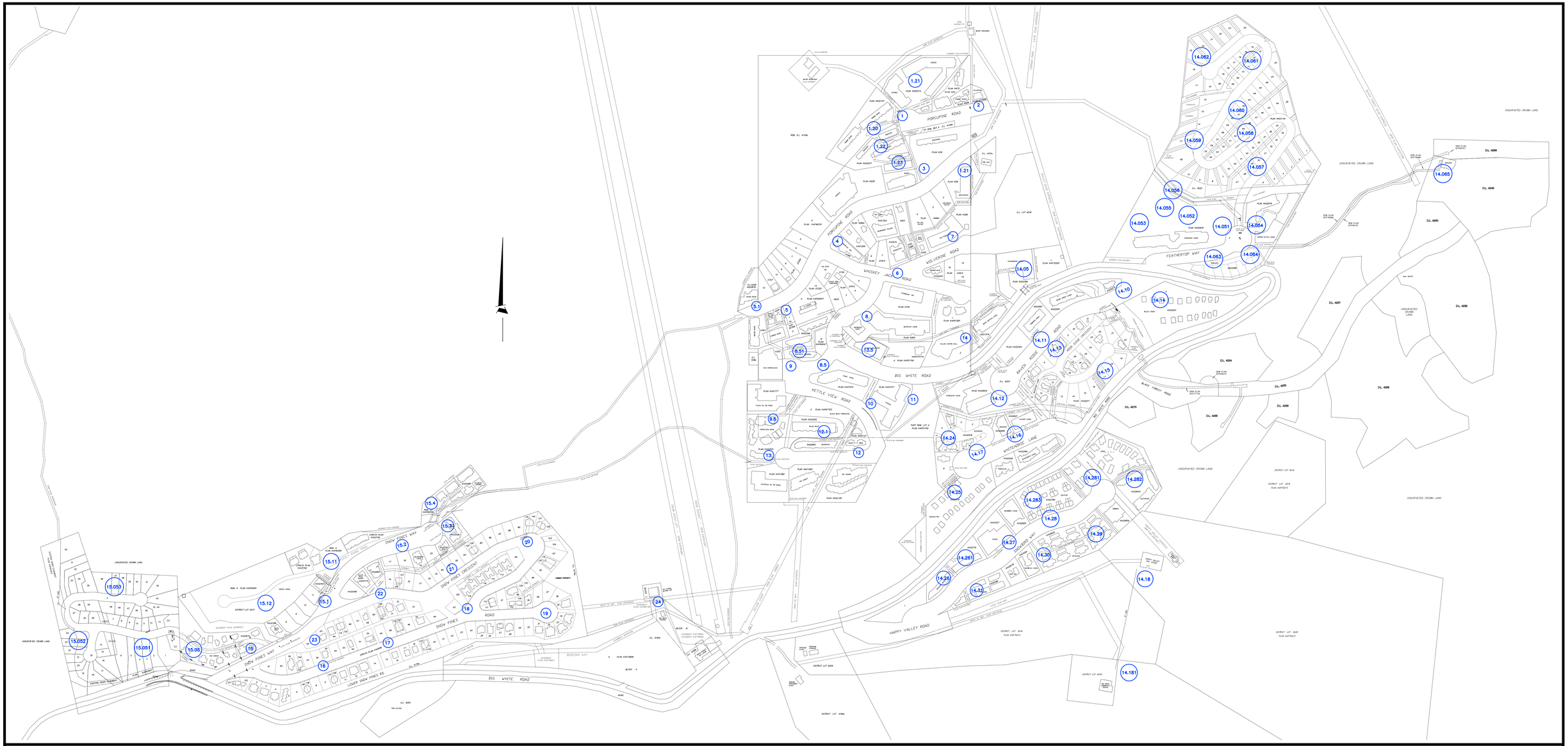
259A Lawrence Avenue
Kelowna B.C. V1Y 6L2

Phone: (250)763-7322
Fax: (250)763-4413

Email: neil@runnallsdenby.com

CLIENT: BIG WHITE UTILITIES

SCALE:	1:3000
DATE:	FEBRUARY 14th, 2019
DWG:	12748 WATER 2019
FILE No:	12748
REV.	0



LEGEND:

15.051 DENOTES EXISTING NUMBERED FIRE HYDRANT

TITLE:

BIG WHITE MOUNTAIN

FIRE HYDRANT MAP

DRAWN BY:

RUNNALLS DENBY
british columbia land surveyors
259A Lawrence Avenue
Kelowna B.C. V1Y 6L2
Phone: (250)763-7322
Fax: (250)763-4413
Email: neil@runnallsdenby.com

CLIENT: BIG WHITE UTILITIES

SCALE:	1:3000
DATE:	FEBRUARY 14th, 2019
DWG:	12748 FIRE HYDRANTS
FILE No:	12748
REV.	0

APPENDIX D

Schedule A

Standard Depreciation Rates for Private Water Utilities in British Columbia

NARUC Acct No.		Account Title	Prescribed Service Life SL [Years]	Prescribed Depreciation Rate DR = 100/SL [% per Year]	Estimated Costs EC [$]	Annual Depreciation 2 AD = EC*DR/100 [$]	Actual Costs 3 AC [$]	Annual Depreciation 4 AD = AC*DR/100 [$]
A		**Source of Supply Plant**						
	304	***Structures and Improvements***						
	304.1	Wood Frame	30	3.3%		$ -		$ -
	304.2	Steel	40	2.5%		$ -		$ -
	304.3	Cement Block	40	2.5%		$ -		$ -
	304.4	Reinforced Concrete or Brick	50	2.0%		$ -		$ -
	304.5	Miscellaneous	25	4.0%		$ -		$ -
	305	***Collecting and Impounding Reservoirs***						
	305.1	Wood Structures	35	2.9%		$ -		$ -
	305.2	Earth Fill Structures	60	1.7%	$ 6,800,000	$ 113,333		$ -
	305.3	Concrete Structures	75	1.3%		$ -		$ -
	306	***Lake, River and Other Intakes***						
	306.1	Wood Structures	35	2.9%		$ -		$ -
	306.2	Concrete Structures	60	1.7%		$ -		$ -
	307	***Wells and Springs***	40	2.5%		$ -		$ -
	309	***Supply Mains***						
	309.1	PVC AWWA C900	75	1.3%		$ -		$ -
	309.2	HDPE AWWA C906	75	1.3%		$ -		$ -
	309.3	Ductile/Cast Iron	60	1.7%		$ -		$ -
	309.4	Steel, Cement Lined	50	2.0%		$ -		$ -
	309.5	Concrete	50	2.0%		$ -		$ -
	309.6	Sub-Marine Mains	20	5.0%		$ -		$ -
	339	**Other Misc. Water Source Plant**	25	4.0%				
B		**Pumping Plant**						
	304	***Structures and Improvements***						
	304.1	Wood Frame	30	3.3%		$ -		$ -
	304.2	Steel	40	2.5%		$ -		$ -
	304.3	Cement Block	40	2.5%		$ -		$ -
	304.4	Reinforced Concrete or Brick	50	2.0%		$ -		$ -
	304.5	Miscellaneous	25	4.0%		$ -		$ -
	310	***Power Generation Equipment***	25	4.0%		$ -		$ -
	311	***Pumping Equipment***						
	311.1	Electric Pumping Equipment	25	4.0%		$ -		$ -
	311.2	Diesel Pumping Equipment	25	4.0%		$ -		$ -
	311.3	Other Pumping Equipment	25	4.0%		$ -		$ -
	339	**Other Miscellaneous Pumping Plant**	25	4.0%		$ -		$ -
C		**Water Treatment Plant**						
	304	***Structures and Improvements***						
	304.1	Wood Frame	30	3.3%	$ 540,000	$ 18,000		$ -
	304.2	Steel	40	2.5%	$ 640,000	$ 16,000		$ -
	304.3	Cement Block	40	2.5%		$ -		$ -
	304.4	Reinforced Concrete or Brick	50	2.0%		$ -		$ -
	304.5	Miscellaneous	25	4.0%		$ -		$ -
	320	***Treatment Equipment***						
	320.1	Sand & Other Media Filtration Equipmer	30	3.3%	$ 500,000	$ 16,667		$ -
	320.2	Membrane Filtration Equipment	15	6.7%		$ -		$ -
	320.3	Chlorination	15	6.7%	$ 100,000	$ 6,667		$ -
	320.4	Other Water Treatment Equipment	20	5.0%		$ -		$ -
	339	**Other Miscellaneous Treatment Plant**	25	4.0%	$ 1,900,000	$ 76,000		$ -
D		**Transm. and Distribution Plant**						
	304	***Structures and Improvements***						
	304.1	Wood Frame	30	3.3%		$ -		$ -
	304.2	Steel	40	2.5%		$ -		$ -
	304.3	Cement Block	40	2.5%		$ -		$ -
	304.4	Reinforced Concrete or Brick	50	2.0%		$ -		$ -
	304.5	Miscellaneous	25	4.0%		$ -		$ -
	330	***Distribution Reservoirs***						
	330.1	Concrete (underground)	60	1.7%	$ 3,500,000	$ 58,333		$ -
	330.2	Steel (above ground)	50	2.0%		$ -		$ -

Continued on next page...

Schedule A

Standard Depreciation Rates for Private Water Utilities in British Columbia

NARUC Acct No.		Account Title	Prescribed Service Life SL [Years]	Prescribed Depreciation Rate DR = 100/SL [% per Year]	Estimated Costs EC [$]	Annual Depreciation 2 AD = EC*DR/100 [$]	Actual Costs 3 AC [$]	Annual Depreciation 4 AD = AC*DR/100 [$]
D		**Transm. and Distr. Plant (con't)**						
	331	***Transmission and Distribution Mains***						
	331.1	PVC AWWA C900	75	1.3%	$ 200,000	$ 2,667		$ -
	331.2	HDPE AWWA C906	75	1.3%		$ -		$ -
	331.3	Ductile/Cast Iron	60	1.7%	$ 4,200,000	$ 70,000		$ -
	331.4	Steel, Cement Lined	50	2.0%		$ -		$ -
	331.5	Concrete	50	2.0%		$ -		$ -
	331.6	Sub-Marine Mains	20	5.0%		$ -		$ -
	333	***Services***	50	2.0%	$ 1,000,000	$ 20,000		$ -
	334	***Meters and Meter Installations***	25	4.0%	$ 1,500,000	$ 60,000		$ -
	335	***Hydrants / Standpipes***	50	2.0%	$ 1,000,000	$ 20,000		$ -
	339	***Other Transm. and Distribution Plant***	25	4.0%	$ 450,000	$ 18,000		$ -
E		**General Plant**						
	304	***Structures and Improvements***						
	304.1	Wood Frame	30	3.3%		$ -		$ -
	304.2	Steel	40	2.5%		$ -		$ -
	304.3	Cement Block	40	2.5%		$ -		$ -
	304.4	Reinforced Concrete or Brick	50	2.0%		$ -		$ -
	304.5	Miscellaneous	25	4.0%		$ -		$ -
	340	***Office Furniture and Equipment***	20	5.0%		$ -		$ -
	349	***Computer Equipment***	5	20.0%		$ -		$ -
	341	***Transportation Equipment***	7	14.3%		$ -		$ -
	342	***Stores Equipment***	20	5.0%		$ -		$ -
	343	***Tools, Shop and Garage Equipment***	15	6.7%		$ -		$ -
	344	***Laboratory Equipment***	15	6.7%		$ -		$ -
	345	***Power Operated Equipment***	15	6.7%		$ -		$ -
	346	***Communication Equipment***	10	10.0%		$ -		$ -
	346.1	Communication Equipment - SCADA	10	10.0%		$ -		$ -
	346.2	Other Communication Equipment	10	10.0%		$ -		$ -
	347	***Miscellaneous Equipment***	20	5.0%		$ -		$ -
F		**Other Tangible Plant**						
	348	***Other Tangible Plant*** [5]	50	2.0%		$ -		$ -
G		**Intangible Plant**						
	301	***Organization***	100	1.0%		$ -		$ -
	302	***Franchises and Consents***	100	1.0%		$ -		$ -
a		**Subtotal Construction Cost [$]**			$ 22,330,000		$ -	
b		**Total Annual Depreciation [$]**				$ 495,667		$ -
c		**Composite Depreciation Rate [%], = b / a * 100**		2.2%				
d		**Engineering Cost** [6]			$ 500			
e		**Annual Engineering Cost Component [$] = d * c / 100**				$ 11		$ -
f		**Contingency** [7]			$ 500		n/a	
g		**Annual Contingency Cost Component [$] = f * c / 100**				$ 11		n/a
h		**Total Annual Cost = Annual RRF Contribution** [8] **= b + e + g**				$ 495,689		$ -

Notes:

1. Estimated Costs at CPCN application/pre-construction stage, in CAD $, from CPCN Application Guide - Appendix 6 - Capital Cost Estimate Form
2. Annual Depreciation based on Estimated Costs at CPCN stage.
3. Actual Costs at post-construction approval stage, in CAD $, from CPCN Application Guide - Appendix 6 - Capital Cost Estimate Form
4. Annual Depreciation based on Actual Costs at post-construction approval stage; for establishing the final Water Tariff
5. List any applicable items such as Valve Chambers, PRV Stations etc.
6. Total engineering fees including survey cost, (see CPCN Application Guide - Appendix 6 - Capital Cost Estimate Form)
7. Contingency allowance at CPCN application/pre-contruction stage, (see CPCN Application Guide - Appendix 6 - Capital Cost Estimate Form
8. RRF - Replacement Reserve Fund, equals rows b + e + g

Last Update: August 2015

APPENDIX E

Account Number	TRX Date	Journal Entry	Debit Amount	Credit Amount	Reference	Description	Originating Master Name	Originating Document Number	
4-7210-000	2021-07-31	10198	$ 355.10	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	369297	Prepare Discharge, strata lot 4, form C
4-7210-000	2021-07-31	10199	$ 337.05	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	369310	
4-7210-000	2021-12-06	10980	$ 599.15	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	374881	
4-7210-000	2022-08-30	12628	$ 985.05	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	386097	
4-7210-000	2022-08-30	12626	$ 1,312.46	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	386108	
4-7210-000	2022-08-31	12632	$ 417.30	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	386242	
4-7210-000	2022-08-31	12633	$ 5,934.54	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	386316	
4-7210-000	2022-10-04	12869	$ 3,477.50	$ -	Payables Trx Entry	water moritorium advice	Pushor Mitchell LLP	387384	
4-7210-000	2022-10-27	13016	$ 452.61	$ -	Payables Trx Entry	Corix advice	Pushor Mitchell LLP	388706	
4-7210-000	2022-10-27	13018	$ 362.73	$ -	Payables Trx Entry	advice for Adrian-tariff, rent	Pushor Mitchell LLP	388738	
4-7210-000	2022-10-27	13017	$ 282.98	$ -	Payables Trx Entry	releasing DCC mortgages	Pushor Mitchell LLP	388653	
4-7210-000	2022-11-18	13214	$ 96.30	$ -	Payables Trx Entry	rls DCC mort for FT, lot 53	Pushor Mitchell LLP	389764	
4-7210-000	2022-11-22	13212	$ 404.28	$ -	Payables Trx Entry	filing annual report	Pushor Mitchell LLP	389299	
4-7210-000	2023-01-27	13558	$ 1,341.24	$ -	Payables Trx Entry	SRW to BWCS and BWCR	Pushor Mitchell LLP	392689	
4-7210-000	2023-01-30	13559	$ 1,273.30	$ -	Payables Trx Entry	bottling water issue/brewery	Pushor Mitchell LLP	392790	
4-7210-000	2023-03-24	14020	$ 3,954.22	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	395200	
4-7210-000	2023-08-28	14998	$ 575.82	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	401209	
4-7210-000	2023-11-30	15611	$ 1,314.82	$ -	Payables Trx Entry	DCC mortgages, etc.	Pushor Mitchell LLP	405566	
4-7210-000	2023-11-30	15610	$ 590.13	$ -	Payables Trx Entry	DCC mortgages, etc	Pushor Mitchell LLP	405569	
4-7210-000	2024-02-02	16013	$ 2,989.81	$ -	Payables Trx Entry	CPCN issue with Monashee Ridge	Pushor Mitchell LLP	408117	
4-7210-000	2024-02-02	16014	$ 128.40	$ -	Payables Trx Entry	DCC mortgage - Grizzly Ridge	Pushor Mitchell LLP	408111	
4-7210-000	2024-02-26	16152	$ 3,049.50	$ -	Payables Trx Entry	civil claim Monashee Ridge	Pushor Mitchell LLP	408874	
4-7210-000	2024-04-24	16419	$ 483.31	$ -	Payables Trx Entry	2023 Annual Reports	Pushor Mitchell LLP	411066	
4-7210-000	2024-10-24	17387	$ 2,515.49	$ -	Payables Trx Entry	legal services Apr-Oct 2024	Pushor Mitchell LLP	418014	
4-7210-000	2024-12-06	17695	$ 1,929.53	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	419988	
4-7210-000	2025-01-22	17831	$ 1,772.01	$ -	Payables Trx Entry	Grizzly Ridge water line issue	Pushor Mitchell LLP	422186	
4-7210-000	2025-01-23	17834	$ 964.00	$ -	Payables Trx Entry	Purchases	Pushor Mitchell LLP	422272	

APPENDIX F

Vendor	General Area
Agua Consulting	Engineering
BDO Canada LLP	Accounting
Brent Harley & Associates	Engineering
Centrix Control Solutions	Engineering
Ecora Engineering & Resource Group Ltd.	Specialist Consulting *
Keppel Gate Consulting Ltd.	Specialist Consulting
Kerr Wood Leidal Associates Ltd	Engineering
Pushor Mitchell LLP	Legal **
Runnalls Denby Land Surveying Ltd.	Engineering

** Ecora was primarily used to design the reservoir capital project.*

***These expenses should have been posted to Legal.*

APPENDIX G

Account Number	TRX Date	Journal Entry	Debit Amount	Credit Amount	Reference	Description	Originating Master Name	Originating Document Number
4-7290-000	2021-06-11	9828	$ 4,085.00	$ -	Payables Trx Entry	Purchases	Professional Diving Technologies Ltd	CFC0473
4-7290-000	2021-06-30	9922	$ -	$ 54.68	Payables Trx Entry	Mearls CM71678 PRV	Big White Ski Resort Ltd	BWSR0003749
4-7290-000	2021-06-30	9926	$ 254.00	$ -	Payables Trx Entry	Purchases	Centrix Control Solutions	INV17047
4-7290-000	2021-06-30	9927	$ 2,574.42	$ -	Payables Trx Entry	Purchases	Okanagan Stainless Ltd.	21926
4-7290-000	2021-06-30	9923	$ 245.17	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003756
4-7290-000	2021-07-03	10003	$ -	$ 245.17	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003759
4-7290-000	2021-07-17	10002	$ 90.00	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003764
4-7290-000	2021-07-21	9991	$ -	$ 5.00	Payables Trx Entry	Purchases	Centrix Control Solutions	CR16842
4-7290-000	2021-07-31	10209	$ 58.58	$ -	accrue July inv posted in Aug	WWOL350 Inv6097243		
4-7290-000	2021-07-31	10071	$ 1,678.41	$ -	Payables Trx Entry	Purchases	Fred Surridge Ltd	000655778
4-7290-000	2021-07-31	10077	$ 1,062.00	$ -	Payables Trx Entry	Purchases	Serwa Bulldozing Co Ltd	9925
4-7290-000	2021-07-31	10196	$ 83.89	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003785
4-7290-000	2021-08-01	10209	$ -	$ 58.58	accrue July inv posted in Aug	WWOL350 Inv6097243		
4-7290-000	2021-08-11	10147	$ 694.88	$ -	Payables Trx Entry	Purchases	Sunbelt Rentals of Canada Ltd.	73822027-0001
4-7290-000	2021-08-11	10145	$ 58.58	$ -	Payables Trx Entry	Purchases	Wolseley Waterworks Group	6097243
4-7290-000	2021-08-11	10143	$ 9.10	$ -	Payables Trx Entry	Purchases	Allans Hose n All	243950
4-7290-000	2021-08-16	10212	$ 4,395.00	$ -	Payables Trx Entry	Purchases	Professional Diving Technologies Ltd	CFC 0481
4-7290-000	2021-08-17	10261	$ 33.37	$ -	Payables Trx Entry	Purchases	Wolseley Waterworks Group	6148398
4-7290-000	2021-08-31	10264	$ 104.86	$ -	Payables Trx Entry	Purchases	Wolseley Waterworks Group	6170459
4-7290-000	2022-01-05	11091	$ 49.19	$ -	Payables Trx Entry	Hammers - Summit Tools	Valcourt, Maurice	MVAJAN042022
4-7290-000	2022-01-31	11264	$ 240.66	$ -	Payables Trx Entry	Ribbon Cable, Cuvette	MEQUIPCO	53894
4-7290-000	2022-02-17	11427	$ -	$ 401.99	Payables Trx Entry	Kelowna Yamaha - credit thrott	Big White Ski Resort Ltd	BWSRCM0000366
4-7290-000	2022-02-17	11426	$ 924.94	$ -	Payables Trx Entry	Kel Yamaha - Secondary	Big White Ski Resort Ltd	BWSR0003974
4-7290-000	2022-03-12	11599	$ 201.00	$ -	Payables Trx Entry	gas detector recalibration	Big White Ski Resort Ltd	BWSR0004002
4-7290-000	2022-04-01	11823	$ 346.68	$ -	Payables Trx Entry	MGG-T Tube Assembly	Centrix Control Solutions	INV67056
4-7290-000	2022-04-23	11803	$ 399.30	$ -	Payables Trx Entry	Gescan 14291547-00	Big White Ski Resort Ltd	BWSR0004037
4-7290-000	2022-05-07	11965	$ 113.37	$ -	Payables Trx Entry	Princess Auto 2527079	Big White Ski Resort Ltd	BWSR0004049
4-7290-000	2022-05-07	11965	$ 19.25	$ -	Payables Trx Entry	Pro Builder Supply - parts	Big White Ski Resort Ltd	BWSR0004049
4-7290-000	2022-05-07	11965	$ 7.49	$ -	Payables Trx Entry	Pro Builder Supply - p-hose	Big White Ski Resort Ltd	BWSR0004049
4-7290-000	2022-05-18	11947	$ 572.24	$ -	Payables Trx Entry	Powder WTP pump hose replace	Allans Hose n All	259260
4-7290-000	2022-05-25	12016	$ 3,616.60	$ -	Payables Trx Entry	Kettleview water main break	Wolseley Waterworks Group	7004858
4-7290-000	2022-05-26	12018	$ 60.94	$ -	MVA expenses May '22	Summit Tools	Valcourt, Maurice	MAY2022EXP
4-7290-000	2022-05-30	12095	$ 905.83	$ -	Payables Trx Entry	Kettleview Rd-repair main leak	Sunbelt Rentals of Canada Ltd.	74669422-0001
4-7290-000	2022-05-31	12102	$ -	$ 2,562.65	Payables Trx Entry	returned goods kettleview rd	Wolseley Waterworks Group	7200274
4-7290-000	2022-05-31	12015	$ 2,323.22	$ -	Payables Trx Entry	Kettleview water main break	Serwa Excavating Co Ltd	143
4-7290-000	2022-06-07	12045	$ 22.79	$ -	Payables Trx Entry	Purchases	Fred Surridge Ltd	000661425
4-7290-000	2022-06-28	12194	$ 1,027.20	$ -	Payables Trx Entry	Lightning arrestors for WTP	Centrix Control Solutions	INV18019
4-7290-000	2022-06-30	12329	$ 230.08	$ -	Payables Trx Entry	TELUS 2582146	Big White Ski Resort Ltd	BWSR0004087
4-7290-000	2022-06-30	12329	$ 142.10	$ -	Payables Trx Entry	CLOVERDALE 014600696	Big White Ski Resort Ltd	BWSR0004087
4-7290-000	2022-06-30	12329	$ 84.04	$ -	Payables Trx Entry	VANKEL 80223003938	Big White Ski Resort Ltd	BWSR0004087
4-7290-000	2022-06-30	12329	$ 67.21	$ -	Payables Trx Entry	VANKEL 80223003937	Big White Ski Resort Ltd	BWSR0004087
4-7290-000	2022-07-20	12535	$ 286.76	$ -	Payables Trx Entry	Dialer replacement	Centrix Control Solutions	INV18062
4-7290-000	2022-07-31	12545	$ 84.74	$ -	Payables Trx Entry	mara lumber CA3571	Big White Ski Resort Ltd	BWSR0004107
4-7290-000	2022-08-19	12561	$ 2,734.00	$ -	Payables Trx Entry	Autodialer replacement	Centrix Control Solutions	INV18120
4-7290-000	2022-08-31	12625	$ 1,767.64	$ -	Payables Trx Entry	Water distribuition Monashee R	Serwa Bulldozing Co Ltd	213
4-7290-000	2022-09-15	12700	$ 571.38	$ -	Payables Trx Entry	multifunction valve AWC	Rowland, Gord	EXPSEP2022
4-7290-000	2022-10-01	12911	$ 1,058.06	$ -	Rhonda Lake Dam Mtce	Rhonda Lake Dam Mtce	Sunbelt Rentals	75047859-0001
4-7290-000	2022-10-14	12914	$ 130.51	$ -	Road prep for valve repair	Road prep for valve repair	Sunbelt Rentals of Canada Ltd.	75128886-0001
4-7290-000	2022-10-20	12994	$ 28.88	$ -	MVA's October Expenses	princess auto - tools	Valcourt, Maurice	2022OCTEXP
4-7290-000	2022-10-21	13038	$ 583.69	$ -	Payables Trx Entry	rep UV lamps for powder basin	Gentis Water Company Ltd.	22-3223
4-7290-000	2022-10-31	12998	$ 552.87	$ -	Payables Trx Entry	Kettleview Rd repair - valve	Serwa Excavating Co Ltd	272
4-7290-000	2022-10-31	12964	$ 124.34	$ -	Payables Trx Entry	Powder basin WTP repair	Allans Hose n All	268881
4-7290-000	2022-11-22	13151	$ 80.87	$ -	Payables Trx Entry	Purchases	Fred Surridge Ltd	000664218
4-7290-000	2022-11-24	13218	$ 474.32	$ -	Payables Trx Entry	UVT lamps	Rowland, Gord	EXPNOV2022
4-7290-000	2022-12-06	13334	$ 2,256.16	$ -	Payables Trx Entry	lamps for powder basin UV	Gentis Water Company Ltd.	22-3255
4-7290-000	2022-12-31	13481	$ 406.40	$ -	Payables Trx Entry	canada safety 160244	Big White Ski Resort Ltd	BWSR0004239
4-7290-000	2023-01-18	13517	$ 850.32	$ -	Payables Trx Entry	quartz sleeve	Xylem Canada LP	3558383620
4-7290-000	2023-01-20	13520	$ 1,235.00	$ -	Payables Trx Entry	WTP UV and PLC troubleshooting	Centrix Control Solutions	INV18475
4-7290-000	2023-02-23	13804	$ 1,247.97	$ -	Payables Trx Entry	filter fans x 2	Xylem Canada LP	3558385361
4-7290-000	2023-02-25	13875	$ 15.24	$ -	Payables Trx Entry	rona 36075691	Big White Ski Resort Ltd	BWSR0004308
4-7290-000	2023-02-25	13875	$ 1,060.00	$ -	Payables Trx Entry	D&L 12471	Big White Ski Resort Ltd	BWSR0004308
4-7290-000	2023-02-28	13874	$ 47.26	$ -	Payables Trx Entry	rona 35833251	Big White Ski Resort Ltd	BWSR0004319
4-7290-000	2023-03-15	13912	$ 117.30	$ -	Payables Trx Entry	Fuel line for Ford Truck	Allans Hose n All	275150
4-7290-000	2023-03-31	14033	$ 927.50	$ -	Payables Trx Entry	D&L 12491	Big White Ski Resort Ltd	BWSR0004343
4-7290-000	2023-04-06	14072	$ 32.58	$ -	Payables Trx Entry	Princess Auto-Files Tools	Valcourt, Maurice	APR2023EXP
4-7290-000	2023-04-06	14072	$ 85.60	$ -	Payables Trx Entry	Jerry's Mufflers-WTP generator	Valcourt, Maurice	APR2023EXP
4-7290-000	2023-05-03	14245	$ 124.00	$ -	Payables Trx Entry	RhondaLk generator & trans swc	Centrix Control Solutions	INV18751
4-7290-000	2023-05-03	14245	$ 210.00	$ -	Payables Trx Entry	PowBas WTP UV remote help	Centrix Control Solutions	INV18751
4-7290-000	2023-05-03	14245	$ 280.00	$ -	Payables Trx Entry	RhondaLk WTP remote support	Centrix Control Solutions	INV18751
4-7290-000	2023-05-19	14266	$ 1,292.00	$ -	Payables Trx Entry	Rhonda Lk WTP filter fan	Xylem Canada LP	3558389549
4-7290-000	2023-05-31	14338	$ 54.05	$ -	Graham's expense	Postage UV sensors	Sullivan, Graham	MAY2023
4-7290-000	2023-05-31	14414	$ 5.37	$ -	Payables Trx Entry	growers 420528	Big White Ski Resort Ltd	BWSR0004390
4-7290-000	2023-06-19	14621	$ 16.05	$ -	MVA June expenses	Heps - tools	Valcourt, Maurice	JUNE2023MVA
4-7290-000	2023-06-21	14510	$ 488.43	$ -	Water Meter Install 7595 Porcu	Water Meter install at WTP	Billy's Waterworks	INV-08781
4-7290-000	2023-06-29	14584	$ 193.72	$ -	Payables Trx Entry	Saddle, nipples, bushing, tee	Wolseley Waterworks Group	8172665

4-7290-000	2023-07-10	14751	$ 1,588.22	$ -	Payables Trx Entry	UV Sensor verification	Xylem Canada LP	3558391913
4-7290-000	2023-07-18	14669	$ 9,970.50	$ -	paving kettleview rd	paving kettleview plaza valve	Peters Bros. Construction Ltd.	D-436-7/23
4-7290-000	2023-08-23	14997	$ 396.76	$ -	Payables Trx Entry	Harsco filters small reactors	H204U	INV9554
4-7290-000	2023-08-29	14999	$ 1,802.95	$ -	Payables Trx Entry	Purchases	Wolseley Waterworks Group	8330916
4-7290-000	2023-09-11	15105	$ -	$ 28.34	Void Open Trx	Purchases	Valcourt, Maurice	MVASEP2023
4-7290-000	2023-09-11	15070	$ 28.34	$ -	Payables Trx Entry	small electric grinder	Valcourt, Maurice	MVASEP2023
4-7290-000	2023-09-12	15066	$ 2,379.37	$ -	Payables Trx Entry	Brush cut around tanks & WTP	Gentle Panda Landscaping	662
4-7290-000	2023-09-15	15099	$ 140.00	$ -	Payables Trx Entry	test & trubshoot pit 2	Centrix Control Solutions	INV19079
4-7290-000	2023-09-26	15106	$ 28.34	$ -	Payables Trx Entry	small electric grinder	Big White Ski Resort Ltd	BWSR0004487
4-7290-000	2023-09-26	15106	$ 4,508.98	$ -	Payables Trx Entry	AWC LMI pump & kit	Big White Ski Resort Ltd	BWSR0004487
4-7290-000	2023-09-26	15120	$ 71.73	$ -	Payables Trx Entry	Purchases	Allans Hose n All	287366
4-7290-000	2023-10-16	15309	$ 2,601.75	$ -	Payables Trx Entry	Purchases	Centrix Control Solutions	INV19151
4-7290-000	2023-11-01	15642	$ 494.13	$ -	Payables Trx Entry	Filter	H204U	INV11424
4-7290-000	2023-11-30	15686	$ 1,225.86	$ -	Payables Trx Entry	UV sensor, lamps, ballast	Rowland, Gord	NOV2023EXP
4-7290-000	2023-11-30	15683	$ 184.85	$ -	Payables Trx Entry	Mara Lumber CN6375	Big White Ski Resort Ltd	BWSR0004559
4-7290-000	2023-11-30	15683	$ 268.00	$ -	Payables Trx Entry	Interstate Batte 1925801008296	Big White Ski Resort Ltd	BWSR0004559
4-7290-000	2023-12-01	15714	$ 12.01	$ -	Payables Trx Entry	Jerry's Mufflers - WTP genset	Valcourt, Maurice	DEC4EXP
4-7290-000	2023-12-09	15717	$ 132.35	$ -	Payables Trx Entry	3" Gas Trash Pump, hoses	Sunbelt Rentals of Canada Ltd.	76488428-0001
4-7290-000	2023-12-09	15718	$ 260.81	$ -	Payables Trx Entry	14" floor saw, diamond blade	Sunbelt Rentals of Canada Ltd.	76485898-0001
4-7290-000	2023-12-11	15751	$ 1,783.69	$ -	Payables Trx Entry	repair parts for snowbird way	Wolseley Waterworks Group	8629996
4-7290-000	2023-12-11	15729	$ 19.52	$ -	Payables Trx Entry	2x50 cam hose	Sunbelt Rentals of Canada Ltd.	76485898-0003
4-7290-000	2023-12-11	15728	$ 292.38	$ -	Payables Trx Entry	sub dewater pump, plate tamper	Sunbelt Rentals of Canada Ltd.	76485898-0002
4-7290-000	2023-12-15	15807	$ -	$ 10,037.05	Void Open Trx	Purchases	Serwa Excavating Co Ltd	578
4-7290-000	2023-12-15	15808	$ 9,279.12	$ -	Payables Trx Entry	water main Snowbird Way	Serwa Excavating Co Ltd	578.
4-7290-000	2023-12-15	15748	$ 10,037.05	$ -	Payables Trx Entry	Water main leak Snowbird Way	Serwa Excavating Co Ltd	578
4-7290-000	2023-12-19	15757	$ 54.73	$ -	Payables Trx Entry	brass precision needle valve	Allans Hose n All	291683
4-7290-000	2023-12-21	15763	$ -	$ 545.70	returned 8" bolt coupling	returned 8" bolt coupling	Wolseley Waterworks Group	7279835
4-7290-000	2023-12-29	15891	$ 76.63	$ -	Payables Trx Entry	Richelieu KO06236	Big White Ski Resort Ltd	BWSR0004584
4-7290-000	2023-12-29	15891	$ 102.11	$ -	Payables Trx Entry	Rona 170-36925331	Big White Ski Resort Ltd	BWSR0004584
4-7290-000	2023-12-29	15891	$ 528.18	$ -	Payables Trx Entry	Mid-Valley Sheet Metal 10018	Big White Ski Resort Ltd	BWSR0004584
4-7290-000	2023-12-29	15891	$ 15.92	$ -	Payables Trx Entry	Richelieu KY85666	Big White Ski Resort Ltd	BWSR0004584
4-7290-000	2023-12-29	15891	$ 76.18	$ -	Payables Trx Entry	Rona 170-36859411	Big White Ski Resort Ltd	BWSR0004584
4-7290-000	2024-01-01	15913	$ 138.05	$ -	Payables Trx Entry	20' 115Vpump down float s/plug	EMPS Electric Motor & Pump Service Ltd	60394
4-7290-000	2024-01-31	16095	$ 300.73	$ -	Payables Trx Entry	Lafarge 719136903	Big White Ski Resort Ltd	BWSR0004642
4-7290-000	2024-01-31	16095	$ 322.31	$ -	Payables Trx Entry	Lafarge 719037664	Big White Ski Resort Ltd	BWSR0004642
4-7290-000	2024-01-31	16095	$ 336.11	$ -	Payables Trx Entry	Lafarge 719037665	Big White Ski Resort Ltd	BWSR0004642
4-7290-000	2024-03-09	16270	$ 37.50	$ -	Payables Trx Entry	repair shop tune	Big White Ski Resort Ltd	BWSR0004685
4-7290-000	2024-04-30	16540	$ 29.94	$ -	Payables Trx Entry	princess auto torch and butane	Big White Ski Resort Ltd	BWSR0004741
4-7290-000	2024-05-15	16545	$ 520.00	$ -	Payables Trx Entry	Sundance valve repair	Serwa Excavating Co Ltd	599
4-7290-000	2024-05-21	16546	$ 757.74	$ -	Payables Trx Entry	KMS tools-Portable band saw	Valcourt, Maurice	MAY2024MVAEXP
4-7290-000	2024-05-30	16587	$ 1,190.91	$ -	Payables Trx Entry	Hach chlorine reagent, turb st	Rowland, Gord	MAY2024EXP
4-7290-000	2024-05-30	16587	$ 2,307.99	$ -	Payables Trx Entry	Hoskin Scienti turbidity meter	Rowland, Gord	MAY2024EXP
4-7290-000	2024-06-04	16732	$ 138.80	$ -	Payables Trx Entry	gas detector repair service	Canada Safety Equipment Ltd	175109
4-7290-000	2024-06-06	16679	$ 1,447.71	$ -	Payables Trx Entry	Harmsco 19.5" filter 1 micron	H204U	INV23881
4-7290-000	2024-06-24	16699	$ 1,520.00	$ -	Payables Trx Entry	pressure guage for RL WTP	Endress + Hauser Canada Ltd	6001226030
4-7290-000	2024-06-30	16734	$ 300.00	$ -	Payables Trx Entry	repair/cleanup Snowbird Wy bre	Serwa Excavating Co Ltd	625
4-7290-000	2024-06-30	16844	$ 15.48	$ -	Payables Trx Entry	Uni-Select 1875-139853 t-stat	Big White Ski Resort Ltd	BWSR0004783
4-7290-000	2024-07-10	16878	$ 167.78	$ -	Payables Trx Entry	PE hoses & fittings	Allans Hose n All	302631
4-7290-000	2024-07-31	16995	$ 207.93	$ -	Payables Trx Entry	Princess Auto-3434271	Big White Ski Resort Ltd	BWSR0004811.
4-7290-000	2024-07-31	16993	$ 207.93	$ -	Payables Trx Entry	Princess Auto-3434271	Big White Ski Resort Ltd	BWSR0004811
4-7290-000	2024-07-31	16995	$ 47.10	$ -	Payables Trx Entry	Ok Power Equip-126035	Big White Ski Resort Ltd	BWSR0004811.
4-7290-000	2024-07-31	16993	$ 47.10	$ -	Payables Trx Entry	Ok Power Equip-126035	Big White Ski Resort Ltd	BWSR0004811
4-7290-000	2024-07-31	16994	$ -	$ 207.93	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-7290-000	2024-07-31	16994	$ -	$ 47.10	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-7290-000	2024-08-06	17049	$ 206.72	$ -	Payables Trx Entry	CRD/CDHS18 Pilot Repair kit	Mearl's Machine Works Ltd	81978
4-7290-000	2024-08-06	17048	$ 206.72	$ -	Payables Trx Entry	CRD/CDHS18 Pilot Repair kit	Mearl's Machine Works Ltd	81979
4-7290-000	2024-08-13	17040	$ 6,110.33	$ -	Payables Trx Entry	asphalt repairs	Peter's Bros. Construction Ltd.	D-643-8/24
4-7290-000	2024-08-15	17052	$ 145.00	$ -	Payables Trx Entry	Snowbird Way water valve raise	Serwa Excavating Co Ltd	675
4-7290-000	2024-08-23	17094	$ 456.92	$ -	Payables Trx Entry	Purchases	Allans Hose n All	305471
4-7290-000	2024-08-28	17093	$ 63.60	$ -	Payables Trx Entry	Purchases	Allans Hose n All	305425
4-7290-000	2024-08-29	17095	$ 46.62	$ -	Payables Trx Entry	Purchases	Allans Hose n All	305492
4-7290-000	2024-09-18	17237	$ 1,211.93	$ -	Payables Trx Entry	Service call for generator	Gentek Power	3
4-7290-000	2024-09-23	17222	$ 82.18	$ -	Payables Trx Entry	5/8x1/2 poly 75psi	Allans Hose n All	306718
4-7290-000	2024-09-25	17276	$ 326.35	$ -	Payables Trx Entry	TR40 Cover - blank sanitary	Wolseley Waterworks Group	9365193
4-7290-000	2024-09-25	17277	$ -	$ 326.35	Recode Wolseley #9365193	TR40 Cover Blank Sanitary		
4-7290-000	2024-10-03	17350	$ 805.00	$ -	Payables Trx Entry	test surge suppressor modules	Avatar Metrology Inc.	3841
4-7290-000	2024-10-08	17343	$ 1,567.50	$ -	Payables Trx Entry	commission generator, trbsht U	Centrix Control Solutions	INV20086
4-7290-000	2024-10-09	17346	$ 500.00	$ -	Payables Trx Entry	2 hours R&M water	D & L Enviromental Ltd	21157
4-7290-000	2024-10-31	17495	$ 15.02	$ -	Payables Trx Entry	Rona - 170-37616101	Big White Ski Resort Ltd	BWSR0004876
4-7290-000	2024-10-31	17495	$ 120.50	$ -	Payables Trx Entry	Cloverdale Paint - 014661764	Big White Ski Resort Ltd	BWSR0004876
4-7290-000	2024-10-31	17438	$ 19.80	$ -	Payables Trx Entry	6" coupling	Wolseley Waterworks Group	9466294
4-7290-000	2024-10-31	17439	$ 27.77	$ -	Payables Trx Entry	Summit Tools	Valcourt, Maurice	OCT2024EXP
4-7290-000	2024-10-31	17439	$ 768.26	$ -	Payables Trx Entry	The Lazer Guy - tools	Valcourt, Maurice	OCT2024EXP
4-7290-000	2024-10-31	17498	$ 799.16	$ -	Recode BWSR0004876	Rona 170-37667901		
4-7290-000	2024-10-31	17437	$ 920.20	$ -	Payables Trx Entry	6" flanges	Wolseley Waterworks Group	9466293
4-7290-000	2024-11-07	17512	$ 2,400.00	$ -	Payables Trx Entry	E&H turbidity issues	Centrix Control Solutions	INV20169

4-7290-000	2024-11-14	17546	$ 227.54	$ -	Payables Trx Entry	12 proread wall receptacles	Flowsystems Distribution Inc.	0000031245
4-7290-000	2024-11-26	17591	$ 589.79	$ -	Payables Trx Entry	1/4" PVC Needle Valve	Allans Hose n All	309913
4-7290-000	2024-11-29	17639	$ 454.51	$ -	Payables Trx Entry	UVT bulb, ribbon cable	MEQUIPCO	54703
4-7290-000	2024-11-30	17640	$ 23.58	$ -	Payables Trx Entry	Rona 170-37746071	Big White Ski Resort Ltd	BWSR0004920
4-7290-000	2024-12-05	17670	$ 1,650.00	$ -	Payables Trx Entry	PowBasin PLC, UV issues	Centrix Control Solutions	INV20247
4-7290-000	2024-12-11	17676	$ 80.38	$ -	Payables Trx Entry	1.5 Std Glv A53B Erw pipe T/C	Wolseley Waterworks Group	9581013
4-7290-000	2024-12-12	17680	$ 413.29	$ -	Payables Trx Entry	Harmsco 19.5" 1 micron filter	H204U	INV37063
4-7290-000	2024-12-31	17808	$ 16.82	$ -	Payables Trx Entry	Home Hardware 900355	Big White Ski Resort Ltd	BWSR0004952
4-7290-000	2024-12-31	17808	$ 56.11	$ -	Payables Trx Entry	Rona 170-37813371	Big White Ski Resort Ltd	BWSR0004952
4-7290-000	2024-12-31	17808	$ 56.92	$ -	Payables Trx Entry	Home Hardware 903439	Big White Ski Resort Ltd	BWSR0004952
4-7290-000	2024-12-31	17723	$ -	$ 413.29	WWH-harmsco filters	reverse orig posting	Big White Ski Resort Ltd	SALES00435
4-7290-000	2024-12-31	17808	$ -	$ 23.17	Payables Trx Entry	Home Hardware 903490	Big White Ski Resort Ltd	BWSR0004952
4-7290-000	2024-12-31	17808	$ 50.19	$ -	Payables Trx Entry	Home Hardware 902314	Big White Ski Resort Ltd	BWSR0004952
4-7290-000	2025-01-09	17803	$ 36.00	$ -	Payables Trx Entry	gas detector repair	Canada Safety Equipment Ltd	181511
4-7290-000	2025-01-09	17801	$ 600.00	$ -	Payables Trx Entry	tech supp CL2 analyzer	Centrix Control Solutions	INV20344
4-7290-000	2025-01-14	17875	$ 131.00	$ -	Payables Trx Entry	gas detector repairs	Canada Safety Equipment Ltd	181610
4-7290-000	2025-02-01	18085	$ 1,249.61	$ -	Payables Trx Entry	UV lamps x 4	Xylem Canada LP	3558419460
4-7290-000	2025-02-05	17970	$ 5,062.00	$ -	Payables Trx Entry	mtce at both WTPs	CENTRIX Control Solutions LP	INV20430
4-7290-000	2025-02-05	17993	$ -	$ 5,062.00	Void Open Trx	Purchases	CENTRIX Control Solutions LP	INV20430
4-7290-000	2025-02-05	17994	$ 5,062.00	$ -	Payables Trx Entry	2025 Maintenance	Centrix Control Solutions	INV20430
4-7290-000	2025-02-10	17967	$ 2,434.69	$ -	Payables Trx Entry	Curbstop Sam's serv line	D & L Enviromental Ltd	22726
4-7290-000	2025-02-14	17975	$ 5.34	$ -	Payables Trx Entry	Princess Auto - tools	Valcourt, Maurice	MVAEXPFEB25
4-7290-000	2025-02-14	17968	$ 784.04	$ -	Payables Trx Entry	curbstop valve, misc parts	Wolseley Waterworks Group	9736056
4-7290-000	2025-02-15	17966	$ 7,390.79	$ -	Payables Trx Entry	Curbstop valve Sam's serv line	Serwa Excavating Co Ltd	818
4-7290-000	2025-02-28	18084	$ 68.47	$ -	Payables Trx Entry	Home Hardware - 918679	Big White Ski Resort Ltd	BWSR0005036
4-7290-000	2025-02-28	18084	$ 29.94	$ -	Payables Trx Entry	Princess Auto - 3674834	Big White Ski Resort Ltd	BWSR0005036
4-7290-000	2025-03-04	18094	$ 367.10	$ -	Payables Trx Entry	chlorine strips	Hach Sales and Service	376644
4-7290-000	2025-03-05	18098	$ 154.00	$ -	Payables Trx Entry	PB-UB sys intergration	Centrix Control Solutions	INV20524
4-7290-000	2025-04-02	18224	$ 3,157.00	$ -	Payables Trx Entry	Powder Basin UV programming	Centrix Control Solutions	INV20619
4-7290-000	2025-04-30	18330	$ 147.12	$ -	Payables Trx Entry	Nutech 99495a	Big White Ski Resort Ltd	BWSR0005099
4-7290-000	2025-05-16	18347	$ 71.38	$ -	Payables Trx Entry	manual aspirator pump kit	Canada Safety Equipment Ltd	185610
4-7290-000	2025-05-31	18517	$ 3,781.79	$ -	YE Adjustment water meter inv	adjust inventory to actuals		
4-7290-000	2025-06-03	18421	$ 1,059.30	$ -	Payables Trx Entry	UVT-045010 Cuvette	MEQUIPCO	54859
4-7290-000	2025-06-05	18424	$ 59.41	$ -	Payables Trx Entry	Hi-Vis Vests for operators	Canada Safety Equipment Ltd	186281
			$ 156,675.66	$ 20,019.00	**$ 136,656.66**			

APPENDIX H

2025 Summer Poject Schedule				April		May				June				July				Aug				Sept				Oct				Nov	
				week		week				week				week				week				week				week				week	
Maurice Holidays																															
Gord Holidays / training																															
Josh personal leave / holidays / training																															
Kate Holidays																															
Lee ???																															
Jeff ???																															
1 more full time guy gives the ability to have a pair of guys start on projects first thing in the morning while the other guy takes care of daily rounds and maintenance																															
1 guy for the daily rounds and to help when available / most likely count 1 guy out to take care of day to day / rounds /maintenance / etc.																															
	# Days	**# Men**	**Total man hours**																												
Rhonda Lake (source water)				3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
Cl2 vault repair doors, remove trucker line	2	2	40																												
Dam / spillway / lake inspection / exercise valves	1	1	10																												
Divers inspection ??	1	2	20																												
			0																												
Rhonda Lake WTP			0																												
footing infiltration	1	2	20																												
back up power gen ?			0																												
replace leaking / inoperable red and whites	1	2	20																												
			0																												
plumb in sink for sampling	1	2	20																												
plumb in backwash line to sani			0																												
			0																												
Treated Water Resevoir			0																												
repair drain line res#1	6	3	180																												
cl2 booster station ??? Discussion with BWSR	8	2	160																												
exercise all valves	1	1	10																												
Divers inspection	1	2	20																												
new hatches on resevoirs ??	4	2	80																												
			0																												
Water Distribution			0																												
PRV Inspection	1	2	20																												
hydrant maint late spring / early fall /	2	12	240																												
Ridge Daylodge waterline replacement?? BWSR cost	4	4	160																												
raise staff accom hydrant	1	1	10																												
hydrant replacement (pumper port)			0																												
dead end flushing / UDF	8	2	160																												
exercise valves	12	1	120																												
GPS assets / valves / curbstops / ongoing	8	1	80																												
			0																												
Powder Basin / WTP / Pipeline RD.			0																												
			0																												
Pump?			0																												
clean / service / calibrate equipment	1	2	20																												
replace flow tubing			0																												
inspect air relief valves			0																												
exercise all valves	1	1	10																												
plumb in sink for sampling	1	1	10																												
Divers inspection??	1	2	20																												
			0																												
Westridge			0																												
instal curbstop outside replace ball valve inside?? BWSR cost??	1	2	20																												
clean / inspect	1	1	10																												
locate water distribution tank	1	2	20																												
clean, inpect all piping, tanks	1	1	10																												
pull out pumps / instal sump			0																												
	130		2790																												
Misc.																															
sled maintenance																															
ongoing infratructure inspection of contractors																															
new connections / water / sewer / gas																															
ongoing GPS of assets to mapping																															
meters to mapping as they are swapped out																															
ongoing CCCP / inspections and reporting																															
ERP / SOP updates ongoing																															

APPENDIX I

Account Number	TRX Date	Journal Entry	Debit Amount	Credit Amount	Reference	Description	Originating Master Name	Originating Document Number
4-7296-000	2021-11-30	10892	$ 270.00	$ -	Service Bundle	Purchases	Central Square Canada Software Inc.	338956
4-7296-000	2021-12-16	11030	$ 825.50	$ -	Payables Trx Entry	Remote assessment of SCADA	Centrix Control Solutions	INV17499
4-7296-000	2023-02-01	13575	$ 18.83	$ -	Repost Adobe Fees	October Adobe fees		
4-7296-000	2023-02-01	13575	$ 18.83	$ -	Repost Adobe Fees	September Adobe fees		
4-7296-000	2023-02-01	13575	$ 18.83	$ -	Repost Adobe Fees	August Adobe fees		
4-7296-000	2023-02-01	13575	$ 18.83	$ -	Repost Adobe Fees	July Adobe fees		
4-7296-000	2023-02-01	13575	$ 18.83	$ -	Repost Adobe Fees	June Adobe fees		
4-7296-000	2023-02-01	13575	$ 9.80	$ -	Repost Adobe Fees	November Adobe fees		
4-7296-000	2023-02-01	13575	$ 9.41	$ -	Repost Adobe Fees	December Adobe fees		
4-7296-000	2023-02-01	13568	$ 1,532.24	$ -	Repost Tm Viewer exp 20220818	Team Viewer Annual		
4-7296-000	2023-02-01	13569	$ 1,522.68	$ -	Repost Cen Sqar exp 20221001	2020 Central Square Annual fee		
4-7296-000	2023-02-01	13576	$ 214.59	$ -	Repost Docusign Expense	docusign 34394811		
4-7296-000	2023-02-01	13577	$ 205.44	$ -	Repost Maximizer Expense	Maximizer Annual Support		
4-7296-000	2023-03-01	13910	$ 12.08	$ -	correct feb adobe posting	MJB adobe		
4-7296-000	2023-03-11	13951	$ 12.08	$ -	Payables Trx Entry	dataanywhere	Big White Ski Resort Ltd	BWSR0004323
4-7296-000	2023-03-31	14023	$ 9.41	$ -	Payables Trx Entry	MJB adobe	Big White Ski Resort Ltd	BWSR0004341
4-7296-000	2023-04-30	14164	$ 18.92	$ -	Payables Trx Entry	dataanywhere 22718	Big White Ski Resort Ltd	BWSR0004373
4-7296-000	2023-05-06	14241	$ 229.14	$ -	Payables Trx Entry	diamond maps annual support	Big White Ski Resort Ltd	BWSR0004377
4-7296-000	2023-05-24	14274	$ 2,514.50	$ -	SCADA software support annual	SCADA software support annual	Centrix Control Solutions	INV18783
4-7296-000	2023-05-31	14423	$ 17.82	$ -	Payables Trx Entry	dataanywhere 22879	Big White Ski Resort Ltd	BWSR0004398
4-7296-000	2023-05-31	14415	$ 9.41	$ -	Payables Trx Entry	Adobe - May	Big White Ski Resort Ltd	BWSR0004391
4-7296-000	2023-05-31	14415	$ 9.41	$ -	Payables Trx Entry	Adobe - April	Big White Ski Resort Ltd	BWSR0004391
4-7296-000	2023-06-28	14631	$ 9.41	$ -	Mothly Adobe Charges	Mothly Adobe Charges		
4-7296-000	2023-06-28	14508	$ 9.41	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-06-28	14847	$ -	$ 9.41	Back Out Journal Entry 14631	Mothly Adobe Charges		
4-7296-000	2023-06-30	14616	$ 17.82	$ -	Payables Trx Entry	MS Office 365, etc.	Big White Ski Resort Ltd	BWSR0004417
4-7296-000	2023-07-28	14508	$ 9.41	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-08-28	14508	$ 9.41	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-08-28	15051	$ 3.85	$ -	increase in adobe fees	increase in adobe fees		
4-7296-000	2023-08-31	15045	$ 2,914.30	$ -	Recode software expense	Central Square Annual Support		
4-7296-000	2023-09-11	15105	$ -	$ 1,590.88	Void Open Trx	Purchases	Valcourt, Maurice	MVASEP2023
4-7296-000	2023-09-11	15070	$ 1,590.88	$ -	Payables Trx Entry	Team Viewer Annual License	Valcourt, Maurice	MVASEP2023
4-7296-000	2023-09-26	15106	$ 1,590.88	$ -	Payables Trx Entry	team viewer annual license	Big White Ski Resort Ltd	BWSR0004487
4-7296-000	2023-09-26	15106	$ 18.93	$ -	Payables Trx Entry	microsoft licensing monthly	Big White Ski Resort Ltd	BWSR0004487
4-7296-000	2023-09-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-10-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-10-31	15498	$ 18.93	$ -	Payables Trx Entry	Dataanywhere 23708	Big White Ski Resort Ltd	BWSR0004525
4-7296-000	2023-11-27	15583	$ 205.44	$ -	Payables Trx Entry	Maximizer annual support	Big White Central Reservations	BWCR0001368
4-7296-000	2023-11-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-11-30	15608	$ 18.93	$ -	Payables Trx Entry	Dataanywhere 23877	Big White Ski Resort Ltd	BWSR0004543
4-7296-000	2023-12-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2023-12-29	15891	$ 18.93	$ -	Payables Trx Entry	DataAnywhere 24043	Big White Ski Resort Ltd	BWSR0004584
4-7296-000	2024-01-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2024-01-31	16096	$ -	$ 19.99	move exp to feb	Data Anywere 24380		
4-7296-000	2024-01-31	16094	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 24207 - January	Big White Ski Resort Ltd	BWSR0004641
4-7296-000	2024-01-31	16094	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 24380 - February	Big White Ski Resort Ltd	BWSR0004641
4-7296-000	2024-02-01	16096	$ 19.99	$ -	move exp to feb	Data Anywere 24380		
4-7296-000	2024-02-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2024-02-29	16230	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 24380	Big White Ski Resort Ltd	BWSR0004680
4-7296-000	2024-03-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2024-03-31	16339	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 24541	Big White Ski Resort Ltd	BWSR0004702
4-7296-000	2024-03-31	16345	$ -	$ 19.99	Payables Trx Entry	Data Anywhere 24380 (Jan&Feb)	Big White Ski Resort Ltd	BWSR0004708
4-7296-000	2024-04-28	14508	$ 13.26	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2024-04-28	16579	$ 13.26	$ -	Second Adobe expense	Monthly Adobe for James Kay		
4-7296-000	2024-04-30	16540	$ 19.99	$ -	Payables Trx Entry	DataAnywhere 24711	Big White Ski Resort Ltd	BWSR0004741
4-7296-000	2024-05-28	14508	$ 26.53	$ -	Monthy Adobe Charges	Monthy Adobe Charges		
4-7296-000	2024-05-30	16637	$ 19.99	$ -	Payables Trx Entry	DataAnywhere 24878 softw lic	Big White Ski Resort Ltd	BWSR0004755
4-7296-000	2024-06-28	16814	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2024-06-30	16706	$ 19.99	$ -	Payables Trx Entry	dataanywhere 25052	Big White Ski Resort Ltd	BWSR0004767
4-7296-000	2024-07-18	16941	$ 1,960.00	$ -	Project V4 Custom file	Project Custom V4 file N360	Central Square Canada Software Inc.	416025
4-7296-000	2024-07-18	16945	$ 1,590.88	$ -	Payables Trx Entry	Team Viewer annual fee	Valcourt, Maurice	JUL2024EXP
4-7296-000	2024-07-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2024-07-31	16995	$ 19.99	$ -	Payables Trx Entry	DataAnywhere-July licensing	Big White Ski Resort Ltd	BWSR0004811.
4-7296-000	2024-07-31	16993	$ 44.08	$ -	Payables Trx Entry	DataAnywhere-June licensing	Big White Ski Resort Ltd	BWSR0004811
4-7296-000	2024-07-31	16995	$ 44.08	$ -	Payables Trx Entry	DataAnywhere-June licensing	Big White Ski Resort Ltd	BWSR0004811.
4-7296-000	2024-07-31	16994	$ -	$ 44.08	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-7296-000	2024-07-31	16994	$ -	$ 19.99	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811

4-7296-000	2024-07-31	16993	$ 19.99	$ -	Payables Trx Entry	DataAnywher-July licensing	Big White Ski Resort Ltd	BWSR0004811
4-7296-000	2024-08-01	17047	$ 2,610.80	$ -	Payables Trx Entry	SCADA annual mtce	Centrix Control Solutions	INV19719
4-7296-000	2024-08-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2024-08-31	17175	$ 19.99	$ -	Payables Trx Entry	MS office licenses	Big White Ski Resort Ltd	BWSR0004830
4-7296-000	2024-09-01	17321	$ 288.90	$ -	Payables Trx Entry	Maximizer annual support	Big White Central Reservations	BWCR0001475
4-7296-000	2024-09-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2024-09-30	17320	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 25700	Big White Ski Resort Ltd	BWSR0004851
4-7296-000	2024-09-30	17320	$ 234.50	$ -	Payables Trx Entry	Diamond Map - 7134 ($420 USD)	Big White Ski Resort Ltd	BWSR0004851
4-7296-000	2024-10-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2024-10-29	17394	$ 2,341.80	$ -	Payables Trx Entry	Neptune 360 AMR Year 1	Flowsystems Distribution Inc.	0000031173
4-7296-000	2024-10-31	17495	$ 19.99	$ -	Payables Trx Entry	DataAnywhere - 25700	Big White Ski Resort Ltd	BWSR0004876
4-7296-000	2024-11-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2024-11-30	17640	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 25863	Big White Ski Resort Ltd	BWSR0004920
4-7296-000	2024-12-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2025-01-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2025-01-31	17955	$ 19.99	$ -	Payables Trx Entry	DataAnywhere 26180 - January	Big White Ski Resort Ltd	BWSR0005000
4-7296-000	2025-01-31	17955	$ 19.99	$ -	Payables Trx Entry	DataAnywhere 26023 - December	Big White Ski Resort Ltd	BWSR0005000
4-7296-000	2025-02-28	18084	$ 19.99	$ -	Payables Trx Entry	Data Anywhere 26374	Big White Ski Resort Ltd	BWSR0005036
4-7296-000	2025-02-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2025-03-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2025-03-31	18219	$ 19.99	$ -	Payables Trx Entry	Software licensing	Big White Ski Resort Ltd	BWSR0005070
4-7296-000	2025-04-03	18153	$ 1,626.87	$ -	Payables Trx Entry	GP & DMS support for 6mos	Central Square Canada Software Inc.	434985
4-7296-000	2025-04-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2025-04-30	18330	$ 20.99	$ -	Payables Trx Entry	DataAnywhere 26917	Big White Ski Resort Ltd	BWSR0005099
4-7296-000	2025-04-30	18330	$ 19.99	$ -	Payables Trx Entry	DataAnywhere 26736	Big White Ski Resort Ltd	BWSR0005099
4-7296-000	2025-05-28	16820	$ 26.53	$ -	Monthly Adobe Charges	Monthly Adobe Charges		
4-7296-000	2025-05-29	18374	$ 2,889.00	$ -	Payables Trx Entry	1 yr support for SCADA	Centrix Control Solutions	INV20769
4-7296-000	2025-05-31	18478	$ 255.48	$ -	Payables Trx Entry	Diamond Maps Annual Support	Big White Ski Resort Ltd	BWSR0005116
4-7296-000	2025-05-31	18483	$ 2,698.33	$ -	YE Prepaid fix for ZoneBilling	YE Prepaid fix for ZoneBilling		

APPENDIX J

Account Number	TRX Date	Journal Entry	Debit Amount	Credit Amount	Reference	Description	Originating Master Name	Originating Document Number
4-6000-000	2021-06-01	9742	$ -	$ 1,036.59	Accrue May 23-31 Payroll			
4-6010-000	2021-06-01	9742	$ -	$ 158.47	Accrue May 23-31 Payroll			
4-6020-000	2021-06-01	9742	$ -	$ 1,702.55	Accrue May 23-31 Payroll			
4-6000-000	2021-06-05	9751	$ 2,587.54	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	3742
4-6010-000	2021-06-05	9751	$ 253.54	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	3742
4-6020-000	2021-06-05	9751	$ 3,013.82	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	3742
4-6000-000	2021-06-30	9922	$ 3,527.30	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003749
4-6000-000	2021-06-30	9961	$ 3,086.38	$ -	Accrue June 20-30th Wages	accrue 7/8 days		
4-6000-000	2021-06-30	9959	$ 3,086.38	$ -	accrue wages Jun 20-30th	accrue 7/8 days		
4-6000-000	2021-06-30	9966	$ 167.99	$ -	accrue Sunlife	accrue sunlife		
4-6000-000	2021-06-30	9960	$ -	$ 3,086.38	Back Out Journal Entry 9959	accrue 7/8 days		
4-6010-000	2021-06-30	9960	$ -	$ 170.55	Back Out Journal Entry 9959	accrue 7/8 days		
4-6010-000	2021-06-30	9959	$ 170.55	$ -	accrue wages Jun 20-30th	accrue 7/8 days		
4-6010-000	2021-06-30	9961	$ 170.55	$ -	Accrue June 20-30th Wages	accrue 7/8 days		
4-6010-000	2021-06-30	9922	$ 219.67	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003749
4-6020-000	2021-06-30	9960	$ -	$ 62.84	Back Out Journal Entry 9959	Tool Allowance		
4-6020-000	2021-06-30	9960	$ -	$ 2,879.06	Back Out Journal Entry 9959	accrue 7/8 days		
4-6020-000	2021-06-30	9966	$ 54.34	$ -	accrue Sunlife	accrue sunlife		
4-6020-000	2021-06-30	9961	$ 62.84	$ -	Accrue June 20-30th Wages	Tool Allowance		
4-6020-000	2021-06-30	9961	$ 2,879.06	$ -	Accrue June 20-30th Wages	accrue 7/8 days		
4-6020-000	2021-06-30	9922	$ 3,253.60	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003749
4-6020-000	2021-06-30	9959	$ 2,879.06	$ -	accrue wages Jun 20-30th	accrue 7/8 days		
4-6020-000	2021-06-30	9959	$ 62.84	$ -	accrue wages Jun 20-30th	Tool Allowance		
4-6020-000	2021-06-30	9923	$ -	$ 19.84	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003756
4-6000-000	2021-07-01	9961	$ -	$ 3,086.38	Accrue June 20-30th Wages	accrue 7/8 days		
4-6000-000	2021-07-01	9966	$ -	$ 167.99	accrue Sunlife	accrue sunlife		
4-6010-000	2021-07-01	9961	$ -	$ 170.55	Accrue June 20-30th Wages	accrue 7/8 days		
4-6020-000	2021-07-01	9966	$ -	$ 54.34	accrue Sunlife	accrue sunlife		
4-6020-000	2021-07-01	9961	$ -	$ 62.84	Accrue June 20-30th Wages	Tool Allowance		
4-6020-000	2021-07-01	9961	$ -	$ 2,879.06	Accrue June 20-30th Wages	accrue 7/8 days		
4-6000-000	2021-07-03	10003	$ 167.99	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003759
4-6000-000	2021-07-03	10003	$ 3,527.30	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003759
4-6010-000	2021-07-03	10003	$ 194.92	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003759
4-6020-000	2021-07-03	10003	$ 3,353.19	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003759
4-6020-000	2021-07-03	10003	$ 54.34	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003759
4-6000-000	2021-07-17	10002	$ 3,527.30	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003764
4-6020-000	2021-07-17	10002	$ 3,359.82	$ -	BWSR	Purchases	Big White Ski Resort Ltd	BWSR0003764
4-6000-000	2021-07-31	10066	$ 2,929.15	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003775
4-6020-000	2021-07-31	10066	$ 3,290.36	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003775
4-6000-000	2021-08-19	10219	$ 3,527.30	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003787
4-6000-000	2021-08-19	10219	$ 167.99	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003787
4-6020-000	2021-08-19	10219	$ 52.95	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003787
4-6020-000	2021-08-19	10219	$ 2,486.93	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003787
4-6000-000	2021-08-31	10322	$ 2,729.76	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003797
4-6020-000	2021-08-31	10322	$ 4,140.24	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003797
4-6000-000	2021-09-30	10603	$ 3,527.30	$ -	Sept Payables posted in Oct	BWSR0003806		
4-6000-000	2021-09-30	10603	$ 2,729.76	$ -	Sept Payables posted in Oct	BWSR0003813		
4-6000-000	2021-09-30	10603	$ 341.91	$ -	Sept Payables posted in Oct	BWSR0003813		
4-6000-000	2021-09-30	10603	$ 167.99	$ -	Sept Payables posted in Oct	BWSR0003806		
4-6020-000	2021-09-30	10603	$ 2,674.27	$ -	Sept Payables posted in Oct	BWSR0003806		
4-6020-000	2021-09-30	10603	$ 2,253.12	$ -	Sept Payables posted in Oct	BWSR0003813		
4-6020-000	2021-09-30	10603	$ 53.20	$ -	Sept Payables posted in Oct	BWSR0003806		
4-6000-000	2021-10-01	10603	$ -	$ 3,527.30	Sept Payables posted in Oct	BWSR0003806		
4-6000-000	2021-10-01	10603	$ -	$ 2,729.76	Sept Payables posted in Oct	BWSR0003813		
4-6000-000	2021-10-01	10603	$ -	$ 341.91	Sept Payables posted in Oct	BWSR0003813		
4-6000-000	2021-10-01	10603	$ -	$ 167.99	Sept Payables posted in Oct	BWSR0003806		
4-6020-000	2021-10-01	10603	$ -	$ 53.20	Sept Payables posted in Oct	BWSR0003806		
4-6020-000	2021-10-01	10603	$ -	$ 2,253.12	Sept Payables posted in Oct	BWSR0003813		
4-6020-000	2021-10-01	10603	$ -	$ 2,674.27	Sept Payables posted in Oct	BWSR0003806		
4-6000-000	2021-10-13	10450	$ 167.99	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003817
4-6000-000	2021-10-13	10449	$ 341.91	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003813
4-6000-000	2021-10-13	10449	$ 2,729.76	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003813
4-6000-000	2021-10-13	10450	$ 3,527.30	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003817
4-6000-000	2021-10-13	10457	$ 3,527.30	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003806
4-6000-000	2021-10-13	10457	$ 167.99	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003806
4-6020-000	2021-10-13	10450	$ -	$ 89.15	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003817
4-6020-000	2021-10-13	10457	$ 53.20	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003806

4-6020-000	2021-10-13	10449	$ 2,253.12	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003813
4-6020-000	2021-10-13	10450	$ 2,586.14	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003817
4-6020-000	2021-10-13	10457	$ 2,674.27	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003806
4-6000-000	2021-10-31	10814	$ 2,461.34	$ -	Payroll accrual			
4-6000-000	2021-10-31	10705	$ 3,527.30	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003287
4-6000-000	2021-10-31	10771	$ 46.62	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003840
4-6010-000	2021-10-31	10814	$ 1,453.31	$ -	Payroll accrual			
4-6020-000	2021-10-31	10705	$ 268.14	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003287
4-6020-000	2021-10-31	10705	$ 4,920.84	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003287
4-6000-000	2021-11-01	10814	$ -	$ 2,461.34	Payroll accrual			
4-6010-000	2021-11-01	10814	$ -	$ 1,453.31	Payroll accrual			
4-6000-000	2021-11-26	10863	$ 203.90	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003849
4-6000-000	2021-11-26	10863	$ 3,527.30	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003849
4-6000-000	2021-11-26	10858	$ 3,782.41	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003863
4-6020-000	2021-11-26	10863	$ 4,301.99	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003849
4-6020-000	2021-11-26	10858	$ 4,419.77	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003863
4-6000-000	2021-12-04	11192	$ -	$ 2,446.80	fix BWSR003890 invoice	realloc housing allow		
4-6000-000	2021-12-04	10982	$ 210.20	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0003890
4-6000-000	2021-12-04	10982	$ 6,229.21	$ -	Payables Trx Entry	Payroll	Big White Ski Resort Ltd	BWSR0003890
4-6020-000	2021-12-04	10982	$ 5,602.22	$ -	Payables Trx Entry	Payroll	Big White Ski Resort Ltd	BWSR0003890
4-6020-000	2021-12-04	10982	$ 2.85	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0003890
4-6020-000	2021-12-04	11192	$ -	$ 764.62	fix BWSR003890 invoice	realloc housing allow		
4-6000-000	2021-12-10	11002	$ 374.97	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003885
4-6000-000	2021-12-18	11045	$ 43.34	$ -	Payables Trx Entry	Accident insurance	Big White Ski Resort Ltd	BWSR0003906
4-6000-000	2021-12-18	11045	$ 8,789.76	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003906
4-6020-000	2021-12-18	11045	$ 43.33	$ -	Payables Trx Entry	Accident insurance	Big White Ski Resort Ltd	BWSR0003906
4-6020-000	2021-12-18	11045	$ 2,739.37	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003906
4-6000-000	2022-01-01	11217	$ -	$ 210.20	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11217	$ -	$ 2,446.80	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11217	$ -	$ 5,518.12	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11089	$ 210.20	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11218	$ 210.20	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11089	$ 2,446.80	$ -	Payables Trx Entry	Housing for MVA	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11089	$ 5,518.12	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-01	11218	$ 5,518.12	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6020-000	2022-01-01	11217	$ -	$ 764.62	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6020-000	2022-01-01	11217	$ -	$ 3,637.98	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6020-000	2022-01-01	11089	$ 764.62	$ -	Payables Trx Entry	Housing for Gord	Big White Ski Resort Ltd	BWSR0003925
4-6020-000	2022-01-01	11089	$ 3,637.98	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6020-000	2022-01-01	11218	$ 3,637.98	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003925
4-6000-000	2022-01-31	11393	$ 57.86	$ -	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-01-31	11393	$ 349.27	$ -	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-01-31	11239	$ 5,754.55	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003939
4-6000-000	2022-01-31	11393	$ 5,767.22	$ -	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-01-31	11390	$ -	$ 1,825.58	fix BWSR0003939			
4-6000-000	2022-01-31	11390	$ 2,281.97	$ -	fix BWSR0003939	Adrian fix alloc		
4-6020-000	2022-01-31	11239	$ 3,942.05	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003939
4-6020-000	2022-01-31	11393	$ 3,772.17	$ -	fix posting date for Jan invs	Fix date on JE 11369		
4-6020-000	2022-01-31	11393	$ 45.96	$ -	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-02-01	11393	$ -	$ 57.86	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-02-01	11393	$ -	$ 349.27	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-02-01	11393	$ -	$ 5,767.22	fix posting date for Jan invs	Fix date on JE 11369		
4-6020-000	2022-02-01	11393	$ -	$ 3,772.17	fix posting date for Jan invs	Fix date on JE 11369		
4-6020-000	2022-02-01	11393	$ -	$ 45.96	fix posting date for Jan invs	Fix date on JE 11369		
4-6000-000	2022-02-04	11294	$ 1,081.40	$ -	2021 WCB Premium	2021 WCB Premium	Worksafe	DAJ000001661
4-6010-000	2022-02-04	11294	$ 122.24	$ -	2021 WCB Premium	2021 WCB Premium	Worksafe	DAJ000001661
4-6020-000	2022-02-04	11294	$ 1,123.64	$ -	2021 WCB Premium	2021 WCB Premium	Worksafe	DAJ000001661
4-6000-000	2022-02-10	11369	$ 57.86	$ -	Payables Trx Entry	EH Tax deficiency	Big White Ski Resort Ltd	BWSR0003963
4-6000-000	2022-02-10	11369	$ 349.27	$ -	Payables Trx Entry	Sunlife health spending	Big White Ski Resort Ltd	BWSR0003963
4-6000-000	2022-02-10	11369	$ 5,767.22	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003963
4-6020-000	2022-02-10	11369	$ 45.96	$ -	Payables Trx Entry	Sunlife health spending	Big White Ski Resort Ltd	BWSR0003963
4-6020-000	2022-02-10	11369	$ 3,772.17	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003963
4-6000-000	2022-02-17	11426	$ 5,767.22	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003974
4-6020-000	2022-02-17	11426	$ 3,771.61	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003974
4-6000-000	2022-02-28	11553	$ 247.97	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0003999
4-6000-000	2022-02-28	11570	$ 5,767.22	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003997
4-6020-000	2022-02-28	11570	$ 3,923.12	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0003997
4-6000-000	2022-03-12	11599	$ 247.97	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004002

4-6000-000	2022-03-12	11599	$ 5,767.22	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004002
4-6020-000	2022-03-12	11599	$ 3,721.10	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004002
4-6000-000	2022-03-26	11635	$ 5,754.55	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004012
4-6020-000	2022-03-26	11635	$ 3,647.00	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004012
4-6000-000	2022-03-31	11700	$ 50.50	$ -	Payables Trx Entry	Sunlife Health Spend Account	Big White Ski Resort Ltd	BWSR0004026
4-6000-000	2022-04-09	11726	$ 247.97	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004031
4-6000-000	2022-04-09	11726	$ 5,754.55	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004031
4-6020-000	2022-04-09	11726	$ 3,737.18	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004031
4-6000-000	2022-04-23	11803	$ 5,754.55	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004037
4-6020-000	2022-04-23	11803	$ 2,641.58	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004037
4-6000-000	2022-05-07	11965	$ 156.60	$ -	Payables Trx Entry	Sunlife health	Big White Ski Resort Ltd	BWSR0004049
4-6000-000	2022-05-07	11965	$ 16,215.46	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004049
4-6020-000	2022-05-07	11965	$ 10,883.47	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004049
4-6000-000	2022-05-21	12023	$ 247.97	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004055
4-6000-000	2022-05-21	12023	$ 5,611.55	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004055
4-6020-000	2022-05-21	12023	$ 3,661.36	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004055
4-6020-000	2022-05-21	12023	$ 30.76	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004055
4-6000-000	2022-05-31	12164	$ -	$ 1,645.00	accrue CPCN to Developers	accr CPCN costs to Developers		
4-6000-000	2022-05-31	12164	$ -	$ 3,651.00	accrue CPCN to Developers	accr CPCN costs to Developers		
4-6000-000	2022-05-31	12137	$ 3,928.09	$ -	accrue May payroll paid in Jun	May Payroll Accrual		
4-6000-000	2022-05-31	12099	$ 65.25	$ -	Payables Trx Entry	Sunlife Health	Big White Ski Resort Ltd	BWSR0004060
4-6020-000	2022-05-31	12137	$ 3,145.13	$ -	accrue May payroll paid in Jun	May Payroll Accrual		
4-6000-000	2022-06-01	12137	$ -	$ 3,928.09	accrue May payroll paid in Jun	May Payroll Accrual		
4-6020-000	2022-06-01	12137	$ -	$ 3,145.13	accrue May payroll paid in Jun	May Payroll Accrual		
4-6020-000	2022-06-09	12046	$ -	$ 59.54	R.Ferguson loss wages	R.Ferguson loss wages	WorkSafe BC	RCT000001763
4-6000-000	2022-06-11	12161	$ 247.97	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004067
4-6000-000	2022-06-11	12161	$ 5,611.51	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004067
4-6020-000	2022-06-11	12161	$ 30.76	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004067
4-6020-000	2022-06-11	12161	$ 4,493.09	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004067
4-6000-000	2022-06-18	12179	$ 6,810.18	$ -	Payables Trx Entry	22-06-18 payroll	Big White Ski Resort Ltd	BWSR0004073
4-6020-000	2022-06-18	12179	$ 4,162.84	$ -	Payables Trx Entry	22-06-18 payroll	Big White Ski Resort Ltd	BWSR0004073
4-6000-000	2022-06-30	12309	$ 5,350.22	$ -	accrue PP ending July 2nd	accrue PP22-07-02 9/10 days		
4-6020-000	2022-06-30	12309	$ 3,803.94	$ -	accrue PP ending July 2nd	accrue PP22-07-02 7/8days		
4-6000-000	2022-07-01	12309	$ -	$ 5,350.22	accrue PP ending July 2nd	accrue PP22-07-02 9/10 days		
4-6020-000	2022-07-01	12309	$ -	$ 3,803.94	accrue PP ending July 2nd	accrue PP22-07-02 7/8days		
4-6000-000	2022-07-14	12388	$ 308.43	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004089
4-6000-000	2022-07-14	12388	$ 5,944.68	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004089
4-6020-000	2022-07-14	12388	$ 33.76	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004089
4-6020-000	2022-07-14	12388	$ 4,347.36	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004089
4-6000-000	2022-07-16	12387	$ 5,622.88	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004094
4-6020-000	2022-07-16	12387	$ 4,179.65	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004094
4-6000-000	2022-07-30	12542	$ 6,292.84	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004099
4-6020-000	2022-07-30	12542	$ 4,451.04	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004099
4-6000-000	2022-08-13	12591	$ 266.87	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004113
4-6000-000	2022-08-13	12591	$ 5,179.05	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004113
4-6020-000	2022-08-13	12591	$ 30.76	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004113
4-6020-000	2022-08-13	12591	$ 3,104.34	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004113
4-6000-000	2022-08-27	12637	$ 5,517.48	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004117
4-6020-000	2022-08-27	12637	$ 3,919.32	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004117
4-6000-000	2022-08-31	12706	$ 156.60	$ -	Payables Trx Entry	sunlife health	Big White Ski Resort Ltd	BWSR0004126
4-6000-000	2022-08-31	12716	$ 2,269.52	$ -	Accrue Payroll	Aug 29-31st Payroll Accrual		
4-6020-000	2022-08-31	12716	$ 1,678.06	$ -	Accrue Payroll	Aug 29-31st Payroll Accrual		
4-6000-000	2022-09-01	12716	$ -	$ 2,269.52	Accrue Payroll	Aug 29-31st Payroll Accrual		
4-6020-000	2022-09-01	12716	$ -	$ 1,678.06	Accrue Payroll	Aug 29-31st Payroll Accrual		
4-6000-000	2022-09-10	12703	$ 266.87	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004130
4-6000-000	2022-09-10	12703	$ 5,785.19	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004130
4-6020-000	2022-09-10	12703	$ 30.76	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004130
4-6020-000	2022-09-10	12703	$ 4,444.06	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004130
4-6000-000	2022-09-24	12810	$ 6,123.62	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004140
4-6020-000	2022-09-24	12810	$ 4,710.00	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004140
4-6000-000	2022-09-30	12865	$ 281.60	$ -	Payables Trx Entry	sunlife health spending	Big White Ski Resort Ltd	BWSR0004148
4-6000-000	2022-09-30	12907	$ 3,149.09	$ -	Sep 25-30th Payroll Accrual	Sep 25-30th Payroll Accrual		
4-6020-000	2022-09-30	12907	$ 2,374.67	$ -	Sep 25-30th Payroll Accrual	Sep 25-30th Payroll Accrual		
4-6000-000	2022-10-01	12907	$ -	$ 3,149.09	Sep 25-30th Payroll Accrual	Sep 25-30th Payroll Accrual		
4-6020-000	2022-10-01	12907	$ -	$ 2,374.67	Sep 25-30th Payroll Accrual	Sep 25-30th Payroll Accrual		
4-6000-000	2022-10-08	12863	$ 266.87	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004154
4-6000-000	2022-10-08	12863	$ 6,031.31	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004154
4-6020-000	2022-10-08	12863	$ 30.76	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004154

4-6020-000	2022-10-08	12863	$ 4,718.57	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004154
4-6000-000	2022-10-22	12993	$ 8,610.37	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004170
4-6020-000	2022-10-22	12993	$ 4,389.28	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004170
4-6000-000	2022-10-31	13061	$ 39.15	$ -	Payables Trx Entry	sunlife hsa	Big White Ski Resort Ltd	BWSR0004179
4-6000-000	2022-11-05	13118	$ 222.74	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004184
4-6000-000	2022-11-05	13118	$ 4,415.22	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004184
4-6020-000	2022-11-05	13118	$ 6,378.96	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004184
4-6020-000	2022-11-05	13118	$ 29.94	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004184
4-6000-000	2022-11-19	13208	$ 4,415.22	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004196
4-6020-000	2022-11-19	13208	$ 5,262.14	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004196
4-6000-000	2022-12-03	13280	$ 196.08	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004222
4-6000-000	2022-12-03	13280	$ 4,415.22	$ -	Payables Trx Entry	payroll	Big White Ski Resort Ltd	BWSR0004222
4-6020-000	2022-12-03	13280	$ 5,451.79	$ -	Payables Trx Entry	payroll	Big White Ski Resort Ltd	BWSR0004222
4-6020-000	2022-12-03	13280	$ -	$ 45.89	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004222
4-6000-000	2022-12-17	13384	$ 7,677.62	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004232
4-6020-000	2022-12-17	13384	$ 4,981.29	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004232
4-6000-000	2022-12-31	13481	$ 74.12	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004239
4-6000-000	2022-12-31	13481	$ 7,470.70	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004239
4-6020-000	2022-12-31	13481	$ 4,740.54	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004239
4-6000-000	2023-01-14	13541	$ 196.07	$ -	Payables Trx Entry	sunife	Big White Ski Resort Ltd	BWSR0004255
4-6000-000	2023-01-14	13541	$ 7,491.50	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004255
4-6020-000	2023-01-14	13541	$ 5,333.90	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004255
4-6000-000	2023-01-31	13683	$ 26.10	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004273
4-6000-000	2023-01-31	13683	$ 7,491.50	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004273
4-6020-000	2023-01-31	13683	$ 4,462.04	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004273
4-6000-000	2023-02-11	13791	$ 196.07	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004290
4-6000-000	2023-02-11	13791	$ 7,491.50	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004290
4-6020-000	2023-02-11	13791	$ 4,517.00	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004290
4-6000-000	2023-02-21	13853	$ 1,589.53	$ -	WBC premiums	WBC premiums	Worksafe BC	DAJ000002085
4-6020-000	2023-02-21	13853	$ 2,507.14	$ -	WBC premiums	WBC premiums	Worksafe BC	DAJ000002085
4-6000-000	2023-02-25	13875	$ 7,491.50	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004308
4-6020-000	2023-02-25	13875	$ 4,920.39	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004308
4-6000-000	2023-03-11	13951	$ 7,458.70	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004323
4-6020-000	2023-03-11	13951	$ 4,540.87	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004323
4-6000-000	2023-03-25	14054	$ 196.08	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004329
4-6000-000	2023-03-25	14054	$ 7,577.94	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004329
4-6020-000	2023-03-25	14054	$ 30.66	$ -	Payables Trx Entry	pier furrjo10	Big White Ski Resort Ltd	BWSR0004329
4-6020-000	2023-03-25	14054	$ 3,983.44	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004329
4-6000-000	2023-03-31	14023	$ 11.64	$ -	Payables Trx Entry	sunlife health	Big White Ski Resort Ltd	BWSR0004341
4-6000-000	2023-04-08	14082	$ 7,577.94	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004356
4-6020-000	2023-04-08	14082	$ 4,515.00	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004356
4-6000-000	2023-04-19	14175	$ 910.20	$ -	WBC quarterly premiums	WBC quarterly premiums	Worksafe BC	DAJ000002132
4-6020-000	2023-04-19	14175	$ 507.47	$ -	WBC quarterly premiums	Bank Transaction Entry	Worksafe BC	DAJ000002132
4-6000-000	2023-04-30	14164	$ 142.26	$ -	Payables Trx Entry	Sunlife Health SA	Big White Ski Resort Ltd	BWSR0004373
4-6000-000	2023-04-30	14164	$ 288.47	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004373
4-6000-000	2023-04-30	14164	$ 782.15	$ -	Payables Trx Entry	J.Kay Vac Pay adjustment	Big White Ski Resort Ltd	BWSR0004373
4-6000-000	2023-04-30	14164	$ 7,577.94	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004373
4-6020-000	2023-04-30	14164	$ 48.28	$ -	Payables Trx Entry	Sunlife Health SA	Big White Ski Resort Ltd	BWSR0004373
4-6020-000	2023-04-30	14164	$ 3,916.45	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004373
4-6000-000	2023-05-06	14241	$ 7,577.57	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004377
4-6020-000	2023-05-06	14241	$ 4,581.66	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004377
4-6000-000	2023-05-26	14286	$ 288.47	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004381
4-6000-000	2023-05-26	14286	$ 6,820.44	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004381
4-6020-000	2023-05-26	14286	$ 2,457.14	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004381
4-6000-000	2023-05-29	14295	$ -	$ 1,607.61	reallocate MVA wages for May	VALCMA92 60% to Reservoir Proj		
4-6000-000	2023-05-31	14414	$ 221.85	$ -	Payables Trx Entry	sunlife health spending	Big White Ski Resort Ltd	BWSR0004390
4-6000-000	2023-05-31	14414	$ 7,501.84	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004390
4-6020-000	2023-05-31	14414	$ 86.13	$ -	Payables Trx Entry	sunlife health spending	Big White Ski Resort Ltd	BWSR0004390
4-6020-000	2023-05-31	14414	$ 4,353.60	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004390
4-6000-000	2023-06-03	14476	$ 288.47	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004405
4-6000-000	2023-06-03	14476	$ 5,945.40	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004405
4-6020-000	2023-06-03	14476	$ 32.33	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004405
4-6020-000	2023-06-03	14476	$ 4,422.34	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004405
4-6000-000	2023-06-30	14616	$ 172.74	$ -	Payables Trx Entry	sunlife health spending	Big White Ski Resort Ltd	BWSR0004417
4-6000-000	2023-06-30	14616	$ 7,172.02	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004417
4-6020-000	2023-06-30	14616	$ 137.46	$ -	Payables Trx Entry	sunlife health spending	Big White Ski Resort Ltd	BWSR0004417
4-6020-000	2023-06-30	14616	$ 4,491.87	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004417
4-6000-000	2023-07-01	14672	$ 289.44	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004422

4-6000-000	2023-07-01	14672	$ 7,172.02	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004422
4-6020-000	2023-07-01	14672	$ 218.66	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004422
4-6020-000	2023-07-01	14672	$ 4,585.43	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004422
4-6000-000	2023-07-15	14701	$ 7,152.52	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004430
4-6020-000	2023-07-15	14701	$ 3,321.26	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004430
4-6000-000	2023-07-18	14791	$ 897.07	$ -	WBC Premiums	WBC Premiums	Worksafe BC	DAJ000002238
4-6020-000	2023-07-18	14791	$ 655.17	$ -	WBC Premiums	WBC Premiums	Worksafe BC	DAJ000002238
4-6000-000	2023-07-31	14848	$ 7,052.24	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004445
4-6020-000	2023-07-31	14848	$ 3,542.68	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004445
4-6020-000	2023-07-31	14848	$ 119.95	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004445
4-6000-000	2023-08-18	14789	$ -	$ 897.07	WBC Premiums	WBC Premiums	Worksafe BC	DAJ000002236
4-6000-000	2023-08-18	14787	$ 897.07	$ -	WBC Premiums	WBC Premiums	Worksafe BC	DAJ000002236
4-6020-000	2023-08-18	14789	$ -	$ 655.17	WBC Premiums	WBC Premiums	Worksafe BC	DAJ000002236
4-6020-000	2023-08-18	14787	$ 655.17	$ -	WBC Premiums	WBC Premiums	Worksafe BC	DAJ000002236
4-6000-000	2023-08-26	15012	$ 22,288.40	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004468
4-6000-000	2023-08-26	15012	$ 289.44	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004468
4-6000-000	2023-08-26	15012	$ 7,587.48	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004468
4-6020-000	2023-08-26	15012	$ 80.36	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004468
4-6020-000	2023-08-26	15012	$ 4,712.39	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004468
4-6020-000	2023-08-26	15012	$ 8,736.04	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004468
4-6000-000	2023-09-26	15106	$ 289.44	$ -	Payables Trx Entry	sunlife sep 23	Big White Ski Resort Ltd	BWSR0004487
4-6000-000	2023-09-26	15106	$ 7,587.48	$ -	Payables Trx Entry	sep 9-23	Big White Ski Resort Ltd	BWSR0004487
4-6020-000	2023-09-26	15106	$ 80.36	$ -	Payables Trx Entry	sunlife sep 23	Big White Ski Resort Ltd	BWSR0004487
4-6020-000	2023-09-26	15106	$ 5,015.29	$ -	Payables Trx Entry	sep 9-23	Big White Ski Resort Ltd	BWSR0004487
4-6000-000	2023-09-30	15224	$ 3,347.77	$ -	Payables Trx Entry	VP accrual to actual	Big White Ski Resort Ltd	BWSR0004499
4-6000-000	2023-09-30	15224	$ 7,587.48	$ -	Payables Trx Entry	bwsr payroll 2023-09-23	Big White Ski Resort Ltd	BWSR0004499
4-6000-000	2023-09-30	15224	$ -	$ 807.70	Payables Trx Entry	G.Sullivan-Vacation taken	Big White Ski Resort Ltd	BWSR0004499
4-6000-000	2023-09-30	15224	$ -	$ 4,038.46	Payables Trx Entry	G.Sulliv-reverse upfront vacay	Big White Ski Resort Ltd	BWSR0004499
4-6000-000	2023-09-30	15224	$ -	$ 4,861.54	Payables Trx Entry	J.Kay-reverse upfront vacay	Big White Ski Resort Ltd	BWSR0004499
4-6000-000	2023-09-30	15224	$ -	$ 6,346.15	Payables Trx Entry	M.Valcou-reverse upfront vacay	Big White Ski Resort Ltd	BWSR0004499
4-6020-000	2023-09-30	15224	$ -	$ 528.00	Payables Trx Entry	J.Furrer-Vacation taken	Big White Ski Resort Ltd	BWSR0004499
4-6020-000	2023-09-30	15224	$ -	$ 692.30	Payables Trx Entry	G.Rowland-Vacation taken	Big White Ski Resort Ltd	BWSR0004499
4-6020-000	2023-09-30	15224	$ -	$ 1,056.00	Payables Trx Entry	J.Furrer-reverse upfront vacay	Big White Ski Resort Ltd	BWSR0004499
4-6020-000	2023-09-30	15224	$ -	$ 3,692.31	Payables Trx Entry	G.Rowlan-reverse upfront vacay	Big White Ski Resort Ltd	BWSR0004499
4-6020-000	2023-09-30	15224	$ 764.73	$ -	Payables Trx Entry	VP accrual to actual	Big White Ski Resort Ltd	BWSR0004499
4-6020-000	2023-09-30	15224	$ 4,903.68	$ -	Payables Trx Entry	bwsr payroll 2023-09-23	Big White Ski Resort Ltd	BWSR0004499
4-6000-000	2023-10-07	15298	$ 7,587.48	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004500
4-6020-000	2023-10-07	15298	$ 5,323.56	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004500
4-6000-000	2023-10-19	15313	$ 253.84	$ -	Payables Trx Entry	quartely premium	WorkSafeBC	2023-Q2
4-6000-000	2023-10-19	15314	$ 651.20	$ -	Payables Trx Entry	quarterly premium	WorkSafeBC	2023-Q2
4-6000-000	2023-10-19	15320	$ 651.20	$ -	Payables Trx Entry	quarterly premium q2	WorkSafeBC	2023-Q2.
4-6000-000	2023-10-19	15315	$ -	$ 253.84	Void Open Trx	Purchases	WorkSafeBC	2023-Q2
4-6000-000	2023-10-19	15318	$ -	$ 651.20	Void Open Trx	Purchases	WorkSafeBC	2023-Q2
4-6020-000	2023-10-19	15315	$ -	$ 209.69	Void Open Trx	Purchases	WorkSafeBC	2023-Q2
4-6020-000	2023-10-19	15318	$ -	$ 537.95	Void Open Trx	Purchases	WorkSafeBC	2023-Q2
4-6020-000	2023-10-19	15313	$ 209.69	$ -	Payables Trx Entry	Purchases	WorkSafeBC	2023-Q2
4-6020-000	2023-10-19	15320	$ 537.91	$ -	Payables Trx Entry	quarterly premium q2	WorkSafeBC	2023-Q2.
4-6020-000	2023-10-19	15314	$ 537.95	$ -	Payables Trx Entry	quarterly premium	WorkSafeBC	2023-Q2
4-6000-000	2023-10-31	15522	$ -	$ 0.27	AJE to fix BWSR to/from	AJE to fix BWSR to/from		
4-6000-000	2023-10-31	15519	$ 0.14	$ -	AJE to fix BWSR to/from	repost BWSR0004499		
4-6000-000	2023-10-31	15422	$ 289.44	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004516
4-6000-000	2023-10-31	15422	$ 6,779.78	$ -	Payables Trx Entry	oct 7-21	Big White Ski Resort Ltd	BWSR0004516
4-6020-000	2023-10-31	15422	$ 80.36	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004516
4-6020-000	2023-10-31	15422	$ 5,327.63	$ -	Payables Trx Entry	oct 7-21	Big White Ski Resort Ltd	BWSR0004516
4-6000-000	2023-11-04	15539	$ 7,587.48	$ -	Payables Trx Entry	Oct 22-Nov 4	Big White Ski Resort Ltd	BWSR0004531
4-6000-000	2023-11-04	15539	$ 229.57	$ -	Payables Trx Entry	sunlife Nov 2023	Big White Ski Resort Ltd	BWSR0004531
4-6020-000	2023-11-04	15539	$ 63.71	$ -	Payables Trx Entry	sunlife Nov 2023	Big White Ski Resort Ltd	BWSR0004531
4-6020-000	2023-11-04	15539	$ 291.02	$ -	Payables Trx Entry	Oct tool allowance	Big White Ski Resort Ltd	BWSR0004531
4-6020-000	2023-11-04	15539	$ 5,055.31	$ -	Payables Trx Entry	Oct 22-Nov 4	Big White Ski Resort Ltd	BWSR0004531
4-6000-000	2023-11-18	15602	$ 7,587.48	$ -	Payables Trx Entry	nov 4-18	Big White Ski Resort Ltd	BWSR0004537
4-6020-000	2023-11-18	15602	$ 4,578.28	$ -	Payables Trx Entry	nov 4-18	Big White Ski Resort Ltd	BWSR0004537
4-6000-000	2023-11-30	15683	$ 147.87	$ -	Payables Trx Entry	sunlife HSA Maurice	Big White Ski Resort Ltd	BWSR0004559
4-6020-000	2023-11-30	15683	$ 235.77	$ -	Payables Trx Entry	sunlife HSA Gord	Big White Ski Resort Ltd	BWSR0004559
4-6000-000	2023-12-02	15746	$ 229.57	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004566
4-6000-000	2023-12-02	15746	$ 7,587.48	$ -	Payables Trx Entry	Nov 19-Dec 2	Big White Ski Resort Ltd	BWSR0004566
4-6020-000	2023-12-02	15746	$ 63.71	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004566
4-6020-000	2023-12-02	15746	$ 4,525.75	$ -	Payables Trx Entry	Nov 19-Dec 2	Big White Ski Resort Ltd	BWSR0004566
4-6000-000	2023-12-16	15786	$ 229.57	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004582

4-6000-000	2023-12-16	15786	$ 14,560.59	$ -	Payables Trx Entry	Dec 3-16 payroll	Big White Ski Resort Ltd	BWSR0004582
4-6020-000	2023-12-16	15786	$ 63.71	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004582
4-6020-000	2023-12-16	15786	$ 4,501.37	$ -	Payables Trx Entry	Dec 3-16 payroll	Big White Ski Resort Ltd	BWSR0004582
4-6000-000	2023-12-31	15892	$ 7,476.53	$ -	Payables Trx Entry	Dec 17-30	Big White Ski Resort Ltd	BWSR0004601
4-6020-000	2023-12-31	15892	$ 5,157.20	$ -	Payables Trx Entry	Dec 17-30	Big White Ski Resort Ltd	BWSR0004601
4-6000-000	2024-01-01	15981	$ -	$ 229.57	Payables Trx Entry	sunlife billed twice in Dec	Big White Ski Resort Ltd	BWSRCM0000431
4-6020-000	2024-01-01	15981	$ -	$ 63.70	Payables Trx Entry	sunlife billed twice in Dec	Big White Ski Resort Ltd	BWSRCM0000431
4-6000-000	2024-01-13	15963	$ -	$ 807.60	Payables Trx Entry	CR to wages, accrue to vac pay	Big White Ski Resort Ltd	BWSR0004608
4-6000-000	2024-01-13	15963	$ 8,122.68	$ -	Payables Trx Entry	dec 31-jan 13	Big White Ski Resort Ltd	BWSR0004608
4-6020-000	2024-01-13	15963	$ -	$ 528.00	Payables Trx Entry	CR to wages, accrue to vac pay	Big White Ski Resort Ltd	BWSR0004608
4-6020-000	2024-01-13	15963	$ 5,678.97	$ -	Payables Trx Entry	dec 31-jan 13	Big White Ski Resort Ltd	BWSR0004608
4-6000-000	2024-01-18	15943	$ 189.97	$ -	Payables Trx Entry	Worksafe BC Q4	WorkSafeBC	2023Q4
4-6020-000	2024-01-18	15943	$ 458.85	$ -	Payables Trx Entry	Purchases	WorkSafeBC	2023Q4
4-6000-000	2024-01-31	16093	$ 228.77	$ -	Payables Trx Entry	jan sunlife	Big White Ski Resort Ltd	BWSR0004639
4-6000-000	2024-01-31	16093	$ 8,176.71	$ -	Payables Trx Entry	jan 14-27	Big White Ski Resort Ltd	BWSR0004639
4-6020-000	2024-01-31	16093	$ 63.48	$ -	Payables Trx Entry	jan sunlife	Big White Ski Resort Ltd	BWSR0004639
4-6020-000	2024-01-31	16093	$ 5,231.86	$ -	Payables Trx Entry	jan 14-27	Big White Ski Resort Ltd	BWSR0004639
4-6000-000	2024-02-10	16130	$ 228.77	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004652
4-6000-000	2024-02-10	16130	$ 8,176.68	$ -	Payables Trx Entry	Jan 28-Feb 10	Big White Ski Resort Ltd	BWSR0004652
4-6020-000	2024-02-10	16130	$ 5,360.97	$ -	Payables Trx Entry	Jan 28-Feb 10	Big White Ski Resort Ltd	BWSR0004652
4-6020-000	2024-02-10	16130	$ 63.48	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004652
4-6000-000	2024-02-24	16212	$ 72.48	$ -	Payables Trx Entry	sunlife feb 11-24	Big White Ski Resort Ltd	BWSR0004670
4-6000-000	2024-02-24	16212	$ 8,156.68	$ -	Payables Trx Entry	payroll feb 11-24	Big White Ski Resort Ltd	BWSR0004670
4-6020-000	2024-02-24	16212	$ 5,175.51	$ -	Payables Trx Entry	payroll feb 11-24	Big White Ski Resort Ltd	BWSR0004670
4-6000-000	2024-03-01	16358	$ -	$ 25.49	Worksafe BC 2023 Premium	Worksafe BC 2023 Premium	Worksafe BC	IAJ000002440
4-6020-000	2024-03-01	16358	$ -	$ 38.23	Worksafe BC 2023 Premium	Worksafe BC 2023 Premium	Worksafe BC	IAJ000002440
4-6000-000	2024-03-09	16270	$ 228.77	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004685
4-6000-000	2024-03-09	16270	$ 7,447.45	$ -	Payables Trx Entry	Feb 25-Mar 9	Big White Ski Resort Ltd	BWSR0004685
4-6020-000	2024-03-09	16270	$ 5,070.20	$ -	Payables Trx Entry	Feb 25-Mar 9	Big White Ski Resort Ltd	BWSR0004685
4-6020-000	2024-03-09	16270	$ 63.48	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004685
4-6000-000	2024-03-23	16318	$ 11,967.22	$ -	Payables Trx Entry	bwsr payroll Mar 9-23	Big White Ski Resort Ltd	BWSR0004689
4-6020-000	2024-03-23	16318	$ 4,186.46	$ -	Payables Trx Entry	bwsr payroll Mar 9-23	Big White Ski Resort Ltd	BWSR0004689
4-6000-000	2024-03-31	16344	$ 39.15	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004706
4-6000-000	2024-04-06	16398	$ 228.77	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004714
4-6000-000	2024-04-06	16398	$ 8,122.68	$ -	Payables Trx Entry	bwsr payroll Mar 24-Apr 6	Big White Ski Resort Ltd	BWSR0004714
4-6020-000	2024-04-06	16398	$ 63.48	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004714
4-6020-000	2024-04-06	16398	$ 5,044.17	$ -	Payables Trx Entry	bwsr payroll Mar 24-Apr 6	Big White Ski Resort Ltd	BWSR0004714
4-6000-000	2024-04-30	16578	$ 21.32	$ -	Payables Trx Entry	Sunlife HSA	Big White Ski Resort Ltd	BWSR0004748
4-6000-000	2024-04-30	16578	$ 7,879.61	$ -	Payables Trx Entry	bwsr payroll apr 7-20	Big White Ski Resort Ltd	BWSR0004748
4-6020-000	2024-04-30	16578	$ 4,791.05	$ -	Payables Trx Entry	bwsr payroll apr 7-20	Big White Ski Resort Ltd	BWSR0004748
4-6000-000	2024-05-02	16505	$ 1,174.85	$ -	WBC Q1 Jan-Mar 2024	WBC Q1 Jan-Mar 2024	Worksafe BC	DAJ000002478
4-6020-000	2024-05-02	16505	$ 722.65	$ -	WBC Q1 Jan-Mar 2024	WBC Q1 Jan-Mar 2024	Worksafe BC	DAJ000002478
4-6000-000	2024-05-31	16643	$ 1,645.00	$ -	Clear the AR Clearing Water	Revrs CPCN costs to Developers		
4-6000-000	2024-05-31	16643	$ 3,651.00	$ -	Clear the AR Clearing Water	Revrs CPCN costs to Developers		
4-6000-000	2024-05-31	16649	$ 3,653.38	$ -	Payables Trx Entry	bwsr payroll May 31	Big White Ski Resort Ltd	BWSR0004759
4-6000-000	2024-05-31	16649	$ 6,418.70	$ -	Payables Trx Entry	bwsr payroll May 10	Big White Ski Resort Ltd	BWSR0004759
4-6000-000	2024-05-31	16649	$ 6,852.14	$ -	Payables Trx Entry	bwsr payroll May 24	Big White Ski Resort Ltd	BWSR0004759
4-6000-000	2024-05-31	16708	$ 692.92	$ -	recode bwsr0004766	vacation accrual adjustment		
4-6000-000	2024-05-31	16709	$ -	$ 692.92	Payables Trx Entry	vacation accrual adjustment	Big White Ski Resort Ltd	BWSRCM0000460
4-6000-000	2024-05-31	16709	$ -	$ 692.92	Payables Trx Entry	vacation accrual adjustment er	Big White Ski Resort Ltd	BWSRCM0000460
4-6000-000	2024-05-31	16649	$ 43.62	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0004759
4-6000-000	2024-05-31	16649	$ 228.77	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004759
4-6020-000	2024-05-31	16709	$ -	$ 93.02	Payables Trx Entry	vacation accrual adjustment	Big White Ski Resort Ltd	BWSRCM0000460
4-6020-000	2024-05-31	16709	$ -	$ 93.02	Payables Trx Entry	vacation accrual adjustment er	Big White Ski Resort Ltd	BWSRCM0000460
4-6020-000	2024-05-31	16649	$ 63.48	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004759
4-6020-000	2024-05-31	16708	$ 93.02	$ -	recode bwsr0004766	vacation accrual adjustment		
4-6020-000	2024-05-31	16649	$ 2,665.64	$ -	Payables Trx Entry	bwsr payroll May 31	Big White Ski Resort Ltd	BWSR0004759
4-6020-000	2024-05-31	16649	$ 5,691.54	$ -	Payables Trx Entry	bwsr payroll May 24	Big White Ski Resort Ltd	BWSR0004759
4-6020-000	2024-05-31	16649	$ 6,206.64	$ -	Payables Trx Entry	bwsr payroll May 10	Big White Ski Resort Ltd	BWSR0004759
4-6000-000	2024-06-30	16706	$ 10,263.46	$ -	Payables Trx Entry	Jun 15 payroll	Big White Ski Resort Ltd	BWSR0004767
4-6000-000	2024-06-30	16844	$ 10,098.56	$ -	Payables Trx Entry	bwsr payroll Jun 29	Big White Ski Resort Ltd	BWSR0004783
4-6000-000	2024-06-30	16706	$ 9,481.60	$ -	Payables Trx Entry	Jun 1 payroll	Big White Ski Resort Ltd	BWSR0004767
4-6000-000	2024-06-30	16706	$ 228.76	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004767
4-6020-000	2024-06-30	16706	$ 63.48	$ -	Payables Trx Entry	sunlife	Big White Ski Resort Ltd	BWSR0004767
4-6020-000	2024-06-30	16706	$ 2,641.17	$ -	Payables Trx Entry	Jun 1 payroll	Big White Ski Resort Ltd	BWSR0004767
4-6020-000	2024-06-30	16706	$ 2,792.03	$ -	Payables Trx Entry	Jun 15 payroll	Big White Ski Resort Ltd	BWSR0004767
4-6020-000	2024-06-30	16844	$ 3,923.88	$ -	Payables Trx Entry	bwsr payroll Jun 29	Big White Ski Resort Ltd	BWSR0004783
4-6000-000	2024-07-26	16910	$ 780.38	$ -	Q2 2024 Premiums for Worksafe	Q2 2024 Premiums for Worksafe	WorkSafe BC	DAJ000002531

4-6020-000	2024-07-26	16910	$ 251.64	$ -	Q2 2024 Premiums for Worksafe	Q2 2024 Premiums for Worksafe	WorkSafe BC	DAJ000002531
4-6000-000	2024-07-31	16993	$ 229.47	$ -	Payables Trx Entry	Sunlife - benefits	Big White Ski Resort Ltd	BWSR0004811
4-6000-000	2024-07-31	16993	$ 19,655.02	$ -	Payables Trx Entry	BWSR-July payroll	Big White Ski Resort Ltd	BWSR0004811
4-6000-000	2024-07-31	16993	$ 430.65	$ -	Payables Trx Entry	Sunlife-Health Spending June	Big White Ski Resort Ltd	BWSR0004811
4-6000-000	2024-07-31	16994	$ -	$ 19,655.02	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-6000-000	2024-07-31	16994	$ -	$ 430.65	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-6000-000	2024-07-31	16994	$ -	$ 229.47	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-6000-000	2024-07-31	16995	$ 19,655.02	$ -	Payables Trx Entry	BWSR-July payroll	Big White Ski Resort Ltd	BWSR0004811.
4-6000-000	2024-07-31	16995	$ 430.65	$ -	Payables Trx Entry	Sunlife-Health Spending June	Big White Ski Resort Ltd	BWSR0004811.
4-6000-000	2024-07-31	16995	$ 229.47	$ -	Payables Trx Entry	Sunlife-benefits	Big White Ski Resort Ltd	BWSR0004811.
4-6020-000	2024-07-31	16994	$ -	$ 63.70	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-6020-000	2024-07-31	16994	$ -	$ 7,786.31	Void Open Trx	Purchases	Big White Ski Resort Ltd	BWSR0004811
4-6020-000	2024-07-31	16993	$ 63.70	$ -	Payables Trx Entry	Sunlife - July	Big White Ski Resort Ltd	BWSR0004811
4-6020-000	2024-07-31	16993	$ 7,786.31	$ -	Payables Trx Entry	BWSR-July payroll	Big White Ski Resort Ltd	BWSR0004811
4-6020-000	2024-07-31	16995	$ 7,786.31	$ -	Payables Trx Entry	BWSR-July payroll	Big White Ski Resort Ltd	BWSR0004811.
4-6020-000	2024-07-31	16995	$ 63.70	$ -	Payables Trx Entry	Sunlife-benefits	Big White Ski Resort Ltd	BWSR0004811.
4-6000-000	2024-08-31	17175	$ 8,978.90	$ -	Payables Trx Entry	Aug 30 payroll	Big White Ski Resort Ltd	BWSR0004830
4-6000-000	2024-08-31	17175	$ 3,611.20	$ -	Payables Trx Entry	Aug 16 payroll	Big White Ski Resort Ltd	BWSR0004830
4-6000-000	2024-08-31	17175	$ 540.87	$ -	Payables Trx Entry	Sunlife HSA-Graham	Big White Ski Resort Ltd	BWSR0004830
4-6000-000	2024-08-31	17175	$ 229.47	$ -	Payables Trx Entry	Aug Sunlife	Big White Ski Resort Ltd	BWSR0004830
4-6000-000	2024-08-31	17190	$ 4.46	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004831
4-6020-000	2024-08-31	17175	$ 2,841.03	$ -	Payables Trx Entry	Aug 16 payroll	Big White Ski Resort Ltd	BWSR0004830
4-6020-000	2024-08-31	17175	$ 4,297.92	$ -	Payables Trx Entry	Aug 30 payroll	Big White Ski Resort Ltd	BWSR0004830
4-6020-000	2024-08-31	17175	$ 353.05	$ -	Payables Trx Entry	Sunlife HSA-Josh	Big White Ski Resort Ltd	BWSR0004830
4-6020-000	2024-08-31	17175	$ 126.97	$ -	Payables Trx Entry	Aug Sunlife	Big White Ski Resort Ltd	BWSR0004830
4-6020-000	2024-08-31	17190	$ 4.46	$ -	Payables Trx Entry	Purchases	Big White Ski Resort Ltd	BWSR0004831
4-6000-000	2024-09-30	17320	$ 8,870.81	$ -	Payables Trx Entry	BWSR payroll Sept 21	Big White Ski Resort Ltd	BWSR0004851
4-6000-000	2024-09-30	17320	$ 8,729.66	$ -	Payables Trx Entry	BWSR payroll Sept 7	Big White Ski Resort Ltd	BWSR0004851
4-6000-000	2024-09-30	17320	$ 4,969.23	$ -	Payables Trx Entry	Q1 Acr Vac for M.Valcourt	Big White Ski Resort Ltd	BWSR0004851
4-6000-000	2024-09-30	17320	$ 22.87	$ -	Payables Trx Entry	Health Spending	Big White Ski Resort Ltd	BWSR0004851
4-6000-000	2024-09-30	17320	$ 229.47	$ -	Payables Trx Entry	Sunlife September	Big White Ski Resort Ltd	BWSR0004851
4-6020-000	2024-09-30	17320	$ 2,752.66	$ -	Payables Trx Entry	BWSR payroll Sept 21	Big White Ski Resort Ltd	BWSR0004851
4-6020-000	2024-09-30	17320	$ 2,148.93	$ -	Payables Trx Entry	BWSR payroll Sept 7	Big White Ski Resort Ltd	BWSR0004851
4-6020-000	2024-09-30	17320	$ 398.24	$ -	Payables Trx Entry	Q1 Acr Vac for L. Adam	Big White Ski Resort Ltd	BWSR0004851
4-6020-000	2024-09-30	17320	$ -	$ 44.48	Payables Trx Entry	Sunlife September	Big White Ski Resort Ltd	BWSR0004851
4-6000-000	2024-10-29	17396	$ 1,639.93	$ -	Worksafe BC Q3 payment	Worksafe BC Q3 payment	Worksafe BC	DAJ000002628
4-6000-000	2024-10-29	17421	$ -	$ 0.01	Fix rounding	Fix rounding	Worksafe BC	IAJ000002638
4-6020-000	2024-10-29	17396	$ 623.00	$ -	Worksafe BC Q3 payment	Worksafe BC Q3 payment	Worksafe BC	DAJ000002628
4-6000-000	2024-10-31	17495	$ 1.68	$ -	Payables Trx Entry	payroll 24-10-05A	Big White Ski Resort Ltd	BWSR0004876
4-6000-000	2024-10-31	17495	$ 11.59	$ -	Payables Trx Entry	Telus Health Sep & Oct	Big White Ski Resort Ltd	BWSR0004876
4-6000-000	2024-10-31	17495	$ 229.47	$ -	Payables Trx Entry	October Sunlife	Big White Ski Resort Ltd	BWSR0004876
4-6000-000	2024-10-31	17495	$ 8,832.51	$ -	Payables Trx Entry	payroll 24-10-05P	Big White Ski Resort Ltd	BWSR0004876
4-6000-000	2024-10-31	17495	$ 9,228.13	$ -	Payables Trx Entry	payroll 24-10-19P	Big White Ski Resort Ltd	BWSR0004876
4-6020-000	2024-10-31	17495	$ 2.90	$ -	Payables Trx Entry	Telus Health Sep & Oct	Big White Ski Resort Ltd	BWSR0004876
4-6020-000	2024-10-31	17495	$ 9.92	$ -	Payables Trx Entry	Sunlife - HSA	Big White Ski Resort Ltd	BWSR0004876
4-6020-000	2024-10-31	17495	$ 64.65	$ -	Payables Trx Entry	October Sunlife	Big White Ski Resort Ltd	BWSR0004876
4-6020-000	2024-10-31	17495	$ 2,964.25	$ -	Payables Trx Entry	payroll 24-10-05P	Big White Ski Resort Ltd	BWSR0004876
4-6020-000	2024-10-31	17495	$ 2,874.86	$ -	Payables Trx Entry	payroll 24-10-19P	Big White Ski Resort Ltd	BWSR0004876
4-6020-000	2024-10-31	17495	$ 66.14	$ -	Payables Trx Entry	payroll 24-10-05A	Big White Ski Resort Ltd	BWSR0004876
4-6000-000	2024-11-30	17640	$ 16.99	$ -	Payables Trx Entry	Health Spending	Big White Ski Resort Ltd	BWSR0004920
4-6000-000	2024-11-30	17640	$ 291.25	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004920
4-6000-000	2024-11-30	17640	$ 7,581.98	$ -	Payables Trx Entry	Payroll 24-11-30	Big White Ski Resort Ltd	BWSR0004920
4-6000-000	2024-11-30	17640	$ 9,975.82	$ -	Payables Trx Entry	Payroll 24-11-02	Big White Ski Resort Ltd	BWSR0004920
4-6000-000	2024-11-30	17640	$ 9,975.82	$ -	Payables Trx Entry	Payroll 24-11-16	Big White Ski Resort Ltd	BWSR0004920
4-6020-000	2024-11-30	17640	$ 3.22	$ -	Payables Trx Entry	Health Spending	Big White Ski Resort Ltd	BWSR0004920
4-6020-000	2024-11-30	17640	$ 81.54	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0004920
4-6020-000	2024-11-30	17640	$ 2,187.65	$ -	Payables Trx Entry	Payroll 24-11-02	Big White Ski Resort Ltd	BWSR0004920
4-6020-000	2024-11-30	17640	$ 2,555.42	$ -	Payables Trx Entry	Payroll 24-11-30	Big White Ski Resort Ltd	BWSR0004920
4-6020-000	2024-11-30	17640	$ 3,398.45	$ -	Payables Trx Entry	Payroll 24-11-16	Big White Ski Resort Ltd	BWSR0004920
4-6000-000	2024-12-31	17808	$ 291.25	$ -	Payables Trx Entry	Sunlife Dec 2024	Big White Ski Resort Ltd	BWSR0004952
4-6000-000	2024-12-31	17808	$ 377.43	$ -	Payables Trx Entry	Sunlife health spending	Big White Ski Resort Ltd	BWSR0004952
4-6000-000	2024-12-31	17808	$ 6,524.80	$ -	Payables Trx Entry	Payroll - Dec 27	Big White Ski Resort Ltd	BWSR0004952
4-6000-000	2024-12-31	17808	$ 9,412.71	$ -	Payables Trx Entry	Payroll - Dec 14	Big White Ski Resort Ltd	BWSR0004952
4-6000-000	2024-12-31	17808	$ 10,625.20	$ -	Payables Trx Entry	Payroll - Dec 28	Big White Ski Resort Ltd	BWSR0004952
4-6020-000	2024-12-31	17808	$ 81.54	$ -	Payables Trx Entry	Sunlife Dec 2024	Big White Ski Resort Ltd	BWSR0004952
4-6020-000	2024-12-31	17808	$ 2,633.52	$ -	Payables Trx Entry	Payroll - Dec 14	Big White Ski Resort Ltd	BWSR0004952
4-6020-000	2024-12-31	17808	$ 2,514.61	$ -	Payables Trx Entry	Payroll - Dec 28	Big White Ski Resort Ltd	BWSR0004952
4-6020-000	2024-12-31	17808	$ 3.22	$ -	Payables Trx Entry	Sunlife health spending	Big White Ski Resort Ltd	BWSR0004952

4-6000-000	2025-01-29	17856	$ 395.18	$ -	Payables Trx Entry	WorksafeBC-Q4	WorkSafeBC	2024Q4
4-6020-000	2025-01-29	17856	$ 379.69	$ -	Payables Trx Entry	WorksafeBC-Q4	WorkSafeBC	2024Q4
4-6000-000	2025-01-31	17955	$ 10,242.15	$ -	Payables Trx Entry	Payroll 25-01-11	Big White Ski Resort Ltd	BWSR0005000
4-6000-000	2025-01-31	17955	$ 10,740.61	$ -	Payables Trx Entry	Payroll 25-01-25	Big White Ski Resort Ltd	BWSR0005000
4-6000-000	2025-01-31	17955	$ 66.12	$ -	Payables Trx Entry	Payroll 25-01-11 benefits	Big White Ski Resort Ltd	BWSR0005000
4-6000-000	2025-01-31	17955	$ 172.80	$ -	Payables Trx Entry	Staff Family Passes GST	Big White Ski Resort Ltd	BWSR0005000
4-6000-000	2025-01-31	17955	$ 291.25	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0005000
4-6000-000	2025-01-31	17955	$ 345.75	$ -	Payables Trx Entry	Health Spending Jan 2025	Big White Ski Resort Ltd	BWSR0005000
4-6020-000	2025-01-31	17955	$ 6.46	$ -	Payables Trx Entry	Health Spending Jan 2025	Big White Ski Resort Ltd	BWSR0005000
4-6020-000	2025-01-31	17955	$ 41.52	$ -	Payables Trx Entry	Staff Family Passes GST	Big White Ski Resort Ltd	BWSR0005000
4-6020-000	2025-01-31	17955	$ 3,616.30	$ -	Payables Trx Entry	Payroll 25-01-11	Big White Ski Resort Ltd	BWSR0005000
4-6020-000	2025-01-31	17955	$ 2,891.06	$ -	Payables Trx Entry	Payroll 25-01-25	Big White Ski Resort Ltd	BWSR0005000
4-6020-000	2025-01-31	17955	$ 191.22	$ -	Payables Trx Entry	Payroll 25-01-11 benefits	Big White Ski Resort Ltd	BWSR0005000
4-6020-000	2025-01-31	17955	$ 112.34	$ -	Payables Trx Entry	Sunlife	Big White Ski Resort Ltd	BWSR0005000
4-6000-000	2025-02-28	18084	$ 291.25	$ -	Payables Trx Entry	Sunlife benefits Feb 2025	Big White Ski Resort Ltd	BWSR0005036
4-6000-000	2025-02-28	18084	$ 374.08	$ -	Payables Trx Entry	Health Spending	Big White Ski Resort Ltd	BWSR0005036
4-6000-000	2025-02-28	18084	$ 403.28	$ -	Payables Trx Entry	2024 GST taxable benefit	Big White Ski Resort Ltd	BWSR0005036
4-6000-000	2025-02-28	18084	$ 10,729.56	$ -	Payables Trx Entry	payroll Feb 15-28	Big White Ski Resort Ltd	BWSR0005036
4-6000-000	2025-02-28	18084	$ 10,740.61	$ -	Payables Trx Entry	payroll Feb 1-14	Big White Ski Resort Ltd	BWSR0005036
4-6020-000	2025-02-28	18084	$ 112.02	$ -	Payables Trx Entry	Sunlife benefits Feb 2025	Big White Ski Resort Ltd	BWSR0005036
4-6020-000	2025-02-28	18084	$ 3,514.79	$ -	Payables Trx Entry	payroll Feb 15-28	Big White Ski Resort Ltd	BWSR0005036
4-6020-000	2025-02-28	18084	$ 3,576.18	$ -	Payables Trx Entry	payroll Feb 1-14	Big White Ski Resort Ltd	BWSR0005036
4-6000-000	2025-03-31	18219	$ 10,699.34	$ -	Payables Trx Entry	bwsr payroll Mar 8	Big White Ski Resort Ltd	BWSR0005070
4-6000-000	2025-03-31	18219	$ 197.45	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0005070
4-6000-000	2025-03-31	18219	$ 291.25	$ -	Payables Trx Entry	Sunlife benefits	Big White Ski Resort Ltd	BWSR0005070
4-6000-000	2025-03-31	18219	$ 9,918.50	$ -	Payables Trx Entry	bwsr payroll Mar 22	Big White Ski Resort Ltd	BWSR0005070
4-6020-000	2025-03-31	18219	$ 25.23	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0005070
4-6020-000	2025-03-31	18219	$ 112.23	$ -	Payables Trx Entry	Sunlife benefits	Big White Ski Resort Ltd	BWSR0005070
4-6020-000	2025-03-31	18219	$ 2,651.92	$ -	Payables Trx Entry	bwsr payroll Mar 22	Big White Ski Resort Ltd	BWSR0005070
4-6020-000	2025-03-31	18219	$ 3,238.39	$ -	Payables Trx Entry	bwsr payroll Mar 8	Big White Ski Resort Ltd	BWSR0005070
4-6000-000	2025-04-22	18298	$ 1,424.97	$ -	Q1 2025 WBC premiums	Q1 2025 WBC premiums	WorkSafe BC	DAJ000002794
4-6000-000	2025-04-22	18297	$ 79.78	$ -	Annual WBC premium adjustement	Annual WBC premium adjustement	WorkSafe BC	DAJ000002793
4-6020-000	2025-04-22	18297	$ 30.59	$ -	Annual WBC premium adjustement	Annual WBC premium adjustement	WorkSafe BC	DAJ000002793
4-6020-000	2025-04-22	18298	$ 444.06	$ -	Q1 2025 WBC premiums	Q1 2025 WBC premiums	WorkSafe BC	DAJ000002794
4-6000-000	2025-04-30	18330	$ 66.12	$ -	Payables Trx Entry	25-04-19B	Big White Ski Resort Ltd	BWSR0005099
4-6000-000	2025-04-30	18330	$ 291.25	$ -	Payables Trx Entry	Health Spending	Big White Ski Resort Ltd	BWSR0005099
4-6000-000	2025-04-30	18330	$ 10,428.00	$ -	Payables Trx Entry	25-04-05P	Big White Ski Resort Ltd	BWSR0005099
4-6000-000	2025-04-30	18330	$ 10,677.24	$ -	Payables Trx Entry	25-04-19P	Big White Ski Resort Ltd	BWSR0005099
4-6000-000	2025-04-30	18330	$ 425.70	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0005099
4-6020-000	2025-04-30	18330	$ 6.44	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0005099
4-6020-000	2025-04-30	18330	$ 105.47	$ -	Payables Trx Entry	25-04-19B	Big White Ski Resort Ltd	BWSR0005099
4-6020-000	2025-04-30	18330	$ 112.23	$ -	Payables Trx Entry	Health Spending	Big White Ski Resort Ltd	BWSR0005099
4-6020-000	2025-04-30	18330	$ 2,998.68	$ -	Payables Trx Entry	25-04-19P	Big White Ski Resort Ltd	BWSR0005099
4-6020-000	2025-04-30	18330	$ 3,378.14	$ -	Payables Trx Entry	25-04-05P	Big White Ski Resort Ltd	BWSR0005099
4-6000-000	2025-05-31	18478	$ 40.86	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0005116
4-6000-000	2025-05-31	18478	$ 44,984.05	$ -	Payables Trx Entry	May payroll expenses	Big White Ski Resort Ltd	BWSR0005116
4-6000-000	2025-05-31	18478	$ 291.25	$ -	Payables Trx Entry	Sunlife benefits	Big White Ski Resort Ltd	BWSR0005116
4-6020-000	2025-05-31	18478	$ 112.23	$ -	Payables Trx Entry	Sunlife benefits	Big White Ski Resort Ltd	BWSR0005116
4-6020-000	2025-05-31	18478	$ 190.75	$ -	Payables Trx Entry	Sunlife Health Spending	Big White Ski Resort Ltd	BWSR0005116
4-6020-000	2025-05-31	18478	$ 14,042.36	$ -	Payables Trx Entry	May payroll expenses	Big White Ski Resort Ltd	BWSR0005116

APPENDIX K

Account Number	TRX Date	Journal Entry	Debit Amount	Credit Amount	Reference	Description	Originating Master Name	Originating Document Number
4-7920-000	2025-05-31	18505	$ 83,101.24	$ -	Loan interest	BWSR & BWWU loan interest		
4-7920-000	2024-05-31	16728	$ 98,910.98	$ -	Water Reservoir Loan Interest	Water Reservoir Loan Interest		
4-7920-000	2024-05-31	16976	$ -	$ 1,176.92	Water YE Adjusting entry	adjst accrual interest to BWSR		

APPENDIX L

	Actual		PROPOSED				
	2024	2025	2025-2026	2026-2027	2027-2028	2028-2029	2029-2030
Revenue Requirement	655,304	992,852	1,073,506	1,112,411	1,152,183	1,180,264	1,215,671
Fixed Charge Revenue	206,379	324,332	718,105	743,475	770,009	797,766	826,811
Variable Charge Revenue	162,452	233,565	443,788	470,815	499,488	529,906	562,178
Total Revenue	$ 368,831	$ 557,897	$ 1,161,893	$ 1,214,290	$ 1,269,496	$ 1,327,673	$ 1,388,988
Gross Profit	$ (286,474)	$ (434,955)	$ 88,388	$ 101,879	$ 117,313	$ 147,409	$ 173,317
Income Tax		(121,787)	24,749	28,526	32,848	41,275	48,529
(Loss) / Retained Earnings		**(313,167)**	**63,639**	**73,353**	**84,466**	**106,135**	**124,788**
Consumption (m3)	193,394.83	199,196.68	205,172.58	211,327.76	217,667.59	224,197.62	230,923.54
Increase / Inflation %		250%	103%	103%	103%	103%	103%
Fixed Rate	$ 1.75	$ 4.38	$ 4.51	$ 4.64	$ 4.78	$ 4.92	$ 5.07
Revenue Portion	$ 0.87	$ 2.91	$ 3.06	$ 3.21	$ 3.37	$ (1.46)	$ (6.57)
Reserve Portion	$ 0.88	$ 1.46	$ 1.45	$ 1.43	$ 1.42	$ 6.38	$ 11.64
Reserve Rate		33.4%	32.1%	30.8%	29.6%	129.6%	229.6%
Accumulated Reserve		$ 200,653.36	$ 200,631.58	$ 200,320.21	$ 200,369.59	$ 913,267.82	###########
Variable Rate	$ 0.84	$ 2.10	$ 2.16	$ 2.23	$ 2.29	$ 2.36	$ 2.43
Fire Protection		$ 93,084	$ 93,084	$ 93,084	$ 93,084	$ 93,084	$ 93,084
Commercial Service Factors	7,517	7,597	7,597	7,597	7,597	7,597	7,597
Residential Service Factors	3,734	3,846	3,961	4,080	4,203	4,329	4,459
Total Service Factors	11,251	11,443	11,558	11,677	11,800	11,926	12,056

APPENDIX M

Increase only	$ 1.26	Consumption (m^3) increase
Increase only	$ 2.63	per SF increase ($2.74 deferred revenue & $0.62 RRTF Contribution)

	WINTER (Jan)			SUMMER (Jul)		
Property	**SF or M^3**	**Increase**	**Per unit increase**	**SF or M^3**	**Increase**	**Per unit increase**
Ponderosa (48 units)	150	$ 393.75		150	$ 393.75	
	311	$ 391.86		137	$ 172.62	
		$ 785.61	$ 16.37		$ 566.37	$ 11.80
Chateau (37 Units)	183	$ 480.38		183	$ 480.38	
	617	$ 777.42		147	$ 185.22	
		$ 1,257.80	$ 33.99		$ 665.60	$ 17.99
CBW (50 units)	139	$ 364.88		139	$ 364.88	
	621	$ 782.46		67	$ 84.42	
		$ 1,147.34	$ 22.95		$ 449.30	$ 8.99
180BF Staff Housing	132	$ 346.50		132	$ 346.50	
	941	$ 1,185.66		291	$ 366.66	
		$ 1,532.16			$ 713.16	
Feathertop - SFD	8	$ 21.00		8	$ 21.00	
	4	$ 5.04		1	$ 1.26	
		$ 26.04			$ 22.26	
Stonebridge (88 units)	394	$ 1,034.25		394	$ 1,034.25	
	1015	$ 1,278.90		189	$ 238.14	
		$ 2,313.15	$ 26.29		$ 1,272.39	$ 14.46